

Topic Outline for Confined Spaces

For the wine industry there are two main sections of the Washington Administrative Code (WAC) that apply. 296-307 for Agriculture and 296-800 for General Industry. Most wineries fall under General Industry so that is the focus of this outline.

Definition: The space must meet all of the following conditions to be considered a confined space: Confined Spaces are a space that are large enough and arranged so an employee can fully enter the space and work, has limited or restricted entry or exit, and is not primarily designed for human occupancy.

Examples within a Winery: Winery tanks, utility vaults, sump pits, tanker trucks, presses, grape crush equipment, sewer or wastewater vaults, crawl spaces, even some excavations.

Regulatory Summary (with emphasis on application for wineries covered under general industry):

If it is possible to perform the work needed without entering the space – do that!

If you have a space that meets the definition of a confined space, you must assume that it is a permit-required confined space.

1. Entering confined spaces is one of the most hazardous tasks done within a winery. A review of confined space violations in Washington State from June 2003 to June 2013 found that there were four confined space entry violations for failure to inform employees and control entry to permit-required confined spaces, and three confined space entry violations for failure to develop a written permit-required confined space program in the wine industry. In general, entering confined spaces is seen as one of the most hazardous tasks in wineries. Each year in the wine industry, there are near misses and fatalities as a result of improper confined space entries. **Take the time to get it right!**

2. DOSH provides standards for Confined Spaces (WAC 296-809).

3. Wineries must have a written, implemented confined space program, and provide documented training including an evaluation of the employee's proficiency.

4. All confined spaces shall be identified and entry points to confined spaces shall prevent unauthorized entry.

- **WAC 296-809-200 outlines the requirements to identify these spaces, the requirements to control entry, and the requirements to inform employees and contractors of confined spaces in your workplace**
 - **A permit-required confined space** contains or has the potential to contain a hazardous atmosphere (example- high CO₂, low O₂), and/or contains a physical hazard (example- electrical components or moving parts). For more characteristics of a permit-required

confined space, see 296-809-20002. For permit-required confined spaces, all sections of the standard apply.

- You must inform employees and control entry to permit-required confined spaces.
 - You must provide information and documentation about confined spaces to affected employees.
 - You must inform affected employees about the existence, location, and danger of permit-required confined spaces.
 - Posting a sign reading “Danger-Permit-required Confined Space, DO NOT ENTER” or similar wording employees can understand would satisfy the requirement.
 - You must take measures to prevent unauthorized employees from entering permit-required confined spaces; examples - lock permit-required confined spaces, and provide employee training.
 - If you hire a contractor, the contractor is responsible for following all confined space requirements. Your responsibilities include, but are not limited to: informing the contractor that the space is a permit-required confined space and they may only enter if they meet the requirements of the confined space rules. For specific requirements, see WAC 296-809- 20006.
- **WAC 296-809-300 outlines the requirements to develop a permit-required confined space program**
 - **BEFORE** employees enter any confined space you must develop a written confined space entry program that includes:
 - The means, procedures, and practices to be used for safe entry
 - Permit entry procedures and alternate procedures
 - How to reclassify permit-required spaces to nonpermit spaces
 - Designation of roles – such as entrants, attendants, entry supervisors, rescuers, those to test or monitor the atmosphere in a permit-required space
 - Identify the roles or designation of each of the employees involved in the permit-required confined space entry
 - How you are going to train employees specifically on their designated roles
 - How you are going to train employees on the use and maintenance of the equipment involved
 - Outline how you are going to prevent unauthorized entry
 - And specify your rescue procedures
 - Make sure to review and update your program as necessary as changes are made to your confined space entry program.
 - Circumstances that require review of your program include but not limited to:
 - Unauthorized entry of a permit space
 - A change in the use or configuration of a permit space

- Employee complaint about the effectiveness of the program
 - A condition prohibited by the permit occurs
 - WAC 296-809-30002, 296-809-50002, and 296-809-50006 provides additional information regarding when your plan requires review and update
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- **WAC 296-809-400 outlines requirements for employee training:**
 - Make sure employees are trained to perform their designated roles safely
 - Your training program is required to ensure that the employees involved in the permit-required confined space entry operation have the understanding, skills, and knowledge necessary to permit their assigned duties in a safe matter
 - Establish a means to demonstrate employee proficiency in their assigned duties (by written exam, observation of a drill, or other method determined effective by the employer)
 - Provide training before the employee's first assigned confined space duties
 - Provide training when/if there is a new or different hazard present (not covered in previous training)
 - And provide retraining if it becomes evident that employee knowledge or use of procedures is inadequate
 - Certify proficiency in assigned duties:
 - The certification shall include the employees name, trainer signature or initials, and the date of the training
 - Make sure the certification is available for inspection by employees and their authorized representative
 - Establish procedures for the safe permit-required entry of a confined space
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- **WAC 296-809-50002 outlines requirements for implementing safe entry procedures:**
 - The confined space permit process is designed to ensure that you as an employer have done everything you can do to ensure safe entry into a permit-required confined space. It guides you to identify, evaluate, and control the hazardous conditions of your space prior to entry. This includes, but is not limited, testing to ensure a safe atmosphere, ensuring a rescue team is available or non-entry rescue system is in place.
 - Identify and evaluate, before employees enter, potential hazards from the permit-required confined space AND from the work being performed
 - Complete the permit BEFORE entry is authorized and MAKE SURE the following have been completed:
 - Entrants have had the opportunity to observe any testing or monitoring done prior and during entry; or any actions to eliminate or control hazards

