

Chapter 296-71 WAC REFINERY WORKER TRAINING AND CERTIFICATION IN HIGH HAZARD FACILITIES

(Form Number F414-185-000)

This book contains rules for Safety Standards for refinery worker training and certification in high hazard facilities, as adopted under the Washington Industrial Safety and Health Act of 1973 (Chapter 49.17 RCW).

The rules in this book are effective October 2022. A brief promulgation history, set within brackets at the end of this chapter, gives statutory authority, administrative order of promulgation, and date of adoption of filing.

TO RECEIVE E-MAIL UPDATES:

- Sign up at https://public.govdelivery.com/accounts/WADLI/subscriber/new?topic_id=WADLI_19

TO PRINT YOUR OWN PAPER COPY OR TO VIEW THE RULE ONLINE:

- Go to <https://www.lni.wa.gov/safety-health/safety-rules/rules-by-chapter/?chapter=71/>

DOSH CONTACT INFORMATION:

- **Physical address:**
7273 Linderson Way
Tumwater, WA 98501-5414
(Located off I-5 Exit 101 south of Tumwater.)
- **Mailing address:**
DOSH Standards and Information
PO Box 44810
Olympia, WA 98504-4810
- Telephone: 1-800-423-7233
- For all L&I Contact information, visit <http://www.lni.wa.gov/agency/contact/>

Also available on the L&I Safety & Health website:

- DOSH Core Rules
- Other General Workplace Safety & Health Rules
- Industry and Task-Specific Rules
- Proposed Rules and Hearings
- Newly Adopted Rules and New Rule Information
- DOSH Directives (DD's)
- See <http://www.lni.wa.gov/Safety-Health/>

WAC	Page
<i>WAC 296-71-001 Purpose and scope.....</i>	<i>1</i>
<i>WAC 296-71-003 Definitions.</i>	<i>1</i>
<i>WAC 296-71-010 Skilled and trained workforce requirements.</i>	<i>2</i>
<i>WAC 296-71-020 Training certification.</i>	<i>3</i>
<i>WAC 296-71-030 Training course approval.....</i>	<i>3</i>
<i>WAC 296-71-040 Reciprocity.</i>	<i>6</i>
<i>WAC 296-71-050 Denial, suspension, and revocation.</i>	<i>6</i>

Chapter 296-71 WAC

REFINERY WORKER TRAINING AND CERTIFICATION IN HIGH HAZARD FACILITIES

(Form Number F 414-185-000)

WAC 296-71-001 Purpose and scope.

This standard contains requirements under chapter 49.80 RCW for:

- (1) Owners and operators of petroleum refining or petrochemical manufacturing facilities to use a skilled and trained workforce when contracting for construction, alteration, demolition, installation, repair or maintenance work at the stationary source.
- (2) Training and certification of the skilled and trained workforce, including training course approval, and the issuance of worker certification.

WAC 296-71-003 Definitions.

Unless the context clearly requires otherwise, the definitions in this section apply throughout this chapter.

Apprenticeable occupation. An occupation for which an apprenticeship program has been approved by the Washington state apprenticeship and training council pursuant to chapter 49.04 RCW.

Approved. Approved by the department.

Competent instructor. An instructor who has demonstrated satisfactory performance in the occupation for a minimum of three years beyond the customary learning period for that occupation and who:

- (a) Meets the requirements of the state board for community and technical colleges for a vocational-technical instructor; or
- (b) Is recognized within an industry as having expertise in a specific occupation and is a subject matter expert; and
- (c) Has training in teaching techniques and adult learning styles. The training may be acquired before, or within one year after, the competent instructor begins to provide related supplemental instruction.

Department. The department of labor and industries.

Director. The director of the department of labor and industries or the director's designee.

High hazard facility. A stationary source that is engaged in activities described in code 324110 or 325110 of the North American Industry Classification System (NAICS).

