

**OCCUPATIONAL SAFETY
AND HEALTH STANDARDS BOARD**

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NOTICE OF PROPOSED MODIFICATIONS TO
CALIFORNIA CODE OF REGULATIONS

TITLE 8: Division 1, Chapter 4, Subchapter 4,
Article 4, Section 1533(b) and Article 6, Section 1541(g)(3) of the Construction Safety Orders
and Subchapter 20, Article 1, Section 8403(a)(4) of the Tunnel Safety Orders.

Ventilation Inside Shafts, Culverts and Pipelines

Pursuant to Government Code Section 11346.8(c), the Occupational Safety and Health Standards Board (Standards Board) gives notice of the opportunity to submit written comments on the above-named standard in which modifications are being considered as a result of public comments and/or Board staff consideration.

On August 18, 2011, the Standards Board held a Public Hearing to consider revisions to Title 8, Division 1, Construction Safety Orders, Sections 1533 and 1541 and Tunnel Safety Orders, Section 8403. The Standards Board received written and oral comments on the proposed revisions. The standard has been modified as a result of these comments and Board consideration.

A copy of the full text of the standard, with the modifications clearly indicated, is attached for your information. In addition, a summary of all written and oral comments regarding the original proposal and staff responses is included.

Any written comments on these modifications must be received by 5:00 p.m. on October 4, 2011, at the Occupational Safety and Health Standards Board's Office, 2520 Venture Oaks Way, Suite 350, Sacramento, California 95833 or submitted by fax to (916) 274-5743 or e-mailed to oshsb@dir.ca.gov. This proposal will be scheduled for adoption at a future Business Meeting of the Occupational Safety and Health Standards Board.

The Standards Board's rulemaking file on the proposed action is open to public inspection Monday through Friday, from 8:00 a.m. to 4:30 p.m. at the Standards Board's Office.

Inquiries concerning the proposed changes may be directed to Marley Hart, Executive Officer at (916) 274-5721.

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date: September 16, 2011

Marley Hart, Executive Officer

PROPOSED MODIFICATIONS
(Modifications are indicated in bold,
underline for new language.)

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

PROPOSED STATE STANDARD,
TITLE 8, DIVISION 1, CHAPTER 4

Amend Section 1533 to read:

§1533. Internal Combustion Engines.

(a) Internal combustion engine-driven equipment shall be operated inside buildings or enclosed structures, **or, if they are 20 feet or less in depth, inside shafts, culverts, pipelines or other excavations** only when such operation does not result in exposure to dangerous gases or fumes in concentrations above the maximum acceptable limits listed in **Section 5155 of** the General Industry Safety Orders. Some acceptable methods of control are:

- (1) Piping exhaust gases to the outside atmosphere.
- (2) Providing a system of building ventilation that dilutes and removes exhaust products to outside atmosphere.
- (3) Installing effective, catalyst-type exhaust treatment units on the engines.

(b) When shafts, culverts, pipelines or other excavations are 20 feet or less in depth and when internal combustion engine-driven equipment is operated therein, a mechanical exhaust ventilation system shall be provided to prevent exposure to the internal combustion engine's emissions. A forced air ventilation (blower system) may be used in conjunction with, or in lieu of, mechanical exhaust ventilation. The ventilation system (be it a mechanical exhaust system or a forced air ventilation system or a combination of the two) shall:

- (1) Supply fresh air at a minimum of 60 lineal feet per minute through the area where the engine is operated;**
- (2) Supply at least 100 cubic feet of fresh air per minute per engine brake horsepower of the internal combustion engine used;**
- (3) Supply a minimum of 200 cubic feet of fresh air per minute for each person that enters the space, and**
- (4) Be inspected by a competent person at the beginning of each shift, or more frequently, to ensure an effective supply of fresh air.**

(c) If any work location subject to subsection (b) is subject to confined space safety orders contained in these orders, the General Industry Safety Orders or other Title 8 safety orders, and if the provisions of subsection (b) are less protective than a confined space safety order, the confined space safety order shall take precedence.

NOTE: For shafts greater than 20 feet in depth and excavations subject to the Tunnel Safety Orders, refer to Title 8, Division 1, Chapter 4, Subchapter 20, the Tunnel Safety Orders.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

PROPOSED STATE STANDARD,
TITLE 8, DIVISION 1, CHAPTER 4

Amend Section 1541 to read:

§1541. General Requirements.

(g) Hazardous atmospheres.

(3) Whenever internal combustion engine-driven equipment is operated inside a shaft subject to Section 1542 of these Orders, a ventilation system shall be provided and operated in accordance with Sections 1530 and 1533(b) of these Orders.

