REGULAR

STATE OF CALIFORNIA—OFFICE OF ADMINISTRATIVE LAW

NOTICE PUBLICATION/REGULATIONS SUBMISSION

(See instructions on reverse)

For use by Secretary of State only
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DEBRA BOWEN SECRETARY OF STATE

STD. 400 (REV. 01-2013)

OAL FILE NUMBERS	NOTICE FILE NUMBER	REGULATORY ACTION NUMBER	EMERGENCY NUMBER
	Z-2013-0617-02	2014-0321-10S	

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RECEIVED FOR FILING PUBLICATION DATE	
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Office of Administrative Law	
NOTICE	REGULATIONS

AGENCY WITH RULEMAKING AUTHORITY: Occupational Safety and Health Standards Board

AGENCY FILE NUMBER (If any):

A. PUBLICATION OF NOTICE (Complete for publication in Notice Register)

1. SUBJECT OF NOTICE	TITLE(S)	FIRST SECTION AFFECTED	2. REQUESTED PUBLICATION DATE
CSO 1504, 1929, (see attached)	Title 8	1504	June 28, 2013

3. NOTICE TYPE	4. AGENCY CONTACT PERSON	TELEPHONE NUMBER	FAX NUMBER (Optional)
[X] Notice re Proposed Regulatory Action [ ] Other	Marley Hart, Executive Officer	(916)-274-5721	(916)-274-5743

OAL USE ONLY	ACTION ON PROPOSED NOTICE	NOTICE REGISTER NUMBER	PUBLICATION DATE
	[ ] Approved as Submitted [ ] Approved as Modified [ ] Disapproved/ Withdrawn	2013, 262	6/28/2013

B. SUBMISSION OF REGULATIONS (Complete when submitting regulations)

1a. SUBJECT OF REGULATION(S): Federal Final Rule GHS-Update to Hazard Comm. Safety

1b. ALL PREVIOUS RELATED OAL REGULATORY ACTION NUMBER(S):

2. SPECIFY CALIFORNIA CODE OF REGULATIONS TITLE(S) AND SECTION(S) (Including title 26, if toxics related)

SECTION(S) AFFECTED (List all section number(s) individually. Attach additional sheet if needed.)

ADOPT: Please see attached B., Item 2.

AMEND: Please see attached B., Item 2.

REPEAL:

TITLE(S): 8

3. TYPE OF FILING

- [X] Regular Rulemaking (Gov. Code §11346)
- [ ] Resubmittal of disapproved or withdrawn nonemergency filing (Gov. Code §§11349.3, 11349.4)
- [ ] Emergency (Gov. Code, §11346.1(b))
- [ ] Certificate of Compliance: The agency officer named below certifies that this agency complied with the provisions of Gov. Code §§11346.2-11347.3 either before the emergency regulation was adopted or within the time period required by statute.
- [ ] Resubmittal of disapproved or withdrawn emergency filing (Gov. Code, §11346.1)
- [ ] Emergency Readopt (Gov. Code, §11346.1(h))
- [ ] File & Print
- [ ] Other (Specify)
- [ ] Changes Without Regulatory Effect (Cal. Code Regs., title 1, §100)
- [ ] Print Only

4. ALL BEGINNING AND ENDING DATES OF AVAILABILITY OF MODIFIED REGULATIONS AND/OR MATERIAL ADDED TO THE RULEMAKING FILE (Cal. Code Regs. title 1, §44 and Gov. Code §11347.1)
October 31, 2013 - November 20, 2013 and January 28, 2014 - February 13, 2014

5. EFFECTIVE DATE OF CHANGES (Gov. Code, §§ 11343.4, 11346.1(d); Cal. Code Regs., title 1, §100)
- [ ] Effective January 1, April 1, July 1, or October 1 (Gov. Code §11343.4(a))
- [ ] Effective on filing with Secretary of State
- [ ] §100 Changes Without Regulatory Effect
- [X] Effective other (Specify) May 6, 2014

6. CHECK IF THESE REGULATIONS REQUIRE NOTICE TO, OR REVIEW, CONSULTATION, APPROVAL OR CONCURRENCE BY, ANOTHER AGENCY OR ENTITY
- [ ] Department of Finance (Form STD. 399) (SAM §6660)
- [ ] Fair Political Practices Commission
- [X] State Fire Marshal
- [ ] Other (Specify)

7. CONTACT PERSON: Marley Hart | TELEPHONE NUMBER: 916.274.5721 | FAX NUMBER (Optional): 916.274.5743 | E-MAIL ADDRESS (Optional): mhart@dir.ca.gov

8. **I certify that the attached copy of the regulation(s) is a true and correct copy of the regulation(s) identified on this form, that the information specified on this form is true and correct, and that I am the head of the agency taking this action, or a designee of the head of the agency, and am authorized to make this certification.**

SIGNATURE OF AGENCY HEAD OR DESIGNEE: Marley Hart | DATE: 3/20/14

TYPED NAME AND TITLE OF SIGNATORY: Marley Hart, Executive Officer

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MAY 05 2014
Office of Administrative Law

Revised May 2, 2014

B. Submission of Regulations – Continued
Item 2. Continued

Adopt: Section 1929

Amend: Sections 1504, 1930, 1931, 1932, 1934, 1935, 1936, 5154, 5191, 5194, 5415, 5417, 5449, 5451, 5531, 5532, 5533, 5534, 5535, 5537, 5538, 5541, 5542, 5543, 5545, 5546, 5547, 5549, 5555, 5556, 5558, 5560, 5566, 5568, 5569, 5570, 5573, 5574, 5575, 5576, 5577, 5578, 5579, 5580, 5583, 5585.1, 5589, 5590, 5592, 5593, 5594, 5595, 5596, 5597, 5598, 5599, 5600, 5601, 5602, 5606, 5607, 5608, 5616, 5617, 5618, 5619, 5620, 5621, 5622, and 5624

STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

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

Subchapter 4. Construction Safety Orders
Article 2. Definitions

Amend Section 1504 as follows:
§1504. Definitions.
(a) The following definitions shall apply in the application of these Orders:

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Combustible Liquid. A liquid having a flash point greater than 199.4°F (93°C) (formerly designated Class IIIB Combustible liquids). ~~at or above 100°F (37.8 degrees C). Combustible liquids shall be subdivided as follows:~~
~~(A) Class II liquids shall include those having flash points at or above 100° F (37.8°C) and below 140°F (60°C).~~
~~(B) Class IIIA liquids shall include those having flash points at or above 140°F (60°C) and below 200°F (93.4°C).~~
~~(C) Class IIIB liquids shall include those having flash points at or above 200°F (93.4°C).~~

***

Fire Area. An area of a building separated from the remainder of the building by construction having a fire resistance of at least 1 hour and having all communicating openings properly protected by an assembly having a fire resistance rating of at least 1 hour.

***

Flammable Liquid. Any liquid having a vapor pressure not exceeding 40 pounds per square inch (absolute) at 100 °F (37.8 °C) and having a flashpoint at or below 199.4 °F (93 °C). Flammable liquids are divided into four categories as follows:
~~Flammable Liquid. A liquid having a flash point below 100° F (37.8° C) and having a vapor pressure not exceeding 40 pounds per square inch (absolute) at 100° F (37.8° C) and shall be known as a Class I liquid. Class I liquids shall be subdivided as follows:~~
(A) Category 1 shall include liquids having flashpoints below 73.4 °F (23 °C) and having a boiling point at or below 95 °F (35 °C). ~~Class IA shall include those having flash points below 73° F (22.8° C) and having a boiling point below 100°F (37.8° C).~~
(B) Category 2 shall include liquids having flashpoints below 73.4 °F (23 °C) and having a boiling point above 95 °F (35 °C). ~~Class IB shall include those having flash points below 73° F (22.8° C) and having a boiling point at or above 100° F (37.8° C).~~
(C) Category 3 shall include liquids having flashpoints at or above 73.4 °F (23 °C) and at or below 140 °F (60 °C). ~~Class IC shall include those having flash points at or above 73° F (22.8° C) and below 100° F (37.8°C).~~
(D) Category 4 shall include liquids having flashpoints above 140 °F (60 °C) and at or below 199.4 °F (93 °C).

