Oregon OSHA
Text of Changes for the Adoption of Federal and Oregon OSHA Minor Corrections

9/11/2024

Adopted Rule Changes

Text removed is in [~~brackets with line through~~].

Text added is in **bold and underline**.

Division 1
General Administration

437-001-0142 Annual Adjustment of Civil Penalties

(1) Each year, the director will be responsible for publishing notice of Oregon OSHA's Annual Adjustments to Penalties Bulletin in the Oregon Bulletin or its successor. This bulletin will also be made available on the Division's website at https://osha.oregon.gov/pages/topics/violations-and-penalties, or its successor. This bulletin will notify the regulated community of annual adjustment in civil penalty amounts required by ORS 654.086(4) to account for the percentage change, if any, in the Consumer Price Index for All Urban Consumers, West Region, All Items (West Region CPI-U), from October to October of each year as published by the Bureau of Labor Statistics (BLS) of the United States Department of Labor or its successor. The annual adjustments will be effective January 1st of each calendar year.

(2) Annual adjustments must be applied to the following civil penalties:

(a) Other than serious-rated violation - maximum civil penalty amounts in OAR 437-001-0145(2)(a) and civil penalty amounts in Table 2 in OAR 437-001-0145(2)(g).

(b) Serious Physical Harm or Death-rated violation – minimum and maximum civil penalty amounts in OAR 437-001-0145(2)(b) and civil penalty amounts in Table 2 in OAR 437-001-0145(2)(g).

(c) Repeat Violation - minimum and maximum civil penalty amounts in OAR 437-001-0145(2)(c) and civil penalty amounts in Table 2 in OAR [~~437-001-0145(2)(c)~~]**437-001-0165(3).**

(d) Willful Violations - minimum and maximum civil penalty amounts in OAR 437-001-0145(2)(d) and civil penalty amounts in Table 1 in OAR 437-001-0175(1).

(e) Violations that caused or contributed to a work-related fatality - minimum and maximum civil penalty amounts in OAR 437-001-0145(2)(e) and civil penalty amounts in Table 3 in OAR 437-001-0145(3).

(f) Willful and repeat violations that caused or contributed to a work-related fatality - minimum and maximum civil penalty amounts in OAR 437-001-0145(2)(f) and civil penalty amounts in Table 2 in OAR [~~437-001-0165(2)(a)~~]**437-001-0165(3)** and Table 2 in OAR [~~437-001-0175(3)~~]**437-001-0175(2).**

(3) An annual adjustment must be applied to the penalty reduction in OAR 437-001-0150(2)(b).

(4) The civil penalty amounts adjusted under this rule will not be lower than the minimum or greater than the maximum that may be assessed under [~~OAR~~] **ORS** 654.086 as a result of any reductions or multipliers applied. See Appendix A to OAR 437-001-0142 – Example of Oregon OSHA's Annual Adjustments to Penalties Bulletin.

Note: Appendix A is an example of information that will be included in Oregon OSHA's Annual Adjustments to Penalties Bulletin.

Statutory/Other Authority: ORS 654.025(2) & 656.726(4)
Statutes/Other Implemented: ORS 654.001 - 654.295
History:
OSHA 3-2023, filed 11/22/2023, effective 01/01/2024
OR-OSHA Administrative Order 1-2024, filed 9/11/24, effective 9/11/24.

Appendix A: Example of Oregon OSHA's Annual Adjustments to Penalties Bulletin

Bulletin Number:
Published:
Effective:

Oregon OSHA's Annual Adjustments to Penalties Bulletin
ORS 654.086(3), OAR 437-001-0142

To: All Interested Parties

Summary: This bulletin supersedes the civil penalties adopted by Administrative Order 3-2023.

As provided for in ORS 654.086(3), Oregon OSHA shall adjust the amount of civil penalties to account for the percentage increase or decrease, if any, in the Consumer Price Index for All Urban Consumers, West Region, All Items (West Region CPI-U), as published by the Bureau of Labor Statistics (BLS) of the United States Department of Labor. On DATE, the BLS published a % increase.

West Region CPI-U:

BLS reference data location: https://data.bls.gov/timeseries/CUUR0400SA0

Date published BLS West Region CPI-U:

Month	Year	West Region CPI-U Index Data
October		
October		

Percentage Adjustment	
Annual Adjustment Factor	

Oregon OSHA is required to calculate the annual adjustment based on the West Region CPI-U. Annual inflation adjustments are based on the percent change between the West Region CPI-U in October of the preceding year and October of the current year. The percent change is the cost-of-living adjustment multiplier for the following year. In order to compute the annual adjustment, the Agency multiplied the most recent penalty amount for each applicable penalty by the multiplier and rounded to the nearest dollar.

More information about Oregon OSHA's violations and civil penalties can be found at: https://osha.oregon.gov/Pages/topics/violations-and-penalties.aspx

The civil penalties in this bulletin apply to citations assessed under ORS 654.086 for inspections opened between January 1, through December 31[,]. See tables on the following pages.

Bulletin Number:
Published:
Effective:

Penalty Table – Penalty Range By Type and Classification of Violation

Type	Minimum	Maximum
Other Than Serious		
Serious Physical Harm or Death		
Repeat		
Willful		
Serious that Caused or Contributed to [~~the Death of Employee~~] **a Work-Related Fatality**		
Repeat that Caused or Contributed to [~~the Death of Employee~~] **a Work-Related Fatality**		
Willful that Caused or Contributed to [the Death of Employee] **a Work-Related Fatality**		

First-instance violation: An employer's first violation cited within the previous three years of a particular statute, regulation, rule, standard, or order.

Other Than Serious (OAR 437-001-0145)

Probability	Low	High	**The civil penalty amount for an initial other than serious violation is not annually adjusted.**
Initial Penalty			

Serious Violation Types (OAR 437-001-0145)

Severity	Serious Physical Harm			Death		
Probability	Low	Medium	High	Low	Medium	High
Initial Penalty						

Bulletin Number:
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Effective:

Repeat violation: An employer's second or subsequent violation involving a substantially similar violation as the earlier violation or violations, cited within the previous three years.

Repeat Violation Types (OAR 437-001-0165)

	Severity			**Civil penalties for the 4th and greater repeat violations are assigned with the Administrator's discretion.**
	Other than Serious			
	First	Second	Third	
Civil Penalty				

Repeat Violation Types (OAR 437-001-0165)

		Severity					
		Serious Physical Harm			Death		
	Probability	First	Second	Third	First	Second	Third
Civil Penalty	Low						
	Medium						
	High						

Repeat Size Reduction for 1-50 employees (OAR 437-001-0150)

Type	Serious Violation Types
Reduction	

Willful violation: A violation committed knowingly by an employer or supervisory employee who, having a free will or choice, intentionally or knowingly disobeys or recklessly disregards the requirements of a statute, regulation, rule, standard, or order.

Willful Violation Types (OAR 437-001-0175)

		Probability	**Severity**	
	Other than Serious		Serious Physical Harm	Death
Civil Penalty		Low		
		Medium		
		High		

Bulletin Number:
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Caused or contributed to a work-related fatality violation: The workplace death of an employee that was attributed to a violation or in which the violation was a related factor, as determined by the compliance officer.

Serious that Caused or Contributed to [~~the Death of an Employee~~] a Work-Related Fatality Violation Types (OAR 437-001-0145)

Severity	Serious Physical Harm			Death		
Probability	Low	Medium	High	Low	Medium	High
Civil Penalty						

Repeat that Caused or Contributed to [~~Death of Employee~~] a Work-Related Fatality Violation Types (OAR 437-001-0165)

		Probability	**Severity**	
	Other than Serious		Serious Physical Harm	Death
Civil Penalty		Low		
		Medium		
		High		

Willful that Caused or Contributed [~~the Death of Employee~~] a Work-Related Fatality Violation Types (OAR 437-001-0175)

		Probability	**Severity**	
	Other than Serious		Serious Physical Harm	Death
Civil Penalty		Low		
		Medium		
		High		

If you have questions about this bulletin, call Oregon OSHA at 503-378-3272 or 800-922-2689.

_____
(Administrator - Printed name)

_____ _____
(Administrator - Signature) Date

Statutory/Other Authority: ORS 654.025(2) & 656.726(4)
Statutes/Other Implemented: ORS 654.001 - 654.295
History:
OSHA 3-2023, filed 11/22/2023, effective 01/01/2024
OR-OSHA Administrative Order 1-2024, filed 9/11/24, effective 9/11/24.

437-001-0170 Determination of Penalty – Failure to Report an Occupational Fatality, Catastrophe, or Accident

If an employer fails to report an occupational fatality, catastrophe, or accident as provided in OAR 437-001-0704, a penalty of not less than $250 and not greater than the maximum penalty for a [~~serious-rated~~] violation in accordance with OAR 437-001-0145(2), as adjusted annually in accordance with OAR 437-001-0142, shall be assessed.

Statutory/Other Authority: ORS 654.025(2) , 654.035 and 656.726(4).
Statutes/Other Implemented: ORS 654.001 through 654.295.
History: WCD Admin. Order, Safety 4-1981, filed 5-22-81 ef. 7-1-81.
APD Admin. Order 6-1987, filed 12-23-87, effective 1-1-88.
APD Admin. Order 7-1988, filed 6-17-88, effective 7-1-74.
OSHA 7-1992, filed 7/31/92, effective 10/1/92.
OSHA 7-2002, filed 11/15/02, effective 11/15/02.
OSHA 8-2017, filed 12/22/17, effective 1/1/18.
OSHA 13-2021, filed 11/1/21, effective 12/1/21.
OSHA 3-2023, filed 11/22/2023, effective 1/1/2024.
OR-OSHA Administrative Order 1-2024, filed 9/11/24, effective 9/11/24.

437-001-0171 Determination of Penalty – Failure to Register a Farm Labor Camp/Facility

If an operator, employer, or contractor fails to register a Farm Labor Camp or facility with Oregon OSHA as required in Division 4/J, OAR 437-004-1120(5)(b), a penalty of not less than $250 and not greater than the maximum penalty for a [~~serious-rated~~] violation in accordance with OAR 437-001-0145(2), as adjusted annually in accordance with OAR 437-001-0142, shall be assessed.

Statutory/Other Authority: ORS 654.025(2) , 654.035 and 656.726(4).
Statutes/Other Implemented: ORS 315.164, 658.750, 658.755, 658.780, 658.785, 658.805, 658.810 and 658.825.
History: OSHA 10-1995, filed 11/29/95, effective 11/29/95.
OSHA 6-2003, filed 11/26/03, effective 11/26/03.
OSHA 8-2017, filed 12/22/17, effective 1/1/18.
OSHA 5-2018, filed 11/29/18, effective 12/17/18.
OSHA 13-2021, filed 11/1/21, effective 12/1/21.
OSHA 3-2023, filed 11/22/2023, effective 1/1/2024.
OR-OSHA Administrative Order 1-2024, filed 9/11/24, effective 9/11/24.

437-001-0180 Determination of Penalty – Relating to Red Warning Notice

Any employer who violates or directs another to violate OAR 437-001-0096(3) or (4) shall be assessed a civil penalty of not less than $250 and not more than maximum penalty for a [~~serious-rated~~] violation in accordance with OAR 437-001-0145(2), as adjusted annually in accordance with OAR 437-001-0142.

Statutory/Other Authority: ORS 654.025(2) , 654.035 and 656.726(3).
Statutes/Other Implemented: ORS 654.001 to 654.295.
History: WCD Admin. Order, Safety 5-1978, filed 6-22-78, effective 8-15-78.

APD Admin. Order 6-1987, filed 12-23-87, effective 1-1-88.
APD Admin. Order 7-1988, filed 6-17-88, effective 7-1-74.
OSHA 13-2021, filed 11/1/21, effective 12/1/21.
OSHA 3-2023, filed 11/22/2023, effective 1/1/2024.
OR-OSHA Administrative Order 1-2024, filed 9/11/24, effective 9/11/24.

437-001-0201 Determination of Penalty – Relating to Field Sanitation

The Administrator shall assess a minimum civil penalty of not less than $250 and not greater than the maximum penalty for a [~~serious-rated~~] violation in accordance with OAR 437-001-0145(2), as adjusted annually in accordance with OAR 437-001-0142, to employers of workers who are engaged in field activities for the growing and harvesting of food crops intended for human consumption, who substantially fail to comply with OAR 437-004-1110 in Division 4, Agriculture.

Statutory/Other Authority: ORS 654.025(2) and 656.726[(~~3~~)]**(4).**
Statutes/Other Implemented: ORS 654.001 through 654.295.
History: WCD Admin. Order, Safety 9-1986, filed 10-7-86, effective 12-1-86.
APD Admin. Order 6-1987, filed 12-23-87, effective 1-1-88.
APD Admin. Order 7-1988, filed 6-17-88, effective 7-1-74.
OSHA 7-1999, filed 7/15/99, effective 7/15/99.
OSHA 3-2023, filed 11/22/2023, effective 1/1/2024.
OR-OSHA Administrative Order 1-2024, filed 9/11/24, effective 9/11/24.

437-001-0203 Determination of Penalty – Relating to Violations Which Have No Probability and Severity

(1) Safety and Health Protection on the Job Poster – If the employer has not displayed the poster, a minimum penalty of $100 may be assessed.

(2) Annual Summary – If an employer fails to post the summary portion of the OSHA 300 Form no later than February 1 of the year following the year covered by the records and keep it posted until April 30 in accordance with 437-001-0700(17)(e), a minimum penalty of $200 may be assessed.

(3) Citation – If an employer fails to post the citation after receipt, a minimum penalty of $200 may be assessed.

(4) OSHA 300 and DCBS 801 Forms – If the employer does not maintain the Log and Summary of Occupational Injuries and Illnesses, OSHA 300 Form, and the Supplementary Record, DCBS Form 801 or equivalent, a minimum penalty of $100 may be assessed for each OSHA form not maintained.

(5) Access to Records – If the employer fails upon request to provide records for inspection and copying by any authorized representative of Oregon OSHA or by any employee, former employee, or authorized representative of employees, a minimum penalty of $100 may be assessed for each form not made available.

(6) Flush Toilets/Warm Water Hand Washing Facilities – If an employer fails to provide flush toilets or warm water hand washing facilities on a construction site according to OAR 437-003-0020 in 437, [~~d~~]**D**ivision 3, Construction, a penalty of not less than $200, nor more than the maximum other than serious civil penalty in accordance with OAR 437-001-0145(2), as adjusted annually in accordance with OAR 437-001-0142, shall be assessed.

Note: Forms referenced are available from the agency.

Statutory/Other Authority: ORS 654.025(2) and 656.726(4).
Statutes/Other Implemented: ORS [~~ORS 654.086~~]**654.001-654.295.**
History: APD Admin. Order 6-1987, filed 12-23-87, effective 1-1-88.
APD Admin. Order 7-1988, filed 6-17-88, effective 7-1-74.
OSHA 7-1992, filed 7/31/92, effective 10/1/92.
OSHA 9-1995, filed 11/29/95, effective 11/29/95.
OSHA 11-2001, filed 9/14/01, effective 1/1/02.
OSHA 6-2003, filed 11/26/03, effective 11/26/03.
OSHA 9-2008, filed 9/19/08, effective 1/1/09.
OSHA 5-2018, filed 11/29/18, effective 12/17/18.
OSHA 3-2023, filed 11/22/2023, effective 1/1/2024.
OR-OSHA Administrative Order 1-2024, filed 9/11/24, effective 9/11/24.

437-001-0700 Recording Workplace Injuries and Illnesses

(1) Purpose. This rule requires employers to record work-related fatalities, injuries, and illnesses.

Note: Recording a work-related injury, illness, or fatality does not assign fault to anybody, does not prove the violation of an OSHA rule, and does not establish the employee's eligibility for workers' compensation or other benefits.

(2) Scope. This standard covers all employers covered by the Oregon Safe Employment Act, except for the exemptions below.

(3) Exemptions.

(a) If your company never had more than ten (10) employees during the last calendar year, including temporary employees, you do not need to keep Oregon OSHA injury and illness records unless the Director informs you in writing that you must keep records. The exemption for size is based on the number of employees in the entire company within the state of Oregon.

(b) If your company had more than ten (10) employees at any time during the last calendar year, you must keep Oregon OSHA injury and illness records unless your business is in a specific low hazard retail, service, finance, insurance, or real estate industry in Table 1. If so, you do not need to keep Oregon OSHA injury and illness records unless the government asks you to keep the records under 437-001-0700(22).

(c) If one or more of your company's establishments are classified in a nonexempt industry, you must keep Oregon OSHA injury and illness records for all of such establishments unless your company is exempted because of size under 437-001-0700(3)(a). If a company has several business establishments engaged in different classes of business activities, some of the company's establishments may be required to keep records, while others may be exempt.

(4) Alternate or Duplicate Records. If you create records to comply with another government agency's injury and illness recordkeeping requirements, those records meet Oregon OSHA's recordkeeping requirements if Oregon OSHA accepts the other agency's records under a memorandum of understanding with that agency, or if the other agency's records contain the same information as this standard requires you to record. Contact Oregon OSHA for help in determining if your records meet Oregon OSHA's requirements.

Table 1 - Exempt industries

Employers do not need to keep Oregon OSHA injury and illness records for any establishment in the following 2007 North American Industry Classification System (NAICS) codes. Subsequent codes that are added with further revisions of the NAICS codes would apply to this exemption list, unless Oregon OSHA or the Department of Consumer and Business Services asks them in writing to keep these records.

NAICS Code	Industry Description
4412	Other Motor Vehicle Dealers
4431	Electronics and Appliance Stores
4461	Health and Personal Care Stores
4471	Gasoline Stations
4481	Clothing Stores
4482	Shoe Stores
4483	Jewelry, Luggage, and Leather Goods Stores
4511	Sporting Goods, Hobby, and Musical Instrument Stores
4512	Book, Periodical, and Music Stores
4531	Florists
4532	Office Supplies, Stationary, and Gift Stores
4812	Nonscheduled Air Transportation
4861	Pipeline Transportation of Crude Oil
4862	Pipeline Transportation of Natural Gas
4869	Other Pipeline Transportation
4879	Scenic and Sightseeing Transportation, Other
4885	Freight Transportation Arrangement
5111	Newspaper, Periodical, Book, and Directory Publishers
5112	Software Publishers
5121	Motion Picture and Video Industries
5122	Sound Recording Industries
5151	Radio and Television Broadcasting
5172	Wireless Telecommunications Carriers (except Satellite)
5173	Telecommunications Resellers
5179	Other Telecommunications
5181	Internet Service Providers and Web Search Portals
5182	Data Processing, Hosting, and Related Services
5191	Other Information Services
5211	Monetary Authorities - Central Bank
5221	Depository Credit Intermediation
5222	Nondepository Credit Intermediation
5223	Activities Related to Credit Intermediation
5231	Securities and Commodity Contracts Intermediation and Brokerage
5232	Securities and Commodity Exchanges
5239	Other Financial Investment Activities
5241	Insurance Carriers

NAICS Code	Industry Description
5242	Agencies, Brokerages, and Other Insurance Related Activities
5251	Insurance and Employee Benefit Funds
5259	Other Investment Pools and Funds
5312	Offices of Real Estate Agents and Brokers
5331	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)
5411	Legal Services
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services
5413	Architectural, Engineering, and Related Services
5414	Specialized Design Services
5415	Computer Systems Design and Related Services
5416	Management, Scientific, and Technical Consulting Services
5417	Scientific Research and Development Services
5418	Advertising and Related Services
5511	Management of Companies and Enterprises
5611	Office Administrative Services
5614	Business Support Services
5615	Travel Arrangement and Reservation Services
5616	Investigation and Security Services
~~[6111~~	~~Elementary and Secondary Schools]~~
6112	Junior Colleges
6113	Colleges, Universities, and Professional Schools
6114	Business Schools and Computer and Management Training
6115	Technical and Trade Schools
~~[6116~~	~~Other Schools and Instruction]~~
~~[6117~~	~~Educational Support Services]~~
6211	Offices of Physicians
6212	Offices of Dentists
6213	Offices of Other Health Practitioners
6214	Outpatient Care Centers
6215	Medical and Diagnostic Laboratories
6244	Child Day Care Services
7114	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures
7115	Independent Artists, Writers, and Performers
7213	Rooming and Boarding Houses
7221	Full-Service Restaurants
7222	Limited-Services Eating Places
7224	Drinking Places (Alcoholic Beverages)
8112	Electronic and Precision Equipment Repair and Maintenance
8114	Personal and Household Goods Repair and Maintenance
8121	Personal Care Services
8122	Death Care Services
8131	Religious Organizations
8132	Grantmaking and Giving Services
8133	Social Advocacy Organizations
8134	Civic and Social Organizations
8139	Business, Professional, Labor, Political, and Similar Organizations

(5) Recording Criteria and Forms. Each employer required to keep records of fatalities, injuries, and illnesses must record each fatality, injury, and illness that:

(a) Is work-related; and
(b) Is a new case; and

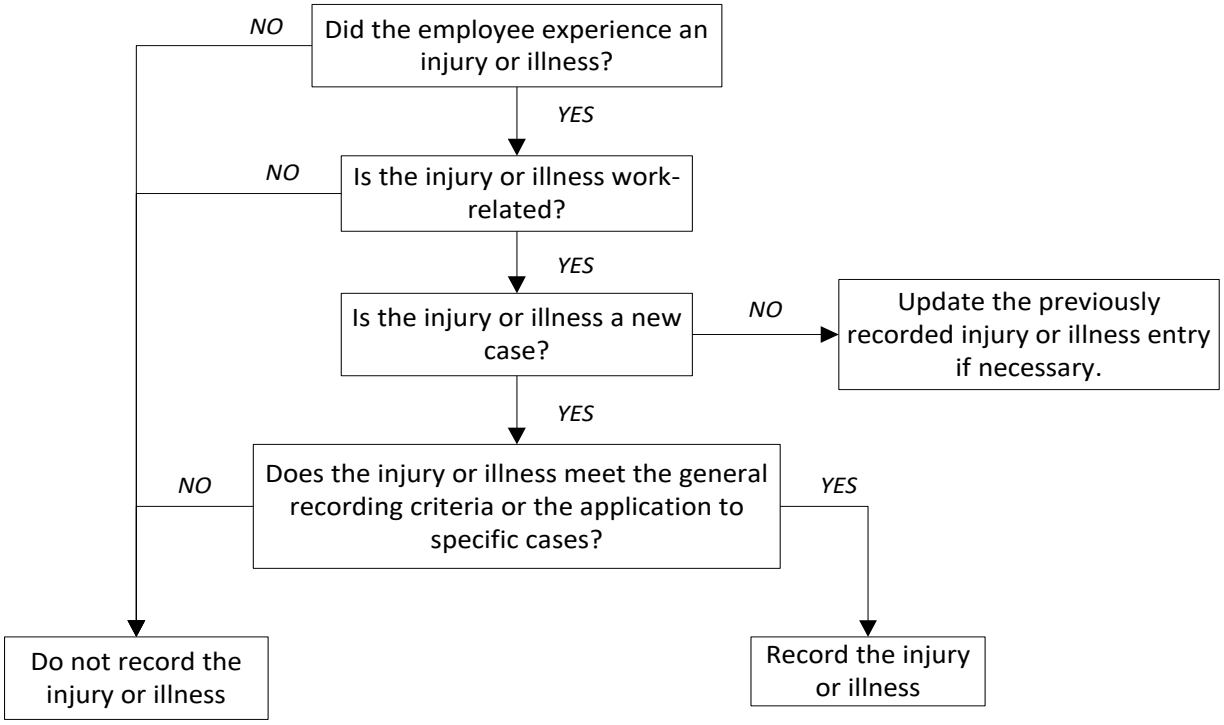
(c) Meets one or more of the general recording criteria of OAR 437-001-0700(8) or the application to specific cases of OAR 437-001-0700(9) through (12), see Table 2.

Note: The decision tree for recording work-related injuries and illnesses below shows the steps involved in making this determination, see Figure 1.

Table 2 - Related rules

This table indicates which sections of the rule address each topic.		
(i)	Determination of work-relatedness.	See 437-001-0700(6)
(ii)	Determination of a new case.	See 437-001-0700(7)
(iii)	General recording criteria.	See 437-001-0700(8)
(iv)	Additional criteria. (Needlestick and sharps injury cases, tuberculosis cases, hearing loss cases, medical removal cases, and musculoskeletal disorder cases)	See 437-001-0700(9) through (12)

Figure 1 -Decision tree



(6) Work-Related. You must consider an injury or illness to be work-related if an event or exposure in the work environment either caused or contributed to the resulting condition or significantly aggravated a pre-existing injury or illness. You must presume work-relatedness for injuries and illnesses resulting from events or exposures occurring in the work environment, unless an exception in Table 3 specifically applies.

(a) Oregon OSHA defines the work environment as the establishment and other locations where one or more employees work or are present as a condition of their employment.

(b) If it is not obvious where the precipitating event occurred you must evaluate the employee's work duties and environment to decide whether events or exposures in the work environment either caused or contributed to the condition or significantly aggravated a pre-existing condition.

(c) A pre-existing injury or illness is significantly aggravated when an event or exposure in the work environment results in (A) through (D) below. Oregon OSHA considers an injury or illness to be a pre-existing if it resulted solely from a non-work-related event or exposure that occurred outside the work environment.

(A) Death, provided that the pre-existing injury or illness would likely not have resulted in death but for the occupational event or exposure.
(B) Loss of consciousness, provided that the pre-existing injury or illness would likely not have resulted in loss of consciousness but for the occupational event or exposure.
(C) One or more days away from work, or days of restricted work, or days of job transfer that otherwise would not have occurred but for the occupational event or exposure.
(D) Medical treatment in a case where no medical treatment was needed for the injury or illness before the workplace event or exposure, or a change in medical treatment was necessitated by the workplace event or exposure.

(d) An injury or illness occurring in the work environment that falls under one of the following exceptions found in Table 3 is not work-related, and is not recordable.

Table 3 - Work environment exceptions

Do not record injuries and illnesses if . . .
At the time of the injury or illness, the employee was present in the work environment as a member of the general public rather than as an employee.
The injury or illness involves signs or symptoms that surface at work but result solely from a nonwork-related event or exposure that occurs outside the work environment.
The injury or illness results solely from voluntary participation in a wellness program or in a medical, fitness, or recreational activity such as blood donation, physical examination, flu shot, exercise class, racquetball, or baseball.
The injury or illness is solely the result of an employee eating, drinking, or preparing food or drink for personal consumption (whether bought on the employer's premises or brought in). For example, if the employee is injured by choking on a sandwich while in the employer's establishment, the case is not work-related. Note: If the employee becomes ill by ingesting food contaminated by workplace contaminants (such as lead), or gets food poisoning from food supplied by the employer, the case is work-related.

Do not record injuries and illnesses if . . .
The injury or illness is solely the result of an employee doing personal tasks (unrelated to their employment) at the establishment outside of the employee's assigned working hours.
The injury or illness is solely the result of personal grooming, self-medication for a nonwork-related condition, or is intentionally self-inflicted.
The injury or illness is caused by a motor vehicle accident and occurs on a company parking lot or company access road while the employee is commuting to or from work.
The illness is the common cold or flu (Note: contagious diseases such as tuberculosis, brucellosis, hepatitis A, or plague are work-related if the employee is infected at work).
The illness is a mental illness. Mental illness is not work-related unless the employee voluntarily provides the employer with an opinion from a physician or other licensed health care professional with appropriate training and experience (psychiatrist, psychologist, psychiatric nurse practitioner, etc.) stating that the employee has a work-related mental illness.

(e) Travel. Injuries or illnesses occurring during travel are work-related if the employee was engaged in work activities in the interest of the employer and it is not one of the exceptions in Table 4 - Travel status exemptions.

Table 4 - Travel status exemptions

Do not record injuries or illnesses that occur when the employee is on travel status if they meet one of the exceptions listed below.	
If the employee . . .	You may use the following to determine if an injury or illness is work-related.
checked into a hotel or motel for one or more days.	When a traveling employee checks into a hotel, motel, or other temporary residence, they establish a "home away from home." You must evaluate the employee's activities after they check into the hotel, motel, or other temporary residence for their work-relatedness in the same manner as you evaluate the activities of a nontraveling employee. When the employee checks into the temporary residence, they have left the work environment. When the employee begins work each day, they re-enter the work environment. If the employee has established a "home away from home" and is reporting to a fixed worksite each day, you also do not consider injuries or illnesses work-related if they occur while the employee is commuting between the temporary residence and the job location.
took a detour for personal reasons.	Injuries or illnesses are not work-related if they occur while the employee is on a personal detour from a reasonably direct route of travel (e.g., took a side trip for personal reasons).

(f) Work at home. Injuries and illnesses that occur while an employee works at home, including work in a home office, is work-related if the injury or illness relates directly to the work rather than to the general home environment or setting.

(g) Former employees. If you are notified that a former employee had a work related injury or illness when in your employment, record the date of the incident on the appropriate OSHA 300 log for the date of the injury. If the date is not known, use the last day of employment.

(7) New Cases. An injury or illness is a "new case" if:

(a) The employee has no previous recorded injury or illness of the same type that affects the same part of the body, or

(b) The employee previously had a recorded injury or illness of the same type that affected the same part of the body but recovered completely (all signs and symptoms disappeared) from the previous injury or illness and an event or exposure in the work environment caused the signs or symptoms to reappear.

(A) For occupational illnesses where the signs or symptoms may recur or continue in the absence of a workplace exposure, record the case only once when it is diagnosed. Examples include occupational cancer, asbestosis, byssinosis, and silicosis.

(B) You are not required to seek the advice of a physician or other licensed health care professional. If you do seek such advice, you must follow their recommendation about whether the case is a new case or a recurrence.

(8) General Recording Criteria. A work-related injury or illness is recordable if it results in any of the following: death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, or loss of consciousness. You must record a case if it involves a significant injury or illness diagnosed by a physician or other licensed health care professional, even if it does not result in death, days away from work, restricted work or job transfer, medical treatment beyond first aid, or loss of consciousness.

Note: Oregon OSHA believes that most significant injuries and illnesses will result in one of the events listed below. However, there are some significant injuries, such as a punctured eardrum or a fractured toe or rib, for which neither medical treatment nor work restrictions may be recommended. In addition, there are some significant progressive diseases, such as byssinosis, silicosis, and some types of cancer, for which medical treatment or work restrictions may not be recommended at the time of diagnosis but are likely to be recommended as the disease progresses. Cancer, chronic irreversible diseases, fractured or cracked bones, and punctured eardrums are generally considered significant injuries and illnesses, and must be recorded at the initial diagnosis even if medical treatment or work restrictions are not recommended, or are postponed, in a particular case.

Table 5 - General recording criteria

Record a work-related injury or illness if it results in one or more of the following:		
(i)	Death,	See 437-001-0700(8)(a)
(ii)	Days away from work,	See 437-001-0700(8)(b)
(iii)	Restricted work or transfer to another job,	See 437-001-0700(8)(c)
(iv)	Medical treatment beyond first aid,	See 437-001-0700(8)(d)
(v)	Loss of consciousness,	See 437-001-0700(8)(e)
(vi)	A significant injury or illness diagnosed by a physician or other licensed health care professional.	See 437-001-0700(8)(f)

(a) Death. You must record an injury or illness that results in death by entering a check mark on the OSHA 300 Log in the space for cases resulting in death.

Note: You must also report any work-related fatality to Oregon OSHA within 8 hours. See OAR 437-001-0704.

(b) Days Away from Work. When an injury or illness involves one or more days away from work, you must record the injury or illness on the OSHA 300 Log with a check mark in the space for cases involving days away and an entry of the number of calendar days away from work in the number of days column. If the employee is out for an extended period of time, you must enter an estimate of the days that the employee will be away, and update the day count when the actual number of days is known.

(A) Begin counting days away on the day after the injury occurred or the illness began.
(B) End the count of days away from work on the date the physician or other licensed health care professional recommends that the employee return to work. This applies regardless of whether the employee returns earlier or later than recommended. If there is no recommendation from the physician or licensed health care professional, enter the actual number of days the employee is off work.
(C) You must count the number of calendar days the employee was unable to work as a result of the injury or illness, regardless of whether or not the employee was scheduled to work on those day(s). Include weekend days, holidays, vacation days or other days off in the total number of days recorded if the employee would not have been able to work on those days because of a work-related injury or illness.
(D) You may stop tracking of the number of calendar days away from work once the total reaches 180 days away from work and/or days of job transfer or restriction. Entering 180 in the total days away column is adequate.
(E) If the employee leaves your company for a reason unrelated to the injury or illness, such as retirement, a plant closing, or to take another job, you may stop counting days away from work or days of restriction/job transfer. If the employee leaves your company because of the injury or illness, you must estimate the total number of days away or days of restriction/job transfer and enter the day count on the 300 Log.
(F) You must enter the number of calendar days away for the injury or illness on the OSHA 300 Log that you prepare for the year in which the incident occurred. If the time off extends into a new year, estimate the number of days for that year and add that amount to the days from the year of occurrence. Do not split the days between years and enter amounts on the logs for two different years. Use this number to calculate the total for the annual summary, and then update the initial log entry later when the day count is known or reaches the 180-day cap.

(c) Restricted Work or Job Transfer. When an injury or illness involves restricted work or job transfer but does not involve death or days away from work, you must record the injury or illness on the OSHA 300 Log by placing a check mark in the space for job transfer or restriction and an entry of the number of restricted or transferred days in the restricted workdays column. Restricted work occurs when, as the result of a work-related injury or illness:

(A) You keep the employee from performing one or more of the routine functions of their job, or from working the full day that they would otherwise work; or

(B) A physician or other licensed health care professional recommends that the employee not perform one or more of the routine functions of their job, or not work the full workday that they would otherwise work.

Note: For recordkeeping purposes, an employee's routine functions are those work activities the employee regularly performs at least once per week.

(C) A recommended work restriction is recordable only if it affects one or more of the employee's routine job functions. To determine whether this is the case, you must evaluate the restriction in light of the routine functions of the injured or ill employee's job.
(D) A partial day of work is recorded as a day of job transfer or restriction for recordkeeping purposes, except for the day on which the injury occurred or the illness began.
(E) Record job transfer and restricted work cases in the same box on the OSHA 300 Log.
(F) Count days of job transfer or restriction in the same way you count days away from work. The only difference is that, if you permanently assign the injured or ill employee to a job modified or permanently changed to eliminate the routine functions the employee was restricted from performing, you may stop the day count when the modification or change is permanent. You must count at least 1-day of restricted work or job transfer for such cases.

(d) Medical Treatment. If a work-related injury or illness results in medical treatment beyond first aid, you must record it on the OSHA 300 Log. If the employee received medical treatment but remained at work without transfer or restriction and the injury or illness did not involve death, one or more days away from work, one or more days of restricted work, or one or more days of job transfer, you enter a check mark in the box for other recordable cases.

Note: You must record the case even if the injured or ill employee does not follow the physician or other licensed health care professional's recommendation.
(A) "Medical treatment" is the management and care of a patient to combat disease or disorder. For this rule, medical treatment does not include:

(i) Visits to a physician or other licensed health care professional solely for observation or counseling;
(ii) The conduct of diagnostic procedures, such as x-rays and blood tests, including the administration of prescription medications solely for diagnostic purposes (e.g., eye drops to dilate pupils); or
(iii) "First aid" as in (B) below.

(B) First aid is any of the conditions listed in Table 6. This is a complete list of all first aid treatments for this standard. These treatments are considered first aid regardless of the professional status of the person providing the treatment.

Table 6 - First aid treatment

(A)	Using a nonprescription medication at nonprescription strength (for medications available in both prescription and nonprescription form, a recommendation by a physician or other licensed health care professional to use a nonprescription medication at prescription strength is medical treatment for recordkeeping purposes);	(H)	Drilling of a fingernail or toenail to relieve pressure, or draining fluid from a blister;
(B)	Administering tetanus immunizations (other immunizations, such as Hepatitis B vaccine or rabies vaccine, is medical treatment);	(I)	Using eye patches;
(C)	Cleaning, flushing or soaking wounds on the surface of the skin;	(J)	Removing foreign bodies from the eye using only irrigation or a cotton swab;
(D)	Using wound coverings such as bandages, Band-Aids™, gauze pads, etc.; or using butterfly bandages or Steri-Strips™ (other wound closing devices such as sutures, staples, etc. are medical treatment);	(K)	Removing splinters or foreign material from areas other than the eye by irrigation, tweezers, cotton swabs or other simple means;
(E)	Using hot or cold therapy;	(L)	Using finger guards;
(F)	Using any nonrigid means of support, such as elastic bandages, wraps, nonrigid back belts, etc. (devices with rigid stays or other systems designed to immobilize parts of the body are medical treatment for recordkeeping purposes);	(M)	Using massages (physical therapy or chiropractic treatment are medical treatment for recordkeeping purposes); or
(G)	Using temporary immobilization devices while transporting an accident victim (e.g., splints, slings, neck collars, back boards, etc.).	(N)	Drinking fluids for relief of heat stress.
This is a complete list of all first aid treatments for this standard. These treatments are considered first aid regardless of the professional status of the person providing the treatment.			

(e) Loss of Consciousness. You must record a work-related injury or illness if the worker becomes unconscious, regardless of the length of time they remain unconscious.

(f) Other Injuries and Illnesses. Work-related cases involving cancer, chronic irreversible disease, a fractured or cracked bone, or a punctured eardrum must always be recorded under the general criteria at the time of occurrence.

(9) Needlestick and Sharps Injury Recording Criteria.

(a) When an injury is diagnosed later as an infectious bloodborne disease, you must update the classification on the 300 log to reflect the new status or classification.

(b) You must record all work-related needlestick injuries and cuts from sharp objects contaminated with another person's blood or other potentially infectious material (as defined by 1910.1030). You must enter the case on the OSHA 300 Log as an injury. To protect the employee's privacy, do not enter the employee's name on the OSHA 300 Log (see the requirements for privacy cases in OAR 437-001-0700(14)).

Note: If you have an exposure incident that is not a needlestick, you must still record it if it results in death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, loss of consciousness, or diagnosis of a significant injury or illness, such as HIV, hepatitis B, or hepatitis C.

(10) Medical Removal Recording Criteria. If another Oregon OSHA standard requires the medical removal of an employee, you must record the case on the OSHA 300 Log.

(a) You must enter each medical removal case on the OSHA 300 Log as either a case involving days away from work or a case involving restricted work activity, depending on how you decide to comply with the medical removal requirement. If the medical removal is the result of a chemical exposure, you must enter the case on the OSHA 300 Log by checking the "poisoning" column.

(b) If the case involves voluntary medical removal before reaching the medical removal levels required by an Oregon OSHA standard, do not record the case on the OSHA 300 Log.

(11) Occupational Hearing Loss Recording Criteria.

(a) Hearing loss must be recorded on the OSHA 300 Log by checking the hearing loss column when:

(A) An annual audiogram reveals a Standard Threshold Shift (STS) in either or both ears; and
(B) The hearing level in the same ear is 25 dB above audiometric zero.

Note: For the ease of the reader the definitions for STS and audiometric zero are provided here.
Standard Threshold Shift (STS) – A change in hearing threshold relative to the baseline audiogram of an average of 10 dB or more in either ear.
Audiometric Zero – The lowest sound pressure level that the average, young adult with normal hearing can hear.

(b) determining whether an STS has occurred, you may correct for the age of the employee. Use the appropriate table in Appendix A to determine the age adjustment. If the STS is 10 dB or more after the age correction, it still meets the criteria for recordability. Employers may use the flowchart in Appendix B (non-mandatory) to determine if hearing loss is recordable on the OSHA 300 form.

(c) If you retest the employee's hearing within 30 days of the first test, and the retest does not confirm the recordable STS, you are not required to record the hearing loss case on the OSHA 300 Log. If the retest confirms the recordable STS, you must record the hearing loss case within 7 calendar days of the retest. If subsequent audiometric testing performed under the testing requirements of the noise standard (1910.95) indicates that an STS is not persistent, you may erase, delete, or line-out the recorded entry.

(d) If a physician or other licensed health care professional determines, following the rules set out in OAR 437-001-0700 (6), that the hearing loss is not work-related or has not been significantly aggravated by occupational noise exposure, the case is not work-related. Do not record it on the OSHA 300 Log.

(12) Tuberculosis Reporting Criteria. If any of your employees has an occupational exposure to anyone with a known case of active tuberculosis (TB), and that employee subsequently develops a tuberculosis infection, as evidenced by a positive skin test or diagnosis by a physician or other licensed health care professional, you must record the case on the OSHA 300 Log by checking the "respiratory condition" column.

(a) Do not record a pre-employment positive skin test because the exposure was not in your workplace.

(b) Line out or erase a recorded case if you prove that:

(A) The worker lives in a household with a person diagnosed with active TB;
(B) The Public Health Department identifies the worker as a contact of an individual with a case of active TB unrelated to the workplace; or
(C) A medical investigation shows that the employee's infection was caused by exposure to TB away from work, or proves that the case was not related to the workplace TB exposure.

(13) Removed.

(14) Forms.

(a) You must use OSHA 300, 300A, and DCBS Form 801, or equivalent forms, for recordable injuries and illnesses. The OSHA 300 form is the Log of Work-Related Injuries and Illnesses, the 300A is the Summary of Work-Related Injuries and Illnesses, and the DCBS Form 801 or equivalent is the Worker's and Employer's Report of Occupational Injury or Disease. The OSHA 300 and 300A Summary forms must be kept on a calendar year basis.

(A) Even if you are exempt from recordkeeping, you must have at each establishment, a copy of DCBS Form 801 or equivalent for each occupational injury or illness that may result in a compensable claim.
(B) You must enter information about your business at the top of the OSHA 300 Log, enter a one or two line description for each recordable injury or illness, and summarize this information on the OSHA 300A Summary form at the end of the year.
(C) You must complete a DCBS Form 801 or equivalent form, for each recordable injury or illness entered on the OSHA 300 Log.
(D) You must enter each recordable injury or illness on the OSHA 300 Log and DCBS Form 801 or equivalent within 7 calendar days of receiving information that a recordable injury or illness has occurred.
(E) An equivalent form is one that has the same information, is as readable and understandable, and is completed using the same instructions as the OSHA form it replaces. Many employers use an insurance form instead of the DCBS Form 801, or supplement an insurance form by adding any additional information required by OSHA.
(F) You may use a computer to keep your records if it can produce equivalent forms when needed.

(G) Privacy Concern Cases. If you have a “privacy concern case,” do not enter the employee’s name on the OSHA 300 Log. Instead, enter “privacy case” in the space normally used for the employee’s name. This will protect the privacy of the injured or ill employee when another employee, a former employee, or an authorized employee representative has access to the OSHA 300 Log. You must keep a separate, confidential list of the case numbers and employee names for your privacy concern cases so you can update the cases and provide the information to the government if asked to do so.

(H) The following injuries or illnesses are privacy concern cases:

(i) An injury or illness to an intimate body part or the reproductive system;
(ii) An injury or illness resulting from a sexual assault;
(iii) Mental illnesses;
(iv) HIV infection, hepatitis, or tuberculosis;
(v) Needlestick injuries and cuts from sharp objects contaminated with another person’s blood or other potentially infectious material; and
(vi) Other illnesses, if the employee voluntarily requests that his or her name not be entered on the log.

Note: This is a complete list of all injuries and illnesses that are privacy concern cases.

(I) If you reasonably believe that information describing the privacy concern case may be personally identifiable even though the employee’s name is omitted, use discretion in describing the injury or illness on both the OSHA 300 and DCBS 801 Forms. You must enter enough information to identify the cause of the incident and the general severity of the injury or illness, but you do not need to include details of an intimate or private nature. For example, describe a sexual assault case as “injury from assault,” or an injury to a reproductive organ could be described as “lower abdominal injury.”

(J) If you voluntarily disclose the forms to persons other than government representatives, employees, former employees or authorized representatives, you must remove or hide the employees’ names and other personally identifying information, except for the following cases:

(i) To an auditor or consultant hired by the employer to evaluate the safety and health program;
(ii) To the extent necessary for processing a claim for workers’ compensation or other insurance benefits; or
(iii) To a public health authority or law enforcement agency for uses and disclosures for which consent, an authorization, or opportunity to agree or object is not required under Department of Health and Human Services Standards for Privacy of Individually Identifiable Health Information, 45 CFR.164.512.

(b) In addition, health care employers as defined in ORS 654.412 must record assaults against employees on the Health Care Assault Log. See OAR 437-001-0706.

(15) Multiple Business Establishments. You must keep a separate OSHA 300 Log for each establishment that you expect to operate for 1-year or longer.

(a) You may keep one OSHA 300 Log that covers all of your short-term establishments. You may also include the short-term establishments' recordable injuries and illnesses on an OSHA 300 Log that covers short-term establishments for individual company divisions or geographic regions.

(b) You may keep the records for an establishment at your headquarters or other central location if you can:

(A) Transmit information about the injuries and illnesses from the establishment to the central location within 7 calendar days of receiving information that a recordable injury or illness has occurred; and

(B) Produce and send the records from the central location to the establishment within the time frames required by OAR 437-001-0700(22) when you are required to provide records to a government representative, employees, former employees or employee representatives.

(c) You must link each employee with one of your establishments, for recordkeeping purposes. You must record the injury and illness on the OSHA 300 Log of the injured or ill employee's establishment, or on an OSHA 300 Log that covers that employee's short-term establishment.

(d) If the injury or illness occurs at one of your establishments, you must record the injury or illness on the OSHA 300 Log of the establishment where the injury or illness occurred. If the employee is injured or becomes ill and is not at one of your establishments, you must record the case on the OSHA 300 Log at the establishment where the employee normally works.

(16) Covered Employees. You must record on the OSHA 300 Log the recordable injuries and illnesses of all employees on your payroll, whether they are labor, executive, hourly, salary, part-time, seasonal, or migrant workers. You also must record the recordable injuries and illnesses that occur to employees who are not on your payroll if you supervise these employees on a day-to-day basis. If your business is organized as a sole proprietorship or partnership, the owner or partners are not considered employees for recordkeeping purposes.

(a) Record the injuries and illnesses to workers from temporary help agencies or employee leasing services only if you supervise these employees on a day-to-day basis.

(b) If a contractor's employee is under the day-to-day supervision of the contractor, the contractor is responsible for recording the injury or illness. If you supervise the contractor employee's work on a day-to-day basis, you must record the injury or illness.

(c) You and the temporary help service, employee leasing service, personnel supply service, or contractor should coordinate your efforts to make sure that each injury and illness is recorded only once: either on your OSHA 300 Log (if you provide day-to-day supervision) or on the other employer's OSHA 300 Log (if that company provides day-to-day supervision).

(17) Annual Summary and Posting Requirements. At the end of each calendar year, you must:

(a) Review the OSHA 300 Log to verify that the entries are complete and accurate, and correct any deficiencies identified.

(b) Use the OSHA 300A Summary form to create an annual summary of injuries and illnesses recorded on the OSHA 300 Log:

(A) Total the columns on the OSHA 300 Log (if you had no recordable cases, enter zeros for each column total); and
(B) Enter the calendar year covered, the company's name, establishment name, establishment address, annual average number of employees covered by the OSHA 300 Log, and the total hours worked by all employees covered by the OSHA 300 Log.
(C) If you are using an equivalent form other than the OSHA 300A Summary form, the summary you use must also include the employee access and employer penalty statements found on the OSHA 300A Summary form.

