Oregon OSHA Comparison Document for Confined Spaces Administrative Order 6-2012, adopted 9/28/2012, effective 4/1/2013		
437-002-0146 Confined Spaces	1910.146 Permit-Required Confined Spaces	Comments
(1) Purpose and application. This rule applies to all activities in confined spaces and provides requirements to protect employees from the hazards of entering and working in confined spaces.	(a) Scope and application. This section contains requirements for practices and procedures to protect employees in general industry from the hazards of entry into permit-required confined spaces. This section does not apply to agriculture, to construction, or to shipyard employment (Parts 1928, 1926, and 1915 of this chapter, respectively).	The new rule is written to apply to general industry and construction.
(2) Exceptions. This standard does not apply to the following:		The old standard does not specify the exemptions. In working with stakeholders, it was apparent that there is enough confusion among those affected by these rules that the exemptions are necessary.
(a) Construction work regulated by OAR 437-003, Division 3/P Excavations, except for existing sanitary sewers and new sanitary sewers when connected to an existing sanitary sewer.		This exemption was taken from the proposed construction rules, with clarification for sanitary sewer work.

(b) Construction work regulated by OAR 437-003, Division 3/S Underground Construction, Caissons, Cofferdams and Compressed Air, except for sewers.	This exemption was taken from the proposed construction rules
(c) Enclosed spaces regulated by OAR 437-002-1910.269 in Division 2/R Electric Power Generation, Transmission And Distribution, except when that standard requires compliance with this standard.	
(d) Manholes and vaults regulated by OAR 437-002-1910.268(o) in Division 2/R Telecommunications, except when those provisions are insufficient to render the space safe to enter.	
(e) Welding in confined spaces regulated by OAR 437-002, Division 2/Q Welding, Cutting & Brazing, when the only hazards are related to the welding process.	
(f) Grain bins, silos, tanks, and other grain storage structures regulated by OAR 437-002-1910.272, Grain Handling Facilities.	
(g) Diving operations regulated by OAR 437-002, Division 2/T, Commercial Diving Operations.	
(h) Except for (a) through (g) above, when	

any other applicable standard addresses work in confined spaces or additional hazards that may be present, you must comply with the provisions of that standard and this standard. Where the requirements of one standard are more restrictive than the other, follow the more stringent requirements.		
(3) Definitions.	(b) Definitions.	
Acceptable entry conditions: The conditions that must exist in a permit-required confined space to allow safe entry and work.	Acceptable entry conditions means the conditions that must exist in a permit space to allow entry and to ensure that employees involved with a permit-required confined space entry can safely enter into and work within the space.	We used the definition from the Washington code as it was clearer.
Alternate entry – An alternative process for		The new rule addresses
entering a permit space under very specific		alternate entry into a permit
conditions. The space remains a permit		space differently, and eliminates reclassification of
space even when entered using alternate entry.		permit spaces. Paragraph (9) of the new rule covers this further.
Atmospheric hozord (see the definition of		Definition added for
Atmospheric hazard (see the definition of hazardous atmosphere).		additional clarity.
Authorized – Approved by the employer or		Definition added for
controlling contractor.		additional clarity.
Attendant - An individual stationed outside one or more permit spaces to monitor the authorized entrants and who performs all	Attendant means an individual stationed outside one or more permit spaces who monitors the	

attendants duties assigned in the employer's permit space program.	authorized entrants and who performs all attendant's duties assigned in the employer's permit space program.	
Atmospheric testing – see "Testing."		Definition added for additional clarity.
Authorized entrant - An employee who is authorized by the employer to enter a permit space. Barrier - A physical obstruction that blocks or limits access.	Authorized entrant means an employee who is authorized by the employer to enter a permit space. Blanking or blinding means the absolute closure of a pipe, line, or duct by the fastening of a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore and that is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.	This term is not used in the regulatory language of the new rule. Definition added for additional clarity.
Calibration – The checking of a direct-reading instrument against an accurate standard (such as a calibration gas) to determine any deviation and correct for errors. Note: A similar process may also be referred to as a "bump test" in which an instrument is tested with an accurate standard to ensure it is still reading correctly. For the purposes of this rule, a "bump test" performed in		Definition added for additional clarity.

accordance with the manufacturer's instructions can be used to verify calibration.		
Confined space – A space that meets all of the following: Large enough and so configured that an	Confined space means a space that: (1) Is large enough and so configured that an employee can	
employee can fully enter the space and perform work.	bodily enter and perform assigned work; and (2) Has limited or restricted means	
Has limited or restricted means for entry and/or exit.	for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces	
Is not designed for continuous human occupancy.	that may have limited means of entry); and (3) Is not designed for continuous employee occupancy.	
Continuous system – a confined space that meets all of the following:		Definition from the federal construction confined space proposal
 Part of, and contiguous with, a larger confined space (for example, storm sewers, sanitary sewers, or steam tunnels) 		
Cannot be isolated from the larger		

confined space		
Subject to a potential hazard releases from the larger confined space that can overwhelm control measures and/or personal protective equipment, resulting in a hazard that is immediately dangerous to life and health.		
Control - The action taken to reduce the level of any hazard inside a confined space using engineering methods (for example, by isolation or ventilation), and then using these methods to maintain the reduced hazard level. Control also refers to the engineering methods used for this purpose. Personal protective equipment is not a control.		Definition added for additional clarity.
Controlling contractor - The employer that has overall responsibility for construction at a worksite. Note: A controlling contractor who owns or manages the property is both a controlling employer and a host employer.		New term used by the new rule as it also applies to construction activities.
	Double block and bleed means the closure of a line, duct, or pipe by closing and locking or tagging two in-line valves and by opening and locking or tagging a drain or vent valve in the line between the two closed valves.	This term is not used in the regulatory language of the new rule.
Emergency - Any occurrence (including any failure of hazard control or monitoring	Emergency means any occurrence (including any failure of hazard	

equipment) or event internal or external to the permit space that could endanger entrants.	control or monitoring equipment) or event internal or external to the permit space that could endanger entrants.	
Engulfment hazard - A physical hazard consisting of a liquid or flowable solid substance that can surround and capture an individual. Engulfment hazards may cause death or serious physical harm if: the individual inhales the engulfing substance into the respiratory system (drowning, for example); the substance exerts excessive force on the individual's body resulting in strangulation, constriction, or crushing; or the substance suffocates the individual.	Engulfment means the surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.	
Entrant (see the definition of authorized entrant).		Definition added for additional clarity.
Entry - The action by which any part of an employee's body breaks the plane of an opening into a confined space. Entry (or entry operations) also refers to the period during which an employee occupies a confined space.	Entry means the action by which a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.	
Entry Permit – Written authorization from the employer, controlling contractor, or host employer to enter a permit-required confined	Entry permit (permit) means the written or printed document that is provided by the employer to allow	

space and perform work.	and control entry into a permit space and that contains the information specified in paragraph (f) of this section.	
Entry supervisor: The person (such as the employer, foreman, or crew chief, or any other designated employee) responsible for: Determining if acceptable entry conditions are present at a permit space where entry is planned; and Authorizing entry and overseeing entry operations; and	Entry supervisor means the person (such as the employer, foreman, or crew chief) responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this section.	Definition broken down for clarity. The note is added to the requirements of paragraph (7)(a) of the new rule.
Terminating entry as required	Note: An entry supervisor also may serve as an attendant or as an authorized entrant, as long as that person is trained and equipped as required by this section for each role he or she fills. Also, the duties of entry supervisor may be passed from one individual to another during the course of an entry operation.	
Hazard - A physical hazard or hazardous atmosphere.		Definition added for clarity.
Hazardous atmosphere - An existing or	Hazardous atmosphere means an	

potential atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to selfrescue (that is, escape unaided from a permit space), injury, or acute illness from one or more of the following:

A flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit.

An airborne combustible dust at a concentration that meets or exceeds its lower explosive limit.

Note: This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet (1.52 meters) or less.

An atmospheric oxygen concentration below 19.5 percent (oxygen deficient) or above 23.5 percent (oxygen enriched).

An airborne concentration of a substance that exceeds the dose or exposure limit specified by an Oregon OSHA requirement.

Note: An atmospheric concentration of any substance that is not capable of causing death, incapacitation, impairment of ability to self-rescue, injury, or acute illness due to its health effects is not covered by this provision.

atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (that is, escape unaided from a permit space), injury, or acute illness from one or more of the following causes:

- (1) Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL);
- (2) Airborne combustible dust at a concentration that meets or exceeds its LFL:

Note: This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet (1.52 m) or less.