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Flash point of the liquid. The temperature at which it gives off vapor sufficient to form an ignitable mixture with the air near the surface of the liquid or within the vessel used as determined by appropriate test procedure and apparatus as specified below.
(A) The flashpoint of liquids having a viscosity less than 45 Saybolt Universal Second(s) at 100 °F (37.8 °C) and a flashpoint below 175 °F (79.4 °C) shall be determined in accordance with the Standard Test Method for Flash Point by Tag Closed Cup Tester, ASTM D–56–05, which is incorporated herein by reference, or an equivalent method as defined by Section 5194 Appendix B.
(B) The flashpoints of liquids having a viscosity of 45 Saybolt Universal Second(s) or more at 175 °F (79.4 °C) or higher shall be determined in accordance with the Standard Test Methods for Flash Point by Pensky-Martens Closed Cup Tester, ASTM D–93–08, which is incorporated herein by reference, or an equivalent method as defined by Section 5194 Appendix B.

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

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Subchapter 4. Construction Safety Orders
Article 36. Fire Protection and Prevention

Add new Section 1929 as follows:
§1929. Scope (Sections 1930-1936, Flammable and Combustible Liquids).
The following sections 1930 through 1936 apply to the handling, storage, and use of flammable and combustible liquids. These sections do not apply to:
(a) Bulk transportation of flammable liquids; and
(b) Storage, handling, and use of fuel oil tanks and containers connected with oil burning equipment.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Amend Section 1930 as follows:
§1930. Flammable and Combustible Liquids.
(a) General.
(1) Only approved containers and portable tanks shall be used for storage and handling of flammable liquids and liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids). Approved safety cans or Department of Transportation approved containers shall be used for the handling and use of flammable liquids and liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) in quantities of 5 gallons or less.

For quantities of one gallon or less, the original container may be used, for storage, use and handling of flammable liquids and liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids). ~~Metal containers and portable tanks meeting the requirements of and containing products authorized by Chapter I, Title 49, of the Code of Federal Regulations (DOT Regulations), shall be deemed to be acceptable.~~
~~(2) Containers and portable tanks for flammable and combustible liquids shall conform to Table A.~~
(2) Containers and portable tanks for flammable liquids and liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) shall conform to Table A.

~~Table A~~
~~Maximum Allowable Size of~~
~~Containers and Portable Tanks~~

	~~Flammable Liquids~~			~~Combustible Liquids~~	
~~Container Type~~	~~Class IA~~	~~Class IB~~	~~Class IC~~	~~Class II~~	~~Class III~~
~~Glass.....~~	~~1 pt.~~	~~1 qt.~~	~~1 gal.~~	~~1 gal.~~	~~5 gal.~~
~~Metal (Other than DOT Drums) or approved plastic.....~~	~~1 gal.~~	~~5 gal.~~	~~5 gal.~~	~~5 gal.~~	~~5 gal.~~

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~~Safety cans..... 2 gal. 5 gal. 5 gal. 5 gal. 5 gal.~~
~~Metal Drum (DOT Spec).... 60 gal. 60 gal. 60 gal. 60 gal. 60 gal.~~
~~Approved Portable~~
~~Tanks ..... 660 gal. 660 gal. 660 gal. 660 gal. 660 gal.~~
~~Polyethylene~~
~~DOT Spec 34 or as~~
~~authorized by DOT~~
~~Exemption..... 1 gal. 5 gal. 5 gal. 60 gal. 60 gal.~~
~~SI Units: 1 pt. = 0.43 L; 1 qt. = 0.95 L; 1 gal. = 3.785 L~~

Table A
Maximum Allowable Size of
Containers and Portable Tanks

Container Type	Category 1	Category 2	Category 3	Category 4	Other[1]
Glass or approved plastic	1 pt.	1 qt.	1 gal.	1 gal.	5 gal.
Metal (Other than DOT Drums)	1 gal.	5 gal.	5 gal.	5 gal.	5 gal.
Safety cans	2 gal.	5 gal.	5 gal.	5 gal.	5 gal.
Metal Drum (DOT Spec)	60 gal.	60 gal.	60 gal.	60 gal.	60 gal.
Approved Portable Tanks	660 gal.	660 gal.	660 gal.	660 gal.	660 gal.

SI Units: 1 pt. = 0.43 L; 1 qt. = 0.95 L; 1 gal. = 3.785 L
NOTE 1: "Other": Liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids)

~~(3) Portable tanks in excess of 660 gallons shall have emergency venting and other devices as required by Chapters II and III of the Flammable and Combustible Liquids Code (NFPA 30-1984).~~
(3) Portable tanks shall have emergency venting and other devices as required by the Flammable and Combustible Liquids Code (NFPA 30-2012).
~~(4)~~(4) Flammable ~~or combustible~~ liquids or liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) shall not be stored so as to limit use of exits, stairways or areas normally used for the safe egress of people.
(A) Storage in excess of 25 gallons of flammable liquids ~~or 60 gallons of Class III liquids~~ or 60 gallons of liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) shall be within cabinets constructed to the requirements of NFPA 30.
(B) Not more than 25 gallons of flammable liquids shall be stored in a room ~~safety cans~~ outside of an approved storage cabinet ~~flammable liquids storage room or storage cabinet~~.
~~(5)~~(5) Not more than 120 gallons of Category 1, 2, 3 and 4 flammable ~~Class I, Class II, or Class IIIA~~ liquids may be stored in a storage cabinet. Of this total, not more than 60 gallons may be of Category 1, 2 and 3 flammable ~~Class I and Class II~~ liquid. Not more than three such cabinets may be located in a single fire ~~floor~~ area, except that in an industrial occupancy additional

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cabinets may be located in the same fire ~~floor~~ area if the additional cabinet, or group of not more than three cabinets, is separated from any other cabinets or group of cabinets by at least 100 feet.
(b) Flammable liquids and liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) in excess of that permitted in inside storage rooms shall be stored outside of buildings in accordance with Section 1932.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Amend Section 1931 as follows:
§1931. Inside Storage ~~of Flammable Liquids~~.
(a) Inside storage rooms shall be constructed in accordance with NFPA 30-2012 ~~1984~~.
(b) Materials which will react with water shall not be stored in the same room with flammable or combustible liquids.
(c) Storage in inside storage rooms shall comply with the following:

Automatic Fire Protection Provided*	Fire Resistance	Maximum Floor Area	Total Allowable Quantities, gals/sq.ft floor area
Yes	2-hour	500 sq. ft.	10
No	2-hour	500 sq. ft.	4~~**~~
Yes	1-hour	150 sq. ft.	5
No	1-hour	150 sq. ft.	2

* Fire protection system shall be sprinkler, water spray, carbon dioxide, ~~dry chemical, halon~~ or other system approved ~~system~~ by a nationally recognized testing laboratory for this purpose.
~~** Total allowable quantities of Class IA and IB Liquids shall not exceed that permitted in Table 4-4.2.7 and the provisions of 4-4.2.10 of NFPA 30-1984.~~

