



Oregon

Kate Brown, Governor

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October 29, 2019

[Text of changes](#)
[May 14, 2019, Federal Register](#)

Oregon OSHA's Adoption of Federal SIP-IV Amendments and Oregon-Initiated Changes to Administrative, General Industry, Construction, and Maritime Activity Standards

Oregon OSHA adopted changes to our administrative (recordkeeping), general industry, and construction standards, and updating references in the maritime activity standards in response to federal OSHA's adoption of final rules published in the May 14, 2019 Federal Register. This is Phase IV of federal OSHA's Standards Improvement Project (SIP-IV), the fourth in a series of rulemakings to improve and streamline workplace safety and health standards. Oregon's response removes or revises rules or requirements within our corresponding rules that are outdated, duplicative, or inconsistent. This rulemaking is anticipated to reduce regulatory burden and compliance costs while maintaining or enhancing worker safety and health as well as worker privacy protections.

Oregon OSHA adopted most of the federal rule changes with the exception of rules that we had previously eliminated or updated. These changes include:

- Eliminating the requirements for the use of employee social security numbers (SSN) in employee records including medical surveillance records.
- Updating and clarifying medical surveillance requirements for both general industry and construction in certain substance-specific standards:
 - To eliminate the requirement for periodic x-rays;
 - To reflect current technology and medical practice for the evaluation and storage of x-rays.
 - To reflect current technology and medical practice for pulmonary function testing.
 - To improve the consistency of information collected on standardized forms.
- Updating methods allowed when communicating site information to 911 rescue and emergency services.
- Clarifying existing rule requirements for when hearing loss must be recorded.
- Eliminating the requirement to post load limits in certain residential structures during construction.
- Updating the references about diesel engines in underground construction.
- Harmonizing OSHA rule requirements with more recent consensus standards:
 - For signs and devices used to protect employees working near traffic; and
 - For roll-over protective structures on certain equipment.

In addition, Oregon OSHA completed several edits to our rules to restore consistency with federal OSHA's rules.

One hearing was held in September in Portland, Oregon. While the hearing received a few attendees, no oral comments were given. Oregon OSHA received no written comments on this rulemaking. During the rulemaking process, the agency discovered paragraph lettering errors in its proposed text of changes. Oregon OSHA corrected these lettering errors, as well as a few typos in the text of changes to ensure that federal rule text that was adopted by reference was correctly reflected in the text of changes document. Because no comments were received, substantively Oregon OSHA adopted these rule changes as proposed.

Please visit our web site osha.oregon.gov Click 'Rules and laws' in the Common resources column and view our adopted rules, or select other rule activity from this page.

This is Oregon OSHA Administrative Order 3-2019, Adopted and effective October 29, 2019.

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Note: In compliance with the Americans with Disabilities Act (ADA), this publication is available in alternative formats by calling 503-378-3272.

Secretary of State
Certificate and Order for Filing
PERMANENT ADMINISTRATIVE RULES

I certify that the attached copies* are true, full and correct copies of the PERMANENT Rule(s) adopted on October 29, 2019 by the
Date prior to or same as filing date

Department of Consumer & Business Services/Oregon Occupational Safety & Health Division 437
Agency and Division Administrative Rules Chapter Number

Heather Case 350 Winter Street NE, Salem OR 97301-3882 503-947-7449
Rules Coordinator Address Telephone

to become effective October 29, 2019 as Oregon OSHA Administrative Order 3-2019.
Date upon filing or later

Rulemaking Notice was published in the September 2019 *Oregon Bulletin*.**
Month and Year

RULE CAPTION

Adopt federal SIP-IV amendments and Oregon-initiated changes to administrative, general industry, construction, and maritime activity standards.

Not more than 15 words that reasonably identifies the subject matter of the agency's intended action.

RULEMAKING ACTION

AMEND: OAR 437-001-0700, 437-002-0005, 437-002-0100, 437-002-0360, 437-002-1064, 437-002-2037, 437-002-2224, 437-003-0001, 437-003-0420, 437-003-1000, 437-003-3224, 437-005-0001

ORS 654.025(2), 656.726(4)

Stat. Auth.

ORS 654.001 through 654.295

Stats. Implemented

RULEMAKING SUMMARY

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INDIVIDUAL RULE SUMMARY (By rule number)

Provide a brief summary of the rule (if new adoption), or a brief summary of changes made to the rule (if amending)

437-001-0700 - For equivalency with 29 CFR 1904.10(b)(6), clarifies at 437-001-0700(11)(d) that general criteria at (6) apply when determining if hearing loss is recordable.

437-002-0005 – Adoption by Reference into Division 2, General Industry.

437-002-0100 - Adoption by Reference into Division 2, General Industry.

437-002-0360 - Adoption by Reference into Division 2, General Industry.

437-002-1064 – Removes requirement for use of employee Social Security Numbers (SSN) from Silica recordkeeping rule at (1)(b)(G) and (3)(a)(A). OAR applies to both General Industry and Construction exposures to Silica.

437-002-2037 – Removes requirement for use of employee SSN from Beryllium recordkeeping rule at (1)(b)(F) and (3)(b)(A).

437-002-2224 - At (12) Traffic Control, updates Oregon's Vehicle Drivers and Riders rules for general industry to reference the 2009 Edition of the Manual of Uniform Traffic Control Devices (MUTCD) -- including two revisions dated May 2012.

437-003-0001 - Adoption by Reference into Division 3, Construction.

437-003-0420 – Updates Oregon's Traffic Control rule for construction to reference the 2009 Edition of the Manual of Uniform Traffic Control Devices (MUTCD) -- including two revisions dated May 2012 – as incorporated by reference in 1926.6.

437-003-1000 – Minor text edits to Construction Air Contaminants rules to maintain equivalency with Oregon's General Industry Air Contaminants rules.

437-003-3224 – At (12) Traffic Control, updates Oregon's Vehicle Drivers and Riders rules for construction to reference the 2009 Edition of the Manual of Uniform Traffic Control Devices (MUTCD) -- including two revisions dated May 2012 – as incorporated by reference in 1926.6.

437-005-0001 – Adoption by Reference into Division 5, Maritime Activities.

Please visit the rules and laws section of our website at osha.oregon.gov/rules and select *adopted rules* in the rule making column to view our adopted rules.



Authorized Signer

Michael D. Wood

Printed name

10/29/2019

Date

*With this original, file one photocopy of certificate, one paper copy of rules listed in Rulemaking Actions, and electronic copy of rules.

**The *Oregon Bulletin* is published on the 1st of each month and updates rules found in the OAR Compilation. For publication in Bulletin, rule and notice filings must be submitted by 5:00 pm on the 15th day of the preceding month unless this deadline falls on a weekend or legal holiday, when filings are accepted until 5:00 pm on the preceding workday.

ARC 930-2005



PERMANENT ADMINISTRATIVE ORDER

OSHA 3-2019

CHAPTER 437
DEPARTMENT OF CONSUMER AND BUSINESS SERVICES
OREGON OCCUPATIONAL SAFETY AND HEALTH DIVISION

FILED

10/29/2019 2:03 PM
ARCHIVES DIVISION
SECRETARY OF STATE
& LEGISLATIVE COUNSEL

FILING CAPTION: Adopt federal SIP-IV and Oregon changes to administrative, general industry, construction, and maritime standards.

EFFECTIVE DATE: 10/29/2019

AGENCY APPROVED DATE: 10/29/2019

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Heather Case
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RULES:

437-001-0700, 437-002-0005, 437-002-0100, 437-002-0360, 437-002-1064, 437-002-2037, 437-002-2224, 437-003-0001, 437-003-0420, 437-003-1000, 437-003-3224, 437-005-0001

AMEND: 437-001-0700

RULE TITLE: Recording Workplace Injuries and Illnesses

NOTICE FILED DATE: 08/27/2019

RULE SUMMARY: For equivalency with 29 CFR 1904.10(b)(6), clarifies at 437-001-0700(11)(d) that general criteria at (6) apply when determining if hearing loss is recordable.

RULE TEXT:

(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 (attached).
- (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). Table 2 (attached). The decision tree for recording work-related injuries and illnesses below shows the steps involved in making this determination. Figure 1 (attached).
 - (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 (attached).
 - (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 (attached).
 - (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 (attached).

(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 (attached).

(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) In 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.

(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, 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 paragraph (24)(g) 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 paragraph (24)(g) of the year after the calendar year covered by the form.

(c) For each establishment that is subject to these reporting requirements, you must provide the Employer Identification Number (EIN) used by the establishment.

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.

(d) If you are required to submit information under paragraph (24)(a) or (24)(b), then you must submit the information once a year, by the date listed in paragraph (24)(g) 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 paragraph (24)(g), then you must submit the information as often as specified in the notification.

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

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

(g) Reporting Dates. Beginning in 2020, establishments that are required to submit under paragraph (24)(a) or (24)(b) 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 (attached). Appendix A (attached). Appendix B (attached).

STATUTORY/OTHER AUTHORITY: ORS 654.025(2), 656.726(4)

STATUTES/OTHER IMPLEMENTED: ORS 654.001 – 654.295, 654.412 – 654.423, 654.750 – 780

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	NAICS Code	Industry Description
4412	Other Motor Vehicle Dealers	5411	Legal Services
4431	Electronics and Appliance Stores	5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services
4461	Health and Personal Care Stores	5413	Architectural, Engineering, and Related Services
4471	Gasoline Stations	5414	Specialized Design Services
4481	Clothing Stores	5415	Computer Systems Design and Related Services
4482	Shoe Stores	5416	Management, Scientific, and Technical Consulting Services
4483	Jewelry, Luggage, and Leather Goods Stores	5417	Scientific Research and Development Services
4511	Sporting Goods, Hobby, and Musical Instrument Stores	5418	Advertising and Related Services
4512	Book, Periodical, and Music Stores	5511	Management of Companies and Enterprises
4531	Florists	5611	Office Administrative Services
4532	Office Supplies, Stationary, and Gift Stores	5614	Business Support Services
4812	Nonscheduled Air Transportation	6515	Travel Arrangement and Reservation Services
4861	Pipeline Transportation of Crude Oil	5616	Investigation and Security Services
4862	Pipeline Transportation of Natural Gas	6111	Elementary and Secondary Schools
4869	Other Pipeline Transportation	6112	Junior Colleges
4879	Scenic and Sightseeing Transportation, Other	6113	Colleges, Universities, and Professional Schools
4885	Freight Transportation Arrangement	6114	Business Schools and Computer and Management Training
5111	Newspaper, Periodical, Book, and Directory Publishers	6115	Technical and Trade Schools
5112	Software Publishers	6116	Other Schools and Instruction
5121	Motion Picture and Video Industries	6117	Educational Support Services
5122	Sound Recording Industries	6211	Offices of Physicians
5151	Radio and Television Broadcasting	6212	Offices of Dentists
5172	Wireless Telecommunications Carriers (except Satellite)	6213	Offices of Other Health Practitioners
5173	Telecommunications Resellers	6214	Outpatient Care Centers
5179	Other Telecommunications	6215	Medical and Diagnostic Laboratories
5181	Internet Service Providers and Web Search Portals	6244	Child Day Care Services
5182	Data Processing, Hosting, and Related Services	7114	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures
5191	Other Information Services	7115	Independent Artists, Writers, and Performers
5211	Monetary Authorities - Central Bank	7213	Rooming and Boarding Houses
5221	Depository Credit Intermediation	7221	Full-Service Restaurants
5222	Nondepository Credit Intermediation	7222	Limited-Service Eating Places
5223	Activities Related to Credit Intermediation	7224	Drinking Places (Alcoholic Beverages)
5231	Securities and Commodity Contracts Intermediation and Brokerage	8112	Electronic and Precision Equipment Repair and Maintenance
5232	Securities and Commodity Exchanges	8114	Personal and Household Goods Repair and Maintenance
5239	Other Financial Investment Activities	8121	Personal Care Services
5241	Insurance Carriers	8122	Death Care Services
5242	Agencies, Brokerages, and Other Insurance Related Activities	8131	Religious Organizations
5251	Insurance and Employee Benefit Funds	8132	Grantmaking and Giving Services
5259	Other Investment Pools and Funds	8133	Social Advocacy Organizations
5312	Offices of Real Estate Agents and Brokers	8134	Civic and Social Organizations
5331	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	8139	Business, Professional, Labor, Political, and Similar Organizations