- (3) Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent;
- (4) Atmospheric concentration of any substance for which a dose or a permissible expo- sure limit is published in Subpart G,
 Occupational Health and
 Environmental Control, or in
 Subpart Z, Toxic and Hazardous
 Substances, of this part and which could result in employee exposure in excess of its dose or permissible exposure limit;

Note: An atmospheric

An atmosphere that presents an immediate danger to life or health (IDLH).	concentration of any substance that is not capable of causing death, incapacitation, impairment of ability to self-rescue, injury, or acute illness due to its health effects is not covered by this provision. (5) Any other atmospheric condition that is immediately dangerous to life or health. Note: For air contaminants for which OSHA has not determined a dose or permissible exposure limit, other sources of information, such as Material Safety Data Sheets that comply with the Hazard Communication Standard, §1910.1200 of this part, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions.	
Host employer - An employer who owns or manages the property on which confined space work is taking place.		New term used by the new rule as it also applies to construction activities.
Immediately dangerous to life or health (IDLH) means any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual's ability to escape unaided from a permit space.	Immediately dangerous to life or health (IDLH) means any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual's ability to escape	

	unaided from a permit space.	
Note: Some materials – hydrogen fluoride		
gas and cadmium vapor, for example – may	Note: Some materials – hydrogen	
produce immediate transient effects that,	fluoride gas and cadmium vapor,	
even if severe, may pass without medical	for example – may produce	
attention, but are followed by sudden,	immediate transient effects that,	
possibly fatal collapse 12 - 72 hours after	even if severe, may pass without	
exposure. The victim "feels normal" from	medical attention, but are followed	
recovery from transient effects until collapse.	by sudden, possibly fatal collapse	
Such materials in hazardous quantities are	12 - 72 hours after exposure. The	
considered to be "immediately" dangerous to	victim "feels normal" from	
life or health.	recovery from transient effects until	
	collapse. Such materials in	
	hazardous quantities are considered	
	to be "immediately" dangerous to	
T d' CH	life or health.	
Inerting - The displacement of the	Inerting means the displacement of	
atmosphere in a permit space by a	the atmosphere in a permit space by	
noncombustible gas (such as nitrogen) to	a noncombustible gas (such as	
such an extent that the resulting atmosphere is noncombustible.	nitrogen) to such an extent that the	
is noncombustible.	resulting atmosphere is noncombustible.	
Note: This precedure produces on IDLH	noncombustible.	
Note: This procedure produces an IDLH oxygen-deficient atmosphere.	Note: This procedure produces on	
oxygen-deficient aunosphere.	Note: This procedure produces an IDLH oxygen-deficient	
	atmosphere.	
	Line breaking means the intentional	This term is not used in the
	opening of a pipe, line, or duct that	regulatory language of the
	is or has been carrying flammable,	new rule.
	corrosive, or toxic material, an inert	
	gas, or any fluid at a volume,	
	pressure, or temperature capable of	
	causing injury.	

Isolation: The process by which a permitrequired confined space is removed from service and completely protected against the release of energy and material into the space by such means as: • Blanking or blinding. • Misaligning or removing sections of lines, pipes, or ducts. • A double block and bleed system. • Lockout or tagout of all sources of energy. • Blocking or disconnecting all mechanical linkages. Mobile worker – An employee who performs their work in multiple locations such as customer sites, company offices, private homes, vendor offices, or construction sites. Monitor or monitoring – The process used to identify and evaluate the atmosphere in a permit space after an authorized entrant enters the space. This is a process of checking for changes in the atmospheric conditions within a permit space and is performed in a periodic or continuous manner after the completion of the initial testing of that space. (See also "testing.")	Isolation means the process by which a permit space is removed from service and completely protected against the release of energy and material into the space by such means as: blanking or blinding; misaligning or removing sections of lines, pipes, or ducts; a double block and bleed system; lockout or tagout of all sources of energy; or blocking or disconnecting all mechanical linkages.	New term used by the new rule as it also applies to construction activities. Definition added for clarity. The concept that arose from the drafting of this rule is that testing is done initially to determine the conditions of a space, and monitoring is done during an entry.
Non-entry rescue – Retrieval of entrants from a permit space without entering the permit space.		Definition added for clarity.

	Nonpermit confined space means a confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.	This term is not used by the new rule. Under the new rule, a space is either a confined space or a permit-required confined space.
	Oxygen deficient atmosphere means an atmosphere containing less than 19.5 percent oxygen by volume.	This term is defined as part of the definition of Hazardous Atmosphere.
	Oxygen enriched atmosphere means an atmosphere containing more than 23.5 percent oxygen by volume.	This term is defined as part of the definition of Hazardous Atmosphere.
Permit-required confined space (permit	Permit-required confined space	We modified the 4 th
space) – A confined space that has one or more of the following characteristics:	(permit space) means a confined space that has one or more of the following characteristics:	characteristic to clarify that the hazards that make a confined space a permit-
Contains, or has a potential to contain, a hazardous atmosphere.	(1) Contains or has a potential to contain a hazardous atmosphere;	required space are those that can inhibit an entrant's ability to self rescue. For example, a
Contains a material that has the potential to engulf an entrant.	(2) Contains a material that has the potential for engulfing an entrant;	space may contain sharp edges that can cause serious cuts or punctures, but would not
Has an internal configuration such that an entrant could become trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section.	(3) Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers	necessarily make that space a permit-required one.

Contains any other recognized serious safety or health hazard that can inhibit an entrants	to a smaller cross-section; or	
ability to self-rescue.	(4) Contains any other recognized serious safety or health hazard.	
	Permit system means the employer's written procedure for preparing and issuing permits for entry and for returning the permit space to service following termination of entry.	This is rolled into the requirements listed in paragraph (5)
Physical hazard: An existing or potential hazard that can cause death or serious physical harm in or near a confined space, or a hazard that has a reasonable probability of occurring in or near a confined space, and includes, but is not limited to:		Definition added for clarity.
Explosives; mechanical, electrical, hydraulic, and pneumatic energy; radiation; temperature extremes; engulfment; noise; and inwardly converging surfaces; and		
Chemicals that can cause death or serious physical harm through skin or eye contact (rather than through inhalation).		
Potential hazards - All reasonably anticipated conditions within the space and outside the space that can adversely affect conditions within the space.		Definition added for clarity.
	Prohibited condition means any condition in a permit space that is	This specific term is not used in the new rule. The

	not allowed by the permit during the period when entry is authorized.	requirements are part of paragraph (5)
Rescue - Retrieving employees who are unable to remove themselves from a permit space.		Definition added for clarity.
Rescue service - The onsite or offsite personnel who the employer designates to engage in non-entry and/or entry rescue of employees from a permit space.	Rescue service means the personnel designated to rescue employees from permit spaces.	
Retrieval system - The equipment, including mechanical retrieval devices, used for nonentry rescue of authorized entrants from a permit space.	Retrieval system means the equipment (including a retrieval line, chest or full-body har- ness, wristlets, if appropriate, and a lifting device or anchor) used for nonentry rescue of persons from permit spaces.	
Serious physical harm - An impairment in which a body part is made functionally useless or is substantially reduced in efficiency. Such impairment may include loss of consciousness or disorientation, and may be permanent or temporary, or chronic or acute. Injuries involving such impairment would usually require treatment by a physician or other licensed health-care professional while an illness resulting in serious physical harm could shorten life or substantially reduce physical or mental efficiency by impairing a normal bodily function or body part.		This definition was taken from the proposed confined space in construction standard

Testing: The process of identifying and evaluating the atmospheric hazards that entrants may be exposed to in a permit-required confined space. Testing includes specifying the initial tests that are to be performed in the permit space. (See also "monitor or monitoring")	Testing means the process by which the hazards that may confront entrants of a permit space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space.	Definition added for clarity. The concept that arose from the drafting of this rule is that testing is done initially to determine the conditions of a space, and monitoring is done during an entry.
Note: Testing enables employers both to devise and implement adequate control measures for the protection of authorized entrants and to determine if acceptable entry conditions are present immediately prior to and during entry.		
Ventilate or ventilation - Controlling a hazardous atmosphere using powered equipment, such as fans and blowers, to continuously move air.		Definition added for clarity.
You – The employer.		Definition added for clarity.
(4) Evaluation.		
(a) You must determine if there are any confined spaces in your workplace. Ensure all confined spaces are part of this determination.	(c)(1) The employer shall evaluate the workplace to determine if any spaces are permit required confined spaces. Note: Proper application of the decision flow chart in Appendix A to §1910.146 would facilitate compliance with this requirement.	The new rule takes a step back and begins with a determination of whether or not confined spaces exist.