(c) Sign or have a representative sign the 300A Summary to certify that the OSHA 300 Log is correct to the best of the signer's knowledge. If the summary is signed by a person other than a company executive, a company executive must also review the OSHA 300 Log in order to be generally familiar with its contents. A company executive is:

(A) An owner of the company when the company is a sole proprietorship or partnership;
(B) An officer of the corporation;
(C) The highest ranking company official working at the establishment; or
(D) The immediate supervisor of the highest ranking company official working at the establishment.

(d) Post a copy of the 300A Summary form in each establishment in a conspicuous place or places where notices to employees are customarily posted. Ensure that the posted annual summary is not altered, defaced or covered by other material.

(e) Post the 300A Summary no later than February 1 of the year following the year covered by the records and keep it posted until April 30.

(f) When you maintain records for all of your establishments at your headquarters or other central location, each 300A Summary form must be specific to each separate establishment.

(18) Paperwork Retention and Updating.

(a) You must save the OSHA 300 Log, the privacy case list (if any), the 300A Summary form, and the DCBS Form 801 or equivalent forms for 5 years following the end of the calendar year that they cover.

(b) During the storage period, you must update your stored OSHA 300 Logs to include newly discovered recordable injuries or illnesses and to show any changes that have occurred in the classification of previously recorded injuries and illnesses. If the description or outcome of a case changes, you must remove or line out the original entry and enter the new information.

Note: For more information on retention of medical and exposure records, see 1910.1020.

(19) Change of Business Ownership. If your business changes ownership, you must record and report work-related injuries and illnesses only for the time you owned the establishment. You must transfer the records to the new owner. The new owner must save all records of the establishment kept by the prior owner, but need not update or correct the records of the prior owner.

(20) Prohibition against discrimination. Oregon Revised Statute 654.062(5) prohibits discrimination against an employee for reporting a work-related fatality, injury or illness. It also protects the employee who files a safety and health complaint, asks for access to this rule, records, or otherwise exercises any rights afforded by law or rule.

(21) Employee Involvement. You must involve your employees and their representatives in the recordkeeping system.

(a) You must establish a reasonable procedure for employees to report work-related injuries and illnesses promptly and accurately. A procedure is not reasonable if it would deter or discourage a reasonable employee from accurately reporting a workplace injury or illness.

(b) You must inform each employee of your procedure for reporting work related injuries and illnesses and tell each employee how they are to report an injury or illness to you.

(c) You must inform employees that they have the right to report work-related injuries and illnesses; and that employers are prohibited from discharging or in any manner discriminating against employees for reporting work-related injuries and illnesses.

(d) You must leave the names on the 300 Log. However, to protect the privacy of injured and ill employees, do not record the employee's name on the OSHA 300 Log for certain "privacy concern cases."

(e) You must provide limited access to your injury and illness records for your employees and their representatives.

(A) Your employees, former employees, their personal representatives, and their authorized collective bargaining representatives have the right to access the OSHA injury and illness records, in accordance with (B) through (E) below.

Note: A personal representative is anybody designated in writing by the employee or former employee, as well as the legal representative of a deceased or legally incapacitated employee.

(B) When an employee, former employee, personal representative, or authorized employee representative asks for copies of your current or stored OSHA 300 Log(s) for an establishment the employee or former employee has worked in, you must give the requester a copy of the relevant OSHA 300 Log(s) by the end of the next business day.

(C) When an employee, former employee, or personal representative asks for a copy of the DCBS Form 801 or equivalent describing an injury or illness to that employee or former employee, you must give the requester a copy of the DCBS Form 801 or equivalent containing that information by the end of the next business day.

(D) When an authorized employee representative asks for copies of the DCBS Form 801 or equivalent for an establishment where the agent represents employees under a collective bargaining agreement, you must give copies of those forms to the authorized employee representative within 7 calendar days. You are only required to give the authorized employee representative information from the releasable part of the DCBS Form 801 indicated in the "Worker" section. You must remove all other information from the copy of the DCBS Form 801 or equivalent form that you give to the authorized employee representative.

(E) You may not charge for these copies the first time. However, if one of the designated persons asks for additional copies, you may assess a reasonable charge for retrieving and copying the records.

(22) Providing Records to Government Representatives. When an authorized government representative asks for the records you keep in compliance with this standard, you must provide copies of the records within 4 business hours. Authorized government representatives are:

(a) A representative of the Oregon Department of Consumer and Business Services.

(b) A representative of the Secretary of Labor conducting an inspection or investigation under the Act.

(c) A representative of the Secretary of Health and Human Services (including the National Institute for Occupational Safety and Health - NIOSH) conducting an investigation under Section 20(b) of the Act.

(23) Requests from the Bureau of Labor Statistics or DCBS. If you receive a Survey of Occupational Injuries and Illnesses Form from the Bureau of Labor Statistics (BLS), or a BLS designee, or a request for data from the Oregon Department of Consumer and Business Services, you must promptly complete the form and return it following the instructions on the survey form.

(24) Electronic submission of injury and illness records to OSHA.

(a) If your establishment had 250 or more employees at any time during the previous calendar year, and you are required to maintain an OSHA 300 log per section (2) of this rule **except 6111 Elementary and Secondary Schools, 6116 Other Schools and Instruction, and 6117 Educational Support Services**, then you must electronically submit information from the OSHA Form 300A Summary of Work-Related Injuries and Illnesses to OSHA or OSHA's designee. You must submit the information once a year, no later than the date listed in subsection (24)(h) of the year after the calendar year covered by the forms.

(b) If your establishment had 20 or more employees but fewer than 250 employees at any time during the previous calendar year, and your establishment is classified in an industry listed in Table 7, then you must electronically submit information from OSHA Form 300A Summary of Work-Related Injuries and Illnesses to OSHA or OSHA's designee. You must submit the information once a year, no later than the date listed in subsection (24)(h) of the year after the calendar year covered by the form.

(c) If your establishment had 100 or more employees at any time during the previous calendar year, and your establishment is classified in an industry listed in Table 8, then you must electronically submit information from OSHA Forms 300 and DCBS Form 801 to OSHA or OSHA's designee. You must submit the information once a year, no later than the date listed in (24)(h) of this section of the year after the calendar year covered by the forms.

Note: If subsection (24)(c) applies then your establishment is also required to electronically submit the OSHA Form 300A summary in accord with either subsection (24)(a) or (24)(b) depending on the size of the establishment.

(d) For each establishment that is subject to these reporting requirements, you must provide the Employer Identification Number (EIN) used by the establishment and your legal company name.

Note: Each individual employed in the establishment at any time during the calendar year counts as one employee, including full-time, part-time, seasonal, and temporary workers.

(e) If you are required to submit information under subsection (24)(a), [~~or~~] (24)(b), or (24)(c), then you must submit the information once a year, by the date listed in subsection (24)(h) of the year after the calendar year covered by the form or forms. If you are submitting information because OSHA notified you to submit information as part of an individual data collection under subsection (24)(h), then you must submit the information as often as specified in the notification.

(f) You must submit the information electronically. Federal OSHA will provide a secure website for the electronic submission of information.

(g) If your enterprise or corporate office had ownership of or control over one or more establishments required to submit information under subsection (24)(a), (24)(b), or (24)(c), then the enterprise or corporate office may collect and electronically submit the information for the establishment(s).

(h) Reporting Dates. Beginning in 2020, establishments that are required to submit under subsection (24)(a), (24)(b)**, or** (24)(c) of this section will have to submit all of the required information by March 2 of the year after the calendar year covered by the form or forms (for example, by March 2, 2020, for the forms covering 2019).

Table 7- 24(b) Designated Industries

Annual Electronic Submission of OSHA Form 300A Summary of Work-Related Injuries and Illnesses by Establishments With 20-249 Employees in Designated Industries

NAICS	Industry
11	Agriculture, Forestry, Fishing and Hunting.
22	Utilities.
23	Construction.
31-33	Manufacturing.
42	Wholesale Trade.
4413	Automotive Parts, Accessories, and Tire Stores.
4421	Furniture Stores.
4422	Home Furnishings Stores.
4441	Building Material and Supplies Dealers.

NAICS	Industry
4442	Lawn and Garden Equipment and Supplies Stores.
4451	Grocery Stores.
4452	Specialty Food Stores.
4522	Department Stores.
4523	General Merchandize Stores including Warehouse Clubs and Supercenters.
4533	Used Merchandise Stores.
4542	Vending Machine Operators.
4543	Direct Selling Establishments.
4811	Scheduled Air Transportation.

NAICS	Industry
4841	General Freight Trucking.
4842	Specialized Freight Trucking.
4851	Urban Transit Systems.
4852	Interurban and Rural Bus Transportation.
4853	Taxi and Limousine Service.
4854	School and Employee Bus Transportation.
4855	Charter Bus Industry.
4859	Other Transit and Ground Passenger Transportation.
4871	Scenic and Sightseeing Transportation, Land.
4881	Support Activities for Air Transportation.
4882	Support Activities for Rail Transportation.
4883	Support Activities for Water Transportation.
4884	Support Activities for Road Transportation.
4889	Other Support Activities for Transportation.
4911	Postal Service.
4921	Couriers and Express Delivery Services.
4922	Local Messengers and Local Delivery.
4931	Warehousing and Storage.
5152	Cable and Other Subscription Programming.
5311	Lessors of Real Estate.
5321	Automotive Equipment Rental and Leasing.
5322	Consumer Goods Rental.
5323	General Rental Centers.
5617	Services to Buildings and Dwellings.
5621	Waste Collection.
5622	Waste Treatment and Disposal.
5629	Remediation and Other Waste Management Services.

NAICS	Industry
6219	Other Ambulatory Health Care Services.
6221	General Medical and Surgical Hospitals.
6222	Psychiatric and Substance Abuse Hospitals.
6223	Specialty (except Psychiatric and Substance Abuse) Hospitals.
6231	Nursing Care Facilities (Skilled Nursing Facilities).
6232	Residential Intellectual and Development Disability, Mental Health and Substance Abuse Facilities.
6233	Continuing Care Retirement Communities and Assisted Living Care Facilities for the Elderly.
6239	Other Residential Care Facilities.
6242	Community Food and Housing, and Emergency and Other Relief Services.
6243	Vocational Rehabilitation Services.
7111	Performing Arts Companies.
7112	Spectator Sports.
7121	Museums, Historical Sites, and Similar Institutions.
7131	Amusement Parks and Arcades.
7132	Gambling Industries.
7211	Traveler Accommodation.
7212	RV (Recreational Vehicle) Parks and Recreational Camps.
7223	Special Food Services.
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance.
8123	Dry-cleaning and Laundry Services.

Table 8 – 24(c) Designated Industries

Designated Industries for Annual Electronic Submission of information from OSHA Form 300 Log of Work-Related Injuries and Illnesses and DCBS Form 801 by Establishments With 100 or More Employees in Designated Industries.

Note: If subsection (24)(c) applies, then your establishment is also required to electronically submit the OSHA Form 300A summary in accord with either subsection (24)(a) or (24)(b) depending on the size of the establishment

NAICS	Industry	NAICS	Industry
1111	Oilseed and Grain Farming.	3161	Leather and Hide Tanning and Finishing.
1112	Vegetable and Melon Farming.	3162	Footwear Manufacturing.
1113	Fruit and Tree Nut Farming.	3211	Sawmills and Wood Preservation.
1114	Greenhouse, Nursery, and Floriculture Production.	3212	Veneer, Plywood, and Engineered Wood Product Manufacturing.
1119	Other Crop Farming.	3219	Other Wood Product Manufacturing.
1121	Cattle Ranching and Farming.	3261	Plastics Product Manufacturing.
1122	Hog and Pig Farming.	3262	Rubber Product Manufacturing.
1123	Hog and Pig Farming.	3271	Clay Product and Refractory Manufacturing.
1129	Other Animal Production.		
1133	Logging.	3272	Glass and Glass Product Manufacturing.
1141	Fishing.	3273	Cement and Concrete Product Manufacturing.
1142	Hunting and Trapping.		
1151	Support Activities for Crop Production.	3279	Other Nonmetallic Mineral Product Manufacturing.
1152	Support Activities for Animal Production.	3312	Steel Product Manufacturing from Purchased Steel.
1153	Support Activities for Forestry.		
2213	Water, Sewage and Other Systems.	3314	Nonferrous Metal (except Aluminum) Production and Processing.
2381	Foundation, Structure, and Building Exterior Contractors.	3315	Foundries.
3111	Animal Food Manufacturing	3321	Forging and Stamping.
3113	Sugar and Confectionery Product Manufacturing.	3323	Architectural and Structural Metals Manufacturing.
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing.	3324	Boiler, Tank, and Shipping Container Manufacturing.
3115	Dairy Product Manufacturing.	3325	Hardware Manufacturing.
3116	Animal Slaughtering and Processing.	3326	Spring and Wire Product Manufacturing.
3117	Seafood Product Preparation and Packaging.	3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing.
3118	Bakeries and Tortilla Manufacturing.	3328	Coating, Engraving, Heat Treating, and Allied Activities.
3119	Other Food Manufacturing.		
3121	Beverage Manufacturing.	3331	Agriculture, Construction, and Mining Machinery Manufacturing.

NAICS	Industry
3335	Metalworking Machinery Manufacturing.
3361	Motor Vehicle Manufacturing.
3362	Motor Vehicle Body and Trailer Manufacturing.
3363	Motor Vehicle Parts Manufacturing.
3366	Ship and Boat Building.
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing.
3372	Office Furniture (including Fixtures) Manufacturing.
3379	Other Furniture Related Product Manufacturing.
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers.
4233	Lumber and Other Construction Materials Merchant Wholesalers.
4235	Metal and Mineral Merchant Wholesalers.
4239	Miscellaneous Durable Goods Merchant Wholesalers.
4244	Grocery and Related Product Merchant Wholesalers.
4248	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers.
4413	Automotive Parts, Accessories, and Tire Stores.
4422	Home Furnishings Stores.
4441	Building Material and Supplies Dealers.
4442	Lawn and Garden Equipment and Supplies Stores.
4451	Grocery Stores.
4522	Department Stores.
4523	General Merchandise Stores, including Warehouse Clubs and Supercenters.
4533	Used Merchandise Stores.
4543	Direct Selling Establishments.
4811	Scheduled Air Transportation.
4841	General Freight Trucking.
4842	Specialized Freight Trucking.
4851	Urban Transit Systems.
4852	Interurban and Rural Bus Transportation.
4853	Taxi and Limousine Service.
4854	School and Employee Bus Transportation.
4859	Other Transit and Ground Passenger Transportation.
4871	Scenic and Sightseeing Transportation, Land.
4881	Support Activities for Air Transportation.
4883	Support Activities for Water Transportation.
4889	Other Support Activities for Transportation.
4911	Postal Service.
4921	Couriers and Express Delivery Services.
4931	Warehousing and Storage.
5322	Consumer Goods Rental.
5621	Waste Collection.
5622	Waste Treatment and Disposal.
6219	Other Ambulatory Health Care Services.
6221	General Medical and Surgical Hospitals.
6222	Psychiatric and Substance Abuse Hospitals.
6223	Specialty (except Psychiatric and Substance Abuse) Hospitals.
6231	Nursing Care Facilities (Skilled Nursing Facilities).
6232	Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities.
6233	Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly.
6239	Other Residential Care Facilities.
6243	Vocational Rehabilitation Services.
7111	Performing Arts Companies.
7112	Spectator Sports.
7131	Amusement Parks and Arcades.
7211	Traveler Accommodation.
7212	RV (Recreational Vehicle) Parks and Recreational Camps.
7223	Special Food Services.

Statutory/Other Authority: ORS 654-025(2) and 656.726(4).
Statutes/Other Implemented: ORS 654.001 to 654.295.
History: WCB Administrative Order 19-1974, filed 6-5-74, effective 7-1-74.
WCD Administrative Order, Safety 7-1979, filed 8-20-79, effective 9-1-79.
WCD Administrative Order, Safety 4-1981, filed 5-22-81, effective 7-1-81.
APD Administrative Order 7-1988, filed 6-17-88, effective 7-1-74.
OSHA 11-2001, filed 9/14/01, effective 1/1/02.
OSHA 2-2002, filed 3/12/02, effective 3/12/02.
OSHA 7-2002, filed 11/15/02, effective 11/15/02.
OSHA 6-2003, filed 11/26/03, effective 11/26/03.
OSHA 7-2006, filed 9/6/06, effective 9/6/06.
OSHA 11-2007, filed 12/21/07, effective 1/1/08.
OSHA 8-2008, filed 7/14/08, effective 7/14/08.
OSHA 2-2015, filed 3/18/15, effective 1/1/16.
OSHA 6-2016, filed.11/10/16. effective 5/1/17.
OSHA 5-2017, filed 8/1/17, effective 1/1/18.
OSHA 5-2018, filed 11/29/18, effective 12/17/18.
OSHA 2-2019, filed 6/24/19, effective 6/24/19.
OSHA 3-2019, filed 10/29/19, effective 10/29/19.
OSHA 4-2023, filed 12/21/23, effective 1/1/24
OR-OSHA Administrative Order 1-2024, filed 9/11/24, effective 9/11/24.

Appendix A (Nonmandatory) to 437-001-0700, Age Related Hearing Loss

You cannot use age correction for determining whether an employee has reached the 25 dB threshold above audiometric zero. You cannot age-correct an audiogram for determining a Standard Threshold Shift (STS) for purposes of OAR 437-002-1910.95, “Occupational Noise Exposure.”
When determining whether you must record an STS on the OSHA 300 Log, you can allow for the contribution of aging by adjusting the current audiogram. If you choose to adjust the audiogram, follow the procedure described below. This procedure and the age correction tables were developed by the National Institute for Occupational Safety and Health in the criteria document entitled “Criteria for a Recommended Standard . . . Occupational Exposure to Noise,” ((HSM)-11001).

For each ear;
(i) Determine from Table F-1 (for males) or F-2 (for females) the age correction values for the employee by:
(A) Finding the age at which the current audiogram was taken and recording the corresponding values of age corrections at 2000 Hz, 3000 Hz, and 4000 Hz;
(B) Finding the age at which the baseline audiogram was taken and recording the corresponding values of age corrections at 2000 Hz, 3000 Hz, and 4000 Hz.
(ii) Subtract the values in the baseline from the values in the current audiogram.
(iii) The calculated difference represents the portion of the change in hearing that may be due to aging.
(iv) An STS is a loss of 10 dB as an average of the 2000 Hz, 3000 Hz, and 4000 Hz between the baseline audiogram and the current audiogram. Once you have performed the age correction, add up the results of the age-corrected audiogram and divide by three. If the result is 10 or larger, then it is still an STS.
Example: Employee is a 32-year-old male. The audiometric history for his right ear is shown in decibels below.

Employee's age	Audiometric test frequency (hz)		
	2000	3000	4000
*27	0	0	5
28	0	0	10
29	0	5	15
30	5	10	20
31	10	20	15
*32	10	10	25

The audiogram at age 27 is considered the baseline since it was the initial audiogram. Asterisks have been used to identify the baseline and current audiogram. A threshold shift of 10 dB exists at both the 2000 Hz and 3000 Hz, and a 20 dB shift exists at 4000 Hz between the audiograms taken at ages 27 and 32.

(The threshold shift is computed by subtracting the hearing threshold at age 27, which was 0, 0, 5, from the hearing threshold at age 32, which is 10, 10, and 25). A retest audiogram has confirmed this shift. The contribution of aging to this change in hearing may be estimated in the following manner:

Go to Table F-1 and find the age correction values at age 27 and age 32.

	Frequency (Hz)		
	2000	3000	4000
Age 32	5	7	10
Age 27	4	6	7
Difference	1	1	3

The difference represents the amount of hearing loss that may be attributed to aging in the time period between the baseline audiogram and the current audiogram.
In this example, the difference at 2000 Hz is 1 dB, the difference at 3000 Hz is 1dB, and the difference at 4000 Hz is 3 dB. These values are subtracted from the respective hearing levels of the current audiogram.
Once you have done the age correction, compare the age-corrected audiogram to the baseline to determine the severity of the shift. There is no need to age-correct the baseline for this purpose because the calculation above already took that into consideration.

	Frequency (Hz)		
	2000	3000	4000
Age-corrected Current Audiogram	5	7	10
Baseline Audiogram	4	6	7
Difference	1	1	3

An STS is present when the difference between the current audiogram and the baseline audiogram is 10 dB averaged from the 2000 Hz, 3000 Hz, and 4000 Hz readings. In this instance, the average of 9 dB (from the 2000 Hz reading), 9 dB (from the 3000 Hz reading), and 17 dB (from the 4000 Hz reading) is 11.7 dB. This is an STS because the shift is more than 10 dB, even after the age correction.

Table F 1 - Age correction values in decibels for males

Years	Audiometric Test Frequency (Hz)			Years	Audiometric Test Frequency (Hz)		
	2000	3000	4000		2000	3000	4000
20 or younger	3	4	5	41	6	10	14
21	3	4	5	42	7	11	16
22	3	4	5	43	7	12	16
23	3	4	6	44	7	12	17
24	3	5	6	45	7	133	18

Years	Audiometric Test Frequency (Hz)			Years	Audiometric Test Frequency (Hz)		
	2000	3000	4000		2000	3000	4000
25	3	5	7	46	8	13	19
26	4	5	7	47	8	14	19
27	4	6	7	48	8	14	20
28	4	6	8	49	9	15	21
29	4	6	8	50	9	16	22
30	4	6	9	51	9	16	23
31	4	7	9	52	10	17	24
32	5	7	10	53	10	18	25
33	5	7	10	54	10	18	26
34	5	8	11	55	11	19	27
35	5	8	11	56	11	20	28
36	5	9	12	57	11	21	29
37	6	9	12	58	12	22	31
38	6	9	13	59	12	22	32
39	6	10	14	60 or older	13	23	33
40	6	10	14				

Table F 2 - Age correction values in decibels for females

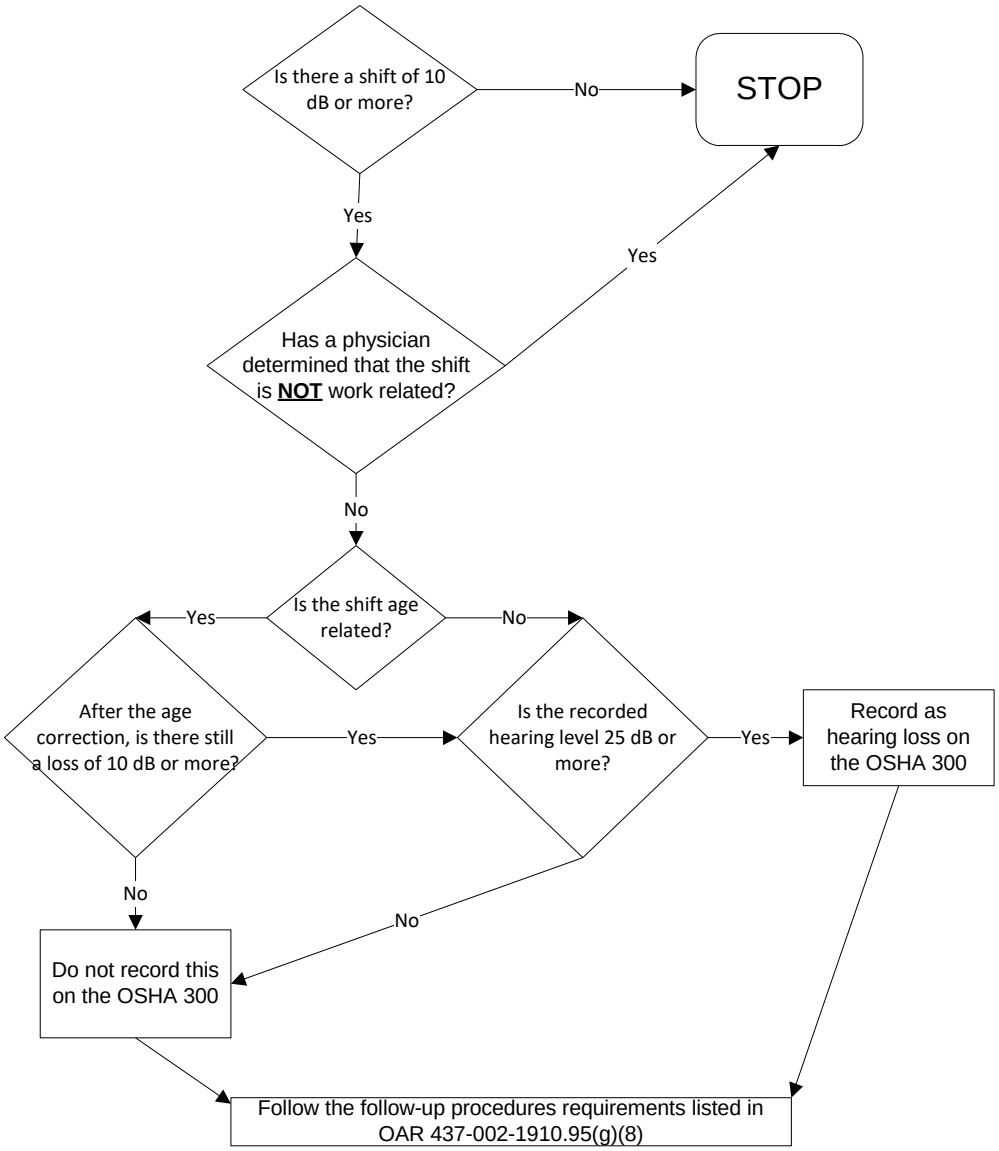
Years	Audiometric Test Frequency (Hz)			Years	Audiometric Test Frequency (Hz)		
	2000	3000	4000		2000	3000	4000
20 or younger	4	3	3	41	8	8	8
21	4	4	3	42	8	9	9
22	4	4	4	43	8	9	9
23	5	4	4	44	8	9	9
24	5	4	4	45	8	10	10
25	5	4	4	46	9	10	10
26	5	5	4	47	9	10	11
27	5	5	5	48	9	11	11
28	5	5	5	49	9	11	11
29	5	5	5	50	10	11	12
30	6	5	5	51	10	12	12
31	6	6	5	52	10	12	13
32	6	6	6	53	10	13	13
33	6	6	6	54	11	13	14
34	6	6	6	55	11	14	14
35	6	7	7	56	11	14	15
36	6	7	7	57	11	15	15

Years	Audiometric Test Frequency (Hz)			Years	Audiometric Test Frequency (Hz)		
	2000	3000	4000		2000	3000	4000
37	7	7	7	58	12	15	16
38	7	7	7	59	12	16	16
39	7	8	8	60 or older	12	16	17
40	7	8	8				

Statutory/Other Authority: ORS 654.025(2) and 656.726(4).
Statutes/Other Implemented: ORS 654.001 through 654.295.
History: OSHA 7-2002, filed 11/15/02, effective 11/15/02.

Appendix B (Nonmandatory) to 437-001-0700, Hearing Loss Recordability Flowchart

All numbers referenced below are taken as an average of the 2K, 3K, and 4K Hx. levels of the audiogram.



* 29 CFR 1910.95 assumes that any shift is workplace-induced unless a physician determines otherwise.

Statutory/Other Authority: ORS 654.025(2) and 656.726(4).
Statutes/Other Implemented: ORS 654.001 through 654.295.
History: OSHA 7-2002, filed 11/15/02, effective 11/15/02.

437-001-0765 Safety Committees and Safety Meetings.

This rule requires employers to establish and administer a safety committee, or to hold safety meetings, to communicate and evaluate safety and health issues. Purpose: The purpose of safety committees and safety meetings is to bring workers and management together in a non-adversarial, cooperative effort to promote safety and health. Safety committees and safety meetings will assist you in making continuous improvement to your safety and health programs. Scope: This rule applies to public or private employers in Oregon subject to Oregon OSHA jurisdiction, except as listed below. You do not have to comply with this rule if you are: The sole owner and only employee of a corporation~~[;]~~**.** A member of a board or commission and do not participate in the day-to-day activities of the company. You are not considered an employee for purposes of this rule. Engaged in agricultural activities covered by Division 4, Subdivision C. Engaged in forest activities covered by Division 7, Subdivisions B and C. Division 2, Subdivision L OAR 437-002-0182~~(7)~~**(8)** requires employers engaged in fire service activities to establish a separate fire service safety committee or opt for safety meetings if they meet the criteria in the following table. You can choose a committee or meetings.

(1) You must establish and administer an effective safety committee or hold effective safety meetings as defined by these rules: Safety Committees

Table 1 - Safety committee or safety meeting

If	You can have a Safety Committee	You can have Safety Meetings
You have 10 or fewer employees more than half of the year (including seasonal and temporary)	Yes	Yes
More than half of your employees report to construction sites	Yes	Yes
More than half of your employees are mobile or move frequently between sites	Yes	Yes
Most employees do not regularly work outside an office environment	Yes	Yes
You have more than 10 employees at a location, and none of the above applies	Yes	No
You have satellite or auxiliary offices with 10 or fewer employees at each location	Yes	Yes

(2) If you have 20 or fewer employees you must have at least 2 members. If you have more than 20 employees you must have at least 4 members.

(3) You must have an equal number of employer-selected members and employee-elected or volunteer members. If both parties agree, the committee may have more employee-elected or volunteer members.

~~NOTE~~**Note**: Management can select a supervisor to represent them. Employees can elect a supervisor to represent them.

(4) Your safety committee members must: Have a majority agree on a chairperson. Serve a minimum of one year, when possible. Be compensated at their regular rate of pay. Have training

in the principles of accident and incident investigations for use in evaluating those events. Have training in hazard identification. Be provided with meeting minutes. Represent major activities of your business.

(5) Your safety committee must meet on company time as follows: Quarterly in situations where employees do mostly office work. Monthly for all other situations (except the months when quarterly worksite inspections are performed).

(6) You must keep written records of each safety committee meeting for three years that include: Names of attendees. Meeting date. All safety and health issues discussed, including tools, equipment, work environment, and work practice hazards. Recommendations for corrective action and a reasonable date by which management agrees to respond. Person responsible for follow up on any recommended corrective actions. All reports, evaluations, and recommendations made by the committee.

(7) Your safety committee must establish procedures for conducting workplace safety and health inspections. Persons trained in hazard identification must conduct inspections as follows:

Table 2 - Safety committee procedures for inspections

Where	Who	When
Primary fixed locations	Employer and employee representatives	Quarterly
Office environments	Employer and employee representatives	Quarterly
Auxiliary and satellite locations	Employer and employee representatives	Quarterly
Mobile work locations, infrequently visited sites, and sites that do not lend themselves to quarterly inspections	Employer and employee representatives or a designated person	As often as the safety committee determines is necessary

(8) In addition to the above requirements, your safety committee must: Work with management to establish, amend, or adopt accident investigation procedures that will identify and correct hazards. Have a system that allows employees an opportunity to report hazards and safety and health related suggestions. Establish procedures for reviewing inspection reports and for making recommendations to management. Evaluate all accident and incident investigations and make recommendations for ways to prevent similar events from occurring. Make safety committee meeting minutes available for all employees to review. Evaluate management’s accountability system for safety and health, and recommend improvements. Examples include use of incentives, discipline, and evaluating success in controlling safety and health hazards.

(9) If you have multiple locations, you may choose to have a centralized safety committee. A centralized safety committee must represent the safety and health concerns of all locations and meet the requirements for safety committees. If you rely on a centralized committee, you must also have a written safety and health policy that: Represents management commitment to the committee. Requires and describes effective employee involvement. Describes how the company will hold employees and managers accountable for safety and health. Explains specific methods for identifying and correcting safety and health hazards at each location.

Includes an annual written comprehensive review of the committees' activities to determine effectiveness. Safety Meetings

~~NOTE~~**Note**: Two or more employers at a single location may combine resources to meet the intent of these rules.

(10) Safety meetings must: Include all available employees. Include at least one employer representative authorized to ensure correction of safety and health issues. Be held on company time and attendees paid at their regular rate of pay.

(11) Hold safety meetings with the following frequency if:

Table 3 – Safety Meeting Frequency

Nature of the Business	Frequency of Meetings
You employ construction workers	At least monthly and before the start of each job that lasts more than one week.
Your employees do mostly office work	At least quarterly
All other employers	At least monthly

(12) Safety meetings must include discussions of: Safety and health issues. Accident investigations, causes, and the suggested corrective measures.

(13) Employers in construction, utility work, and manufacturing must document, make available to all employees, and keep for three years a written record of each meeting that includes the following: Hazards related to tools, equipment, work environment, and unsafe work practices identified and discussed during the meeting. The date of the meeting. The names of those attending the meeting. All other employers do not need to keep these records if all employees attend the safety meeting.

(14) If you are a subcontractor on a multi-employer worksite, to meet the intent of (11) through (13), your employees may attend the prime contractor's safety meetings. You may keep the minutes from these meetings as a part of your records to meet the intent of (13). If you choose this option, you must still meet to discuss accidents involving your employees.

(15) Innovation. After you apply, Oregon OSHA may grant approval for safety committees or safety meetings that differ from the rule requirements yet meet the intent of these rules.

(16) Effective Dates. The effective date for compliance with this rule is January 1, 2009. For employers with 10 or fewer employees, other than those in construction, the effective date is September 19, 2009.

Statutory/Other Authority: ORS 654.025(2) & 656.726(4)
Statutes/Other Implemented: ORS [~~654.176~~] **654.001 - 654.295**
History:
OR-OSHA Administrative Order 1-2024, filed 9/11/24, effective 9/11/24.
OSHA 5-2018, amend filed 11/29/2018, effective 12/17/2018
OSHA 9-2008, f. 9-19-08, cert. ef. 1-1-09
OSHA 7-2006, f. & cert. ef. 9-6-06
OSHA 6-2003, f. & cert. ef. 11-26-03
OSHA 8-2001, f. & cert. ef. 7-13-01
OSHA 10-1995, f. & cert. ef. 11-29-95

OSHA 6-1994, f. & cert. ef. 9-30-94, Renumbered from 437-040-0044, 437-040-0045, 437-040-0046, 437-040-0047, 437-040-0048 & 437-040-0049
OSHA 28-1990, f. 12-18-90, cert. ef. 3-1-91
OSHA 12-1990(Temp), f. & cert. ef. 6-18-90
WCD 10-1982, f. & cert. ef. 7-30-82

Division 2
Subdivision A
General Industry

437-002-0005
Adoption by Reference

In addition to, and not in lieu of, any other safety and health codes contained in OAR Chapter 437, the Department adopts by reference the following federal regulations printed as part of the Code of Federal Regulations, 29 CFR 1910, in the Federal Register:

(1) 29 CFR 1910.1, Purpose and scope; published 6/27/74, Federal Register, vol. 39, no. 125, p. 23503.

(2) 29 CFR 1910.2, Definitions; published 6/27/74, Federal Register, vol. 39, no. 125, p. 23503.

(3) 29 CFR 1910.3, Petitions for the issuance, amendment, or repeal of a standard; published 6/27/74, Federal Register, vol. 39, no. 125, p. 23503.

(4) 29 CFR 1910.4, Amendments to this part; published 6/27/74, Federal Register, vol. 39, no. 125, p. 23503.

(5) 29 CFR 1910.5, Applicability of standards; [~~published 6/30/93, FR vol. 58, no. 124, p. 35308.~~] **published 2/18/20, FR vol. 85, no. 32, p. 8726-8746.**

(6) 29 CFR 1910.6, Incorporation by reference; published 5/14/19, FR vol. 84, no. 93, p. 21416.

(7) 29 CFR 1910.7, Definition and requirements for a Nationally Recognized Testing Laboratory[~~; published 5/11/88, FR vol. 53, no. 91, p. 16838.~~]**, published 2/18/20, FR vol. 85, no. 32, p. 8726-8746.**

(8) 29 CFR 1910.9, Compliance duties owed to each employee; published 12/12/08, Federal Register, vol. 73, no. 240, pp. 75568-75589.

These standards are on file at the Oregon Occupational Safety and Health Division, Oregon Department of Consumer and Business Services, and the United States Government Printing Office.

Statutory/Other Authority: ORS 654.025(2) & 656.726(4)
Statutes/Other Implemented: ORS 654.001 - 654.295
History:

OR-OSHA Administrative Order 1-2024, filed 9/11/24, effective 9/11/24.
OSHA 3-2019, filed 10/29/2019, effective 10/29/2019
OSHA 2-2017, f. 5-16-17, cert. ef. 11-1-17

OSHA 4-2016, f. & cert. ef. 9-7-16
OSHA 3-2016, f. & cert. ef. 8-19-16
OSHA 7-2013, f. & cert. ef. 12-12-13
OSHA 7-2012, f. & cert. ef. 12-14-12
OSHA 5-2012, f. & cert. ef. 9-25-12
OSHA 4-2011, f. & cert. ef. 12-8-11
OSHA 2-2010, f. & cert. ef. 2-25-10
OSHA 1-2010, f. & cert. ef. 2-19-10
OSHA 5-2009, f. & cert. ef. 5-29-09
OSHA 7-2008, f. & cert. ef. 5-30-08
OSHA 4-2007, f. & cert. ef. 8-15-07
OSHA 4-2005, f. & cert. ef 12-14-05
OSHA 8-1999, f. & cert. ef. 8-6-99
OSHA 4-1997, f. & cert. ef. 4-2-97
APD 17-1988, f. & ef. 11-10-88

1910.5 Applicability of Standards

(a) Except as provided in paragraph (b) of this section, the standards contained in this [~~p~~]**P**art shall apply with respect to employments performed in a workplace in a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, Guam, [~~Trust Territory~~] **the Commonwealth** of the [~~Pacific~~] **Northern Mariana** Islands, Wake Island, Outer Continental Shelf lands defined in the Outer Continental Shelf Lands Act, **and** Johnston Island[~~, and the Canal Zone~~].

* * *

1910.7 Definition and Requirements for a Nationally Recognized Testing Laboratory

* * *

Appendix A to 1910.7 - OSHA Recognition Process for Nationally Recognized Testing Laboratories

* * *

C. Terms and [~~c~~]**C**onditions of [~~r~~]**R**ecognition.

1. The following terms and conditions shall be part of every recognition:

[~~1~~]**a**. Letter of recognition. The recognition by OSHA of any NRTL will be evidenced by a letter of recognition from OSHA. The letter will provide the specific details of the scope of the OSHA recognition, including the specific equipment or materials for which OSHA recognition has been granted, as well as any specific conditions imposed by OSHA.

[~~2~~]**b**. Period of recognition. The recognition by OSHA of each NRTL will be valid for [~~5~~]**five** years, unless terminated before the expiration of the period. The dates of the period of recognition will be stated in the recognition letter.

[~~3~~]**c.** Constancy in operations. The recognized NRTL shall continue to satisfy all the requirements or limitations in the letter of recognition during the period of recognition.

[4]**d.** Accurate publicity. The OSHA-recognized NRTL shall not engage in or permit others to engage in misrepresentation of the scope or conditions of its recognition.

[~~5. Temporary Recognition of Certain NRTLs. OSHA Recognition Process for Nationally Recognized Testing Laboratories A~~

~~a. Notwithstanding all other requirements and provisions of 1910.7 and this Appendix, the following two organizations are recognized temporarily as nationally recognized testing laboratories by the Assistant Secretary for a period of five years beginning June 13, 1988 and ending on July 13, 1993:~~

~~(i) Underwriters Laboratories, Inc., 333 Pfingsten Road, Northbrook, Illinois 60062.~~

~~(ii) Factory Mutual Research Corporation, 1151 Boston-Providence Turnpike, Norwood, Massachusetts 02062.~~

~~b. At the end of the 5-year period, the two temporarily recognized laboratories shall apply for renewal of OSHA recognition utilizing the following procedures established for renewal of OSHA recognition.~~]

2. [Reserved]

Division 2
Subdivision D
Walking-Working Surfaces

437-002-0020
Adoption by Reference

In addition to, and not in lieu of, any other safety and health codes contained in OAR Chapter 437, the Department adopts by reference the following federal regulations printed as part of the Code of Federal Regulations, 29 CFR 1910, in the Federal Register:

(1) 29 CFR 1910.21 Scope and definitions, published 11/18/16, Federal Register, vol. 81, no. 223, p. 82494.
(2) 29 CFR 1910.22 General Requirements, published 11/18/16, Federal Register, vol. 81, no. 223, p. 82494.
(3) 29 CFR 1910.23 Ladders, [~~published 11/18/16, Federal Register, vol. 81, no. 223, p. 82494~~.] **published 12/17/19, Federal Register, vol. 84, no. 242, p. 68794-68797.**
(4) 29 CFR 1910.24 Step bolts and manhole steps, published 11/18/16, Federal Register, vol. 81, no. 223, p. 82494.
(5) 29 CFR 1910.25 **Stairways**, [~~published 11/18/16, Federal Register, vol. 81, no. 223, p. 82494.~~ **published 12/17/19, Federal Register, vol. 84, no. 242, p. 68794-68797.**
(6) 29 CFR 1910.26 Dockboards, published 11/18/16, Federal Register, vol. 81, no. 223, p. 82494.
(7) 29 CFR 1910.27 Scaffolds and rope descent systems, [~~published 11/18/16, Federal Register, vol. 81, no. 223, p. 82494.~~] **published 12/17/19, Federal Register, vol. 84, no. 242, p. 68794-68797.**

(8) 29 CFR 1910.28 Duty to have fall protection and falling object protection, published 11/18/16, Federal Register, vol. 81, no. 223, p. 82494.
(9) 29 CFR 1910.29 Fall protection systems and falling object protection – criteria and practices, [~~published 11/18/16, Federal Register, vol. 81, no. 223, p. 82494~~.] **published 12/17/19, Federal Register, vol. 84, no. 242, p. 68794-68797.**
(10) 29 CFR 1910.30 Training requirements, published 11/18/16, Federal Register, vol. 81, no. 223, p. 82494.

These standards are available at the Oregon Occupational Safety and Health Division, Oregon Department of Consumer and Business Services, and the United States Government Printing Office.

Statutory/Other Authority: ORS 654.025(2) & 656.726(4)
Statutes/Other Implemented: ORS 654.001 - 654.295
History:
OR-OSHA Administrative Order 1-2024, filed 9/11/24, effective 9/11/24.
OSHA 2-2017, f. 5-16-17, cert. ef. 11-1-17
OSHA 2-2013, f. 2-15-13, cert. ef. 4-1-13
OSHA 10-1999, f. & cert. ef. 9-10-99
OSHA 4-1997, f. & cert. ef. 4-2-97
APD 4-1990, f. & cert. ef. 1-23-90

1910.23 Ladders.
* * * * *
(d) Fixed ladders. The employer must ensure: ***
(4) The side rails of through or sidestep ladders extend **at least** 42 inches (1.1 m) above the top of the access level or landing platform served by the ladder.
For parapet ladders, the access level is:
(i) The roof, if the parapet is cut to permit passage through the parapet;
or
(ii) The top of the parapet, if the parapet is continuous;
* * * *

1910.25 Stairways
(a) Application. This section covers all stairways (including standard, spiral, ship, and alternating tread-type stairs), except for **articulated** stairs **(stairs that change pitch due to change in height at the point of attachment) such as those** serving floating roof tanks, stairs on scaffolds, stairs designed into machines or equipment, and stairs on self-propelled motorized equipment.
* * *
(c) * * *
(4) * * *
Figure D-8 – Dimensions of Standard Stairs
* * *

1910.27 Scaffolds & Rope Descent
* * *
437-002-2027 Rope Descent & Rope Access Systems

* * *

(4) Anchorages for Rope Descent and Rope Access Systems.

(a) Permanent Anchorages on Buildings.

(A) Before any rope descent or rope access system is used, the building owner must inform the employer, in writing that the building owner has identified, tested, certified, and maintained each permanent anchorage so it is capable of supporting at least 5,000 pounds ([~~22.24kN~~] **2,268 kg**), in any direction, for each employee attached. The information must be based on an annual inspection by a qualified person and certification of each anchorage by a qualified person, as necessary, and at least every 10 years.

* * *

1910.29 Fall protection systems and falling object protection – criteria and practices

* * *

(b)Guardrail systems. The employer must ensure guardrail systems meet the following requirements:

(1)The top edge height of top rails, or equivalent guardrail system members, are 42 inches (107 cm), plus or minus 3 inches (8 cm), above the walking-working surface. The top edge height may exceed 45 inches (114cm), provided the guardrail system meets all other criteria of paragraph(b)of this section (see Figure D–11 of this section).

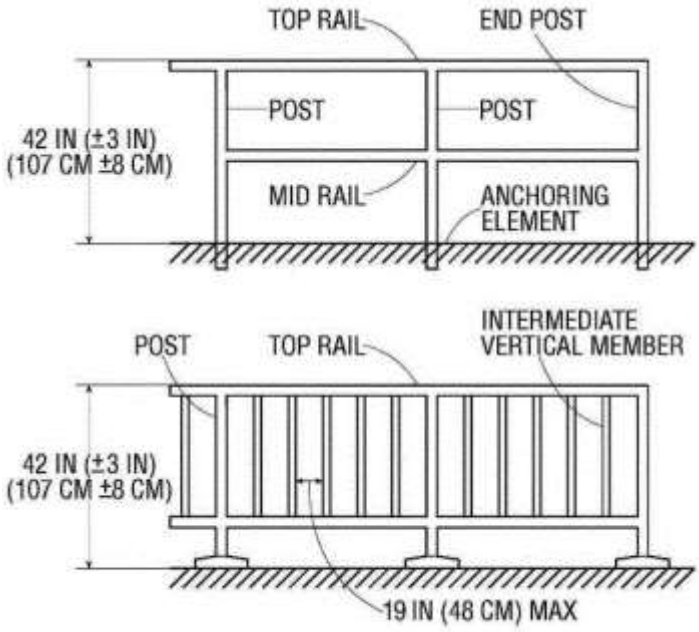


Figure D-11 Guardrail Systems

437-002-0120
Adoption by Reference

In addition to, and not in lieu of, any other health and safety codes contained in OAR Chapter 437, the Department adopts by reference the following federal regulations printed as part of the Code of Federal Regulations, 29 CFR 1910, in the Federal Register:

(1) 29 CFR 1910.132 General requirements. Repealed with Oregon OSHA Admin. Order 4-2011, filed and effective 12/8/11. In Oregon, OAR 437-002-0134 applies.

(2) 29 CFR 1910.133 Eye and face protection. Repealed with Oregon OSHA Admin. Order 4-2011, filed and effective 12/8/11. In Oregon, OAR 437-002-0134 applies.

(3) 29 CFR 1910.134 Respiratory protection, published 9/26/19, FR vol. 84, no. 187, p. 50739.

(4) 29 CFR 1910.135 Occupational head protection. Repealed with Oregon OSHA Admin. Order 4-2011, filed and effective 12/8/11. In Oregon, OAR 437-002-0134 applies.