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

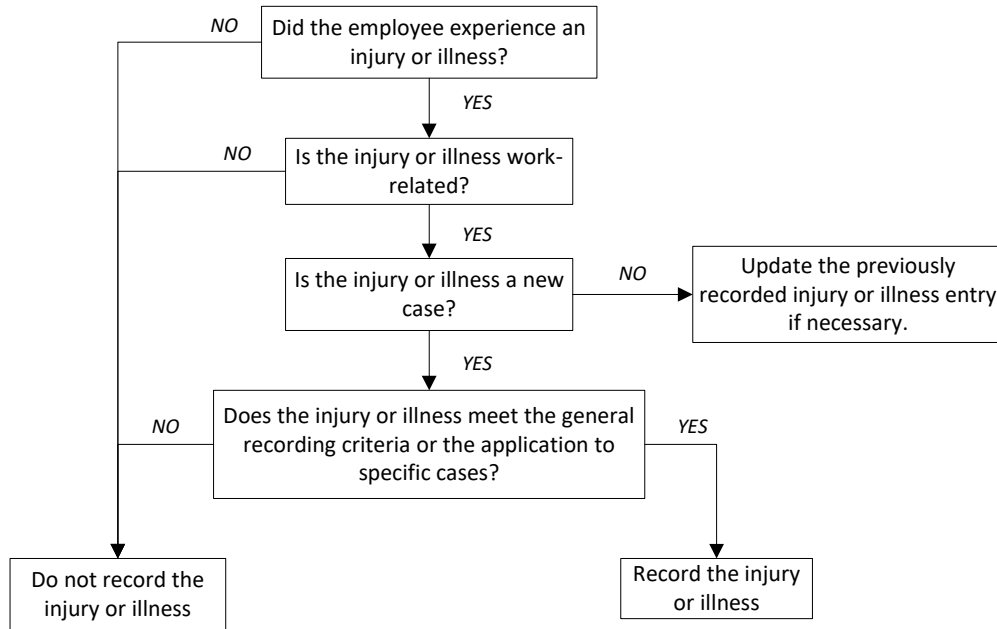


Table 3 - Work environment exceptions

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.

Do not record injuries and illnesses if . . .

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.

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.

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).

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)

Record a work-related injury or illness if it results in one or more of the following:

(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)

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.

Table 7 - Designated Industries

Annual Electronic Submission of OSHA Form 300A Summary of Work-Related Injuries and Illnesses by Establishments With 20 or More Employees but Fewer Than 250 Employees in Designated Industries

NAICS	Industry	NAICS	Industry
11	Agriculture, forestry, fishing and hunting	4921	Couriers and express delivery services
22	Utilities	4922	Local messengers and local delivery
23	Construction	4931	Warehousing and storage
31-33	Manufacturing	5152	Cable and other subscription programming
42	Wholesale trade	5311	Lessors of real estate
4413	Automotive parts, accessories, and tire stores	5321	Automotive equipment rental and leasing
4421	Furniture stores	5322	Consumer goods rental
4422	Home furnishings stores	5323	General rental centers
4441	Building material and supplies dealers	5617	Services to buildings and dwellings
4442	Lawn and garden equipment and supplies stores	5621	Waste collection
4451	Grocery stores	5622	Waste treatment and disposal
4452	Specialty food stores	5629	Remediation and other waste management services
4521	Department stores	6219	Other ambulatory health care services
4529	Other general merchandise stores	6221	General medical and surgical hospitals
4533	Used merchandise stores	6222	Psychiatric and substance abuse hospitals
4542	Vending machine operators	6223	Specialty (except psychiatric and substance abuse) hospitals
4543	Direct selling establishments	6231	Nursing care facilities
4811	Scheduled air transportation	6232	Residential mental retardation, mental health and substance abuse facilities
4841	General freight trucking	6233	Community care facilities for the elderly
4842	Specialized freight trucking	6239	Other residential care facilities
4851	Urban transit systems	6242	Community food and housing, and emergency and other relief services
4852	Interurban and rural bus transportation	6243	Vocational rehabilitation services
4853	Taxi and limousine service	7111	Performing arts companies
4854	School and employee bus transportation	7112	Spectator sports
4855	Charter bus industry	7121	Museums, historical sites, and similar institutions

NAICS	Industry	NAICS	Industry
4859	Other transit and ground passenger transportation	7131	Amusement parks and arcades
4871	Scenic and sightseeing transportation, land	7132	Gambling industries
4881	Support activities for air transportation	7211	Traveler accommodation
4882	Support activities for rail transportation	7212	RV (recreational vehicle) parks and recreational camps
4883	Support activities for water transportation	7213	Rooming and boarding houses
4884	Support activities for road transportation	7223	Special food services
4889	Other support activities for transportation	8113	Commercial and industrial machinery and equipment (except automotive and electronic) repair and maintenance
4911	Postal service	8123	Dry-cleaning and laundry services

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

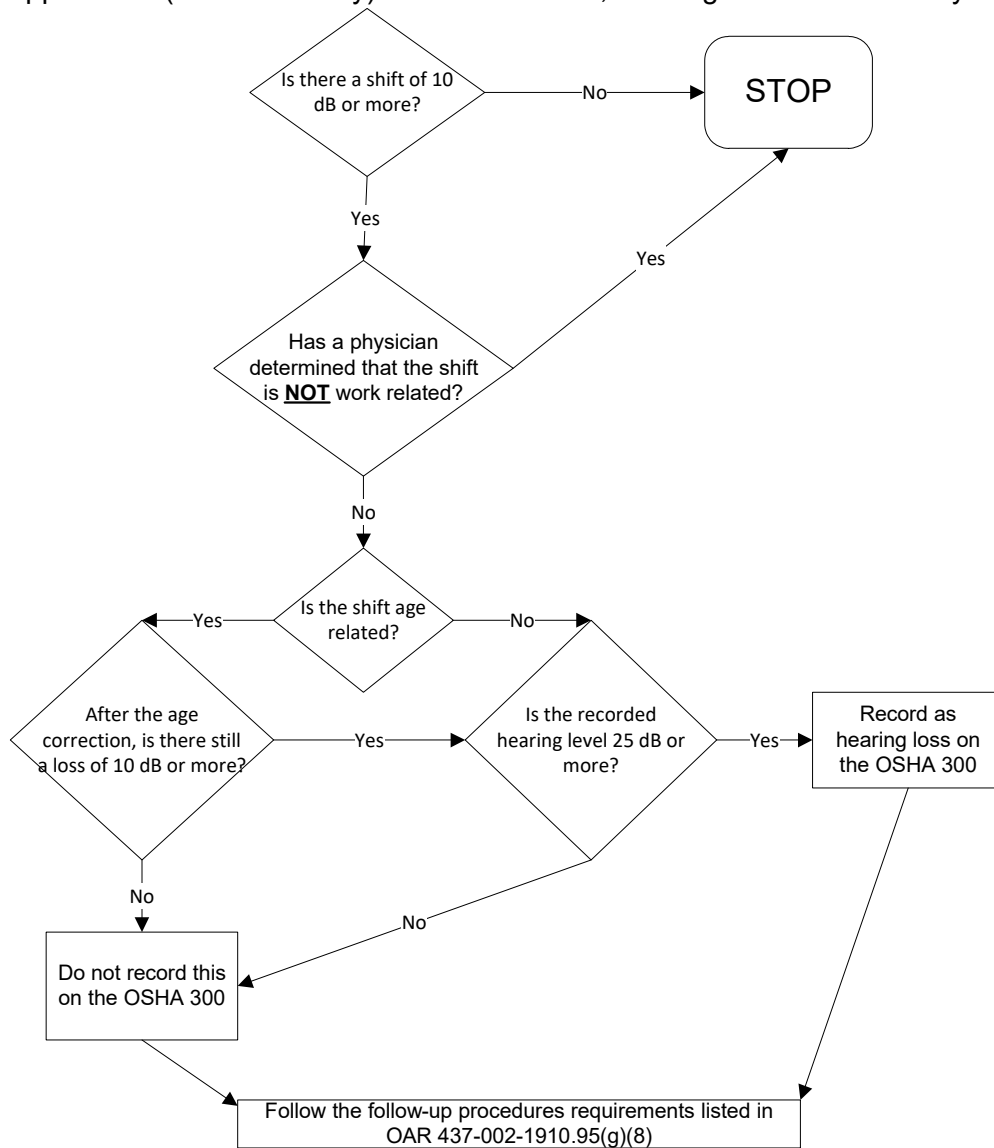
Years	Audiometric Test Frequency (Hz)			Years	Audiometric Test Frequency (Hz)		
	2000	3000	4000		2000	3000	4000
20 or younger	3	4	5	41	6	10	14
21	3	4	5	42	7	11	16
22	3	4	5	43	7	12	16
23	3	4	6	44	7	12	17
24	3	5	6	45	7	13	18
25	3	5	7	46	8	13	19
26	4	5	7	47	8	14	19
27	4	6	7	48	8	14	20
28	4	6	8	49	9	15	21
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

Years	Audiometric Test Frequency (Hz)			Years	Audiometric Test Frequency (Hz)		
	2000	3000	4000		2000	3000	4000
35	6	7	7	56	11	14	15
36	6	7	7	57	11	15	15
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				

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

AMEND: 437-002-0005

RULE TITLE: Adoption by Reference

NOTICE FILED DATE: 08/27/2019

RULE SUMMARY: Adoption by Reference into Division 2, General Industry.

RULE TEXT:

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.
- (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.
- (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

AMEND: 437-002-0100

RULE TITLE: Adoption by Reference

NOTICE FILED DATE: 08/27/2019

RULE SUMMARY: Adoption by Reference into Division 2, General Industry.

RULE TEXT:

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 1910.101 Compressed gases (General requirements). Repealed. Oregon OSHA Admin. Order 6-2014, f. 10/28/14, ef. 5/1/15. In Oregon, OAR 437-002-2101 applies.
- (2) 29 CFR 1910.102 Acetylene. Repealed. Oregon OSHA Admin. Order 1-2010, f. 2/19/10, ef. 2/19/10. In Oregon, OAR 437-002-2102 applies.
- (3) 29 CFR 1910.103 Hydrogen, published 12/14/07, FR vol. 72, no. 240, p. 71061.
- (4) 29 CFR 1910.104 Oxygen, published 3/7/96, FR vol. 61, no. 46, p. 9237.
- (5) 29 CFR 1910.105 Nitrous oxide, published 3/7/96, FR vol. 61, no. 46, p. 9237.
- (6) 29 CFR 1910.106 Flammable and combustible liquids, published 3/26/12, FR vol. 77, no. 58, p. 17574.
- (7) 29 CFR 1910.107 Spray finishing using flammable and combustible materials, amended with AO 3-2003, removed 1910.107, and Oregon note added, f. and ef. 4/21/03.
- (8) 29 CFR 1910.108 Reserved. Published 3/23/99, Federal Register, vol. 64, no. 55, p. 13909.
- (9) 29 CFR 1910.109 Explosives and blasting agents, published 6/18/98, FR vol. 63, no. 117, p. 33466.
- (10) 29 CFR 1910.110 Storage and handling of liquefied petroleum gases, published 12/14/07, FR vol. 72, no. 240, p. 71061.
- (11) 29 CFR 1910.111 Storage and handling of anhydrous ammonia, published amended with AO 12-2001, Oregon note added, f. and ef. 10/26/01; 12/14/07, FR vol. 72, no. 240, p. 71061.
- (12) Reserved for 29 CFR 1910.112 (Reserved)
- (13) Reserved for 29 CFR 1910.113 (Reserved)
- (14) 29 CFR 1910.114 Removed. Published 3/7/96, Federal Register, vol. 61, no. 46, p. 9238.
- (15) 29 CFR 1910.115 Removed. Published 3/7/96, Federal Register, vol. 61, no. 46, p. 9238.
- (16) 29 CFR 1910.116 Removed. Published 3/7/96, Federal Register, vol. 61, no. 46, p. 9238.
- (17) 29 CFR 1910.119 Process safety management of highly hazardous chemicals, amended 5/14/19, FR vol. 84, no. 93, p. 21416.
- (18) 29 CFR 1910.120 Hazardous waste operations and emergency response, amended 5/14/19, FR vol. 84, no. 93, p. 21416.
- (19) 29 CFR 1910.121 Reserved. Published 3/23/99, Federal Register, vol. 64, no. 55, p. 13909.
- (20) 29 CFR 1910.122 Table of contents. Repealed with OR-OSHA Admin. Order 9-2007, f. and ef. 12/3/07.
- (21) 29 CFR 1910.123 Dipping and coating operations: Coverage and definitions. Repealed with OR-OSHA Admin. Order 9-2007, f. and ef. 12/3/07.
- (22) 29 CFR 1910.124 General requirements for dipping and coating operations. Repealed with OR-OSHA Admin. Order 9-2007, f. and ef. 12/3/07.
- (23) 29 CFR 1910.125 Additional requirements for dipping and coating operations that use flammable or combustible liquids. Repealed with OR-OSHA Admin. Order 9-2007, f. and ef. 12/3/07.
- (24) 29 CFR 1910.126 Additional requirements for special dipping and coating applications. Repealed with OR-OSHA Admin. Order 9-2007, f. and ef. 12/3/07.