(A) Exceptions:	
(i) Employers of mobile workers where the employer or controlling contractor is not the property owner are not required to perform this evaluation, but must follow the requirements of (4)(c) through (4)(e).	This is to make it clear that a mobile employer, such as a contractor, is not responsible for evaluating an entire site when they do not own or control that site and their work is for only for a particular area. Paragraph (4)(c) addresses the evaluation for mobile workers on sites with confined spaces.
(ii) On sites where confined spaces are being built, the host employer or controlling contractor is not responsible for performing this evaluation unless: (I) Any of their employees enter that space. (II) An agent of the employer enter that space. (III) Employees of an employer responsible to that controlling contractor or host employer enter that space. (IV) They assume control over that space.	This is to make it clear that a site owner is not responsible for a confined space under the control of another entity, such as a general contractor, until or unless one of the conditions of (I) through (IV) occurs
(B) Before employees of another employer enter a confined space under your control, and you have information related to paragraph (4)(b), you must	While a host employer or controlling contractor may not be responsible for the evaluation under (4)(a)(A), if

provide it to that employer.	they do evaluate a space, they must provide that information to any contractor who may subsequently enter that space. This concept was taken from the federal proposal.
(b) You must evaluate all of your confined spaces to determine if they are permitrequired confined spaces. This evaluation must include: (A) Any known or anticipated hazard (B) The determination from any previous evaluation of that space.	The old rule does not clearly identify what is expected for an evaluation. This section was added to clear up any ambiguity.
(C) Any precautions and procedures previously implemented for entering the space	
(c) When your employees are mobile, you must determine if they will be exposed to confined spaces at their assigned work locations, and if those spaces are subject to any hazards. This determination must include information, if any, from the host employer or controlling contractor.:	This section is to address when mobile workers do go to a site with confined spaces.
(A) Determine if the space meets the definition of a confined space.	

	T	T
(B) Identify any physical and atmospheric hazards that make the space a permit-required confined space		
(d) When a space has hazards that make it a permit space:(A) Develop and implement a means so employees can identify that space. Signs, labels, or tags are methods that can be used to accomplish this.	(c)(2) If the workplace contains permit spaces, the employer shall inform exposed employees, by posting danger signs or by any other equally effective means, of the existence and location of and the danger posed by the permit spaces.	The old rule takes the tack of signs and labels, which can be supplemented by training and education. The new rule takes the tack of training and information, and signs and labels can be used as part of this. We also address training for all employees in paragraph (11)
(B) Allow employees or their representatives to observe the evaluation or re-evaluation of the space.		The old rule only allows for employees to observe the testing of spaces that have already been evaluated. This was put in initially to address the constantly-changing nature of construction sites, but there was no logical reason to make it only applicable to construction activities.
(C) When conditions within a confined space or a permit space change, reevaluate it.	(c)(6) When there are changes in the use or configuration of a nonpermit confined space that might increase the hazards to entrants, the employer shall	

	reevaluate that space and, if necessary, reclassify it as a permit-required confined space.	
(D) Take all necessary measures to prevent unauthorized employees from entering permit spaces.	(c)(3) If the employer decides that its employees will not enter permit spaces, the employer shall take effective measures to prevent its employees from entering the permit spaces and shall comply with paragraphs (c)(1), (c)(2), (c)(6), and (c)(8) of this section. (d)(1) Implement the measures necessary to prevent unauthorized entry	The new rule was designed to flow more linearly than the old rule. Consequently, much of the language of the old rule is redundant and unnecessary.
(e) Ensure employees do not enter any unevaluated confined space it is fully evaluated.		While the rule requires the initial evaluation, should a space be missed or undiscovered for whatever reason, this requirement makes it clear that it is treated with the highest level of caution until it is properly evaluated.
	(c)(4) If the employer decides that its employees will enter permit spaces, the employer shall develop and implement a written permit space program that complies with this section. The written program	This requirement is rolled into paragraph (5)

shall be available for inspection by	
employees and their	
authorized representatives.	
(c)(5) Alternate Entry is covered in	
paragraph (9) of the new rule	
(c)(7) A space classified by the	The new rule does not allow
employer as a permit-required	for reclassification of permit
confined space may be	spaces unless all of the
reclassified as a nonpermit	hazards that made it a permit
confined space under the following	space are permanently
procedures:	removed, in which case the
(i) If the permit space poses no	space is re-evaluated. Permit
actual or potential atmospheric	spaces can be entered without
hazards and if all hazards within	a permit under the provisions
the space are eliminated without	of paragraph (9) of the new
entry into the space, the permit	rule.
space may be reclassified as a	
nonpermit confined space for as	
long as the nonatmospheric	
hazards remain eliminated.	
(ii) If it is necessary to enter the	
permit space to eliminate hazards,	
such entry shall be performed	
under paragraphs (d) through (k) of	
this section. If testing and	
inspection during that entry	
demonstrate that the hazards within	
the permit space have been	
eliminated, the permit space may	
be reclassified as a nonpermit	
confined space for as long as the	
hazards remain eliminated.	
Note: Control of atmospheric	

hazards through forced air ventilation does not constitute elimination of the hazards. Paragraph (c)(5) covers permit space entry where the employer can demonstrate that forced air ventilation alone will control all hazards in the space. (iii) The employer shall document the basis for determining that all hazards in a permit space have been eliminated, through a certification that contains the date, the location of the space, and the signature of the person making the determination. The certification shall be made available to each employee entering the space or to that employee's authorized representative. (iv) If hazards arise within a permit space that has been declassified to a nonpermit space under paragraph (c)(7) of this section, each employee in the space shall exit the space. The employer shall then reevaluate the space and determine whether it must be reclassified as a permit space, in accordance with other applicable provisions of this section. (c)(8) and (c)(9) are covered under paragraph (11) of the new rule		
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other applicable provisions of this section. (c)(8) and (c)(9) are covered under	whether it must be reclassified as a	
section. (c)(8) and (c)(9) are covered under	permit space, in accordance with	
(c)(8) and (c)(9) are covered under	other applicable provisions of this	
	section.	
paragraph (11) of the new rule	(c)(8) and $(c)(9)$ are covered under	
	paragraph (11) of the new rule	

(d) Permit-required confined space	
program (permit space program).	
Under the permit space program	
section, the employer shall:	
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limited to, the following:	
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entry;	
(d)(9) Designate the negative with	
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	program (permit space program).

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(D) Identification of designated employee duties.		
(E) Training on the written program and entry permits.		
(F) Training employees on their designated roles.		
(G) Instructions to identify and evaluate hazards.		
(H) Methods to eliminate and/or control hazards.		
(I) Instructions on equipment use and maintenance.		
(J) Instructions to coordinate entry with another employer.	(d)(11) Develop and implement procedures to coordinate entry operations when employees of more than one employer are working simultaneously as authorized entrants in a permit space, so that employees of one employer do not endanger the employees of any other employer;	Paragraph 11 of the new rule has the requirements for multi-employer worksites.
(K) Procedures necessary for concluding the entry and cancelling the permit after entry operations have been completed	(d)(12) Develop and implement procedures (such as closing off a permit space and canceling the permit) necessary for	

	concluding the entry after entry operations have been completed;	
(c) On fixed sites, ensure this program also includes:	operations have been completed,	
(A) The location of all permit spaces.		
(B) The reason for the classification of each permit space or each type of permit space.		
Note: Where there are multiple permit spaces of the same type that have the same hazards, such as sewers, water vaults, or valve pits, the exact location of each space does not need to be identified so long as there is enough information so that employees can		
readily identify each type of space and its hazards at each location.		
(C) Exception: The location and classification of confined spaces at remote unmanned locations do not need to be added to the program until the first time employees go to that location after the effective date of this rule.		
(d) Ensure employees and their representatives have access to the written program		

 (e) Ensure procedures are developed and implemented for issuing permits. Ensure these procedures include how to: (A) Evaluate the hazards of the space. (B) Evaluate hazards of the work to be performed. (C) Identify safe entry conditions. 	(d)(2) Identify and evaluate the hazards of permit spaces before employees enter them (d)(5) Evaluate permit space conditions as follows when entry operations are conducted (d)(10) Develop and implement a system for the preparation, issuance, use, and cancellation of entry permits as required by this section; (d)(3)(i) Specifying acceptable entry conditions	The operational part of entry is located in paragraph (6). The applicable federal rules are pasted there.
(f) Ensure entry permits include the following information:	(f) Entry permit. The entry permit that documents compliance with this section and authorizes entry to a permit space shall identify:	
(A) The space to be entered.	(f)(1) The permit space to be entered;	
(B) The purpose of the entry.	(f)(2) The purpose of the entry;	
(C) The date, start, and stop times of the permit.	(f)(3) The date and the authorized duration of the entry permit;	

	(e)(4) The duration of the permit may not exceed the time required to complete the assigned task or job identified on the permit in accordance with paragraph (f)(2) of this section.	
(D) The hazards of the space.	(f)(7) The hazards of the permit space to be entered;	
(E) Acceptable entry conditions.	(f)(9) The acceptable entry conditions;	
(F) Results of initial tests and periodic monitoring performed to evaluate and identify the hazards and conditions of the space, or the period for continuous monitoring, accompanied by the names or initials of the testers and by an indication of when the tests were performed.	(f)(10) The results of initial and periodic tests performed under paragraph (d)(5) of this section, accompanied by the names or initials of the testers and by an indication of when the tests were performed;	
(G) Appropriate measures used before entry to isolate the space and eliminate or control hazards. Examples of appropriate measures include the de-energizing and lockout or tagging of equipment, and procedures for purging, inerting,	(f)(8) The measures used to isolate the permit space and to eliminate or control permit space hazards before entry; Note: Those measures can include the lockout or tagging of equipment and procedures for purging, inerting, ventilating, and flushing	