On-site work. Does not include ship and rail car support activities; environmental inspection and testing; security guard services; work which is performed by an original equipment manufacturer for warranty, repair, or maintenance on the vendor's equipment if required by the original equipment manufacturer's warranty agreement between the original equipment manufacturer and the owner; industrial cleaning not related to construction; safety services requiring professional safety certification; nonconstruction catalyst loading, regeneration, and removal; chemical purging and cleaning; refinery by-product separation and recovery; inspection services not related to construction; and work performed that is not in an apprenticeable occupation.

Owner/operator. The owner or operator of a stationary source that is engaged in activities described in code 324110 or 325110 of the North American Industry Classification System (NAICS).

Person. One or more individuals, partnerships, associations, corporations, business trusts, legal representatives, or any organized group of persons.

Registered apprentice. An apprentice registered in an apprenticeship program approved by the Washington state apprenticeship and training council according to chapter 49.04 RCW.

Revocation. A withdrawal of a certification issued by the department or by department approval.

Skilled journeyman. The worker either graduated from an apprenticeship program for the applicable occupation that was approved by the Washington state apprenticeship and training council according to chapter 49.04 RCW, or has at least as many hours of on-the-job experience in the applicable occupation that would be required to graduate from an apprenticeship program approved by the Washington state apprenticeship and training council according to chapter 49.04 RCW, and who is paid a wage meeting the requirements of chapter 49.80 RCW.

Skilled and trained workforce. A workforce that meets both of the following criteria:

- (a) All the workers are either registered apprentices or skilled journeymen; and
- (b) The workforce meets the approved advanced safety training requirements established in this chapter, and the apprenticeship graduation established in RCW 49.80.030.

Suspension. A temporary withdrawal of department course approval. No suspension may be less than six months or longer than one year.

WAC 296-71-010 Skilled and trained workforce requirements.

- (1) Owners and operators, when contracting for the performance of construction, alteration, demolition, installation, repair or maintenance work at the stationary source, must require that its contractors and any subcontractors use a skilled and trained workforce to perform all on-site work within an apprenticeable occupation in the building and construction trades, and that work is done within the worker's specific occupation or craft. This includes:
 - (a) The percentages of skilled journeymen who are graduates of an apprenticeship program for the applicable occupation approved by the Washington state apprenticeship and training council under chapter 49.04 RCW meet the requirements under RCW 49.80.030;
 - (b) Six months after the effective date of this chapter, all workers in the skilled and trained workforce must have completed at least 20 hours of approved advanced safety training for workers at high hazard facilities within the past three calendar years.
 - (c) The skilled and trained workforce requirements under this section apply to each individual contractor's and subcontractor's on-site workforce.
- (2) The owner/operator must have documentation showing that the skilled and trained workforce requirements are met. This documentation must be provided to the department upon request.
- (3) This section does not apply to:
 - (a) The employees of the owner or operator of the stationary source;
 - (b) A contractor who has requested qualified workers from the local hiring halls or apprenticeship programs that dispatch workers in the apprenticeable occupation and who, due to workforce shortages, is unable to obtain sufficient qualified workers within two working days of the request; and

- (c) Emergencies that make compliance impracticable because they require immediate action to prevent harm to public health, safety, or the environment. This section applies as soon as the emergency is over, or it becomes practicable for contractors to obtain a qualified workforce.

Note: This section does not prevent the owner or operator of the stationary source from using its own employees to perform any work that has not been assigned to contractors while the employees of the contractor are present and working.

WAC 296-71-020 Training certification.

- (1) To qualify for an advanced safety training certificate, workers must:
 - (a) Attend and successfully complete an approved 20-hour advanced safety training course for workers at high hazard facilities.
 - (b) Complete an application through an approved training course sponsor.
- (2) Workers must do the following to renew and continue certification prior to the certificate expiration date:
 - (a) Attend and successfully complete an approved 20-hour advanced safety training course for workers at high hazard facilities.
 - (b) Complete an application through an approved training course sponsor.
- (3) Upon receipt of the verification of completion of approved training, and the completed application, the department will issue a certificate to the worker which will include:
 - (a) The name of the person awarded the certificate;
 - (b) Certificate number;
 - (c) Expiration date; and
 - (d) A statement that the person receiving the certificate has completed the 20-hour high hazard facilities training.
- (4) Certificates will be issued and mailed to the individual applicants and will be valid for three years from the date of course completion.
- (5) The department may suspend or revoke a certificate as provided in WAC 296-71-050.