These standards are on file with 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

AMEND: 437-002-0360

RULE TITLE: Adoption by Reference

NOTICE FILED DATE: 08/27/2019

RULE SUMMARY: Adoption by Reference into Division 2, General Industry.

RULE TEXT:

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: 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.

(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: 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

AMEND: 437-002-1064

RULE TITLE: Recordkeeping

NOTICE FILED DATE: 08/27/2019

RULE SUMMARY: Removes requirement for use of employee Social Security Numbers (SSN) from Silica recordkeeping rule at (1)(b)(G) and (3)(a)(A). OAR applies to both General Industry and Construction exposures to Silica.

RULE TEXT:

(1) Air monitoring data.

(a) Make and maintain an accurate record of all exposure measurements taken to assess employee exposure to respirable crystalline silica, as prescribed in 437-002-1056.

(b) This record must include at least the following information:

(A) The date of measurement for each sample taken;

(B) The task monitored;

(C) Sampling and analytical methods used;

(D) Number, duration, and results of samples taken;

(E) Identity of the laboratory that performed the analysis;

(F) Type of personal protective equipment, such as respirators, worn by the employees monitored; and

(G) Name and job classification of all employees represented by the monitoring, indicating which employees were actually monitored.

(c) Ensure that exposure records are maintained and made available in accordance with 1910.1020.

(2) Objective data.

(a) Make and maintain an accurate record of all objective data relied upon to comply with the requirements of this subdivision.

(b) This record must include at least the following information:

(A) The crystalline silica-containing material in question;

(B) The source of the objective data;

(C) The testing protocol and results of testing;

(D) A description of the process, task, or activity on which the objective data were based; and

(E) Other data relevant to the process, task, activity, material, or exposures on which the objective data were based.

(c) Ensure that objective data are maintained and made available in accordance with 1910.1020.

(3) Medical surveillance.

(a) Make and maintain an accurate record for each employee covered by medical surveillance under 437-002-1062.

(b) The record must include the following information about the employee:

(A) Name;

(B) A copy of the PLHCPs' and specialists' written medical opinions;

(C) A copy of the information provided to the PLHCPs and specialists.

(c) Ensure that medical records are maintained and made available in accordance with 1910.1020.

STATUTORY/OTHER AUTHORITY: ORS 654.025(2), 656.726(4).

STATUTES/OTHER IMPLEMENTED: ORS 654.001- 654.295

AMEND: 437-002-2037

RULE TITLE: Recordkeeping

NOTICE FILED DATE: 08/27/2019

RULE SUMMARY: Removes requirement for use of employee SSN from Beryllium recordkeeping rule at (1)(b)(F) and (3)(b)(A).

RULE TEXT:

(1) Air monitoring data.

(a) Make and maintain an accurate record of all exposure measurements taken to assess employee exposure to beryllium, as prescribed in 437-002-2040.

(b) This record must include at least the following information:

(A) The date of measurement for each sample taken;

(B) The task monitored;

(C) Sampling and analytical methods used and evidence of their accuracy;

(D) Number, duration, and results of samples taken;

(E) Type of personal protective clothing and equipment, including respirators, worn by the employees monitored; and

(F) Name and job classification of all employees represented by the monitoring, indicating which employees were actually monitored.

(c) Ensure that exposure records are maintained and made available in accordance with 1910.1020.

(2) Objective data.

(a) Make and maintain an accurate record of all objective data relied upon to comply with the requirements of this subdivision.

(b) This record must include at least the following information:

(A) The data relied upon;

(B) The beryllium-containing material in question;

(C) The source of the objective data;

(D) A description of the process, task, or activity on which the objective data were based; and

(E) Other data relevant to the process, task, activity, material, or exposures on which the objective data were based.

(c) Ensure that objective data are maintained and made available in accordance with 1910.1020.

(3) Medical surveillance.

(a) Make and maintain an accurate record for each employee covered by medical surveillance under 437-002-2034.

(b) The record must include the following information about the employee:

(A) Name;

(B) A copy of the PLHCPs' and specialists' written medical opinions;

(C) A copy of the information provided to the PLHCPs and specialists.

(c) Ensure that medical records are maintained and made available in accordance with 1910.1020.

(4) Training.

(a) At the completion of any training required by this standard, the employer must prepare a record that indicates the name and job classification of each employee trained, the date the training was completed, and the topic of the training.

(b) This record must be maintained for three years after the completion of training.

(5) Upon request, you must make all records maintained as a requirement of this subdivision available for examination and copying to the Director of the Oregon Department of Consumer and Business Services, or designee, and the Director of the National Institute for Occupational Safety and Health (NIOSH), U.S. Department of Health and Human Services, or designee, each employee, and each employee's designated representative(s) in accordance the Records Access standard 1910.1020.

(6) Comply with the requirements involving transfer of records set forth in the Records Access standard (1910.1020).

STATUTORY/OTHER AUTHORITY: ORS 654.025(2), 656.726(4)

STATUTES/OTHER IMPLEMENTED: ORS 654.001 – 654.295

AMEND: 437-002-2224

RULE TITLE: Vehicle Drivers and Riders

NOTICE FILED DATE: 08/27/2019

RULE SUMMARY: At (12) Traffic Control, updates Oregon's Vehicle Drivers and Riders rules for general industry to reference the 2009 Edition of the Manual of Uniform Traffic Control Devices (MUTCD) -- including two revisions dated May 2012.

RULE TEXT:

(1) Scope. This rule applies, without regard to vehicle ownership when your employees drive or ride as part of their employment.

NOTE: The Oregon Bureau of Labor and Industries (BOLI) administers rules about using minors as drivers. Please contact the nearest BOLI office for more information.

(2) Driver Qualifications. You must not allow an employee to drive a vehicle on a public highway or road unless they have a valid driver's license appropriate for that type vehicle.

(3) General Safety.

(a) Do not allow employees to drive or ride in any vehicle known to be unsafe.

(b) Require employees to report any safety problems effecting vehicles you own or provide.

(4) Rider Safety — General.

(a) Except as in (5), (6) and (7), do not allow employees to occupy a vehicle in excess of its seating capacity.

(b) Require employees to comply with all applicable seatbelt and traffic safety laws.

(5) Rider Safety in the Bed of Dump Trucks, Pickups and Similar Vehicles. Do not transport workers in the beds of dump trucks, pickups or similar vehicles unless these conditions are met when applicable:

(a) When seating is available, it must be secure to the floor and passengers may not stand.

(b) The bed is secure to the frame. Beds that tilt or slide must be secure from movement.

(c) Dump beds must be secure or the activating lever locked.

(d) The total height of the sides of the transport area must be at least 42 inches. If riders sit on the floor, the height must be at least 24 inches.

(e) There must be a tailgate the same height as the sides or three evenly spaced chains, cables or ropes taut across the back.

(f) Not more than 4 workers may ride on a flatbed without sides or a tailgate and then only when the speed will not be more than 30 mph. There must be two handholds for each rider.

(g) Workers must not ride in space with cargo unless it is secure from movement.

(6) Standing Rider Safety — Buses. Riders must not sit on the floor while the vehicle is moving. Riders may stand if these conditions are met:

(a) There must be an aisle at least 12 inches wide leading to the emergency exit.

(b) There are no seats in or boards across the aisle.

(c) There must be handholds for standing riders.

(d) Not more than one rider per row of seats may stand.

(e) Riders may not sit or stand near the driver and not ahead of the forward-most row of seats.

(f) Workers in transit must not stand for more than one hour or 45 miles, whichever is less. At the end of that period, the standing workers must get a seat or the vehicle must stop for a 15-minute rest allowing the workers to get out.

(7) Fueling.

(a) There must be no smoking or other source of ignition within 25 feet of any refueling operation.

(b) Do not fill any container that is not bonded or grounded while it is inside the vehicle, in the pickup bed or anyplace other than on the ground.

- (c) Stop the engine (except diesels) during fueling.
- (d) Refueling vehicles with LPG must be outdoors.
- (8) Hauling gasoline or flammable liquid.
 - (a) For buses, vehicles that carry 16 or more, crew trucks, vans and passenger cars, use only DOT or UL approved containers that hold 5 gallons or less and secure them in an area separate from passengers.
 - (b) For pickups, flatbeds and other vehicles not in (a), there is no container size limit as long it is not in an enclosed passenger area.
- (9) Hauling Explosives. When hauling explosives, only the driver and one qualified person may be in the vehicle. Comply with OAR 437-002-1910.109 and 437-002-0109.
- (10) Loading or Unloading. When loading or unloading vehicles in a manner that is likely to cause the vehicle to move, set the brakes and chock the wheels.
- (11) High Voltage Clearances. When operating a vehicle near overhead lines carrying more than 600v, OAR 437-002-0047 applies for general industry employers and OAR 437-003-0047 applies for Construction employers.
- (12) Traffic Control. Adequate and appropriate traffic control devices must be used when vehicles are parked on or adjacent to a highway, street, or road in a way that creates a hazard and when traffic cannot adjust safely on its own. The traffic control devices' design and use must conform to the Manual of Uniform Traffic Control Devices for Streets and Highways, 2009 Edition, December 2009 (Including Revision 1 dated May 2012 and Revision 2 dated May 2012) (MUTCD), incorporated by reference in 1926.6.

NOTE: The MUTCD is available electronically at mutcd.fhwa.dot.gov, or printed copies are available to purchase from The American Traffic Safety Services Association, 1-800-231-3475, www.atssa.com; the Institute of Transportation Engineers, 202-785-0060, www.ite.org; or the American Association of State Highway and Transportation Officials, 1-800-231-3475, store.transportation.org.

NOTE: If the scope of the operation is three days or less, then employers who follow the most current edition of the Oregon Department of Transportation's Temporary Traffic Control Handbook are considered to be in compliance with this requirement.

STATUTORY/OTHER AUTHORITY: ORS 654.025(2), 656.726(4)

STATUTES/OTHER IMPLEMENTED: ORS 654.001 - 654.295

AMEND: 437-003-0001

RULE TITLE: Adoption by Reference

NOTICE FILED DATE: 08/27/2019

RULE SUMMARY: Adoption by Reference into Division 3, Construction.

RULE TEXT:

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.
 - (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: Cadmium has been redesignated as 1926.1127.

- (n) 29 CFR 1926.64, Process Safety Management of Highly Hazardous Chemicals

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: 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: 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.
 - (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.
 - (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.
- (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.
 - (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, published 4/6/79, FR vol. 44, p. 20940.
 - (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.
- (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.
 - (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; 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.
 - (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 §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 §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.
 - (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.
 - (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; amended with Oregon OSHA AO 3-2015, f. 10/9/15, ef. 1/1/16.
 - (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.
- (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.
- (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.
- (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 Severability, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.

(rr) Appendix A to Subdivision CC of 1926 – Standard Hand Signals, published 8/9/10, FR vol. 75, no. 152, pp. 47906-48177.

(ss) 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.

(tt) 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

AMEND: 437-003-0420

RULE TITLE: Traffic Control

NOTICE FILED DATE: 08/27/2019

RULE SUMMARY: Updates Oregon's Traffic Control rule for construction to reference the 2009 Edition of the Manual of Uniform Traffic Control Devices (MUTCD) -- including two revisions dated May 2012 -- as incorporated by reference in 1926.6.

RULE TEXT:

Note: 1926.201, 1926.202, and 1926.203 were repealed by Oregon OSHA. In Oregon, 437-003-0420 applies.

(1) Adequate and appropriate traffic control devices, including signs, signals, markings, and other devices must be provided and used for the protection of workers for all operations on or adjacent to a highway, street, or roadway. The traffic control devices' design and use must conform to the Manual of Uniform Traffic Control Devices (MUTCD), incorporated by reference in 1926.6.

(2) Signaling by flaggers and the use of flaggers, including warning garments worn by flaggers, must conform to the Manual of Uniform Traffic Control Devices (MUTCD), incorporated by reference in 1926.6.

