

DEPARTMENT OF INDUSTRIAL RELATIONS  
DIVISION OF OCCUPATIONAL SAFETY AND HEALTH  
*Headquarters Office*  
1515 Clay Street, Suite 1901  
Oakland, CA 94612  
(510) 286-7000 Fax: (510) 286-7037



*Juliann Sum, Chief*

June 1, 2015

Ralph Morales, Safety & Security Manager  
Safework, Inc.  
ralph.morales@safeworkinc.com

Re: Title 8 Section 5157 Permit Required Confined Space

Dear Mr. Morales;

This letter is provided in response to your inquiry to the Division of Occupational Safety and Health (Cal/OSHA) regarding the ventilation requirement for entering an active sewer system. The content and conclusions of this letter are based only on the facts described below and responsive only to the initial requester. They may not be construed as a statement of general Division policy or general interpretation of the regulations referenced in this letter.

**Scenario Presented:**

You provided the following scenario in your letter:

A crew is preparing to enter an "Active Sewer". The foreman is identified and is listed as the "Competent Person" for the Permit Required Confined Space Entry. The Confined Space Entry Permit is signed by the "Competent Person" and indicates an Oxygen Deficient Atmosphere, Carbon Monoxide present and Engulfment conditions. Each box on the permit was checked by the "Competent Person". The permit also indicates that Natural Ventilation is to be used. Natural Ventilation created by removing the cover on the manhole for entry and removing the up and downstream manhole covers ("Chimney Effect"). The "Competent Person" is asked why he does not have "forced air ventilation", the "Competent Person" states that his worker is wearing a gas monitor and is attached to the Tripod for extraction in the event of an emergency. The foreman also states he has been instructed by his Safety Manager that "forced air ventilation" is not required.

A Contractor's Safety Representative is present and is asked what the contractor's Safety Plan states to do. The Safety Representative could not locate the Safety Plan governing the operation. The Contractor's safety representative is asked what is his professional opinion regarding "forced air ventilation"? The contractor safety representative states that his "No Response" is his answer.

A Contractor Management Representative arrives and provides a copy of the Contractor's "Confined Space Entry Program". The Contractor Management Representative requests where it states in their policy that "forced air ventilation", is required. The contractor informed the

Owners Safety Representative that the Confined Space Policy they are using does not state "forced air ventilation" is required. At this time they (3) ("Competent Person" foreman), Contractor Safety Representative & Contractor Management Representative, are all informed that it is not stated in their policy that "forced air ventilation" is required, it does not mean the policy they have is 100% correct. At that time an explanation of the minimum requirements of Cal/OSHA Article 108, 5157 Permit-Required Confined Spaces and the importance of providing "forced air ventilation" is reviewed.

An explanation to the definition of a "Competent Person" set forth by Cal/OSHA needed to be reviewed. The Contractors foreman, safety representative and the management representative demonstrated that they do not meet the requirements of a "Competent Person", responsible for the Permit-Required Confined Space Entry. All three individuals failed to recognize the minimum requirement to provide "forced air ventilation" when entering an active sewer, and the requirement to take immediate corrective action to eliminate the atmospheric hazards. Entry was going to be allowed into the "Active Sewer" by the Contractor.

The Contractor's Management Representative, Safety Manager and the foreman need to reread the Cal/OSHA Regulation §5157. Permit-Required Confined Space including Appendix A -Permit Required Confined Space Decision Flow Chart. Also, they needed read the State of California Decision, Docket Nos. 01-R2D4-3946 and 3947, In the Matter of the Appeal of:

GRANITE CONSTRUCTION COMPANY  
P.O. BOX 50085  
Watsonville, CA 95077-5085

### **Question 1.**

Please verify: Is it a requirement to provide "forced air ventilation" whenever workers are to enter an "active sewer"? Reference: Cal/OSHA Regulation Section 5157, Appendix A and the Decision Flow Chart

### **Response to Question 1:**

Forced air ventilation is commonly used to eliminate or control hazardous atmospheres in permit entry into an active sewer. The standard does not mandate the use of forced air ventilation when workers are to enter an active sewer as other methods such as purging, inerting, and/or flushing may be utilized to control the atmospheric hazards. However, the natural ventilation created by removing manhole covers in the above scenario is not an effective control method for entry into an active sewer, especially when the atmosphere is oxygen deficient and carbon monoxide is present. Because sewers are large, continuous systems, conditions encountered at the point of entry may not be indicative of conditions at distances further from the point of entry. Also, since the space usually cannot be effectively isolated, conditions at any particular point in the space may change suddenly due to the introduction of a contaminant from another point in the system that creates a hazardous environment for the entrants. Regardless of the control measures utilized, the employer must verify that all hazards within the permit required confined space are eliminated or controlled to safe levels before employees are allowed to enter the space to perform the work.