(H) Names of entrants and current attendants.	(f) (4) The authorized entrants within the permit space, by name or by such other means (for example, through the use of rosters or tracking systems) as will enable the attendant to determine quickly and accurately, for the duration of the permit, which authorized entrants are inside the permit space;	
	Note: This requirement may be met by inserting a reference on the entry permit as to the means used, such as a roster	
	(f)(5) The personnel, by name, currently serving as attendants;	
(I) The signature of the original supervisor authorizing entry.	(f)(6) The individual, by name, currently serving as entry supervisor, with a space for the	
(J) The current entry supervisor.	signature or initials of the entry supervisor who originally authorized entry;	
(K) Communication procedures for entrants and attendants to maintain contact during the entry.	(f)(12) The communication procedures used by authorized entrants and attendants to maintain contact during the entry;	

(L) Equipment provided for safe entry, such as: (i) Personal protective equipment (PPE) (ii) Testing and monitoring equipment (iii) Communications equipment (iv) Alarm systems (v) Rescue equipment	(f)(13) Equipment, such as personal protective equipment, testing equipment, communications equipment, alarm systems, and rescue equipment, to be provided for compliance with this section;	
(M) Rescue services available, and how to contact them.	(f)(11) The rescue and emergency services that can be summoned and the means (such as the equipment to use and the numbers to call) for summoning those services;	
(N) Other information needed for safety in the particular permit space	(f)(14) Any other information whose inclusion is necessary, given the circumstances of the particular confined space, in order to ensure employee safety; and	
(O) Additional permits issued for work in the space, such as for hot work.	(f)(15) Any additional permits, such as for hot work, that have been issued to authorize work in the permit space.	
(P) Any problems, if any, encountered during the entry.		This captures part of the requirements of (e)(6) of the old rule
(g) Ensure entrants or their authorized representatives have access to the completed permit before entry so they	(e)(3) The completed permit shall be made available at the time of entry to all authorized	

can confirm that pre-entry preparations have been completed.	entrants or their authorized representatives, by posting it at the entry portal or by any other equally effective means, so that the entrants can confirm that pre-entry	
	preparations have been completed.	

- (h) Review the permit program when there is any reason to believe that employees are not adequately protected, and revise it as necessary.
 - (A) Situations that require this review include:
 - (i) Unauthorized entry of a permit space.
 - (ii) A previously unrecognized hazard is discovered.
 - (iii) A condition prohibited by the permit or permit program exists.
 - (iv) An injury or near-miss occurs during entry.
 - (v) An employee reports concerns about the effectiveness of the program.
 - (vi) Any other condition that affects employee safety or health.
 - (B) When revising the permit program to correct hazard-related deficiencies, do not allow entries into affected permit spaces to be made until the revisions are complete.

(d)(13) Review entry operations when the employer has reason to believe that the measures taken under the permit space program may not protect employees and revise the program to correct deficiencies found to exist before subsequent entries are authorized; and

Note: Examples of circumstances requiring the review of the permit space program are: any unauthorized entry of a permit space, the detection of a permit space hazard not covered by the permit, the detection of a condition prohibited by the permit, the occurrence of an injury or nearmiss during entry, a change in the use or configuration of a permit space, and employee complaints about the effectiveness of the program.

(C) Ensure employees and their representatives have access to the revised permit program.		
(i) Review permits within one year of their cancellation to evaluate:(A) The permit program.(B) The protection provided to employees entering permit spaces.	(d)(14) Review the permit space program, using the canceled permits retained under paragraph (e)(6) of this section within 1-year after each entry and revise the program as necessary, to ensure that employees participating in entry operations are protected from permit space hazards.	Paragraph (12) of the new rule requires the one year retention of permits. Paragraphs (5)(e)(P) and (5)(g) also include these requirements
	Note: Employers may perform a single annual review covering all entries performed during a 12-month period. If no entry is performed during a 12-month period, no review is necessary. Appendix C to §1910.146 presents examples of permit space programs that are considered to comply with the requirements of paragraph (d) of this section.	
	(e)(6) The employer shall retain each canceled entry permit for at least 1-year to facilitate the review of the permit-required confined space program required by paragraph (d)(14)	

of this section. Any problems encountered during an entry operation shall be noted on the pertinent permit so that appropriate revisions to the permit space program can be made.	

(6) Permit Entry.		
(a) Perform initial testing for atmospheric hazards, where necessary, before any entry is made.	(d)(5)(i) Test conditions in the permit space to determine if acceptable entry conditions exist before entry is authorized to begin, except that, if isolation of the space is infeasible because the space is large or is part of a continuous system (such as a sewer), pre-entry testing shall be performed to the extent feasible before entry is authorized and, if entry is authorized, entry conditions shall be continuously monitored in the areas where	The infeasibility issues are addressed in (5)(d)(D) and (5)(d)(E)(i)
(b) Provide each entrant or their authorized	authorized entrants are working; (vi) Immediately provide each	
representative with the results of any	authorized entrant or that	
initial testing before they enter the space.	employee's authorized	

	representative with the results of	
	any testing conducted in accord	
	with paragraph (d) of this	
	section.	
(c) Ensure safe entry conditions are	(d)(3)(vi) Verifying that conditions	
maintained for the duration of the entry.	in the permit space are acceptable	
	for entry throughout the duration of	
	an authorized entry.	
	(d)(5)(ii) Test or monitor the permit	
	space as necessary to determine if	
	acceptable entry conditions are	
	being maintained during the course	
	of entry operations;	
(A) When the space is too large to		
isolate, or is part of a continuous		
system, such as a sewer, ensure		
continuous monitoring where		
entrants are working for the		
duration of the entry.		
	(d)(5)(iii) When testing for atmospheric hazards, test first for	The state of direct-reading equipment makes this
	oxygen, then for combustible gases	requirement superfluous. If
	and vapors, and then for toxic gases	there is an order to follow
	and vapors.	based on a particular
	1	instrument, (6)(c) already
		requires that equipment is
		used in accordance with the
		manufacturer's instructions.
(B) When an entrant or their	(d)(5)(v)Reevaluate the permit	
authorized representative has	space in the presence of any	
reason to believe that the	authorized entrant or that	

evaluation was inadequate, re-test the space.	employee's authorized representative who requests that the employer conduct such reevaluation because the entrant or representative has reason to believe that the evaluation of that space may not have been adequate	
(d) Ensure all actions and precautions identified on the permit are followed.	(d)(3)(iii) Isolating the permit space; (d)(3)(iv) Purging, inerting, flushing, or ventilating the permit space as necessary to eliminate or control atmospheric hazards;	The permit identifies the actions that must be taken to isolate, eliminate, or control hazards.
 (e) When conditions require the space to be evacuated, do not allow re-entry unless you: (A) Re-assess the conditions of the space to ensure it is safe for re-entry and ensure the permit reflects the evacuation and subsequent reassessment; or (B) Issue a new permit. 		The current rule is not as explicitly clear as it could be. This section was added for additional clarity in the process.
(f) Allow entrants or their authorized representatives the opportunity to observe monitoring, testing, and all other actions taken to eliminate or control the hazards of the space.	(d)(3)(ii) Providing each authorized entrant or that employee's authorized representative with the opportunity to observe any monitoring or testing of permit spaces (d)(5)(iv) Provide each authorized	

	entrant or that employee's authorized representative an opportunity to observe the preentry and any subsequent testing or monitoring of permit spaces; (e)(1) Before entry is authorized, the employer shall document the completion of measures required by paragraph (d)(3) of this section by preparing an entry permit. Note: Appendix D to §1910.146 presents examples of permits whose elements are considered to comply with the requirements of this section.	Paragraphs (5)(a), (5)(d) and (5)(e) already address this requirement
	this section.	
(7) Equipment.		
(a) When employees enter permit spaces, provide the following equipment as necessary:	(d)(4) Provide the following equipment (specified in paragraphs (d)(4)(i) through (d)(4)(ix) of this section) at no cost to employees, maintain that equipment properly, and ensure that employees use that equipment properly:	Paragraph (7)(b)-(d) of the new rule addresses cost, maintenance, and use.
(A) Testing and monitoring	(d)(4)(i) Testing and monitoring	
equipment.	equipment needed to comply with paragraph (d)(5) of this section;	
(B) Ventilating equipment, when	(d)(4)(ii) Ventilating equipment	

