

**OCCUPATIONAL SAFETY
AND HEALTH STANDARDS BOARD**

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**TITLE 8. CALIFORNIA CODE OF REGULATIONS**General Industry Safety Orders

Sections 5530, 5568, 5572, 5574, 5575 and 5621

Electrical Safety Orders

Sections 2540.7 and 2540.8

Electrical Equipment in Hazardous (Classified) Locations

NOTICE IS HEREBY GIVEN that the Occupational Safety and Health Standards Board (Board) proposes to adopt, amend or repeal the foregoing provisions of Title 8 of the California Code of Regulations in the manner described in the Informative Digest, below.

PUBLIC HEARING

The Board will hold a public hearing starting at 10:00 a.m. on **December 18, 2014**, in the auditorium of the **State Resources Building, 1416 9th Street, Sacramento, California**. At this public hearing, any person may present statements or arguments orally or in writing relevant to the proposed action described in the Informative Digest.

WRITTEN COMMENT PERIOD

Any interested person may present statements or arguments orally or in writing at the hearing on the proposed changes under consideration. The written comment period commences on **October 31, 2014**, and closes at 5:00 p.m. on **December 18, 2014**. Comments received after that deadline will not be considered by the Board unless the Board announces an extension of time in which to submit written comments. Written comments are to be submitted as follows:

By mail to Sarah Money, Occupational Safety and Health Standards Board, 2520 Venture Oaks Way, Suite 350, Sacramento, CA 95833; or

By fax at (916) 274-5743; or

By e-mail sent to oshsb@dir.ca.gov.

AUTHORITY AND REFERENCE

Labor Code Section 142.3 establishes the Board as the only agency in the State authorized to adopt occupational safety and health standards. In addition, Labor Code Section 142.3 requires the adoption of occupational and health standards that are at least as effective as federal occupational safety and health standards.

INFORMATIVE DIGEST OF PROPOSED ACTION/POLICY STATEMENT
OVERVIEW

This rulemaking was initiated by Board staff to update the provisions contained in the above sections relating to electrical equipment located in hazardous (classified) locations in industrial plants, bulk plants, processing plants, and service stations. These sections apply to industries that store, process, and handle flammable and combustible liquids. Provisions addressed in this proposal are related to fire and explosion prevention.

This proposal is one of the series of proposals to complete the transition to the Globally Harmonized System (GHS). GHS was developed to help standardize the way chemical information is provided in the world. This proposal changes the classification of liquids from Class I, II, III to the corresponding Category 1, 2, 3, 4, in line with the terminology used in GHS. There are changes to Electrical Safety Orders to be consistent with the General Industry Safety Orders.

The proposal also harmonizes Title 8 requirements for electrical installations and the method of delineation of hazardous (classified) locations with building standards in Title 24. The pertinent California Code of Regulations, Title 24, California Electrical Code provisions related to this rulemaking draws largely from the National Fire Protection Association (NFPA) standards 30, 30A and 70. Current provisions in Title 8 were based on previous editions of the California Electrical Code, with many of its provisions dating back in the 1970s.

Anticipated Benefits

This regulatory action pertains to electrical installation issues and hazardous classified locations, and also fire and explosion prevention. This proposal intends to ensure the protection of health and safety of workers, and indirectly protects the environment.

This proposed rulemaking action is not inconsistent or incompatible with existing state regulations. This proposal is part of a system of occupational safety and health regulations. The consistency and compatibility of that system's component regulations is provided by such things as: (1) the requirement of the federal government and the Labor Code to the effect that the state's regulations be at least as effective as their federal counterparts, and (2) the requirement that all state occupational safety and health rulemaking be channeled through a single entity (the Standards Board).

In conformance with Government Code Section 11346.9(c), the Board provides the following information. The U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) promulgated regulations on March 26, 2012, addressing Globally Harmonized System (GHS) updates of the Hazard Communication Standard (HCS) and related sections. The changes affect 29 CFR, Parts 1910 (general industry). The Board is relying on the explanation of the provisions of the federal regulations in Federal Register, Volume 77, No. 58, pages 17574-17896, March 26, 2012, as the justification for the Board's proposed rulemaking action.

Section 5530. Scope.

Section 5530 contains the scope and general requirements for electrical installations in hazardous (classified) locations.