**Question 2.**

How is forced air ventilation required to be used in an active sewer? What is the process for forced air ventilation: prior to entry, during testing and throughout the time workers are inside the permit required confined space?

**Response to Question 2:**

If forced air ventilation is used to maintain safe entry conditions, it must be utilized to eliminate or control hazardous atmospheres to safe levels in the permit space prior to allowing employees to enter the space and be continuously used throughout entry until the last person leaves the permit space. The forced air ventilation must be so directed as to ventilate the immediate areas where an employee is or will be present within the space. The air supply for the forced air ventilation must be from a clean source and may not increase the hazards in the space. In addition, the atmosphere within the space must be periodically tested as necessary to ensure that the forced air ventilation is preventing the accumulation of a hazardous atmosphere.

**Question 3.**

What citation(s) would Cal/OSHA Enforcement issue to the contractor in the scenario described above?

**Response to Question 3:**

Assuming the scope of work performed by the contractor is covered under the section 5157, the contractor could be issued serious citations under section 5157(d)(3) for failure to develop and implement the means, procedures, and practices necessary for safe permit space entry operation and 5157(d)(4) for not providing proper ventilating equipment and personal protective equipment:

5157(d) Permit-required confined space program (permit space program). Under the permit required confined space program required by subsection (c)(4), the employer shall:

(3) Develop and implement the means, procedures, and practices necessary for safe permit space entry operations, including, but not limited to, the following:

(A) Specifying acceptable entry conditions;

(B) Isolating the permit space;

(C) Purging, inerting, flushing, or ventilating the permit space as necessary to eliminate or control atmospheric hazards;

(D) Providing pedestrian, vehicle, or other barriers as necessary to protect entrants from external hazards; and

(E) Verifying that conditions in the permit space are acceptable for entry throughout the duration of an authorized entry.

(4) Provide the following equipment (specified in subsections (A) through (I), below) at no cost to employees, maintain that equipment properly, and ensure that employees use that equipment properly:

- (A) Testing and monitoring equipment needed to comply with subsection (d)(5);
- (B) Ventilating equipment needed to obtain acceptable entry conditions;
- (C) Communications equipment necessary for compliance with subsections (h)(3) and (i)(5);
- (D) Personal protective equipment insofar as feasible engineering and work practice controls do not adequately protect employees;
- (E) Lighting equipment needed to enable employees to see well enough to work safely and to exit the space quickly in an emergency;
- (F) Barriers and shields as required by subsection (d)(3)(D);
- (G) Equipment, such as ladders, needed for safe ingress and egress by authorized entrants;
- (H) Rescue and emergency equipment needed to comply with subsection (d)(9), except to the extent that the equipment is provided by rescue services; and
- (I) Any other equipment necessary for safe entry into and rescue from permit spaces.

In addition, the attached confined space entry permit did not meet requirements of section 5157(f)(9), (10) and (11):

(f) Entry permit. The entry permit that documents compliance with this section and authorizes entry to a permit space shall identify:

- (1) The permit space to be entered;
- (2) The purpose of the entry;
- (3) The date and the authorized duration of the entry permit;
- (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 roster or tracking systems, to keep track of the authorized entrants within the permit space.

- (5) The personnel, by name, currently serving as attendants;
- (6) The individual, by name, currently serving as entry supervisor, with a space for the signature or initials of the entry supervisor who originally authorized entry;
- (7) The hazards of the permit space to be entered;
- (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 permit spaces.