NOTE: For shafts greater than 20 feet in depth and excavations unrelated to the Construction Safety Orders, refer to Title 8, Division 1, Chapter 4, Subchapter 20, the Tunnel Safety Orders.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

**STANDARDS PRESENTATION
TO
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Attachment No. 1

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PROPOSED STATE STANDARD,
TITLE 8, DIVISION 1, CHAPTER 4

Amend Section 8403(a)(4) to read:

§8403. Scope and Application.

(a) In accordance with the provisions of Labor Code, Division 5, Part 9 et al., these orders establish minimum safety standards in places of employment at tunnels, shafts, raises, inclines, underground chambers, and premises appurtenant thereto during excavation, construction, alteration, repairing, renovating or demolishing and the following:

(4) All shaft excavations intended to exceed 20 feet in depth where employees may enter the shaft and/or approach the shaft area. A shaft will be considered a shaft from its inception. For shafts 20 feet or less in depth and excavations unrelated to the Tunnel Safety Orders, refer to, CCR, Title 8, Section 1533 and Article 6, commencing with Section 1539 of the Construction Safety Orders.

NOTE: Authority cited: Sections 142.3 and 7997, Labor Code. Reference: Sections 142.3 and 7997, Labor Code.

SUMMARY AND RESPONSE TO COMMENTS

SUMMARY AND RESPONSE TO ORAL AND WRITTEN COMMENTS

I. Written Comments

Mr. Van Howell, Area Director, Region IX, OSHA, U.S. Department of Labor, by letter dated July 22, 2011.

Comment:

Mr. Howell commented that Federal OSHA has reviewed the proposal and found it to not be commensurate with federal standards, in that it is not sufficiently linked to Title 8, Section 5155 (the counterpart of federal construction standards) as to hazardous substance exposure limits.

Response:

The Board accepts Mr. Howell's comments to the extent that the proposal will be modified to reference Section 5155. That modification is found in Section 1533(a). In addition, the first sentence of Section 1533(a) had been modified to make it clear that work locations subject to subsection (b) are subject to subsection (a) as well.

II. Oral Comments

Oral comments received at the August 18, 2011, Public Hearing in Sacramento, California.

Mr. Hank McDermott, Board Member

Comment:

Mr. McDermott stated that the definition of ventilation was somewhat unclear because it requires a mechanical exhaust ventilation system but then it goes on to state that a forced air blower system may be used in conjunction with or in lieu of a mechanical exhaust system. He stated that it seems that the wording could be tightened a little bit to make it clearer.

Response:

The proposal provides the employer with the option of using either a mechanical exhaust (removes contaminated air) ventilation system or a forced air blower (introduces breathing air and dilutes contaminated air) or a combination of both. The manner in which the options are stated is clear and does not constitute a definition.

Mr. Bill Jackson, Board Member

Comment No 1:

Mr. Jackson questioned the necessity of the proposal. Mr. Jackson indicated that the confined space safety orders should provide adequate safety for poor air quality in shafts, pipelines, culverts and excavations. The definition of a confined space should not be changed as a result of the proposal.

Response No 1:

The proposal is necessary because existing Construction Safety Order (CSO) requirements for internal combustion engines contained in Section 1533 only apply to work inside buildings or enclosed structures. Ventilation inside pipelines, shafts, excavations and culverts is not addressed by existing Section 1533 language since these are not buildings or structures. Secondly, the confined space safety orders only apply to what are by definition confined spaces, meaning they are defined by the concurrence of two conditions: limited egress and access and questionable air quality. Not all pipes, shafts, culverts and excavations meet these two conditions and therefore would not be addressed by the confined space safety orders. It is possible however, that portions of some shaft, pipeline, culvert and excavation jobsites may be subjected to Title 8 confined space standards leaving other portions subject to the proposal. This kind of overlap is not uncommon in Title 8 standards. For clarification, wording has been added to set forth the order of precedence. It is important, whether the space is a confined space or not, that adequate, healthful ventilation is provided to ensure employee safety. The definition “confined space” is therefore unaffected by the proposal.

Comment No 2:

Mr. Jackson questioned the procedure by which this proposal was developed, noting that it was put forward by the Division of Occupational Safety and Health (Division) and that Division-originated proposals do not have the initial scrutiny given to petitions.

Response No 2:

This proposal was developed in accordance with the laws and procedures that govern Board rule-making. In addition, the comment concerns procedural matters that do not touch on the substance of the proposal.

Mr. Guy Prescott, Board Member

Comment:

Mr. Prescott stated that if the confined space standard does not apply in the instant case, that standard is much more stringent than the proposal, and that we need to ensure that we are not putting a less stringent standard into effect regarding these conditions. He also echoed Mr. Jackson’s concerns about why staff handles Division Form 9 requests differently than petitions.

Response:

See the responses to Mr. Bill Jackson’s comments. The Board notes the proposal enhances safety by instituting ventilation requirements for worksites not covered by the confined space regulations.