(d) Electrical wiring and equipment located in inside storage rooms ~~used for Class I liquids~~ shall be approved for Class I, Division 1 ~~2~~ Hazardous Locations in accordance with the Low Voltage Electrical Safety Orders.
(e) Provisions shall be made for ventilation of inside storage rooms in accordance with General Industry Safety Orders, Section 5143.
Every inside storage room shall be provided with either a gravity or a mechanical exhausting system. Such system shall commence not more than 12 inches above the floor and be designed to provide for a complete change of air within the room at least 6 times per hour. If a mechanical exhausting system is used, it shall be controlled by a switch located outside of the door. The ventilating equipment and any lighting fixtures shall be operated by the same switch. An electric pilot light shall be installed adjacent to the switch if Category 1, 2 or 3 flammable liquids are dispensed within the room. Where gravity ventilation is provided, the fresh air intake, as well as

the exhausting outlet from the room, shall be on the exterior of the building in which the room is located.
(f) In every inside storage room there shall be maintained one clear aisle at least three feet wide. Containers over 30 gallons capacity ~~storing Class I or Class II liquids~~ shall not be stacked one upon the other. Dispensing shall be by approved pump or self-closing faucet only.
(g) "Quantity." The quantity of flammable liquids and liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) kept in the vicinity of spraying operations shall be the minimum required for operations and should not exceed a supply for 1 day or one shift. Bulk storage of portable containers of flammable liquids and liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) shall be in a separate, constructed building detached from other important buildings or cut off in a standard manner. See Section 5451 of the General Industry Safety Orders for additional requirements.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Amend Section 1932 as follows:
§1932. ~~Outside~~ Storage Outside Buildings.

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(b) The storage area shall be graded in a manner to divert possible spills away from buildings or other exposures or shall be surrounded by a curb at least 12 inches high. When curbs are used, provisions shall be made for draining of accumulations of ground or rain water or spills of flammable or combustible liquids. Drains shall terminate at a safe location and shall be accessible to operation under fire conditions.

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

Amend Section 1934 as follows:
§1934. Dispensing Liquids.
(a) Areas in which flammable or combustible liquids are transferred at one time, in quantities greater than 5 gallons from one tank or container to another tank or container~~,~~ shall be separated from other operations by 25-feet distance or by construction having a fire resistance of at least 1 hour. Drainage or other means shall be provided to control spills. Adequate natural or mechanical ventilation shall be provided to maintain the concentration of flammable vapor at or below 10 percent of the lower flammable limit.
(b) Transfer of Category 1, 2 or 3 flammable liquids from one container to another shall be done only when containers are electrically interconnected (bonded). ~~When flammable liquids are transferred from one container to another, the fill spout, nozzle or fill pipe shall be kept continuously in contact with the edge of the fill opening to prevent the discharge of static~~

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~~sparks.~~ Bonding or grounding of tanks, tank vehicles, tank cars, etc., shall be in accordance with NFPA 77-2007 ~~1983~~, which is incorporated herein by reference.
(c) Flammable liquids shall be drawn from or transferred into vessels, containers or portable tanks within a building or outside only through a closed piping system, from safety cans, by means of a device drawing through the top, or from a container or portable tanks by gravity or pump through an approved self-closing valve. Transferring any liquids by means of air pressure on the container or portable tanks shall be prohibited.

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(e) Dispensing devices and nozzles for Category 1, 2 or 3 flammable liquids shall be of an approved type.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Amend Section 1935 as follows:
§1935. Use of Flammable Liquids.
(a) ~~Flammable~~ Category 1, 2 or 3 flammable liquids shall be kept in closed containers when not actually in use.
(b) Leakage or spillage of flammable or combustible liquids shall be disposed of promptly and safely.
(c) ~~Flammable~~ Category 1, 2 or 3 flammable liquids may be used only where there are no open flames or other sources of ignition within 50 feet of the operation, unless conditions warrant greater clearance. ~~the possible path of vapor travel.~~
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Amend Section 1936 as follows:
§1936. Service and Refueling Areas.
(a) Flammable liquids shall be stored in approved closed containers, in approved tanks located underground, or in approved aboveground portable tanks. ~~Only approved containers and portable tanks shall be used. Metal containers and portable tanks meeting the requirements of and containing products authorized by Chapter I, Title 49, of the Code of Federal Regulations (DOT Regulations), shall be deemed to be acceptable.~~
(b) Dispensing devices for ~~Class I~~ Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) ~~liquids~~ shall be of approved type. The dispensing nozzle shall be of an approved automatic-closing type without a latch-open device.

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(e) Heating equipment of an approved type ~~using gas or oil fuel~~ may be installed in the lubrication or service area ~~room~~ where there is no dispensing or transferring of Category 1 or 2 flammable liquids or Category 3 flammable liquids with a flashpoint below 100 °F (37.8

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°C) ~~Class I liquids~~ provided the bottom of the heating unit ~~combustion chamber~~ is at least 18 inches above the floor and the heating equipment is protected from physical damage.

(f) Heating equipment installed in lubrication or service areas, where Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) are dispensed, shall be of an approved type for garages, and shall be installed at least 8 feet above the floor. ~~Heating equipment approved for use in garages may be installed in the lubrication or service room where Class I liquids are dispensed provided the equipment is installed at least 8 feet above the floor.~~

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

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Subchapter 7. General Industry Safety Orders
Group 16. Control of Hazardous Substances
Article 107. Dusts, Fumes, Mists, Vapors and Gases

Amend Section 5154 as follows:
§5154. Ventilation and Personal Protective Equipment Requirements for Open-Surface Tank Operations.
(a) General. This section applies to all operations involving the immersion of materials in liquids, or in the vapors of such liquids, for the purpose of cleaning or altering the surface character of the materials.
(1) Additional requirements for dipping and coating operations that use flammable liquids or liquids with flashpoints greater than 199.4 ≥F (93 ≥C).
Where flammable liquids are used in dipping and coating operations, the employer shall also comply with the requirements of Articles 136 and 137 and Sections 5143 and 5154, as applicable.

The employer shall comply with this subsection (a)(1) if:	And:
• The flashpoint of the liquid is 199.4 °F (93 °C) or above	• The liquid is heated as part of the operation; or • A heated object is placed in the liquid.

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

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Subchapter 7. General Industry Safety Orders
Group 16. Control of Hazardous Substances
Article 109. Hazardous Substances and Processes

Modify Section 5191 as follows:
§5191. Occupational Exposure to Hazardous Chemicals in Laboratories.

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(b) Definitions

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~~Combustible liquid. Any liquid having a flashpoint at or above 100° F (37.8° C), but below 200° F (93.3° C) except any mixture having components with flashpoints of 200° F (93.3° C), or higher, the total volume of which make up 99 percent or more of the total volume of the mixture.~~