(5) 29 CFR 1910.136 Occupational foot protection. Repealed with Oregon OSHA Admin. Order 4-2011, filed and effective 12/8/11. In Oregon, OAR 437-002-0134 applies.

(6) 29 CFR 1910.137 Electrical protective equipment, published 4/11/14, FR vol. 79, no. 70, p. 20316.

(7) 29 CFR 1910.138 Hand Protection. Repealed with Oregon OSHA Admin. Order 4-2011, filed and effective 12/8/11. In Oregon, OAR 437-002-0134 applies.

(8) 29 CFR 1910.139 Reserved.

(9) 29 CFR 1910.140 Personal fall protection, [~~published 11/18/16, Federal Register, vol. 81, no. 223, p. 82494.~~] **published 12/17/19, Federal Register, vol. 84, no. 242, p. 68794-68797.**

(10) Appendices.

(a) Appendix A – References for further information (nonmandatory).

(b) Appendix B – Nonmandatory compliance guidelines for hazard assessment and personal protective equipment selection; amended with OR-OSHA Admin. Order 3-2015, f. 10/9/15, ef. 1/1/16.

(c) Appendix C to Subpart I of Part 1910 – Personal Fall Protection Systems Non-Mandatory Guidelines, published 11/18/16, Federal Register, vol. 81, no. 223, p. 82494.

(d) Appendix D to Subpart I of Part 1910 – Test Methods and Procedures for Personal Fall Protection Systems Non-Mandatory Guidelines, published 11/18/16, Federal Register, vol. 81, no. 223, p. 82494.

These standards are available from the Oregon Occupational Safety and Health Division (OR-OSHA), Department of Consumer and Business Services; and the United States Government Printing Office.

Statutory/Other Authority: ORS 654.025(2) & 656.726(4)
Statutes/Other Implemented: ORS 654.001 - 654.295

History:
OR-OSHA Administrative Order 1-2024, filed 9/11/24, effective 9/11/24.
OSHA 1-2020, filed 02/13/2020, effective 02/13/2020
OSHA 2-2017, f. 5-16-17, cert. ef. 11-1-17
OSHA 3-2015, f. 10-9-15, cert. ef. 1-1-16
OSHA 7-2012, f. & cert. ef. 12-14-12
OSHA 1-2012, f. & cert .ef. 4-10-12
OSHA 4-2011, f. & cert. ef. 12-8-11
OSHA 2-2010, f. & cert. ef. 2-25-10
OSHA 5-2009, f. & cert. ef. 5-29-09
OSHA 5-2008, f. 5-1-08, cert. ef. 5-15-08
OSHA 10-2006, f. & cert. ef. 11-30-06
OSHA 4-2006, f. & cert. ef. 7-24-06
OHSA 5-2004, f. & cert. ef. 11-19-04
OSHA 1-2004, f. 3-26-04, cert. ef. 7-1-04
OSHA 12-2001, f. & cert. ef. 10-26-01
OSHA 3-1998, f. & cert. ef. 7-7-98
OSHA 4-1997, f. & cert. ef. 4-2-97
OSHA 3-1997, f. & cert. ef. 3-28-97
OSHA 3-1994, f. & cert. ef. 8-1-94
OSHA 9-1993, f. 7-29-93, cert. ef. 9-15-93

Division 2
Subdivision I
Personal Protective Equipment

437-002-0134 Personal Protective Equipment

Application. This rule applies to personal protective equipment and other protective equipment for the eyes, face, head, extremities and torso to include protective clothing, respiratory devices, and protective shields and barriers, wherever employees encounter hazardous processes or environments, chemical hazards, radiological hazards, or mechanical irritants that are capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.

Note: The assessment for eyes, face, head, hands, and feet are currently in effect. The torso and extremities (e.g. arms and legs) element of the body assessment will not be enforced until July 1, 2012.

(1) Hazard assessment and equipment selection.

(a) The employer must assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE) or other protective equipment. If such hazards are present, or likely to be present, the employer must:

(A) Select, and have each affected employee use, the types of PPE that will protect the affected employee from the hazards identified in the hazard assessment;

(i) All protective equipment must be of safe design and construction for the work to be performed.

(ii) Protective equipment must be worn and used in a manner which will make full use of its protective properties.

(B) Communicate selection decisions to each affected employee; and,

(C) Select PPE that properly fits each affected employee.

Note: Non-mandatory Appendix B contains an example of procedures that would comply with the requirement for a hazard assessment.

(b) The employer must verify that the required workplace hazard assessment has been performed through a written certification that identifies the workplace evaluated; the person certifying that the evaluation has been performed; the date(s) of the hazard assessment; and, which identifies the document as a certification of hazard assessment.

(2) Equipment.

(a) Where employees provide their own protective equipment, the employer is responsible to assure its adequacy, including proper maintenance, and sanitation of such equipment.

(b) All personal protective equipment must be provided, used, and maintained in a sanitary and reliable condition.

(c) Defective or damaged personal protective equipment must not be used.

(d) Each employer must maintain a regular system of inspection and maintenance of personal protective equipment furnished to workers.

(3) Training.

(a) The employer must provide training to each employee who is required by this section to use PPE and each employee that is provided training must know at least the following:

(A) When PPE is necessary;

(B) What PPE is necessary;

(C) How to properly don, doff, adjust, and wear PPE;

(D) The limitations of the PPE; and,

(E) The proper care, maintenance, useful life and disposal of the PPE.

(b) Each affected employee must demonstrate an understanding of the training specified in paragraph (3)(a) of this section, and the ability to use PPE properly, before being allowed to perform work requiring the use of PPE.

(c) When the employer has reason to believe that any affected employee who has already been trained does not have the understanding and skill required by paragraph (3)(b) of this section, the employer must retrain each such employee. Circumstances where retraining is required include, but are not limited to situations where:

(A) Changes in the workplace render previous training obsolete; or

(B) Changes in the types of PPE to be used render previous training obsolete; or

(C) Inadequacies in an affected employee's knowledge or use of assigned PPE indicate that the employee has not retained the requisite understanding or skill.

(4) Payment for protective equipment.

(a) Except as provided by paragraphs (4)(b) through (4)(f) of this section, the protective equipment, including personal protective equipment (PPE), used to comply with this part, must be provided by the employer at no cost to employees.

(b) The employer is not required to pay for non-specialty safety-toe protective footwear (including steel-toe shoes or steel-toe boots) and non-specialty prescription safety eyewear, provided that the employer permits such items to be worn off the job-site.

(c) When the employer provides metatarsal guards and allows the employee, at his or her request, to use shoes or boots with built-in metatarsal protection, the employer is not required to reimburse the employee for the shoes or boots.

(d) The employer is not required to pay for:

(A) The logging boots required by OAR 437-007-0330 in Division 7.

(B) Everyday clothing, such as long-sleeve shirts, long pants, street shoes, and normal work boots; or

(C) Ordinary clothing, skin creams, or other items, used solely for protection from weather, such as winter coats, jackets, gloves, parkas, rubber boots, hats, raincoats, ordinary sunglasses, and sunscreen.

(e) The employer must pay for replacement PPE, except when the employee has lost or intentionally damaged the PPE.

(f) Where an employee provides adequate protective equipment he or she owns pursuant to paragraph (2)(a) of this section, the employer may allow the employee to use it and is not required to reimburse the employee for that equipment. The employer must not require an employee to provide or pay for his or her own PPE, unless the PPE is excepted by paragraphs (4)(b) through (4)(e) of this section.

(5) Fall Protection.

(a) Motor and Rolling Stock Vehicles.

(A) All employees must be protected from fall hazards when working on motor and rolling stock vehicle surfaces more than 10 feet above a lower level or at any height above dangerous equipment.

(B) The employer must ensure that fall protection systems are provided, installed, and used according to the criteria in 1910.140 in this Subdivision.

Note to 437-002-0134(5)(a): The duty to provide fall protection for employees on walking-working surfaces other than motor and rolling stock vehicles is covered by 1910.28 (Duty to have fall protection and falling object protection) within 2/D. The criteria

and practices for fall protection systems for walking-working surfaces other than motor and rolling stock vehicles is covered by 1910.29 within 2/D.

(b) Travel Restraint Systems. The employer must ensure each employee using a travel restraint system (personal fall restraint) is prevented from going over the edge by providing, installing and ensuring its use according to the criteria in 1910.140 in this Subdivision with the following exceptions to 1910.140:

(A) 1910.140(c)(13) does not apply when anchorages used solely for travel restraint are:

(i) Capable of supporting 3000 pounds (13.34 kN) per employee attached; or

(ii) Are designed, installed and used under the supervision of a qualified person, as part of a complete personal fall protection system that maintains a safety factor of at least two.

(B) 1910.140(c)(22) does not apply. The attachment point to the body belt or full body harness may be at the back, front or side D-ring.

(6) Work Clothing.

(a) Clothing must be worn which is appropriate to the work performed and conditions encountered.

(b) Appropriate high temperature protective clothing must be worn by workers who are exposed to possible contact with molten metals or other substances that can cause burns.

(c) Loose sleeves, ties, lapels, cuffs, or other loose clothing must not be worn near moving machinery.

(d) Clothing saturated or impregnated with flammable liquids, corrosive or toxic substances, irritants, or oxidizing agents must be removed immediately and not worn again until properly cleaned.

(e) Rings, wristwatches, earrings, bracelets, and other jewelry which might contact power driven machinery or electric circuitry, must not be worn.

(f) Allow employees to wear a face covering if they so choose, unless doing so creates or otherwise exposes the employee to a hazard. Employers must supply these items at no cost to employees when the employer requires their use.

Note: For purposes of this rule, employers are not required to allow voluntary use of respirators if an employee requests to use one in lieu of a face covering.

(7) High Visibility Garments. Employees exposed to hazards caused by on highway type moving vehicles in construction zones and street/highway traffic must wear highly visible upper body garments. The colors must contrast with other colors in the area sufficiently to make the worker stand out. Colors equivalent to strong red, strong orange, strong yellow, strong yellow-green or fluorescent versions of these colors are acceptable. During hours of darkness, the garments must also have reflective material visible from all sides for 1000 feet.

(8) Eye And Face Protection.

(a) The employer must ensure that each affected employee uses appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation.

(b) The employer must ensure that each affected employee uses eye protection that provides side protection when there is a hazard from flying objects. Detachable side protectors (e.g., clip-on or slide-on side shields) meeting the pertinent requirements of this section are acceptable.

(c) The employer must ensure that each affected employee who wears prescription lenses while engaged in operations that involve eye hazards wears eye protection that incorporates the prescription in its design, or shall wear eye protection that can be worn over the prescription lenses without disturbing the proper position of the prescription lenses or the protective lenses.

(d) Eye and face PPE must be distinctly marked to facilitate identification of the manufacturer.

(e) The employer must ensure that each affected employee uses equipment with filter lenses that have a shade number appropriate for the work being performed for protection from injurious light radiation. The following is a listing of appropriate shade numbers for various operations.

Table 2-I 1 Filter Lenses for Protection Against Radiant Energy

Operations	*Electrode Size 1/32 in.*	*Arc Current (amps)*	*Minimum* Protective Shade*
Shielded metal arc welding	*Less than 3*	*Less than 60*	*7*
	3-5	*60-160*	*8*
	5-8	*160-250*	*10*
	More than 8	*250-550*	*11*
Gas metal arc welding and flux cored arc welding		*Less than 60*	*7*
		60-160	*10*
		160-250	*10*
		250-500	*10*
Gas Tungsten arc welding		*Less than 50*	*8*
		50-150	*8*
		150-500	*10*
Air carbon	*(Light)*	*Less than 500*	*10*
Arc cutting	*(Heavy)*	*500-1000*	*11*
Plasma arc welding		*Less than 20*	*6*
		20-100	*8*
		100-400	*10*
		400-800	*11*
Plasma arc cutting	*(Light) ***	*Less than 300*	*8*
	*(Medium) ***	*300-400*	*9*
	*(Heavy) ***	*400-800*	*10*
Torch brazing		*.....* *.....* *.....*	*3*

Table 2-I 2 Filter Lenses for Protection Against Radiant Energy

	Plate thickness – inches	*Plate thickness – mm*	*Minimum* Protective Shade*
Gas Welding:			
Light	*Under 1/8*	*Under 3.2*	*4*
Medium	*1/8 to 1/2*	*3.2 to 12.7*	*5*
Heavy	*Over 1/2*	*Over 12.7*	*6*
Oxygen Cutting:			
Light	*Under 1*	*Under 25*	*3*
Medium	*1 to 6*	*25 to 150*	*4*
Heavy	*Over 6*	*Over 150*	*5*

** As a rule of thumb, start with a shade that is too dark to see the weld zone. Then go to a lighter shade which gives sufficient view of the weld zone without going below the minimum. In oxy-fuel gas welding or cutting where the torch produces a high yellow light, it is desirable to use a filter lens that absorbs the yellow or sodium line in the visible light of the (spectrum) operation.*

*** These values apply where the actual arc is clearly seen. Experience has shown that lighter filters may be used when the arc is hidden by the workpiece.*

(f) Protective eye and face protection devices must comply with any of the following consensus standards

(A) ANSI/ISEA Z87.1-2010, Occupational and Educational Personal Eye and Face Protection Devices, incorporated by reference in 1910.6;

(B)ANSI Z87.1-2003, American National Standard Practice for Occupational and Educational Eye and Face Protection, which is incorporated by reference in 1910.6; or

(C) ANSI Z87.1-1989 (R-1998), American National Standard Practice for Occupational and Educational Eye and Face Protection, which is incorporated by reference in 1910.6.

(g) Protective eye and face protection devices that the employer demonstrates are at least as effective as protective eye and face protection devices that are constructed in accordance with one of the above consensus standards will be deemed to be [~~incompliance~~]**in compliance** with the requirements of this section.

(h) Employees whose occupation or assignment requires exposure to laser beams shall be furnished laser safety goggles as required by Occupational Health Regulations which will protect for the specific wavelength of the laser and be of optical density adequate for the energy involved.

(9) Head Protection.

(a) The employer must ensure that each affected employee wears a protective helmet when working in areas where there is a potential for injury to the head from falling or flying objects.

(b) The employer must ensure that a protective helmet designed to reduce electrical shock hazard is worn by each such affected employee when near exposed electrical conductors which could contact the head.

(c) Head protection must comply with any of the following consensus standards:

(A) ANSI Z89.1-2009, American National Standard for Industrial Head Protection, which is incorporated by reference in §1910.6;

(B) ANSI Z89.1-2003, American National Standard for Industrial Head Protection, which is incorporated by reference in 1910.6; or

(C) ANSI Z89.1-1997, American National Standard for Industrial Head Protection, which is incorporated by reference in 1910.6.

(d) Head protection devices that the employer demonstrates are at least as effective as head protection devices that are constructed in accordance with one of the above consensus standards will be deemed to be in compliance with the requirements of this section.

(e) Employees who are exposed to power-driven machinery or to sources of ignition shall wear caps or other head covering which completely covers the hair.

(10) Foot Protection.

(a) The employer must ensure that each affected employee use protective footwear when working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, and where such employee's feet are exposed to electrical hazards, such as static-discharge or electric-shock hazard, that remains after the employer takes other necessary protective measures.

(b) Protective footwear must comply with any of the following consensus standards:

(A) ASTM F-2412-2005, Standard Test Methods for Foot Protection, and ASTM F-2413-2005, Standard Specification for Performance Requirements for Protective Footwear, which are incorporated by reference in 1910.6;

(B) ANSI Z41-1999, American National Standard for Personal Protection – Protective Footwear, which is incorporated by reference in 1910.6; or

(C) ANSI Z41-1991, American National Standard for Personal Protection – Protective Footwear, which is incorporated by reference in §1910.6.

(c) Protective footwear that the employer demonstrates is at least as effective as protective footwear that is constructed in accordance with one of the above consensus standards will be deemed to be in compliance with the requirements of this section.

(d) Special types or designs of shoes or foot guards are required where conditions exist that make their use necessary for the safety of workers.

(11) Leg protection

(a) Leggings or high boots of leather, rubber, or other suitable material must be worn by persons exposed to hot substances or dangerous chemical spills.

(b) Employees using chain saws must wear chaps or leg protectors that cover the leg from the upper thigh to mid-calf. The protector must be material designed to resist cuts from the chain saw. Employers must provide this protection at no cost to the employee.

Note to 437-002-0134(11)(b): Employees working in the tree and shrub services industry must follow rules on this subject in Subdivision 2/R instead of the above.

(12) Hand Protection.

(a) Employers must select and require employees to use appropriate hand protection when employees' hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns; thermal burns; and harmful temperature extremes.

(b) Employers must base the selection of the appropriate hand protection on an evaluation of the performance characteristics of the hand protection relative to the task(s) to be performed, conditions present, duration of use, and the hazards and potential hazards identified.

(c) Gloves must not be worn by persons whose hands are exposed to moving parts in which they could be caught.

(13) Skin protection. Where the need for their use is necessary, protective covering, ointments, gloves, or other effective protection must be provided for and used by persons exposed to materials which are hazardous to the skin.

Statutory/Other Authority: ORS 654.025(2) & 656.726(4)
Statutes/Other Implemented: ORS 654.001 - 654.295
History:
OR-OSHA Administrative Order 1-2024, filed 9/11/24, effective 9/11/24.
OSHA 2-2023, amend filed 08/16/2023, effective 08/17/2023
OSHA 1-2023, temporary amend filed 03/30/2023, effective 04/03/2023 through 09/29/2023
OSHA 2-2017, f. 5-16-17, cert. ef. 11-1-17
OSHA 4-2016, f. & cert. ef. 9-7-16
OSHA 3-2016, f. & cert. ef. 8-19-16
OSHA 3-2015, f. 10-9-15, cert. ef. 1-1-16
OSHA 2-2013, f. 2-15-13, cert. ef. 4-1-13
OSHA 4-2011, f. & cert. ef. 12-8-11

1910.140 Personal Fall Protection Systems

(c) * * *
(8) D-rings, snaphooks, and carabiners must be proof tested to a minimum tensile load of 3,600 pounds (16 kN) without cracking, breaking, or incurring permanent deformation. The gate strength of snaphooks and carabiners, must be [~~proof tested to~~] **capable of withstanding a minimum load of** 3,600 lbs. (16 kN) [~~in all directions.~~] **without the gate separating from the nose of the snaphook or carabiner body by more than 0.125 inches (3.175 mm).**

Division 2
Subdivision Z
Toxic & Hazardous Substances

437-002-0360
Adoption by Reference

In addition to, and not in lieu of, any other safety and health codes contained in OAR Chapter 437, the Department adopts by reference the following federal regulations printed as part of the Code of Federal Regulations, 29 CFR 1910, in the Federal Register:

(1) (Reserved) 29 CFR 1910.1000 Air contaminants.
[~~NOTE~~]**Note**: 29 CFR 1910.1000 was repealed on 11/15/93 by OR OSHA. In Oregon, OAR 437-002-0382 applies.
(2) 29 CFR 1910.1001 Asbestos, published 5/14/19, FR vol. 84, no. 93, p. 21416.
(3) 29 CFR 1910.1002 Coal tar pitch volatiles, interpretation of term, published 1/21/83, Federal Register, vol. 43, p. 2768.
(4) 29 CFR 1910.1003 13 Carcinogens, published 3/26/12, FR vol. 77, no. 58, p. 17574.
(5) 29 CFR 1910.1004 See §1910.1003, 13 Carcinogens.
(6) Reserved for 29 CFR 1910.1005.
(7) 29 CFR 1910.1006 See §1910.1003, 13 Carcinogens.
(8) 29 CFR 1910.1007 See §1910.1003, 13 Carcinogens.
(9) 29 CFR 1910.1008 See §1910.1003, 13 Carcinogens.
(10) 29 CFR 1910.1009 See §1910.1003, 13 Carcinogens.
(11) 29 CFR 1910.1010 See §1910.1003, 13 Carcinogens.
(12) 29 CFR 1910.1011 See §1910.1003, 13 Carcinogens.
(13) 29 CFR 1910.1012 See §1910.1003, 13 Carcinogens.
(14) 29 CFR 1910.1013 See §1910.1003, 13 Carcinogens.
(15) 29 CFR 1910.1014 See §1910.1003, 13 Carcinogens.
(16) 29 CFR 1910.1015 See §1910.1003, 13 Carcinogens.
(17) 29 CFR 1910.1016 See §1910.1003, 13 Carcinogens.
(18) 29 CFR 1910.1017 Vinyl chloride, published 5/14/19, FR vol. 84, no. 93, p. 21416.
(19) 29 CFR 1910.1018 Inorganic arsenic, published 5/14/19, FR vol. 84, no. 93, p. 21416.
(20) 29 CFR 1910.1020 Access to Employee Exposure and Medical Records, published 6/8/11, Federal Register, vol. 76, no. 110, p. 33590.
Appendix A: Sample Authorization Letter.
Appendix B: Availability of NIOSH RTECS.
(21) 29 CFR 1910.1025 Lead, published 5/14/19, FR vol. 84, no. 93, p. 21416.
(22) 29 CFR 1910.1026 Chromium (VI), published 5/14/19, FR vol. 84, no. 93, p. 21416.
(23) 29 CFR 1910.1027 Cadmium, [~~published 5/14/19, FR vol. 84, no. 93, p. 21416.~~] **published 2/18/20, FR vol. 85, no. 32, p. 8726-8746.**
(24) 29 CFR 1910.1028 Benzene, and Appendices A, B, C, D, and E, published 5/14/19, FR vol. 84, no. 93, p. 21416.

(25) 29 CFR 1910.1029 Coke oven emissions, published 5/14/19, FR vol. 84, no. 93, p. 21416.
(26) 29 CFR 1910.1030 Bloodborne pathogens, published 5/14/19, FR vol. 84, no. 93, p. 21416.
(27) 29 CFR 1910.1043 Cotton dust, published 5/14/19, FR vol. 84, no. 93, p. 21416.
(28) 29 CFR 1910.1044 1,2 dibromo-3 chloropropane, published 5/14/19, FR vol. 84, no. 93, p. 21416.
(29) 29 CFR 1910.1045 Acrylonitrile, published 5/14/19, FR vol. 84, no. 93, p. 21416.
(30) 29 CFR 1910.1047 Ethylene oxide, published 5/14/19, FR vol. 84, no. 93, p. 21416.
(31) 29 CFR 1910.1048 Formaldehyde, and Appendices A, B, C, D and E, published 5/14/19, FR vol. 84, no. 93, p. 21416.
(32) 29 CFR 1910.1050 Methylenedianiline (MDA), published 5/14/19, FR vol. 84, no. 93, p. 21416.
(33) 29 CFR 1910.1051 1,3-Butadiene, published 5/14/19, FR vol. 84, no. 93, p. 21416.
(34) 29 CFR 1910.1052 Methylene Chloride, published 5/14/19, FR vol. 84, no. 93, p. 21416.
[~~NOTE~~]**Note**: 29 CFR 1910.1101 Asbestos, was repealed by Federal Register, vol. 57, no. 110, issued 6/8/92, p. 24330.
(35) 29 CFR 1910.1096 Ionizing radiation, published 6/20/96, FR vol. 61, no. 46, p. 31427.
(36) 29 CFR 1910.1200 Hazard communication, published 2/8/13, FR vol. 78, no. 27, p. 9311.
(37) 29 CFR 1910.1201 Retention of DOT Markings, Placards and Labels, published 7/19/94, Federal Register, vol. 59, p. 36700.
(38) 29 CFR 1910.1450 Occupational Exposure to Hazardous Chemicals in Laboratories, published 1/22/13, FR vol. 78, no. 14, p. 4324.
(39) 29 CFR 1910.1499 Removed. Published 3/7/96, Federal Register, vol. 61, no. 46, p. 9245.
(40) 29 CFR 1910.1500 Removed. Published 3/7/96, Federal Register, vol. 61, no. 46, p. 9245.

These standards are available at the Oregon Occupational Safety and Health Division, Oregon Department of Consumer and Business Services, and the United States Government Printing Office.

Statutory/Other Authority: ORS 654.025(2) & 656.726(4)
Statutes/Other Implemented: ORS 654.001 - 654.295
History:
OR-OSHA Administrative Order 1-2024, filed 9/11/24, effective 9/11/24.
OSHA 3-2019, filed 10/29/2019, effective 10/29/2019
OSHA 4-2013, f. & cert. ef. 7-19-13
OSHA 3-2013, f. & cert. ef. 7-18-13
OSHA 5-2012, f. & cert. ef. 9-25-12
OSHA 1-2012, f. & cert .ef. 4-10-12
OSHA 5-2011, f. 12-8-11, cert. ef. 7-1-12
OSHA 4-2011, f. & cert. ef. 12-8-11
OSHA 3-2010, f. 6-10-10, cert. ef. 6-15-10
OSHA 5-2009, f. & cert. ef. 5-29-09
OSHA 10-2006, f. & cert. ef. 11-30-06
OSHA 6-2006, f. & cert. ef. 8-30-06
OSHA 4-2006, f. & cert. ef. 7-24-06
OSHA 1-2005, f. & cert. ef. 4-12-05
OSHA 12-2001, f. & cert. ef. 10-26-01
OSHA 10-2001, f. 9-14-01, cert. ef. 10-18-01
OSHA 6-2001, f. & cert. ef. 5-15-01
OSHA 2-1999, f. & cert. ef. 4-30-99
OSHA 1-1999, f. & cert. ef. 3-22-99
OSHA 3-1998, f. & cert. ef. 7-7-98
OSHA 1-1998, f. & cert. ef. 2-13-98
OSHA 8-1997, f. & cert. ef. 11-14-97
OSHA 6-1997, f. & cert. ef. 5-2-97

OSHA 4-1997, f. & cert. ef. 4-2-97
OSHA 6-1996, f. & cert. ef. 11-29-96
OSHA 4-1996, f. & cert. ef. 9-13-96
OSHA 8-1995, f. & cert. ef. 8-25-95
OSHA 5-1995, f. & cert. ef. 4-6-95
OSHA 4-1995, f. & cert. ef. 3-29-95
OSHA 1-1995, f. & cert. ef. 1-19-95
OSHA 4-1994, f. & cert. ef. 8-4-94
OSHA 17-1993, f. & cert. ef. 11-15-93
OSHA 12-1993, f. 8-20-93, cert. ef. 11-1-93
OSHA 6-1993(Temp), f. & cert. ef. 5-17-93
OSHA 1-1993, f. & cert. ef. 1-22-93
OSHA 15-1992, f. & cert. ef. 12-30-92
OSHA 14-1992, f. & cert. ef. 12-7-92
OSHA 12-1992, f. & cert. ef. 10-13-92
OSHA 11-1992, f. & cert. ef. 10-9-92
OSHA 9-1992(Temp), f. & cert. ef. 9-24-92
OSHA 6-1992, f. & cert. ef. 5-18-92
OSHA 5-1992, f. 4-24-92, cert. ef. 7-1-92
OSHA 4-1992, f. & cert. ef. 4-16-92
OSHA 1-1992, f. & cert. ef. 1-22-92
OSHA 15-1991, f. & cert. ef. 12-13-91
OSHA 13-1991, f. & cert. ef. 10-10-91
OSHA 7-1991, f. & cert. ef. 4-25-91
OSHA 21-1990, f. & ef. 9-18-90
OSHA 20-1990, f. & ef. 9-18-90
OSHA 19-1990, f. & ef. 8-31-90
OSHA 14-1990, f. 6-28-90, ef. 8-1-90
OSHA 13-1990(Temp), f. 6-28-90, ef. 8-1-90
OSHA 11-1990, f. 6-7-90, ef. 7-1-90
OSHA 9-1990, f. 5-8-90, ef. 8-8-90
OSHA 7-1990, f. & ef. 3-2-90
OSHA 6-1990, f. & ef. 3-2-90
OSHA 3-1990(Temp), f. & ef. 1-19-90
OSHA 1-1990(Temp), f. & ef. 1-11-90
APD 13-1989, f. & ef. 7-17-89
APD 11-1989, f. 7-14-89, ef. 8-14-89
APD 9-1989, f. & ef. 7-7-89
APD 6-1989(Temp), f. 4-20-89, ef. 5-1-89
APD 4-1989(Temp), f. 3-31-89, ef. 5-1-89
APD 18-1988, f. & ef. 11-17-88
APD 14-1988, f. & ef. 9-12-88
APD 13-1988, f. 8-2-88 & ef. 8-2-88

1910.1027 Cadmium.

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~~[(5) Transfer of records. Whenever an employer ceases to do business and there is no successor employer to receive and retain records for the prescribed period or the employer intends to dispose of any records required to be preserved for at least 30 years, the employer shall comply with the requirements concerning transfer of records set forth in 29 CFR 1910.1020(h).]~~

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Division 3

437-003-0001
Adoption by Reference

In addition to, and not in lieu of, any other safety and health codes contained in OAR Chapter 437, the Department adopts by reference the following federal regulations printed as part of the Code of Federal Regulations, in the Federal Register:
(1) Subdivision A — GENERAL
(a) 29 CFR 1926.1 Purpose and Scope, published 4/6/79, FR vol. 44, p. 20940.
(b) 29 CFR 1926.2 Variances from safety and health standards, published 4/6/79, FR vol. 44, p. 20940.
(c) 29 CFR 1926.3 Inspections — right of entry, published 4/6/79, FR vol. 44, p. 20940.
(d) 29 CFR 1926.4 Rules of practice for administrative adjudications for enforcement of safety and health standards, published 4/6/79, FR vol. 44, p. 20940.
(e) 29 CFR 1926.6 Incorporation by reference, published 3/25/16, FR vol. 81, no. 58, p. 16085, amended 5/14/19, FR vol. 84, no. 93, p. 21457.
(2) Subdivision B — GENERAL INTERPRETATIONS
(a) 29 CFR 1926.10 Scope of subpart, published 4/6/79, FR vol. 44, p. 20940.
(b) 29 CFR 1926.11 Coverage under section 103 of the act distinguished, published 4/6/79, FR vol. 44, p. 20940.
(c) 29 CFR 1926.12 Reorganization plan No. 14 of 1950, published 4/6/79, FR vol. 44, p. 20940.
(d) 29 CFR 1926.13 Interpretation of statutory terms, published 4/6/79, FR vol. 44, p. 20940.
(e) 29 CFR 1926.14 Federal contracts for 'mixed' types of performance, published 4/6/79, FR vol. 44, p. 20940.
(f) 29 CFR 1926.15 Relationship to the service contract act; Walsh-Healey Public Contracts Act, published 4/6/79, FR vol. 44, p. 20940.
(g) 29 CFR 1926.16 Rules of construction, published 4/6/79, FR vol. 44, p. 20940.
(3) Subdivision C — GENERAL SAFETY AND HEALTH PROVISIONS
(a) 29 CFR 1926.20 General safety and health provisions, [~~published 12/12/08, FR vol. 73, no. 240, pp. 75568-75589.~~] **published 2/18/20, FR vol. 85, no. 32, p. 8726-8746.**
(b) 29 CFR 1926.21 Safety training and education, published 4/6/79, FR vol. 44, p. 20940; amended with Oregon OSHA AO 6-2012, repealed (b)(6), f. 9/28/12, ef. 4/1/13.
(c) 29 CFR 1926.22 Recording and reporting of injuries (Reserved)
(d) 29 CFR 1926.23 First aid and medical attention, published 4/6/79, FR vol. 44, p. 20940.
(e) 29 CFR 1926.24 Fire protection and prevention, published 4/6/79, FR vol. 44, p. 20940.
(f) 29 CFR 1926.25 Housekeeping, published 4/6/79, FR vol. 44, p. 20940.
(g) 29 CFR 1926.26 Illumination, published 4/6/79, FR vol. 44, p. 20940.
(h) 29 CFR 1926.27 Sanitation, published 4/6/79, FR vol. 44, p. 20940.
(i) 29 CFR 1926.28 Personal protective equipment. REPEALED with Oregon OSHA Admin. Order 2-2013, filed 2/15/13, effective 4/1/13. In Oregon, OAR 437-003-0134 applies.
(j) 29 CFR 1926.29 Acceptable certifications, published 4/6/79, FR vol. 44, p. 20940.
(k) 29 CFR 1926.30 Shipbuilding and ship repairing, published 3/7/96, FR vol. 61, no. 46, p. 9249.
(l) 29 CFR 1926.31 (Reserved).
(m) 29 CFR 1926.32 Definitions, published 6/30/93, FR vol. 58, no. 124, p. 35078.
(n) 29 CFR 1926.33 Access to employee exposure and medical records, published 6/20/96, FR vol. 61, no. 46, p. 31427.

(o) 29 CFR 1926.34 Means of egress, published 6/30/93, Federal Register, vol. 58, no. 124, p. 35083.
(4) Subdivision D — OCCUPATIONAL HEALTH AND ENVIRONMENTAL CONTROLS
(a) 29 CFR 1926.50 Medical services and first aid, published 6/18/98, FR vol. 63, no. 117, p. 33469, amended 5/14/19, FR vol. 84, no. 93, p. 21576.
(b) 29 CFR 1926.51 Sanitation, published 6/30/93, FR vol. 58, no. 124, p. 35084.
(c) 29 CFR 1926.52 Occupational noise exposure, published 4/6/79, FR vol. 44, p. 20940.
(d) 29 CFR 1926.53 Ionizing radiation, published 4/6/79, FR vol. 44, p. 20940.
(e) 29 CFR 1926.54 Nonionizing radiation, published 4/6/79, FR vol. 44, p. 20940.
(f) 29 CFR 1926.55 Gases, vapors, fumes, dusts, and mists, Note: Oregon OSHA did not adopt 1926.55. In Oregon, 437-003-1000 applies.
(g) 29 CFR 1926.56 Illumination, published 4/6/79, FR vol. 44, p. 20940.
(h) 29 CFR 1926.57 Ventilation, published 1/8/98, FR vol. 63, no. 5, p. 1295.
(i) 29 CFR 1926.58 Reserved, §1926.58, Asbestos, tremolite, anthophyllite and actinolite is redesignated as 1926.1101, Asbestos, and 1926.58 is reserved (8/10/94, FR vol. 59, no. 153, pp. 41131-62).
(j) 29 CFR 1926.59 Hazard Communication, published 6/20/96, FR vol. 61, p. 31427.
(k) 29 CFR 1926.60 Methylenedianiline (MDA), published 5/14/19, FR vol. 84, no. 93, p. 21576.
(l) 29 CFR 1926.61 Retention of DOT markings, placards and labels, published 6/20/96, FR vol. 61, p. 31427.
(m) 29 CFR 1926.62 Lead, published 5/14/19, FR vol. 84, no. 93, p. 21416.
[~~NOTE~~]**Note**: Cadmium has been redesignated as 1926.1127.
(n) 29 CFR 1926.64, Process Safety Management of Highly Hazardous Chemicals
[~~NOTE~~]**Note**: Division 2/H, 1910.119, Process Safety Management of Highly Hazardous Chemicals, applies to Construction.
(o) 29 CFR 1926.65 Hazardous Waste Operations and Emergency Response
[~~NOTE~~]**Note**: Division 2/H, 1910.120, Hazardous Waste Operations and Emergency Response, applies to Construction.
(5) Subdivision E — PERSONAL PROTECTIVE AND LIFE SAVING EQUIPMENT
(a) 29 CFR 1926.95 Criteria for personal protective equipment. REPEALED with Oregon OSHA Admin. Order 2-2013, filed 2/15/13, effective 4/1/13. In Oregon, OAR 437-003-0134 applies.
(b) 29 CFR 1926.97 Electrical protective equipment, published 4/11/14, FR vol. 79, no. 70, p. 20316.
(c) 29 CFR 1926.100 Head protection. REPEALED with Oregon OSHA Admin. Order 2-2013, filed 2/15/13, effective 4/1/13. In Oregon, OAR 437-003-0134 applies.
(d) 29 CFR 1926.101 Hearing protection. REPEALED with Oregon OSHA Admin. Order 2-2013, filed 2/15/13, effective 4/1/13. In Oregon, OAR 437-003-0134 applies.
(e) 29 CFR 1926.102 Eye and face protection. REPEALED with Oregon OSHA Admin. Order 2-2013, filed 2/15/13, effective 4/1/13. In Oregon, OAR 437-003-0134 applies.
(f) 29 CFR 1926.103 Respiratory protection, published 1/8/98, FR vol. 63, no. 5, p. 1297.
[~~NOTE~~]**Note**: 29 CFR 1926.104 Removed, 8/9/94, FR vol. 59, no. 152, p. 40729.
(g) 29 CFR 1926.105 Reserved, 8/9/94, FR vol. 59, no. 152, p. 40729.
(h) 29 CFR 1926.106 Working over or near water, published 4/6/79, FR vol. 44, p. 20940.
(i) 29 CFR 1926.107 Definitions applicable to this subpart, published 8/9/94, FR vol. 59, no. 152, p. 40729.
(6) Subdivision F — FIRE PROTECTION AND PREVENTION
(a) 29 CFR 1926.150 Fire protection, published 4/6/79, FR vol. 44, p. 20940.
(b) 29 CFR 1926.151 Fire prevention, published 7/11/86, FR vol. 51, p. 25318.
(c) 29 CFR 1926.152 Flammable and combustible liquids, published 6/30/93, FR vol. 58, no. 124, p. 35162.

(d) 29 CFR 1926.153 Liquefied petroleum gas (LP-Gas), published 6/30/93, FR vol. 58, no. 124, p. 35170.
(e) 29 CFR 1926.154 Temporary heating devices, published 4/6/79, FR vol. 44, p. 20940.
(f) 29 CFR 1926.155 Definitions applicable to this subpart, published 4/6/79, FR vol. 44, p. 20940.
(7) Subdivision G — SIGNS, SIGNALS, AND BARRICADES
(a) 29 CFR 1926.200 Accident prevention signs and tags, published 6/13/13, FR vol. 78, no. 114, p. 35559; 11/6/13, FR vol. 78, no. 215, p. 66641, amended 5/14/19, FR vol. 84, no. 93, p. 21576.
(b) 29 CFR 1926.201 Signaling, REPEALED with OR-OSHA Admin. Order 2-2003, f. 1/30/03, ef. 1/30/03.
(c) 29 CFR 1926.202 Barricades, REPEALED with OR-OSHA Admin. Order 2-2003, f. 1/30/03, ef. 1/30/03.
(d) 29 CFR 1926.203 Definitions applicable to this subpart, published 4/6/79, FR vol. 44, p. 20940; amended with OR-OSHA Admin. Order 2-2003, f. 1/30/03, ef. 1/30/03, repealed 5/14/19, FR vol. 84, no. 93, p. 21576.
(8) Subdivision H — MATERIALS HANDLING, STORAGE, USE AND DISPOSAL
(a) 29 CFR 1926.250 General requirements for storage, published 6/30/93, FR vol. 58, no. 124, p. 35173, amended 5/14/19 FR vol. 84, no. 93, p. 21576.
(b) 29 CFR 1926.251 Rigging equipment for material handling, published 4/18/12, FR vol. 77, no. 75, p. 23117.
(c) 29 CFR 1926.252 Disposal of waste materials, published 4/6/79, FR vol. 44, p. 20940.
(9) Subdivision I — TOOLS — HAND AND POWER
(a) 29 CFR 1926.300 General requirements, published 3/7/96, FR vol. 61, no. 46, p. 9250.
(b) 29 CFR 1926.301 Hand tools, published 4/6/79, FR vol. 44, p. 20940.
(c) 29 CFR 1926.302 Power operated hand tools, published 6/30/93, FR vol. 58, no. 124, p. 35175.
(d) 29 CFR 1926.303 Abrasive wheels and tools, published 6/30/93, FR vol. 58, no. 124, p. 35175.
(e) 29 CFR 1926.304 Woodworking tools, published 3/7/96, FR vol. 61, no. 46, p. 9251.
(f) 29 CFR 1926.305 Jacks - lever and ratchet, screw, and hydraulic, published Federal Register vol. 58, no. 124, p. 35176.
(10) Subdivision J — WELDING AND CUTTING
(a) 29 CFR 1926.350 Gas welding and cutting. Repealed. Oregon OSHA Admin. Order 6-2014, f. 10/28/14, ef. 5/1/15. In Oregon, OAR 437-002-2253 applies.
(b) 29 CFR 1926.351 Arc welding and cutting, published 7/11/86, FR vol. 51, p. 25318.
(c) 29 CFR 1926.352 Fire prevention, published 4/6/79, FR vol. 44, p. 20940.
(d) 29 CFR 1926.353 Ventilation and protection in welding, cutting, and heating, published 6/30/93, FR vol. 58, no. 124, p. 35179.
(e) 29 CFR 1926.354 Welding, cutting, and heating in way of preservative coatings, published 4/6/79, FR vol. 44, p. 20940.
(11) Subdivision K — ELECTRICAL
(a) 29 CFR 1926.400 Introduction, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335.
(b) 29 CFR 1926.401 (Reserved)
(c) 29 CFR 1926.402 Applicability, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335.
(d) 29 CFR 1926.403 General requirements, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335.
(e) 29 CFR 1926.404 Wiring design and protection, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335; amended with AO 5-2002, repeal (b)(1), f. 6/28/02, ef. 10/1/03.

(f) 29 CFR 1926.405 Wiring methods, components, and equipment for general use, [~~published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335.~~] **published 2/18/20, FR vol. 85, no. 32, p. 8726-8746.**
(g) 29 CFR 1926.406 Specific purpose equipment and installations, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335.
(h) 29 CFR 1926.407 Hazardous (classified) locations, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335.
(i) 29 CFR 1926.408 Special systems, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335.
(j) 29 CFR 1926.409 (Reserved)
(k) 29 CFR 1926.415 (Reserved)
(l) 29 CFR 1926.416 General requirements, published 8/12/96, FR vol. 61, no. 156, p. 41738.
(m) 29 CFR 1926.417 Lockout and tagging of circuits, published 8/12/96, FR vol. 61, no. 156, p. 41739.
(n) 29 CFR 1926.418 (Reserved)
(o) 29 CFR 1926.430 (Reserved)
(p) 29 CFR 1926.431 Maintenance of equipment, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335.
(q) 29 CFR 1926.432 Environmental deterioration of equipment, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335.
(r) 29 CFR 1926.433 - 29 CFR 1926.440 (Reserved)
(s) 29 CFR 1926.441 Battery locations and battery charging, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335.
(t) 29 CFR 1926.442 - 29 CFR 1926.448 (Reserved)
(u) 29 CFR 1926.449 Definitions applicable to this subpart, published 7/11/86, FR vol. 51, no. 133, pp. 25294-25335.
(12) Subdivision L — SCAFFOLDING
(a) 29 CFR 1926.450 Scope, application and definitions applicable to this subpart, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(b) 29 CFR 1926.451 General requirements, published 11/25/96, FR vol. 61, no. 228, p. 59831.
(c) 29 CFR 1926.452 Additional requirements applicable to specific types of scaffolds, [~~published 8/30/96, FR vol. 61, no. 170, p. 46113~~**.] published 2/18/20, FR vol. 85, no. 32, p. 8726-8746.**
(d) 29 CFR 1926.453 Aerial lifts, published 11/25/96, FR vol. 61, no. 228, p. 59832.
(e) 29 CFR 1926.454 Training, published 8/30/96, FR vol. 61, no. 170, p. 46117.
(f) Appendix A to Subpart L Scaffold Specifications, published 8/30/96, FR vol. 61, no. 170, p. 46117.
(g) Appendix B to Subpart L Criteria for determining the feasibility of providing safe access and fall protection for scaffold erectors and dismantlers (Reserved), published 8/30/96, FR vol. 61, no. 170, p. 46122.
(h) Appendix C to Subpart L List of National Consensus Standards, published 8/30/96, FR vol. 61, no. 170, p. 46122.
(i) Appendix D to Subpart L List of training topics for scaffold erectors and dismantlers, published 8/30/96, FR vol. 61, no. 170, p. 46122.
(j) Appendix E to Subpart L Drawing and illustrations, [~~published 11/25/96, FR vol. 61, no. 228, p. 59832.~~]**published 2/18/20, FR vol. 85, no. 32, p. 8726-8746.**
(13) Subdivision M — FALL PROTECTION
(a) 29 CFR 1926.500 Scope, application, and definitions applicable to this subpart, published 4/11/14, FR vol. 79, no. 70, p. 20316; amended with AO 1-2016, f. 3/1/16, ef. 1/1/17.
(b) 29 CFR 1926.501 Duty to have fall protection. REPEALED with AO 1-2016, f. 3/1/16, ef. 1/1/17. In Oregon, 437-003-1501 applies.

(c) 29 CFR 1926.502 Fall protection systems criteria and practices, published 8/9/94, FR vol. 59, no. 152, p. 40733-40738; amended with AO 6-2002, f. and ef. 7/19/02.
(d) 29 CFR 1926.503 Training requirements. REPEALED with AO 6-2002, f. and ef. 7/19/02, in Oregon, 437-003-0503 applies.
(e) Appendix A to Subpart M Determining Roof Widths, [~~published 8/9/94, FR vol. 59, no. 152, p. 40738-40742.~~] **published 2/18/20, FR vol. 85, no. 32, p. 8726-8746.**
(f) Appendix B to Subpart M Guardrail Systems, published 8/9/94, FR vol. 59, no. 152, p. 40743.
(g) Appendix C to Subpart M Personal Fall Arrest Systems, published 8/9/94, FR vol. 59, no. 152, p. 40743-40746.
(h) Appendix D to Subpart M Positioning Device Systems, published 8/9/94, FR vol. 59, no. 152, p. 40746.
(14) Subdivision N — HELICOPTERS, HOISTS, ELEVATORS, AND CONVEYORS
(a) 29 CFR 1926.550 (Reserved).
(b) 29 CFR 1926.551 Helicopters, published 4/6/79, FR vol. 44, p. 20940.
(c) 29 CFR 1926.552 [~~Material hoists, personnel hoists, and elevators~~] **Helicopters, Hoists, Elevators, and Conveyors**, [~~published 4/6/79, FR vol. 44, p. 20940.~~] **published 2/18/20, FR vol. 85, no. 32, p. 8726-8746.**
(d) 29 CFR 1926.553 Base-mounted drum hoist, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(e) 29 CFR 1926.554 Overhead hoists, published 4/6/79, FR vol. 44, p. 20940.
(f) 29 CFR 1926.555 Conveyors, published 4/6/79, FR vol. 44, p. 20940.
(15) Subdivision O — MOTOR VEHICLES, MECHANIZED EQUIPMENT, AND MARINE OPERATIONS
(a) 29 CFR 1926.600 Equipment, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(b) 29 CFR 1926.601 Motor vehicles, REPEALED by OR-OSHA Admin. Order 6-2007, f. 9/26/07, ef. 9/26/07.
(c) 29 CFR 1926.602 Material handling equipment, published 12/1/98, FR vol. 63, no. 230, p. 66274; amended by AO 7-2003, f. 12/5/03, ef. 12/5/03.
(d) 29 CFR 1926.603 Pile driving equipment, published 4/6/79, FR vol. 44, p. 20940.
(e) 29 CFR 1926.604 Site clearing, published 7/22/77, FR vol. 42, p. 37674.
(f) 29 CFR 1926.605 Marine operations and equipment, published 4/6/79, FR vol. 44, p. 20940.
(g) 29 CFR 1926.606 Definitions applicable to this subpart, published 4/6/79, FR vol. 44, p. 20940.
(16) Subdivision P — EXCAVATIONS
(a) 29 CFR 1926.650 Scope, application, and definitions applicable to this subdivision, published 10/31/89, FR vol. 54, no. 209, pp. 45959-45961.
(b) 29 CFR 1926.651 General requirements, published 8/9/94, FR vol. 59, no. 152, p. 40730.
(c) 29 CFR 1926.652 Requirements for protective systems, published 10/31/89, FR vol. 54, no. 209, pp. 45961-45962.
(d) Appendices A-F to Subdivision P, Excavations, [~~published 10/31/89, FR vol. 54, no. 209, pp. 45962-45991.~~] **published 2/18/20, FR vol. 85, no. 32, p. 8726-8746.**
(17) Subdivision Q — CONCRETE AND MASONRY CONSTRUCTION
(a) 29 CFR 1926.700 Scope, application and definitions applicable to this subpart, published 10/18/90, FR vol. 55, no. 202, p. 42326.
(b) 29 CFR 1926.701 General requirements, published 8/9/94, FR vol. 59, no. 152, p. 40730.
(c) 29 CFR 1926.702 Requirements for equipment and tools, published 6/16/88, FR vol. 53, p. 22612.
(d) 29 CFR 1926.703 Requirements for cast-in-place concrete, published 6/16/88, FR vol. 53, p. 22612.
(e) 29 CFR 1926.704 Requirements for precast concrete, published 10/5/89, FR vol. 54, no. 192, p. 41088.