WAC 296-71-030 Training course approval.

- (1) High hazard facilities 20-hour training courses may be sponsored by any person, or other entity having department approval. An approved course must include 20 hours of in-person and laboratory instruction, and meet the minimum required elements for approved course in Appendix A, including topics and hours.
- (2) Prior to receiving department approval, each course must be evaluated by the department for the breadth of knowledge and experience required to properly train workers. Course content must be carefully scrutinized for adequacy and accuracy. Training techniques will be evaluated by the department.
- (3) Sponsors of training courses proposed for approval must submit:
 - (a) Background information about course sponsors;

- (b) Course locations;
 - (c) Course fees;
 - (d) Copies of course handouts;
 - (e) A detailed description of course content and the amount of time allotted to each major topic. See Appendix A for a list of required training topics that must be included;
 - (f) A description of teaching methods to be utilized and a list of all audio-visual materials; the department may, in its discretion, request that copies of the materials be provided for review;
 - (g) A list of all personnel involved in course preparation and presentation and a description of the background, special training and qualifications of each. Training must be taught by competent instructors. The department may, in its discretion, require proposed instructors to pass an examination on subjects related to their respective topics of instruction;
 - (h) A description of student evaluation methods;
 - (i) A description of course evaluation methods;
 - (j) Any restrictions on attendance (language, class size, affiliation, etc.);
 - (k) A list of any other states that currently approve the training course; and
 - (l) The amount and type of hands-on training.
- (4) Materials may be submitted electronically through the online portal or mailed to:
- High Hazard Facilities Program
Department of Labor & Industries
P.O. Box 44615
Olympia, WA 98504-4615
- (5) For timely approval, the initial application for training course approval and course materials must be submitted to the department at least 60 days prior to the requested approval date.
- (6) The decision to grant or renew approval of a training course is the sole discretion of the department.
- (a) Following approval of a training course, the department will issue the course sponsor an approval that is valid for three years from the date of issuance.
 - (b) Application for renewal must follow the procedures described in subsections (3) and (4) of this section.
- (7) In recognition that the industry is evolving, the department reserves the right to require additional subjects to be taught and to specify the amount of time which must be allotted to adequately cover required subjects. To ensure adequate coverage of required material, each course sponsor must be provided and required to incorporate into their training course, a detailed outline of subject matter developed by the department.
- (8) For timely approval, the training course approval renewal must be received by the department no later than 30 days before the approval expiration date.
- (9) Any changes to a training course must be approved by the department in advance.
- (10) The course sponsor must provide the department with a roster of all persons who have completed the training course. The list must be provided no later than 10 days after course completion and must include the:
- (a) Training course provider name;

-
- (b) Instructor name(s);
 - (c) Course name;
 - (d) Dates of class;
 - (e) Location of class;
 - (f) Student's name;
 - (g) Student's mailing address; and
 - (h) Certificate number (if applicable).
- (11) The course sponsor must notify the department, in writing, at least 14 days before a training class is scheduled to begin. The notification must include the date, time, instructor, and address where the training will be conducted.
- (12) A representative of the department may, at the department's discretion, attend a training course as an observer to verify that the training course is conducted in accordance with the program approved by the department.
- (a) Course sponsors conducting training outside the state of Washington must reimburse the department for reasonable travel expenses associated with department audits of the training courses.
 - (b) Reasonable travel expenses are defined as current state of Washington per diem and travel allowance rates including airfare and/or surface transportation rates. Such reimbursement must be paid within 30 days of receipt of the billing notice.
- (13) The training course sponsor must limit each class to a maximum of 50 participants.
- (14) There must be at least one instructor for every 25 students.
- (15) Denial, suspension, or revocation of approval will be done in accordance with WAC 296-71-050.
- (16) Recordkeeping requirements for training providers: All approved providers of accredited training courses must comply with the following minimum recordkeeping requirements:
- (a) Training course materials. A training provider must retain copies of all instructional materials used in delivery of the classroom training such as student manuals, instructor notebooks and handouts.
 - (b) Instructor qualifications. A training provider must retain copies of all instructors' resumes, and the documents approving each instructor issued by the department. Instructors must be approved by the department before teaching courses for accreditation purposes. A training provider must notify the department in advance whenever it changes course instructors. Records must accurately identify the instructors that taught each particular class for each date that a course is offered.
 - (c) Training records. The training providers must maintain records that document the names of all persons who have completed training, the disciplines for which training was provided, training dates and training locations.
 - (d) Record retention and access. The training provider must maintain the records in a manner that allows verification of the required information via telephone, or other communication.
 - (i) The training provider must maintain all required training course materials for a minimum of the duration of the course offering plus four years.
 - (ii) The training provider must maintain all required instructor qualification records for the duration of the instructor's employment plus four years.