needed, used to obtain and maintain acceptable entry conditions.	needed to obtain acceptable entry conditions	
(C) Communication equipment for effective communication between the attendant and all entrants, and to initiate rescue when necessary.	(d)(4)(iii) Communications equipment necessary for compliance with paragraphs (h)(3) and (i)(5) of this section	
(D) Lighting equipment needed to ensure employees can see well enough to work safely and exit the space quickly in the event of an emergency.	(d)(4)(v) Lighting equipment needed to enable employees to see well enough to work safely and to exit the space quickly in an emergency	
(E) Barriers or shields to protect entrants from external hazards, such as pedestrians and vehicles.	(d)(3)(v) Providing pedestrian, vehicle, or other barriers as necessary to protect entrants from external hazards (d)(4)(vi) Barriers and shields as required by paragraph (d)(3)(v) of this section;	
(F) Ladders or other equipment to safely enter and exit the space.	(d)(4) (vii) Equipment, such as ladders, needed for safe ingress and egress by authorized entrants;	
(G) Rescue and emergency equipment necessary to safely and effectively rescue entrants.	(d)(4)(viii)Rescue and emergency equipment needed to comply with paragraph (d)(9) of this section, except to the extent that the equipment is provided by rescue	

	services; and	
(H) Any other equipment necessary to safely enter and exit the space.	(d)(4)(ix) Any other equipment necessary for safe entry into and rescue from permit spaces.	
(I) Personal protective equipment as mandated by any applicable Oregon OSHA standard.	(d)(4)(iv) Personal protective equipment insofar as feasible engineering and work practice controls do not adequately protect employees	
(b) Provide all necessary equipment at no cost to employees.		These are broken out from (d)(4) of the old rule for clarity, and replaces (h)(2) of
(c) Ensure all equipment is maintained and used in accordance with the instructions from the manufacturer.	(h)(2) Properly use equipment as required by paragraph (d)(4) of this section;	the old rule.
(d) Ensure all employees who use equipment are trained in the use of that equipment.		
(8) Personnel.		
(a) Before employees enter permit spaces, designate entrants, attendants, and entry supervisors.	(d)(6) Provide at least one attendant outside the permit space into which entry is authorized for the duration of entry operations	This rule is written so that the requirements of each function (attendant, entrant, and supervisor) are contained within paragraph (7) of the

	(d)(8) Designate the persons who are to have active roles (as, for example, authorized entrants, attendants, entry supervisors, or persons who test or monitor the atmosphere in a permit space) in entry operations, identify the duties of each such employee, and provide each such employee with the training required by paragraph (g) of this section;	new rule.
Note: The entry supervisor can also be either the attendant or entrant.		This note was added to clear up a common misconception that any entry must involve at least three people (not counting rescue personnel)
(b) Entrants must:	(h) Duties of authorized entrants. The employer shall ensure that all authorized entrants:	
(A) Know the hazards that may be faced during entry, including information on the type of hazard, as well as signs, symptoms, and consequences of exposure to those hazards.	(h)(1) Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;	We used the language in the duties of an entry supervisor section as it was clearer.
(B) Communicate with the attendant as necessary so the attendant can monitor the entrant's status and to enable the attendant to alert entrants of the need to evacuate the space.	(h)(3) Communicate with the attendant as necessary to enable the attendant to monitor entrant status and to enable the attendant to alert entrants of the need to evacuate the	

	space as required by paragraph (i)(6) of this section	
(C) Alert the attendant whenever the entrant detects a dangerous or hazardous condition or warning sign or symptom of exposure to a dangerous situation.	(h)(4) Alert the attendant whenever:(i) The entrant recognizes any warning sign or symptom of exposure to a dangerous situation, or	
	(ii) The entrant detects a prohibited condition; and	
(D) Exit from the permit space as quickly as possible whenever:	(h)(5) Exit from the permit space as quickly as possible whenever:	
(i) An order to evacuate is given by the attendant or the entry supervisor, or	(i) An order to evacuate is given by the attendant or the entry supervisor,	
(ii) The entrant recognizes any warning sign or symptom of exposure to a dangerous situation, or	(ii) The entrant recognizes any warning sign or symptom of exposure to a dangerous situation,	
(iii) The entrant detects a dangerous or hazardous condition, or	(iii) The entrant detects a prohibited condition, or	
(iv) An evacuation alarm is activated.	(iv) An evacuation alarm is activated.	
(c) Attendants must:	(i) Duties of attendants. The employer shall ensure that each	

	attendant:	
(A) Know the hazards that may be faced during entry, including information on the type of hazard, as well as signs, symptoms, and consequences of exposure to those hazards.	(i)(1) Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;	We used the language in the duties of an entry supervisor section as it was clearer.
(B) Be aware of possible behavioral effects of hazard exposure in authorized entrants.	(i)(2) Is aware of possible behavioral effects of hazard exposure in authorized entrants;	
(C) Continuously maintain an accurate count of authorized entrants in the permit space and ensure that the means used to identify authorized entrants accurately identifies who is in the permit space.	(i)(3) Continuously maintains an accurate count of authorized entrants in the permit space and ensures that the means used to identify authorized entrants under paragraph (f)(4) of this section accurately identifies who is in the permit space;	
(D) Remain outside the permit space during entry operations until relieved by another attendant.	(i)(4) Remains outside the permit space during entry operations until relieved by another attendant;	
(E) Communicate with authorized entrants as necessary to monitor entrant status and to alert entrants of the need to evacuate the space.	(i)(5) Communicates with authorized entrants as necessary to monitor entrant status and to alert entrants of the need to evacuate the space under paragraph (i)(6) of this section;	

(F) Monitor activities inside and	(i)(6) Monitors activities inside and	
outside the space to determine if it is	outside the space to determine if it	
safe for entrants to remain in the space	is safe for entrants to remain in the	
and order the authorized entrants to	space and orders the authorized	
evacuate the permit space immediately	entrants to evacuate the permit	
under any of the following conditions:	space immediately under any of the	
Ç	following conditions:	
(i) If the attendant detects a		
dangerous or hazardous	(i) If the attendant detects a	
condition;	prohibited condition;	
(ii) If the attendant detects the	(ii) If the attendant detects the	
behavioral effects of hazard	behavioral effects of hazard	
exposure in an authorized entrant;	exposure in an authorized	
	entrant;	
(iii) If the attendant detects a situation		
outside the space that could	(iii) If the attendant detects a	
endanger the authorized entrants;	situation outside the space that	
or	could endanger the authorized	
	entrants; or	
(iv) If the attendant cannot effectively		
and safely perform all the duties	(iv) If the attendant cannot	
required of the attendant	effectively and safely perform all	
	the duties required under	
	paragraph (i) of this section;	
(G) Summon rescue and other	(i)(7) Summon rescue and other	
emergency services as soon as the	emergency services as soon as the	
attendant determines that authorized	attendant determines that	
entrants may need assistance to escape	authorized entrants may need	
from permit space hazards;	assistance to escape from permit	
Tom permit space nazaras,	space hazards;	

(H) Take the following actions when unauthorized persons approach or enter a permit space while entry is underway:	(i)(8) Takes the following actions when unauthorized persons approach or enter a permit space while entry is underway:	
(i) Warn the unauthorized persons that they must stay away from the permit space;	(i) Warn the unauthorized persons that they must stay away from the permit space;	
(ii) Advise the unauthorized persons that they must exit immediately if they have entered the permit space; and	(ii) Advise the unauthorized persons that they must exit immediately if they have entered the permit space; and	
(iii) Inform the authorized entrants and the entry supervisor if unauthorized persons have entered the permit space;	(iii) Inform the authorized entrants and the entry supervisor if unauthorized persons have entered the permit space;	
Note: The employer can give the attendant the authority to remove unauthorized individuals who enter or who attempt to enter the permit space during entry operations, so long as the attendant does not enter the space.		Note added for clarity.
(I) Perform non-entry rescues as specified by the employer's rescue procedure; and	(i)(9) Performs nonentry rescues as specified by the employer's rescue procedure; and	

(J) Perform no duties that might interfere with the attendant's primary duty to monitor and protect any authorized entrant.	(i)(10)Performs no duties that might interfere with the attendant's primary duty to monitor and protect the authorized entrants.	
NOTE: An attendant may monitor more than one space at a time, but the duties in relation to one space may not interfere with the duties for any other spaces. If an attendants' attention is focused on one space, such as to initiate the rescue procedures, all other spaces that the attendant is monitoring must be evacuated or another attendant must take over those duties first.	(d)(7) If multiple spaces are to be monitored by a single attendant, include in the permit program the means and procedures to enable the attendant to respond to an emergency affecting one or more of the permit spaces being monitored without distraction from the attendant's responsibilities under paragraph (i) of this section;	
(d) Entry supervisors must:	(j) Duties of entry supervisors. The employer shall ensure that each entry supervisor:	
(A) Know the hazards that may be faced during entry, including information on the type of hazard, as well as signs, symptoms, and consequences of exposure to those hazards	(j)(1) Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;	
(B) Understand the means and methods to control and/or eliminate the hazards of the permit space		
(C) Verify, by checking that the appropriate entries have been made on	(e)(2) Before entry begins, the entry supervisor identified on the	

the permit, that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin	permit shall sign the entry permit to authorize entry. (j)(2) Verifies, by checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin;	
(D) Inform entrants and attendants of the hazards and conditions associated with the space and the methods used to eliminate and/or control those hazards		
(E) Terminate the entry and cancel the permit as required by the permit entry program	(e)(5) The entry supervisor shall terminate entry and cancel the entry permit when: (i) The entry operations covered by the entry permit have been completed; or (ii) A condition that is not allowed under the entry permit arises in or near the permit space. (j)(3) Terminates the entry and cancels the permit as required by paragraph (e)(5) of this	The requirements under paragraph (5) of the new rule already address these conditions.