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~~Flammable. A chemical that falls into one of the following categories:~~
~~(1) "Aerosol, flammable" means an aerosol that, when tested by the method described in 16 CFR 1500.45, yields a flame projection exceeding 18 inches at full valve opening, or a flashback (a flame extending back to the valve) at any degree of valve opening;~~
~~(2) "Gas, flammable" means:~~
~~(A) A gas that, at ambient temperature and pressure, forms a flammable mixture with air at a concentration of 13 percent by volume or less; or~~
~~(B) A gas that, at ambient temperature and pressure, forms a range of flammable mixtures with air greater than 12 percent by volume, regardless of the lower explosive limit.~~
~~(3) "Liquid, flammable" means any liquid having a flashpoint below 100° F (37.8° C), except any mixture having components with flashpoints of 100° F (37.8° C) or higher, the total of which make up 99 percent or more of the total volume of the mixture.~~
~~(4) "Solid, flammable" means a solid, other than a blasting agent or explosive as defined in 29 CFR 1910.109(a), that is liable to cause fire through friction, absorption of moisture, spontaneous chemical change, or retained heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious hazard. A chemical shall be considered to be a flammable solid if, when tested by the method described in 16 CFR 1500.44, it ignites and burns with a self-sustained flame at a rate greater than one-tenth of an inch per second along its major axis.~~
~~Flashpoint. The minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite when tested as follows:~~
~~(1) Tagliabue Closed Tester (See American National Standard Method of Test for Flash Point by Tag Closed Tester, Z11.24 - 1979 (ASTM D 56-79) - for liquids with a viscosity of less than 45 Saybolt Universal Seconds (SUS) at 100° F (37.8° C), or that do not contain suspended solids, and do not have a tendency to form a surface film under test; or~~
~~(2) Pensky-Martens Closed Tester (see American National Standard Method of Test for Flash Point by Pensky-Martens closed tester), Z11.7 - 1979 (ASTM D 93-79) for liquids with a~~

~~viscosity equal to or greater than 45 SUS at 100° F (37.8°C), or that contain suspended solids, or that have a tendency to form a surface film under test; or~~
~~(3) Setaflash Closed Tester (see American National Standard Method of Test for Flash Point by Setaflash Closed Tester (ASTM D 3278-78)). Organic peroxides, which undergo autoaccelerating thermal decomposition, are excluded from any of the flashpoint determination methods specified above.~~

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NOTE: Authority cited: Sections 142.3 and 9020, Labor Code. Reference: Sections 142.3, 9004(d), 9009 and 9020, Labor Code.

Modify Section 5194 as follows:
§ 5194. Hazard Communication.

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(c) Definitions.

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~~Combustible liquid.~~
~~Any liquid having a flashpoint at or above 100° F (37.8° C), but below 200° F (93.3° C), except any mixture having components with flashpoints of 200° F (93.3° C), or higher, the total volume of which make up 99 percent or more of the total volume of the mixture.~~

Combustible liquid.
Any liquid having a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids).

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~~Flammable.~~
~~A substance that falls into one of the following categories:~~
~~(A) Aerosol, flammable. An aerosol that, when tested by the method described in 16 CFR 1500.45, yields a flame projection exceeding 18 inches at full valve opening, or a flashback (a flame extending back to the valve) at any degree of valve opening;~~
~~(B) Gas, flammable:~~
~~1. A gas that, at ambient temperature and pressure, forms a flammable mixture with air at a concentration of thirteen (13) percent of volume or less; or~~
~~2. A gas that, at ambient temperature and pressure, forms a range of flammable mixtures with air wider than twelve (12) percent by volume, regardless of the lower limit;~~
~~(C) Liquid, flammable. Any liquid having a flashpoint below 100° F (37.8° C), except any mixture having components with flashpoints of 100° F (37.8° C) or higher, the total of which make up 99 percent or more of the total volume of the mixture.~~
~~(D) Solid, flammable. A solid, other than a blasting agent or explosive as defined in section 5237(a), that is liable to cause fire through friction, absorption of moisture, spontaneous~~

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~~chemical change, or retained heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious hazard. A chemical shall be considered to be a flammable solid if, when tested by the method described in 16 CFR 1500.44, it ignites and burns with a self-sustained flame at a rate greater than one-tenth of an inch per second along its major axis.~~

~~Flashpoint.~~

~~The minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite when tested as follows:~~

~~(A) Tagliabue Closed Tester (see American National Standard Method of Test for Flash Point by Tag Closed Tester, Z11.24-1979 (ASTM D 56-79)) for liquids with a viscosity of less than 45 Saybolt Universal Seconds (SUS) at 100° F (37.8° C), that do not have a tendency to form a surface film under test; or~~

~~(B) Pensky-Martens Closed Tester (see American National Standard Method of Test for Flash Point by Pensky-Martens Closed Tester, Z11.7-1979 (ASTM D 93-79)) for liquids with a viscosity equal to or greater than 45 SUS at 100° F (37.8° C), or that have a tendency to form a surface film under test; or~~

~~(C) Setaflash Closed Tester (see American National Standard Method of Test for Flash Point by Setaflash Closed Tester (ASTM D 3278-78)).~~

~~Organic peroxides, which undergo autoaccelerating thermal decomposition, are excluded from any of the flashpoint determination methods specified above.~~

***

NOTE: Authority cited: Sections 50.7, 142.3 and 6398, Labor Code. Reference: Sections 50.7, 142.3 and 6361-6399.7, Labor Code; Sections 25249.6, 25249.7, 25249.8, 25249.10, 25249.11, 25249.12 and 25249.13, Health and Safety Code; *California Lab. Federation v. Occupational Safety and Health Stds. Bd.* (1990) 221 Cal.App.3d 1547 [271 Cal. Rptr. 310]; and *United Steelworkers of America v. Auchter* (3d Cir. 1985) 763 F.2d 728.

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Subchapter 7. General Industry Safety Orders
Group 20. Flammable Liquids, Gases and Vapors
Article 134. Definitions

Amend Section 5415 as follows:
§5415. Definitions.

***

Closed Container…

Combustible Liquid~~s~~. See Liquid~~s~~, Combustible.

Container…

***

Fire Area…

Flammable Aerosol. An aerosol which is a flammable aerosol as defined by Section 5194 Appendix B – Physical Hazard Criteria. For the purposes of Group 20 of these Orders, such aerosols are considered Category 1 flammable liquids.
~~required to be labeled "Flammable" under the U. S. Federal Hazardous Substances Labeling Act. For the purposes of these regulations such aerosols are considered Class IA liquids~~.

Flammable (Explosive) Limits…

Flammable Liquid. See Liquid, Flammable.

Flash Point ~~(of a liquid)~~. The minimum temperature at which a liquid gives off vapor within a test vessel in sufficient concentration to form an ignitable mixture with air near the surface of the liquid, and shall be determined as follows:
~~it gives off vapor in sufficient concentration to form an ignitible mixture with air near the surface of the liquid within the vessel as specified by appropriate test procedure and apparatus as follows:~~
(A) For a liquid which has a viscosity of less than 45 SUS at 100 °F (37.8 °C), does not contain suspended solids, and does not have a tendency to form a surface film while under test, the procedure specified in the Standard Method of Test for Flashpoint by Tag Closed Tester (ASTM D–56–05), which is hereby incorporated by reference, or an equivalent test method as defined in Section 5194, Appendix B – Physical Hazard Criteria, shall be used.
~~The flash point of a liquid having a viscosity less than 45 SUS at 100 F. (37.8° C) and a flash point below 200° F. (93.4° C), shall be determined in accordance with the Standard Method of Test for Flash Point by the Tag Closed Tester, ASTM D-56-79.~~

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(B) The flash point of a liquid having a viscosity of 45 SUS or more at 100 F. (37.8° C), or contains suspended solids, or has a tendency to form a surface film while under test, the Standard Method of Test for Flashpoint by Pensky-Martens Closed Tester (ASTM D–93–08), which is hereby incorporated by reference, or an equivalent method as defined by Section 5194, Appendix B – Physical Hazard Criteria, shall be used except that the methods specified in Note 1 to section 1.1 of ASTM D-93-08 may be used for the respective materials specified in the Note.
~~or a flash point of 200° F. (93.4° C) or higher shall be determined in accordance with the Standard Method of Test for Flash Point by the Pensky Martens Closed Tester, ASTM D-93-73.~~
(C) For a liquid that is a mixture of compounds that have different volatilities and flash points, its flash point shall be determined by using the procedure specified above on the liquid in the form it is shipped. If the flash point, as determined by this test, is 100° F. (37.8° C) or higher, an additional flash point determination shall be run on a sample of the liquid evaporated to 90 percent of its original volume, and the lower value of the two tests shall be considered the flash point of the material.
(D) Organic peroxides, which undergo auto-accelerating thermal decomposition, are excluded from any of the flash point determination methods above.