(f) 29 CFR 1926.705 Requirements for lift-slab construction operations, published 10/18/90, FR vol. 55, no. 202, p. 42326.
(g) Appendix A to 1926.705 Lift-slab operations, published 10/18/90, FR vol. 55, no. 202, p. 42326.
(h) 29 CFR 1926.706 Requirements for masonry construction, published 6/16/88, FR vol. 53, p. 22612; amended with OR-OSHA Admin. Order 1-2003, f. 1/30/03, ef. 4/30/03.
(18) Subdivision R — STEEL ERECTION
(a) 29 CFR 1926.750 Scope, published 7/17/01, FR vol. 66, no. 137, p. 37137.
(b) 29 CFR 1926.751 Definitions, published 7/17/01, FR vol. 66, no. 137, p. 37137; amended with AO 6-2002, f. and ef. 7/19/02; amended with AO 8-2003, f. 12/30/03, ef. 1/1/04.
(c) 29 CFR 1926.752 Site layout, site-specific erection plan and construction sequence, published 7/17/01, FR vol. 66, no. 137, p. 37137.
(d) 29 CFR 1926.753 Hoisting and rigging, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(e) 29 CFR 1926.754 Structural steel assembly, [~~published 4/3/06, FR vol. 71, no. 63, p. 16669.~~] **published 2/18/20, FR vol. 85, no. 32, p. 8726-8746.**
(f) 29 CFR 1926.755 Column anchorage, published 7/17/01, FR vol. 66, no. 137, p. 37137.
(g) 29 CFR 1926.756 Beams and columns, published 7/17/01, FR vol. 66, no. 137, p. 37137.
(h) 29 CFR 1926.757 Open web steel joists, published [~~7/17/01, FR vol. 66, no. 137, p. 37137~~] **2/18/20, FR vol. 85, no. 32, p. 8726-8746;** amended with AO 8-2003, f. 12/30/03, ef. 1/1/04.
(i) 29 CFR 1926.758 Systems-engineered metal buildings, published 7/17/01, FR vol. 66, no. 137, p. 37137.
(j) 29 CFR 1926.759 Falling object protection, published 7/17/01, FR vol. 66, no. 137, p. 37137.
(k) 29 CFR 1926.760 Fall protection, published 7/17/01, FR vol. 66, no. 137, p. 37137; amended with AO 8-2003, f. 12/30/03, ef. 1/1/04.
(l) 29 CFR 1926.761 Training, [~~published 12/12/08, FR vol. 73, no. 240, pp. 75568-75589~~.] **published 2/18/20, FR vol. 85, no. 32, p. 8726-8746.**
(m) Appendix A to Subpart R Guidelines for establishing the components of a site-specific erection plan: Nonmandatory Guidelines for Complying with §1926.752(e), published 7/17/01, FR vol. 66, no. 137, p. 37137.
(n) Appendix B to Subpart R Reserved.
(o) Appendix C to Subpart R Illustrations of bridging terminus points: Nonmandatory Guidelines for Complying with §1926.757(a)(10) and §1926.757(c)(5), published 7/17/01, FR vol. 66, no. 137, p. 37137.
(p) Appendix D to Subpart R Illustration of the use of control lines to demarcate controlled decking zones (CDZs): Nonmandatory Guidelines for Complying with §1926.760(c)(3), REPEALED with AO 6-2002, f. and ef. 7/19/02; amended with AO 8-2003, f. 12/30/03, ef. 1/1/04.
(q) Appendix E to Subpart R Training: Nonmandatory Guidelines for Complying with §1926.761, published 7/17/01, FR vol. 66, no. 137, p. 37137.
(r) Appendix F to Subpart R Perimeter columns: Nonmandatory Guidelines for Complying with §1926.756(e) to Protect the Unprotected Side or Edge of a Walking/Working Surface, published 7/17/01, FR vol. 66, no. 137, p. 37137.
(s) Appendix G to Subpart R Fall protection systems criteria and practices from §1926.502: Nonmandatory Guidelines for Complying with Complying with §1926.760(d), REPEALED with AO 6-2002, f. and ef. 7/19/02; amended with AO 8-2003, f. 12/30/03, ef. 1/1/04.
(t) Appendix H to Subpart R Double connections: Illustration of a clipped end connection and a staggered connection: Non-Mandatory Guidelines for Complying with Complying with §1926.756(c)(1), published 7/17/01, FR vol. 66, no. 137, p. 37137.
(19) Subdivision S — UNDERGROUND CONSTRUCTION, CAISSONS, COFFERDAMS, AND COMPRESSED AIR

(a) 29 CFR 1926.800 Underground construction, published 4/23/13, FR vol. 78, no. 78, p. 23837, amended 5/14/19, FR vol. 84, no. 93, p. 21576.
(b) 29 CFR 1926.801 Caissons, published 4/6/79, FR vol. 44, p. 20940.
(c) 29 CFR 1926.802 Cofferdams, published 4/6/79, FR vol. 44, p. 20940.
(d) 29 CFR 1926.803 Compressed air, published 7/11/86, FR vol. 51, p. 25318.
(e) 29 CFR 1926.804 Definitions applicable to this subpart, published 4/6/79, FR vol. 44, p. 20940.
(f) Appendix A to Subpart S Decompression Tables, published 4/6/79, FR vol. 44, p. 20940.
(20) Subdivision T – DEMOLITION
(a) 29 CFR 1926.850 Preparatory operations, published 4/6/79, FR vol. 44, p. 20940.
(b) 29 CFR 1926.851 Stairs, passageways, and ladders, published 4/6/79, FR vol. 44, p. 20940.
(c) 29 CFR 1926.852 Chutes, published 4/6/79, FR vol. 44, p. 20940.
(d) 29 CFR 1926.853 Removal of materials through floor openings, published 4/6/79, FR vol. 44, p. 20940.
(e) 29 CFR 1926.854 Removal of walls, masonry sections, and chimneys, published 4/6/79, FR vol. 44, p. 20940.
(f) 29 CFR 1926.855 Manual removal of floors, published 4/6/79, FR vol. 44, p. 20940.
(g) 29 CFR 1926.856 Removal of walls, floors, and materials with equipment, published 4/23/13, FR vol. 78, no. 78, p. 23837.
(h) 29 CFR 1926.857 Storage, published 4/6/79, FR vol. 44, p. 20940.
(i) 29 CFR 1926.858 Removal of steel construction, published 4/23/13, FR vol. 78, no. 78, p. 23837.
(j) 29 CFR 1926.859 Mechanical demolition, published 4/6/79, FR vol. 44, p. 20940.
(k) 29 CFR 1926.860 Selective demolition by explosives, published 4/6/79, FR vol. 44, p. 20940.
(21) Subdivision U — BLASTING AND USE OF EXPLOSIVES
(a) 29 CFR 1926.900 General provisions, published 4/6/79, FR vol. 44, p. 20940.
(b) 29 CFR 1926.901 Blaster qualifications, published 4/6/79, FR vol. 44, p. 20940.
(c) 29 CFR 1926.902 Surface transportation of explosives, published 6/30/93, FR vol. 58, no. 124, p. 35311.
(d) 29 CFR 1926.903 Underground transportation of explosives, published 4/6/79, FR vol. 44, p. 20940.
(e) 29 CFR 1926.904 Storage of explosives and blasting agents, published 6/30/93, FR vol. 58, no. 124, p. 35311.
(f) 29 CFR 1926.905 Loading of explosives or blasting agents, published 6/30/93, FR vol. 58, no. 124, p. 35184.
(g) 29 CFR 1926.906 Initiation of explosive charges — electric blasting, published 6/18/98, FR vol. 63, no. 117, p. 33469.
(h) 29 CFR 1926.907 Use of safety fuse, published 4/6/79, FR vol. 44, p. 20940.
(i) 29 CFR 1926.908 Use of detonating cord, published 4/6/79, FR vol. 44, p. 20940.
(j) 29 CFR 1926.909 Firing the blast, published 4/6/79, FR vol. 44, p. 20940.
(k) 29 CFR 1926.910 Inspection after blasting, published 4/6/79, FR vol. 44, p. 20940.
(l) 29 CFR 1926.911 Misfires, published 4/6/79, FR vol. 44, p. 20940.
(m) 29 CFR 1926.912 Underwater blasting, published 4/6/79, FR vol. 44, p. 20940.
(n) 29 CFR 1926.913 Blasting in excavation work under compressed air, published 4/6/79, FR vol. 44, p. 20940.
(o) 29 CFR 1926.914 Definitions applicable to this subpart, published 6/30/93, FR vol. 58, no. 124, p. 35184, 35311.
(22) Subdivision V — POWER TRANSMISSION AND DISTRIBUTION. 29 CFR 1926.950 through 1926.960 are repealed with Oregon OSHA Admin. Order 3-2015, f. 10/9/15, ef. 1/1/16. In Oregon, Division 2/RR applies.
(23) Subdivision W — ROLLOVER PROTECTIVE STRUCTURES: OVERHEAD PROTECTION

(a) 29 CFR 1926.1000 Rollover protective structures (ROPS) for material handling equipment, published 4/6/79, FR vol. 44, p. 20940, amended 5/14/19, FR vol. 84, no. 93, p. 21576.
(b) 29 CFR 1926.1001 Minimum performance criteria for rollover protective structure for designated scrapers, loaders, dozers, graders, and crawler tractors, published 4/6/79, FR vol. 44, p. 20940, amended 5/14/19, FR vol. 84, no. 93, p. 21576.
(c) 29 CFR 1926.1002 Protective frame (ROPS) test procedures and performance requirements for wheel-type agricultural and industrial tractors used in construction, published 7/20/06, FR vol. 71, no. 139, p. 41127, amended 5/14/19, FR vol. 84, no. 93, p. 21576.
(d) 29 CFR 1926.1003 Overhead protection for operators of agricultural and industrial tractors, published 2/28/06, FR vol. 71, no. 39, p. 9909, amended 5/14/19, FR vol. 84, no. 93, p. 21576.
(24) Subdivision X — STAIRWAYS AND LADDERS
(a) 29 CFR 1926.1050 Scope, application and definitions applicable to this Subdivision, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(b) 29 CFR 1926.1051 General requirements, published 11/14/90, FR vol. 55, no. 220, p. 47688.
(c) 29 CFR 1926.1052 Stairways, published 8/23/91, FR vol. 56, no. 164, pp. 41793-41794.
(d) 29 CFR 1926.1053 Ladders, published 4/11/14, FR vol. 79, no. 70, p. 20316.
(e) 29 CFR 1926.1054 (Reserved).
(f) 29 CFR 1926.1055 (Reserved).
(g) 29 CFR 1926.1056 (Reserved).
(h) 29 CFR 1926.1057 (Reserved).
(i) 29 CFR 1926.1058 (Reserved).
(j) 29 CFR 1926.1059 (Reserved).
(k) 29 CFR 1926.1060 Training requirements, published 11/14/90, FR vol. 55, no. 220, p. 47691.
(25) Subdivision Z — TOXIC AND HAZARDOUS SUBSTANCES
(a) 29 CFR 1926.1101 Asbestos, published [~~2/8/13, FR vol. 78, no. 27, p. 9311, amended 5/14/19, FR vol. 84, no. 93, p. 21576.~~]**2/18/20, FR vol. 85, no. 32, p. 8726-8746; amended with OR-OSHA Admin. Order 5-2011, f. 12/8/11, ef. 7/1/12.**
(b) 29 CFR 1926.1126 Chromium (VI), published 3/17/10, FR vol. 75, no. 51, pp. 12681-12686, amended 5/14/19, FR vol. 84, no. 93, p. 21576.
(c) 29 CFR 1926.1127 Cadmium, [~~published 12/12/08, FR vol. 73, no. 240, pp. 75568-75589, amended 5/14/19, FR vol. 84, no. 93, p. 21576.~~]**2/18/20, FR vol. 85, no. 32, p. 8726-8746; amended with OR-OSHA Admin. Order 5-2011, f. 12/8/11, ef. 7/1/12.**
(d) 29 CFR 1926.1152 Methylene Chloride, published 12/18/97, FR vol. 62, no. 243, p. 66275.
(26) Subdivision AA — (Reserved).
(27) Subdivision BB — (Reserved).
(28) Subdivision CC – Cranes and Derricks in Construction.
(a) 29 CFR 1926.1400 Scope, published [~~4/11/14, FR vol. 79, no. 70, p. 20316~~] **9/15/20, FR vol. 85, no. 179, pp 57109-57122**; amended with Oregon OSHA AO 3-2015, f. 10/9/15, ef. 1/1/16**; amended with OSHA 1-2024, f. 9/4/2024, ef. 9/4/2024.**
(b) 29 CFR 1926.1401 Definitions, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(c) 29 CFR 1926.1402 Ground conditions, published 8/9/10, FR vol. 75, no. 152. Pp. 47906-48177.
(d) 29 CFR 1926.1403 Assembly/Disassembly – selection of manufacturer or employer procedures, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(e) 29 CFR 1926.1404 Assembly/Disassembly – general requirements (applies to all assembly and disassembly operations), published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(f) 29 CFR 1926.1405 Disassembly – additional requirements for dismantling of booms and jibs (applies to both the use of manufacturer procedures and employer procedures), published 8/9/10, FR vol. 75, no. 152. Pp. 47906-48177.

(g) 29 CFR 1926.1406 Assembly/Disassembly – employer procedures – general requirements, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(h) 29 CFR 1926.1407 Power line safety (up to 350 kV) – assembly and disassembly, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(i) 29 CFR 1926.1408 Power line safety (up to 350 kV) – equipment operations, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177**; amended with OSHA 1-2024, f. 9/11/2024, ef. 9/11/2024.**
(j) 29 CFR 1926.1409 Power line safety (over 35 kV), published 8/9/10, FR vol. 75, vol. 152, pp. 47906-48177.
(k) 29 CFR 1926.1410 Power line safety (all voltages) – equipment operations closer than the Table A zone, published 4/11/14, FR vol. 79, no. 70, pp. 20316**; amended with OSHA 1-2024, f. 9/11/2024, ef. 9/11/2024.**
(l) 29 CFR 1926.1411 Power line safety – while traveling, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(m) 29 CFR 1926.1412 Inspections, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(n) 29 CFR 1926.1413 Wire rope – inspection, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(o) 29 CFR 1926.1414 Wire rope – selection and installation criteria, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(p) 29 CFR 1926.1415 Safety devices, published 8/9/10, FR vol. 75, no. 152, pp. 47906- 48177.
(q) 29 CFR 1926.1416 Operational aids, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(r) 29 CFR 1926.1417 Operation, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(s) 29 CFR 1926.1418 Authority to stop operation, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(t) 29 CFR 1926.1419 Signals – general requirements, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(u) 29 CFR 1926.1420 Signals – radio, telephone or other electronic transmission of signals, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(v) 29 CFR 1926.1421 Signals – voice signals – additional requirements, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(w) 29 CFR 1926.1422 Signals – hand signal chart, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(x) 29 CFR 1926.1423 Fall protection, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(y) 29 CFR 1926.1424 Work area control, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(z) 29 CFR 1926.1425 Keeping clear of the load, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(aa) 29 CFR 1926.1426 Free fall and controlled load lowering, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(bb) 29 CFR 1926.1427 Operator qualification and certification, published 11/9/18, FR vol. 83, no. 218, p. 56198.
(cc) 29 CFR 1926.1428 Signal person qualifications, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(dd) 29 CFR 1926.1429 Qualifications of maintenance & repair employees, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(ee) 29 CFR 1926.1430 Training, published 11/9/18, FR vol. 83, no. 218, p. 56198.
(ff) 29 CFR 1926.1431 Hoisting personnel, published [~~8/9/10, FR vol. 75, no. 152, pp. 47906-48177.~~]**published 2/18/20, FR vol. 85, no. 32, p. 8746; amended with OSHA 1-2024, f. 9/11/2024, ef. 9/11/2024.**

(gg) 29 CFR 1926.1432 Multiple-crane/derrick lifts – supplemental requirements, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(hh) 29 CFR 1926.1433 Design, construction and testing, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(ii) 29 CFR 1926.1434 Equipment modifications, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(jj) 29 CFR 1926.1435 Tower cranes, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(kk) 29 CFR 1926.1436 Derricks, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(ll) 29 CFR 1926.1437 Floating cranes/derricks and land cranes/derricks on barges, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(mm) 29 CFR 1926.1438 Overhead & gantry cranes, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(nn) 29 CFR 1926.1439 Dedicated pile drivers, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(oo) 29 CFR 1926.1440 Sideboom cranes, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(pp) 29 CFR 1926.1441 Equipment with a rated hoisting/lifting capacity of 2,000 pounds or less, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(qq) 29 CFR 1926.1442 [~~Cranes and Derricks in Construction: Railroad Roadway Work~~]**Railroad roadway maintenance machines**, published 9/15/20, FR vol. 85, no. 179, pp 57109-57122.
(rr) 29 CFR 1926.1443 Severability, published [~~8/9/10, FR vol. 75, no. 152, pp. 47906-48177~~]**9/15/20, FR vol. 85, no. 179, pp 57109-57122**.
(ss) Appendix A to Subdivision CC of 1926 – Standard Hand Signals, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(tt) Appendix B to Subdivision CC of 1926 – Assembly/Disassembly – Sample Procedures for Minimizing the Risk of Unintended Dangerous Boom Movement, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
(uu) Appendix C to Subdivision CC of 1926 – Operator Certification – Written Examination – Technical Knowledge Criteria, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.
These standards are available at the Oregon Occupational Safety and Health Division, Oregon Department of Consumer and Business Services, and the United States Government Printing Office.

Statutory/Other Authority: ORS 654.025(2) & 656.726(4)
Statutes/Other Implemented: ORS 654.001 - 654.295
History:
OR-OSHA Administrative Order 1-2024, filed 9/11/24, effective 9/11/24.
OSHA 3-2021, amend filed 06/02/2021, effective 06/02/2021
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OSHA 4-2016, f. & cert. ef. 9-7-16
OSHA 3-2016, f. & cert. ef. 8-19-16
OSHA 1-2016, f. 3-1-16, cert. ef. 1-1-17
OSHA 3-2015, f. 10-9-15, cert. ef. 1-1-16
OSHA 6-2014, f. 10-28-14, cert. ef. 5-1-15
OSHA 7-2013, f. & cert. ef. 12-12-13
OSHA 6-2013, f. & cert. ef. 10-9-13
OSHA 5-2013, f. & cert. ef. 9-13-13
OSHA 4-2013, f. & cert. ef. 7-19-13
OSHA 2-2013, f. 2-15-13, cert. ef. 4-1-13
OSHA 1-2013, f. & cert. ef. 2-14-13
OSHA 7-2012, f. & cert. ef. 12-14-12
OSHA 6-2012, f. 9-28-12, cert. ef. 4-1-13
OSHA 5-2012, f. & cert. ef. 9-25-12
OSHA 3-2012, f. & cert. e.f 8-20-12

OSHA 1-2012, f. & cert. ef. 4-10-12
OSHA 5-2011, f. 12-8-11, cert. ef. 7-1-12
OSHA 4-2011, f. & cert. ef. 12-8-11
OSHA 1-2011, f. & cert. ef. 2-9-11
OSHA 3-2010, f. 6-10-10, cert. ef. 6-15-10
OSHA 5-2009, f. & cert. ef. 5-29-09
OSHA 5-2008, f. 5-1-08, cert. ef. 5-15-08
OSHA 6-2007, f. & cert. ef. 9-26-07
OSHA 10-2006, f. & cert. ef. 11-30-06
OSHA 6-2006, f. & cert. ef. 8-30-06
OSHA 5-2006, f. 8-7-06, cert. ef. 1-1-07
OSHA 4-2006, f. & cert. ef. 7-24-06
OSHA 2-2006, f. & cert. ef. 4-28-06
OSHA 1-2005, f. & cert. ef. 4-12-05
OSHA 8-2003, f. 12-30-03, cert. ef. 1-1-04
OSHA 7-2003, f. & cert. ef. 12-5-03
OSHA 2-2003, f. & cert. ef. 1-30-03
OSHA 1-2003, f. 1-30-03, cert. ef. 4-30-03
OSHA 6-2002, f. & cert. ef. 7-19-02
OSHA 5-2002, f. 6-28-02, cert. ef. 10-1-03
OSHA 3-2002, f. 4-15-02, cert. ef. 4-18-02
OSHA 3-2001, f. & cert. ef. 2-5-01
OSHA 3-2000, f. & cert. ef. 2-8-00
OSHA 6-1999, f. & cert. ef. 5-26-99
OSHA 2-1999, f. & cert. ef. 4-30-99
OSHA 7-1998, f. & cert. ef. 12-18-98
OSHA 6-1998, f. & cert. ef. 10-15-98
OSHA 3-1998, f. & cert. ef. 7-7-98
OSHA 7-1997, f. & cert. ef. 9-15-97
OSHA 6-1997, f. & cert. ef. 5-2-97
OSHA 4-1997, f. & cert. ef. 4-2-97
OSHA 2-1997, f. & cert. ef. 3-12-97
OSHA 6-1996, f. & cert. ef. 11-29-96
OSHA 5-1996, f. & cert. ef. 11-29-96
OSHA 8-1995, f. & cert. ef. 8-25-95
OSHA 6-1995, f. & cert. ef. 4-18-95
OSHA 5-1995, f. & cert. ef. 4-6-95
OSHA 4-1995, f. & cert. ef. 3-29-95
OSHA 3-1995, f. & cert. ef. 2-22-95
OSHA 1-1995, f. & cert. ef. 1-19-95
OSHA 4-1994, f. & cert. ef. 8-4-94
OSHA 16-1993, f. & cert. ef. 11-1-93
OSHA 1-1993, f. & cert. ef. 1-22-93
OSHA 11-1992, f. & cert. ef. 10-9-92
OSHA 6-1992, f. & cert. ef. 5-18-92
OSHA 16-1991, f. 12-16-91, cert. ef. 1-1-92
OSHA 15-1991, f. & cert. ef. 12-13-91
OSHA 7-1991, f. & cert. ef. 4-25-91
OSHA 6-1991, f. 3-18-91, cert. ef. 4-15-91
OSHA 27-1990, f. 12-12-90, cert. ef. 2-1-91
OSHA 19-1990, f. & cert. ef. 8-31-90
OSHA 13-1990(Temp), f. 6-28-90, cert. ef. 8-1-90
OSHA 8-1990, f. & cert. ef. 3-30-90
OSHA 7-1990, f. & cert. ef. 3-2-90
OSHA 3-1990(Temp), f. & cert. ef. 1-19-90
APD 15-1989, f. & cert. ef. 9-13-89
APD 14-1989(Temp), f. 7-20-89, cert. ef. 8-1-89
APD 8-1989, f. & cert. ef. 7-7-89
APD 5-1989(Temp), f. 3-31-89, cert. ef. 5-1-89

Division 3
Subdivision D
Occupational Health and Environmental Controls

* * * * *

1926.405 Wiring methods, components, and equipment for general use.

* * * * *
(g) * * *
(1) * * *
(iii) * * *
(C) Where run through doorways, windows, or similar openings, except as permitted in paragraph (a)(2)(ii)~~[(1)]~~**(I)** of this section;
* * * * *

Division 3
Subdivision E
Personal Protective and Life Saving Equipment

437-003-0134 Personal Protective Equipment

Application. This rule applies to personal protective equipment and other protective equipment for the eyes, face, head, extremities and torso to include protective clothing, respiratory devices, and protective shields and barriers, wherever employees encounter hazardous processes or environments, chemical hazards, radiological hazards, or mechanical irritants that are capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.

(1) Hazard assessment and equipment selection. The employer must assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE) or other protective equipment. If such hazards are present, or likely to be present, the employer must:

(a) Select, and have each affected employee use, the types of PPE that will protect the affected employee from the hazards identified in the hazard assessment;

(A) All protective equipment must be of safe design and construction for the work to be performed.

(B) Protective equipment must be worn and used in a manner which will make full use of its protective properties.

(b) Communicate selection decisions to each affected employee; and,

(c) Select PPE that properly fits each affected employee.

Note: Non-mandatory Appendix B to Subdivision 2/I, contains an example of procedures that would comply with the requirement for a hazard assessment.

(2) Equipment.

(a) Where employees provide their own protective equipment, the employer is responsible to assure its adequacy, including proper maintenance, and sanitation of such equipment.

(b) All personal protective equipment must be provided, used, and maintained in a sanitary and reliable condition.

(c) Defective or damaged personal protective equipment must not be used.

(d) Each employer must maintain a regular system of inspection and maintenance of personal protective equipment furnished to workers.

(3) Training.

(a) The employer must provide training to each employee who is required by this section to use PPE and each employee that is provided training must know at least the following:

(A) When PPE is necessary;

(B) What PPE is necessary;

(C) How to properly don, doff, adjust, and wear PPE;

(D) The limitations of the PPE; and,

(E) The proper care, maintenance, useful life and disposal of the PPE.

(b) Each affected employee must demonstrate an understanding of the training specified in paragraph (3)(a) of this section, and the ability to use PPE properly, before being allowed to perform work requiring the use of PPE.

(c) When the employer has reason to believe that any affected employee who has already been trained does not have the understanding and skill required by paragraph (3)(b) of this section, the employer must retrain each such employee. Circumstances where retraining is required include, but are not limited to situations where:

(A) Changes in the workplace render previous training obsolete; or

(B) Changes in the types of PPE to be used render previous training obsolete; or

(C) Inadequacies in an affected employee's knowledge or use of assigned PPE indicate that the employee has not retained the requisite understanding or skill.

(4) Payment for protective equipment.

(a) Except as provided by paragraphs (4)(b) through (4)(f) of this section, the protective equipment, including personal protective equipment (PPE), used to comply with this part, must be provided by the employer at no cost to employees.

(b) The employer is not required to pay for non-specialty safety-toe protective footwear (including steel-toe shoes or steel-toe boots) and non-specialty prescription safety eyewear, provided that the employer permits such items to be worn off the job-site.

(c) When the employer provides metatarsal guards and allows the employee, at his or her request, to use shoes or boots with built-in metatarsal protection, the employer is not required to reimburse the employee for the shoes or boots.

(d) The employer is not required to pay for:

(A) The logging boots required by OAR 437-007-0330 in Division 7.

(B) Everyday clothing, such as long-sleeve shirts, long pants, street shoes, and normal work boots; or

(C) Ordinary clothing, skin creams, or other items, used solely for protection from weather, such as winter coats, jackets, gloves, parkas, rubber boots, hats, raincoats, ordinary sunglasses, and sunscreen.

(e) The employer must pay for replacement PPE, except when the employee has lost or intentionally damaged the PPE.

(f) Where an employee provides adequate protective equipment he or she owns pursuant to paragraph (2)(a) of this section, the employer may allow the employee to use it and is not required to reimburse the employee for that equipment. The employer must not require an employee to provide or pay for his or her own PPE, unless the PPE is excepted by paragraphs (4)(b) through (4)(e) of this section.

(5) Fall Protection.

[~~(a) All employees must be protected from fall hazards when working on unguarded surfaces more than 10 feet above a lower level or at any height above dangerous equipment.~~]

[~~(b) The~~]**When fall protection systems are required by another standard, the** employer must ensure that fall protection systems are provided, installed, and [~~used~~] **implemented** according to the criteria in 1926.502[~~(d)~~], 437-003-0502**, 437-003-1502 and 437-003-2502** in Division 3/M, Fall Protection.

(6) Work Clothing.

(a) Clothing must be worn which is appropriate to the work performed and conditions encountered.

(b) Appropriate high temperature protective clothing must be worn by workers who are exposed to possible contact with molten metals or other substances that can cause burns.

(c) Loose sleeves, ties, lapels, cuffs, or other loose clothing must not be worn near moving machinery.

(d) Clothing saturated or impregnated with flammable liquids, corrosive or toxic substances, irritants, or oxidizing agents must be removed immediately and not worn again until properly cleaned.

(e) Rings, wristwatches, earrings, bracelets, and other jewelry which might contact power driven machinery or electric circuitry, must not be worn.

(f) Allow employees to wear a face covering if they so choose, unless doing so creates or otherwise exposes the employee to a hazard. Employers must supply these items at no cost to employees when the employer requires their use.

Note: For purposes of this rule, employers are not required to allow voluntary use of respirators if an employee requests to use one in lieu of a face covering.

(7) High Visibility Garments. Employees exposed to hazards caused by on highway type moving vehicles in construction zones and street/highway traffic must wear highly visible upper body garments. The colors must contrast with other colors in the area sufficiently to make the worker standout. Colors equivalent to strong red, strong orange, strong yellow, strong yellow-green or fluorescent versions of these colors are acceptable. During hours of darkness, the garments must also have reflective material visible from all sides for 1000 feet.

(8) Eye And Face Protection.

(a) The employer must ensure that each affected employee uses appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation.

(b) The employer must ensure that each affected employee uses eye protection that provides side protection when there is a hazard from flying objects. Detachable side protectors (e.g., clip-on or slide-on side shields) meeting the pertinent requirements of this section are acceptable.

(c) The employer must ensure that each affected employee who wears prescription lenses while engaged in operations that involve eye hazards wears eye protection that incorporates the prescription in its design, or shall wear eye protection that can be worn over the prescription lenses without disturbing the proper position of the prescription lenses or the protective lenses.

(d) Eye and face PPE must be distinctly marked to facilitate identification of the manufacturer.

(e) The employer must ensure that each affected employee uses equipment with filter lenses that have a shade number appropriate for the work being performed for protection from injurious light radiation.

Table 7 - Filter Lenses for Protection Against Radiant Energy

Operations	Electrode Size 1/32 in.	Arc Current (amps)	Minimum* Protective Shade
Shielded metal arc welding	Less than 3	Less than 60	7
	3-5	60-160	8
	5-8	160-250	10
	More than 8	250-550	11
Gas metal arc welding and flux cored arc welding		Less than 60	7
		60-160	10
		160-250	10
		250-500	10
Gas Tungsten arc welding		Less than 50	8
		50-150	8
		150-500	10
Air carbon	(Light)	Less than 500	10
Arc cutting	(Heavy)	500-1000	11
Plasma arc welding		Less than 20	6
		20-100	8
		100-400	10
		400-800	11
Plasma arc cutting	(Light) **	Less than 300	8
	(Medium) **	300-400	9
	(Heavy) **	400-800	10
Torch brazing			3
Torch soldering			2
Carbon arc welding			14

** As a rule of thumb, start with a shade that is too dark to see the weld zone. Then go to a lighter shade which gives sufficient view of the weld zone without going below the minimum. In oxyfuel gas welding or cutting where the torch produces a high yellow light, it is desirable to use a filter lens that absorbs the yellow or sodium line in the visible light of the (spectrum) operation.*

*** These values apply where the actual arc is clearly seen. Experience has shown that lighter filters may be used when the arc is hidden by the work piece.*

Table 8 - Filter Lenses for Protection Against Radiant Energy

Operations		*Plate thickness – inches*	*Plate thickness – mm*	*Minimum* Protective Shade*
Gas Welding:	*Light*	*Under 1/8*	*Under 3.2*	*4*
	Medium	*1/8 to 1/2*	*3.2 to 12.7*	*5*
	Heavy	*Over 1/2*	*Over 12.7*	*6*
Oxygen Cutting:	*Light*	*Under 1*	*Under 25*	*3*
	Medium	*1 to 6*	*25 to 150*	*4*
	Heavy	*Over 6*	*Over 150*	*5*

** As a rule of thumb, start with a shade that is too dark to see the weld zone. Then go to a lighter shade which gives sufficient view of the weld zone without going below the minimum. In oxyfuel gas welding or cutting where the torch produces a high yellow light, it is desirable to use a filter lens that absorbs the yellow or sodium line in the visible light of the (spectrum) operation.*

*** These values apply where the actual arc is clearly seen. Experience has shown that lighter filters may be used when the arc is hidden by the work piece.*

(f) Protective eye and face protection devices must comply with any of the following consensus Standards.

(A) ANSI/ISEA Z87.1-2010, Occupational and Educational Personal Eye and Face Protection Devices, incorporated by reference in 1926.6;

(B) ANSI Z87.1-2003, American National Standard Practice for Occupational and Educational Eye and Face Protection, which is incorporated by reference in 1926.6; or

(C) ANSI Z87.1-1989 (R-1998), American National Standard Practice for Occupational and Educational Eye and Face Protection, which is incorporated by reference in 1926.6.

(g) Protective eye and face protection devices that the employer demonstrates are at least as effective as protective eye and face protection devices that are constructed in accordance with one of the above consensus standards will be deemed to be incompliance with the requirements of this section.

(h) Employees whose occupation or assignment requires exposure to laser beams shall be furnished laser safety goggles as required by Occupational Health Regulations which will protect for the specific wavelength of the laser and be of optical density adequate for the energy involved.

(9) Head Protection.

(a) The employer must ensure that each affected employee wears a protective helmet when working in areas where there is a potential for injury to the head from falling or flying objects.

(b) The employer must ensure that a protective helmet designed to reduce electrical shock hazard is worn by each such affected employee when near exposed electrical conductors which could contact the head.

(c) Head protection must comply with any of the following consensus standards:

(A) ANSI Z89.1-2009, American National Standard for Industrial Head Protection, which is incorporated by reference in 1926.6;

(B) ANSI Z89.1-2003, American National Standard for Industrial Head Protection, which is incorporated by reference in 1926.6;

(C) ANSI Z89.1-1997, American National Standard for Industrial Head Protection, which is incorporated by reference in 1926.6; or

(d) Head protection devices that the employer demonstrates are at least as effective as head protection devices that are constructed in accordance with one of the above consensus standards will be deemed to be in compliance with the requirements of this section.

(e) Employees who are exposed to power-driven machinery or to sources of ignition shall wear caps or other head covering which completely covers the hair.

(10) Foot Protection.

(a) The employer must ensure that each affected employee use protective footwear when working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, and where such employee's feet are exposed to electrical hazards.

(b) Protective footwear must comply with any of the following consensus standards:

(A) ASTM F-2412-2005, Standard Test Methods for Foot Protection, and ASTM F-2413-2005, Standard Specification for Performance Requirements for Protective Footwear, which are incorporated by reference in [~~1926~~]**1910**.6;

(B) ANSI Z41-1999, American National Standard for Personal Protection – Protective Footwear, which is incorporated by reference in [~~1926~~]**1910**.6; or

(C) ANSI Z41-1991, American National Standard for Personal Protection – Protective Footwear, which is incorporated by reference in [~~1926~~]**1910**.6.

(c) Protective footwear that the employer demonstrates is at least as effective as protective footwear that is constructed in accordance with one of the above consensus standards will be deemed to be in compliance with the requirements of this section.

(d) Special types or designs of shoes or foot guards are required where conditions exist that make their use necessary for the safety of workers.

(11) Leg protection.

(a) Leggings or high boots of leather, rubber, or other suitable material must be worn by persons exposed to hot substances or dangerous chemical spills.

(b) Employees using chain saws must wear chaps or leg protectors that cover the leg from the upper thigh to mid-calf. The protector must be material designed to resist cuts from the chain saw. Employers must provide this protection at no cost to the employee.

(12) Hand Protection.

(a) Employers must select and require employees to use appropriate hand protection when employees' hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns; thermal burns; and harmful temperature extremes.

(b) Employers must base the selection of the appropriate hand protection on an evaluation of the performance characteristics of the hand protection relative to the task(s) to be performed, conditions present, duration of use, and the hazards and potential hazards identified.

(c) Gloves must not be worn by persons whose hands are exposed to moving parts in which they could be caught.

(13) Skin protection. Where the need for their use is necessary, protective covering, ointments, gloves, or other effective protection must be provided for and used by persons exposed to materials which are hazardous to the skin.

Statutory Authority: ORS 654.025(2) and 656.726(4).
Statutes Implemented: ORS 654.001 through 654.295.
History: OSHA Administrative Order 2-2013, filed 2/15/13, effective 4/1/13.
OSHA Administrative Order 1-2016, filed 3/1/16, effective 1/1/17.
OSHA Temporary Administrative Order 1-2023, filed 3/30/23, effective 4/3/23.
OR-OSHA Administrative Order 2-2023, filed 8/16/23, effective 8/17/23
OR-OSHA Administrative Order 1-2024, filed 9/11/24, effective 9/11/24.

Division 3
Subdivision L
Scaffolding

1926.452 Additional Requirements Applicable to Specific Types of Scaffolds.

In addition to the applicable requirements of 1926.451, the following requirements apply to the specific types of scaffolds indicated. Scaffolds not specifically addressed by 1926.452, such as but not limited to systems scaffolds, must meet the requirements of §1926.451.

(a) Pole scaffolds.

(1) When platforms are being moved to the next level, the existing platform shall be left undisturbed until the new bearers have been set in place and braced, prior to receiving the new platforms.

(2) Crossbracing shall be installed between the inner and outer sets of poles on double pole scaffolds.

(3) Diagonal bracing in both directions shall be installed across the entire inside face of double-pole scaffolds used to support loads equivalent to a uniformly distributed load of 50 pounds ([~~222~~]**22.7** kg) or more per square foot (929 square cm).

* * * * *

(w) * * *

(6) * * *

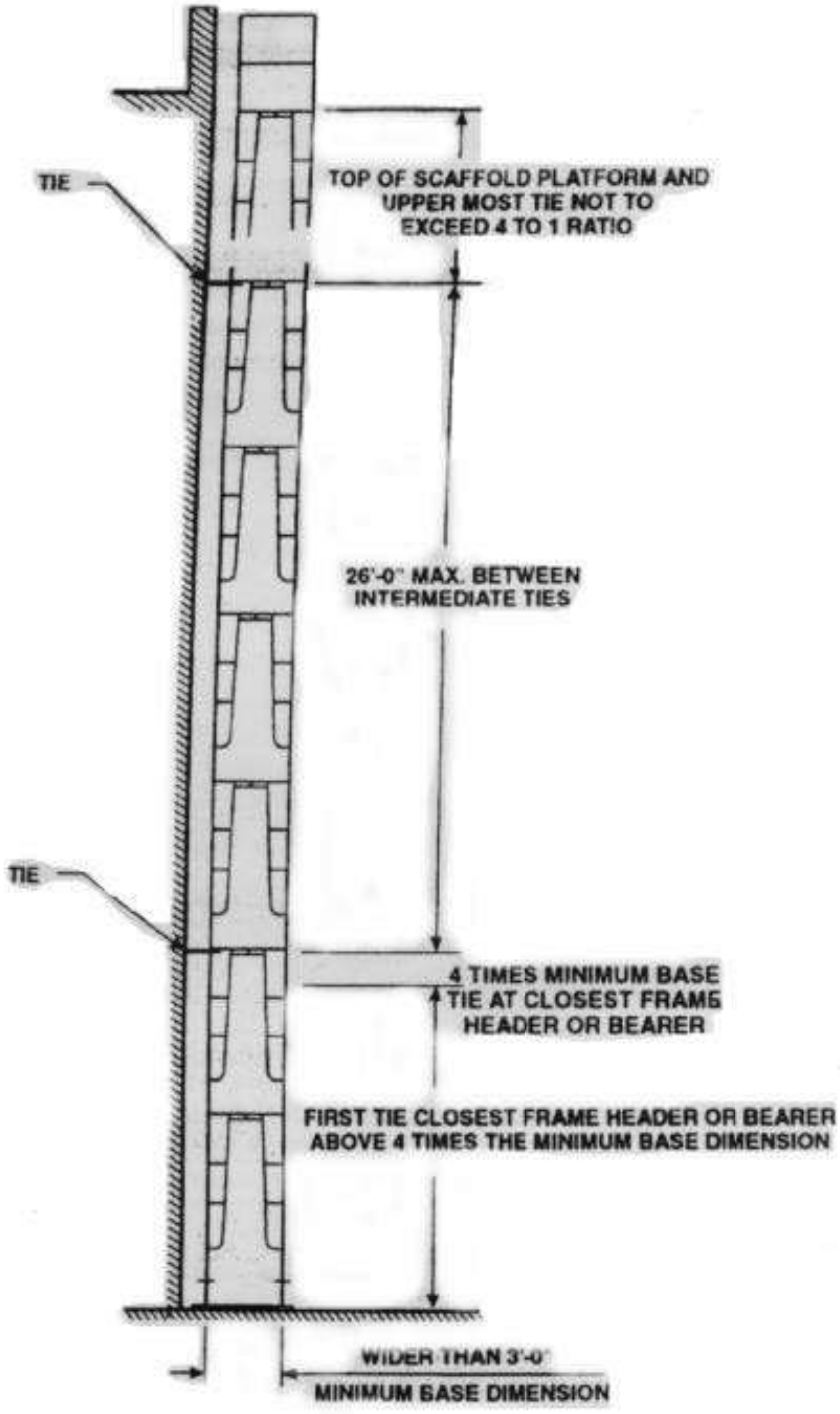
(ii) The height to base width ratio of the scaffold during movement is two to one or less, unless the scaffold is designed and constructed to meet or exceed nationally recognized stability test requirements such as those listed in paragraph [~~(x)~~] **2.(w)** of appendix A to this subpart [~~(ANSI/SIA A92.5 and A92.6)~~];

* * * * *

The following text (non-rule for Text of Changes guidance only) describes changes in the illustrations (since it is difficult to show illustrations as struck through or added as bold-underlined); changes are: in appendix E to subpart L of part 1926 subpart L: Remove the graphic ''Maximum Vertical Tie Spacing Wider Than 3'-0" Bases'' and add in its place the graphic ''Maximum Vertical Guy, Tie or Brace Spacing Wider Than 3'-0" Bases''; and Remove the graphic ''Maximum Vertical Tie Spacing 3'-0"and Narrower Bases'' and add in its place the ''Maximum Vertical Guy, Tie or Brace Spacing 3'-0" And Narrower Bases''.

