

**OCCUPATIONAL SAFETY
AND HEALTH STANDARDS BOARD**

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NOTICE OF PROPOSED MODIFICATION TO
CALIFORNIA CODE OF REGULATIONS

TITLE 8: Division 1, Chapter 4, Subchapter 7, Article 109, Section 5168
of the General Industry Safety Orders and Chapter 4, Subchapter 15, Article 5, Section 6775 of the
Petroleum Safety Orders-Refining, Transportation and Handling

Static Electricity

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 standards in which modifications are being considered as a result of public comments and/or Board staff consideration.

On April 17, 2008, the Standards Board held a Public Hearing to consider revisions to Title 8, Section 5168 of the General Industry Safety Orders and Section 6775 of the Petroleum Safety Orders-Refining, Transportation and Handling. The Standards Board received written and oral comments on the proposed revisions. The standards have been modified as a result of these comments and Board consideration.

A copy of the full text of the standards 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 June 12, 2008, at the Occupational Safety and Health Standards Board, 2520 Venture Oaks Way, Suite 350, Sacramento, California 95833. The standards will be scheduled for adoption at a future Business Meeting of the 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 Office.

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

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Date: May 23, 2008

Marley Hart, Executive Officer

PROPOSED MODIFICATIONS
(Modifications are indicated in bold,
underline for new language,
and bold, ~~strikeout~~ for deleted language.)

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

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

Amend Section 5168 to read as follows:

§ 5168. Static Electricity.

(a) Processes or operations involving the use of oxidizing agents such as chlorates, perchlorates or peroxides, shall be effectively grounded.

(b) The nozzle of air, **high pressure water cleaning systems, grit cleaning systems,** inert gas, and steam lines or hoses, when used in the cleaning or ventilation of tanks and vessels that may contain hazardous concentrations of flammable gases or vapors, shall be grounded and bonded to the tank or vessel shell. Bonding devices shall not be attached nor detached in hazardous concentrations of flammable gases or vapors. Before starting work, precautions shall be taken to prevent ignition of flammable atmospheres in tanks and vessels in accordance with the requirements of Section 5420 of these Orders.

EXCEPTION: High pressure water cleaning system nozzles used to clean tanks or vessels 100 cubic meters or less in size need not be bonded to the tank or vessel shell, provided all conductive components are grounded and it is not possible for steam to enter the tank or vessel.

(c) Bonding and grounding devices which are temporarily clamped or clipped to movable equipment shall have a conductor of ample length to assure the effective attachment of the device.

(d) When attaching bonding and grounding clamps or clips, a secure and positive metal to metal contact shall be made. Such attachments shall be made before closures are opened and substance movements are started and shall not be broken until after substance movements are stopped and closures are made.

(e) Steam Cleaning. Steam cleaning components shall be conductive and grounded. The conductive components of the tank or vessel shall be grounded and bonded.

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, CHAPTER 4

Amend Section 6775 to read:

§ 6775. Static Electricity.

(a) Where not effectively grounded and/or bonded by contact or connection, provision shall be made to prevent the accumulation of static electrical charges which may create a source of ignition in the presence of flammable vapors or gases. This order applies specifically, but is not necessarily limited to, the following operations:

- (1) Blowing or agitating with air.
- (2) Loading and unloading tank cars and tank trucks.
- (3) Filling metal drums or containers.
- (4) Abrasive Blasting.
- (5) Hydroblasting.

EXCEPTION: Bonding is not required where vehicles are loaded or unloaded exclusively with products not having a static accumulating tendency.

(b) Stationary tanks containing flammable liquids and Class II combustible liquids, not inherently grounded by contact or by connection to a grounded pipe line, shall be grounded.

(c) The nozzle of air, high pressure water cleaning systems, grit cleaning systems, inert gas and steam lines or hoses when used in the cleaning or ventilation of tanks and vessels that contain hazardous concentrations of flammable gases or vapors, shall be grounded and bonded to the tank or vessel shell. Bonding devices shall not be attached nor detached in hazardous concentrations of flammable gases or vapors. Before starting work, precautions shall be taken to prevent ignition of flammable atmospheres in tanks and vessels in accordance with the requirements of Sections 5168 and 5420 of the General Industry Safety Orders.

EXCEPTION: High pressure water cleaning system nozzles used to clean tanks or vessels 100 cubic meters or less in size need not be bonded to the tank or vessel shell, provided all conductive components are grounded and it is not possible for steam to enter the tank or vessel.

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

SUMMARY AND RESPONSE TO COMMENTS

SUMMARY AND RESPONSE TO ORAL AND WRITTEN COMMENTS

I. Written Comments

Mr. Richard S. Terrill, Acting Regional Administrator, U.S. Department of Labor, Occupational Safety and Health Administration, Region IX, by letter dated March 26, 2008.

Comment:

Mr. Terrill summarized the proposal and concluded that the proposed standard is at least as effective as the federal standard.

Response:

The Board acknowledges the Region IX advisory opinion and thanks Mr. Terrill for his participation in the rulemaking process.

Ms. Elizabeth A. Treanor, Director, Phylmar Regulatory Roundtable, by letter dated April 17, 2008.

Comments 1 and 2:

In comment 1, Ms. Treanor suggested the Board clarify the intent of Section 5168 which is described in the Initial Statement of Reasons by including language in the Final Statement of Reasons that clarifies that high pressure water cleaning systems are static electricity risks and that grounding and bonding should only be required for tanks and vessels larger than 100 cubic meters. Ms. Treanor noted experiences of Phylmar clients who use water and humidity to control static build-up and that the NFPA 77 standard does not specifically identify water as a static electricity hazard. In comment 2, Ms. Treanor suggested that Section 5168 be revised to add clarifying terminology pertaining to high pressure cleaning systems and the 100 cubic meter volume specification mentioned in the NFPA 77 standard.

Response:

The Board notes that the NFPA 77-2007 Standard, Chapter 8.12 Tank Cleaning addresses water washing in Chapter 8.12.1. The 100 cubic meter criterion described in the NFPA 77 standard only applies to water washing operations where all other conductive water washing system components are grounded and there is no possibility for steam to enter the tank or vessel. It does not apply to washing operations involving other types of cleaning media. Therefore, consistent with the NFPA 77 standard, the Board proposes to modify Sections 5168(b) and 6775(c) to clarify that they apply to high pressure water and grit cleaning systems and to provide an exception that would not require the nozzles of high pressure water cleaning systems used to clean tanks or vessels 100 cubic meters or less in size to be grounded and bonded to the tank or vessel shell provided all other conductive components are grounded and intrusion of steam in to the tank or vessel is not possible.

Comment No. 3

Ms. Treanor stated that it would be helpful to the employer if the requirement contained in Section 5420 were included in Section 5168.

Response:

Title 8 contains many cross-references and the Board believes that the use of cross-references results in greater clarity that would be achieved by repeating extensive provisions in multiple standards. Therefore, the Board declines to make the change urged in this comment.

The Board thanks Ms. Treanor for her comments and participation in the Board's rulemaking process.

II. Oral Comments

Oral comments received at the April 17, 2008, Public Hearing in Sacramento, California.

Ms. Elizabeth Treanor, Director, representing Phylmar Regulatory Roundtable.

Comment:

Ms. Treanor presented the comments contained in her April 17, 2008, letter.

Response:

See the Board's response to Ms. Treanor's written comment in the written comments section above.