- (iii) The training provider must maintain all required training records for a minimum of four years. The training provider may find it advantageous to retain these records for a longer period.
- (iv) The training provider must allow reasonable access to all of the records which may be required by the department for the approval of training providers or the accreditation of training courses, to the department, on request.
- (v) If a training provider ceases to conduct training, the training provider must notify the department and give it the opportunity to take possession of that provider's training records.

WAC 296-71-040 Reciprocity.

- (1) The department may recognize 20-hour high hazard facilities training certifications issued by another state provided that:
 - (a) The worker is in possession of a currently valid certification from the other state;
 - (b) The training was completed within the past three years; and
 - (c) The department evaluates the other state's qualification procedures and determines the certification to be equivalent to the minimum requirements of this chapter.
- (2) The department will maintain a list of states with recognized 20-hour high hazard facilities training certifications accessible from the department's website.
- (3) When the department's evaluation of another state's training and certification procedures identifies deficiencies, the department will require the worker to complete the Washington 20-hour high hazard facilities training before issuing a Washington state certification.

Note: Reciprocity in this section applies only to the 20-hour high hazard facilities training requirement. It does not apply to apprenticeship requirements.

WAC 296-71-050 Denial, suspension, and revocation.

- (1) The department may deny, suspend, or revoke a course approval if the course sponsor does not comply with the training standards and accreditation requirements of this chapter.
- (2) The department may suspend or revoke the training course approval, if in the department's judgment the sponsor does not maintain the course content and quality as initially approved, or make changes to a course as required by WAC 296-71-030(7). The criteria for suspension or revocation of training course approval includes, but is not limited to, at least one of the following:
 - (a) Misrepresentation of the extent of training course approval;
 - (b) Failure to submit required information or notification in a timely manner;
 - (c) Failure to maintain requisite records;
 - (d) Falsification of accreditation records, instructor qualifications, or other accreditation information; or
 - (e) Failure to adhere to the training standards and accreditation requirements of this chapter.
- (3) The department may deny, suspend, or revoke any certificate issued under this chapter if the certificate was obtained through error or fraud.

-
- (4) The criteria for denying, suspending, or revoking a certificate for workers must include at least one of the following:
 - (a) Obtaining certification from a training provider that does not have approval to offer training;
 - (b) Obtaining certification through fraudulent representation of training documents;
 - (c) Obtaining training documentation through fraudulent means.
 - (5) Before any course approval or certificate may be denied, suspended, or revoked, the holder thereof must be given written notice of the department's intention to do so, mailed by registered mail, return receipt requested, to the holder's last known address.
 - (6) A denial, suspension, or revocation order may be appealed in accordance with RCW 49.17.140. Any party aggrieved by an order of the board of industrial insurance appeals may obtain superior court review in the manner provided in RCW 49.17.150.