Appendix E to Subpart L, Drawings and Illustrations

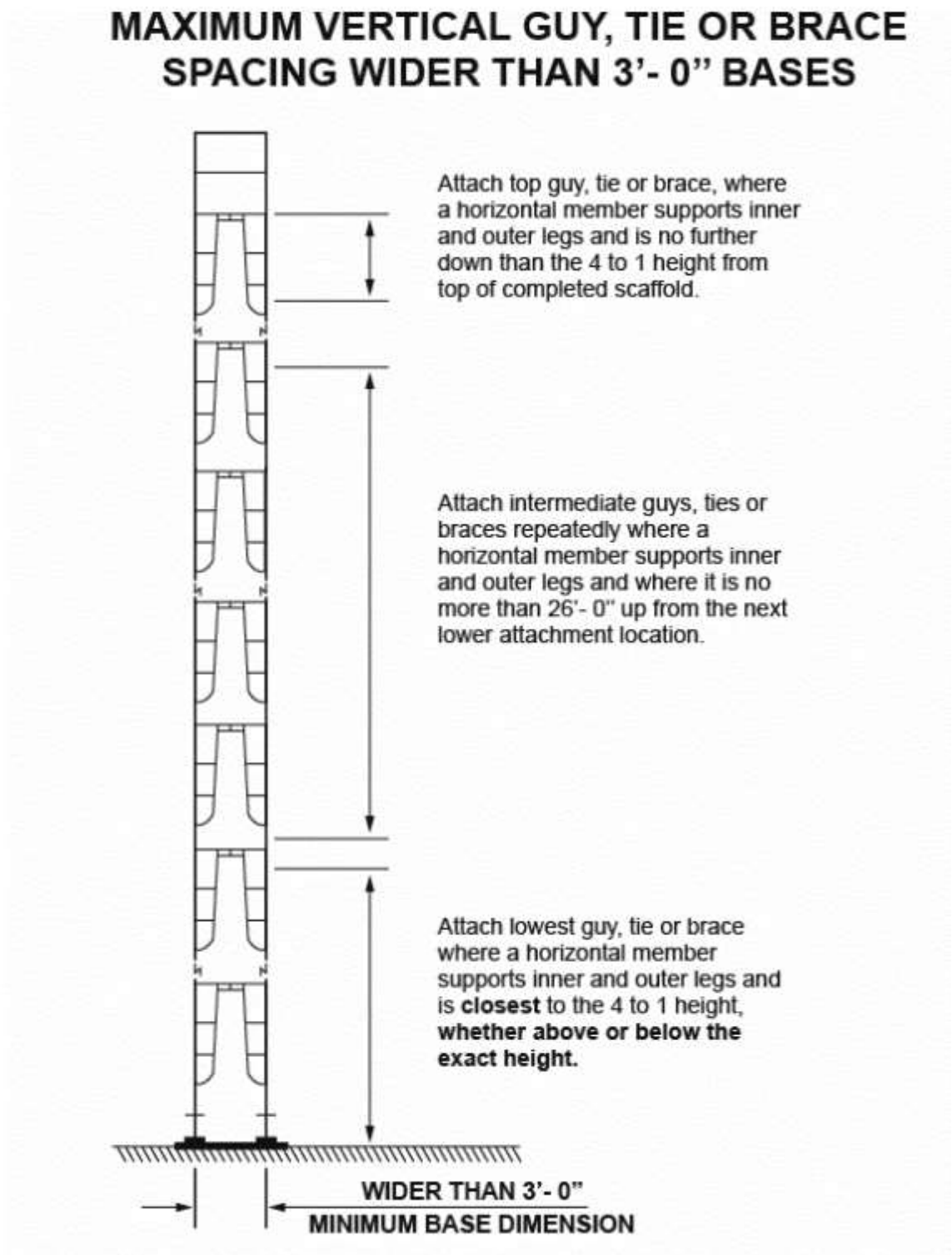
REMOVE
~~[Maximum Vertical Tie Spacing Wider than 3'-0" Bases]~~


TIE
TOP OF SCAFFOLD PLATFORM AND
UPPER MOST TIE NOT TO
EXCEED 4 TO 1 RATIO
26'-0" MAX. BETWEEN
INTERMEDIATE TIES
TIE
4 TIMES MINIMUM BASE
TIE AT CLOSEST FRAME
HEADER OR BEARER
FIRST TIE CLOSEST FRAME HEADER OR BEARER
ABOVE 4 TIMES THE MINIMUM BASE DIMENSION
WIDER THAN 3'-0"
MINIMUM BASE DIMENSION

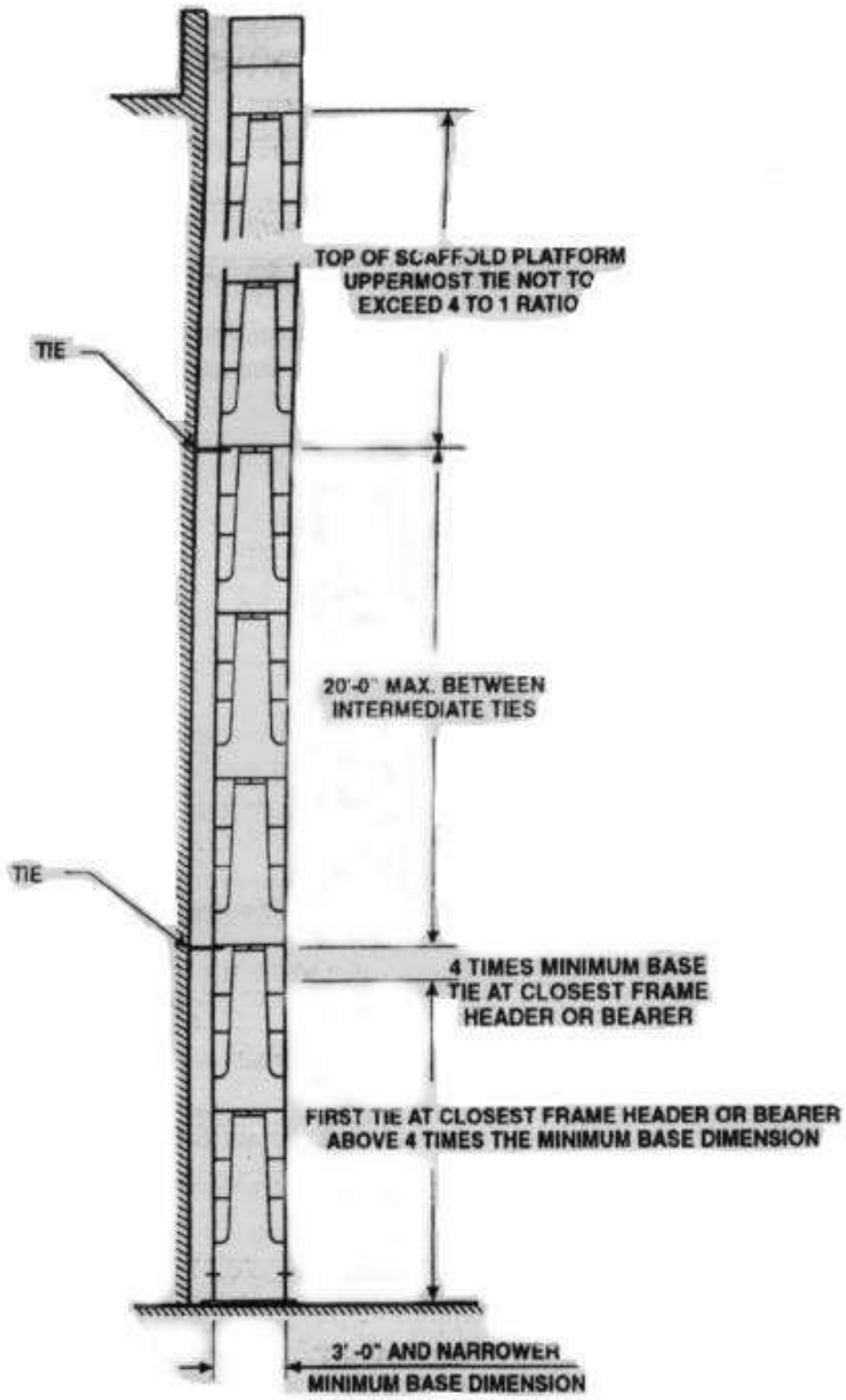
ADD

(Non-Mandatory) Appendix E to Subpart L of Part 1926—Drawings and Illustrations

* * * * *

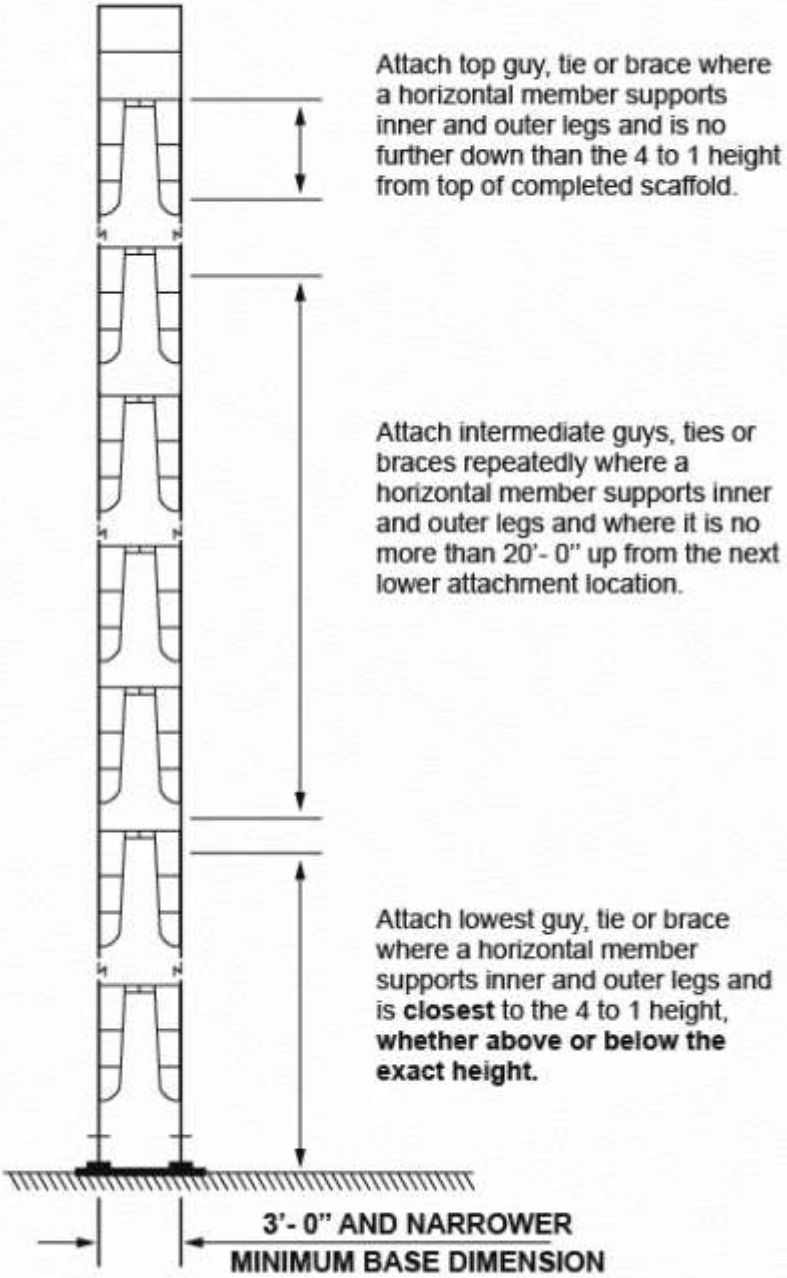


REMOVE
~~[Maximum Vertical Tie Spacing 3'-0" and Narrower Bases]~~


TOP OF SCAFFOLD PLATFORM
UPPERMOST TIE NOT TO
EXCEED 4 TO 1 RATIO
TIE
20'-0" MAX. BETWEEN
INTERMEDIATE TIES
TIE
4 TIMES MINIMUM BASE
TIE AT CLOSEST FRAME
HEADER OR BEARER
FIRST TIE AT CLOSEST FRAME HEADER OR BEARER
ABOVE 4 TIMES THE MINIMUM BASE DIMENSION
3' -0" AND NARROWER
MINIMUM BASE DIMENSION

ADD

MAXIMUM VERTICAL GUY, TIE OR BRACE SPACING 3'- 0" AND NARROWER BASES



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Division 3
Subdivision M
Fall Protection

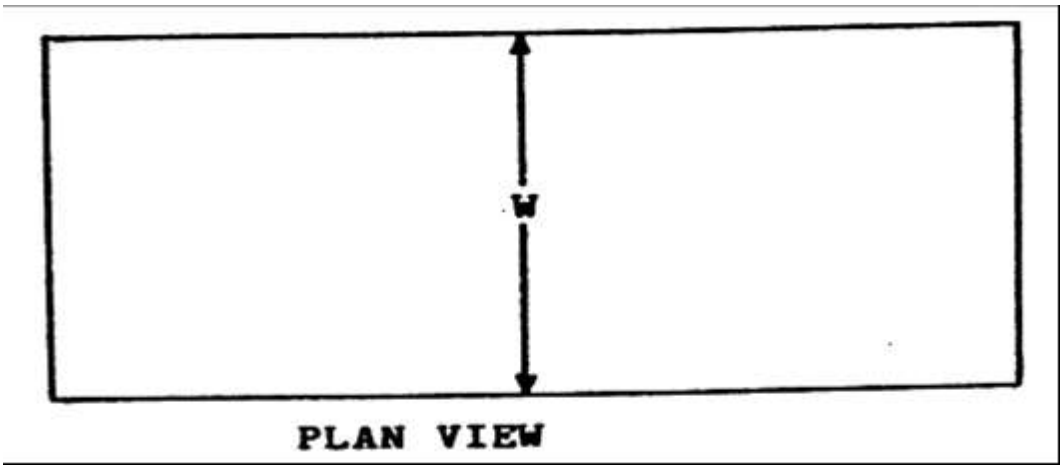
Appendix A to Subpart M – Determining Roof Widths Non-Mandatory Guidelines for Complying with 437-003-2502(2)

(1) This Appendix serves as a guideline to assist employers complying with the requirements of 1926.501(b)(10). Section 19[~~10~~]**26**.501(b)(10) allows the use of a safety monitoring system alone as a means of providing fall protection during the performance of roofing operations on low-sloped roofs 50 feet (15.25 m) or less in width. Each example in the appendix shows a roof plan or plans and indicates where each roof or roof area is to be measured to determine its width. Section views or elevation views are shown where appropriate. Some examples show “correct” and “incorrect” subdivisions of irregularly shaped roofs divided into smaller, regularly shaped areas. In all examples, the dimension selected to be the width of an area is the lesser of the two primary dimensions of the area, as viewed from above. Example A shows that on a simple rectangular roof, width is the lesser of the two primary overall dimensions. This is also the case with roofs which are sloped toward or away from the roof center, as shown in Example B.

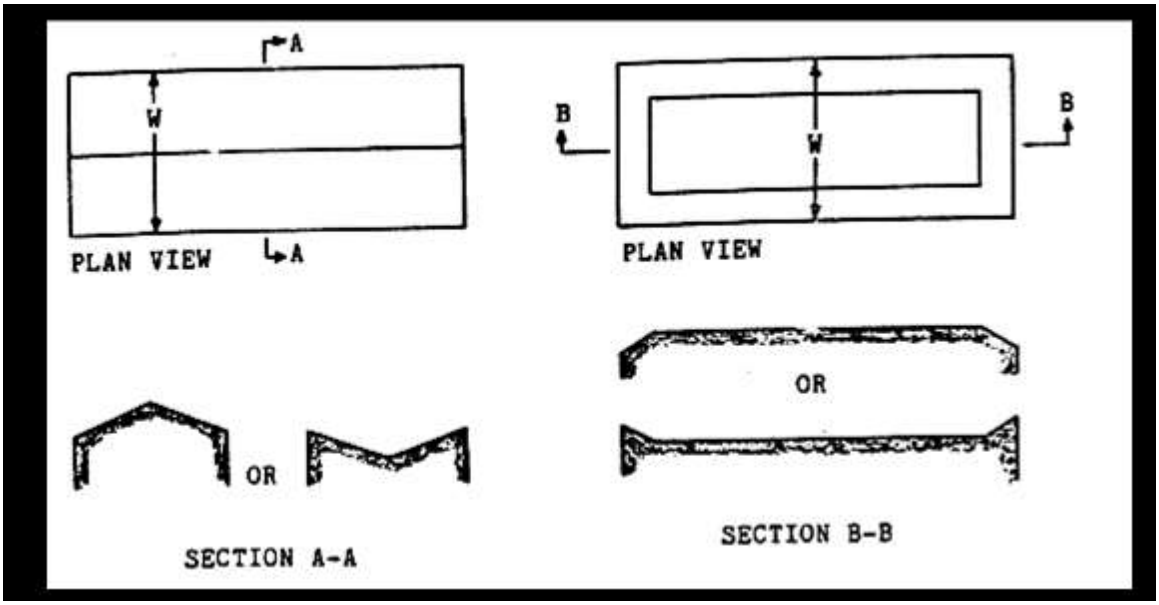
(2) Many roofs are not simple rectangles. Such roofs may be broken down into subareas as shown in Example C. The process of dividing a roof area can produce many different configurations. Example C gives the general rule of using dividing lines of minimum length to minimize the size and number of the areas which are potentially less than 50 feet (15.25 m) wide. The intent is to minimize the number of roof areas where safety monitoring systems alone are sufficient protection.

(3) Roofs which are comprised of several separate, non-contiguous roof areas, as in Example D, may be considered as a series of individual roofs. Some roofs have penthouses, additional floors, courtyard openings, or similar architectural features; Example E shows how the rule for dividing roofs into subareas is applied to such configurations. Irregular, non-rectangular roofs must be considered on an individual basis, as shown in Example F.

1 Example A
Rectangular Shaped Roofs

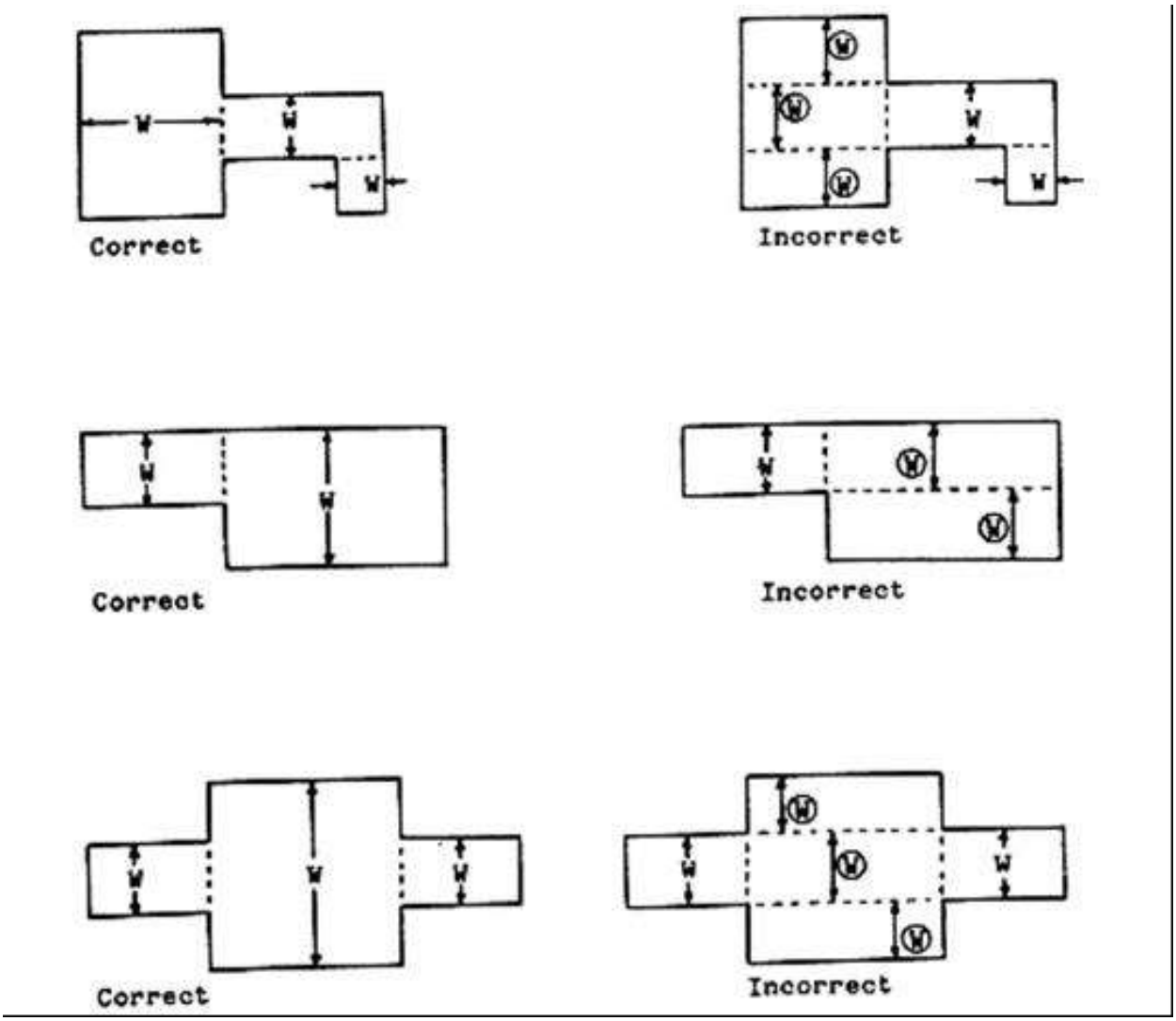


2 Example B
Sloped Regular Shaped Roofs

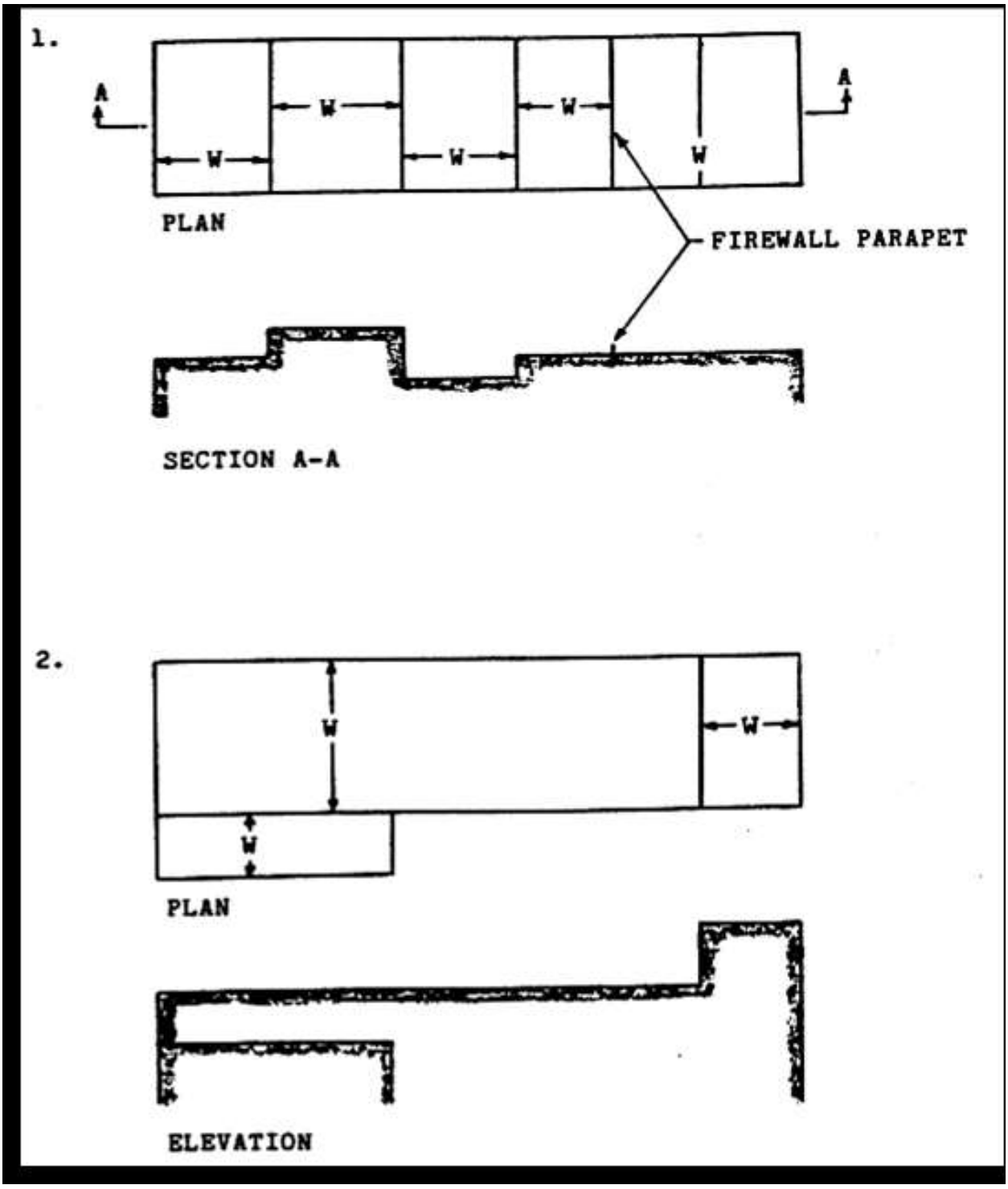


3 Example C
Irregularly Shaped Roofs With Regular Shaped Sections

Such roofs are to be divided into sub-areas by using dividing lines of minimum length to minimize the size and number of the areas which are potentially less than or equal to 50 feet (15.25 meters) in width, in order to limit the size of roof areas where the safety monitoring system alone can be used. Dotted lines are used in the examples to show the location of dividing lines. **W denotes correct measurements and** W (with a circle around it) denotes incorrect measurements of width.



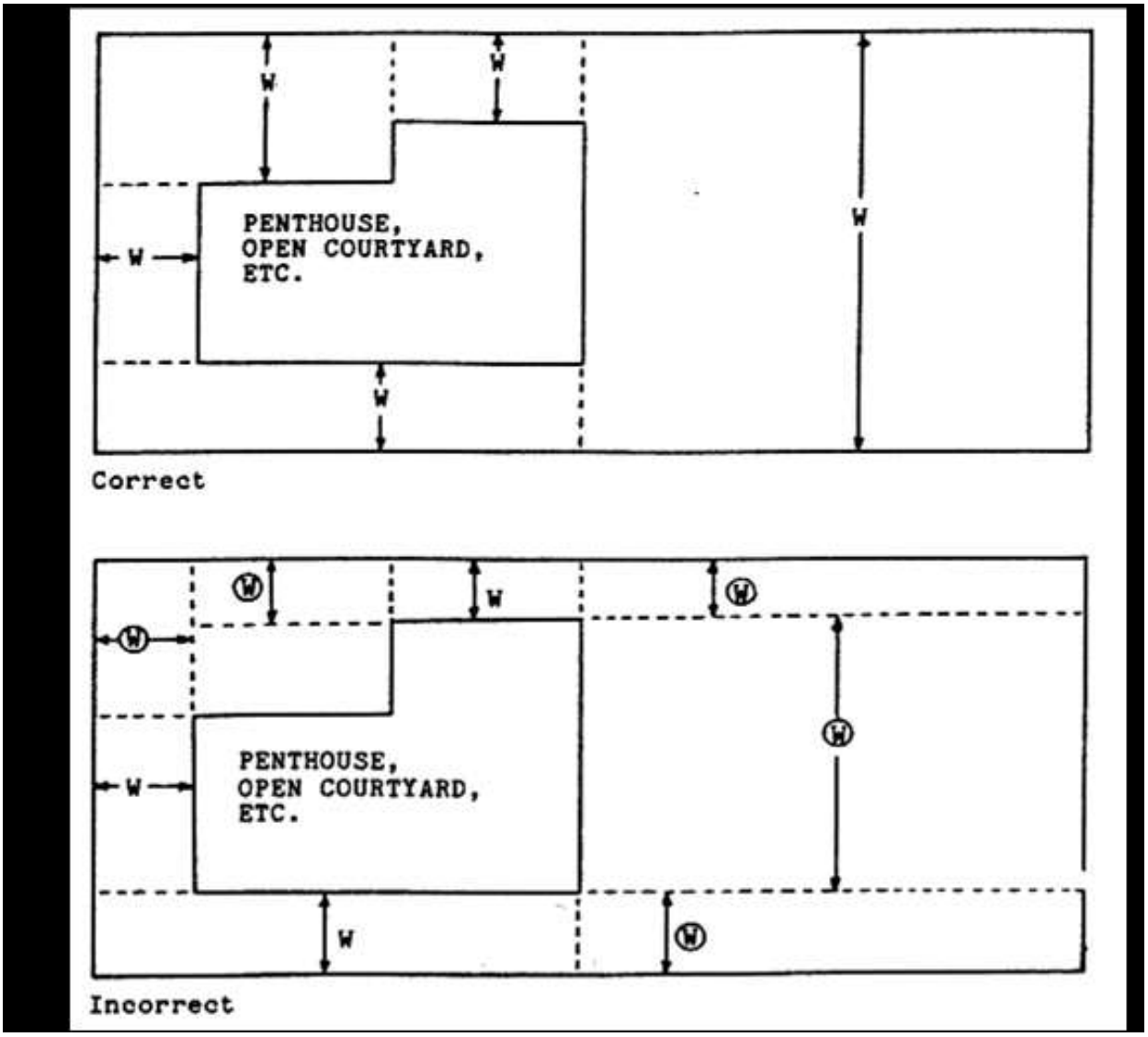
4 Example D
Separate, Non-Contiguous Roof Areas



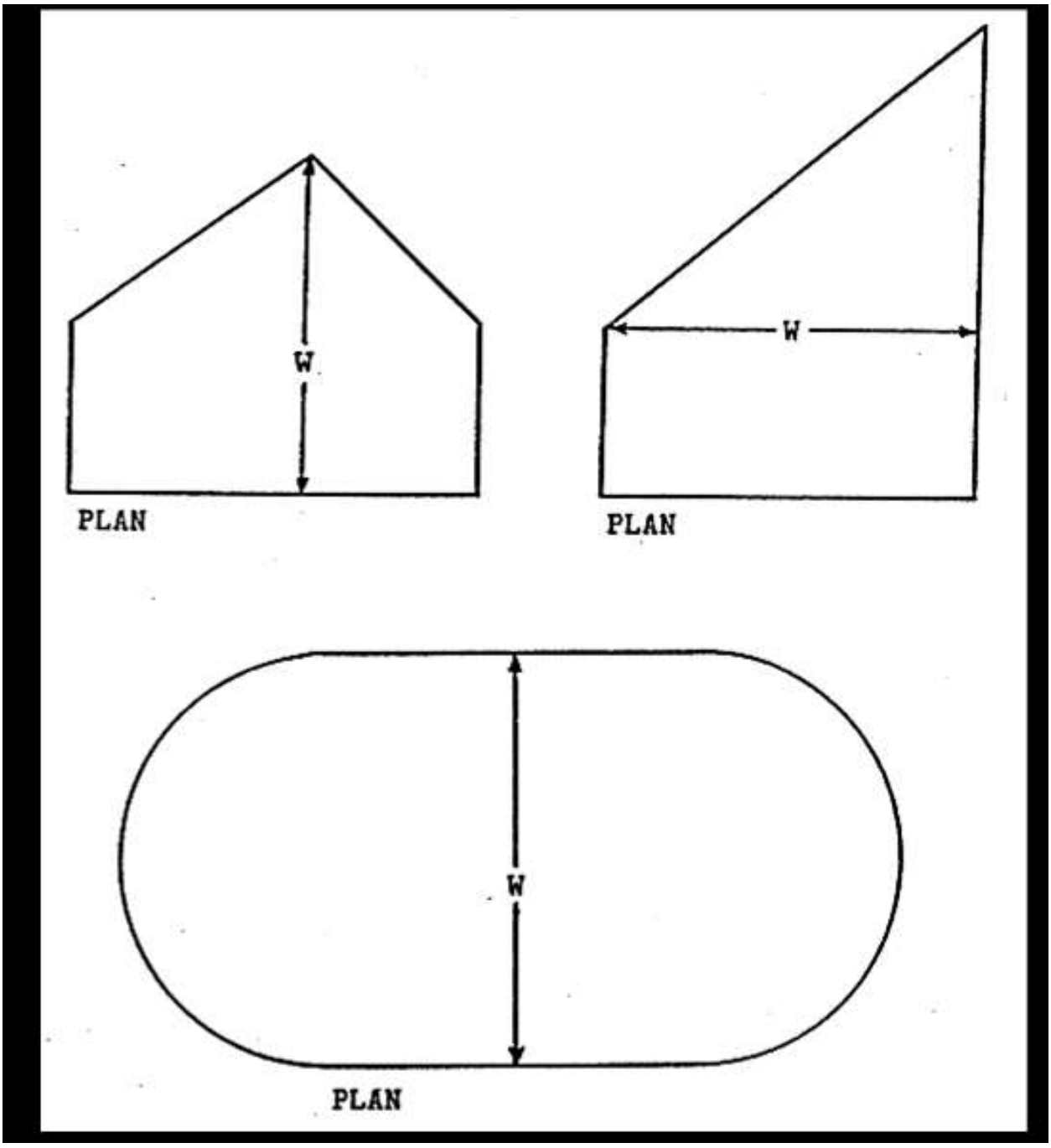
5 Example E
Roofs With Penthouses, Open Courtyards, Additional Floors, etc.

Such roofs are to be divided into sub-areas by using dividing lines of minimum length to minimize the size and number of the areas which are potentially less than or equal to 50 feet

(15.25 meters) in width, in order to limit the size of roof areas where the safety monitoring system alone can be used. Dotted lines are used in the examples to show the location of dividing lines. **W denotes correct measurements and** W (with a circle around it) denotes incorrect measurements of width.



6 Example F
Irregular, Non-Rectangular Shaped Roofs



Division 3
Subdivision N
Helicopters, Hoists, Elevators, and Conveyors

* * * * *

(17)

(i) Personnel hoists used in bridge tower construction shall be approved by a registered professional engineer and erected under the supervision of a qualified engineer competent in this field.

(ii) When a hoist tower is not enclosed, the hoist platform or car shall be totally enclosed (caged) on all sides for the full height between the floor and the overhead protective covering with 3/4 inch mesh of No. 14 U.S. gauge wire or equivalent. The hoist platform enclosure shall include the required gates for loading and unloading.

(iii) These hoists shall be inspected and maintained on a weekly basis. Whenever the hoisting equipment is exposed to winds exceeding 35 miles per hour it shall be inspected and put in operable condition before reuse.

(iv) Wire rope shall be taken out of service when any of the following conditions exist:

~~[(a)]~~**(A)** In running ropes, six randomly distributed broken wires in one lay or three broken wires in one strand in one lay;

~~[(b)]~~**(B)** Wear of one-third the original diameter of outside individual wires. Kinking, crushing, bird caging, or any other damage resulting in distortion of the rope structure;

~~[(c)]~~**(C)** Evidence of any heat damage from any cause;

~~[(d)]~~**(D)** Reductions from nominal diameter of more than three-sixty-fourths inch for diameters to and including three-fourths inch, one-sixteenth inch for diameters seven-eigths inch to 1-1/8 inches inclusive, three-thirty-seconds inch for diameters 1-1/4 to 1-1/2 inches inclusive;

~~[(e)]~~**(E)** In standing ropes, more than two broken wires in one lay in sections beyond end connections or more than one broken wire at an end connection.

* * * * *

Division 3
Subdivision P
Excavations

* * * * *

Appendix A – Soil Classification

(a) Scope and application.

(1) Scope. This appendix describes a method of classifying soil and rock deposits based on site and environmental conditions, and on the structure and composition of the earth

deposits. The appendix contains definitions, sets forth requirements, and describes acceptable visual and manual tests for use in classifying soils.

(2) Application. This appendix applies when a sloping or benching system is designed in accordance with the requirements set forth in §1926.652(b)(2) as a method of protection for employees from cave-ins. This appendix also applies when timber shoring for excavations is designed as a method of protection from cave-ins in accordance with appendix C to subpart P of part 1926, and when aluminum hydraulic shoring is designed in accordance with appendix D. This Appendix also applies if other protective systems are designed and selected for use from data prepared in accordance with the requirements set forth in §1926.652(c), and the use of the data is predicated on the use of the soil classification system set forth in this appendix.

(b) Definitions. The definitions and examples given below are based on, in whole or in part, the following: American Society for Testing Materials (ASTM) Standards D653-85 and D2488; The Unified Soils Classification System, The U.S. Department of Agriculture (USDA) Textural Classification Scheme; and The National Bureau of Standards Report BSS-121.

Cemented soil means a soil in which the particles are held together by a chemical agent, such as calcium carbonate, such that a hand-size sample cannot be crushed into powder or individual soil particles by finger pressure.

Cohesive soil means clay (fine grained soil), or soil with a high clay content, which has cohesive strength. Cohesive soil does not crumble, can be excavated with vertical sideslopes, and is plastic when moist. Cohesive soil is hard to break up when dry, and exhibits significant cohesion when submerged. Cohesive soils include clayey silt, sandy clay, silty clay, clay and organic clay.

Dry soil means soil that does not exhibit visible signs of moisture content.

Fissured means a soil material that has a tendency to break along definite planes of fracture with little resistance, or a material that exhibits open cracks, such as tension cracks, in an exposed surface.

Granular soil means gravel, sand, or silt, (coarse grained soil) with little or no clay content. Granular soil has no cohesive strength. Some moist granular soils exhibit apparent cohesion. Granular soil cannot be molded when moist and crumbles easily when dry.

Layered system means two or more distinctly different soil or rock types arranged in layers. Micaceous seams or weakened planes in rock or shale are considered layered.

Moist soil means a condition in which a soil looks and feels damp. Moist cohesive soil can easily be shaped into a ball and rolled into small diameter threads before crumbling. Moist granular soil that contains some cohesive material will exhibit signs of cohesion between particles.

Plastic means a property of a soil which allows the soil to be deformed or molded without cracking, or appreciable volume change.

Saturated soil means a soil in which the voids are filled with water. Saturation does not require flow. Saturation, or near saturation, is necessary for the proper use of instruments such as a pocket penetrometer or sheer vane.

Soil classification system means, for the purpose of this subpart, a method of categorizing soil and rock deposits in a hierarchy of Stable Rock, Type A, Type B, and Type C, in decreasing order of stability. The categories are determined based on an analysis of the properties and performance characteristics of the deposits and the environmental conditions of exposure.

Stable rock means natural solid mineral matter that can be excavated with vertical sides and remain intact while exposed.

Submerged soil means soil which is underwater or is free seeping.

Type A means cohesive soils with an unconfined compressive strength of 1.5 ton per square foot (tsf) (144 kPa) or greater. Examples of cohesive soils are: clay, silty clay, sandy clay, clay loam and, in some cases, silty clay loam and sandy clay loam. Cemented soils such as caliche and hardpan are also considered Type A. However, no soil is Type A if:

(i) The soil is fissured; or

(ii) The soil is subject to vibration from heavy traffic, pile driving, or similar effects; or

(iii) The soil has been previously disturbed; or

(iv) The soil is part of a sloped, layered system where the layers dip into the excavation on a slope of four horizontal to one vertical (4H:1V) or greater; or

(v) The material is subject to other factors that would require it to be classified as a less stable material.

Type B means:

(i) Cohesive soil with an unconfined compressive strength greater than 0.5 tsf (48 kPa) but less than 1.5 tsf (144 kPa); or

(ii) Granular cohesionless soils including: angular gravel (similar to crushed rock), silt, silt loam, sandy loam and, in some cases, silty clay loam and sandy clay loam.

(iii) Previously disturbed soils except those which would otherwise be classed as Type C soil.

(iv) Soil that meets the unconfined compressive strength or cementation requirements for Type A, but is fissured or subject to vibration; or

(v) Dry rock that is not stable; or

(vi) Material that is part of a sloped, layered system where the layers dip into the excavation on a slope less steep than four horizontal to one vertical (4H:1V), but only if the material would otherwise be classified as Type B.

Type C means:

(i) Cohesive soil with an unconfined compressive strength of 0.5 tsf (48 kPa) or less; or

(ii) Granular soils including gravel, sand, and loamy sand; or

(iii) Submerged soil or soil from which water is freely seeping; or

(iv) Submerged rock that is not stable, or

(v) Material in a sloped, layered system where the layers dip into the excavation [~~or~~]**on** a slope of four horizontal to one vertical (4H:1V) or steeper.

Unconfined compressive strength means the load per unit area at which a soil will fail in compression. It can be determined by laboratory testing, or estimated in the field using a pocket penetrometer, by thumb penetration tests, and other methods.

Wet soil means soil that contains significantly more moisture than moist soil, but in such a range of values that cohesive material will slump or begin to flow when vibrated. Granular material that would exhibit cohesive properties when moist will lose those cohesive properties when wet.

(c) Requirements.

(1) Classification of soil and rock deposits. Each soil and rock deposit shall be classified by a competent person as Stable Rock, Type A, Type B, or Type C in accordance with the definitions set forth in paragraph (b) of this appendix.

(2) Basis of classification. The classification of the deposits shall be made based on the results of at least one visual and at least one manual analysis. Such analyses shall be conducted by a competent person using tests described in paragraph (d) below, or in other recognized methods of soil classification and testing such as those adopted by the America Society for Testing Materials, or the U.S. Department of Agriculture textural classification system.

(3) Visual and manual analyses. The visual and manual analyses, such as those noted as being acceptable in paragraph (d) of this appendix, shall be designed and conducted to provide sufficient quantitative and qualitative information as may be necessary to identify properly the properties, factors, and conditions affecting the classification of the deposits.

(4) Layered systems. In a layered system, the system shall be classified in accordance with its weakest layer. However, each layer may be classified individually where a more stable layer lies under a less stable layer.

(5) Reclassification. If, after classifying a deposit, the properties, factors, or conditions affecting its classification change in any way, the changes shall be evaluated by a competent person. The deposit shall be reclassified as necessary to reflect the changed circumstances.

(d) Acceptable visual and manual tests.

(1) Visual tests. Visual analysis is conducted to determine qualitative information regarding the excavation site in general, the soil adjacent to the excavation, the soil forming the sides of the open excavation, and the soil taken as samples from excavated material.

(i) Observe samples of soil that are excavated and soil in the sides of the excavation. Estimate the range of particle sizes and the relative amounts of the particle sizes. Soil that is primarily composed of fine-grained material is cohesive material. Soil composed primarily of coarse-grained sand or gravel is granular material.

(ii) Observe soil as it is excavated. Soil that remains in clumps when excavated is cohesive. Soil that breaks up easily and does not stay in clumps is granular.

(iii) Observe the side of the opened excavation and the surface area adjacent to the excavation. Crack-like openings such as tension cracks could indicate fissured material. If chunks of soil spall off a vertical side, the soil could be fissured. Small spalls are evidence of moving ground and are indications of potentially hazardous situations.

(iv) Observe the area adjacent to the excavation and the excavation itself for evidence of existing utility and other underground structures, and to identify previously disturbed soil.

(v) Observe the opened side of the excavation to identify layered systems. Examine layered systems to identify if the layers slope toward the excavation. Estimate the degree of slope of the layers.

(vi) Observe the area adjacent to the excavation and the sides of the opened excavation for evidence of surface water, water seeping from the sides of the excavation, or the location of the level of the water table.

(vii) Observe the area adjacent to the excavation and the area within the excavation for sources of vibration that may affect the stability of the excavation face.

(2) Manual tests. Manual analysis of soil samples is conducted to determine quantitative as well as qualitative properties of soil and to provide more information in order to classify soil properly.

(i) Plasticity. Mold a moist or wet sample of soil into a ball and attempt to roll it into threads as thin as 1/8-inch in diameter. Cohesive material can be successfully rolled into threads without crumbling. For example, if at least a two inch (50 mm) length of 1/8-inch thread can be held on one end without tearing, the soil is cohesive.

(ii) Dry strength. If the soil is dry and crumbles on its own or with moderate pressure into individual grains or fine powder, it is granular (any combination of gravel, sand, or silt). If the soil is dry and falls into clumps which break up into smaller clumps, but the smaller clumps can only be broken up with difficulty, it may be clay in any combination with

gravel, sand or silt. If the dry soil breaks into clumps which do not break up into small clumps and which can only be broken with difficulty, and there is no visual indication the soil is fissured, the soil may be considered unfissured.

(iii) Thumb penetration. The thumb penetration test can be used to estimate the unconfined compressive strength of cohesive soils. (This test is based on the thumb penetration test described in American Society for Testing and Materials (ASTM) Standard designation D2488 – "Standard Recommended Practice for Description of Soils (Visual – Manual Procedure).") Type A soils with an unconfined compressive strength of 1.5 tsf can be readily indented by the thumb; however, they can be penetrated by the thumb only with very great effort. Type C soils with an unconfined compressive strength of 0.5 tsf can be easily penetrated several inches by the thumb, and can be molded by light finger pressure. This test should be conducted on an undisturbed soil sample, such as a large clump of spoil, as soon as practicable after excavation to keep to a min**i**mum the effects of exposure to drying influences. If the excavation is later exposed to wetting influences (rain, flooding), the classification of the soil must be changed accordingly.

(iv) Other strength tests. Estimates of unconfined compressive strength of soils can also be obtained by use of a pocket penetrometer or by using a hand-operated shearvane.

(v) Drying test. The basic purpose of the drying test is to differentiate between cohesive material with fissures, unfissured cohesive material, and granular material. The procedure for the drying test involves drying a sample of soil that is approximately one inch thick (2.54 cm) and six inches (15.24 cm) in diameter until it is thoroughly dry:

(A) If the sample develops cracks as it dries, significant fissures are indicated.

(B) Samples that dry without cracking are to be broken by hand. If considerable force is necessary to break a sample, the soil has significant cohesive material content. The soil can be classified as a unfissured cohesive material and the unconfined compressive strength should be determined.

(C) If a sample breaks easily by hand, it is either a fissured cohesive material or a granular material. To distinguish between the two, pulverize the dried clumps of the sample by hand or by stepping on them. If the clumps do not pulverize easily, the material is cohesive with fissures. If they pulverize easily into very small fragments, the material is granular.

Stat. Auth.: ORS 654.025(2) and 656.726(4).
Stats. Implemented: ORS 654.001 through 654.295.
Hist: OR-OSHA Admin. Order 8-1990, f. 3/30/90, ef. 9/1/90.
OR-OSHA Administrative Order 1-2024, filed 9/11/24, effective 9/11/24.

Division 3
Subdivision R
Steel Erection

1926.754 Structural Steel Assembly.

* * * * *

(c) * * *

(2*) Installation of shear connectors on composite floors, roofs and bridge decks.* When shear connectors are used in construction of composite floors, roofs and bridge decks, employees shall lay out and install the shear connectors after the metal decking has been installed, using the metal decking as a working platform. Shear connectors shall not be installed from within a controlled decking zone (CDZ), as specified in § 1926.760(c)[~~(8)~~]**(7)**.

* * * * *

1926.757 Open web steel joists

* * * * *

(c) Erection of steel joists.

(1) Both sides of the seat of one end of each steel joist that requires bridging under Tables A and B shall be attached to the support structure before hoisting cables are released.

(2) For joists over 60 feet, both ends of the joist shall be attached as specified in paragraph (b) of this section and the provisions of paragraph (d) of this section met before the hoisting cables are released.

(3) On steel joists that do not require erection bridging under Tables A and B, only one employee shall be allowed on the joist until all bridging is installed and anchored.

Table A – Erection Bridging for Short Span Joists

Joist	Span	Joist	Span	Joist	Span	Joist	Span
8K1	NM	20K6	36-0	28K6	40-0	18KCS3	NM
10K1	NM	20K7	39-0	28K7	43-0	18KCS4	NM
12K1	23-0	20K9	39-0	28K8	44-0	18KCS5	NM
12K3	NM	20K10	NM	28K9	45-0	20KCS2	36-0
12K5	NM	22K4	34-0	28K10	49-0	20KCS3	39-0
14K1	27-0	22K5	35-0	28K12	53-0	20KCS4	NM
14K3	NM	22K6	36-0	30K7	44-0	20KCS5	NM
14K4	NM	22K7	40-0	30K8	45-0	22KCS2	36-0
14K6	NM	22K9	40-0	30K9	45-0	22KCS3	40-0
16K2	29-0	22K10	NM	30K10	50-0	22KCS4	NM
16K3	30-0	22K11	NM	30K11	52-0	22KCS5	NM
16K4	32-0	24K4	36-0	30K12	54-0	24KCS2	39-0
16K5	32-0	24K5	38-0	10KCS1	NM	24KCS3	44-0
16K6	NM	24K6	39-0	10KCS2	NM	24KCS4	NM
16K7	NM	24K7	43-0	10KCS3	NM	24KCS5	NM
16K9	NM	24K8	43-0	12KCS1	NM	26KCS2	39-0
18K3	31-0	24K9	44-0	12KCS2	NM	26KCS3	44-0
18K4	32-0	24K10	NM	12KCS3	NM	26KCS4	NM
18K5	33-0	24K12	NM	14KCS1	NM	26KCS5	NM
18K6	35-0	26K5	38-0	14KCS2	NM	28KCS2	40-0
18K7	NM	26K6	39-0	14KCS3	NM	28KCS3	45-0
18K9	NM	26K7	43-0	16KCS2	NM	28KCS4	53-0
18K10	NM	26K8	44-0	16KCS3	NM	28KCS5	53-0
20K3	32-0	26K9	44-0	16KCS4	NM	30KCS3	45-0
20K4	34-0	26K10	49-0	16KCS5	NM	30KCS4	54-0
20K5	34-0	26K12	NM	18KCS2	35-0	30KCS5	54-0

NM = diagonal bolted bridging not mandatory [~~for joists under 40 feet~~].

Table B – Erection Bridging for Long Span Joists

Joist	Span	Joist	Span	Joist	Span
18LH02	33-0	24LH04	39-0	32LH07	47-0 through 60-0
18LH03	NM	24LH05	40-0	32LH08	55-0 through 60-0
18LH04	NM	24LH06	45-0	32LH09	NM through 60-0
18LH05	NM	24LH07	NM	32LH10	NM through 60-0
18LH06	NM	24LH08	NM	32LH11	NM through 60-0
18LH07	NM	24LH09	NM	32LH12	NM through 60-0
18LH08	NM	24LH10	NM	32LH13	NM through 60-0
18LH09	NM	24LH11	NM	32LH14	NM through 60-0
20LH02	33-0	28LH05	42-0	32LH15	NM through 60-0
20LH03	38-0	28LH06	46-0	36LH07	47-0 through 60-0
20LH04	NM	28LH07	54-0	36LH08	47-0 through 60-0
20LH05	NM	28LH08	54-0	36LH09	57-0 through 60-0
20LH06	NM	28LH09	NM	36LH10	NM through 60-0
20LH07	NM	28LH10	NM	36LH11	NM through 60-0
20LH08	NM	28LH11	NM	36LH12	NM through 60-0
20LH09	NM	28LH12	NM	36LH13	NM through 60-0
20LH10	NM	28LH13	NM	36LH14	NM through 60-0
24LH03	35-0	32LH06	47-0 through 60-0	36LH15	NM through 60-0

NM = diagonal bolted bridging not mandatory [~~for joists under 40 feet~~].