Amendments are proposed to:

- Change the title of Section 5530 to include the words General Requirements in order to reflect the contents of the Section.
- Change to the GHS method of classification of liquids (Category 1, 2, 3, 4) to reflect the federal standard 29 CFR 1910.106, Flammable Liquids.
- Change the scope to include areas where Category 1, 2, or 3 liquids with flashpoints below 100 °F are stored and handled without regard to whether they are store or handled above their flashpoints. This is in accordance with NFPA 30-2012, Section 7.1 Scope
- Update Section 5530 to be the horizontal standard for electrical equipment in Industrial Plants, Processing Plants and Bulk Plants.
- Delete Table FL-1 and direct the reader to building standard requirements found in Title 24, Part 3, Article 515, Bulk Storage Plants, for the delineation of hazardous (classified) locations. Title 24 prescribes building standards for electrical installations in hazardous classified locations necessary to prevent fires and explosions. Table FL-1 and Table FL-19 were re-listings of provisions from previous editions of the building standards. This proposal is essentially an update to the standard without re-listing the buildings standards in Title 8. New provisions in Title 24 include zone classification systems not found in existing tables, but described in Section 2540.11 of the Electrical Safety Orders.
- Update the date of the referenced NFPA 496 standard for Purged and Pressurized Enclosures for Electrical Equipment, (this manual is incorporated by reference) in subsection (c)(1) from 1974 to 2008, which is consistent with the building standards.

Section 5568. Inside Buildings.

Section 5568 applies to the operation of transferring flammable liquids from one container to another container inside buildings that are part of a service station. The proposal adds references to Section 5530(d) and 5574(c). Transferring flammable liquids may create a flammable atmosphere and ordinary electrical installation can be a source of ignition that could cause a fire. Section 5568 allows transferring of flammable liquids with a flashpoint of less than 100°F only in areas where building's electrical installations are appropriate for the classified location. Provisions for electrical area classification are found in Sections 5530(d) and 5574(c).

Section 5572. Emergency Power Cutoff.

Section 5572 contains provisions for emergency disconnect switches for service stations. Proposed amendments clarify the design and installation requirements for an emergency disconnect. The effect of this section is to cut off the fuel source in an event of an emergency.

Amendments are proposed to:

- Change the title to Emergency Disconnect Switches to reflect the content of the section.
- Update subsection (a) to specify that electrical disconnects have to be installed in approved locations.

- Update subsections (b), (c), and (d) to specify a distance criteria where the electrical disconnects shall be installed. This will instruct the reader to locate the emergency disconnect a certain distance from the fuel source for a timely disconnect but not too far that the user cannot discern what they are disconnecting.
- Update subsection (e) to require a sign for emergency disconnects to help the user locate the emergency disconnect switch in an emergency.
- Update subsections (f) and (g) to specify how the electrical disconnect should function to ensure that supply of fuel is stopped.
- Update subsection (h) to require the controls to be manually resettable is to prevent inadvertent resetting of the controls.

Section 5574. Electrical Equipment.

Section 5574 applies to electrical equipment in motor, marine service stations, and repair garages that store, handle and dispense flammable liquids. It prescribes a method for delineating and classifying areas for the installation of electrical wiring and utilization equipment.

Amendments are proposed to:

- Delete Table FL-9 in subsection (c) and direct the reader to provisions in Title 24, Part 3, Article 514, Motor Fuel Dispensing Facilities, for the delineation of Class I locations. This would add locations such as vapor processing systems, aboveground tanks, and other dispensing device such as compressed natural gas, liquefied natural gas, liquefied petroleum gas.
- Add cross reference to emergency electrical disconnect described in Section 5572 and 2540.7 for clarity.

Section 5575. Heating Equipment.

Section 5575 pertains to heating and ventilating equipment in a service station. It requires that the heating appliance be separated from a classified location. The provisions regarding the extent of the classified location are to be found in Sections 5530(d) and Section 5574(c). Table FL-9 is proposed to be deleted.

The separation of a heating appliance from a Class I location would prevent the appliance from being a source of ignition that could start a fire or explosion. Class I locations are locations where flammable gases or vapors are or may be present in the air in quantities sufficient to produce an explosive or ignitable mixture.

Section 5621. Electrical Equipment.