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(F) Verify that rescue services are available and that the means for summoning them are operable (G) Remove unauthorized individuals who enter or who attempt to enter the permit space during entry operations.	(j)(4) Verifies that rescue services are available and that the means for summoning them are operable; (j)(5) Removes unauthorized individuals who enter or who attempt to enter the permit space during entry operations; and	
(H) Reevaluate the conditions within the space whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and operations performed within the space.	(j)(6) Determines, whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and operations performed within the space, that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained.	
(9) Rescue.		
(a) Before employees enter s permit space, develop and implement procedures to remove entrants in the event of an emergency or when they are unable to self-rescue. These procedures must include: (A) The process for summoning rescue services. (B) The process for summoning	(d)(9) Develop and implement procedures for summoning rescue and emergency services, for rescuing entrants from permit spaces, for providing necessary emergency services to rescued employees, and for preventing unauthorized personnel from attempting a rescue;	

emergency medical services or transporting injured entrants to a medical facility.		
(C) If an injured entrant is exposed to a substance for which a Material Safety Data Sheet (MSDS) or other similar written information is required to be kept at the worksite, that MSDS or written information must be made available to the medical facility treating the exposed entrant.	(j)(4) If an injured entrant is exposed to a substance for which a Material Safety Data Sheet (MSDS) or other similar written information is required to be kept at the worksite, that MSDS or written information shall be made available to the medical facility treating the exposed entrant.	Conversations with stakeholders showed this to be an important piece that was missing from the old rule.
(b) Where feasible, use non-entry retrieval systems or methods whenever an authorized entrant enters a permit space, unless it would increase the overall risk to the entrant or would not contribute to the rescue of the entrant.	(k)(3) To facilitate nonentry rescue, retrieval systems or methods shall be used whenever an authorized entrant enters a permit space, unless the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue of the entrant. Retrieval systems shall meet the following requirements.	The requirements of the retrieval system are (8)(b)(A)(i).
(A) Non-entry Rescue.		The requirements for non- entry rescue and entry rescue were broken out to clearly identify what is required under each type of rescue.
(i) Use a retrieval system that meets the following requirements.		

(I) Each authorized entrant must use a chest or full body harness, with a retrieval line attached at the center of the entrant's back near shoulder level, above the entrant's head, or at another point which you can establish presents a profile small enough for the successful removal of the entrant. Wristlets or ankle straps or other equally effective means may be used in lieu of the chest or full body harness if you can demonstrate that the use of a chest or full body harness is infeasible or creates a greater hazard and that the use of other methods are the safest and most effective alternative.	(k)(3)(i) (i) Each authorized entrant shall use a chest or full body harness, with a retrieval line attached at the center of the entrant's back near shoulder level, above the entrant's head, or at another point which the employer can establish presents a profile small enough for the successful removal of the entrant. Wristlets may be used in lieu of the chest or full body harness if the employer can demonstrate that the use of a chest or full body harness is infeasible or creates a greater hazard and that the use of wristlets is the safest and most effective alternative.	
(II) Attach the other end of the retrieval line to a mechanical device or fixed point outside the permit space so that rescue can begin as soon as the attendant becomes aware that rescue is necessary. Ensure a mechanical device is available to retrieve personnel from vertical type permit spaces more than 5 feet (1.52 m) deep.	(k)(3) (ii) The other end of the retrieval line shall be attached to a mechanical device or fixed point outside the permit space in such a manner that rescue can begin as soon as the rescuer becomes aware that rescue is necessary. A mechanical device shall be available to retrieve personnel from vertical type permit spaces more than 5 feet (1.52 m) deep.	

hazards or hazards re responder	Designate a rescue team to perform rescues in a timely manner. e response time is based on the f the space. For example, IDLH equire an immediate response, and is would need to be available on-site e duration of the entry.	(k)(1) An employer who designates rescue and emergency services, pursuant to paragraph (d)(9) of this section, shall: (i) Evaluate a prospective rescuer's ability to respond to a rescue summons in a timely manner, considering the hazard(s) dentified; Note to paragraph (k)(1)(i): What will be considered timely will vary according to the specific hazards involved in each entry. For example, §1910.134, Respiratory Protection, requires that employers provide a standby person or persons capable of immediate action to rescue employee(s) wearing respiratory protection while in work areas defined as IDLH atmospheres.	
(iii)	Ensure all rescue team members are trained in basic first aid and cardiopulmonary resuscitation	(k)(2)(iii) Train affected employees in basic first aid and cardiopulmonary resuscitation	
	(CPR). At least one member must be certified in first aid and CPR.	(CPR). The employer shall ensure that at least one member of the rescue team or service holding a current certification in first aid and CPR is available; and	
(iv)	Rescue teams must practice		
	-		

performing permit space rescues at least once every 12 months.	
at least once every 12 months.	
(I) The practice rescue must include	
every type of space in which the	
rescue team may perform rescues.	
(II) The practice rescue must include	
removing persons, dummies, or	
manikins from the actual permit	
spaces or representative spaces that	
have similar opening size,	
configuration, and accessibility issues	
as the actual permit spaces where	
rescue may be performed.	
researching of performed.	
(v) Exception: The rescue team does	
not need to perform annual	
practice rescues when mobile	
workers enter a permit space	
when, prior to beginning entry	
operations, the employees	
designated to perform non-entry	
rescue (including attendants, if	
applicable):	
(I) Have access to the permit space to be	
entered or to a simulated permit space; and	
(II) Develop appropriate rescue plans; and	
(III) Conduct practice rescue operations in	
accordance with (8)(b)(A)(iv)(II)	

(B) E	ntry Rescue.		
(i)	Where non-entry rescue is not feasible or would increase the overall risk to the entrant, designate a rescue team before employees enter any permit space.	(k)(1) An employer who designates rescue and emergency services, pursuant to paragraph (d)(9) of this section, shall:	
(ii)	Ensure the rescue team:	(i) Evaluate a prospective rescuer's ability to respond to a rescue summons in a timely manner,	
(I)	Can respond to a rescue call in a timely manner. Timeliness is	considering the hazard(s) dentified;	
	based on the identified hazards of the space. Rescuers must be able to reach potential victims within an appropriate time frame based on the identified hazards of the permit space.	Note to paragraph (k)(1)(i): What will be considered timely will vary according to the specific hazards involved in each entry. For example, §1910.134, Respiratory Protection, requires that employers provide a standby person or persons capable of immediate action to rescue employee(s) wearing respiratory protection while in work areas defined as IDLH atmospheres.	
(II)	Can efficiently rescue employees	(k)(1)(ii) Evaluate a prospective	
(11)	from permit spaces.	rescue service's ability, in terms of proficiency with rescue-related tasks and equipment, to function appropriately while rescuing entrants from the particular permit	

		identified;	
	Has the appropriate uipment to rescue employees from permit spaces employees enter.	 (k)(1)(iii) Select a rescue team or service from those evaluated that: (A) Has the capability to reach the victim(s) within a time frame that is appropriate for the permit space hazard(s) identified; (B) Is equipped for and proficient in performing the needed rescue services; 	
(iii)	Inform each rescue team or service about the hazards they may confront when called to perform rescue.	(k)(1)(iv) Inform each rescue team or service of the hazards they may confront when called on to perform rescue at the site; and	
(iv)	Provide the rescue team or service with access to all permit spaces from which rescue may be necessary.	(k)(1)(v) Provide the rescue team or service selected with access to all permit spaces from which rescue may be necessary so that the rescue service can develop appropriate rescue plans and practice rescue operations.	
(v)	Provide rescue team members with personal protective equipment (PPE) needed for safe entry and any other equipment required to safely conduct rescues.	(k)(2) An employer whose employees have been designated to provide permit space rescue and emergency services shall take the following measures:	

	(i) Provide affected employees with	
	the personal protective equipment	
	(PPE) needed	
	to conduct permit space rescues	
	safely and train affected employees	
	so they are	
	proficient in the use of that PPE, at	
	no cost to those employees;	
	(k)(2)(ii) Train affected employees	Training and ensuring
	to perform assigned rescue duties.	proficiency for all employees
	The employer must ensure that	regarding all permit space
	such employees successfully	operations, including rescue,
	complete the training required to	is addressed in paragraph (10)
	establish proficiency as an	of the new rule.
	authorized entrant, as provided by	
	paragraphs (g) and (h) of this	
	section;	
(vi) Use and maintain all equipment		
according to the instructions from		
the manufacturer.		