***

Liquefied Hydrogen System…

Liquid. Any material which has a fluidity greater than that of 300 penetration asphalt when tested in accordance with ASTM Test for Penetration for Bituminous Materials, D-5-73. ~~When not otherwise identified, the term "liquid" shall include both flammable and combustible liquids.~~

Liquid, Combustible. A liquid having a flash point greater than 199.4°F (93°C) (formerly designated Class IIIB Combustible liquids).
~~at or above 100 F. (37.8° C). They shall be subdivided as follows:~~
~~(A) Class II Liquids shall include those having flash points at or above 100 F (37.8° C) and below 140 F (60° C).~~
~~(B) Class IIIA Liquids shall include those having flash points at or above 140 F (60° C) and below 200 F (93.4° C).~~
~~(C) Class IIIB Liquids shall include those having flash points at or above 200 F (93.4° C).~~

Liquid, Flammable. Any liquid having a vapor pressure not exceeding 40 pounds per square inch (absolute) at 100 °F (37.8 °C) and having a flashpoint at or below 199.4 °F (93 °C). Flammable liquids are divided into four categories as follows:
(A) Category 1 shall include liquids having flashpoints below 73.4 °F (23 °C) and having a boiling point at or below 95 °F (35 °C).
(B) Category 2 shall include liquids having flashpoints below 73.4 °F (23 °C) and having a boiling point above 95 °F (35 °C).

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(C) Category 3 shall include liquids having flashpoints at or above 73.4 °F (23 °C) and at or below 140 °F (60 °C). When a Category 3 liquid with a flashpoint at or above 100 °F (37.8 °C) is heated for use to within 30 °F (16.7 °C) of its flashpoint, it shall be handled in accordance with the requirements for a Category 3 liquid with a flashpoint below 100 °F (37.8 °C).
(D) Category 4 shall include liquids having flashpoints above 140 °F (60 °C) and at or below 199.4 °F (93 °C). When a Category 4 flammable liquid is heated for use to within 30 °F (16.7 °C) of its flashpoint, it shall be handled in accordance with the requirements for a Category 3 liquid with a flashpoint at or above 100 °F (37.8 °C).
(E) When liquid with a flashpoint greater than 199.4 °F (93 °C) is heated for use to within 30 °F (16.7 °C) of its flashpoint, it shall be handled in accordance with the requirements for a Category 4 flammable liquid.
~~A liquid having a flash point below 100 F. (37.8 C) and having a vapor pressure not exceeding 40 pounds per square inch (absolute) at 100° F. (37.8° C). It shall be known as a Class I liquid. Class I liquids shall be subdivided as follows:~~
~~(A) Class IA shall include those having flash points below 73° F (22.8° C) and having a boiling point below 100° F (37.8° C).~~
~~(B) Class IB shall include those having flash points below 73° F (22.8° C) and having a boiling point at or above 100° F (37.8° C).~~
~~(C) Class IC shall include those having flash points at or above 73 F (22.8 C) and below 100° F (37.8° C).~~

***

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

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Subchapter 7. General Industry Safety Orders
Group 20. Flammable Liquids, Gases and Vapors
Article 135. General

Amend Section 5417 as follows:
§5417. Flammable Liquids--General.

***

(b) Flammable liquids shall not be used to wash floors, walls, ceilings, structural members, furniture, equipment, machines or machine parts, unless ventilation is provided and maintained in accordance with Section 5143.
NOTE: For the prohibitions of Category 1 Flammable ~~Class 1A~~ Liquids, See Section 5417(d).

***

(d) Category 1 ~~Class IA~~ flammable liquids shall not be used for washing except that two quarts or less may be so used in an enclosed booth provided adequate ventilation is maintained and all sources of ignition are excluded from locations where concentrations of vapors of such liquids may reasonably be expected to exceed 25 percent of lower explosive limit.

***

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

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Subchapter 7. General Industry Safety Orders
Group 20. Flammable Liquids, Gases and Vapors
Article 137. Spray Coating Operations

Amend Section 5449 as follows:
§5449. Electrical and Other Sources of Ignition.

***

(k) All metal parts of spray booths, exhaust ducts and piping systems conveying flammable ~~or combustible~~ liquids or liquids with a flashpoint greater than 199.4°F (93°C) (formerly designated Class IIIB Combustible liquids) or aerated solids shall be electrically grounded in an effective and permanent manner.

***

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

Amend Section 5451 as follows:
§5451. Flammable ~~and Combustible~~ and Combustible Liquids – Storage and Handling.
(a) The storage of flammable liquids or liquids with a flashpoint greater than 199.4°F (93°C) (formerly designated Class IIIB Combustible liquids) ~~flammable or combustible liquids~~ in connection with spraying operations shall conform to the requirements of Article 141, where applicable.
(b) Bulk storage of flammable liquids or liquids with a flashpoint greater than 199.4°F (93°C) (formerly designated Class IIIB Combustible liquids) ~~flammable or combustible liquids~~ shall be in a separate, properly constructed building detached from other important buildings or cut off from them by construction having at least one-hour fire resistance rating.
NOTE: Lesser quantities of flammable or combustible liquids may be stored for use within a building under conditions meeting the other provisions of this section.
(c) The quantity of flammable liquids or liquids with a flashpoint greater than 199.4°F (93°C) (formerly designated Class IIIB Combustible liquids) kept in the vicinity of spraying operations shall be the minimum required for operations and shall not exceed a supply for 1 day or one shift. ~~and combustible liquids kept in the vicinity of spraying operations outside an inside storage room or storage cabinet in any one fire area shall not exceed the greater of: (1) a supply for one day or one shift; (2) 25 gallons of Class IA liquids in containers, and 120 gallons of Class IB, IC, II or IIIA liquids in containers, or (3) one approved portable tank not exceeding 660 gallons of Class IB, IC, II, or IIIA liquids.~~
(d) Original ~~C~~closed containers, approved portable tanks, approved safety cans, or a properly arranged system of piping shall be used for transporting flammable liquids or liquids with a flashpoint greater than 199.4°F (93°C) (formerly designated Class IIIB Combustible liquids) ~~flammable or combustible liquids~~. Open or glass containers shall not be used for transportation or storage.

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(e) The withdrawal of flammable liquids or liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) ~~flammable or combustible liquids~~ from containers and the filling of containers, including portable mixing tanks, shall be done only in a suitable mixing room or in a spraying area when the ventilating system is in operation. Precautions shall be taken to protect against liquid spillage and sources of ignition.
(f) Except as provided in (h), the withdrawal of flammable liquids and liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) ~~flammable or combustible liquids~~ from containers having a capacity of greater than 60 gallons shall be by approved pumps.

***

(n) If flammable liquids or liquids with a flashpoint greater than 199.4°F (93°C) (formerly designated Class IIIB Combustible liquids) ~~flammable or combustible liquids~~ are supplied to spray nozzles by positive displacement pumps, the pump discharge line shall be provided with an approved relief valve discharging to a safe detached location, or a device provided to stop the prime mover if the discharge pressure exceeds the safe operating pressure of the system. ~~means shall be provided to prevent the discharge pressure exceeding the safe operating pressure of the system. Any discharge shall be to a safe location.~~
(o) Piping systems conveying flammable liquids or liquids with a flashpoint greater than 199.4°F (93°C) (formerly designated Class IIIB Combustible liquids) ~~flammable or combustible liquids~~ shall be of steel or other material having comparable properties of resistance to heat and physical damage; they shall be so installed that a rupture of the system for any reason is unlikely. Piping systems shall be properly bonded and grounded.
(p) Whenever flammable liquids or liquids with a flashpoint greater than 199.4°F (93°C) (formerly designated Class IIIB Combustible liquids) ~~flammable or combustible liquids~~ are transferred from one container to another, both containers shall be effectively bonded and grounded to dissipate static electricity.