(3) The design and use of barricades for the protection of employees must conform to the Manual of Uniform Traffic Control Devices (MUTCD), incorporated by reference in 1926.6.

NOTE: The MUTCD is available electronically at mutcd.fhwa.dot.gov, or printed copies are available to purchase from the American Traffic Safety Services Association, 1-800-231-3475, www.atssa.com; the Institute of Transportation Engineers, 202-785-0060, www.ite.org; or the American Association of State Highway and Transportation Officials, 1-800-231-3475, store.transportation.org.

NOTE: A copy of the MUTCD is available to read in the Oregon OSHA Resource Center, 350 Winter Street NE, Salem, Oregon 97301.

NOTE: Employers who follow the most current edition of the Oregon Department of Transportation's Temporary Traffic Control Handbook are considered to be in compliance with this requirement.

NOTE: 1926.201 and 1926.202 were previously repealed by Oregon OSHA. In Oregon, 437-003-0420 applies, instead.

[Publications: Publications referenced are available from the agency.]

STATUTORY/OTHER AUTHORITY: ORS 654.025(2), 656.726(4)

STATUTES/OTHER IMPLEMENTED: ORS 654.001 - 654.295

AMEND: 437-003-1000

RULE TITLE: Oregon Rules for Air Contaminants

NOTICE FILED DATE: 08/27/2019

RULE SUMMARY: Minor text edits to Construction Air Contaminants rules to maintain equivalency with Oregon's General Industry Air Contaminants rules.

RULE TEXT:

An employee's exposure to any substance listed in Oregon Tables Z-1, Z-2, or Z-3 of this section shall be limited in accordance with the requirements of the following paragraphs of this section.

(1) Oregon Table Z-1.

(a) Substances with limits preceded by "C" – Ceiling Values. An employee's exposure to any substance in Oregon Table Z-1, the exposure limit of which is preceded by a "C", shall at no time exceed the exposure limit given for that substance. If instantaneous monitoring is not feasible, then the ceiling shall be assessed as a 15-minute time weighted average exposure which shall not be exceeded at any time during the working day.

(b) Other substances – 8-hour Time Weighted Averages. An employee's exposure to any substance in Oregon Table Z-1, the exposure limit of which is not preceded by a "C", shall not exceed the 8-hour Time Weighted Average given for that substance in any 8-hour work shift of a 40-hour work week.

(c) Other Substances – Excursion Limits. Excursions in worker exposure levels may exceed 3 times the PEL-TWA for no more than a total of 30 minutes during a workday, and under no circumstances should they exceed 5 times the PEL-TWA, provided that the PEL-TWA is not exceeded.

(d) Skin Designation. To prevent or reduce skin absorption, an employee's skin exposure to substances listed in Oregon Table Z-1 with an "X" in the Skin Designation column following the substance name shall be prevented or reduced to the extent necessary in the circumstances through the use of gloves, coveralls, goggles, or other appropriate personal protective equipment, engineering controls or work practices.

(2) Oregon Table Z-2. An employee's exposure to any substance listed in Oregon Table Z2 shall not exceed the exposure limits specified as follows:

(a) 8-hour time weighted averages. An employee's exposure to any substance listed in Oregon Table Z-2, in any 8-hour work shift of a 40-hour work week, shall not exceed the 8-hour time weighted average limit given for that substance in Oregon Table Z-2.

(b) Acceptable ceiling concentrations. An employee's exposure to a substance listed in Oregon Table Z-2 shall not exceed the acceptable ceiling concentration for the given substance in the table at any time during an 8-hour shift except: Acceptable maximum peak above the acceptable ceiling concentration for an 8-hour shift. An employee's exposure to a substance listed in Oregon Table Z-2 shall not exceed the acceptable maximum peak above the acceptable ceiling concentration, and shall not exceed the maximum duration for the given substance during an 8-hour shift.

(c) Example.

Table.

During an 8-hour work shift, an employee exposed to benzene may be exposed to an 8-hour time weighted average (TWA) of 10 ppm. Concentrations of benzene during the 8-hour work shift may not exceed 25 ppm, unless that exposure is no more than 50 ppm and does not exceed 10 minutes during an 8-hour work shift. Such exposures must be compensated by exposures to concentrations below 10 ppm so that the 8-hour time-weighted average is less than 10 ppm.

(d) Skin Designation. To prevent or reduce skin absorption, an employee's skin exposure to substances listed in Oregon Table Z-2 with an "X" in the Skin Designation column following the substance name shall be prevented or reduced to the extent necessary in the circumstances through the use of gloves, coveralls, goggles, or other appropriate personal

protective equipment, engineering controls or work practices.

(3) Oregon Table Z-3. An employee's exposure to any substance listed in Oregon Table Z3, in any 8-hour work shift of a 40-hour work week, shall not exceed the 8-hour time weighted average limit given for that substance in the table.

(4) Computation formulae. The computation formula which shall apply to employee exposure to more than one substance for which 8-hour time weighted averages are included in OAR 437, Division 2/Z, Toxic and Hazardous Substances, in order to determine whether an employee is exposed over the regulatory limit is as follows:

(a) Cumulative Exposures.

(i) The cumulative exposure for an 8-hour work shift shall be computed as follows:

$$E = (C_a T_a + C_b T_b + \dots C_n T_n) \div 8$$

Where:

E is the equivalent exposure for the working shift.

C is the concentration during any period of time T where the concentration remain constant.

T is the duration in hours of the exposure at the concentration C.

The value of E shall not exceed the 8-hour time weighted average specified in subpart Z of 29 CFR part 1910 for the substance involved.

(ii) To illustrate the formula prescribed in paragraph (4)(a)(i) of this section, assume that Substance A has an 8-hour time weighted average limit of 100 ppm (Oregon Table Z-1). Assume that an employee is subject to the following exposure:

Two hours exposure at 150 ppm

Two hours exposure at 75 ppm

Four hours exposure at 50 ppm

Substituting this information in the formula, we have

$$[(2 \times 150) + (2 \times 75) + (4 \times 50)] \div 8 = 81.25 \text{ ppm}$$

Since 81.25 ppm is less than 100 ppm, the 8-hour time weighted average limit, the exposure is acceptable.

(b) Mixtures.

(i) In case of a mixture of air contaminants an employer shall compute the equivalent exposure as follows:

$$E_m = (C_1 \div L_1) + (C_2 \div L_2) + \dots (C_n \div L_n)$$

Where:

E_m is the equivalent exposure for the mixture.

C is the concentration of a particular contaminant.

L is the exposure limit for that substance specified in Subpart Z of 29 CFR Part 1910.

The value of E_m shall not exceed unity (1).

(ii) To illustrate the formula prescribed in paragraph (4)(b)(i) of this section, consider the following exposures:

Table.

Substituting in the formula, we have:

$$E_m = (500 \div 1000) + (45 \div 200) + (40 \div 200)$$

$$E_m = 0.500 + 0.225 + 0.200$$

$$E_m = 0.925$$

Since E_m is less than unity (1), the exposure combination is within acceptable limits.

(5) To achieve compliance with paragraphs (1) through (4) of this section, administrative or engineering controls must

first be determined and implemented whenever feasible. When such controls are not feasible to achieve full compliance, protective equipment or any other protective measures shall be used to keep the exposure of employees to air contaminants within the limits prescribed in this section. Any equipment and/or technical measures used for this purpose must be approved for each particular use by a competent industrial hygienist or other technically qualified person. Whenever respirators are used, their use shall comply with 1910.134.

Table Z-1, Notes, Footnotes; Table Z-2, Note, Footnotes; Table Z-3, Notes, Footnotes.

STATUTORY/OTHER AUTHORITY: ORS 654.025(2), 656.726(4)

STATUTES/OTHER IMPLEMENTED: ORS 654.001 - 654.295

Example Table 1

Substance	8-Hour Time-Weighted Average	Acceptable Ceiling Concentration	Acceptable Max. Peak Above the Acceptable Ceiling Concentration for an 8-hour Shift		Skin
			Concentration	Maximum Duration	
Benzene (a) (Z87.4-1969)	10 ppm	25 ppm	50 ppm	10 min.	
Beryllium and beryllium compounds (Z37.17-1970)	2 µg/m ³	5 µg/m ³	25 µg/m ³	30 min.	
Carbon disulfide (Z37.3-1968)	20 ppm	30 ppm	100 ppm	30 min.	X
Carbon tetrachloride (Z37.19-1967)	10 ppm	25 ppm	200 ppm	5 min. in any 4 hours	

Example Table 2

<i>Substance</i>	<i>Actual concentration of 8-hour exposure</i>	<i>8-hour time weighted average exposure limits</i>
<i>B</i>	<i>500 ppm</i>	<i>1,000 ppm</i>
<i>C</i>	<i>45 ppm</i>	<i>200 ppm</i>
<i>D</i>	<i>40 ppm</i>	<i>200 ppm</i>

Table Z-1

Substance	CAS No. (c)	Ppm (a)	Mg/m ³ (b)	Skin
Abate	3383-96-8	—	10	
Acetaldehyde	75-07-0	100	180	
Acetic Acid	64-19-7	10	25	
Acetic anhydride	108-24-7	5	20	
Acetone	67-64-1	1,000	2,400	
Acetonitrile	75-05-8	40	70	
2-Acetylaminoflourine	53-96-3	(C)	(See 1910.1003)	
Acetylene	74-86-2	1,000	—	
Acetylene dichloride, see 1,2-Dichloroethylene				

Substance	CAS No. ^(c)	Ppm ^(a)	Mg/m ³ ^(b)	Skin
Acetylene tetrabromide	79-27-6	1	14	
Acrolein	107-02-8	0.1	0.25	
Acrylamide	79-06-1	—	0.3	x
Acrylonitrile	107-13-1		(See 1910.1045)	x
Aldrin	309-00-2	—	0.25	x
Allyl alcohol	107-18-6	2	5	x
Allyl chloride	107-05-1	1	3	
Allyl glycidyl ether (AGE)	106-92-3	5 (C) 10	22 (C) 45	
Allyl propyl disulfide	2179-59-1	2	12	
alpha Alumina	1344-28-1			
Total Dust		—	10	
Respirable Fraction		—	5	
Aluminum Metal Dust	7429-90-5			
Total Dust		—	10	
Respirable Fraction		—	5	
Alundum (A1203)		—	10	
4-Aminodiphenyl	92-67-1		(See 1910.1003)	
2-Aminoethanol, see Ethanolamine				
2-Aminopyridine	504-29-0	0.5	2	
Ammonia	7664-41-7	25	18	
Ammonium Chloride Fumes	12125-02-09	—	10	
Ammonium sulfamate	7773-06-0			
Total Dust		—	10	
Respirable Fraction		—	5	
n-Amyl acetate	628-63-7	100	525	
sec-Amyl Acetate	626-38-0	125	650	
Aniline and homologs	62-53-3	5	19	X
Anisidine (o, p-isomers)	29191-52-4	0.1	0.5	X
Antimony & Compounds (as Sb)	7440-36-0	—	0.5	
ANTU (alpha naphthyl-thiourea)	86-88-4	—	0.3	
Arsenic Inorganic Compounds (as As)	7440-38-2		(See 1910.1018) 0.01	
Arsenic Organic Compounds (as As)	7440-38-2	—	0.5	
Arsine	7784-42-1	0.05	0.2	
Asbestos		(See 1910.1001 and 1926.1101)		
Asphalt (petroleum) Fumes	8052-42-4	—	5	
Azinphos-methyl	86-50-1	—	0.2	X
Barium (soluble compounds)	7440-39-3	—	0.5	