(vii)	Rescue teams must practice	(k)(2)(iv) Ensure that affected	
	performing permit space rescues	employees practice making permit	
	at least once every 12 months.	space rescues at least	
	·	once every 12 months, by means of	
(I)	The practice rescue must include	simulated rescue operations in	
	the different kinds of spaces in	which they remove dummies,	
	which the rescue team may	manikins, or actual persons from	
	perform rescues.	the actual permit spaces or from	
		representative permit spaces.	
(II)	The practice rescue must include	Representative permit spaces shall,	
	removing persons, dummies, or	with respect to opening size,	
	manikins from the actual permit	configuration, and accessibility,	
	spaces or representative spaces	simulate the types of permit spaces	
	that have simlar opening size,	from which rescue is to be	
	configuration, and accessibility	performed.	
	issues as the actual permit spaces		
	where rescue may be performed.		
(III)	Exception: The rescue team does		
()	not need to perform annual		
	practice rescues when mobile		
	workers enter a permit space		
	when, prior to beginning entry		
	operations, the employees		
	designated to perform entry:		
(i)	Have access to the permit		This is a modified version of
(1)	space to be entered or to a		the language of the proposed
	simulated permit space; and		1926.1213 standard for
	simulated permit space, and		confined space in
(ii) Develop appropriate rescue		construction. It recognizes
(11)	plans; and		that some mobile workers,
	1 27 22 2		particularly construction

(ii	i) Conduct practice rescue operations in accordance with (8)(b)(B)(vii)(II).		workers, are only with a particular employer for the duration of a specific job.
(viii)	Rescue team personnel must have the same training and proficiencies as a permit space entrant, attendant, and/or entry supervisor.		Although this concept can be found in reading the current rule, it does not clearly state it explicitly.
(ix)	Ensure all rescue team members are trained in basic first aid and cardiopulmonary resuscitation (CPR). At least one member must be certified in first aid and CPR. Note: Additional medical training, such as oxygen administration, the use of automated external defibrillators (AEDs), and personnel decontamination should be considered.	(k)(2)(iii) Train affected employees in basic first aid and cardiopulmonary resuscitation (CPR). The employer shall ensure that at least one member of the rescue team or service holding a current certification in first aid and CPR is available; and	
(x)	When a third-party rescue service is used, ensure that the service is:		A common issue we have found in enforcement and consultations is that many
(I)	Aware that they are so designated and agree to it in writing prior to entry.		employers plan to simply plan to call 911 if a problem happens during an entry. This language was added so
(II)	Capable of performing all required rescue operations.		they clearly understand that there are additional

(III)	Trained in first aid and CPR, and at least one member is certified in first aid and CPR.	considerations to be made.
(C) T	Third-party entry rescue providers.	While the requirements above apply to all rescue personnel, regardless if they are on-site or third-party, this section was written to address specifically to third party providers who agree to be a rescue team. We have found that some providers, particularly community emergency response personnel, do not fully understand what responsibilities they accept when they agree to be a rescue provider.
(i)	In addition to the requirements of this rule, employers that provide entry rescue services must:	
(I)	Obtain information required by paragraph (4) regarding every permit space in which entry rescue by your employees may be necessary.	
(II)	Be familiar with the policies and procedures as described in	

	paragraph (9)(a).	
(ii)	When activated to perform a rescue, without entering the space and using the entry permit, evaluate the space to:	
(I)	Identify all physical and atmospheric hazards.	
(II)	Determine the precautions and procedures to follow for entry into the space.	

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(10) Alternate Entry.	(c)(5) An employer may use the	Our approach in alternate
	alternate procedures specified in	entry is that it is an alternative
(a) Permit spaces may be entered without a	paragraph (c)(5)(ii) of this	to the full permit and permit
permit when:	section for entering a permit space	program. We also took an all-
	under the conditions set forth in	hazards approach to alternate
(A) All hazards have been eliminated;	paragraph $(c)(5)(i)$ of this section.	entry. Our experience is that
or		there is ongoing confusion
(B) All physical hazards, if any, have	(i) An employer whose employees	regarding paragraphs (c)(5)
been eliminated and all atmospheric	enter a permit space need not	and $(c)(7)$ of the existing
hazards are controlled with continuous	comply with paragraphs (d)	standard. Much of this
forced-air ventilation.	through (f) and (h) through (k) of	concept was taken from the
N - E - C41: 1 (4) 1	this section, provided that:	proposed language for
Note: For purposes of this rule, "hazard	(A) 771 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	confined space in
elimination" means that the conditions that	(A) The employer can demonstrate	construction, particularly
caused the hazard no longer exist within the	that the only hazard posed by the	1926.1216 and 1926.1217.
space.	permit space is an actual or	
Note: Continuous forced-air ventilation does	potential hazardous atmosphere;	
not eliminate atmospheric hazards. It only	(B) The employer can demonstrate	
controls the hazards.	that continuous forced air	
controls the nazards.	ventilation alone is sufficient to	
	maintain that permit space safe for	
	entry;	
(b) Alternate entry cannot be used to enter a	enay,	
continuous system unless you can		
positively isolate the area to be entered		
from the rest of the space or can		
demonstrate and document that the		
conditions which caused the hazard no		
longer exist within the system during the		
entry.		
(c) When employees enter permit spaces		
under alternate entry, you do not need to		

comply with the requirements of	
paragraphs (5), (6), (8), (9), and (12) of	
this rule for those entries.	

- (d) Develop and implement procedures for each space that can be entered with alternate entry procedures. These procedures must address:
 - (A) The hazards of the space.
 - (B) The methods used to eliminate hazards.
 - (C) The methods used to ensure that the hazards have been eliminated.
 - (D) The methods used to test the atmosphere within the space, where applicable, for all atmospheric hazards.
 - (E) The methods used to determine if unsafe conditions arise before or during entry.
 - (F) The criteria and conditions for evacuating the space during entry.
 - (G) The methods for training employees in these procedures.
 - (H) The methods for ensuring employees follow these procedures.

- (c)(5) (C) The employer develops monitoring and inspection data that supports the demonstrations required by paragraphs (c)(5)(i)(A) and (c)(5)(i)(B) of this section;
- (D) If an initial entry of the permit space is necessary to obtain the data required by paragraph (c)(5)(i)(C) of this section, the entry is performed in compliance with paragraphs (d) through (k) of this section;
- (E) The determinations and supporting data required by paragraphs (c)(5)(i)(A), (c)(5)(i)(B), and (c)(5)(i)(C) of this section are documented by the employer and are made available to each employee who enters the permit space under the terms of paragraph (c)(5) of this section or to that employee's authorized representative; and
- (F) Entry into the permit space under the terms of paragraph (c)(5)(i) of this section is performed in accordance with the requirements of paragraph (c)(5)(ii) of this section.

Note: See paragraph (c)(7) of this section for reclassification of a permit space after all hazards within the space have been eliminated.	
(c)(5)(ii) The following requirements apply to entry into permit spaces that meet the conditions set forth in paragraph (c)(5)(i) of this section. (A) Any conditions making it unsafe to remove an entrance cover shall be eliminated before the cover is removed.	These issues are already addressed by other standards, including 1910.147, The Control of Hazardous Energy and 1910.23, Guarding Floor and Wall Openings and Holes.
(B) When entrance covers are removed, the opening shall be promptly guarded by a railing, temporary cover, or other temporary barrier that will prevent an accidental fall through the opening and that will protect each employee working in the space from foreign objects entering the space.	

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	(3) The air supply for the forced air ventilation shall be from a clean source and may not increase the hazards in the space.	portons of the new rule that require an assessment of the hazards of the space, both internal and external, and hazards created by the work itself.
(E) Perform continuous atmospheric monitoring for all atmospheric hazards during the entry.	(c)(5)(ii)(F) The atmosphere within the space shall be periodically tested as necessary to ensure that the continuous forced air	The language of the old rule was ambiguous regarding how often a test was necessary.
	ventilation is preventing the accumulation of a hazardous atmosphere. Any employee who enters the space, or that employee's authorized representative, shall be provided with an opportunity to observe the periodic testing required by this paragraph.	The observation of monitoring is in paragraph (9)(e) of the new rule.
(F) Immediately evacuate the space:	(c)(5)(ii)(G) If a hazardous	The new rule has a higher
(i) When the atmospheric monitoring indicates the return of atmospheric hazards	atmosphere is detected during entry: (1) Each employee shall leave the	standard for when the space must be evacuated. The provisions for re-assessment after evacuation are in
(ii) Upon any failure with the direct-reading instrument.	space immediately; (2) The space shall be evaluated to determine how the hazardous	paragraph (9)(g) of the new rule.
(iii) Upon any failure with the ventilation.	atmosphere developed; and	
	(3) Measures shall be implemented	
(iv) When a new hazard is introduced	to protect employees from the	
or conditions within the space	hazardous atmosphere before any	

change.	subsequent entry takes place.	
(f) Ensure all employees or their		
representatives who will conduct the		
entry have the opportunity to observe all activities used to comply with this		
section.		
(g) Ensure all employees who conduct entry have an effective means of		The old rule does not address communication when a
communication, such as a two-way		worker is inside a space under
radio, cell phone, or voice if other		(c)(5) or (c)(7).
employees are present, to summon help while within the space.		
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(h) When a space is evacuated, it cannot be re-entered as an alternate entry unless:		
re-emerce as an atternate entry unless.		
(A) The conditions that necessitated the		
evacuation are corrected; and (B) The re-entry is treated and		
documented as a new entry.		