Appendix A: Training course content – Nonmandatory

Fundamentals of Petroleum Refining	4.0 Hours General Overview	Specific content
Crude oil and its refining into downstream products	Basic high level information about refineries	How crude oil is processed; relevant hazards as described on the safety data sheet for crude oil; fractions and their related hazards (temperatures, pressures, etc.); introduction to key refining processes; classes of refinery processes and refinery configurations; properties of the refinery-produced streams; and the interrelationship between processing units.
Refining Industry Safety Concepts	8.0 Hours WAC Reference	Overview
Exit routes and employee alarm systems	WAC 296-800-310	Details of emergency action plan concepts.
Process safety management for refineries	Chapter 296-67 WAC	Overview of the requirements for process safety management, including: Workplace assessments; stop work authority; job hazard analysis; contractor roles and responsibilities in a refinery facility; and other sections of the rule.
Emergency response	Chapter 296-824 WAC, Emergency response; WAC 296-24-567 Employee emergency plans and fire prevention plans	General overview of emergency operations in a refinery. May include facility-specific information.
Fire brigades	Chapter 296-811 WAC	Understanding how refinery fire brigades work, including rescue operations, confined space entry protocols, fire suppression techniques, use of testing instruments, etc. May include facility-specific information.

Appendix A: Training course content – Nonmandatory

Fire prevention and protection	WAC 296-24-567 (general industry); WAC 296-155-250 (construction industry)	Basic overview touching on fire prevention, ignition sources, testing before hot work, etc. May include facility-specific information.
Hazard communication	Chapter 296-901 WAC	Review of chemicals found in refineries and their locations, including general "streams"; personal protective equipment and practices; signs and symptoms of exposure; long-term health effects; and a comprehensive review of relevant safety data sheets.
Personal protective equipment (PPE) for refinery work	WAC 296-800-160 (general industry); WAC 296-155-200 (construction industry)	Fire resistant clothing; head protection; eye protection; foot protection; hearing protection; and contaminated clothing.
Respiratory protection	Chapter 296-842 WAC	The use of respirators in certain refinery locations. May include facility-specific information.
Hearing conservation	Chapter 296-817 WAC	Understanding the areas in a refinery facility where hearing protection is required. May include facility-specific information.
Lockout/tagout	Chapter 296-803 WAC (general industry); WAC 296-155-429 (construction industry)	Energy control protocols in a refinery. May include facility-specific information.
Confined spaces	Chapter 296-809 WAC (general industry) in addition to WAC 296-155-203 (construction industry)	Types of confined spaces in a refinery; entry protocols; atmospheric testing; other related hazards. May include facility-specific information and permit forms.
Heat related illness	WAC 296-62-095	Maintain awareness of outdoor heat in the hot areas of a refinery, which may contribute to heat-related illness.

Appendix A: Training course content – Nonmandatory

<p>Refinery safe work practices</p>	<p>General safety in a refinery</p>	<p>Identify walking/working surface hazards; areas of nonentry; understanding general hazards of vessels and other equipment. May include facility-specific information.</p>
<p>Craft-Specific Safety Training Including, but not limited to:</p>	<p>8.0 Hours WAC References</p>	<p>The purpose of this section is to have a discussion about specific interdependencies and relationships of trades, including stacked work; dissimilar trades in direct proximity with each other; dissimilar risks associated with various trades (i.e., radiation, potential falling objects, etc.); job sequencing; and barricading.</p>
<p>Hot work</p>	<p>WAC 296-24-695 Fire prevention and protection (general industry); WAC 296-155-250, fire prevention and protection (construction industry)</p>	<p>Understanding what hot work is and how to perform craft work safely; awareness of ignition sources such as welding, and performing dissimilar work around such areas. Hot work permits are specific to each facility and facility-specific information may be included in training.</p>
<p>Working at heights</p>	<p>Chapter 296-874 WAC, Scaffolds; Chapter 296-880 WAC, Unified safety standards for fall protection</p>	<p>Recognizing where overhead work is occurring; understanding any hazards associated with craft work in such areas.</p>
<p>Electrical</p>	<p>WAC 296-24-957 (general industry); WAC 296-155-426 (construction industry)</p>	<p>Recognizing potential hazards about electrical work in a refinery and how to perform such work around other contract operations.</p>