***

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

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Subchapter 7. General Industry Safety Orders
Group 20. Flammable Liquids, Gases and Vapors
Article 141. Container and Portable Tank Storage

Amend Section 5531 as follows:
§5531. Scope.
This article shall apply only to the storage of flammable or combustible liquids in drums or other containers (including flammable aerosols) not exceeding 60 gallons individual capacity and those portable tanks not exceeding 660 gallons individual capacity.
EXCEPTIONS: This article shall not apply to the following:
(1) Storage of containers in bulk plants, service stations, refineries, chemical plants, wineries and distilleries.
(2) Category 1, 2, or 3 flammable ~~Flammable or combustible~~ liquids in the fuel tanks of a motor vehicle, aircraft, boat or portable or stationary engine.
(3) Flammable or combustible paints, oils, varnishes and similar mixtures used for painting or maintenance when not kept for a period in excess of 30 days.
(4) Beverages when packaged in individual containers not exceeding one gallon in size.
(5) Medicines, foodstuffs, cosmetics and other consumer items containing not more than 50 percent by volume of water miscible flammable ~~or combustible~~ liquids and with the remainder of the solution not being flammable when packaged in individual containers not exceeding one gallon in size.
~~(Title 24, T8-5531)~~
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Amend Section 5532 as follows:
§5532. Design, Construction, and Capacity of Containers.
***
(c) Containers and portable tanks for flammable and combustible liquids shall conform to Table FL-2.
EXCEPTIONS:
(1) …
(2) ~~Class IA and Class IB flammable liquids may be stored in glass containers of not more than one-gallon (3.78 l.) capacity if the required liquid purity (such as ACS analytical reagent grade or higher) would be affected by storage in metal containers or if the liquid would cause excessive corrosion of the metal container.~~ Glass or approved plastic containers of no more than 1-gallon capacity may be used for a Category 1 or 2 flammable liquid if:
(A) Such liquid either would be rendered unfit for its intended use by contact with metal or would excessively corrode a metal container so as to create a leakage hazard; and

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(B) The user's process either would require more than 1 pint of a Category 1 flammable liquid or more than 1 quart of a Category 2 flammable liquid of a single assay lot to be used at one time, or would require the maintenance of an analytical standard liquid of a quality which is not met by the specified standards of liquids available, and the quantity of the analytical standard liquid required to be used in any one control process exceeds one-sixteenth the capacity of the container allowed under Table FL-2 for the category of liquid; or
(3) The containers are intended for direct export outside the United States.

~~Table FL-2~~
~~MAXIMUM ALLOWABLE SIZE OF CONTAINERS AND PORTABLE TANKS~~

Container type	Flammable liquids			Combustible liquids	
	Class IA	Class IB	Class IC	Class II	Class III
Glass.....	1 pt (472ml)	1 qt (945ml)	1 gal (3.78l)	1 gal (3.78l)	5 gal. (18.9l)
Metal (other than DOT drums)or approved plastic.	1 gal	5 gal	5 gal	5 gal	5 gal.
Safety cans.....	2 gal	5 gal	5 gal	5 gal	5 gal.
Metal drums (DOT specifications)..	60 gal	60 gal	60 gal	60 gal	60 gal.
Approved portable tanks.....	660 gal	660 gal	660 gal	660 gal	660 gal.

TABLE FL-2. MAXIMUM ALLOWABLE SIZE OF CONTAINERS AND PORTABLE TANKS

Container type	Category 1	Category 2	Category 3	Category 4 & combustible
Glass or approved plastic	1 pt.	1 qt.	1 gal.	1 gal.
Metal (other than DOT drums)	1 gal.	5 gal.	5 gal.	5 gal.
Safety cans	2 gal.	5 gal.	5 gal.	5 gal.
Metal drums (DOT specifications)	60 gal.	60 gal.	60 gal.	60 gal.
Approved portable tanks	660 gal.	660 gal.	660 gal.	660 gal.

NOTE: Authority and reference cited: Section 142.3, Labor Code.

Amend Section 5533 as follows:

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§5533. Design, Construction, and Capacity of Storage Cabinets.
(a) Not more than 120 gallons of Category 1, 2, 3 and 4 flammable ~~Class I, Class II and Class IIIA~~ liquids may be stored in a storage cabinet. Of this total, not more than 60 gallons may be of Category 1, 2 and 3 flammable ~~Class I and Class II~~ liquid. Not more than three such cabinets may be located in a single fire area, except that in an industrial occupancy additional cabinets may be located in the same fire area if the additional cabinet, or group of not more than three cabinets, is separated from any other cabinets or group of cabinets by at least 100 feet.

***

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

Amend Section 5534 as follows:
§5534. Design and Construction of Inside Storage Rooms.

***

(b) Storage in inside storage rooms shall comply with the following:

***

(1) Electrical wiring and equipment located in inside storage rooms used for Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) ~~Class I liquids~~ shall be approved for Class I, Division 2 Hazardous Locations; for Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) and Category 4 flammable liquids ~~Class II and Class III liquids~~, shall be approved for general use.
(2) Every inside storage room shall be provided with either a gravity or a continuous mechanical exhaust ventilation system. Mechanical ventilation shall be used if Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) ~~Class I liquids~~ are dispensed within the room.
(A) Exhaust air shall be taken from a point near a wall on one side of the room and within 12 inches of the floor with one or more make-up air inlets located on the opposite side of the room within 12 inches from the floor. The location of both the exhaust and inlet air openings shall be arranged to provide, as far as practicable, air movements across all portions of the floor to prevent accumulation of flammable vapors. Exhaust from the room shall be directly to the exterior of the building. If ducts are used they shall not be used for any other purpose and shall comply with the Standard for the Installation of Blower and Exhaust Systems for Dust, Stock and Vapor Removal or Conveying, NFPA No. 91-1973 (ANSI Z33.1). If make-up air to a mechanical system is taken from within the building, the opening shall be equipped with an approved fire door or damper, as required in the Standard for the Installation of Blower and Exhaust Systems, for Dust, Stock and Vapor Removal or Conveying, NFPA 91-1973 (ANSI Z33.1). For gravity systems, the make-up air shall be supplied from outside the building.
(B) Mechanical ventilation systems shall provide the greater of the following:
1. A~~a~~t least one cubic foot per minute of exhaust per square foot of floor area, but not less than 150 CFM or ~~(Title 24, T8-5534)~~