(i) Document each entry. This	(c)(5)(ii) (H) The employer shall	This was designed to ensure
documentation must include:	verify that the space is safe for	that the hazards and
(4) 771 1 1 (4)	entry and that the preentry	precautions that a permit
(A) The location of the space.	measures required by paragraph	would address are still addressed under alternate
(B) The hazards of the space.	(c)(5)(ii) of this section have been taken, through a written	entry.
(B) The nazards of the space.	certification that contains the date,	chi y.
(C) The measures taken to eliminate the	the location of the space, and the	
hazards.	signature of the person providing	
	the certification. The certification	
(D) When applicable, the measures	shall be made before entry and	
used to control the atmospheric hazards	shall be made available to each employee entering the	
(E) When applicable, the identity of the	space or to that employee's	
direct-reading instruments used to test	authorized representative.	
the atmosphere, including the date of	1	
calibration.		
(F) When applicable, the results of the atmospheric testing.		
aunospheric testing.		
(G) The date of the entry.		
(H) The duration of the entry.		
(I) When applicable, any and all		
conditions that required the evacuation of the space.		
of the space.		
(J) The name, title, and signature of the		
person responsible for ensuring the		
safe entry conditions.		

(j) Maintain this documentation for the duration of the entry at the location of the entry.		The old rule does not address how long to maintain the documentation under (c)(5) or (c)(7)
(11) Training.		
(a) Train each employee involved in permit space activities so they acquire the understanding, knowledge, and skills necessary to safely perform their duties, according to their assigned responsibilities.	(g)(1) The employer shall provide training so that all employees whose work is regulated by this section acquire the understanding, knowledge, and skills necessary for the safe performance of the duties assigned under this section.	
(A) Provide training:	(g)(2) Training shall be provided to each affected employee:	
(i) For all new employees		This was added to ensure new employees receive awareness training.
(ii) Before an employee is assigned permit space duties	(g)(2)(i) Before the employee is first assigned duties under this section;	
(iii) Before there is a change in an employee's assigned duties	(g)(2)(ii) Before there is a change in assigned duties;	
(iv) When there is a hazard for which	(g)(2)(iii) Whenever there is a	

the employee hasn't already been trained	change in permit space operations that presents a hazard about which an employee has not previously been trained;	
(v) When there are changes to the permit program (vi) When the permit audit shows deficiencies		These were added as they are seen as deficiencies in the old standard.
(vii) Whenever there is a deviation from the established procedures or employee knowledge of the procedures is inadequate	(g)(2)(iv) Whenever the employer has reason to believe either that there are deviations from the permit space entry procedures required by paragraph (d)(3) of this section or that there are inadequacies in the employee's knowledge or use of these procedures.	
 (b) Document employee training. Ensure the documentation: (A) Contains the employee's name, the name and signature of the trainer, and the date of training. (B) Contains the responsibilities for which they were trained. (C) Is available for inspection by employees and their authorized 	(g)(4) The employer shall certify that the training required by paragraphs (g)(1) through (g)(3) of this section has been accomplished. The certification shall contain each employee's name, the signatures or initials of the trainers, and the dates of training. The certification shall be available for inspection by employees and their authorized representatives.	

(c) Ensure each employee is proficient in their assigned duties. (g)(3) The training shall establish employee proficiency in the duties required by this section and shall introduce new or revised procedures, as necessary, for compliance with this section. (d) Awareness training. (A) Provide awareness training to all employees to explain: (i) The permit space program (ii) The alternate entry procedures, if used (iii) The alternate entry procedures, if used (iv) How to recognize permit spaces in their work areas (B) Provide this training: (i) For all new affected employees (ii) For all new affected employees whose duties change to include work in areas with permit spaces (iii) When inadequacies in an employee's knowledge indicate that the employee has not retained the requisite understanding (iv) When there is a change in the permit program (v) When there are new or previously unidentified permit spaces			
(A) Provide awareness training to all employees to explain: (i) The permit space program (ii) The entry permit system (iii) The alternate entry procedures, if used (iv) How to recognize permit spaces in their work areas (i) For all new affected employees (ii) For all employees whose duties change to include work in areas with permit spaces (iii) When inadequacies in an employee's knowledge indicate that the employee has not retained the requisite understanding (iv) When there is a change in the permit program (v) When there are new or previously		employee proficiency in the duties required by this section and shall introduce new or revised procedures, as necessary, for	
	(A) Provide awareness training to all employees to explain: (i) The permit space program (ii) The entry permit system (iii) The alternate entry procedures, if used (iv) How to recognize permit spaces in their work areas (B) Provide this training: (i) For all new affected employees (ii) For all employees whose duties change to include work in areas with permit spaces (iii) When inadequacies in an employee's knowledge indicate that the employee has not retained the requisite understanding (iv) When there is a change in the permit program (v) When there are new or previously		piece of the requirements of (4)(d)(A) of the new rule to replace the posting requirement of (c)(2) of the old rule. While signs can be used to identify permit spaces, we still require training for all employees so they understand

- (12) Multi-employer worksites.
- (a) Unless you fall within an exemption under paragraph (4)(A)(a), before employees of another employer enter permit spaces under your control, you must:
 - (A) Inform the employer and their employees:
 - (i) That the workplace contains permit spaces and can be entered only when the applicable requirements of this rule are met
 - (ii) Of the identified hazards and your experience with each permit space they will enter
 - (iii) Of any precautions or procedures you require to protect employees in or near spaces where the work will be performed
 - (B) Coordinate entry operations with the employer, when employees of different employers will be working in or near the same permit spaces.
 - (C) Discuss entry operations with the employer after they are complete. This discussion must include:

- (c)(8)When an employer (host employer) arranges to have employees of another employer (contractor) perform work that involves permit space entry, the host employer shall:
- (c)(8)(i) Inform the contractor that the workplace contains permit spaces and that permit space entry is allowed only through compliance with a permit space program meeting the requirements of this section;
- (c)(8)(ii) Apprise the contractor of the elements, including the hazards identified and the host employer's experience with the space, that make the space in question a permit space;
- (c)(8)(iii) Apprise the contractor of any precautions or procedures that the host employer has implemented for the protection of employees in or near permit spaces where contractor personnel will be working;
- (c)(8)(iv) Coordinate entry operations with the contractor, when both host employer

- (i) The program followed during permit space entry and
- (ii) Any hazards confronted or created
- (b) When your employees enter a permit space under the control of another entity, at the conclusion of entry operations, inform the controlling contractor and host employer about the precautions and procedures you followed and any hazards that were present or that developed during entry operations.
- personnel and contractor personnel will be working in or near permit spaces, as required by paragraph (d)(11) of this section; and
- (c)(8)(v) Debrief the contractor at the conclusion of the entry operations regarding the permit space program followed and regarding any hazards confronted or created in permit spaces during entry operations.
- (c)(9) In addition to complying with the permit space requirements that apply to all employers, each contractor who is retained to perform permit space entry operations shall:
- (i) Obtain any available information regarding permit space hazards and entry operations from the host employer;
- (ii) Coordinate entry operations with the host employer, when both host employer personnel and contractor personnel will be working in or near permit spaces, as required by paragraph (d)(11) of this section; and
- (iii) Inform the host employer of

the permit space program that the contractor will follow and of any hazards confronted or created in permit spaces, either through a debriefing or during the entry operation.	

	(l) Employee participation.	These pieces are already
	(1) Employers shall consult with affected employees and their authorized representatives on the development and implementation of all aspects of the permit space program required by paragraph (c) of this section.	integrated into the new rule.
	(2) Employers shall make available to affected employees and their authorized representatives all information required to be developed by this section.	
(13) Records. Keep cancelled permits for at least one year from the date the permit expires for review (see paragraph (5)(i))		
Note: Additional record retention requirements may apply under OAR 437-002-1910.1020. "Access to Employee Medical and Exposure Records."		