Substance	CAS No. (c)	Ppm (a)	Mg/m ³ (b)	Skin
Barium Sulfate Total Dust Respirable Fraction	7727-43-7	— —	10 5	
Benomyl Total Dust Respirable Fraction	17804-35-2	— —	10 5	
Benzene See Oregon Table Z-2 for the limits applicable in the operations or sectors excluded in 1910.1028 ^(d)	71-43-2		(See 1910.1028)	
Benzidine	92-87-5		(See 1910.1003)	
p-Benzoquinone, see Quinone				
Benzoyl peroxide	94-36-0	—	5	
Benzyl chloride	100-44-7	1	5	
Beryllium and Beryllium compounds (as Be); see Division 2/Z Beryllium ^(k)	7440-41-7		(See Oregon Table Z-2)	
Biphenyl, see Diphenyl				
Bismuth telluride (undoped) Total Dust Respirable Fraction	1304-82-1	— —	10 5	
Bismuth telluride (Se-doped)		—	5	
Bisphenol A, see Diglycidyl ether				
Boron oxide	1303-86-2	—	10	
Boron tribromide	10294-33-4	1	10	
Boron trifluoride	7637-07-2	(C) 1	(C) 3	
Bromine	7726-95-6	0.1	0.7	
Bromine pentafluoride	7789-30-2	0.1	0.7	
Bromoform	75-25-2	0.5	5	X
Butadiene (1,3-Butadiene)	106-99-0	1 ppm/5 ppm STEL	(See 1910.1051; 1910.19(l))	
Butane	106-97-8	800	1,900	
Butanethiol, see Butyl mercaptan				
2-Butanone (Methyl Ethyl Ketone)	78-93-3	200	590	
2-Butoxyethanol (Butyl cellosolve)	111-76-2	50	240	X
Butyl acetate (n-Butyl acetate)	123-86-4	150	710	
sec-Butyl acetate	105-46-4	200	950	
tert-Butyl acetate	540-88-5	200	950	
n-Butyl alcohol	71-36-3	100	300	
sec-Butyl alcohol	78-92-2	150	450	
tert-Butyl alcohol	75-65-0	100	300	

Substance	CAS No. (c)	Ppm (a)	Mg/m ³ (b)	Skin
Butyl lactate	138-22-7	1	5	
Butylamine	109-73-9	(C) 5	(C) 15	X
tert-Butyl chromate (as CrO ₃)	1189-85-1	(See 1926.1126) ^(h)		
n-Butyl glycidyl ether (BGE)	2426-08-6	50	270	
Butyl mercaptan	109-79-5	0.5	1.5	
p-tert-Butyltoluene	98-51-1	10	60	
Cadmium dust and fume (as Cd)	7440-43-9	(See 1910.1027, 1926.1127 and Division 4) 0.005		
Calcium carbonate	1317-65-3			
Total Dust		—	10	
Respirable Fraction		—	5	
Calcium hydroxide	1305-62-0			
Total Dust		—	10	
Respirable Fraction		—	5	
Calcium oxide	1305-78-8	—	5	
Calcium silicate	1344-95-2			
Total Dust		—	10	
Respirable Fraction		—	5	
Calcium sulfate	7778-18-9			
Total Dust		—	10	
Respirable Fraction		—	5	
Camphor, synthetic	76-22-2	—	2	
Caprolactam (2-Oxonexa-methylenimine)	105-60-2	—	5	
Carbaryl (Sevin®)	63-25-2	—	5	
Carbon black	1333-86-4	—	3.5	
Carbon dioxide	124-38-9	5,000	9,000	
Carbon disulfide	75-15-0		(See Oregon Table Z-2)	
Carbon monoxide	630-08-0	50	55	
Carbon tetrachloride	56-23-5		(See Oregon Table Z-2)	
Cellulose	9006-34-6			
Total Dust		—	10	
Respirable Fraction		—	5	
Chlordane	57-74-9	—	0.5	X
Chlorinated camphene	8001-35-2	—	0.5	X
Chlorinated diphenyl oxide	55720-99-5	—	0.5	
Chlorine	7782-50-5	(C) 1	(C) 3	
Chlorine dioxide	10049-04-4	0.1	0.3	
Chlorine trifluoride	7790-91-2	(C) 0.1	(C) 0.4	
Chloroacetaldehyde	107-20-0	(C) 1	(C) 3	
o-Chloroacetophenone (phenacyl chloride)	532-27-4	0.05	0.3	
Chlorobenzene	108-90-7	75	350	
o-Chlorobenzylidene malononitrile	2698-41-1	0.05	0.4	

Substance	CAS No. (c)	Ppm (a)	Mg/m ³ (b)	Skin
Chlorobromomethane	74-97-5	200	1,050	
2-Chloro-1, 3-butadiene, see beta-Chloroprene				
Chlorodiphenyl (42% Chlorine)	53469-21-9	—	1	X
Chlorodiphenyl (54% Chlorine)	11097-69-1	—	0.5	X
1-Chloro, 2, 3-epoxypropane, see Epichlorhydrin				
2-Chloroethanol, see Ethylene Chlorohydrin				
Chloroethylene, see Vinyl Chloride				
Chloroform (trichloromethane)	67-66-3	(C) 25	(C) 120	
bis-Chloromethyl ether	542-88-1		(See 1910.1003)	
Chloromethyl methyl ether	107-30-2		(See 1910.1003)	
1-Chloro-1-nitropropane	600-25-9	20	100	
Chloropicrin	76-06-2	0.1	0.7	
Beta-Chloroprene (2-chloro-1,3-butadiene)	126-99-8	25	90	X
2-Chloro-6-(trichloromethyl) pyridine	1929-82-4			
Total Dust		—	10	
Respirable Fraction		—	5	
Chromic acid and chromates (as CrO ₃)			(See Oregon Table Z-2)	
Chromium (II) compounds (as Cr)	7440-47-3	—	0.5	
Chromium (III) compounds (as Cr)	7440-47-3	—	0.5	
Chromium (VI) compounds		(See 1926.1126) ⁽ⁱ⁾		
Chromium metal & insol. salts	7440-47-3	—	1	
Clopidol	2971-90-6			
Total Dust		—	10	
Respirable Fraction		—	5	
Coal Dust			(See Oregon Table Z-3)	
Coal tar pitch volatiles (Benzene soluble fraction) anthracene, BaP, phenanthracene, acridine, chrysene, pyrene	65966-93-2	—	0.2 (See 1910.1002)	
Cobalt metal, fume & dust	7440-48-4	—	0.1	
Coke oven emissions			(See 1910.1029)	
Copper fume	7440-50-8	—	0.1	
Dusts and Mists	7440-50-8	—	1	

Substance	CAS No. (c)	Ppm (a)	Mg/m ³ (b)	Skin
Corundum (A1203)	1302-74-5	—	10	
Cotton dust			(See 1910.1043)	
Cotton dust (raw)		—	1 (e)	
Crag® herbicide (Sesone)	136-78-7			
Total Dust		—	10	
Respirable Fraction		—	5	
Cresol (all isomers)	1319-77-3	5	22	X
Crotonaldehyde	123-73-9/ 4170-30-3	2	6	
Cumene	98-82-8	50	245	X
Cyanide (as CN)		—	5	X
Cyanogen	460-19-5	10	—	
Cyclohexane	110-82-7	300	1,050	
Cyclohexanol	108-93-0	50	200	
Cyclohexanone	108-94-1	50	200	
Cyclohexene	110-83-8	300	1,015	
Cyclopentadiene	542-92-7	75	200	
2,4-D (Dichlorophenoxyacetic acid)	94-75-7	—	10	
DDT	50-29-3	—	1	X
DDVP, see Dichlorvos				
Decaborane	17702-41-9	0.05	0.3	X
Demeton® (Systox)	8065-48-3	—	0.1	X
Diacetone alcohol (4-hydroxy-4-methyl-2-pentanone)	123-42-2	50	240	
1, 2-Diaminoethane, see Ethylenediamine				
Diazinon	333-41-5	—	0.1	X
Diazomethane	334-88-3	0.2	0.4	
Diborane	19287-45-7	0.1	0.1	
Dibrom®	300-76-5	—	3	
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.001	(See 1910.1044)	
1,2-Dibromoethane, see Ethylene dibromide				
2-N-Dibutylaminoethanol	102-81-8	2	14	X
Dibutyl phosphate	107-66-4	1	5	
Dibutyl phthalate	84-74-2	—	5	
Dichloroacetylene	7572-29-4	(C) 0.1	(C) 0.4	
o-Dichlorobenzene	95-50-1	(C) 50	(C) 300	
p-Dichlorobenzene	106-46-7	75	450	
3,3-Dichlorobenzidine	91-94-1		(See 1910.1003)	X
Dichlorodifluoromethane	75-71-8	1,000	4,950	

Substance	CAS No. ^(c)	Ppm ^(a)	Mg/m ³ ^(b)	Skin
1,3-Dichloro-5, 5-dimethyl hydantoin	118-52-5	—	0.2	
Dichlorodiphenyltrichloroethane (DDT)	50-29-3	—	1	X
1, 1-Dichloroethane	75-34-3	100	400	
1, 2-Dichloroethane, see Ethylene dichloride				
1, 2-Dichlorethylene	540-59-0	200	790	
Dichloroethyl Ether	111-44-4	5 (C) 15	30 (C) 90	X X
Dichloromethane, see Methylenechloride				
Dichloromonofluoromethane	75-43-4	1,000	4,200	
1, 1-Dichloro-1-nitroethane	594-72-9	(C) 10	(C) 60	
1, 2-Dichloropropane, see Propylene dichloride				
Dichlorotetrafluoroethane	76-14-2	1,000	7,000	
Dichlorvos (DDVP)	62-73-7	0.1	1	X
Dicyclohexylmethane 4,4'-diisocyanate (hydrogenated MDI, see Oregon Table Z-2 (Diisocyanates))	5124-30-1			
Dicyclopentadienyl iron Total Dust Respirable Fraction	102-54-5	— —	10 5	
Dieldrin	60-57-1	—	0.25	X
Diethylamine	109-89-7	25	75	
2-Diethylaminoethanol	100-37-8	10	50	X
Diethylene triamine	111-40-0	(C) 1	(C) 4	X
Diethylether, see Ethyl ether				
Difluorodibromomethane	75-61-6	100	860	
Diglycidyl ether (DGE)	2238-07-5	(C) 0.5	(C) 2.8	
Dihydroxybenzene, see Hydroquinone				
Diisobutyl ketone	108-83-8	25	150	
Diisopropylamine	108-18-9	5	20	X
Dimethoxymethane, see Methylal				
Dimethyl acetamide	127-19-5	10	35	X
Dimethylamine	124-40-3	10	18	
4-Dimethylaminoazobenzene	60-11-7		(See 1910.1003)	
Dimethylaminobenzene, see Xylidene				
Dimethylaniline (N,N-Dimethylaniline)	121-69-7	5	25	X
Dimethylbenzene, see Xylene				

Substance	CAS No. (c)	Ppm (a)	Mg/m ³ (b)	Skin
Dimethyl-1,2-dibromo-2,2-dichloroethyl phosphate	300-76-5	—	3	
Dimethylformamide	68-12-2	10	30	X
2,6-Dimethylheptanone, see Diisobutyl ketone				
1,1-Dimethylhydrazine	57-14-7	0.5	1	X
Dimethylphthalate	131-11-3	—	5	
Dimethyl sulfate	77-78-1	1	5	X
Dinitrobenzene (all isomers)	528-29-0/ 99-65-0/ 100-25-4			
Dinitro-o-cresol	534-52-1	—	0.2	X
Dinitrotoluene	25321-14-6	—	1.5	X
Dioxane (Diethylene dioxide)	123-91-1	100	360	X
Diphenyl (Biphenyl)	92-52-4	0.2	1	
Diphenylamine	122-39-4	—	10	
Diphenylmethane diisocyanate (MDI), see Oregon Table Z-2 (Diisocyanates)				
Dipropylene glycol methyl ether	34590-94-8	100	600	X
Diquat	231-36-7	—	0.5	
Di-sec, octyl phthalate (Di-2-ethyl-hexyl-phthalate)	117-81-7	—	5	
Emery	12415-34-8			
Total Dust		—	10	
Respirable Fraction		—	5	
Endosulfan (Thiodan®)	115-29-7	—	0.1	X
Endrin	72-20-8	—	0.1	X
Epichlorohydrin	106-89-8	5	19	X
EPN	2104-64-5	—	0.5	X
1,2-Epoxypropane, see Propylene oxide				
2,3-Epoxy-1-propanol, see Glycidol				
Ethane	74-84-0	1,000	—	
Ethanethiol, see Ethyl mercaptan				
Ethanolamine	141-43-5	3	6	
2-Ethoxyethanol (Cellosolve)	110-80-5	100	370	
2-Ethoxyethyl acetate (Cellosolve acetate)	111-15-9	100	540	X
Ethyl acetate	141-78-6	400	1,400	
Ethyl acrylate	140-88-5	25	100	X
Ethyl alcohol (ethanol)	64-17-5	1,000	1,900	
Ethylamine	75-04-7	10	18	
Ethyl amyl ketone (5-methyl-3-heptanone)	541-85-5	25	130	