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1926.761 Training.

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(b) Fall hazard training. The employer shall train each employee exposed to a fall hazard in accordance with the requirements of this section. The employer shall institute a training program and ensure employee participation in the program. The program shall include training and instruction in the following areas:

(1) The recognition and identification of fall hazards in the work area;
(2) The use and operation of guardrail systems (including perimeter safety cable systems), personal fall arrest systems, positioning device systems, fall restraint systems, safety net systems, and other protection to be used;
(3) The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used;
(4) The procedures to be followed to prevent falls to lower levels and through or into holes and openings in walking/working surfaces and walls; and
(5) The fall protection requirements of this subpart.

* * * * *

Division 3
Subdivision Z
Toxic and Hazardous Substances

1926.1101 Asbestos

* * * * *

(e) Regulated areas.

(1) All Class I, II and III asbestos work shall be conducted within regulated areas. All other operations covered by this standard shall be conducted within a regulated area where airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed a PEL. Regulated areas shall comply with the requirements of paragraphs (2), (3), (4) and (5) of this section.

(2) Demarcation. The regulated area shall be demarcated in any manner that minimizes the number of persons within the area and protects persons outside the area from exposure to airborne asbestos. Where critical barriers or negative pressure enclosures are used, they may demarcate the regulated area. Signs shall be provided and displayed pursuant to the requirements of paragraph (k)(7) of this section.

(3) Access. Access to regulated areas shall be limited to authorized persons and to persons authorized by the Act or regulations issued pursuant thereto.

(4) Respirators. All persons entering a regulated area where employees are required pursuant to paragraph (h)(1) of this section to wear respirators shall be supplied with a respirator selected in accordance with paragraph (h)~~[(2)]~~**(3)** of this section.

(5) Prohibited activities. The employer shall ensure that employees do not eat, drink, smoke, chew tobacco or gum, or apply cosmetics in the regulated area.

(6) Competent Persons. The employer shall ensure that all asbestos work performed within regulated areas is supervised by a competent person, as defined in paragraph (b) of this section. The duties of the competent person are set out in paragraph (o) of this section.

* * * * *

(f) Exposure assessments and monitoring

* * * * *

(3) Periodic monitoring.(i) Class I and II operations. The employer shall conduct daily monitoring that is representative of the exposure of each employee who is assigned to work within a regulated area who is performing Class I or II work, unless the employer pursuant to (f)(2)(iii) of this section, has made a negative exposure assessment for the entire operation.

(ii) All operations under the standard other than Class I and II operations. The employer shall conduct periodic monitoring of all work where exposures are expected to exceed a PEL, at intervals sufficient to document the validity of the exposure prediction.

(iii) Exception: When all employees required to be monitored daily are equipped with supplied-air respirators operated in the pressure demand mode, or other positive pressure mode [~~respirator~~], the employer may dispense with the daily monitoring required by this paragraph. However, employees performing Class I work using a control method which is not listed in paragraph (g)(4)(i), (ii), or (iii) of this section or using a modification of a listed control method, shall continue to be monitored daily even if they are equipped with supplied-air respirators.

* * * * *

(g) Methods of compliance.

* * * * *

(8) * * *

(v) When performing any other Class II removal of asbestos containing material for which specific controls have not been listed in paragraph (g)(8)[~~(iv)(A) through (D)~~] **(i) through (iv)** of this section, the employer shall ensure that the following work practices are complied with.

* * * * *

(n) Recordkeeping.

(2) Exposure measurements.

(i) The employer shall keep an accurate record of all measurements taken to monitor employee exposure to asbestos as prescribed in paragraph (f) of this section.

Note: The employer may utilize the services of competent organizations such as industry trade associations and employee associations to maintain the records required by this section.

(ii) This record shall include at least the following information:

(A) The date of measurement;

(B) The operation involving exposure to asbestos that is being monitored;
(C) Sampling and analytical methods used and evidence of their accuracy;
(D) Number, duration, and results of samples taken;
(E) Type of protective devices worn, if any; and
(F) Name and exposure of the employees whose exposures are represented.

(iii) The employer shall maintain this record for at least thirty (30) years, in accordance with 29 CFR [~~1910.33~~]**1910.1020**.

(3) Medical surveillance.

(i) The employer shall establish and maintain an accurate record for each employee subject to medical surveillance by paragraph (m) of this section, in accordance with 29 CFR [~~1910.33~~]**1910.1020**.

(ii) The record shall include at least the following information:

(A) The name of the employee;
(B) A copy of the employee's medical examination results, including the medical history, questionnaire responses, results of any tests, and physician's recommendations.
(C) Physician's written opinions;
(D) Any employee medical complaints related to exposure to asbestos; and
(E) A copy of the information provided to the physician as required by paragraph (m) of this section.

(iii) The employer shall ensure that this record is maintained for the duration of employment plus thirty (30) years, in accordance with 29 CFR [~~1910.33~~]**1910.1020**.

* * * * *

(p) Appendices.

(1) Appendices A, [~~C,~~] D, and E to this section are incorporated as part of this section and the contents of these appendices are mandatory.

(2) Appendices B, F, H, I, J, and K to this section are informational and are not intended to create any additional obligations not otherwise imposed or to detract from any existing obligations.

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Appendix K to 1926.1101—Polarized Light Microscopy of Asbestos (Non-Mandatory)

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3.1. Safety

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(e) Some of the solvents used, such as THF (tetrahydrofuran), are toxic and should only be handled in an appropriate fume hood and according to instructions given in the [~~Material Safety Data Sheet (MSDS)~~]**Safety Data Sheet (SDS).**

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1926.1127 Cadmium

* * * * *

(d) Exposure Monitoring.

(1) General.

(i) Prior to the performance of any construction work where employees may be potentially exposed to cadmium, the employer shall establish the applicability of this standard by determining whether cadmium is present in the workplace and whether there is the possibility that employee exposures will be at or above the action level. The employer shall designate a competent person who shall make this determination. Investigation and material testing techniques shall be used, as appropriate, in the determination. Investigation shall include a review of relevant plans, past reports, [~~material safety data sheets~~] **Safety Data Sheets (SDS),** and other available records, and consultations with the property owner and discussions with appropriate individuals and agencies.

(ii) Where cadmium has been determined to be present in the workplace, and it has been determined that there is a possibility the employee's exposure will be at or above the action level, the competent person shall identify employees potentially exposed to cadmium at or above the action level.

(iii) Determinations of employee exposure shall be made from breathing-zone air samples that reflect the monitored employee's regular, daily 8-hour TWA exposure to cadmium.

(iv) Eight-hour TWA exposures shall be determined for each employee on the basis of one or more personal breathing-zone air samples reflecting full shift exposure on each shift, for each job classification, in each work area. Where several employees perform the same job tasks, in the same job classification, on the same shift, in the same work area, and the length, duration, and level of cadmium exposures are similar, an employer may sample a representative fraction of the employees instead of all employees in order to meet this requirement. In representative sampling, the employer shall sample the employee(s) expected to have the highest cadmium exposures.

* * * * *

(n) Recordkeeping.

(1) Exposure monitoring.

(i) The employer shall establish and keep an accurate record of all air monitoring for cadmium in the workplace.

(ii) This record shall include at least the following information:

(A) The monitoring date, shift, duration, air volume, and results in terms of an 8 hour TWA of each sample taken, and if cadmium is not detected, the detection level;

(B) The name and job classification of all employees monitored and of all other employees whose exposures the monitoring result is intended to represent, including, where applicable, a description of how it was determined that the employee's monitoring result could be taken to represent other employee's exposures;

(C) A description of the sampling and analytical methods used and evidence of their accuracy;

(D) The type of respiratory protective device, if any, worn by the monitored employee and by any other employee whose exposure the monitoring result is intended to represent;
(E) A notation of any other conditions that might have affected the monitoring results.
(F) Any exposure monitoring or objective data that were used and the levels.

(iii) The employer shall maintain this record for at least thirty (30) years, in accordance with [~~1926.33~~]**1910.1020** of this [~~part~~]**chapter**.

* * * * *

(n) Recordkeeping.

* * * * *

(4) Availability.

(i) Except as otherwise provided for in this section, access to all records required to be maintained by paragraphs (n)(1) through (3) of this section shall be in accordance with the provisions of 29 CFR 1910.1020.

(ii) Within 15 days after a request, the employer shall make an employee's medical records required to be kept by paragraph (n)(3) of this section available for examination and copying to the subject employee, to designated representatives, to anyone having the specific written consent of the subject employee, and after the employee's death or incapacitation, to the employee's family members.

~~[(5) Transfer of records. Whenever an employer ceases to do business and there is no successor employer or designated organization to receive and retain records for the prescribed period, the employer shall comply with the requirements concerning transfer of records set forth in 1926.33(h) of this part.]~~

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Division 3
Subdivision CC
Cranes and Derricks in Construction

1926.1400 Scope

*****

(c) ***

(4) Digger derricks when used for augering holes for poles carrying electric or telecommunication lines, placing and removing the poles, and for handling associated materials for installation on, or removal from, the poles, or when used for any other work subject to subpart V of this part. To be eligible for this exclusion, digger derrick use in work subject to subpart V of this part must comply with all of the provisions of that subpart, and digger derrick use in construction work for telecommunication service (as defined at 1910.268(s)(40)) must comply with all of the provisions of 1910.268.

Note: In 1926.1400(c)(4), the Oregon OSHA reference is Division 2/RR instead of the federal OSHA reference of subpart V of this part.

1926.1408 Power line safety (up to 350 kV) – equipment operations

*****

(b) ***

(5) The requirements of paragraph (b)(4) of this section do not apply to work covered by subpart V of this part.

Note: In 1926.1408(b)(5), the Oregon OSHA reference is Division 2/RR instead of the federal OSHA reference of subpart V of this part.

***

(d) ***

(2) Exceptions. Paragraph (d)(1) of this section is inapplicable where the employer demonstrates that one of the following applies:

(i) The work is covered by subpart V of this part.

Note: In 1926.1408(d)(2)(i), the Oregon OSHA reference is Division 2/RR instead of the federal OSHA reference of subpart V of this part.

1926.1410 Power line safety (all voltages) – equipment operations closer than the Table A zone

*****

(d) ***

(3) An elevated warning line, or barricade (not attached to the crane), in view of the operator (either directly or through video equipment), equipped with flags or similar high-visibility markings, to prevent electrical contact. However, this provision does not apply to work covered by subpart V of this part.

Note: In 1926.1410(d)(3), the Oregon OSHA reference is Division 2/RR instead of the federal OSHA reference of subpart V of this part.

1926.1431 Hoisting personnel

The requirements of this section are supplemental to the other requirements in this subpart and apply when one or more employees are hoisted.

(a) The use of equipment to hoist employees is prohibited except where the employer demonstrates that the erection, use, and dismantling of conventional means of reaching the work area, such as a personnel hoist, ladder, stairway, aerial lift, elevating work platform, or scaffold, would be more hazardous, or is not possible because of the project's structural design or worksite conditions. This paragraph does not apply to work covered by subpart R (Steel Erection) of this part **and also does not apply to routine personnel access to an underground worksite via shaft as covered by 1926.800 (Underground Construction) of this part.**

* * * * *

(n) Hoisting personnel near power lines. Hoisting personnel within 20 feet of a power line that is up to 350 kV, and hoisting personnel within 50 feet of a power line that is over 350 kV, is prohibited, except for work covered by subpart V of this part (Power Transmission and Distribution).
Note: In 1926.1431(n), the Oregon OSHA reference is Division 2/RR instead of the federal OSHA reference of subpart V of this part.

Division 4
Subdivision I
Protective Equipment

437-004-0380 Manually Propelled Mobile Ladder Stands and Scaffolds (Towers)

Standards for the use of mobile work platforms and scaffolds are found in [~~d~~]**D**ivision 2, [~~s~~]**S**ubdivision D, 1910.2[~~9~~]**7** which applies to agricultural places of employment.

Statutory/Other Authority: ORS 654.025(2) & 656.726([~~3~~]**4**)
Statutes/Other Implemented: ORS 654.001 - 654.295
History:
OSHA 4-1998, f. 8-28-98, cert. ef. 10-1-98
OR-OSHA Administrative Order 1-2024, filed 9/11/24, effective 9/11/24.

437-004-1041 Respiratory Protection

(1) Permissible practice.

(a) To control occupational diseases caused by breathing contaminated air, the best method is to prevent contamination with engineering controls. To the extent feasible, accepted engineering controls must be used. Examples of engineering controls include enclosing the source of contamination, providing general or local exhaust ventilation to remove the contaminated air from work areas, and substituting less toxic materials. When this approach is not feasible, or while engineering controls are being established, employers must provide appropriate respirators in compliance with this standard.

(b) You must provide a respirator to each employee when it is necessary to protect their health. Respirators must be appropriate for the hazard. You must also establish and maintain an effective respiratory protection program that includes at least the requirements outlined in paragraph (3) of this standard. The program must cover each employee required to use a respirator.

(2) Definitions. The following definitions apply to this standard.

Air-purifying respirator is a respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.

Assigned protection factor (APF) means the workplace level of respiratory protection that a respirator or class of respirators is expected to provide to employees when the employer implements a continuing, effective respiratory protection program as specified by this section.

Atmosphere-supplying respirator is a respirator that supplies the user with breathing air from a source independent of the ambient atmosphere, and includes supplied-air respirators (SARs) and self-contained breathing apparatus (SCBA) units.

Canister or cartridge is a container with a filter, sorbent, or catalyst, or combination of these items, that removes specific contaminants from the air passed through the container.

Competent person is a person who, because of training and experience, can identify existing and predictable hazards in equipment, material, conditions or practices and who has the knowledge and authority to take corrective steps.

Demand respirator is an atmosphere-supplying respirator that admits breathing air to the face piece only when inhalation creates a negative pressure inside the face piece.

Elastomer (elastomeric) is an elastic substance like rubber or neoprene.

Emergency situation is any event such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment that may or does result in an uncontrolled significant release of an airborne contaminant.

Employee exposure is exposure to a concentration of an airborne contaminant that would occur if the employee were not using respiratory protection.

End-of-service-life indicator (ESLI) is a device, on the cartridge, that warns respirator users when their respirator is near the end of its ability to protect them. For example, an indicator on the cartridge will change to warn the user that the cartridge sorbent material is nearing saturation and is no longer effective.

Engineering control measures are methods to eliminate or control employee exposure to the hazard; e.g., substitution of a less toxic material, general or local ventilation and enclosing the operation.

Escape-only respirator is a respirator only for use during emergency exit.

Filter or air purifying element is a respirator component (e.g., canister or cartridge) that removes solid or liquid aerosols from the inspired air.

Filtering face piece (dust mask) is a tight fitting negative pressure particulate respirator with a filter as an integral part of the face piece or with the entire face piece made of the filtering medium.

Fit factor is a quantitative estimate of the fit of a particular respirator to a specific person, and typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn. Instrumentation is used with ambient air as the “test agent” to quantify the respirator fit. See Appendix A.

Fit test is the use of procedures in Appendix A to qualitatively or quantitatively evaluate the fit of a respirator on a person. (See also Qualitative fit test QLFT and Quantitative fit test QNFT.)

Helmet is a rigid respirator covering that also provides head protection against impact and penetration.

High efficiency particulate air (HEPA) filter is a filter that is at least 99.97 percent efficient in removing monodisperse particles of 0.3 micrometers in diameter. The equivalent NIOSH 42 CFR 84 particulate filters are the N100, R100, and P100 filters.

Hood is a respirator covering that completely covers the head and neck and may also cover portions of the shoulders and torso.

Immediately dangerous to life or health (IDLH) is an atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.

Interior structural firefighting is the physical activity of fire suppression, rescue or both, inside of buildings or enclosed structures which are involved in a fire situation beyond the incipient stage.

Loose-fitting face piece is a respiratory covering that forms a partial seal with the face, e.g., hood.

Maximum use concentration (MUC) means the maximum atmospheric concentration of a hazardous substance from which an employee can be expected to be protected when wearing a respirator, and is determined by the assigned protection factor of the respirator or class of respirators and the exposure limit of the hazardous substance. The MUC can be determined mathematically by multiplying the assigned protection factor specified for a respirator by the required OSHA permissible exposure limit, short-term exposure limit, or ceiling limit. When no OSHA exposure limit is available for a hazardous substance, an employer must determine an MUC on the basis of relevant available information and informed professional judgment.

Negative pressure respirator (tight fitting) is a respirator in which the air pressure inside the face piece is negative during inhalation with respect to the ambient air pressure outside the respirator.

Oxygen deficient atmosphere is an atmosphere with an oxygen content less than 19.5 percent by volume.

Physician or other licensed health care professional (PLHCP) is a person whose legally permitted scope of practice (i.e., license, registration, or certification) allows them to independently provide, or be delegated to provide, some or all of the health care services required by this standard.

Positive pressure respirator is a respirator in which the pressure inside the respiratory covering is higher than the air pressure outside the respirator.

Powered air-purifying respirator (PAPR) is an air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.

Pressure demand respirator is a positive pressure atmosphere-supplying respirator that admits breathing air to the face piece when inhalation reduces the positive pressure inside the face piece.

Qualitative fit test (QLFT) is a pass/fail fit test to assess the adequacy of respirator fit that relies on the individual's response to the test agent. See Appendix A.

Quantitative fit test (QNFT) is an assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator. See Appendix A.

Respirator covering is that part of a respirator that forms the protective barrier between the user's respiratory tract and an air-purifying device or breathing air source, or both. It may be a face piece, helmet, hood, suit, or a mouthpiece respirator with nose clamp.

Self-contained breathing apparatus (SCBA) is an atmosphere-supplying respirator for which user carries the breathing air source. Service life is the period of time that a respirator, filter or sorbent, or other respiratory equipment adequately protects the wearer.

Supplied-air respirator (SAR) or airline respirator is an atmosphere-supplying respirator for which the source of breathing air is not carried by the user.

Tight-fitting face piece is a respirator covering that forms a complete seal with the face, e.g., half mask or full-face piece.

User seal check is an action by the respirator user to determine if the respirator is properly seated to the face. See [~~a~~]**A**ppendix B-1.

(3) Respiratory protection program.

(a) When respirators are necessary to protect the health of workers or when you require workers to wear them, you must have an effective, written respiratory protection program, managed by a knowledgeable person, with procedures specific to your work site. Keep the program updated to reflect changes in conditions that require the use of respirators. You must include at least these points, as applicable:

(A) Procedures for selecting respirators for use in the workplace;

(B) Procedures for the medical evaluations of employees required to use respirators;

(C) Fit testing procedures for tight-fitting respirators;

(D) Procedures for proper use of respirators in routine and reasonably foreseeable emergency situations;

(E) Procedures and schedules for cleaning, disinfecting, storing, inspecting, repairing, discarding, and otherwise maintaining respirators;

(F) Procedures to ensure adequate air quality, quantity, and flow of breathing air for atmosphere-supplying respirators;

(G) Procedures for training employees in the respiratory hazards to which they are potentially exposed during routine and emergency situations;

(H) Procedures for training employees in the proper use of respirators, including putting on and removing them, any limitations on their use, and their maintenance; and

(I) Procedures for regularly evaluating the effectiveness of the program.

(b) The employer must provide respirators, and all other program requirements including training, and medical evaluations at no cost to the employee.

(c) Where respirator use is voluntary:

(A) You may provide respirators to employees who request them or they may use their own respirators. If you allow this voluntary use;

(i) You must determine that it will not create a hazard to the user;

(ii) You must provide the voluntary user with the information in Appendix D, “Information for Employees Using Respirators When Not Required Under the Standard”; and

(B) You must have a limited written respiratory program for voluntary users. It must include those parts of the standard program necessary to ensure that:

(i) The user is medically able to use the respirator without adverse health effects. Users of tight-fitting respirators other than dust masks must have a medical evaluation.

(ii) The user will properly clean, store and maintain the respirator.

(4) Selection of respirators. Identify and evaluate the respiratory hazard(s) including a reasonable estimate of employee exposures and an identification of the contaminant’s chemical state and physical form. You must treat atmospheres with the potential for IDLH conditions as an IDLH hazard and provide appropriate respiratory protection.

(a) General requirements.

(A) You must evaluate respiratory hazards, conditions in the workplace and user factors, then select and provide the appropriate respirators.

(B) All respirators must have NIOSH certification and all use must conform to that certification.

(C) Respirators must correctly fit and be acceptable to the user.

(b) Respirators for IDLH atmospheres.

(A) Provide the following respirators for employee use in IDLH atmospheres:

(i) A full-face piece pressure demand SCBA certified by NIOSH for a minimum service life of 30 minutes, or

(ii) A combination full-face piece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply.

(B) Respirators only for escape from IDLH atmospheres must have NIOSH certification for escape from the atmosphere of use.

(C) Treat all oxygen-deficient atmospheres as IDLH.

E[~~XCEPTION~~]**xception** to paragraph (4)(b)(C): If you can demonstrate that under all foreseeable conditions, the oxygen concentration will stay within the ranges in Table A for the appropriate altitudes set out in the table, then your selection of atmosphere-supplying respirators is not limited to the types listed in (4)(b)(A).

Table A

Altitude (ft.)	Oxygen deficient Atmospheres (% 0_2) for which the employer may rely on atmosphere-supplying respirators
Less than 3,001	16.0-19.5
3,001-4,000	16.4-19.5
4,001-5,000	17.1-19.5
5,001-6,000	17.8-19.5
6,001-7,000	18.5-19.5
7,001-8,000[1]	19.3-19.5

[1] This exception does not apply to altitudes above 8,000 feet. Oxygen-enriched breathing air must be supplied above 14,000 feet.

(c) Respirators for atmospheres that are not IDLH.

(A) Provide respirators adequate to protect the health of workers and ensure compliance with all other OR-OSHA requirements, under routine and reasonably foreseeable emergency situations.

(i) Assigned Protection Factors (APFs). Employers must use the assigned protection factors listed in Table B to select a respirator that meets or exceeds the required level of employee protection. When using a combination respirator (e.g., airline respirators with an air-purifying filter), employers must ensure that the assigned protection factor is appropriate to the mode of operation in which the respirator is being used.

Table B. -- Assigned Protection Factors[5]

Type of respirator[1, 2]	Quarter mask	Half mask	Full facepiece	Helmet/ hood	Loose-fitting facepiece
1. Air-Purifying Respirator	5	[3]10	50	……..	…….
2. Powered Air-Purifying Respirator (PAPR)	……...	50	1,000	[4]25/1,000	25

3. Supplied-Air Respirator (SAR) or Airline Respirator					
• Demand mode	……...	10	50	……...	……...
• Continuous flow mode	……...	50	1,000	[4]25/1,000	25
• Pressure-demand or other positive-pressure mode	…….	50	1,000	……...	……...
4. Self-Contained Breathing Apparatus (SCBA)					
• Demand mode	…….	10	50	50	……...
• Pressure-demand or other positive-pressure mode (e.g., open/closed circuit)	……...	…….	10,000	10,000	……...

Notes:

1 Employers may select respirators assigned for use in higher workplace concentrations of a hazardous substance for use at lower concentrations of that substance, or when required respirator use is independent of concentration.

2 The assigned protection factors in Table B are only effective when the employer implements a continuing, effective respirator program as required by this section (Division 4/I, 437-004-1041), including training, fit testing, maintenance, and use requirements.

3 This APF category includes filtering facepieces, and half masks with elastomeric facepieces.

4 The employer must have evidence provided by the respirator manufacturer that testing of these respirators demonstrates performance at a level of protection of 1,000 or greater to receive an APF of 1,000. This level of performance can best be demonstrated by performing a WPF or SWPF study or equivalent testing. Absent such testing, all other PAPRs and SARs with helmets/hoods are to be treated as loose-fitting facepiece respirators, and receive an APF of 25.

5 These APFs do not apply to respirators used solely for escape. For escape respirators used in association with specific substances covered by Division 4/Z, employers must refer to the appropriate substance-specific standards in that subpart. Escape respirators for other IDLH atmospheres are specified by Division 4/I, 437-004-1041(4)(b)(B).

(ii) Maximum Use Concentration (MUC).

(I) The employer must select a respirator for employee use that maintains the employee's exposure to the hazardous substance, when measured outside the respirator, at or below the MUC.

(II) Employers must not apply MUCs to conditions that are immediately dangerous to life or health (IDLH); instead, they must use respirators listed for IDLH conditions in paragraph (4)(b) of this standard.

(III) When the calculated MUC exceeds the IDLH level for a hazardous substance, or the performance limits of the cartridge or canister, then employers must set the maximum MUC at that lower limit.

(B) The respirator must be appropriate for the chemical state and physical form of the contaminant.

(C) For protection against gases and vapors, provide:

(i) An atmosphere-supplying respirator, or

(ii) An air-purifying respirator, if:

(I) It has and end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant; or

(II) If there is no ESLI appropriate for your conditions, implement a change schedule for canisters and cartridges that is based on objective information or data that will ensure that canisters and cartridges are changed before the end of their service life. Describe in the respirator program the information and data relied on and the basis for the canister and cartridge change schedule and the basis for reliance on the data.

N[~~OTE~~]**ote**: The Worker Protection Standard contains criteria for specific change out schedules for respirator canisters and cartridges. See Division 4/W, 170.240.

(D) For protection against particulates, provide:

(i) An atmosphere-supplying respirator; or

(ii) An air-purifying respirator with a filter certified by NIOSH under 30 CFR part 11 as a high efficiency particulate air (HEPA) filter, or an air-purifying respirator with a filter certified for particulates by NIOSH under 42 CFR part 84; or

(iii) For contaminants consisting primarily of particles with mass median aerodynamic diameters (MMAD) of at least 2 micrometers, an air-purifying respirator with any filter certified for particulates by NIOSH.

(5) Medical evaluation. Using a respirator may place a physiological burden on employees that depends on the type of respirator, the job and workplace conditions in which the respirator is used, and the medical status of the employee.

(a) General. You must provide medical evaluations to determine each worker's ability to use a respirator without causing adverse health effects. Do this before the worker's fit test and before they perform any work requiring respirator use. The employer may discontinue an employee's medical evaluations when the employee no longer uses a respirator.

(b) Medical evaluation procedures. The employer must identify a physician or other licensed health care professional (PLHCP) to perform medical evaluations using a medical questionnaire or an initial examination that obtains the same information as the medical questionnaire. The medical evaluation must obtain the information requested by the questionnaire in Appendix C, Part A, Sections 1 and 2, of this standard.

N[~~OTE~~]**ote**: If the employee refuses the examination, they may not be permitted to work in jobs that require a tight-fitting respirator.

(c) Follow-up medical examination.

(A) The employer must ensure that a follow-up medical examination is provided for an employee if, in the opinion of the PLHCP, this is necessary.

N[~~OTE~~]**ote**: The PLHCP may require a follow-up examination for an employee who gives a positive response to any question among questions 1 through 9, or 10 through 15 in Appendix C, Part A, Section 2; or whose initial medical examination demonstrates the need for a follow-up medical examination.

(B) The follow-up medical examination must include any medical tests, consultations, or diagno**s**tic procedures that the PLHCP deems necessary to make a final determination.

(d) Administration of the medical questionnaire and examinations.

(A) You must allow the employee to complete the questionnaire in a way that protects the confidentiality of the information. Employers are not allowed to see the answers or to review the completed form. You must allow employees to complete the form during normal working hours or at a time and place convenient to them. If employees need help, allow them to ask your PLHCP or anybody other than their employer or represent[~~t~~]atives of their employer.

(B) The employer must provide the employee with an opportunity to discuss the questionnaire and examination results with the PLHCP.

(e) Supplemental information for the PLHCP.

(A) You must give the PLHCP the required supplemental information before they make any recommendation about a worker's ability to use a respirator. Use Appendix C, Part B, Section 2 of this standard, or an equivalent form to provide this information.

(i) The type and weight of the respirator the employee will use;

(ii) How long and how often the employee will use the respirator (including use for rescue and escape);

(iii) The expected physical work effort while using the respirator;

(iv) Additional protective clothing and equipment to be worn; and

(v) Temperature and humidity extremes that may exist during use.

(B) Supplemental information you provide for an employee's medical evaluation does not have to be provided again for later evaluations unless the information or the PLHCP changes.

(C) You must provide a copy of your written respiratory program and this standard to the PLHCP.

Note to Paragraph (5)(e): When the employer replaces a PLHCP, the employer must ensure that the new PLHCP has this information, either by providing the documents directly to the new PLHCP or by having the documents transferred

from the former PLHCP to the new PLHCP. However, OR-OSHA does not expect employers to have employees medically reevaluated solely because there is a new PLHCP.

(f) Medical determination. In determining the employee's ability to use a respirator, the employer must:

(A) Obtain a written recommendation about the employee's ability to use the respirator from the PLHCP. The recommendation must provide only the following information:

(i) Any limitations on respirator use relating to the medical condition of the employee, or relating to the workplace conditions, including whether or not the employee is medically able to use the respirator;

(ii) The need, if any, for follow-up medical evaluations; and

(iii) A statement that the PLHCP gave a copy of the recommendation to the worker.

(B) If the respirator is a negative pressure respirator and the PLHCP finds that using it would increase the employee's health risk, the employer must provide a PAPR until a subsequent evaluation clears the employee for another type.

(g) Additional medical evaluations. At a minimum, the employer must provide additional medical evaluations that comply with this standard if:

(A) An employee reports medical signs or symptoms related to ability to use a respirator;

(B) A PLHCP, supervisor, or the knowledgeable person who manages the respiratory protection program informs the employer that an employee needs a reevaluation; or

(C) Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for employee reevaluation; or

(D) A change occurs in work conditions (such as physical work effort, protective clothing, and temperatures) that may result in a substantial increase in the physiological burden to the employee.

(6) Fit testing. You must:

(a) Ensure that employees using a tight-fitting face piece respirator pass an appropriate qualitative fit test (QLFT) or quantitative fit test (QNFT), using the same make, model, style and size respirator that they will use in the workplace.

(b) Ensure that each worker using a tight-fitting face piece respirator is fit-tested, before initial respirator use; whenever they change to another type, style, model, or make of respirator, and at least annually thereafter.

(c) Do a new fit test on a worker when you observe or the worker, a supervisor, the program administrator, or a PLCHP report any change in the worker's physical condition that could affect the respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.

(d) Give employees a reasonable opportunity to select a different respirator face piece and redo the fit test if, after passing a QLFT or QNFT, the employee notifies the employer, supervisor, or PLHCP that the fit of the respirator is unacceptable.

(e) Ensure that all fit tests comply with the accepted QLFT or QNFT protocols in Appendix A of this standard.

(f) Ensure that qualitative fit tests (QLFT) are used only to fit test negative pressure air-purifying respirators that must achieve an assigned protective factor of 50 or less.

(g) Ensure that quantitative fit tests (QNFT), using an accepted QNFT protocol, are only passed by achieving a fit factor of 100 or more for a tight fitting half face piece respirator, and a fit factor of 500 or more for a tight fitting full face piece respirator.

(h) Ensure that fit testing of tight-fitting atmosphere-supplying respirators and tight-fitting powered air-purifying respirators is only accomplished by performing quantitative or qualitative fit testing in the negative pressure mode, regardless of the mode of operation (negative or positive pressure) that is used for respiratory protection.

(A) Do qualitative fit testing of these respirators by temporarily converting the respirator user's actual face piece into a negative pressure respirator with appropriate filters, or by using an identical negative pressure air-purifying respirator face piece with the same sealing surfaces as a surrogate for the atmosphere-supplying or powered air-purifying respirator face piece.

(B) Do quantitative fit testing of these respirators by modifying the face piece to allow sampling inside the face piece in the breathing zone of the user, midway between the nose and mouth. Do this by installing a permanent sampling probe onto a surrogate face piece, or by using a sampling adapter designed to temporarily provide a way to sample air from inside the face piece.

(C) Before returning a face piece to normal use, completely remove any modifications done for fit testing, and restore the face piece to NIOSH-approved configuration.

(7) Use of respirators.

(a) Face piece seal protection.

(A) You must not permit workers to wear tight-fitting face pieces if they have:

(i) Facial hair that comes between the face-to-face piece sealing surface or that interferes with the respirator's valve function; or

(ii) Any other condition that interferes with the face-to-face piece seal or valve function.

(B) If an employee wears glasses or goggles or other personal protective equipment, the employer must ensure that it does not interfere with the seal of the face piece to the face of the user.

(C) Employers must ensure that workers who wear respirators perform a user seal check before every use, using the procedures in Appendix B-1 or, if equally effective, the recommendations of the respirator manufacturer.

(b) Continuing respirator effectiveness.

(A) You must reevaluate the effectiveness of a respirator when there is a change in work area conditions or degree of employee exposure or stress that may affect respirator effectiveness.

(B) You must ensure that employees leave the area where respirators are required:

(i) To wash their faces and respirator face pieces as necessary to prevent eye or skin irritation associated with respirator use; or

(ii) If they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the face piece; or

(iii) To replace the respirator or the filter, cartridge, or canister elements.

(C) If the employee detects vapor or gas breakthrough, changes in breathing resistance, or leakage of the face piece, the employer or a competent person must replace or repair the respirator before allowing the employee to return to the work area.

(c) Procedures for IDLH atmospheres. For all IDLH atmospheres, the employer must ensure that:

(A) One employee or, when needed, more than one employee is stationed outside the IDLH atmosphere;

(B) Visual, voice, or line communication is continuous between the employee(s) in the IDLH atmosphere and the employee(s) outside the IDLH atmosphere;

(C) The employee(s) outside the IDLH atmosphere have the training and equipment to provide effective emergency rescue;

(D) The employer or designee is notified before the employee(s) outside the IDLH atmosphere enter the IDLH atmosphere to provide emergency rescue;

(E) The employer or designee authorized to do so by the employer, once notified, provides necessary assistance appropriate to the situation;

(F) Employee(s) outside the IDLH atmospheres have:

(i) Pressure demand or other positive pressure SCBAs, or a pressure demand or other positive pressure supplied-air respirator with auxiliary SCBA; and either:

(ii) Appropriate retrieval equipment for removing the employee(s) who enter(s) these hazardous atmospheres where retrieval equipment would contribute to the rescue of the employee(s) and would not increase the overall risk resulting from entry; or

(iii) Equivalent means for rescue when there is no requirement for retrieval equipment under paragraph (7)(c)(F)(ii).

(d) Procedures for interior structural firefighting. If you require your workers to fight interior structural fires, paragraph (7)(c) applies. You must also do the following:

(A) At least two employees enter the IDLH atmosphere and remain in visual or voice contact with one another at all times; and

(B) At least two employees are located outside the IDLH atmosphere; and

(C) All employees engaged in interior structural firefighting use SCBA's.

N[~~OTE~~]**ote** 1 to paragraph (7)(d):One of the two individuals located outside the IDLH atmosphere may be assigned to an additional role, such as incident commander in charge of the emergency or safety officer, so long as this individual is able to perform assistance or rescue activities without jeopardizing the safety of health of any firefighter working at the incident.

N[~~OTE~~]**ote** 2 to paragraph (7)(d): Nothing in this section is meant to preclude firefighters from performing emergency rescue activities before an entire team has assembled.

(8) Maintenance and care of respirators.

(a) Cleaning and disinfecting. You must provide each respirator user with a respirator that is clean, sanitary, and in good working order. You also must ensure that respirators are cleaned and disinfected using the procedures in Appendix B-2, or equally effective procedures recommended by the respirator manufacturer, at the following intervals:

(A) Clean and disinfect respirators used exclusively by one worker as often as necessary to keep them sanitary;

(B) Clean and disinfect respirators after each use, or before being worn by different individuals, if used by more than one worker;

(C) Clean and disinfect emergency use respirators after each use; and

(D) Clean and disinfect fit test and training respirators after each use.

(b) Storage. Ensure that respirators are stored as follows:

(A) Store all respirators to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, damaging chemicals, and to prevent deformation of the face piece and exhalation valve.

(B) In addition to the requirements of paragraph (8)(b)(A), keep emergency respirators:

(i) Accessible to the work area;

(ii) In compartments or in covers clearly marked as containing emergency respirators; and

(iii) In accordance with any applicable manufacturer instructions.

(c) Inspections.

(A) The employer must require respirator inspections as follows:

(i) Inspect all routine use respirators before each use and during cleaning;

(ii) Inspect emergency use respirators at least monthly and according to the manufacturer's recommendations. Check for proper function before and after each use; and

(iii) Inspect escape respirators before taking them into the workplace for use.

(B) The employer must ensure that respirator inspections include the following:

(i) A check of respirator function, tightness of connections, and the condition of the various parts including, but not limited to, the face piece, head straps, valves, connecting tube, and cartridges, canisters or filters; and

(ii) A check of elastomeric parts for pliability and signs of deterioration.

(C) In addition to the requirements of paragraphs (8)(c)(A) and (B), inspect self-contained breathing apparatus monthly. Keep air and oxygen fully charged and recharge them when the pressure falls to 90 percent of the manufacturer's recommended pressure level. Be certain the regulator and warning devices work properly.

(D) For emergency use respirators, the employer must:

(i) Certify the respirator by documenting the date of inspection, the name (or signature) of the inspector, the findings, required remedial action, and a serial number or other means of identifying the respirator; and

(ii) Provide this information on a tag or label attached to the respirator storage compartment, or keep it with the respirator, or include it in paper or electronic inspection reports. Keep this information until the next report replaces it.

(d) Repairs. Do not use respirators that fail an inspection or are otherwise defective. Either discard them or repair them according to these procedures:

(A) Only people with appropriate training may repair or adjust respirators. They must use only the manufacturer's NIOSH-approved parts designed for the particular respirator;

(B) Repairs must conform to the manufacturer's recommendations for the type of repair to be performed;

(C) Only the manufacturer or a technician trained by the manufacturer may repair or adjust the reducing and admission valves, regulators and alarms.

(9) Breathing air quality and use.

(a) The employer must ensure or have their supplier certify that compressed air, compressed oxygen, liquid air, and liquid oxygen used for respiration meets the following specifications:

(A) Compressed and liquid oxygen must meet the United States Pharmacopoeia requirements for medical or breathing oxygen; and

(B) Compressed breathing air must meet at least the requirements for Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989, to include:

(i) Oxygen content (v/v) between 19.5 and 23.5 percent;

(ii) Hydrocarbon (condensed) content of no more than 5 milligrams per cubic meter of air;

(iii) Carbon monoxide (CO) content of no more than 10 ppm;

(iv) Carbon dioxide content of no more than 1,000 ppm; and

(v) No noticeable odor.

[~~NOTE~~]**Note**: Do not fill your own air vessels unless they and the contents meet all the requirements of this standard.

(b) Do not use compressed oxygen in atmosphere-supplied respirators that previously held compressed air.

(c) The employer must ensure that oxygen concentrations more than 23.5 percent are used only in equipment designed for oxygen service or distribution.

(d) The employer must ensure that cylinders to supply breathing air to respirators meet the following requirements:

(A) Cylinders are tested and maintained as prescribed in the Shipping Container Specification Regulations of the Department of Transportation (49 CFR part 180);

(B) Cylinders of purchased breathing air have a certificate of analysis from the supplier that the breathing air meets the requirements for Grade D breathing air; and

(C) The moisture content in the cylinder does not exceed a dew point of –50 degrees F. (-45.6 degrees C.) at 1 atmosphere pressure.

(e) The employer must ensure that compressors supplying breathing air to respirators are constructed and situated to:

(A) Prevent entry of contaminated air into the air-supply system;

(B) Minimize moisture content so that the dew point at 1 atmosphere pressure is 10 degrees F. (5.56 degrees C.) below the ambient temperature;

(C) Have suitable in-line air-purifying sorbent beds and filters to further ensure breathing air quality. Maintain and replace sorbent beds and filters according to the manufacturer's instructions.

(D) Have a tag at the compressor showing the most recent change date and the signature of the authorized person who did the change.

(f) For compressors that are not oil-lubricated, ensure that carbon monoxide levels in the breathing air do not exceed 10 ppm.

(g) For oil-lubricated compressors, use only a high-temperature or carbon monoxide alarm, or both, to monitor carbon monoxide levels. If you use only high-temperature alarms, monitor the air supply often enough to prevent carbon monoxide in the breathing air from exceeding 10 ppm.

(h) The employer must ensure that breathing air couplings are incompatible with outlets for nonrespirable worksite air or other gas systems. Do not allow any asphyxiating substance to get into breathing airlines.

(i) Use only the respirator manufacturer's NIOSH approved breathing gas containers marked and maintained in accordance with the Quality Assurance provisions of the NIOSH approval for the SCBA, as issued in accordance with the NIOSH respirator certification standard at 42 CFR part 84.

(10) Identification of filters, cartridges, and canisters. The employer must ensure that all filters, cartridges and canisters have labels and color codes that comply with the NIOSH standards and that the label remains in place and legible.

(11) Training and information.

(a) The employer must ensure that each employee can demonstrate knowledge of at least the following:

(A) Why the respirator is necessary and how improper fit, use, or maintenance can compromise the protective effect of the respirator;

(B) What the limitations and capabilities of the respirator are;

(C) How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions;

(D) How to inspect, put on and remove, use, and check the seals of the respirator;

(E) What the procedures are for maintenance and storage of the respirator;

(F) How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators; and

(G) The general requirements of this rule.

(b) Training must be in a language or form that workers understand.

(c) Training must be complete before workers use respirators.

(d) Retrain respirator users annually and when these situations happen:

(A) Changes in the work or the type of respirator make previous training obsolete;

(B) Inadequacies in the employee's knowledge or use of the respirator indicate that they no longer have the basic understanding or skill; or

(C) Any other situation arises in which retraining appears necessary to ensure safe respirator use.

(e) An employer who can demonstrate that a new employee has training within the last 12 months that addresses the elements in paragraph (11)(a)(A) through (G) does not have to repeat that training if, the employee can demonstrate knowledge of those element(s). Previous training not repeated initially by the employer must be provided no later than 12 months from the date of the previous training.

(f) Provide every voluntary respirator user with the basic advisory information in Appendix D. Any written or oral format that the employee understands is acceptable.

(12) Program evaluation.

(a) Evaluate the workplace as necessary to ensure effective implementation of the current written program.

(b) Regularly consult your respirator users to get their views on your program's effectiveness and to identify problems. Correct the problems identified. Things to assess include at least:

(A) Respirator fit (including the ability to use the respirator without interfering with effective workplace performance);

(B) Users have and use the correct respirator and components for their exposure hazards;

(C) Proper respirator use; and

(D) Proper respirator maintenance.

(13) Recordkeeping.

(a) Medical evaluation. Retain and make available all medical evaluations required by this standard according to Division 2/Z, 1910.1020. (Division 4/A, 437-004-0005, Medical Records Access, stipulates that Division 2/Z, 1910.1020 applies to agricultural employers.)

(b) Fit testing.

(A) You must keep a record of qualitative and quantitative fit tests for each user including:

(i) The name or identification of the employee;

(ii) Type of fit test;

(iii) Specific make, model, style, and size of respirator tested;

(iv) Date of test; and

(v) The pass/fail results for QLFTs or the fit factor and strip chart recording or other recording of the test results for QNFTs.

(B) Keep fit test records until records of a new test replace them.

(c) You must keep a written copy of your current respirator program.

(d) On request, you must make written records required by this standard, available to the Oregon OSHA Administrator or their designee for examination or copying.

(14) Appendices. Compliance with Appendix A, Appendix B-1, Appendix B-2, Appendix C, and Appendix D of this rule is mandatory.

(15) Effective Date. OAR 437-004-1041, Respiratory Protection, is effective March 1, 2007.

Statutory/Other Authority: ORS 654.025(2) & 656.726(4).
Statutes/Other Implemented: ORS 654.001 - 654.295.
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Appendix A to 437-004-1041, Respiratory Protection – Fit Testing Procedures (Mandatory)

Part I. Acceptable Fit Test Procedures

A. Fit Testing Procedures – General Requirements. These fit test procedures are mandatory and apply to both Qualitative Fit Tests (QLFT) and Quantitative Fit Tests (QNFT).

(1) Provide enough respirators so the employee can choose an acceptable model that fits correctly. Be sure they understand that they must select a respirator that gives the best fit.

(2) Before the employee selects their respirator you must show them how to put on a respirator, how to position it on their face, how to set the strap tension and how to make sure the fit is acceptable. There must be a mirror for them to use when evaluating the position and fit. This instruction does not replace the required formal training.

(3) They must hold each face piece they choose up to their face to find the one with the best fit.

(4) Once they choose a mask, have them wear it for at least 5 minutes to evaluate the comfort level. Discuss the points in the following paragraph to assure the worker makes a good evaluation. If they are not familiar with using a particular respirator, have them put it on and take it off several times to assure they make the needed adjustments for a good fit.

(5) Assessment of comfort must include a review of the following points with the test subject and allowing the test subject enough time to determine the comfort of the respirator:

(a) Position of the mask on the nose

(b) Room for eye protection

(c) Room to talk

(d) Position of mask on face and cheeks

(6) Use the following criteria to help determine the adequacy of the respirator fit:

(a) Chin properly placed;

(b) Adequate strap tension, not too tight;

(c) Fit across nose bridge;

(d) Respirator of proper size to span distance from nose to chin;

(e) Tendency of respirator to slip;

(f) Self-observation in mirror to evaluate fit and respirator position.

(7) Have the employee do a user seal check according to Appendix B-1. Before they do the check have them seat the mask by moving their head from side to side and up and down slowly while taking a few deep breaths. If the test fails, have them select another mask.

(8) Do not do the test if the employee has any hair (including beard stubble) between the skin and sealing surface. They must alter or remove any clothing or items that interfere with the fit.

(9) If the testing employee shows signs of difficult breathing during the test, send them to a PLHCP to evaluate their ability to use a respirator.

(10) If the employee finds the fit unacceptable, you must allow them to select another respirator and retest.

(11) Exercises. Before beginning the fit test, give the worker a description of the test and advise them of their responsibilities during the test. The description must include the exercises. They must wear the respirator for 5 minutes before the start of the test.

(12) During the test the employee must wear any other safety equipment normally required for their work, if it could interfere with the respirator fit.

(13) Test Exercises.

(a) Employers must perform the following test exercises for all fit testing methods prescribed in this appendix, except for the two modified ambient aerosol CNC quantitative fit testing protocols, the CNP quantitative fit testing protocol, and the CNP REDON quantitative fit testing protocol. For the modified ambient aerosol CNC quantitative fit testing protocols, employers shall ensure that the test subjects (i.e., employees) perform the exercise procedure specified in Part I.C.4(b) of this appendix for full-facepiece and half-mask elastomeric respirators, or the exercise procedure specified in Part I.C.5(b) for filtering facepiece respirators. Employers must ensure that the test subjects (i.e., employees) perform the exercise procedure described in Part I.C.6(b) of this appendix for the CNP quantitative fit testing protocol, or the exercise procedure described in Part I.C.7(b) of this appendix for the CNP REDON quantitative fit-testing protocol. For the remaining fit testing methods, employers shall ensure that the test exercises are performed in the appropriate test environment in the following manner:

(1) Normal breathing. In a normal standing position, without talking, the subject must breathe normally.