- (9) The acceptable entry conditions;
- (10) The results of initial and periodic tests performed under subsection (d)(5) accompanied by the names or initials of the testers and by an indication of when the tests were performed;
- (11) The rescue and emergency services that can be provided on-site and additional service that can be summoned and the means such as the equipment to use and the numbers to call) for summoning those services;
- (12) The communication procedures used by authorized entrants and attendants to maintain contact during the entry;

(13) Equipment, such as personal protective equipment, testing equipment, communications equipment, alarm systems, and rescue equipment, to be provided for compliance with this section;

(14) Any other information whose inclusion is necessary, given the circumstances of the particular confined space, in order to ensure employee safety, and

(15) Any additional permits, such as for hot work, that have been issued to authorize work in the permit space.

Please note that these are a few examples of possible citations and additional citations may be issued if other violations are observed during an inspection.

#### **Question 4.**

Would the owner of the project be included under the Multi-Employer Worksite regulation of the citation(s) issued? Even if they notified the contractor of the issue to be corrected?

#### **Response to Question 4:**

The owner of the project could be cited under the multi-employer regulation depending on circumstances. However, there are many factors that must be considered and it cannot be determined from the information given in the scenario. The multi-employer regulations are in Title 8, sections 336.10 and 336.11. In addition, section 5157 includes responsibilities of host employer in subsection (c)(8):

5157(c) General requirements.

(8) When an employer (host employer) arranges to have employees of another employer (contractor) perform work that involves permit space entry or confined space entries covered by sections 5158 or 8355, the host employer shall:

(A) 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, section 5158 or section 8355, depending on which section applies to the contractor;

(B) 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) 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;

(D) Coordinate entry operations with the contractor, when both host employer personnel and contractor personnel will be working in or near permit spaces, as required by subsection (d)(11); and

(E) Debrief the contractor at the conclusion of the entry operations regarding the permit spaced program followed and regarding any hazards confronted or created in permit spaces during entry operations.

#### **Question 5.**

Pending Cal/OSHA Consultation confirmation requiring "forced air ventilation" while working in an active sewer, the contractor's safety manager would have issued incorrect information, project-wide. Are all members of the contractor's safety department, including any and all persons who will be responsible for administering Permit-Required Confined Space Entry, required retraining? And would Cal/OSHA require retraining to be conducted by an independent, 3<sup>rd</sup> party qualified instructor?

**Response to Question 5:**

Training requirements are specified in section 5157(g):

(g) Training.

(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.

(2) Training shall be provided to each affected employee:

(A) Before the employee is first assigned duties under this section;

(B) Before there is a change in assigned duties;

(C) Whenever there is a change in permit space operations that presents a hazard about which an employee has not previously been trained;

(D) Whenever the employer has reason to believe either that there are deviations from the permit space entry procedures required by subsection (d)(3) or that there are inadequacies in the employee's knowledge or use of these procedures.

(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.

(4) The employer shall certify that the training required by subsections (g)(1) through (g)(3) 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.

Training must be provided to all employees whose work is regulated by the standard including persons who will be responsible for administering Permit-Required Confined Space entries. Subsections (g)(2)(B) through (D) addresses the issue of retraining. Subsection (D) requires retraining when there are inadequacies in the employee's knowledge or use of the relevant permit space procedures. In the scenario you provided, retraining is needed due to the lack of knowledge of controlling hazards in active sewers. However, the standard does not specify the courses to be provided or otherwise detail the exact training to be provided to employees involved in permit space entry operations; rather, the standard requires effective training to employees so that they acquire the understanding, knowledge, and skills necessary to perform their duties. Due to the wide-ranging hazards found and the various control measures to be used, it is difficult to specify the exact material to be covered in training courses for workers involved in permit space entry which covers all situations. In addition, the regulation does not require the trainer to be an independent, 3<sup>rd</sup> party qualified instructor. The employer is responsible for assuring that the training provided is effective in protecting employees for their confined space situations.

To help you understand the confined space regulations better, we have included links for the Federal OSHA's Frequently Asked Questions on Permit-Required Confined Space Standard and OSHA Confined Space Advisor:

<https://www.osha.gov/html/faq-confinedspaces.html>

<http://www.dol.gov/elaws/confined.htm>

We hope this provides you with information you need. If you have any further questions regarding this or related safety concerns, please contact me at 925-270-9791 or [eberg@dir.ca.gov](mailto:eberg@dir.ca.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "E Berg". The signature is written in a cursive style with a large initial "E" and a stylized "Berg".

Eric Berg  
Acting Deputy Chief, Research and Standards