Substance	CAS No. (c)	Ppm (a)	Mg/m ³ (b)	Skin
Ethyl benzene	100-41-4	100	435	
Ethyl bromide	74-96-4	200	890	
Ethyl butyl ketone (3-Heptanone)	106-35-4	50	230	
Ethyl chloride	75-00-3	1,000	2,600	
Ethyl ether	60-29-7	400	1,200	
Ethyl formate	109-94-4	100	300	
Ethyl mercaptan	75-08-1	0.5 (C) 10	1 (C) 25	
Ethyl silicate	78-10-4	100	850	
Ethylene	74-85-1	1,000	—	
Ethylene chlorohydrin	107-07-3	5	16	X
Ethylenediamine	107-15-3	10	25	
Ethylene dibromide	106-93-4		(See Oregon Table Z-2)	
Ethylene dichloride	107-06-2		(See Oregon Table Z-2)	
Ethylene glycol particulate		—	10	
Ethylene glycol, Vapor	107-21-1	100	260	
Ethylene glycol dinitrate	628-96-6	(C) 0.2	(C) 1	X
Ethylene glycol methyl acetate (Methyl cellosolve acetate) (2-Methoxy-ethyl acetate)	110-49-6	25	120	
Ethylenimine	151-56-4		(See 1910.1003)	
Ethylene oxide	75-21-8		(See 1910.1047)	
Ethylidene chloride, see 1,1-Dichloroethane				
N-Ethylmorpholine	100-74-3	20	94	X
Ferbam	14484-64-1			
Total Dust		—	10	
Respirable Fraction		—	5	
Ferrovandium dust	12604-58-9	—	1	
Fibrous glass, see Glass, Fibrous				
Fluorides (As F)		—	2.5 (See Oregon Table Z-2)	
Fluorine	7782-41-4	0.1	0.2	
Fluorotrichloromethane (Trichlorofluoromethane)	75-69-4	1,000	5,600	
Formaldehyde	50-00-0	0.75	(See 1910.1048)	
Formic acid	64-18-6	5	9	
Furfural	98-01-1	5	20	X
Furfuryl alcohol	98-00-0	5	20	

Substance	CAS No. ^(c)	Ppm ^(a)	Mg/m ³ ^(b)	Skin
Gasoline	8006-61-9	—	^(g)	
Germanium tetrahydride	7782-65-2	0.2	0.6	
Glass, Fibrous or dust		—	10	
Glycerin (mist)	56-81-5			
Total Dust		—	10	
Respirable Fraction		—	5	
Glycidol	556-52-5	50	150	
Glycol monoethyl ether, see 2-Ethoxyethanol				
Grain dust (oat, wheat, barley)		—	10	
Graphite natural, respirable	7782-42-5		(See Oregon Table Z-3)	
Graphite (Synthetic)	7782-42-5			
Total Dust		—	10	
Respirable Fraction		—	5	
Guthion®, see Azinphosmethyl				
Gypsum	13397-24-5			
Total Dust		—	10	
Respirable Fraction		—	5	
Hafnium	7440-58-6	—	0.5	
Heptachlor	76-44-8	—	0.5	X
Heptane (n-heptane)	142-82-5	500	2,000	
Hexachlorocyclopentadiene	77-47-4	0.1	1	
Hexachloroethane	67-72-1	1	10	X
Hexachloronaphthalene	1335-87-1	—	0.2	X
Hexafluoracetone	684-16-2	0.1	0.7	X
Hexamethylene diisocyanate (HDI), see Oregon Table Z-2 (Diisocyanates)	822-06-01			
1,6 Hexamethylene diisocyanate Based Adduct, see Oregon Table Z-2 (Diisocyanates)				
Hexane (n-hexane)	110-54-3	500	1,800	
2-Hexanone	591-78-6	100	410	
Hexone (Methyl isobutyl ketone)	108-10-1	100	410	
sec-Hexyl acetate	108-84-9	50	300	
Hydrazine	302-01-2	1	1.3	X
Hydrogen	1333-74-0	1,000	—	
Hydrogen bromide	10035-10-6	3	10	
Hydrogen chloride	7647-01-0	(C) 5	(C) 7	
Hydrogen cyanide	74-90-8	10	11	X
Hydrogen fluoride (as F)	7664-39-3		(See Oregon Table Z-2)	
Hydrogen peroxide	7722-84-1	1	1.4	
Hydrogen selenide (as Se)	7783-07-5	0.05	0.2	

Substance	CAS No. ^(c)	Ppm ^(a)	Mg/m ³ ^(b)	Skin
Hydrogen sulfide	7783-06-4		(See Oregon Table Z-2)	
Hydroquinone	123-31-9	—	2	
Indene	95-13-6	10	45	
Indium and compounds (as In)	7440-74-6	—	0.1	
Iodine	7553-56-2	(C) 0.1	(C) 1	
Iron oxide fume	1309-37-1	—	10	
Iron pentacarbonyl	13463-40-6	0.1	.23	
Iron salts, soluble, as Fe		—	1	
Isoamyl acetate	123-92-2	100	525	
Isoamyl alcohol (primary and secondary)	123-51-3	100	360	
Isobutyl acetate	110-19-0	150	700	
Isobutyl alcohol	78-83-1	100	300	
Isophorone	78-59-1	10	55	
Isophorone diisocyanate (IPDI), see Oregon Table Z-2 (Diisocyanates)	4098-71-9			
Isopropyl acetate	108-21-4	250	950	
Isopropyl alcohol	67-63-0	400	980	
Isopropylamine	75-31-0	5	12	
Isopropyl ether	108-20-3	250	1,050	
Isopropyl glycidyl ether (IGE)	4016-14-2	50	240	
Kaolin	1332-58-7			
Total Dust		—	10	
Respirable Fraction		—	5	
Ketene	463-51-4	0.5	0.9	
Lead, inorganic (as Pb)	7439-92-1	(See 1910.1025 & 1926.62)	(See 1910.1025 & 1926.62)	
Lead arsenate	7784-40-9	(See 1910.1018)	0.01	
Limestone	1317-65-3			
Total Dust		—	10	
Respirable Fraction		—	5	
Lindane	58-89-9	—	0.5	X
Lithium hydride	7580-67-8	—	0.025	
L.P.G. (Liquified petroleum gas)	68476-85-7	1,000	1,800	
Magnesite	546-93-0			
Total Dust		—	10	
Respirable Fraction		—	5	
Magnesium oxide fume	1309-48-4			
Total Dust		—	10	
Respirable Fraction		—	5	
Malathion	121-75-5	—	10	X
Maleic anhydride	108-31-6	0.25	1	

Substance	CAS No. (c)	Ppm (a)	Mg/m ³ (b)	Skin
Manganese Compounds (as Mn)	7439-96-5	—	(C) 5	
Manganese fume (as Mn)	7439-96-5	—	(C) 5	
Marble	1317-65-3			
Total Dust		—	10	
Respirable Fraction		—	5	
Mercury (aryl, inorganic, organo, and vapor) (as Hg)	7439-97-6		(See Oregon Table Z-2)	
Mesityl oxide	141-79-7	25	100	
Methane	74-82-8	1,000	—	
Methanethiol, see Methyl mercaptan				
Methoxychlor	72-43-5			
Total Dust		—	10	
Respirable Fraction		—	5	
2-Methoxyethanol (Methyl Cellosolve)	109-86-4	25	80	X
2-Methoxyethyl acetate (Methyl cellosolve acetate)	110-49-6	25	120	X
Methyl acetate	79-20-9	200	610	
Methyl acetylene (propyne)	74-99-7	1,000	1,650	
Methyl acetylene-propadiene mixture (MAPP)		1,000	1,800	
Methyl acrylate	96-33-3	10	35	X
Methylacrylonitrile	126-98-7	1	3	X
Methylal (dimethoxy-methane)	109-87-5	1,000	3,100	
Methyl alcohol (methanol)	67-56-1	200	260	
Methylamine	74-89-5	10	12	
Methyl amyl alcohol, see Methyl isobutyl carbinol				
Methyl (n-amyl) ketone	110-43-0	100	465	
Methyl bromide	74-83-9	15 (C) 20	60 (C) 80	X
Methyl butyl ketone, see 2-Hexanone				
Methyl cellosolve, see 2 Methoxy ethanol				X
Methyl cellosolve acetate (Ethylene glycol monomethyl ether acetate)	110-49-6	25	120	X
Methyl Chloride	74-87-3		(See Oregon Table Z-2)	
Methyl Chloroform (1,1,1-Trichloroethane)	71-55-6	350	1,900	
Methyl Chloromethyl ether			(See 1910.1003)	
Methyl 2-cyanoacrylate	137-05-3	2	8	
Methylcyclohexane	108-87-2	500	2,000	

Substance	CAS No. ^(c)	Ppm ^(a)	Mg/m ³ ^(b)	Skin
Methylcyclohexanol	25639-42-3	50	235	
o-Methylcyclohexanone	583-60-8	50	230	X
2-Methylcyclopentadienyl manganese tricarbonyl (as Mn)	12108-13-3	0.1	0.2	X
Methyl demeton	8022-00-2	—	0.5	X
Methyl ethyl ketone (MEK), see 2-Butanone				
Methyl formate	107-31-3	100	250	
Methyl iodide	74-88-4	5	28	X
Methyl isoamyl ketone	110-12-3	100	475	
Methyl isobutyl carbinol	108-11-2	25	100	X
Methyl isobutyl ketone, see Hexone				
Methyl isocyanate	624-83-9	0.02	0.05	X
Methyl mercaptan	74-93-1	0.5 (C) 10	1 (C) 20	
Methyl methacrylate	80-62-6	100	410	
Methyl parathion	298-00-0	—	0.2	X
Methyl propyl ketone, see 2-Pentanone				
Methyl silicate	681-84-5	(C) 5	(C) 30	
a-Methyl styrene	98-83-9	(C) 100	(C) 480	
Methylene bisphenyl isocyanate (MDI)	101-68-8	(See Oregon Table Z-2 (diisocyanates))		
Methylenedianiline (MDA)		(See 1910.1050 & 1926.60)	0.01	
Methylene Chloride	75-09-2	25	(See 1910.1052)	
Mineral Wool Fiber		—	10	
MOCA	101-14-4		(See 437-002-0346)	
Molybdenum (soluble compounds)	7439-98-7	—	5	
(insoluble compounds)		—	10	
Monomethyl aniline	100-61-8	2	9	X
Monomethyl hydrazine	60-34-4	(C) 0.2	(C) 0.35	X
Morpholine	110-91-8	20	70	X
Naphtha (coal tar)	8030-30-6	100	400	
Naphthalene	91-20-3	10	50	
Naphthalene diisocyanate (NDI), see Oregon Table Z-2 (Diisocyanates)	3173-72-6			
Alpha naphthylamine	134-32-7		(See 1910.1003)	
B-Naphthylamine	91-59-8		(See 1910.1003)	

Substance	CAS No. ^(c)	Ppm ^(a)	Mg/m ³ ^(b)	Skin
Nickel carbonyl (as Ni)	13463-39-3	0.001	0.007	
Nickel, metal and insoluble compounds, as Ni	7440-02-0	—	1	
Nickel, soluble compounds, (as Ni)	7440-02-0	—	1	
Nicotine	54-11-5	0.075	0.5	X
Nitric acid	7697-37-2	2	5	
Nitric oxide	10102-43-9	25	30	
p-Nitroaniline	100-01-6	1	6	
Nitrobenzene	98-95-3	1	5	X
4-Nitrodiphenyl	92-93-3		(See 1910.1003)	
p-Nitrochlorobenzene	100-00-5	—	1	X
Nitroethane	79-24-3	100	310	
Nitrogen dioxide	10102-44-0	(C) 5	(C) 9	
Nitrogen trifluoride	7783-54-2	10	29	
Nitroglycerin	55-63-0	(C) 0.2	(C) 2	X
Nitromethane	75-52-5	100	250	
1-Nitropropane	108-03-2	25	90	
2-Nitropropane	79-46-9	25	90	
N-Nitrosodimethylamine			(See 1910.1003)	
Nitrotoluene (all isomers)	88-72-2/ 99-08-1/ 99-99-0	5	30	X
Nitrotrichloromethane, see Chloropicrin				
Nitrous oxide	10024-97-2	50	90	
Octachloronaphthalene	2234-13-1	—	0.1	X
Octane	111-65-9	400	1,900	
Oil mist (mineral)	8012-95-1	—	5	
Oil mist, vapor		—	^(g)	
Osmium tetroxide (as Os)	20816-12-0		0.002	
Oxalic acid	144-62-7	—	1	
Oxygen difluoride	7783-41-7	0.05	0.1	
Ozone	10028-15-6	0.1	0.2	
Parafin wax fume	8002-74-2	—	1	
Paraquat respirable dust	4685-14-7/ 1910-42-5/ 2074-50-2	—	0.5	X
Parathion	56-38-2	—	0.1	X
Particulates not otherwise regulated (PNOR)^(f)				
Total Dust		—	10	
Respirable Fraction		—	5	
Pentaborane	19624-22-7	0.005	0.01	