- performed to complete the permit, monitor the space continuously, record on the permit periodically
- Entry supervisors must also be identified on the permit as well as signing the permit
- Make sure everyone involved with the confined space entry signs the permit
- Post the permit at the entry location, and
- Note on the permit any problems with the entry; use this information to revise the program as necessary
- The entry permit must contain all of the required information, not limited to the following including WAC 296-809-50004:
 - Identify the space entered, purpose of the entry, date and authorized duration of the entry, hazards of the space, test results (initial & periodic), measures used to control hazards, names of all involved, communication procedures, equipment for safe entry, and the rescue plan and equipment
 - Keep completed permit for at least 1-year
- Provide, maintain, and use proper equipment; covered in WAC 296-809-50010. *Examples of required equipment* would be a full body harness (same as fall protection harness), a retrieval line, and air monitoring equipment.
- Evaluate and control hazards for safe entry; in a winery consider O₂, CO₂, electrical hazards, mechanical hazards, etc. (To monitor for atmospheric hazards use a calibrated meter with the appropriate sensors, document the atmospheric monitoring).
- Have a plan for both entry and non-entry rescues. The standard requires a non-entry rescue when feasible, **or** rescue services available. Whether you utilize entry, non-entry rescue or rescue services, it must be effective for the space.
- Make sure you have adequate rescue and emergency services available that can respond in a timely manner during permit-required confined space entry operations (covered in WAC 296-809-50014). If you plan to use the local fire department (or 911 services), you must confirm that they have the capabilities to conduct confined space rescue during the days/times you are conducting confined space entries. **DO NOT ASSUME you will be able to get confined space entry assistance from your local emergency services.**
- Rescuers must be able to proficiently rescue employees from permit-required confined spaces
- Practice rescue procedures at least once every 12 months
- Have established procedures
- At least one employee involved must hold a current certification in first aid and CPR

- **USE NON-ENTRY RESCUE SYSTEMS OR METHODS WHENEVER POSSIBLE (COVERED IN WAC 296-809-50016).**
 - **Practice, Prepare, Practice and Document, Document, Document!**
 - Make sure entry supervisors perform their responsibilities and duties (covered in WAC 296-809-50018) including but not limited to:
 - Overseeing the operation
 - Having knowledge of the hazards
 - Verifying the information on the permit, testing, and procedures
 - Terminating or canceling the entry when completed or a condition not covered by the permit is discovered
 - Verifying the rescue plan
 - Keeping unauthorized people out of entry area
 - Signing the permit
 - Outside attendants (covered under WAC 296-809-50020) including but not limited to:
 - Have an understanding of the hazards present
 - Are aware of behavioral effects associated with the hazards present
 - Monitor the entrant(s)
 - Monitor activities inside and outside the space
 - Order entrants to evacuate the confined space if necessary
 - Perform non-entry rescues
 - Make sure entrants know and are aware of the hazards of the entry and their duties (covered in WAC 296-809-50022) including but not limited to:
 - Knowledge of and being aware of hazards
 - Know how to use equipment
 - Communicate with outside attendant(s)
 - Alert outside attendant(s) of any changes/issues
 - Exit the space quickly if instructed to
 - Recognize warning systems, detects a problem
 - Evacuate the space if the evacuation alarm or device is activated
 - Implement procedures for ending entry; secure the entrance and cancel the permit; covered in WAC 296-809-50024
- **WAC 296-809-600 outlines the requirements for alternate entry procedures:**
 - Alternate entry is for a permit-required for confined space that contains an atmospheric hazard with no physical hazards present (electrical, engulfment, etc.). This entry is done using continuous forced air ventilation to control a hazardous atmosphere within a confined space.
 - If you elect to utilize alternate entry as an entry procedure you must meet the criteria for alternate entry; review section 600 of the confined space standard to ensure that you are following the requirements for alternate entry.