(2) Deep breathing. In a normal standing position, the subject must breathe slowly and deeply, taking caution so as not to hyperventilate.

(3) Turning head side to side. Standing in place, the subject must slowly turn their head from side to side between the extreme positions on each side. The head must be held at each extreme momentarily so the subject can inhale at each side.

(4) Moving head up and down. Standing in place, the subject must slowly move their head up and down. Instruct the subject to inhale in the up position (i.e., when looking toward the ceiling).

(5) Talking. The subject must talk out loud slowly and loud enough to be heard clearly by the test conductor. The subject can read from a prepared text such as the Rainbow Passage, count backward from 100, or recite a memorized poem or song.

Rainbow Passage

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow.

(6) Grimace. The test subject must grimace by smiling or frowning. (This applies only to QNFT testing; it is not for QLFT.)

(7) Bending over. The test subject must bend at the waist as if they were to touch their toes. Substitute jogging in place for this exercise in those test environments such as shroud type QNFT or QLFT units that do not permit bending over at the waist.

(8) Normal breathing. Same as exercise (1).

(b) Do each test exercise for 1-minute except for the grimace exercise which is only for 15 seconds. Ask the test subject about the comfort of the respirator upon completion of the

procedure. If there are problems, try another respirator. Do not adjust the respirator after the fit test exercises begin. Any adjustment voids the test.

B. Qualitative Fit Test (QLFT) Procedures

(1) General

(a) The employer must ensure that persons administering QLFT are able to prepare test solutions, calibrate equipment and perform tests properly, recognize invalid tests, and ensure that test equipment works properly.

(b) The employer must ensure that QLFT equipment is clean and well maintained so as to operate within its design parameters.

(2) Isoamyl Acetate Procedures

Note: This procedure is not appropriate to use for the fit testing of particulate respirators unless the particulate cartridges can be replaced with organic vapor cartridges for the duration of the test.

(a) Odor Threshold Screening. Odor threshold screening, done without wearing a respirator, is to determine if the individual tested can detect the odor of isoamyl acetate at low levels.

(1) You'll need three 1 liter glass jars with metal lids.

(2) Use odor-free water (e.g., distilled or spring water) at approximately 25 degrees C. (77 degrees F.) for the solutions.

(3) Make the isoamyl acetate (IAA) (also known at isopentyl acetate) stock solution by adding 1 ml of pure IAA to 800 ml of odor-free water in a 1-liter jar, closing the lid and shaking for 30 seconds. Make a new solution at least weekly.

(4) Do the screening test in a room separate from the room used for actual fit testing. Ventilate the two rooms to prevent the odor of IAA from becoming evident in the general room air where testing takes place.

(5) Make the odor test solution in a second jar by placing 0.4 ml of the stock solution into 500 ml of odor-free water using a clean dropper or pipette. Shake the solution for 30 seconds and allow it to stand for 2 to 3 minutes so that the IAA concentration above the liquid may reach equilibrium. Use this solution for only 1-day.

(6) Make a test blank in a third jar by adding 500 cc of odor-free water.

(7) Label the odor test and test blank jar lids (e.g., 1 and 2) for jar identification. Place the labels on the lids so that they can be peeled off periodically and switched to maintain the integrity of the test.

(8) Type the following instruction on a card and place it on the table in front of the two test jars (i.e., 1 and 2): "The purpose of this test is to determine if you can smell banana oil at a low concentration. The two bottles in front of you contain water. One of these bottles also has a small amount of banana oil. Be sure the covers are on tight, then shake each bottle for two seconds. Unscrew the lid of each bottle, one at a time, and sniff at the mouth of the bottle. Indicate to the test conductor which bottle contains banana oil."

(9) Make the mixtures for the IAA odor detection test in an area separate from where you do the test, in order to prevent olfactory fatigue in the subject.

(10) If the test subject cannot correctly identify the jar containing the odor test solution, do not do the IAA qualitative fit test.

(11) If the test subject correctly identifies the jar containing the odor test solution, the test subject may proceed to respirator selection and fit testing.

(b) Isoamyl Acetate Fit Test

(1) The fit test chamber must be a clear 55-gallon drum liner suspended inverted over a 2-foot diameter frame so that the top of the chamber is about 6 inches above the test subject's head. If no drum liner is available, make a similar chamber using plastic sheeting. The inside top center of the chamber must have a small hook attached.

(2) Each respirator for the fitting and fit testing must have organic vapor cartridges or offer protection against organic vapors.

(3) After selecting, donning, and properly adjusting a respirator, the test subject must wear it to the fit testing room. This room must be separate from the room used for odor threshold screening and respirator selection, and must be well-ventilated, as by an exhaust fan or lab hood, to prevent general room contamination.

(4) Tape a copy of the test exercises and any prepared text from which the subject is to read to the inside of the test chamber.

(5) Give the test subject a 6-inch by 5 inch piece of paper towel, or other porous, absorbent, single-ply material, folded in half and wetted with 0.75 ml of pure IAA when they enter the test chamber. Have the test subject hang the wet towel on the hook at the top of the chamber. You may substitute an IAA test swab or ampule for the IAA wetted paper towel if the alternative IAA source will generate an IAA test atmosphere with a concentration equivalent to that generated by the paper towel method.

(6) Allow 2 minutes for the IAA test concentration to stabilize before starting the fit test exercises. This would be an appropriate time to talk with the test subject; to explain the fit test, the importance of their cooperation, and the purpose for the test exercises; or to demonstrate some of the exercises.

(7) If at any time during the test, the subject detects the banana-like odor of IAA, the test is a failure. The subject must quickly exit from the test chamber and leave the test area to avoid olfactory fatigue.

(8) If the test fails, the subject must return to the selection room and remove the respirator. The test subject must repeat the odor sensitivity test, select and put on another respirator, return to the test area and again begin the fit test procedure in (b)(1) through (7) above. The process continues until they find a respirator that fits right. Should the odor sensitivity test fail, the subject must wait at least a few minutes before re-testing. Odor sensitivity will usually return by this time.

(9) If the subject passes the test, demonstrate the efficiency of the test procedure by having the subject break the respirator face seal and take a breath before exiting the chamber.

(10) When the test subject leaves the chamber, they must remove the saturated towel and return it to the person conducting the test, so that there is no significant IAA concentration build-up in the chamber during subsequent tests. Keep the used towels in a self-sealing plastic bag to prevent contamination of the test area.

(3) Saccharin Solution Aerosol Procedure

You must explain the entire screening and testing procedure to the test subject before starting the screening test.

(a) Taste threshold screening. The saccharin taste threshold screening, done without wearing a respirator, is to determine if the individual being tested can detect the taste of saccharin.

(1) During threshold screening as well as during fit testing, subjects must wear an enclosure about the head and shoulders that is approximately 12 inches in diameter by 14 inches tall with at least the front portion clear and that allows free movements of the head when wearing a respirator. An enclosure substantially similar to the 3M hood assembly, parts # FT 14 and # FT 15 combined, is adequate.

(2) The test enclosure must have a 3/4-inch (1.9 cm) hole in front of the test subject's nose and mouth area to accommodate the nebulizer nozzle.

(3) Have the test subject put on the test enclosure. Throughout the threshold screening test, the test subject must breathe through their slightly open mouth with tongue extended. Tell the subject to report when they detect a sweet taste.

(4) Using a DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent, the test conductor must spray the threshold check solution into the enclosure. Direct the nozzle away from the nose and mouth of the person. Clearly mark this nebulizer to distinguish it from the fit test solution nebulizer.

(5) Make the threshold check solution by dissolving 0.83 gram of sodium saccharin USP in 100 ml of warm water. You can also put 1 ml of the fit test solution (see (b)(5) below) in 100 ml of distilled water.

(6) To produce the aerosol, firmly squeeze the nebulizer bulb so that it collapses completely, then release and allow to fully expand.

(7) Repeat ten squeezes rapidly and then ask the test subject if they can taste the saccharin. The test is over when the test subject reports tasting the sweet taste during the ten squeezes. Note the taste threshold as ten regardless of the number of squeezes actually done.

(8) If the first response is negative, do ten more squeezes rapidly and ask the test subject if they taste the saccharin. If the test subject reports tasting the sweet taste during the second ten squeezes, the screening test is over. The taste threshold is twenty regardless of the number of squeezes actually done.

(9) If the second response is negative, do ten more squeezes rapidly and ask the test subject again if they taste the saccharin. If the test subject reports tasting the sweet taste during the third set of ten squeezes, the screening test is over. The taste threshold is thirty regardless of the number of squeezes actually done.

(10) The test conductor will take note of the number of squeezes required to solicit a taste response.

(11) If the test subject cannot taste saccharin after 30 squeezes they may not perform the saccharin fit test.

Note to paragraph **(**3**)[**-**]**(a)**:** If the test subject eats or drinks something sweet before the screening test, they may be unable to taste the weak saccharin solution.

(12) If the test subject gives a taste response, ask them to take note of the taste for reference in the fit test.

(13) Correct use of the nebulizer uses approximately 1 ml of liquid at a time in the nebulizer body.

(14) Thoroughly rinse the nebulizer in water, shake it dry, and refill it at least each morning and afternoon or at least every 4 hours.

(b) Saccharin solution aerosol fit test procedure.

(1) The test subject may not eat, drink (except plain water), smoke, or chew gum for 15 minutes before the test.

(2) The fit test uses the same enclosure as in 3.(a) above.

(3) The test subject must put on the enclosure while wearing the respirator selected in section I.A.. They must properly adjust the respirator and it must have a particulate filter(s).

(4) Use a second DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent to spray the fit test solution into the enclosure. Clearly mark this nebulizer to distinguish it from the screening test solution nebulizer.

(5) Make the fit test solution by adding 83 grams of sodium saccharin to 100 ml of warm water.

(6) As before, the test subject must breathe through the slightly open mouth with tongue extended, and report if they taste the sweet taste of saccharin.

(7) Insert the nebulizer into the hole in the front of the enclosure and spray an initial concentration of saccharin fit test solution into the enclosure using the same number of squeezes (either 10, 20 or 30 squeezes) based on the number of squeezes required to elicit a taste response as noted during the screening test. The minimum is 10 squeezes.

(8) After generating the aerosol, tell the test subject to perform the exercises in section I.A.13.

(9) Replenish the aerosol concentration every 30 using one half the original number of squeezes used initially (e.g., 5, 10 or 15).

(10) The test subject must indicate to the test conductor if at any time during the fit test they taste saccharin. If the test subject does not report tasting the saccharin, the test is successful.

(11) If they taste the saccharin, the fit is unsatisfactory and a failure. Try a different respirator and repeat the entire test procedure (taste threshold screening and fit testing).

(12) Since the nebulizer has a tendency to clog during use, the test operator must make periodic checks of the nebulizer to ensure that it is not clogged. If clogging is found at the end of the test session, the test is invalid.

(4) Bitrex™ (Denatonium Benzoate) Solution Aerosol Qualitative Fit Test Procedure

The Bitrex™ (Denatonium benzoate) solution aerosol QLFT procedure uses the published saccharin test procedure because that procedure is widely accepted. Bitrex is a taste aversion agent used in household liquids that children should not drink and is endorsed by the American Medical Association, the National Safety Council, and the American Association of Poison Control Centers. Explain the entire screening and testing procedure to the test subject before the screening test.

(a) Taste Threshold Screening.

The Bitrex taste threshold screening, done without wearing a respirator, is to determine if the person being tested can detect the taste of Bitrex.

(1) During threshold screening as well as during fit testing, subjects must wear an enclosure about the head and shoulders that is approximately 12 inches (30.5 cm) in diameter by 14 inches (35.6 cm) tall. The front portion of the enclosure must be clear from the respirator and allow free movement of the head when a respirator is worn. An enclosure substantially similar to the 3M hood assembly, parts # FT 14 and # FT 15 combined, is adequate.

(2) The test enclosure must have a 3/4-inch (1.9 cm) hole in front of the test subject's nose and mouth area to accommodate the nebulizer nozzle.

(3) The test subject must put on the test enclosure. Throughout the threshold screening test, the test subject must breathe through his or her slightly open mouth with tongue extended. Tell the subject to report when they detect a bitter taste.

(4) Using a DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent, the spray the Threshold Check Solution into the enclosure. Clearly mark this Nebulizer to distinguish it from the fit test solution nebulizer.

(5) Make the Threshold Check Solution by adding 13.5 milligrams of Bitrex to 100 ml of 5 percent salt (NaCl) solution in distilled water.

(6) To produce the aerosol, firmly squeeze the nebulizer bulb so that the bulb collapses completely, and then release it and allow it to fully expand.

(7) Repeat the initial ten squeezes rapidly and then ask the test subject if they taste the Bitrex. If the test subject tastes the bitter taste during the ten squeezes, the screening test is over. The taste threshold is ten regardless of the number of squeezes actually done.

(8) If the first response is negative, repeat ten more squeezes rapidly and ask the test subject if they taste the Bitrex. If the test subject tastes the bitter taste during the second ten squeezes, the screening test is over. The taste threshold is twenty regardless of the number of squeezes actually done.

(9) If the second response is negative, do ten more squeezes rapidly and ask the test subject if they taste the Bitrex. If the test subject tastes the bitter taste during the third set of ten

squeezes, the screening test is over. The taste threshold is as thirty regardless of the number of squeezes actually done.

(10) The test conductor will take note of the number of squeezes required to solicit a taste response.

(11) If the subject does not taste the Bitrex after 30 squeezes (step 10), the test subject cannot taste Bitrex and may not do the Bitrex fit test.

(12) If they taste the Bitrex, ask the test subject to remember the taste for reference in the fit test.

(13) Correct use of the nebulizer is approximately 1 ml of liquid at a time in the nebulizer body.

(14) Thoroughly rinse the nebulizer in water, shake to dry, and refill at least each morning and afternoon or at least every 4 hours.

(b) Bitrex Solution Aerosol Fit Test Procedure.

(1) The test subject may not eat, drink (except plain water), smoke, or chew gum for 15 minutes before the test.

(2) The fit test uses the same enclosure as in 4.(a) above.

(3) The test subject must put on the enclosure while wearing the respirator selected according to section I.A. They must properly adjust the respirator and it must have any type particulate filter(s).

(4) Use a second DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent to spray the fit test solution into the enclosure. Clearly mark this nebulizer to distinguish it from the screening test solution nebulizer.

(5) Make the fit test solution by adding 337.5 mg of Bitrex to 200 ml of a 5 percent salt (NaCl) solution in warm water.

(6) As before, the test subject must breathe through his or her slightly open mouth with tongue extended, and report if they taste the bitter taste of Bitrex.

(7) Insert the nebulizer into the hole in the front of the enclosure and spray an initial concentration of the fit test solution into the enclosure using the same number of squeezes (either 10, 20 or 30 squeezes) based on the number of squeezes required to elicit a taste response as noted during the screening test.

(8) After generating the aerosol, tell the test subject to do the exercises in section I.A.13.

(9) Replenish the aerosol concentration every 30 seconds using one half the number of squeezes used initially (e.g., 5, 10 or 15).

(10) The test subject must indicate to the test conductor if they taste the Bitrex during the test. If the test subject does not taste the Bitrex, the test passes.

(11) If they taste the Bitrex, the fit is unsatisfactory and the test fails. They must try a different respirator and repeat the entire test procedure (taste threshold screening and fit testing).

(5) Irritant Smoke (Stannic Chloride) Procedure

This qualitative fit test uses a person's response to the irritating chemicals released in the "smoke" produced by a stannic chloride ventilation smoke tube to detect leakage into the respirator.

(a) General Requirements and Precautions

(1) The test respirator must have high efficiency particulate air (HEPA) or P100 series filter(s).

(2) Use only stannic chloride smoke tubes for this procedure.

(3) Do not use any form of test enclosure or hood for the test subject.

(4) The smoke can be irritating to the eyes, lungs, and nasal passages. The test conductor must take precautions to minimize the test subject's exposure to irritant smoke. Sensitivity varies, and certain individuals may respond to a greater degree to irritant smoke. Use only the smallest amount of smoke necessary to get a response when doing the sensitivity screening checks that determine if the test subject can detect irritant.

(5) Do the fit test in an area with adequate ventilation to prevent exposure of the person doing the fit test or the build-up of irritant smoke in the general area.

(b) Sensitivity Screening Check. The person taking the test must demonstrate their ability to detect a weak concentration of the irritant smoke.

(1) The test operator must break both ends of a ventilation smoke tube containing stannic chloride, and attach one end of the smoke tube to a low flow air pump set to deliver 200 milliliters per minute, or an aspirator squeeze bulb. The test operator must cover the other end of the smoke tube with a short piece of tubing to prevent potential injury from the jagged end of the smoke tube.

(2) The test operator must advise the test subject that the smoke can be irritating to the eyes, lungs, and nasal passages and instruct the subject to keep their eyes closed during the test.

(3) Allow the test subject to smell a weak concentration of the irritant smoke before putting the respirator on to become familiar with its irritating properties and to determine if they can detect the irritating properties of the smoke. Carefully direct a small amount of the irritant smoke in the test subject's direction to determine that they can detect it.

(c) Irritant Smoke Fit Test Procedure

(1) The person fit tested must put on the respirator without assistance, and do the required user seal check(s).

(2) Tell the test subject to keep their eyes closed.

(3) The test operator must direct the stream of irritant smoke from the smoke tube toward the face seal area of the test subject, using the low flow pump or the squeeze bulb. The test operator must begin at least 12 inches from the face piece and move the smoke stream around

the whole perimeter of the mask. The operator must gradually make two more passes around the perimeter of the mask, moving to within 6 inches of the respirator.

(4) If the test subject has no involuntary response and/or does not detect the irritant smoke, proceed with the test exercises.

(5) The test subject must do the exercises in section I.A.13. while the respirator seal is continually challenged by the smoke, directed around the perimeter of the respirator at a distance of 6 inches.

(6) If the person detects the irritant smoke, the test fails. The person re-testing must repeat the entire sensitivity check and fit test procedure.

(7) Give a second sensitivity screening check to each test subject passing the irritant smoke test without evidence of a response (involuntary cough, irritation), with the smoke from the same smoke tube used during the fit test, with the respirator off, to determine if they still reacts to the smoke. Failure to evoke a response voids the fit test.

(8) If there is a response during this second sensitivity check, then the fit test passes.

C. Quantitative Fit Test (QNFT) Procedures. The following quantitative fit testing procedures are acceptable: Quantitative fit testing using a non-hazardous test aerosol (such as corn oil, polyethylene glycol 400 [PEG 400], di-2-ethyl hexyl sebacate [DEHS], or sodium chloride) generated in a test chamber, and using instrumentation to quantify the fit of the respirator; Quantitative fit testing using ambient aerosol as the test agent and appropriate instrumentation (condensation nuclei counter) to quantify the respirator fit; Quantitative fit testing using controlled negative pressure and appropriate instrumentation to measure the volumetric leak rate of a face piece to quantify the respirator fit.

(1) General

(a) The employer must ensure that persons administering QNFT are able to calibrate equipment and perform tests properly, recognize invalid tests, calculate fit factors properly and ensure that test equipment is in proper working order.

(b) The employer must ensure that QNFT equipment is clean, and maintained and calibrated according to the manufacturer’s instructions so as to operate at its design parameters.

(2) Generated Aerosol Quantitative Fit Testing Procedure

(a) Apparatus.

(1) Instrumentation. Use aerosol generation, dilution, and measurement systems using particulates (corn oil, polyethylene glycol 400 [PEG 400], di 2-ethyl hexyl sebacate [DEHS] or sodium chloride) as test aerosols.

(2) Test chamber. The test chamber must be large enough to permit all test subjects to perform freely all required exercises without disturbing the test agent concentration or the measurement apparatus. The test chamber must effectively isolate the test agent from the outside air, yet allow its concentration to be uniform throughout the chamber.

(3) When testing air-purifying respirators, replace the normal filter or cartridge element with a high efficiency particulate air (HEPA) or P100 series filter supplied by the same manufacturer.

(4) The sampling instrument must make a computer record or strip chart record of the test showing the rise and fall of the test agent concentration with each inhale and exhale at fit factors of at least 2,000. Integrators or computers that integrate the amount of test agent penetration leakage into the respirator for each exercise are Ok if they make a record of the readings.

(5) The combination of substitute air-purifying elements, test agent and test agent concentration must not expose the test subject in excess of an established exposure limit for the test agent at any time during the testing process.

(6) The sampling port on the test specimen must not allow leaks around the port (e.g., where the respirator is probed). It must always allow a free airflow into the sampling line, and there must be no interference with the fit or performance of the respirator. The in-mask sampling device (probe) must draw the air sample from the breathing zone of the test subject, midway between the nose and mouth and with the probe extending into the face piece cavity at least 1/4-inch.

(7) The test setup must permit the person administering the test to observe the test subject inside the chamber during the test.

(8) The equipment generating the test atmosphere must keep the concentration of test agent constant to within a 10 percent variation for the duration of the test.

(9) The time lag (interval between an event and the recording of the event on the strip chart or computer or integrator) must be minimal. There must be a clear association between the occurrence of an event and its recording.

(10) The sampling line tubing for the test chamber atmosphere and for the respirator sampling port must be of equal diameter and of the same material. The length of the two lines must be equal.

(11) The exhaust flow from the test chamber must pass through an appropriate filter (i.e., high efficiency particulate filter) before release.

(12) When using sodium chloride aerosol, the relative humidity inside the test chamber must not exceed 50 percent.

(13) Take into account the limitations of instrument when determining the fit factor.

(14) Test respirators must work right. Inspect them regularly for deficiencies such as cracks or missing valves and gaskets.

(b) Procedural Requirements.

(1) When performing the initial user seal check using a positive or negative pressure check, crimp the sampling line closed to avoid air pressure leakage during either of these pressure checks.

(2) The use of an abbreviated screening QLFT test is optional. Such a test may quickly identify poor fitting respirators that passed the positive and/or negative pressure test and reduce the amount of QNFT time. The use of the CNC QNFT instrument in the count mode is another

optional method to obtain a quick estimate of fit and eliminate poor fitting respirators before going on to perform a full QNFT.

(3) You must measure a reasonably stable test agent concentration in the test chamber prior to testing. For canopy or shower curtain types of test units, you may determine the test agent's stability after the test subject enters the test environment.

(4) Immediately after the subject enters the test chamber, measure the test agent concentration inside the respirator to ensure that the peak penetration does not exceed 5 percent for a half mask or 1 percent for a full-face piece respirator.

(5) You must have a stable test agent concentration before starting the test.

(6) Do not tighten the respirator restraining straps too much for testing. The wearer must adjust the straps without assistance to give a reasonably comfortable fit typical of normal use. Do not adjust the after the fit test exercises begin.

(7) Stop the test when any single peak penetration exceeds 5 percent for half masks and 1 percent for full-face piece respirators. The test subject must refit and retest.

(8) Calculation of fit factors.

(i) Determine the fit factor for the quantitative fit test by taking the ratio of the average chamber concentration to the concentration measured inside the respirator for each test exercise except the grimace exercise.

(ii) Calculate the average test chamber concentration as the arithmetic average of the concentration measured before and after each test (i.e., 7 exercises) or the arithmetic average of the concentration measured before and after each exercise or the true average measured continuously during the respirator sample.

(iii) Use one of these methods to figure the concentration of the challenge agent inside the respirator:

(A) Average peak penetration method means the method of determining test agent penetration into the respirator using a strip chart recorder, integrator, or computer. The agent penetration is the average of the peak heights on the graph or by computer integration, for each exercise except the grimace exercise. Integrators or computers that calculate the actual test agent penetration into the respirator for each exercise meet the requirements of the average peak penetration method.

(B) Maximum peak penetration method means the method of determining test agent penetration in the respirator as determined by strip chart recordings of the test. The highest peak penetration for a given exercise is representative of average penetration into the respirator for that exercise.

(C) Integration by calculation of the area under the individual peak for each exercise except the grimace exercise. This includes computerized integration.

(D) The calculation of the overall fit factor using individual exercise fit factors involves first converting the exercise fit factors to penetration values, determining the average, and then converting that result back to a fit factor. This equation represents the procedure:

$$\text{Overall Fit Factor} = \frac{\text{Number of exercises}}{1/ff_1 + 1/ff_2 + 1/ff_3 + 1/ff_4 + 1/ff_5 + 1/ff_6 + 1/ff_7 + 1/ff_8}$$

Where ff_1, ff_2, ff_3, etc. are the fit factors for exercises 1, 2, 3, etc.

(9) Do not allow the test subject to wear a half mask or quarter face piece respirator unless they have a minimum fit factor of 100, or a full face piece respirator unless they have a minimum fit factor of 500.

(10) Replace filters used for quantitative fit testing when they cause increased breathing resistance, or when the test agent has altered the integrity of the filter media.

(3) Quantitative fit testing (QNFT) procedure**s** for the ambient aerosol condensation nuclei counter (CNC).

Ambient aerosol condensation nuclei counter (CNC) quantitative fit testing procedure.

The ambient aerosol condensation nuclei counter (CNC) quantitative fit testing (PortaCount®) procedure quantitatively fit tests respirators with the use of a probe. The probed respirator is only for use with quantitative fit tests. A probed respirator has a special sampling device, installed on the respirator, that allows the probe to sample the air from inside the mask. A probed respirator is required for each make, style, model, and size that the employer uses and is available from the respirator manufacturer or distributor. The primary CNC instrument manufacturer, TSI Incorporated, also provides probe attachments (TSI mask sampling adapters) that permit fit testing in an employee's own respirator. A minimum fit factor pass level of at least 100 is necessary for a half-mask respirator (elastomeric or filtering facepiece), and a minimum fit factor pass level of at least 500 is required for a full-facepiece elastomeric respirator. Explain the entire screening and testing procedure to the test subject before doing the screening test.

(a) PortaCount® Fit Test Requirements.

(1) Check the respirator to make sure the sampling probe and line are properly attached to the face piece and that the respirator has a particulate filter capable of preventing significant penetration by the ambient particles used for the fit test (e.g., NIOSH 42 CFR 84 series 100, series 99, or series 95 particulate filter) per manufacturer's instruction.

(2) Instruct the test employee to put on the respirator for 5 minutes before the fit test starts. This purges the ambient particles trapped inside the respirator and permits the wearer to make certain the respirator is comfortable. This person must have training on how to wear the respirator properly.

(3) Check the following conditions for the adequacy of the respirator fit: Chin properly placed; Adequate strap tension, not overly tightened; Fit across nose bridge; Respirator of proper size to span distance from nose to chin; Tendency of the respirator to slip; Self-observation in a mirror to evaluate fit and respirator position.

(4) Have the person wearing the respirator do a user seal check. If it leaks, determine the cause. If the leak is from a poorly fitting face piece, try another size of the same model respirator, or another model of respirator.

(5) Follow the manufacturer's instructions for operating the PortaCount® and proceed with the test.

(6) Instruct the test subject to perform the exercises in section I.A.13.

(7) After the test exercises, question the test subject about the comfort of the respirator. If it has become unacceptable, try another model respirator.

(b) PortaCount® Test Instrument.

(1) The PortaCount® will automatically stop and calculate the overall fit factor for the entire set of exercises. The overall fit factor is what counts. The Pass or Fail message will indicate whether or not the test was successful. If the test was a Pass, the fit test is over.

(2) Since the pass or fail criterion of the PortaCount® is user programmable, the test operator must ensure that the pass or fail criterion meet the requirements for minimum respirator performance in this [~~A~~]**a**ppendix.

(3) Keep a record of the test, assuming the fit test was successful. The record must have the test subject's name; overall fit factor; make, model, style, and size of respirator; and date of the test.

(4) Modified ambient aerosol condensation nuclei counter (CNC) quantitative fit testing protocol for full-facepiece and half-mask elastomeric respirators.

(a) When administering this protocol to test subjects, employers shall comply with the requirements specified in Part I.C.3 of this [~~A~~]**a**ppendix (ambient aerosol condensation nuclei counter (CNC) quantitative fit testing protocol), except they shall use the test exercises described below in paragraph (b) of this protocol instead of the test exercises specified in section I.C.3(a)(6) of this [~~A~~]**a**ppendix.

(b) Employers shall ensure that each test subject being fit tested using this protocol follows the exercise and duration procedures, including the order of administration, described in Table A-1 of this [~~A~~]**a**ppendix.

Table A-1 - Modified Ambient Aerosol CNC Quantitative Fit Testing Protocol for Full Facepiece and Half-Mask Elastomeric Respirators

(a) Exercises[1]	**(b) Exercise procedure**	**(c) Measurement procedure**
(d) Bending Over	**(e)** The test subject shall bend at the waist, as if going to touch his/her toes for 50 seconds and inhale 2 times at the bottom[2].	**(f)** A 20 second ambient sample, followed by a 30 second mask sample.
(g) Jogging-in-Place	**(h)** The test subject shall jog in place comfortably for 30 seconds	**(i)** A 30 second mask sample.
(j) Head Side-to-Side	**(k)** The test subject shall stand in place, slowly turning his/her head from side to side for 30 seconds and inhale 2 times at each extreme[2].	**(l)** A 30 second mask sample.

(a) Exercises[1]	(b) Exercise procedure	(c) Measurement procedure
(m) Head Up-and-Down	**(n)** The test subject shall stand in place, slowly moving his/her head up and down for 39 seconds and inhale 2 times at each extreme[2].	**(o)** A 30 second mask sample followed by a 9 second ambient sample.

[1]Exercises are listed in the order in which they are to be administered.
[2]It is optional for test subjects to take additional breaths at other times during this exercise.

(5) Modified ambient aerosol condensation nuclei counter (CNC) quantitative fit testing protocol for filtering facepiece respirators.

(a) When administering this protocol to test subjects, employers shall comply with the requirements specified in Part I.C.3 of this [~~A~~]**a**ppendix (ambient aerosol condensation nuclei counter (CNC) quantitative fit testing protocol), except they shall use the test exercises described below in paragraph (b) of this protocol instead of the test exercises specified in section I.C.3(a)(6) of this [~~A~~]**a**ppendix.

(b) Employers shall ensure that each test subject being fit tested using this protocol follows the exercise and duration procedures, including the order of administration, described in Table A–2 of this [~~A~~]**a**ppendix.

Table A-2 - Modified Ambient Aerosol CNC Quantitative Fit Testing Protocol for Filtering Facepiece Respirators

(p) Exercises[1]	(q) Exercise (r) procedure	(s) Measurement (t) procedure
(u) Bending Over	**(v)** The test subject shall bend at the waist, as if going to touch his/her toes for 50 seconds and inhale 2 times at the bottom[2].	**(w)** A 20 second ambient sample, followed by a 30 second mask sample.
(x) Talking	**(y)** The test subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor for 30 seconds. He/she will either read from a prepared text such as the Rainbow Passage, count backward from 100, or recite a memorized poem or song.	**(z)** A 30 second mask sample.
(aa) Head Side-to-Side	**(bb)** The test subject shall stand in place, slowly turning his/her head from side to side for 30 seconds and inhale 2 times at each extreme[2].	**(cc)** A 30 second mask sample.

(p) Exercises[1]	(q) Exercise (r) procedure	(s) Measurement (t) procedure
(dd) Head Up-and-Down	**(ee)** The test subject shall stand in place, slowly moving his/her head up and down for 39 seconds and inhale 2 times at each extreme[2].	**(ff)** A 30 second mask sample followed by a 9 second ambient sample.

[1]Exercises are listed in the order in which they are to be administered.

[2]It is optional for test subjects to take additional breaths at other times during this exercise.

(6) Controlled negative pressure (CNP) quantitative fit testing procedure.

The CNP procedure is an alternative to aerosol fit test methods. The CNP fit test method technology is based on exhausting air from a temporarily sealed respirator face piece to generate and then maintain a constant negative pressure inside the face piece. The rate of air exhaust is controlled so that there is a constant negative pressure in the respirator during the fit test. The level of pressure is selected to replicate the mean inhalation pressure that causes leakage into the respirator under normal use conditions. With pressure held constant, airflow out of the respirator is equal to air flow into the respirator. Therefore, measurement of the exhaust stream required to hold the pressure in the temporarily sealed respirator constant yields a direct measure of leakage airflow into the respirator. The CNP fit test method measures leak rates through the face piece as a method for determining the face piece fit for negative pressure respirators. The CNP instrument manufacturer Occupational Health Dynamics of Birmingham, Alabama also provides attachments (sampling manifolds) that replace the filter cartridges to permit fit testing in an employee's own respirator. To perform the test, the test subject closes his or her mouth and holds their breath, after which an air pump removes air from the respirator face piece at a pre-selected constant pressure. The face piece fit is expressed as the leak rate through the face piece, in milliliters per minute. The quality and validity of the CNP fit tests are determined by the degree to which the in-mask pressure tracks the test pressure during the system measurement time of approximately five seconds. Instantaneous feedback in the form of a real-time pressure trace of the in-mask pressure is provided and used to determine test validity and quality. A minimum fit factor pass level of 100 is necessary for a half-mask respirator and a minimum fit factor of at least 500 is required for a full-face piece respirator. Explain the entire screening and testing procedure to the test subject before doing the screening test.

(a) CNP Fit Test Requirements.

(1) The instrument must have a nonadjustable test pressure of 15.0 mm water pressure.

(2) The CNP system defaults selected for test pressure must be set at 15 mm of water (-0.58 inches of water) and the modeled inhalation flow rate must be 53.8 liters per minute for performing fit tests.

Note: CNP systems have built-in capability to conduct fit testing that is specific to unique work rate, mask, and gender situations that might apply in a specific workplace. Use of system

default values, which were selected to represent respirator wear with medium cartridge resistance at a low-moderate work rate, will allow inter-test comparison of the respirator fit.

(3) The individual who conducts the CNP fit testing must have adequate training to lead the test.

(4) Replace the respirator filter or cartridge with the CNP test manifold. Temporarily remove or prop open the inhalation valve downstream from the manifold.

(5) Train the test subject to hold his or her breath for at least 20 seconds.

(6) The test subject must put on the test respirator without any assistance. The respirator must not be adjusted once the fit-test exercises begin. Any adjustment voids the test, and the test subject must repeat the fit-test.

(7) Follow the QNFT procedure according to section I.C.1. with an exception for the CNP test exercises.

(b) CNP Test Exercises.

(1) Normal breathing. In a normal standing position, without talking, the subject must breathe normally for 1-minute. After the normal breathing exercise, the subject needs to hold their head straight ahead and hold their breath for 10 seconds during the test measurement.

(2) Deep breathing. In a normal standing position, the subject must breathe slowly and deeply for 1-minute, being careful not to hyperventilate. After the deep breathing exercise, the subject must hold their head straight ahead and hold their breath for 10 seconds during test measurement.

(3) Turning head side to side. Standing in place, the subject must slowly turn their head from side to side between the extreme positions on each side for 1 minute. The head must be held at each extreme momentarily so the subject can inhale at each side. After the turning head side to side exercise, the subject needs to hold their head full left and hold his or her breath for 10 seconds during test measurement. Next, the subject needs to hold their head full right and hold his or her breath for 10 seconds during test measurement.

(4) Moving head up and down. Standing in place, the subject must slowly move their head up and down for 1-minute. Instruct the subject to inhale in the up position (i.e., when looking toward the ceiling). After the moving head up and down exercise, the subject must hold their head full up and hold his or her breath for 10 seconds during test measurement. Next, the subject must hold their head full down and hold his or her breath for 10 seconds during test measurement.

(5) Talking. The subject must talk out loud slowly and loud enough to be heard clearly by the test conductor. The subject can read from a prepared text like the Rainbow Passage, count backward from 100, or recite a memorized poem or song for 1-minute. After the talking exercise, the subject must hold their head straight ahead and hold their breath for 10 seconds during the test measurement.

(6) Grimace. The test subject must grimace by smiling or frowning for 15 seconds.

(7) Bending Over. The test subject must bend at the waist as if they were to touch their toes for 1-minute. Substitute jogging in place for this exercise in those test environments such as shroud-type QNFT units that prohibit bending at the waist. After the bending over exercise, the subject must hold their head straight ahead and hold their breath for 10 seconds during the test measurement.

(8) Normal Breathing. The test subject must remove and re-don the respirator within a 1-minute period. Then, in a normal standing position, without talking, the subject must breathe normally for 1-minute. After the normal breathing exercise, the subject must hold their head straight ahead and hold their breath for 10 seconds during the test measurement. After the test exercises, question the test about the comfort of the respirator after completion of the test. If it is unacceptable, try another model of respirator.

(c) CNP Test Instrument.

(1) The test instrument must have an effective audio warning device when the test subject fails to hold their breath during the test. Stop the test when the test subject fails to hold their breath. Refit and retest the test subject.

(2) Keep a record of the test, assuming the fit test was successful. The record must have the test subject's name; overall fit factor; make, model, style and size of respirator; and date of the test.

(7) Controlled negative pressure (CNP) REDON quantitative fit testing protocol.

(a) When administering this protocol to test subjects, employers must comply with the requirements specified in paragraphs (a) and (c) of Part I.C.6 of this [~~A~~]**a**ppendix ("Controlled negative pressure (CNP) quantitative fit testing protocol"), as well as use the test exercises described below in paragraph (b) of this protocol instead of the test exercises specified in paragraph (b) of Part I.C.6 of this [~~A~~]**a**ppendix.

(b) Employers must ensure that each test subject being fit tested using this protocol follows the exercise and measurement procedures, including the order of administration, described below in Table A-3 of this [~~A~~]**a**ppendix.

Table A-3 - CNP REDON Quantitative Fit Testing Protocol

(gg) Exercises[1]	**(hh) Exercise procedure**	**(ii) Measurement procedure**
(jj) Facing Forward	**(kk)** Stand and breathe normally, without talking, for 30 seconds.	**(ll)** Face forward, while holding breath for 10 seconds.
(mm) Bending Over	**(nn)** Bend at the waist, as if going to touch his or her toes, for 30 seconds.	**(oo)** Face parallel to the floor, while holding breath for 10 seconds
(pp) Head Shaking	**(qq)** For about three seconds, shake head back and forth vigorously several times while shouting.	**(rr)** Face forward, while holding breath for 10 seconds.

(gg) Exercises[1]	(hh) Exercise procedure	(ii) Measurement procedure
(ss) Redon-1	**(tt)** Remove the respirator mask, loosen all facepiece straps, and then redon the respirator mask.	**(uu)** Face forward, while holding breath for 10 seconds.
(vv) Redon-2	**(ww)** Remove the respirator mask, loosen all facepiece straps, and then redon the respirator mask again.	**(xx)** Face forward, while holding breath for 10 seconds.

[1]Exercises are listed in the order in which they are to be administered.

(c) After completing the test exercises, the test administrator must question each test subject regarding the comfort of the respirator. When a test subject states that the respirator is unacceptable, the employer must ensure that the test administrator repeats the protocol using another respirator model.

(d) Employers must determine the overall fit factor for each test subject by calculating the harmonic mean of the fit testing exercises as follows:

$$\text{Overall fit factor} = \frac{1}{[1/FF_1 + 1/FF_2 + \ldots 1/FF_N]}$$

Where:

N = The number of exercises;

FF_1 = The fit factor for the first exercise;

FF_2 = The fit factor for the second exercise; and

FF_n = The fit factor for the nth exercise.

Part II. New Fit Test Procedures

Oregon OSHA will accept any new procedures that OSHA accepts. For more information of submitting new procedures for acceptance or other information about this subject, read the federal rules.

Statutory Authority: ORS 654.025(2) and 656.726(4).
Statutes Implemented: ORS 654.001 through 654.295.
History: OR-OSHA Administrative Order 3-2006, filed 6/7/06, effective 3/1/07.
OR-OSHA Administrative Order 3-2007, filed 8/13/07, effective 8/13/07.
OR-OSHA Administrative Order 4-2012, filed 9/19/12, effective 1/1/13.
OR-OSHA Administrative Order 1-2020, filed 2/13/20, effective 2/13/20.
OR-OSHA Administrative Order 1-2024, filed 9/11/24, effective 9/11/24.

Apéndice C de OAR 437-004-1041, Protección de la Respiración
CUESTIONARIO PARA EVALUACION MEDICA RESPIRATORIA
(OBLIGATORIO)

TRABAJADOR: Su empleador debe permitirle contestar estas preguntas durante horas normales de trabajo o durante un tiempo y lugar que le sea conveniente a usted. Para mantener su confidencialidad, su empleador o supervisor no debe ver o revisar sus respuestas. Su empleador deberá decirle como enviar o entregar este cuestionario al profesional de cuidado de la salud que lo revisará.

Parte A. Sección 1.

Cada trabajador elegido para usar cualquier tipo de respirador debe proporcionar la siguiente información (use letra de molde).

Fecha: _____

Nombre: _____ Ocupación, título o tipo de trabajo:_____ _____

Edad: _____ Género: M / F Estatura: _____ Peso: _____

Número de Teléfono: (___)____-_____

Dé un número de teléfono donde el profesional de salud que revisará este cuestionario pueda comunicarse con usted (incluya el Código de Área)

La mejor hora de hablarle ha este teléfono: _____

¿Su patrón le explicó como comunicarse con el profesional de salud que revisará

este cuestionario? (circule uno) Sí / No

Marque el tipo de respirador que usará (puede marcar más de una categoría):

a. ____ N, R, o P respirador desechable (máscara de filtro solamente sin cartucho).

b. ____ Otro tipo (por ejemplo, máscara de media cara o cara completa, purificadores motorizados, de suministro de aire, equipo autónomo de respiración).

¿Ha usado usted un respirador antes? (circule uno) Sí / No

Si “afirmativo”, ¿que tipo(s)?:

_____

Parte A. Sección 2

Cualquier trabajador elegido ha usar cualquier tipo de respirador debe contestar las preguntas del 1 al 9 (circule sí o no).

1. ¿En la *actualidad*, fuma tabaco, o ha fumado tabaco en el último mes? Si / No

2. ¿Ha padecido usted de lo siguiente?

   a. Convulsiones Si / No
   b. Diabetes (azúcar en la sangre) Si / No
   c. Reacciones alérgicas que interfieren con su respiración Si / No
   d. Claustrofobia (temor a espacios cerrados) Si / No
   e. Problemas del olfato Si / No

3. ¿Ha padecido en *cualquier tiempo* usted de los siguientes problemas pulmonares?

   a. Asbestosis Si / No
   b. Silicosis Si / No
   c. Asma Si / No
   d. Neumotorax (desinfle del pulmón) Si / No
   e. Bronquitis crónica Si / No
   f. Cáncer del pulmón Si / No
   g. Enfisema Si / No
   h. Fracturas de las costillas Si / No
   i. Neumonía Si / No
   j. Cualquier lesión o cirugía del pecho Si / No
   k. Tuberculosis Si / No
   l. Cualquier otro problema del pulmón del cual se le ha informado Si / No

4. ¿*Actualmente* tiene usted alguno de los siguientes síntomas pulmonares o enfermedades del pulmón?

   a. Falta de aire Si / No
   b. Falta de aire cuando camina rápido sobre una superficie plana o una cuesta leve o una inclinación Si / No
   c. Falta de aire cuando camina con otras personas a un ritmo normal

sobre una superficie plana Si / No

d. Tener que detenerse a coger aire cuando camina a su propio paso sobre superficie plana Sí / No

e. Falta de aire cuando usted se lava o se viste Sí / No

f. Falta de aire que interfiere con su trabajo Sí / No

g. Tos que produce flema espesa Sí / No

h. Tos que lo despierta temprano por la mañana Sí / No

i. Tos que se pasa más cuando esta acostado Sí / No

j. Tos con sangre (durante el ultimo mes) Sí / No

k. Respiración jadeante Sí / No

l. Respiración jadeante, que interfiere con su trabajo Sí / No

m. Dolor en el pecho cuando respira profundamente Sí / No

n. Cualquier otro síntoma que usted cree que puede estar relacionado con problemas del pulmón Sí / No

5. ¿Ha padecido en *cualquier tiempo* alguno de los siguientes problemas cardiovasculares o del corazón?

a. Ataque al corazón Sí / No

b. Derrame cerebral o Embolia Sí / No

c. Angina Sí / No

d. Falla del corazón Sí / No

e. Hinchazón de las piernas o pies (no causado por el andar) Sí / No

f. Arritmias del corazón (palpitación irregular) Sí / No

g. Presión alta de la sangre Sí / No

h. Otros problemas del corazón del cual se le ha informado Sí / No

6. ¿Ha padecido *cualquier tiempo* los siguientes síntomas cardiovasculares o del corazón?

a. Dolor o presión frecuente del pecho Sí / No

b. Dolor o presión en el pecho durante actividad física Sí / No

c. Dolor o presión en el pecho que interfiere con su trabajo Sí / No

d. En los últimos dos años ha notado que le salta o le falta un latido al corazón Sí / No

e. Agrura o indigestión, no ocasionada por la comida Sí / No

f. Otros síntomas los cuales usted cree están relacionados a problemas del corazón o la circulación Sí / No

7. ¿ *Actualmente* toma usted medicamentos para algunos de los siguientes problemas?

a. Problemas de la respiración o de los pulmones Sí / No

b. Problemas del corazón Sí / No

c. Presión Sí / No

d. Convulsiones Sí / No

8. *Si usted ha usado* un respirador, ¿ha tenido en alguna ocasión alguno de los siguientes problemas? (Si nunca ha usado un respirador por favor salte a la pregunta 9).

a. Irritación ocular Sí / No

b. Alergias o erupciones cutáneas Sí / No

c. Ansiedad Sí / No

d. Debilidad general o fatiga Sí / No

e. Cualquier otro problema que interfiera con el uso del respirador Sí / No

9. Quiere hablar de sus respuestas con el profesional de salud que revisará su cuestionario? Sí / No\

Trabajadores que usarán *un respirador de cara completa O Equipo Autónomo de Respiración (SCBA)* DEBERÁN contestar las preguntas del 10 al 15:

10. ¿Ha perdido la visión temporalmente o permanentemente en uno o ambos ojos? Sí / No

11. ¿*Actualmente* tiene alguno de los siguientes problemas de la vista?

a. Usa lentes de contacto Sí / No
b. Usa anteojos Sí / No
c. Dificultad para distinguir los colores Sí / No
d. Otros problemas con los ojos o la visón Sí / No

12. ¿Ha tenido *cualquier tiempo* una lesión en los oídos, incluyendo daño al tímpano?