Section 5621 applies to bulk plants. The proposal is to delete the requirements of this section and cross reference it to Section 5530 to eliminate redundancy. This change is intended to consolidate provisions for bulk plants, industrial plants, and processing plants into one section for user readability.

Section 2540.7. Gasoline Dispensing and Service Station.

Section 2540.7 applies to motor fuel dispensing facilities. Proposal would harmonize the General Industry Safety Orders with the Electrical Safety Orders.

Amendments are proposed to:

- Change the title of the Section to be consistent with Title 24, Part 3, Article 514, Motor Fuel Dispensing Facilities and NFPA 30A-2012.
- Update subsection (a), to change the definition of motor-fuel dispensing facility to be consistent with definition in NFPA 70-2011 and Title 24, Part 3, Section 514.2. It is a more accurate definition because motor-fuel dispensing facilities are involved in the storage and transfer of motor fuel, not simply the transferring of motor fuel. Additionally, subsection (a), will correct the cross referenced Sections to 2540.2 and 2540.5. The reference 2540.6 refers to aircraft hangers and is not the subject matter for this subsection. Section 2540.2 refers to general requirements and Section 2540.5 refers commercial garages, repair, and storage.
- Remove provisions in subsection (b) and refer the reader to Title 24, Part 3, Article 514. Motor Fuel Dispensing Facilities, in order to be consistent with the building standards and Section 5574.
- Clarify the specifications of circuit disconnect in Subsection (c). These requirements are in harmony with Title 24.

Section 2540.8. Bulk Storage Plants.

Section 2540.8 applies to locations where gasoline or other volatile flammable liquids are stored in tanks having an aggregate capacity of one carload or more, and from which such products are distributed (usually by tank truck). This shall also include locations where volatile flammable liquids are loaded or unloaded from tanker ships.

Amendments are proposed to:

- Change the definition in Subsection (a) to be consistent with 29 CFR 1910.106(a)(7), Title 24, Part 3, Article 515, Bulk Storage Plants, Section 515.2, and NFPA 30-2012.
- Update Subsection (b), to direct the reader to the provisions of Title 24, Part 3, Article 515, Bulk Storage Plants, for the delineation of classified locations to be consistent with Section 5530.
- Add reference to 2540.7 in Subsection(c), to provide the appropriate section that refers to gasoline dispensing operations. Subsection (c) addresses operations where both gasoline dispensing and bulk plant operations occur.

DOCUMENTS INCORPORATED BY REFERENCE

- NFPA 496, Purged and Pressurized Enclosures for Electrical Equipment, 2008 Edition.

This document is too cumbersome or impractical to publish in Title 8. Therefore, it is proposed to incorporate the document by reference. A copy of this document is available for review Monday through Friday from 8:00 a.m. to 4:30 p.m. at the Standards Board Office located at 2520 Venture Oaks Way, Suite 350, Sacramento, California.

DISCLOSURES REGARDING THE PROPOSED ACTION

Mandate on Local Agencies and School Districts: None.

Cost or Savings to State Agencies: None.

Cost to any Local Government or School District which must be Reimbursed in Accordance with Government Code Sections 17500 through 17630: None.

Other Nondiscretionary Cost or Savings Imposed on Local Agencies: None.

Cost or Savings in Federal Funding to the State: None.

Cost Impacts on a Representative Private Person Or Business:

The Board is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

Statewide Adverse Economic Impact Directly Affecting Businesses and Individuals Including the Ability of California Businesses To Compete:

The Board estimates the economic impact to be less than \$10 million. The Board has made a determination that this proposal will not result in a significant, statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states.

The Global Harmonized System (GHS) is intended to improve and standardize the way chemical hazards are communicated in a global economy. GHS is a federal requirement that all states must comply with. Federal OSHA estimates the total annualized cost of compliance with the federal final rule (GHS) to be about \$201 million. This cost is for the entire GHS and is for the entire nation. California constitutes approximately 13% of the U.S. GDP, thus California's share of the total cost to implement the new GHS could be approximately \$26 million. This current rulemaking proposal is only for the flammable and combustible portion of the federal GHS proposal, as it applies to electrical equipment. The provisions that changed the system of classification were adopted on May 5, 2014. This proposal completes the transition to GHS. Existing Title 8 standards will no longer contain the terminology "Class I, II and III". These words were substituted by the "Category 1, 2, 3".