- Make sure, when using alternate entry procedures, instead of permit entry procedures, that you have monitoring and inspection data that support the following:
 - Alternate entry procedures are for spaces where the only hazard is an actual or potential hazardous atmosphere; and
 - Under the alternate entry procedures, you are still required to meet the requirements as outlined in WAC 809-200, 300, and 400.
- **WAC 296-809-700 outlines the requirements for nonpermit-required confined spaces**

A non-permit-required confined space meets the definition of a confined space, but does not contain actual or potential hazards causing death or serious physical harm.

You must eliminate all hazards and document the elimination of the hazards prior to reclassifying your space from a permit-required confined space to a nonpermit required confined space.

- The process for eliminating the hazards must be developed and included in your confined space program.
- To be eligible for reclassification, there can be no potential for atmospheric hazards like carbon dioxide (inherent in the fermentation process).
- All tanks being used for production or are being cleaned in preparation for or post production are not eligible for nonpermit-required confined space reclassification.
- Identify your permit-required confined spaces and control employee entry – if your winery only contains nonpermit spaces and employees don't enter any confined spaces you are still required to identify and control access.
- To complete the process of reclassification, you must document your determination that the space is nonpermit as required under WAC 296-809-70002.

Best Management Practices:

- <http://www.statefundca.com/safety/safetymeeting/SafetyMeetingArticle.aspx?ArticleID=383> .
- If contractors are going to be working in or around confined spaces document that you have reviewed site specific hazards and associated precautions with your confined spaces. One way this can be accomplished is to keep a copy of their confined space entry permit on file.
- Do not ever share your confined space equipment with contractors.
- Training should consist of a combination of practical hands-on training, and formal instruction.
- Provide refresher training on an annual basis, just prior to harvest when confined space entries are most common.
- Review your confined space plan on an annual basis, update as necessary, and document the review.

5. Separate downloadable documents are provided at the following links and under the Winery Safety tab at www.winerywise.com:

- **WAC 296-809 Confined Space Rule for General Industry**
<http://www.lni.wa.gov/wisha/rules/confinedspace/default.htm>
- **WAC 296-301, Part Y-8 Confined Rule for Agriculture**
<http://www.lni.wa.gov/wisha/rules/agriculture/HTML/part-y-8.htm>
- **Helpful Tools Confined Space**
<http://www.lni.wa.gov/wisha/rules/confinedspace/helpfultools.htm>
- **A to Z Safety & Health Products** <http://www.lni.wa.gov/Safety/Topics/AtoZ/topic.asp?KWID=65>

Additional Information provided by Washington State Labor and Industries:

Washington has regulated confined spaces for a very long time – long before Federal OSHA. The reason why it has regulated confined spaces for such a long time is many workers have died entering and working in confined spaces from *perceived* minor trivial problems like:

- not comprehensively evaluating hazards;
- not keeping people out of confined spaces;
- not having a written program, implementing or following the actual entry procedure;
- not completing or following the entry permit;
- not using an appropriate piece of equipment; and
- not proficiently training workers on their roles and responsibilities etc.

Each requirement in the standard represents at least one (usually more) worker fatalities.

Entry rescue has a number of related requirements because when workers enter and die – they statistically take approximately five other usually well-meaning but ill prepared would-be rescuers with them. There is not flexibility in meeting the entry rescue requirements, i.e. cold calling 911 is not considered a “rescue plan.” Entry rescue operations are **very dangerous to those involved**. Rescuers have to have time for planning and evaluating, training, determining equipment needs, establishing procedures etc. to enable them to rescue someone safely.

Regarding **nonpermit confined space entry**: Under the confined space rules, there are a number of specific requirements prior to completing the reclassification process. It seems unlikely that wineries and the winemaking process may result in many reclassified nonpermit spaces due to the potential for atmospheric hazards like oxygen deficiency (carbon dioxide and other gases), cleaning compounds, etc. during some parts of the winemaking process.

The reason for fewer requirements to enter a correctly reclassified nonpermit space is that the hazards have been eliminated, i.e. no hazards are present that may hurt or kill the worker. Hazards that may not be an issue outside a confined space can become life threatening very quickly inside a confined space. Unfortunately, small errors in judgment have resulted in fatalities in this state and across the nation. There is no reason to think that the wine making industry is any exception. Don't forget about the

potential atmospheric hazards from the fermentation process and cleaning chemicals for example. Also to be considered are all the mechanical hazards, energy related hazards, engulfment hazards, etc.

Please note: Clean, empty, open top tanks (with removable tops, such as those used for Pinot Noir fermentation) are considered confined spaces by definition. Proper documentation is necessary to re-classify any confined spaces to non-permit-required confined spaces.