Substance	CAS No. (c)	Ppm (a)	Mg/m ³ (b)	Skin
Pentachloronaphthalene	1321-64-8	—	0.5	X
Pentachlorophenol	87-86-5	—	0.5	X
Pentaerythritol	115-77-5			
Total Dust		—	10	
Respirable Fraction		—	5	
Pentane	109-66-0	500	1,500	
2-Pentanone (Methyl propyl ketone)	107-87-9	200	700	
Perchloroethylene (tetrachloroethylene)	127-18-4		(See Oregon Table Z-2)	
Perchloromethyl mercaptan	594-42-3	0.1	0.8	
Perchloryl fluoride	7616-94-6	3	13.5	
Perlite	93763-70-3			
Total Dust		—	10	
Respirable Fraction		—	5	
Petroleum distillates (naphtha) (Rubber Solvent)		500	2,000 (g)	
Phenol	108-95-2	5	19	X
Phenothiazine	92-84-2	—	5	X
p-Phenylene diamine	106-50-3	—	0.1	X
Phenyl ether (vapor)	101-84-8	1	7	
Phenyl ether - biphenyl mixture (vapor)	8004-13-5	1	7	
Phenylethylene, see Styrene				
Phenyl glycidyl ether (PGE)	122-60-1	10	60	
Phenylhydrazine	100-63-0	5	22	X
Phenylphosphine	638-21-1	(C) 0.05	(C) 0.25	
Phosdrin (Mevinphos®)	7786-34-7		0.1	X
Phosgene (carbonyl chloride)	75-44-5	0.1	0.4	
Phosphine	7803-51-2	0.3	0.4	
Phosphoric acid	7664-38-2	—	1	
Phosphorus (yellow)	7723-14-0	—	0.1	
Phosphorus pentachloride	10026-13-8	—	1	
Phosphorus pentasulfide	1314-80-3	—	1	
Phosphorus trichloride	7719-12-2	0.5	3	
Phthalic anhydride	85-44-9	2	12	
Picloram	1918-02-1			
Total Dust		—	10	
Respirable Fraction		—	5	
Picric acid	88-89-1	—	0.1	X
Pindone (2-Pivalyl-1, 3-indandione)	83-26-1	—	0.1	
Plaster of Paris	26499-65-0			
Total Dust		—	10	
Respirable Fraction		—	5	
Platinum (Soluble Salts) as Pt	7440-06-4	—	0.002	

Substance	CAS No. (c)	Ppm (a)	Mg/m ³ (b)	Skin
Polychlorobiphenyls, see Chlorodiphenyls				
Portland Cement Total Dust Respirable Fraction	65997-15-1	— —	10 5	
Propane	74-98-6	1,000	1,800	
Beta-Propiolactone	57-57-8		(See 1910.1003)	
Propargyl alcohol	107-19-7	1	—	X
n-Propyl acetate	109-60-4	200	840	
n-Propyl alcohol	71-23-8	200	500	
n-Propyl nitrate	627-13-4	25	110	
Propylene dichloride	78-87-5	75	350	
Propylene glycol monomethyl ether	107-98-2	100	360	
Propylene imine	75-55-8	2	5	X
Propylene oxide	75-56-9	100	240	
Propyne, see Methyl acetylene				
Pyrethrum	8003-34-7	—	5	
Pyridine	110-86-1	5	15	
Quinone	106-51-4	0.1	0.4	
RDX (Cyclonite)	121-82-4	—	1.5	X
Rhodium, Metal fume and dusts, as Rh Soluble salts	7440-16-6 7440-16-6	— —	0.1 0.001	
Ronnel	299-84-3	—	10	
Rosin core solder pyrolysis Products (as Formaldehyde)		—	0.1	
Rotenone	83-79-4	—	5	
Rouge Total Dust Respirable Fraction		— —	10 5	
Selenium compounds (as Se)	7782-49-2	—	0.2	
Selenium hexafluoride (as Se)	7783-79-1	0.05	0.4	
Silica, crystalline, respirable dust^(d) Cristobalite Quartz Tripoli (as quartz) Tridamite	14464-46-1 14808-60-7 1317-95-9 15468-32-3	—	(See Division 2/Z Silica)	
Silicon Total Dust Respirable Fraction	7440-21-3	— —	10 5	
Silicon carbide Total Dust Respirable Fraction	409-21-2	— —	10 5	
Silver, metal and soluble compounds (as Ag)	7440-22-4	—	0.01	

Substance	CAS No. ^(c)	Ppm ^(a)	Mg/m ³ ^(b)	Skin
Sodium fluoroacetate	62-74-8	—	0.05	X
Sodium hydroxide	1310-73-2	—	2	
Starch	9005-25-8			
Total Dust		—	10	
Respirable Fraction		—	5	
Stibine	7803-52-3	0.1	0.5	
Stoddard solvent	8052-41-3	200	1,150	
Strychnine	57-24-9	—	0.15	
Styrene	100-42-5		(See Oregon Table Z-2)	
Subtilisins (Proteolytic enzymes) (as 100% pure crystalline enzyme)	1395-21-7	—	(C) 0.0003	
Sucrose	57-50-1			
Total Dust		—	10	
Respirable Fraction		—	5	
Sulfur dioxide	7446-09-5	5	13	
Sulfur hexafluoride	2551-62-4	1,000	6,000	
Sulfuric acid	7664-93-9	—	1	
Sulfur monochloride	10025-67-9	1	6	
Sulfur pentafluoride	5714-22-7	0.025	0.25	
Sulfur tetrafluoride	7783-60-0	0.1	0.4	
Sulfuryl fluoride	2699-79-8	5	20	
Systox, see Demeton®				
2, 4, 5-T	93-76-5	—	10	
Tantalum, metal and oxide dust	7440-25-7	—	5	
TEDP (Sulfotepp)	3689-24-5	—	0.2	X
Tellurium and compounds (as Te)	13494-80-9	—	0.1	
Tellurium hexafluoride (as Te)	7783-80-4	0.02	0.2	
Temephos	3383-96-8			
Total Dust		—	10	
Respirable Fraction		—	5	
TEPP (Tetraethyl pyrophosphate)	107-49-3	0.004	0.05	X
Terphenyls	26140-60-3	(C) 1	(C) 9	
1, 1, 1, 2-Tetrachloro-2,2- difluoroethane	76-11-9	500	4,170	
1, 1, 2, 2-Tetrachloro-1,2- difluoroethane	76-12-0	500	4,170	
1, 1, 2, 2-Tetrachloroethane	79-34-5	5	35	X
Tetrachloroethylene, see Perchloroethylene				
Tetrachloronaphthalene	1335-88-2	—	2	X
Tetrachloromethane, see Carbon tetrachloride				
Tetraethyl lead (as Pb)	78-00-2	—	0.075	X

Substance	CAS No. (c)	Ppm (a)	Mg/m ³ (b)	Skin
Tetrahydrofuran	109-99-9	200	590	
Tetramethyl lead (as Pb)	75-74-1	—	0.075	X
Tetramethyl succinonitrile	3333-52-6	0.5	3	X
Tetranitromethane	509-14-8	1	8	
Tetryl (2, 4, 6-trinitro-phenyl-methyl-nitramine)	479-45-8	—	1.5	X
Thallium (soluble compounds) as Tl	7440-28-0	—	0.1	X
4,4'-Thiobis (6-tert, Butyl-m-cresol) Total Dust Respirable Fraction	96-69-5	— —	10 5	
Thiram	137-26-8		(See 437-002-0373) 0.15	
Tin (inorganic compounds, except oxides) as Sn	7440-31-5	—	2	
Tin (organic compounds)	7440-31-5	—	0.1	
Tin oxide Total Dust Respirable Fraction	1332-29-2	— —	10 5	
Titanium dioxide	13463-67-7	—	10	
Toluene (toluol)	108-88-3		(See Oregon Table Z-2)	
Toluene diisocyanate (TDI), See Oregon Table Z-2 (Diisocyanates)	584-84-9			
o-Toluidine	95-53-4	5	22	X
Toxaphene, see Chlorinated camphene				
Tributyl phosphate	126-73-8	—	5	
1, 1, 1-Trichloroethane, see Methyl chloroform				
1, 1, 2-Trichloroethane	79-00-5	10	45	X
Trichloroethylene	79-01-6		(See Oregon Table Z-2)	
Trichloromethane, see Chloroform				
Trichloronaphthalene	1321-65-9	—	5	
1, 2, 3-Trichloropropane	96-18-4	50	300	
1, 1, 2-Trichloro 1, 2, 2-trifluoroethane	76-13-1	1,000	7,600	
Triethylamine	121-44-8	25	100	
Trifluorobromomethane	75-63-8	1,000	6,100	
Trimethyl benzene	25551-13-7	25	120	
2, 4, 6-Trinitrophenol, see Picric acid				

Substance	CAS No. (c)	Ppm (a)	Mg/m ³ (b)	Skin
2, 4, 6-Trinitrophenylmethyl-nitramine, see Tetryl				
Trinitrotoluene (TNT)	118-96-7		1.5	X
Triorthocresyl phosphate	78-30-8	—	0.1	
Triphenyl phosphate	115-86-6	—	3	
Tungsten & compounds, as W	7440-33-7			
Soluble		—	1	
Insoluble		—	5	
Turpentine	8006-64-2	100	560	
Uranium (as U)	7440-61-1			
Soluble compounds		—	0.05	
Insoluble compounds		—	0.2	
Vanadium respirable dust				
(as V ₂ O ₅)	1314-62-1	—	(C) 0.5	
Fume (as V ₂ O ₅)	1314-62-1	—	(C) 0.05	
Vegetable oil mist				
Total Dust		—	10	
Respirable Fraction		—	5	
Vinyl acetate	108-05-4	10	30	
Vinyl benzene, see Styrene				
Vinyl bromide	593-60-2	250	1,100	
Vinyl chloride	75-01-4		(See 1910.1017)	
Vinyl cyanide, see Acrylonitrile				
Vinyl toluene	25013-15-4	100	480	
Warfarin	81-81-2	—	0.1	
Wood Dust (non-allergenic)		—	10	
Xylene (o-, m-, p-isomers)	1330-20-7	100	435	
Xylidine	1300-73-8	5	25	X
Yttrium	7440-65-5	—	1	
Zinc chloride fume	7646-85-7	—	1	
Zinc oxide	1314-13-2			
Total Dust		—	10	
Respirable Fraction		—	5	
Zinc oxide fume	1314-13-2	—	5	
Zinc stearate	557-05-1			
Total Dust		—	10	
Respirable Fraction		—	5	
Zirconium compounds (as Zr)	7440-67-7	—	5	

Note: Bold print identifies substances for which the Oregon Permissible Exposure Limits (PELs) are different than the federal Limits.

Note: PNOR means "particles not otherwise regulated."

FOOTNOTES:

- (a) Parts of vapor or gas per million parts of contaminated air by volume at 25°C and 760 torr.
- (b) Milligrams of substance per cubic meter of air. When entry is in this column only, the value is exact; when listed with a ppm entry, it is approximate.
- (c) The CAS number is for information only. Enforcement is based on the substance name. For an entry covering more than one metal compound, measured as the metal, the CAS number for the metal is given – not CAS numbers for the individual compounds.
- (d) The final benzene standard in 1910.1028 applies to all occupational exposures to benzene except in some circumstances the distribution and sale of fuels, sealed containers and pipelines, coke production, oil and gas drilling and production, natural gas processing, and the percentage exclusion for liquid mixtures; for the excepted subsegments, the benzene limits in Oregon Table Z-2 apply. See 1910.1028 for specific circumstances.
- (e) This 8-hour TWA applies to respirable dust as measured by a vertical elutriator cotton dust sampler or equivalent instrument. The time weighted average applies to the cotton waste processing operations of waste recycling (sorting, blending, cleaning, and willowing) and garnetting. See also 1910.1043 for cotton dust limits applicable to other sectors.
- (f) All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by the Particulates Not Otherwise Regulated (PNOR) limit which is the same as the inert or nuisance dust limit of Oregon Table Z-3.
- (g) Usually a mixture, in general the aromatic hydrocarbon content will determine which TWA applies.
- (h) If the exposure limit in 1926.1126 is stayed or is otherwise not in effect, the exposure limit is a ceiling of 0.1 mg/m³.
- (i) If the exposure limit in 1926.1126 is stayed or is otherwise not in effect, the exposure limit is 0.1 mg/m³ (as CrO₃) as an 8-hour TWA.
- (j) See Table Z-3 for the exposure limit for any operations or sectors where the exposure limit in Division 2/Z-Silica is stayed or is otherwise not in effect.
- (k) This standard applies to any operations or sectors for which the beryllium standard, Division 2/Z Beryllium, is stayed or otherwise is not in effect.