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2. A complete change of air within the room at least six times per hour.
(C) If a mechanical exhaust system is used, it shall be controlled by a switch located outside of the door. The ventilating equipment and any lighting fixtures shall be operated by the same switch. A pilot light shall be installed adjacent to the switch if Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), are dispensed within the room.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Modify Section 5535 as follows:
§5535. Storage in Inside Storage Rooms.
In every inside storage room there shall be maintained one clear aisle at least three feet wide. Containers over 30 gallons capacity storing Category 1, 2 or 3 flammable ~~Class I or Class II~~ liquids shall not be stacked one upon the other. Dispensing shall be by approved pump or self-closing faucet only. ~~[Section 5607(a)]. (Title 24, T8-5535)~~
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Modify Section 5537 as follows:
§5537. Assembly Occupancies, Buildings Containing More Than Three Dwelling Units and Hotels.
Storage in excess of 10 gallons of Category 1, 2 or 3 flammable ~~Class I and Class II~~ liquids combined or 60 gallons of Category 4 flammable ~~Class IIIA~~ liquids shall be in containers stored in a storage cabinet or in safety cans or in an inside storage room not having an opening directly into that portion of the building used by the public. ~~(Title 24, T8-5537)~~
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Modify Section 5538 as follows:
§5538. Office, Educational and Institutional Occupancies.
(a) Storage shall be limited to that required for operation of office equipment, maintenance, demonstration, treatment, and laboratory work. All liquids in laboratories and at other points of use shall meet the following storage provisions:
(1) No container for Category 1, 2 or 3 flammable ~~Class I or Class II~~ liquids shall exceed a capacity of one gallon except that safety cans can be of two gallons capacity.
(2) Not more than 10 gallons of Category 1, 2 or 3 flammable ~~Class I and Class II~~ liquids combined shall be stored outside of a storage cabinet or storage room, except in safety cans.
(3) Not more than 25 gallons of Category 1, 2 or 3 flammable ~~Class I and Class II~~ liquids combined shall be stored in safety cans outside of a storage room or storage cabinet.

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(4) Not more than 60 gallons of combustible liquids shall be stored outside of a storage room or storage cabinet.
(5) Quantities of flammable and combustible liquids in excess of those set forth in this section shall be stored in an inside storage room or storage cabinet. ~~(Title 24, T8-5538)~~
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Modify Section 5541 as follows:
§ 5541. Flammable ~~and Combustible~~ and Combustible Liquid Warehouses or Storage Buildings.
***

Table FL-4
Indoor Container Storage

Category ~~Class~~ Liquid	Storage Level	Protected Storage* *Maximum Per Pile*	Unprotected Storage *Maximum Per Pile*
		Gals.	Gals.
1 ~~IA~~	Ground & Upper Floors	2,750 (50)	660 (12)
	Basement	Not permitted	Not permitted
2 ~~IB~~	Ground & Upper Floors	5,500 (100)	1,375 (25)
	Basement	Not permitted	Not permitted
3 ~~IC~~ FP<100F	Ground & Upper Floors	16,500 (300)	4,125 (75)
	Basement	Not permitted	Not permitted
3 ~~II~~ FP≥100F	Ground & Upper Floors	16,500 (300)	4,125 (75)
	Basement	5,500 (100)	Not permitted
4 and FP>199.4F ~~III~~	Ground & Upper Floors	55,000 (1,000)	13,750 (250)
	Basement	8,250 (450)~~(150)~~	Not permitted

* A sprinkler or equivalent fire protection system installed in an approved manner.
(Numbers in parentheses indicate corresponding number of 55-gallon drums.)
NOTE~~:~~ 1: When two or more categories ~~classes~~ of materials are stored in a single pile, the maximum gallonage permitted in that pile shall be the smallest of the two or more separate maximum gallonages.
NOTE~~:~~ 2: Aisles shall be provided so that no container is more than 12 feet from an aisle. Main aisles shall be at least eight ~~F~~feet wide and side aisles at least four feet wide.

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NOTE~~:~~ 3: Each pile shall be separated from each other pile by at least four feet. When stored on suitably protected racks or when the storage is suitably protected, containers may be piled up to the height limits in Section 5541(e).
NOTE 4: FP means Flashpoint.

Table FL-5
Indoor Portable Tank Storage

Category ~~Class~~ Liquid	Storage Level	Protected Storage* *Maximum Per Pile*	Unprotected Storage *Maximum Per Pile*
		Gals.	Gals.
1 ~~IA~~	Ground & Upper Floors	Not permitted	Not permitted
	Basement	Not permitted	Not permitted
2 ~~IB~~	Ground & Upper Floors	20,000	2,000
	Basement	Not permitted	Not permitted
3 FP<100F ~~IC~~	Ground & Upper Floors	40,000	5,500
	Basement	Not permitted	Not permitted
3 FP≥100F ~~II~~	Ground & Upper Floors	40,000	5,500
	Basement	20,000	Not permitted
4 and FP>199.4F ~~III~~	Ground & Upper Floors	60,000	22,000
	Basement	20,000	Not permitted

* A sprinkler or equivalent fire protection system installed in an approved manner.

NOTE~~:~~ 1: When two or more categories ~~classes~~ of materials are stored in a single pile, the maximum gallonage permitted in that pile shall be the smallest of the two or more separate maximum gallonages.
NOTE~~:~~ 2: Aisles shall be provided so that no portable tank is more than 12 feet from an aisle. Main aisles shall be at least eight feet wide and side aisles at least four feet wide.
NOTE~~:~~ 3: Each pile shall be separated from each other pile by at least four feet. When stored on suitably protected racks or when the storage is suitably protected, portable tanks may be piled up to the height limits in Section 5541(e).
NOTE 4: FP means Flashpoint.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.
Modify Section 5542 as follows:
§ 5542. Storage Outside Buildings.

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Table FL-6
Outdoor Container Storage

1	*2*	*3*	*4*	*5*
Category ~~Class~~	*Maximum Per Pile ~~Gallons~~ (See Note 1)*	*Distance Between Piles (See Note 2)*	*Distance to Property Line That Can Be Built Upon (See Notes 3 & 4)*	*Distance to Street, Alley, Public Way (See Note 4)*
	Gallons	*Feet*	*Feet*	*Feet*
1 ~~IA~~	1,100	5 ~~feet~~	20 ~~feet~~	10 ~~feet~~
2 ~~IB~~	2,200	5 ~~feet~~	20 ~~feet~~	10 ~~feet~~
3 ~~IC~~ FP<100F	4,400	5 ~~feet~~	20 ~~feet~~	10 ~~feet~~
3 ~~II~~ FP≥100F	8,800	5 ~~feet~~	10 ~~feet~~	5 ~~feet~~
4 and FP>199.4F ~~III~~	22,000	5 ~~feet~~	10 ~~feet~~	5 ~~feet~~

NOTE~~:~~ 1: When two or more categories ~~classes~~ of materials are stored in a single pile, the maximum gallonage in that pile shall be the smallest of the two or more separate gallonages.
NOTE~~:~~ 2: Within 200 feet of each container, there shall be a 12-foot wide access way to permit approach of fire control apparatus.
NOTE~~:~~ 3: The distances listed apply to properties that have protection for exposures as defined. If there are exposures, and such protection for exposures does not exist, the distances in column four shall be doubled.
NOTE~~:~~ 4: When total quantity stored does not exceed 50% of maximum per pile, the distances in columns four and five may be reduced 50%, but not less than three feet.
NOTE 5: FP means Flashpoint.