The proposal to reference Title 24 standards and remove duplicate Title 8 provisions does not create additional cost, because these standards have already undergone the rulemaking process and were promulgated by the California Building Standards. The proposal references Title 24 as it pertains to electrical installation issues in hazardous classified locations. Since, as stated earlier, Title 24 electrical installation /classification issues have already undergone the rulemaking process and are currently operative in California workplaces, the proposal has no new or added effect upon the regulated public.

Significant Effect on Housing Costs: None.

DETERMINATION OF MANDATE

The Occupational Safety and Health Standards Board has determined that the proposed regulation does not impose a local mandate. There are no costs to any local government or school district which must be reimbursed in accordance with Government Code Sections 17500 through 17630.

SMALL BUSINESS DETERMINATION

The Board has determined that the proposed amendments will most likely not affect small businesses. The proposed amendments include a change in terminology and a cross reference to existing regulations promulgated by Title 24.

RESULTS OF THE ECONOMIC IMPACT ASSESSMENT/ANALYSIS

Fed OSHA estimates that in almost all cases the annualized costs for small and very small firms are below 0.01 percent of revenues and 0.1 percent of profits. Cost estimates by NAICS Code for small and very small businesses are provided in Fed. Reg., Vol. 77, No. 58, dated March 26, 2012, pages 17661-17674. Therefore, this rulemaking action will not impact the following:

- creation or elimination of jobs within the State of California,
- creation of new businesses or the elimination of existing businesses within the State of California,
- expansion of businesses currently doing business within the State of California.

BENEFITS OF THE REGULATION

The amendments to the regulation would provide safety equivalent to that provided by the federal standards. Standards were amended to help prevent fires and explosions from occurring in places of employment that handle hazardous chemicals that are flammable and combustible. Fires and explosion cause injuries, fatalities and destroy structures and equipment. Ultimately, ensures the protection of health and safety of California workers, and indirectly impact the protection of the environment.

CONSIDERATION OF ALTERNATIVES

In accordance with Government Code Section 11346.5(a)(13), the Board must determine that no reasonable alternative it considered to the regulation or that has otherwise been identified and brought to its attention would either be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provision of law than the proposal described in this Notice.

The Board invites interested persons to present statements or arguments with respect to alternatives to the proposed regulation at the scheduled public hearing or during the written comment period.

CONTACT PERSONS

Inquiries regarding this proposed regulatory action may be directed to Marley Hart (Executive Officer) or Michael Manieri (Principal Safety Engineer) at the Occupational Safety and Health Standards Board, 2520 Venture Oaks Way, Suite 350, Sacramento, CA 95833; (916) 274-5721.

AVAILABILITY OF STATEMENT OF REASONS, TEXT OF THE PROPOSED REGULATIONS AND RULEMAKING FILE

The Board will have the entire rulemaking file available for inspection and copying throughout the rulemaking process at its office at the above address. As of the date this notice is published in the Notice Register, the rulemaking file consists of this notice, the proposed text of the regulations, the initial statement of reasons and supporting documents. Copies may be obtained by contacting Ms. Hart or Mr. Manieri at the address or telephone number listed above.

AVAILABILITY OF CHANGED OR MODIFIED TEXT

After holding the hearing and considering all timely and relevant comments received, the Board may adopt the proposed regulations substantially as described in this notice. If the Board makes modifications which are sufficiently related to the originally proposed text, it will make the modified text (with the changes clearly indicated) available to the public at least 15 days before the Board adopts the regulations as revised. Please request copies of any modified regulations by contacting Ms. Hart or Mr. Manieri at the address or telephone number listed above. The Board will accept written comments on the modified regulations for at least 15 days after the date on which they are made available.

AVAILABILITY OF THE FINAL STATEMENT OF REASONS

Upon its completion, copies of the Final Statement of Reasons may be obtained by contacting Ms. Hart or Mr. Manieri at the address or telephone number listed above or via the internet.

AVAILABILITY OF DOCUMENTS ON THE INTERNET

The Board will have rulemaking documents available for inspection throughout the rulemaking process on its web site. Copies of the text of the regulations in an underline/strikeout format, the Notice of Proposed action and the Initial Statement of Reasons can be accessed through the Standards Board's website at <http://www.dir.ca.gov/oshsb>.