Oregon Table Z-2 Air Contaminants

Substance	8-Hour Time Weighted Average	Acceptable Ceiling Concentration	Acceptable Max. Peak Above the Acceptable Ceiling Concentration for an 8-Hour Shift		Skin
			Concentration	Maximum Duration	
Benzene ^(a) (Z87.4-1969)	10 ppm	25 ppm	50 ppm	10 min.	

Substance	8-Hour Time Weighted Average	Acceptable Ceiling Concentration	Acceptable Max. Peak Above the Acceptable Ceiling Concentration for an 8-Hour Shift		Skin
			Concentration	Maximum Duration	
Beryllium, and beryllium compounds (Z37.29-1970)	2 µg/m ³	5 µg/m ³	25 µg/m ³	30 min.	
Cadmium fume ^(b) (Z37.5-1970)	0.1 mg/m ³	0.3 mg/m ³			
Cadmium dust ^(b) (Z37.5-1970)	0.2 mg/m ³	0.6 mg/m ³			
Carbon disulfide (Z37.3-1968)	20 ppm	30 ppm	100 ppm	30 min.	X
Carbon tetrachloride (Z37.17-1967)	10 ppm	25 ppm	200 ppm	5 min. in any 4 hrs	
Chromic acid and chromates (Z37.7-1971) (as CrO ₃) ^(c)		0.1 mg/m ³			
Ethylene dibromide (Z37.31-1970)	20 ppm	30 ppm	50 ppm	5 min.	X
Ethylene dichloride (Z37.21-1969)	50 ppm	100 ppm	200 ppm	5 min. in any 3 hrs	
Fluoride as dust (Z37.28-1969)	2.5 mg/m ³				
Formaldehyde (see 1910.1048)					
Hydrogen fluoride (Z37.28-1969)	3 ppm				
Hydrogen sulfide (Z37.2-1966)		20 ppm	50 ppm	10 min. once, only if no other measureable exposure occurs	
Mercury (Z37.8-1971)	0.05 mg/m³	0.1 mg/m³			X
Methyl chloride (Z37.18-1969)	100 ppm	200 ppm	300 ppm	5 min. in any 3 hrs	
Organo (alkyl) mercury (Z37.30-1969)	0.001 mg/m³	0.01 mg/m³			X
Styrene (Z37.15-1969)	100 ppm	200 ppm	600 ppm	5 min. in any 3 hrs	
Tetrachloroethylene (Z37.22-1967)	100 ppm	200 ppm	300 ppm	5 min. in any 3 hrs	
Toluene (Z37.12-1967)	100 ppm	300 ppm	500 ppm	10 min.	

Substance	8-Hour Time Weighted Average	Acceptable Ceiling Concentration	Acceptable Max. Peak Above the Acceptable Ceiling Concentration for an 8-Hour Shift		Skin
			Concentration	Maximum Duration	
Trichloroethylene (Z37.19-1967)	100 ppm	200 ppm	300 ppm	5 min. in any 2 hrs	
Diisocyanates					
Dicyclohexylmethane 4,4'-diisocyanate (hydrogenated MDI)	.055 mg/m .005 ppm	.210 mg/m ³ .02 ppm			
Diphenylmethane diisocyanate (MDI)	.050 mg/m ³ .005 ppm	.200 mg/m ³ .02 ppm			
Hexamethylene diisocyanate (HDI)	.035 mg/m ³ .005 ppm	.140 mg/m ³ .02 ppm			
1,6 Hexamethylene diisocyanated Based Adduct (includes HDI-Biuret trimer, and other polymeric forms of HDI, including isocyanurates)	0.5 mg/m ³	1.0 mg/m ³			
Isophorone diisocyanate (IPDI)	.045 mg/m ³ .005 ppm	.180 mg/m ³ .02 ppm			
Napthalene diisocyanate (NDI)	.040 mg/m ³ .005 ppm	.170 mg/m ³ .02 ppm			
Toluene diisocyanate (TDI)	.035 mg/m ³ .005 ppm	.140 mg/m ³ .02 ppm			

Note: Bold print identifies substances for which the Oregon Permissible Exposure Limits (PELs) are different than the federal limits.

FOOTNOTES:

(a) This standard applies to the industry segments exempt from the 1 ppm 8-hour TWA and 5 ppm STEL of the Benzene Standard, 1910.1028.

(b) This standard applies to any operations on sectors for which the Cadmium Standard, 1910.1027, is stayed or otherwise not in effect.

(c) This standard applies to any operations or sectors for which the exposure limit in the Chromium (VI) standard, 1926.1126, is stayed or is otherwise not in effect.

Oregon Table Z-3

Substance	mppcf ^(a)	mg/m ³
Silica: Crystalline Quartz (respirable)		0.1 mg/m ³
Quartz (total dust)		$\frac{30 \text{ mg/m}^3}{\% \text{SiO}_2 + 2}$
Cristobalite (respirable) Tridymite: Use 1/2 the value calculated from the formulae for quartz.		0.05 mg/m ³
Amorphous, including natural diatomaceous earth	20	$\frac{80 \text{ mg/m}^3}{\% \text{SiO}_2}$
Silicates (less than 1% crystalline silica):		
Mica	20	
Soapstone	20	
Talc (not containing asbestos)	20 ^(c)	
Talc (containing asbestos) Use asbestos limit; see 1926.1101.	20	
Tremolite, asbestiform (see OAR 437, Div. 2/Z, 1910.1001 and 1926.1101, Asbestos).		
Portland cement	50	
Graphite (Natural)		5 mg/m ³
Coal Dust: Respirable fraction less than 5% SiO ₂		2.4 mg/m ^{3(e)(f)}
Coal Dust: Respirable fraction greater than 5% SiO ₂		0.1 mg/m ^{3(e)}
Inert or Nuisance Dust: ^(d) Respirable fraction Total dust		5 mg/m ³ 10 mg/m ³

Note: Bold print identifies substances for which the Oregon Permissible Exposure Limits (PELs) are different than the federal limits.

Note: Conversion factors - mppcf x 35.3 = million particles per cubic meter = particles per c.c.

FOOTNOTES:

(a) Millions of particles per cubic foot of air, based on impinger samples counted by light-field techniques.

(b) The percentage of crystalline silica in the formula is the amount determined from airborne samples, except in those instances in which other methods have been shown to be applicable.

(c) Containing less than 1% quartz; if 1% quartz or more, use quartz limit.

(d) All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by this limit, which is the same as the Particulates Not Otherwise Regulated (PNOR) limit in Oregon Table Z-1.

(e) Silica sampling methods must conform to OSHA or NIOSH sampling methods for respirable quartz silica.

(f) The measurements under this note refer to the use of an AEC (now NRC) instrument. If the respirable fraction of coal dust is determined with a MRE the figure corresponding to that of 2.4 mg/m³ in the table for coal dust is 4.5 mg/m³.

AMEND: 437-003-3224

RULE TITLE: Vehicle Drivers and Riders

NOTICE FILED DATE: 08/27/2019

RULE SUMMARY: At (12) Traffic Control, updates Oregon's Vehicle Drivers and Riders rules for construction to reference the 2009 Edition of the Manual of Uniform Traffic Control Devices (MUTCD) -- including two revisions dated May 2012 -- as incorporated by reference in 1926.6.

RULE TEXT:

(1) Scope. This rule applies, without regard to vehicle ownership when your employees drive or ride as part of their employment.

NOTE: The Oregon Bureau of Labor and Industries (BOLI) administers rules about using minors as drivers. Please contact the nearest BOLI office for more information.

(2) Driver Qualifications. You must not allow an employee to drive a vehicle on a public highway or road unless they have a valid driver's license appropriate for that type vehicle.

(3) General Safety.

(a) Do not allow employees to drive or ride in any vehicle known to be unsafe.

(b) Require employees to report any safety problems effecting vehicles you own or provide.

(4) Rider Safety — General.

(a) Except as in (5), (6) and (7), do not allow employees to occupy a vehicle in excess of its seating capacity.

(b) Require employees to comply with all applicable seatbelt and traffic safety laws.

(5) Rider Safety in the Bed of Dump Trucks, Pickups and Similar Vehicles. Do not transport workers in the beds of dump trucks, pickups or similar vehicles unless these conditions are met when applicable:

(a) When seating is available, it must be secure to the floor and passengers may not stand.

(b) The bed is secure to the frame. Beds that tilt or slide must be secure from movement.

(c) Dump beds must be secure or the activating lever locked.

(d) The total height of the sides of the transport area must be at least 42 inches. If riders sit on the floor, the height must be at least 24 inches.

(e) There must be a tailgate the same height as the sides or three evenly spaced chains, cables or ropes taut across the back.

(f) Not more than 4 workers may ride on a flatbed without sides or a tailgate and then only when the speed will not be more than 30 mph. There must be two handholds for each rider.

(g) Workers must not ride in space with cargo unless it is secure from movement.

(6) Standing Rider Safety — Buses. Riders must not sit on the floor while the vehicle is moving. Riders may stand if these conditions are met:

(a) There must be an aisle at least 12 inches wide leading to the emergency exit.

(b) There are no seats in or boards across the aisle.

(c) There must be handholds for standing riders.

(d) Not more than one rider per row of seats may stand.

(e) Riders may not sit or stand near the driver and not ahead of the forward-most row of seats.

(f) Workers in transit must not stand for more than one hour or 45 miles, whichever is less. At the end of that period, the standing workers must get a seat or the vehicle must stop for a 15-minute rest allowing the workers to get out.

(7) Fueling.

(a) There must be no smoking or other source of ignition within 25 feet of any refueling operation.

(b) Do not fill any container that is not bonded or grounded while it is inside the vehicle, in the pickup bed or anyplace other than on the ground.

- (c) Stop the engine (except diesels) during fueling.
- (d) Refueling vehicles with LPG must be outdoors.
- (8) Hauling gasoline or flammable liquid.
 - (a) For buses, vehicles that carry 16 or more, crew trucks, vans and passenger cars, use only DOT or UL approved containers that hold 5 gallons or less and secure them in an area separate from passengers.
 - (b) For pickups, flatbeds and other vehicles not in (a), there is no container size limit as long it is not in an enclosed passenger area.
- (9) Hauling Explosives. When hauling explosives, only the driver and one qualified person may be in the vehicle. Comply with 1910.109 and 437-002-0109.
- (10) Loading or Unloading. When loading or unloading vehicles in a manner that is likely to cause the vehicle to move, set the brakes and chock the wheels.
- (11) High Voltage Clearances. When operating a vehicle near overhead lines carrying more than 600v, OAR 437-002-0047 applies for general industry employers and OAR 437-003-0047 applies for Construction employers.
- (12) Traffic Control. Adequate and appropriate traffic control devices must be used when vehicles are parked on or adjacent to a highway, street, or road in a way that creates a hazard and when traffic cannot adjust safely on its own. The traffic control devices' design and use must conform to the Manual of Uniform Traffic Control Devices (MUTCD), incorporated by reference in 1926.6.

NOTE: The MUTCD is available electronically at mutcd.fhwa.dot.gov, or printed copies are available to purchase from the American Traffic Safety Services Association, 1-800-231-3475, www.atssa.com; the Institute of Transportation Engineers, 202-785-0060, www.ite.org; or the American Association of State Highway and Transportation Officials, 1-800-231-3475, store.transportation.org.

NOTE: Employers who follow the most current edition of the Oregon Department of Transportation's Temporary Traffic Control Handbook are considered in compliance with this requirement.

STATUTORY/OTHER AUTHORITY: ORS 654.025(2), 656.726(3)

STATUTES/OTHER IMPLEMENTED: ORS 654.001 - 654.295

AMEND: 437-005-0001

RULE TITLE: Adoption by Reference

NOTICE FILED DATE: 08/27/2019

RULE SUMMARY: Adoption by Reference into Division 5, Maritime Activities.

RULE TEXT:

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.
- (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.
- (I) 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'Dichlorobenzidene (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.

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