Si / No

13. ¿ *Actualmente* tiene alguno de los siguientes problemas con los oídos?

a. Dificultad al oír Sí / No
b. Usa prótesis en el oído Sí / No
c. Cualquier otro problema con la audición o el oído Sí / No

14. ¿ Se ha lesionado la espalda? Si / No

15. ¿ Actualmente tiene alguno de los siguientes problemas músculo esqueléticos?

a. Debilidad en cualquiera de los brazos, manos, piernas, o pies Sí / No
b. Dolor de la espalda Sí / No
c. Dificultad para mover completamente los brazos y piernas Sí / No
d. Dolor o entumecimiento al inclinarse hacia delante o atrás desde la cintura Sí / No
e. Dificultad en mover la cabeza completamente hacia arriba o abajo Sí / No
f. Dificultad en mover la cabeza completamente de un lado a otro Sí / No
g. Dificultad en doblar las rodillas Sí / No
h. Dificultad en ponerse de cuclillas Sí / No
i. Subiendo escalones o una escalera cargando más de 25 libras Sí / No
j. Cualquier otro problema del esqueleto o de los músculos que pueda interferir con usar un respirador Sí / No

Parte B. Sección 1

El profesional de la salud que revisará este cuestionario puede añadir a su discreción las siguientes preguntas y cualquier otra pregunta no listada.

1. ¿En su presente trabajo, trabaja en alturas elevadas (a más de 5,000 pies) o en lugares con niveles de oxigeno más bajas de lo normal? Sí / No

   ¿*Si "afirmativo"*, tiene mareos, falta de aire, presión en el pecho, u otros síntomas cuando está trabajando bajo estas condiciones? Sí / No

2. ¿En el trabajo o su casa, ha sido usted expuesto a solventes peligrosos, químicos peligrosos transportados por el aire, (gases, humos, o polvos), o haentrado su piel en contacto con químicos peligrosos? Si / No

   Si es afirmativo, nombre del (los) químico(s): _____

   _____

3. ¿Ha trabajado usted con los siguientes materiales, o bajo alguna de las siguientes condiciones?

   a. Asbesto Sí / No
   b. Carbón (por ejemplo, en minas) Sí / No
   c. Sílice (por ejemplo con chorro de arena) Sí / No
   d. Hierro Sí / No
   e. Tungsteno/cobalto (limando o soldando este material) Sí / No
   f. Estaño Sí / No
   g. Ambientes polvorosos Sí / No
   h. Berilio Sí / No
   i. Cualquier otras exposiciones peligrosas Sí / No
   j. Aluminio Sí / No

Si es afirmativo, describa la(s) exposición(es): _____

_____

4. Liste segundos trabajos o negocios paralelos que usted tiene:_____

_____

5. Liste sus ocupaciones anteriores: _____

_____

6. Liste pasatiempos presentes y pasados:_____

_____

7. ¿Estuvo en el servicio militar? Si / No

Si "afirmativo", ¿estuvo expuesto a agentes biológicos o químicos (durante entrenamiento o combate)? Si / No

8. ¿Ha trabajado en un equipo de limpieza de materiales peligrosos (HAZMAT)? Si / No

9. ¿Fuera de medicinas para la respiración, los pulmones, problemas del corazón, presión, y convulsiones mencionadas anteriormente en este cuestionario, está usted tomando otras medicinas por cualquier razón (incluyendo medicinas sin receta médica)? Sí / No

Si "afirmativo", nombre las medicinas:_____

_____

APUNTES:

Parte B. Sección 2.

El EMPLEADOR deberá proporcionar esta información suplementaria al profesional de cuidado de la salud (PLHCP) que revisará el cuestionario médico del trabajador:

NOMBRE DEL TRABAJADOR: _____

POSICIÓN DEL TRABAJADOR:

_____

1. ¿Qué tipo de respirador usará este trabajador?

Marque el (los) tipo(s) que siguen (puede marcar más de una categoría):

_____ N-, R-, o P- máscara filtrante (desechable, tipo “máscara de polvo”).

_____ De ajuste apretado de purificación de media cara

_____ De ajuste apretado de cara completa

_____ De tipo de purificación de aire

_____ De tipo de línea

_____ Respirador purificador de aire motorizado (PAPR)

_____ De ajuste apretado, de cara completa

_____ De ajuste apretado de casco o capucha

_____ Equipo Autónomo de Respiración (SCBA)

_____ Escape (máscara de gas)

2. ¿Cuál es el peso aproximado del respirador, y cualquier tanque o mangueras?

_____

3. ¿El trabajador va a utilizar alguno de los siguientes artículos con su(s) respirador(es)?

a. Filtros HEPA Sí / No
b. Cánisters (máscaras para gas) Sí / No
c. Cartuchos (purificación de aire) Sí / No

4 ¿Con que frecuencia usará el trabajador el respirador? (circule sí o no a toda las preguntas que apliquen)

a. Solamente para escape (sin deberes de rescate) Sí / No

b. Menos de 2 horas por día Sí / No

c. Rescate de emergencia solamente Sí / No

d. 2 a 4 horas por día Sí / No

e. Menos de 5 horas por semana Sí / No

f. Más de 4 horas por día Sí / No

5. ¿Durante el período que el trabajador usa el respirador, el esfuerzo de trabajo es?

a. Liviano (menos de 200 Kcal por hora) Sí / No

Ejemplos de trabajo liviano es estar sentado al escribir, computación, haciendo planos, o realizando ensamble ligero, o de pie operando máquinas.

Si "afirmativo", cuanto tiempo dura esto en un turno promedio:

horas _____ minutos _____

b. Moderado (200 a 350 Kcal por hora) Sí / No

Ejemplos de trabajo moderado son: estar sentado martillando o limando, manejado un camión, perforando, o ensamble, moviendo cargas moderadas (aproximadamente 25 – 35 libras) a nivel de la cintura caminando en superficie planas a 2 millas por hora o bajando un nivel de terreno de 5 grados a 3 millas por hora, o empujando una carretilla con carga pesada (aproximadamente 100 libras) en superficie plana. (NOTA: Un galón de agua peso aproximadamente 8 libras, o sea, un rociadora de mochila llena con 3 galones pesa aproximadamente 25 libras.)

Si "afirmativo", cuanto tiempo dura esto en un turno promedio:

horas _____ minutos _____

c. Pesado (más de 350 Kcal por hora) Sí / No

Ejemplos de trabajo pesado son: levantar cargas pesadas(aproximadamente 50 libras) del suelo a la altura de la cintura u hombros, trabajando en un plataformas de carga, trabajo con pala, albañilería de pie, desbarbando piezas de fundición, subiendo niveles de terreno de 8 grados aproximadamente a 2 millas por hora, subiendo escalones con cargas pesadas (aproximadamente 50 libras)

Si "afirmativo", cuanto tiempo dura esto en un turno promedio:

horas _____ minutos _____

6. ¿El trabajador va a utilizar ropa o equipo protector aparte del respirador? Sí / No

   Si "afirmativo" describa el equipo que va a usar:

   _____

   _____

7. ¿El trabajador va a trabajar en temperaturas

   altas (temperaturas más de 77 F)? Sí / No

8. ¿El trabajador va a trabajar en condiciones húmedas? Sí / No

9. Describa el trabajo que hará el trabajador mientras usa su respirador(es):

   _____

   _____

10. Describa algunas condiciones especiales o condiciones peligrosas las cuales el

    trabajador puede enfrentar cuando usa el respirador (por ejemplo, espacios confinados, atmósferas deficientes en oxígeno, gases fulminantes):

    _____

    _____

11. Proporcione la siguiente información si lo sabe, para cada substancia tóxica a que el trabajador puede ser expuesto cuando usa el respirador(es):

Nombre de la primera substancia tóxica:_____

Nivel máximo de exposición por turno de trabajo:_____

Tiempo de exposición por turno de trabajo:_____

Nombre de la segunda substancia tóxica:_____

Nivel máximo de exposición por turno de trabajo:_____

Tiempo de exposición por turno de trabajo:_____

Nombre de la tercera substancia tóxica: _____

Nivel máximo de exposición por turno de trabajo:_____

Tiempo de exposición por turno de trabajo:_____

Nombre(s) de cualquier otra substancia(s) tóxica(s) a la cual el trabajador pueda ser expuesto mientras usa un respirador:

_____

_____

12. Describa otras responsabilidades especiales que tendrán durante el tiempo que estarán usando respiradores y que puedan afectar la seguridad y bienestar de otras personas (por ejemplo, rescate, seguridad):

_____

Stat. Auth.: ORS 654.025(2) and 656.726(4).
Stats. Implemented: ORS 654.001 through 654.295.
Hist: OR-OSHA Admin. Order 3-2006, f. 6/7/06, ef. 3/1/07.
OR-OSHA Admin. Order 4-2012, f. 9/19/12, ef. 1/1/13.
OR-OSHA Administrative Order 1-2024, filed 9/11/24, effective 9/11/24.

Division 5
Subdivision I
Personal Protective Equipment (PPE)

437-005-0001
Adoption by Reference

In addition to, and not in lieu of, any other safety and health codes contained in OAR chapter 437, the Department adopts by reference the following federal regulations printed as part of the Code of Federal Regulations, 29 CFR 1915, in the Federal Register:

(1) Subdivision A

(a) 29 CFR 1915.1. Purpose and authority, published 4/20/82, Federal Register (FR) vol. 47, p. 16984.

(b) 29 CFR 1915.2. Scope and application, published 4/20/82, FR vol. 47, p. 16984.

(c) 29 CFR 1915.3. Responsibility, published 4/20/82, FR vol. 47, p. 16984.

(d) 29 CFR 1915.4. Definitions, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(e) 29 CFR 1915.5. Incorporation by reference, published 5/14/19, Federal Register vol. 84, no. 93, p. 21416.

(f) 29 CFR 1915.6. Commercial diving operations, published 4/20/82, FR vol. 47, p. 16984.

(g) 29 CFR 1915.7. Competent person, published 7/25/94, FR vol. 59, p. 37856.

(h) 29 CFR 1915.9. Compliance duties owed to each employee, published 12/12/08, FR vol. 73, no. 240, pp. 75568-75589.

(2) Subdivision B

(a) 29 CFR 1915.11. Scope, application and definitions applicable to this Subpart, published 7/25/94, FR vol. 59, p. 37857.

(b) 29 CFR 1915.12. Precautions before entering confined and enclosed spaces and other dangerous atmospheres, published 3/16/95, FR vol. 60, no. 51, p. 14218.

(c) 29 CFR 1915.13. Cleaning and other cold work, published 7/25/94, FR vol. 59, p. 37859.

(d) 29 CFR 1915.14. Hot work, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(e) 29 CFR 1915.15. Maintenance of safe conditions, published 6/22/12, FR vol. 77, no. 121, p. 37587.

(f) 29 CFR 1915.16. Warning signs and labels, published 7/25/94, FR vol. 59, p. 37861.

(A) Appendix A to Subpart B published 6/8/11, Federal Register, vol. 76, no. 110, p. 33590.

(B) Appendix B to Subpart B published 7/25/94, FR vol. 59, p. 37816.

(3) Subdivision C

(a) 29 CFR 1915.31. Scope & application of subdivision, published 4/20/82, FR vol. 47, p. 16984.

(b) 29 CFR 1915.32. Toxic cleaning solvents, published 5/24/96, FR vol. 61, no. 102, p. 26351.

(c) 29 CFR 1915.33. Chemical paint & preservative remover, published 5/24/96, FR vol. 61, no. 102, p. 26351.

(d) 29 CFR 1915.34. Mechanical paint removers, published 5/24/96, FR vol. 61, no. 102, p. 26351.

(e) 29 CFR 1915.35. Painting, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(f) 29 CFR 1915.36. Flammable liquids, published 4/20/82, FR vol. 47, p. 16984.

(4) Subdivision D

(a) 29 CFR 1915.51. Ventilation & protection in welding, cutting and heating, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(b) 29 CFR 1915.52. Fire prevention. REMOVED 9/15/04, FR vol. 69, p. 55667.

(c) 29 CFR 1915.53. Welding, cutting and heating of hollow metal containers & structure not covered by 1915.12, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(d) 29 CFR 1915.55. Gas welding & cutting, published 4/20/82, FR vol. 47, p. 16984.

(e) 29 CFR 1915.56. Arc welding and cutting, published 4/20/82, FR vol. 47, p. 16984.

(f) 29 CFR 1915.57. Uses of fissionable material in ship repairing and shipbuilding, published 4/20/82, FR vol. 47, p. 16984.

(5) Subdivision E

(a) 29 CFR 1915.71. Scaffolds or staging, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(b) 29 CFR 1915.72. Ladders, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(c) 29 CFR 1915.73. Guarding of deck openings and edges, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(d) 29 CFR 1915.74. Access to vessels, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(e) 29 CFR 1915.75. Access to and guarding of dry docks and marine railways, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(f) 29 CFR 1915.76. Access to cargo spaces and confined spaces, published 4/20/82, FR vol. 47, p. 16984.

(g) 29 CFR 1915.77. Working surfaces, published amended 7/3/02, FR vol. 67, no. 128, p. 44541.

(6) Subdivision F

(a) 29 CFR 1915.80 Scope, application, definitions and effective dates, published 5/14/19, Federal Register vol. 84, no. 93, p. 21416.

(b) 29 CFR 1915.81 Housekeeping, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.

(c) 29 CFR 1915.82 Lighting, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.

(d) 29 CFR 1915.83 Utilities, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.

(e) 29 CFR 1915.84 Working alone, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.

(f) 29 CFR 1915.85 Vessel radar and communication systems, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.

(g) 29 CFR 1915.86 Lifeboats, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.

(h) 29 CFR 1915.87 Medical services and first aid, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.

(i) 29 CFR 1915.88 Sanitation, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.

(j) 29 CFR 1915.89 Control of hazardous energy (lockout/tagout), published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.

(k) 29 CFR 1915.90 Safety color code for marking physical hazards, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.

(l) 29 CFR 1915.91. Accident prevention signs and tags, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.

(m) 29 CFR 1915.92. Retention of DOT markings, placards, and labels, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.

(n) 29 CFR 1915.93. Motor vehicle safety equipment, operation, and maintenance, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.

(o) 29 CFR 1915.94. Servicing of multi-piece and single-piece rim wheels, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.

(7) Subdivision G

(a) 29 CFR 1915.111. Inspection, published 4/20/ 82, FR vol. 47, p. 16984.

(b) 29 CFR 1915.112. Ropes, chains and slings, published 6/8/11, Federal Register, vol. 76, no. 110, p. 33590.

(c) 29 CFR 1915.113. Shackles and hooks, published 6/8/11, Federal Register, vol. 76, no. 110, p. 33590.

(d) 29 CFR 1915.114. Chain falls and pull lifts, published 4/20/82, FR vol. 47, p. 16984.

(e) 29 CFR 1915.115. Hoisting and hauling equipment, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(f) 29 CFR 1915.116. Use of gear, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(g) 29 CFR 1915.117. Qualifications of operators, published 4/20/82, FR vol. 47, p. 16984.

(h) 29 CFR 1915.118. Tables, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(8) Subdivision H

(a) 29 CFR 1915.131. General precautions, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(b) 29 CFR 1915.132. Portable electric tools, published 4/20/82, FR vol. 47, p. 16984.

(c) 29 CFR 1915.133. Hand tools, published 4/20/ 82, FR vol. 47, p. 16984.

(d) 29 CFR 1915.134. Abrasive wheels, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(e) 29 CFR 1915.135. Powder actuated fastening tools, published 5/24/96, FR vol. 61, no. 102, p. 26351.

(f) 29 CFR 1915.136. Internal combustion engines other than ship's equipment, published 4/20/82, FR vol. 47, p. 16984.

(9) Subdivision I

(a) 29 CFR 1915.151. Scope, application and definitions, published 5/24/96, FR vol. 61, no. 102, p. 26352.

(b) 29 CFR 1915.152. General requirements, published 6/8/11, Federal Register, vol. 76, no. 110, p. 33590.

(c) 29 CFR 1915.153. Eye and face protection, [~~published 3/25/16, FR vol. 81, no. 58, p. 16085.~~] **published 2/18/20, FR vol. 85, no. 32, p. 8726-8746.**

(d) 29 CFR 1915.154. Respiratory protection, published 5/24/96, FR vol. 61, no. 102, p. 26354.

(e) 29 CFR 1915.155. Head protection, published 6/22/12, FR vol. 77, no. 121, p. 37587.

(f) 29 CFR 1915.156. Foot protection, published 9/9/09, FR vol. 74, no. 173, pp. 46350-46361.

(g) 29 CFR 1915.157. Hand and body protection, published 5/24/96, FR vol. 61, no. 102, p. 26354.

(h) 29 CFR 1915.158. Lifesaving equipment, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(i) 29 CFR 1915.159. Personal fall arrest systems (PFAS), published 7/3/02, FR vol. 67, no. 128, p. 44541.

(j) 29 CFR 1915.160. Positioning device systems, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(A) Appendix A to Subpart I, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(B) Appendix B to Subpart I, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(10) Subdivision J

(a) 29 CFR 1915.161. Scope and application of subdivision, published 4/20/ 82, FR vol. 47, p. 16984.

(b) 29 CFR 1915.162. Ship's boilers, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.

(c) 29 CFR 1915.163. Ship's piping systems, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.

(d) 29 CFR 1915.164. Ship's propulsion machinery, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.

(e) 29 CFR 1915.165. Ship's decking machinery, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(11) Subdivision K

(a) 29 CFR 1915.171. Scope and application of subdivision, published 4/20/ 82, FR vol. 47, p. 16984.

(b) 29 CFR 1915.172. Portable air receiver and other unfired pressure vessels, published 7/3/02, FR vol. 67, no. 128, p. 44541.

(c) 29 CFR 1915.173. Drums and containers, published 4/20/82, FR vol. 47, p. 16984.

(12) Subdivision L.

~~[(a)]~~ 29 CFR 1915.181. Electrical circuits and distribution boards, published 5/2/11, Federal Register vol. 76, no. 84, p. 24576.

(13) Subdivisions M O (Reserved)

(14) Subdivision P

(a) 29 CFR 1915.501. General provisions, published 9/15/04, FR vol. 69, p. 55667.

(b) 29 CFR 1915.502. Fire safety plan, published 9/15/04, FR vol. 69, p. 55667.

(c) 29 CFR 1915.503. Precautions for hot work, published 9/15/04, FR vol. 69, p. 55667.

(d) 29 CFR 1915.504. Fire watches, published 9/15/04, FR vol. 69, p. 55667.

(e) 29 CFR 1915.505. Fire response, published 10/17/06, FR vol. 71, no. 200, p. 60843.

(f) 29 CFR 1915.506. Hazards of fixed extinguishing systems on board vessels and vessel sections, published 9/15/04, FR vol. 69, p. 55667.

(g) 29 CFR 1915.507. Land-side fire protection systems, published 10/17/06, FR vol. 71, no. 200, p. 60843.

(h) 29 CFR 1915.508. Training, published 9/15/04, FR vol. 69, p. 55667.

(i) 29 CFR 1915.509. Definitions applicable to this subpart, published 9/15/04, FR vol. 69, p. 55667. Appendix A to Subpart P, published 9/15/04, FR vol. 69, p. 55667.

(15) Subdivision Q-Y (Reserved)

(16) Subdivision Z

(a) 29 CFR 1915.1000, Air Contaminants, published 1/9/17, FR vol. 82, no. 5, p. 2735.

(b) 29 CFR 1915.1001, Asbestos, published 5/14/19, FR vol. 84, no. 93, p. 21416.

(A) Appendix A to 1915.1001, published 6/29/95, FR vol. 60, p. 33972.

(B) Appendix B to 1915.1001, published 6/29/95, FR vol. 60, p. 33972.

(C) Appendix C to 1915.1001, published 6/8/11, Federal Register, vol. 76, no. 110, p. 33590.

(D) Appendix D to 1915.1001, published 5/14/19, Federal Register, vol. 84, no. 93, p. 21416.

(E) Appendix E to 1915.1001, published 5/14/19, Federal Register, vol. 84, no. 93, p. 21416.

(F) Appendix F to 1915.1001, published 6/29/95, FR vol. 60, p. 33972.

(G) Appendix G to 1915.1001, published 8/10/94, FR vol. 59, p. 40964.

(H) Appendix H to 1915.1001, published 6/29/95, FR vol. 60, p. 33972.

(l) Appendix I to 1915.1001, published 5/14/19, Federal Register, vol. 84, no. 93, p. 21416.

(J) Appendix J to 1915.1001, published 8/10/94, FR vol. 59, p. 40964.

(K) Appendix K to 1915.1001, published 6/29/95, FR vol. 60, p. 33972.

(L) Appendix L to 1915.1001, published 8/23/96, FR vol. 61, p. 43454.

(c) 29 CFR 1915.1002. Coal tar pitch volatiles; interpretation of term, published 6/20/96, FR vol. 61, p. 31427.

(d) 29 CFR 1915.1003. 13 Carcinogens (4 Nitrobiphenyl, etc.), published 6/20/96, FR vol. 61, p. 31427.

(e) 29 CFR 1915.1004. alpha Naphthylamine, published 6/20/96, FR vol. 61, p. 31427.

(f) 29 CFR 1915.1005. (Reserved)

(g) 29 CFR 1915.1006. Methyl chloromethyl ether, published 6/20/96, FR vol. 61, p. 31427.

(h) 29 CFR 1915.1007. 3,3'Dichlorobenzidiene (and its salts), published 6/20/96, FR vol. 61, p. 31427.

(i) 29 CFR 1915.1008. bis Chloromethyl ether, published 6/20/96, FR vol. 61, p. 31427.

(j) 29 CFR 1915.1009. beta Naphthylamine, published 6/20/96, FR vol. 61, p. 31427.

(k) 29 CFR 1915.1010. Benzidine, published 6/20/96, FR vol. 61, p. 31427.

(l) 29 CFR 1915.1011. 4 Aminodiphenyl, published 6/20/96, FR vol. 61, p. 31427.

(m) 29 CFR 1915.1012. Ethyleneimine, published 6/20/96, FR vol. 61, p. 31427.

(n) 29 CFR 1915.1013. beta Propiolactone, published 6/20/96, FR vol. 61, p. 31427.

(o) 29 CFR 1915.1014. 2 Acetylaminofluorene, published 6/20/96, FR vol. 61, p. 31427.

(p) 29 CFR 1915.1015. 4 Dimethylaminoazobenzene, published 6/20/96, FR vol. 61, p. 31427.

(q) 29 CFR 1915.1016. N Nitrosodimethylamine, published 6/20/96, FR vol. 61, p. 31427.

(r) 29 CFR 1915.1017. Vinyl chloride, published 6/20/96, FR vol. 61, p. 31427.

(s) 29 CFR 1915.1018. Inorganic arsenic, published 6/20/96, FR vol. 61, p. 31427.

(t) 29 CFR 1915.1020 Access to employee exposure and medical records, published 6/20/96, FR vol. 61, p. 31427.

(u) 29 CFR 1915.1024 Beryllium, published 1/9/17, FR vol. 82, no. 5, p. 2735.

(v) 29 CFR 1915.1025. Lead, published 6/20/96, FR vol. 61, p. 31427.

(w) 29 CFR 1915.1026 Chromium (VI), published 5/14/19, FR vol. 84, no. 93, p. 21416.

(x) 29 CFR 1915.1027. Cadmium, published 6/20/96, FR vol. 61, p. 31427.

(y) 29 CFR 1915.1028. Benzene, published 6/20/96, FR vol. 61, p. 31427.

(z) 29 CFR 1915.1030. Bloodborne pathogens, published 6/20/96, FR vol. 61, p. 31427.

(aa) 29 CFR 1915.1044. 1,2 dibromo 3 chloropropane, published 6/20/96, FR vol. 61, p. 31427.

(bb) 29 CFR 1915.1045. Acrylonitrile, published 6/20/96, FR vol. 61, p. 31427.

(cc) 29 CFR 1915.1047. Ethylene oxide, published 6/20/96, FR vol. 61, p. 31427.

(dd) 29 CFR 1915.1048. Formaldehyde, published 6/20/96, FR vol. 61, p. 31427.

(ee) 29 CFR 1915.1050. Methylenedianiline, published 6/20/96, FR vol. 61, p. 31427.

(ff) 29 CFR 1915.1052 Methylene Chloride, published 1/10/97, Federal Register, vol. 62, no. 7, p. 1619.

(gg) 29 CFR 1915.1053 Respirable Crystalline Silica, published 3/25/16, Federal Register, vol. 81, no. 58, p. 16286.

(hh) 29 CFR 1915.1120 Access to employee exposure and medical records has been redesignated to §1915.1020.

Note: 29 CFR 1915.99, Hazard Communication was redesignated as 1915.1200 on 7/1/93, FR vol. 58, no. 125, p. 35514.

(ii) 29 CFR 1915.1200. Hazard communication, published 6/20/96, FR vol. 61, p. 31427.

(jj) 29 CFR 1915.1450. Occupational exposure to hazardous chemicals in laboratories, published 6/20/96, FR vol. 61, p. 31427.

These standards are available at the Oregon Occupational Safety and Health Division, Oregon Department of Consumer and Business Services, and the United States Government Printing Office.

Statutory/Other Authority: ORS 654.025(2) & 656.726(4)
Statutes/Other Implemented: ORS 654.001 - 654.295
History:
OR-OSHA Administrative Order 1-2024, filed 9/11/24, effective 9/11/24.
OSHA 3-2019, filed 10/29/2019, effective 10/29/2019
OSHA 3-2017, f. 7-7-17, cert. ef. 3-12-18
OSHA 5-2016, f. 9-23-16, cert. ef. 7-1-18
OSHA 4-2016, f. & cert. ef. 9-7-16
OSHA 3-2016, f. & cert. ef. 8-19-16
OSHA 4-2013, f. & cert. ef. 7-19-13
OSHA 7-2012, f. & cert. ef. 12-14-12
OSHA 5-2012, f. & cert. ef. 9-25-12
OSHA 1-2012, f. & cert. ef. 4-10-12
OSHA 4-2011, f. & cert. ef. 12-8-11
OSHA 3-2011, f. & cert. ef. 11-1-11
OSHA 3-2010, f. 6-10-10, cert. ef. 6-15-10
OSHA 2-2010, f. & cert. ef. 2-25-10
OSHA 5-2009, f. & cert. ef. 5-29-09
OSHA 5-2008, f. 5-1-08, cert. ef. 5-15-08
OSHA 1-2007, f. 1-9-07, cert. ef. 1-16-07
OSHA 10-2006, f. & cert. ef. 11-30-06
OSHA 6-2006, f. & cert. ef. 8-30-06
OSHA 4-2006, f. & cert. ef. 7-24-06
OSHA 1-2005, f. & cert. ef. 4-12-05
OSHA 8-2004, f. & cert. ef. 12-30-04
OSHA 4-2003, f. & cert. ef. 5-6-03

OSHA 4-2001, f. & cert. ef. 2-5-01
OSHA 6-1999, f. & cert. ef. 5-26-99
OSHA 7-1998, f. & cert. ef. 12-18-98
OSHA 6-1997, f. & cert. ef. 5-2-97
OSHA 4-1997, f. & cert. ef. 4-2-97
OSHA 3-1997, f. & cert. ef. 3-28-97
OSHA 6-1996, f. & cert. ef. 11-29-96
OSHA 5-1996, f. & cert. ef. 11-29-96
OSHA 8-1995, f. & cert. ef. 8-25-95
OSHA 5-1995, f. & cert. ef. 4-6-95
OSHA 4-1995, f. & cert. ef. 3-29-95
OSHA 2-1995, f. & cert. ef. 1-25-95
OSHA 1-1995, f. & cert. ef. 1-19-95
OSHA 4-1994 f. & cert. ef. 8-4-94
OSHA 19-1993, f. & cert. ef. 12-29-93
OSHA 1-1993, f. & cert. ef. 1-22-93
OSHA 10-1992, f. 9-24-92, cert. ef. 11-1-92

1915.153 Eye and Face Protection

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(a) * * *

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TABLE I–1—FILTER LENSES FOR PROTECTION AGAINST RADIANT ENERGY

Operations	*Electrode Size 1/32 in.*	*Arc Current (amps)*	*Minimum* Protective Shade*
Shielded metal arc welding	*Less than 3*	*Less than 60*	*7*
	3-5	*60-160*	*8*
	5-8	*160-250*	*10*
	More than 8	*250-550*	*11*
Gas metal arc welding and flux cored arc welding		*Less than 60*	*7*
		60-160	*10*
		160-250	*10*
		250-500	*10*
Gas Tungsten arc welding		*Less than 50*	*8*
		50-150	*8*
		150-500	*10*
Air carbon	*(Light)*	*Less than 500*	*10*
Arc cutting	*(Heavy)*	*500-1000*	*11*
Plasma arc welding		*Less than 20*	*6*
		20-100	*8*
		100-400	*10*
		400-800	*11*
Plasma arc cutting	*(Light) **	*Less than 300*	*8*
	*(Medium) **	*300-400*	*9*
	*(Heavy) **	*400-800*	*10*
Torch brazing			*3*
Torch soldering			*2*
Carbon arc welding			*14*

FILTER LENSES FOR PROTECTION AGAINST RADIANT ENERGY

Operations		*Plate thickness – inches*	*Plate thickness – mm*	*Minimum* Protective Shade*
Gas Welding:	*Light*	*Under 1/8*	*Under 3.2*	*4*
	Medium	*1/8 to 1/2*	*3.2 to 12.7*	*5*
	Heavy	*Over 1/2*	*Over 12.7*	*6*
Oxygen Cutting:	*Light*	*Under 1*	*Under 25*	*3*
	Medium	*1 to 6*	*25 to 150*	*4*
	Heavy	*Over 6*	*Over 150*	*5*

** As a rule of thumb, start with a shade that is too dark to see the weld zone. Then go to a lighter shade which gives sufficient view of the weld zone without going below the minimum. In oxy-fuel gas welding or cutting where the torch produces a high yellow light, it is desirable to use a filter lens that absorbs the yellow or sodium line in the visible light of the (spectrum) operation.*

*** These values apply where the actual arc is clearly seen. Experience has shown that lighter filters may be used when the arc is hidden by the workpiece.*

(b) * * *
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Division 5
Part 1918 – Safety and Health Regulations for Longshoring

437-005-0003
Adoption by Reference

In addition to, and not in lieu of, any other safety and health codes contained in OAR Chapter 437, the Department adopts by reference the following federal regulations printed as part of the Code of Federal Regulations, 29 CFR 1918, in the Federal Register:

(1) Subdivision A
(a) 29 CFR 1918.1 Scope and application, published 2/28/06, FR vol. 71, no. 39, p. 10100.
(b) 29 CFR 1918.2 Definitions, published 6/8/11, Federal Register, vol. 76, no. 110, 33590.
(c) 29 CFR 1918.3 Incorporation by reference, published 3/25/16, FR vol. 81, no. 58, p. 16085.
(d) 29 CFR 1918.5 Compliance duties owed to each employee, published 12/12/08, FR vol. 73, no. 240, pp. 75568-75589.
(2) Subdivision B**.**
~~[(a)]~~ 29 CFR 1918.11 Gear certification (see also §§1918.2 and 1918.51), published 7/25/97, FR vol. 62, no. 143, p. 40202.
(3) Subdivision C
(a) 29 CFR 1918.21 General requirements, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(b) 29 CFR 1918.22 Gangways, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(c) 29 CFR 1918.23 Jacob's ladders, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(d) 29 CFR 1918.24 Fixed and portable ladders, published 6/30/00, FR vol. 65, no. 127, p. 40938.

(e) 29 CFR 1918.25 Bridge plates and ramps (see also §1918.86), published 6/30/00, FR vol. 65, no. 127, p. 40938.
(f) 29 CFR 1918.26 Access to barges and river towboats, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(4) Subdivision D
(a) 29 CFR 1918.31 Hatch coverings, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(b) 29 CFR 1918.32 Stowed cargo and temporary landing surfaces, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(c) 29 CFR 1918.33 Deck loads, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(d) 29 CFR 1918.34 Other decks, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(e) 29 CFR 1918.35 Open hatches, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(f) 29 CFR 1918.36 Weather deck rails, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(g) 29 CFR 1918.37 Barges, published 6/30/00, FR vol. 65, no. 127, p. 40938.
(5) Subdivision E
(a) 29 CFR 1918.41 Coaming clearances, published 6/30/00, FR vol. 65, no. 127, p. 40938.
(b) 29 CFR 1918.42 Hatch beam and pontoon bridles, published 6/30/00, FR vol. 65, no. 127, p. 40938.
(c) 29 CFR 1918.43 Handling hatch beams and covers, published 6/30/00, FR vol. 65, no. 127, p. 40938.
(6) Subdivision F
(a) 29 CFR 1918.51 General requirements (see also §1918.11 and Appendix III of this part), published 6/30/00, FR vol. 65, no. 127, p. 40938.
(b) 29 CFR 1918.52 Specific requirements, published 6/30/00, FR vol. 65, no. 127, p. 40938.
(c) 29 CFR 1918.53 Cargo winches, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(d) 29 CFR 1918.54 Rigging gear, published 6/30/00, FR vol. 65, no. 127, p. 40938.
(e) 29 CFR 1918.55 Cranes (see also §1918.11), published 7/25/97, FR vol. 62, no. 143, p. 40202.
(7) Subdivision G
(a) 29 CFR 1918.61 General (see also Appendix IV of this part), published 6/30/00, FR vol. 65, no. 127, p. 40938.
(b) 29 CFR 1918.62 Miscellaneous auxiliary gear, published 6/30/00, FR vol. 65, no. 127, p. 40938.
(c) 29 CFR 1918.63 Chutes, gravity conveyors and rollers, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(d) 29 CFR 1918.64 Powered conveyors, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(e) 29 CFR 1918.65 Mechanically powered vehicles used aboard vessels, published 6/30/00, FR vol. 65, no. 127, p. 40938.
(f) 29 CFR 1918.66 Cranes and derricks other than vessel's gear, published 6/30/00, FR vol. 65, no. 127, p. 40938.
(g) 29 CFR 1918.67 Notifying ship's officers before using certain equipment, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(h) 29 CFR 1918.68 Grounding, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(i) 29 CFR 1918.69 Tools, published 6/30/00, FR vol. 65, no. 127, p. 40938.
(j) 29 CFR 1918.70 – 1918.80 (Reserved)
(8) Subdivision H
(a) 29 CFR 1918.81 Slinging, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(b) 29 CFR 1918.82 Building drafts, published 7/25/97, FR vol. 62, no. 143, p. 40202.

(c) 29 CFR 1918.83 Stowed cargo, tiering and breaking down, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(d) 29 CFR 1918.84 Bulling cargo, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(e) 29 CFR 1918.85 Containerized cargo operations, published 12/10/08, FR vol. 73, no. 238, pp. 75246-75290.
(f) 29 CFR 1918.86 Roll-on roll-off (Ro-Ro) operations (see also §1918.25), published 6/30/00, FR vol. 65, no. 127, p. 40938.
(g) 29 CFR 1918.87 Ship's cargo elevators, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(h) 29 CFR 1918.88 Log operations, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(i) 29 CFR 1918.89 Handling hazardous cargo (see also §§1918.2 and 1918.99), published 7/25/97, FR vol. 62, no. 143, p. 40202.
(9) Subdivision I
(a) 29 CFR 1918.90 Hazard communication (see also §1918.1(b)(4)), published 7/25/97, FR vol. 62, no. 143, p. 40202.
(b) 29 CFR 1918.91 Housekeeping, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(c) 29 CFR 1918.92 Illumination, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(d) 29 CFR 1918.93 Hazardous atmospheres and substances (see also §1918.2(j)), published 7/25/97, FR vol. 62, no. 143, p. 40202.
(e) 29 CFR 1918.94 Ventilation and atmospheric conditions (see also §1918.2), published 6/30/00, FR vol. 65, no. 127, p. 40938.
(f) 29 CFR 1918.95 Sanitation, published 6/8/11, Federal Register, vol. 76, no. 110, p. 33590.
(g) 29 CFR 1918.96 Maintenance and repair work in the vicinity of longshoring operations, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(h) 29 CFR 1918.97 First aid and lifesaving facilities (see also Appendix V of this part), published 6/30/00, FR vol. 65, no. 127, p. 40938.
(i) 29 CFR 1918.98 Qualifications of machinery operators and supervisory training, published 6/30/00, FR vol. 65, no. 127, p. 40938.
(j) 29 CFR 1918.99 Retention of DOT markings, placards and labels, published 7/25/97, FR vol. 62, no. 143, p. 40202.
(k) 29 CFR 1918.100 Emergency action plans, published 6/30/00, FR vol. 65, no. 127, p. 40938.
(10) Subdivision J
(a) 29 CFR 1918.101 Eye and face protection, published 3/25/16, FR vol. 81, no. 58, p. 16085.
(b) 29 CFR 1918.102 Respiratory protection, published 6/30/00, FR vol. 65, no. 127, p. 40938.
(c) 29 CFR 1918.103 Head protection, published 6/22/12, FR vol. 77, no. 121, p. 37587.
(d) 29 CFR 1918.104 Foot protection, published 9/9/09, FR vol. 74, no. 173, pp. 46350-46361.
(e) 29 CFR 1918.105 Other protective measures, published 6/30/00, FR vol. 65, no. 127, p. 40938.
(f) 29 CFR 1918.106 Payment for protective equipment, published 11/15/07, FR vol. 72, no. 220, p. 64342.
(11) Appendix I — Cargo Gear Register and Certificates (Non-Mandatory), published 7/25/97, FR vol. 62, no. 143, p. 40202.
(12) Appendix II — Tables for Selected Miscellaneous Auxiliary Gear (Mandatory), published 6/30/00, FR vol. 65, no. 127, p. 40938.
(13) Appendix III — The Mechanics of Conventional Cargo Gear (Non-Mandatory), published 7/25/97, FR vol. 62, no. 143, p. 40202.
(14) Appendix IV — Special Cargo Gear (Mandatory), published 6/30/00, FR vol. 65, no. 127, p. 40938.

(15) Appendix V — Basic Elements of a First Aid Training Program (Non-Mandatory), [~~published 7/25/97, FR vol. 62, no. 143, p. 40202.~~] **published 2/18/20, FR vol. 85, no. 32, p. 8726-8746.**

These standards are available at the Department of Consumer and Business Services, Oregon Occupational Safety and Health Division, and the United States Government Printing Office.

Statutory/Other Authority: ORS 654.025(2) & 656.726(4)
Statutes/Other Implemented: ORS 654.001 - 654.295
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OR-OSHA Administrative Order 1-2024, filed 9/11/24, effective 9/11/24.
OSHA 4-2016, f. & cert. ef. 9-7-16
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OSHA 7-2012, f. & cert. ef. 12-14-12
OSHA 4-2011, f. & cert. ef. 12-8-11
OSHA 2-2010, f. & cert. ef. 2-25-10
OSHA 6-2009, f. & cert. ef. 6-5-09
OSHA 5-2009, f. & cert. ef. 5-29-09
OSHA 5-2008, f. 5-1-08, cert. ef. 5-15-08
OSHA 6-2006, f. & cert. ef. 8-30-06
OSHA 9-2000, f. & cert. ef. 10-10-00
OSHA 6-1999, f. & cert. ef. 5-26-99
OSHA 9-1997, f. & cert. ef. 12-31-97
OSHA 5-1995, f. & cert. ef. 4-6-95
OSHA 1-1995, f. & cert. ef. 1-19-95
OSHA 4-1994, f. & cert. ef. 8-4-94
OSHA 10-1992, f. 9-24-92, cert. ef. 11-1-92

1918 Safety and Health Regulations for Longshoring

Appendix V to Part 1918—Basic Elements of a First Aid Training Program (Non-Mandatory)

Note: This appendix is non-mandatory and provides guidelines for small businesses, institutions teaching first aid, and the recipients of first aid training.

General Program Elements

A. Teaching Methods

1. Trainees should develop "hands on" skills through the use of manikins and trainee partners during their training.
2. Trainees should be exposed to acute injury and illness settings as well as the appropriate response to those settings through the use of visual aids, such as video tape and slides.
3. Training should include a course workbook which discusses first aid principles and responses to settings that require interventions.
4. Training duration should allow enough time for particular emphasis on situations likely to be encountered in particular workplaces.
5. An emphasis on quick response to first aid situations should be incorporated throughout the program.

B. Principles of Responding to a Health Emergency

The training program should include instruction in:

1. Injury and acute illness as a health problem.

2. Interactions with the local emergency medical services system. Trainees have the responsibility for maintaining a current list of emergency telephone numbers (police, fire, ambulance, poison control) easily accessible to all employees.
3. The principles of triage.
4. The legal aspects of providing first aid services.

C. Methods of Surveying the Scene and the Victim(s)
The training program should include instruction in:
1. The assessment of scenes that require first aid services including:
a. general scene safety.
b. likely event sequence.
c. rapid estimate of the number of persons injured.
d. identification of others able to help at the scene.
2. Performing a primary survey of each victim including airway, breathing, and circulation assessments as well as the presence of any bleeding.
3. The techniques and principles of taking a victim's history at the scene of an emergency.
4. Performing a secondary survey of the victim including assessments of vital signs, skin appearance, head and neck, eye, chest, abdomen, back, extremities, and medical alert symbols.

D. Basic Adult Cardiopulmonary Resuscitation (CPR)
Basic adult CPR training should be included in the program. Retesting should occur every year. The training program should include instruction in:
1. Establishing and maintaining adult airway patency.
2. Performing adult breathing resuscitation.
3. Performing adult circulatory resuscitation.
4. Performing choking assessments and appropriate first aid interventions.
5. Resuscitating the drowning victim.

E. Basic First Aid Intervention
Trainees should receive instruction in the principles and performance of:
1. Bandaging of the head, chest, shoulder, arm, leg, wrist, elbow, foot, ankle, fingers, toes, and knee.
2. Splinting of the arm, elbow, clavicle, fingers, hand, forearm, ribs, hip, femur, lower leg, ankle, knee, foot, and toes.
3. Moving and rescuing victims including one and two person lifts, ankle and shoulder pulls, and the blanket pull.

F. Universal Precautions
Trainees should be provided with adequate instruction on the need for and use of universal precautions. This should include:
1. The meaning of universal precautions, which body fluids are considered potentially infectious, and which are regarded as hazardous.
2. The value of universal precautions for infectious diseases such as AIDS and hepatitis B.
3. A copy of OSHA's standard for occupational exposure to bloodborne pathogens or information on how to obtain a copy.
4. The necessity for keeping gloves and other protective equipment readily available and the appropriate use of them.

5. The appropriate tagging and disposal of any sharp item or instrument requiring special disposal measures such as blood soaked material.
6. The appropriate management of blood spills.

G. First Aid Supplies
The first aid provider should be responsible for the type, amount, and maintenance of first aid supplies needed for their particular worksite(s). These supplies need to be stored in a convenient area available for emergency access.

H. Trainee Assessments
Assessment of successful completion of the first aid training program should include instructor observation of acquired skills and written performance assessments. First aid skills and knowledge should be reviewed every three years.

I. Program Update
The training program should be periodically reviewed with current first aid techniques and knowledge. Outdated material should be replaced or removed.

Specific Program Elements
A. Type of Injury Training
1. Shock
Instruction in the principles and first aid intervention in:
a. shock due to injury.
b. shock due to allergic reactions.
c. the appropriate assessment and first aid treatment of a victim who has fainted.
2. Bleeding
a. the types of bleeding including arterial, venous, capillary, external, and internal.
b. the principles and performance of bleeding control interventions including direct pressure, pressure points, elevation, and pressure bandaging.
c. the assessment and approach to wounds including abrasions, incisions, lacerations, punctures, avulsions, amputations, and crush injuries.
d. the principles of wound care including infection precautions, wounds requiring medical attention, and the need for tetanus prophylaxis.
3. Poisoning
Instruction in the principles and first aid intervention of:
a. alkali, acid and systemic poisons. In addition, all trainees should know how and when to contact the local Poison Control Center.
b. inhaled poisons including carbon monoxide, carbon dioxide, smoke, and chemical fumes, vapors and gases as well as the importance of assessing the toxic potential of the environment to the rescuer and the need for respirators. Trainees should be instructed in the acute effect of chemicals utilized in their plants, the location of chemical inventories, [~~material safety data sheets (MSDS's)~~] **Safety Data Sheet (SDS),** chemical emergency information, and antidote supplies.
c. topical poisons including poison ivy, poison sumac, poison oak, and insecticides.
d. drugs of abuse including alcohol, narcotics such as heroin and cocaine, tranquilizers, and amphetamines.
4. Burns
Instruction in the principles and first aid intervention of:

a. assessing the severity of the burn including first degree, second degree, and third degree burns.

b. differentiating between the types of third degree burns (thermal, electrical, and chemical) and their specific interventions. Particular attention should be focused upon chemical burns, and the use of specific chemicals in the workplace which may cause them.

5. Temperature Extremes

Instruction in the principles and first aid intervention of:

a. exposure to cold including frostbite and hypothermia.

b. exposure to heat including heat cramps, heat exhaustion, and heat stroke.

6. Musculoskeletal Injuries

The training program should include instruction in the principles and first aid intervention in:

a. open fractures, closed fractures, and splinting.

b. dislocations, especially the methods of joint dislocations of the upper extremity. The importance of differentiating dislocations from fractures.

c. joint sprains.

d. muscle strains, contusions, and cramps.

e. head, neck, back, and spinal injuries.

7. Bites and Stings

Instruction in the principles and first aid intervention in:

a. human and animal (especially dog and snake) bites.

b. bites and stings from insects (spiders, ticks, scorpions, hornets and wasps). Interventions should include responses to anaphylactic shock; other allergic manifestations; rabies and tetanus prophylaxis.

8. Medical Emergencies

Instruction in the principles and first aid intervention of:

a. heart attacks.

b. strokes.

c. asthma attacks.

d. diabetic emergencies including diabetic coma, insulin shock, hyperglycemia, and hypoglycemia.

e. seizures including tonic-clonic and absence seizures. Importance of not putting gags in mouth.

f. pregnancy including the appropriate care of any abdominal injury or vaginal bleeding.

9. Confined Spaces

a. the danger of entering a confined space to administer first aid without having the appropriate respiratory protection.

b. if first aid personnel will be required to assist evacuations from confined spaces, additional training will be needed.

B. Site of Injury Training

Instruction in the principles and first aid intervention of injuries to the following sites:

1. Head and Neck

a. including skull fractures, concussions, and mental status assessments with particular attention to temporary loss of consciousness and the need for referral to a physician.

b. including the appropriate approach to the management of the individual who has suffered a potential neck injury or fracture.

2. Eye

a. foreign bodies, corneal abrasions and lacerations.
b. chemical burns and the importance of flushing out the eye.
c. the importance of not applying antibiotics without physician supervision.

3. Nose
    a. nose injuries and nose bleeds.
4. Mouth and Teeth
    a. oral injuries, lip and tongue injuries, and broken and removed teeth. The importance of preventing inhalation of blood and teeth.
5. Chest
    a. rib fractures, flail chest, and penetrating wounds.
6. Abdomen
    a. blunt injuries, penetrating injuries, and protruding organs.
7. Hand, Finger, and Foot Injuries
    a. finger/toe nail hematoma, lacerations, splinters, finger nail avulsion, ring removal, and foreign bodies.
    b. the importance of identifying amputation care hospitals in the area. When an amputation occurs, appropriate handling of amputated fingers, hands, and feet during the immediate transportation of the victim and body part to the hospital.

[62 FR 40141, July 25, 1997; 85 FR 8733-8735, February 18, 2020]