Appendix A: Training course content – Nonmandatory

	<p>Chapter 296-155 WAC: Part D Fire protection and prevention; Part F-1, rigging other than with the use of a crane (winch/tugger, chainfall, etc.); Part G Tools—Hand and power; Part H Welding and cutting; Part L, rigging and signaling with cranes</p>	<p>Basic knowledge of pipe safety: Including eliminating risk of contamination in process lines through fit, purge, weld techniques and pre and post weld buffing and machining. Basic knowledge of testing lines e.g.: Nondestructive pipe testing techniques; safety regarding fuel and pressure pipes including design, construction, location, leak detection and environmental considerations; pressure vessel fabrication certification; welding qualifications; knowledge and application of relevant standards; pipe corrosion; pipe cracks; pipe modifications, e.g., removing; cutting into or destroying existing pipe lines and piping, installing new pipes, maintaining old pipes, etc.</p>
Equipment operating engineers	<p>Chapter 296-155 WAC: Part L, rigging and signaling with cranes; Part F-1, rigging other than with the use of a crane (winch/tugger, chainfall, etc.)</p>	<p>Crane principles, rigging, signaling; forklift principles, etc.</p>
Finishing trades	<p>Chapter 296-155 WAC: Part F, general requirements for storage (Brick/block, handling cement/lime); Part G Tools—Hand and power; Part O Concrete, concrete forms, shoring, and masonry construction</p>	<p>Lead renovator, repair and painting program (RRP) Toxic Substance Control Act (TSCA) Section 402/chapter 365-230 WAC.</p>
Cement masons	<p>Chapter 296-155 WAC: Part F, general requirements for storage (Brick/block, handling cement/lime); Part G Tools—Hand and power; Part O Concrete, concrete forms, shoring, and masonry construction</p>	<p>How cement masons work relates to other work performed in the refinery.</p>

Appendix A: Training course content – Nonmandatory

<p>Ironworkers, boilermakers, and steelworkers</p>	<p>Chapter 296-155 WAC: Part D Fire protection and prevention; Part F-1, rigging other than with the use of a crane (winch/tugger, chainfall, etc.); Part G Tools—Hand and power; Part H Welding and cutting; Part L, rigging and signaling with cranes; Part P Steel erection</p>	<p>How boilermakers', ironworkers', and steelworkers' work relates to other work performed in the refinery, including: Measuring, fabricating, cutting, welding and shaping steel parts such as girders, columns and frames; using equipment including shears, welding tools and torches; hoisting steel parts to their appropriate location; ensuring proper alignment and positioning and bolting them into place; assembly and use of equipment, including setting up cable and chain systems for hoisting or moving steel parts; disassembling it after completion of the task; following blueprint and instructions from supervisors to perform all tasks involved in assembly of steel structures; communicate with supervisors and coworkers to ensure smooth teamwork; notifying supervisors immediately of safety or structural concerns; taking apart structures or equipment in accordance with directions and standard operating procedures; repair steel components in older structures; directing crane operators as they move and position steel components; drilling holes and aligning parts with framework in preparation for riveting; use of tools including levels, laser tools and plumb bobs to ensure precise alignment.</p>
--	--	---

WAC 296-71-001 Purpose and scope.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060 and 49.80.060. WSR 22-19-101, (Order 20-02), § 296-71-001, filed 09/21/22, effective 10/22/22.]

WAC 296-71-003 Definitions.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060 and 49.80.060. WSR 22-19-101, (Order 20-02), § 296-71-003, filed 09/21/22, effective 10/22/22.]

WAC 296-71-010 Skilled and trained workforce requirements.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060 and 49.80.060. WSR 22-19-101, (Order 20-02), § 296-71-010, filed 09/21/22, effective 10/22/22.]

WAC 296-71-020 Training certification.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060 and 49.80.060. WSR 22-19-101, (Order 20-02), § 296-71-020, filed 09/21/22, effective 10/22/22.]

WAC 296-71-030 Training course approval.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060 and 49.80.060. WSR 22-19-101, (Order 20-02), § 296-71-030, filed 09/21/22, effective 10/22/22.]

WAC 296-71-040 Reciprocity.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060 and 49.80.060. WSR 22-19-101, (Order 20-02), § 296-71-040, filed 09/21/22, effective 10/22/22.]

WAC 296-71-050 Denial, suspension and revocation.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060 and 49.80.060. WSR 22-19-101, (Order 20-02), § 296-71-050, filed 09/21/22, effective 10/22/22.]