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Table FL-7
Outdoor Portable Tank Storage

1	*2*	*3*	*4*	*5*
Category ~~Class~~	*Maximum Per Pile ~~Gallons~~ (See Note 1)*	*Distance Between Piles (See Note 2)*	*Distance to Property Line ~~Propert y Line~~ That Can Be Built Upon (See Note 3)*	*Distance to Street, ~~Street,~~ Alley, Public Way*
	Gallons	*Feet*	*Feet*	*Feet*
1 ~~IA~~	2,200	5 ~~feet~~	20 ~~feet~~	10 ~~feet~~
2 ~~IB~~	4,400	5 ~~feet~~	20 ~~feet~~	10 ~~feet~~
3 FP<100F ~~IC~~	8,800	5 ~~feet~~	20 ~~feet~~	10 ~~feet~~
3 FP≥100F ~~II~~	17,600	5 ~~feet~~	10 ~~feet~~	5 ~~feet~~
4 and FP>199.4F ~~III~~	44,000	5 ~~feet~~	10 ~~feet~~	5 ~~feet~~

NOTE~~:~~ 1: When two or more ~~classes~~ categories of materials are stored in a single pile, the maximum gallonage in that pile shall be the smallest of the two or more separate gallonages.
NOTE~~:~~ 2: Within 200 feet of each portable tank, there shall be a 12-foot wide access way to permit approach of fire control apparatus.
NOTE 3: The distances listed apply to properties that have protection for exposures as defined in 29 CFR 1910.106(a)(27) (Definitions). If there are exposures, and such protection for exposures does not exist, the distances in column 4 shall be doubled.
NOTE 4: FP means Flashpoint.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

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

Modify Section 5543 as follows:
§5543. Fire Control.
(a) Suitable fire control devices, such as small hose or portable fire extinguishers, shall be available at locations where flammable or combustible liquids are stored.
(1) At least one portable fire extinguisher having a rating of not less than 20-B ~~10-B~~ units shall be located outside of, but not more than 10 feet from, the door opening into any room used for storage.
(2) At least one portable fire extinguisher having a rating of not less than 20-B ~~10-B~~ units shall be located not less than 10 feet, ~~n~~or more than 25 feet, from any Category 1, 2, or 3 flammable ~~Class I or Class II~~ liquid storage area located outside of a storage room but inside a building.

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

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

Subchapter 7. General Industry Safety Orders
Group 20. Flammable Liquids, Gases and Vapors
Article 142. Industrial Plants

Modify Section 5545 as follows:
§5545. General.
This Section shall be applicable to those portions of an industrial plant where the use and handling of flammable or combustible liquids is only incidental to the principal business, such as automobile assembly, construction of electronic equipment, furniture manufacturing or other similar activities.
(a) Flammable or combustible liquids shall be stored in tanks or closed containers.
(1) Except as provided in (2) and (3), all storage shall comply with Article 141, Container Storage.
(2) The quantity of liquid that may be located in a building or in any one fire area of a building outside of an inside storage room or storage cabinet shall not exceed that given in (A), (B) and (C) below:
(A) 25 gallons of Category 1 flammable ~~Class IA~~ liquids in containers and
(B) 120 gallons of Category 2, 3, or 4 flammable ~~Class IB, IC, II or III~~ liquids or liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) in containers and
(C) One portable tank not exceeding 660 gallons of Category 2, 3, or 4 flammable ~~Class IB, IC, Class II, or Class III~~ liquids or liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids).

***

(c) Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I and Class II liquids~~ shall be kept in covered containers when not actually in use.

***

(e) Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ may be used only where there are no open flames or other sources of ignition within the possible path of vapor travel.

(f) Category 1 and 2 flammable ~~Class I and Class II~~ liquids shall be drawn from or transferred into vessels, containers or portable tanks within a building only through a closed piping system, from original shipping containers, from safety cans, by means of a device drawing through the top or from a container or portable tanks by gravity through a self-closing valve or faucet [Section 5607(a)]. Transferring any liquids by means of air pressure on the container or portable tanks shall be prohibited. ~~(Title 24, T8-5545(b))~~
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

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Modify Section 5546 as follows:
§5546. General.

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(b) Areas as defined in Section 5546 using Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ shall be ventilated at a rate of not less than one cubic foot per minute per square foot of solid floor area. This shall be accomplished by natural or mechanical ventilation with discharge or exhaust to a safe location outside of the building. Provision shall be made for introduction of make-up air in such a manner as not to short circuit the ventilation. Ventilation shall be arranged to include all floor areas or pits where flammable vapors may collect. Local or spot general ventilation may be needed for the control of special fire or health hazards. Such ventilation, if provided, may be utilized for up to 75 percent of the required ventilation.
(c) Equipment used in a building and the ventilation of the building shall be designed so as to limit flammable vapor-air mixtures under normal operating conditions to the interior of equipment, and to not more than five feet from equipment which exposes Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ to the air. Examples of such equipment are dispensing stations, open centrifuges, plate and frame filters, open vacuum filters, and surfaces of open equipment.

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

Modify Section 5547 as follows:
§5547. Tank Vehicle and Tank Car Loading and Unloading.
(a) Tank vehicle and tank car loading or unloading facilities shall be separated from aboveground tanks, warehouses, other plant buildings or nearest line of adjoining property, which may be built upon by a distance of 25 feet for Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ and 15 feet for Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) and Category 4 flammable liquids and liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids), ~~Class II and Class III liquids~~ measured from the nearest position of any fill stem. Buildings for pumps or shelters for personnel may be a part of the facility. Operations of the facility shall comply with the appropriate portions of Section 5619.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

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

Modify Section 5549 as follows:
§5549. Sources of Ignition.

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(b) Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ shall not be dispensed into ~~metal~~ containers unless the nozzle or fill pipe and container are electrically interconnected ~~is in electrical contact with the container~~. This can be accomplished by maintaining metallic contact during filling, by a bond wire between them, or by other conductive path having an electrical resistance not greater than 10^6 ohms. ~~Bonding is not required where a container is filled through a closed system, or the container is made of glass or other nonconducting material.~~

***

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

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

Subchapter 7. General Industry Safety Orders
Group 20. Flammable Liquids, Gases and Vapors
Article 143. Processing Plants

Modify Section 5555 as follows:
§5555. Location.

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(b) The distances required in (a) may be waived when the vessels are housed within a building and the exterior wall facing the line of adjoining property which may be built upon is a blank wall having a fire resistance rating of not less than four hours. When Flammable Category 1 ~~Class IA~~ or unstable liquids are handled, the blank wall shall have explosion resistance in accordance with good engineering practice, see Section 5556(f). ~~(Title 24, T8-5555)~~
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Modify Section 5556 as follows:
§5556. Construction.
(a) Processing buildings shall be of not less than noncombustible construction, except heavy timber construction with load-bearing walls may be permitted for plants utilizing only stable Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) or Category 4 flammable liquids including liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) ~~Class II or Class III liquids~~. Except as provided in Section 5555(b) or in the case of explosion resistant walls used in conjunction with explosion relieving facilities, see (f), load-bearing walls shall be prohibited. Buildings ~~handling Class I or Class II liquids~~ shall be without basements or covered pits.

***

(d) Enclosed processing buildings handling Category 1, 2 or 3 flammable ~~Class I or Class II~~ liquids shall be ventilated at a rate of not less than one cubic foot per minute per square foot of solid floor area. This shall be accomplished by natural or mechanical ventilation with discharge or exhaust to a safe location outside of the building. Provision shall be made for introduction of make-up air in such a manner as not to short circuit the ventilation. Ventilation shall be arranged to include all floor areas or pits where flammable vapors may collect. Local (or spot) ventilation may be needed for the control of special fire or health hazards. Such ventilation, if provided, may be utilized for up to 75 percent of the required ventilation.
(e) Equipment used in a building and the ventilation of the building shall be designed so as to limit flammable vapor-air mixtures under normal operating conditions to the interior of equipment, and to not more than five feet from equipment which exposes Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ to the air. Examples of such equipment are dispensing stations, open centrifuges, plate and frame filters, open vacuum filters, and surfaces of open equipment.

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(f) Areas where Category 1 ~~Class IA~~ or unstable liquids are processed shall have explosion venting through one or more of the following methods:
(1) Open air construction;
(2) Lightweight walls and roof;
(3) Lightweight wall panels and roof hatches;
(4) Windows of explosion venting-type. ~~(Title 24, T8-5556)~~
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Modify Section 5558 as follows:
§5558. Tank Vehicle and Tank Car Loading and Unloading.
Tank vehicle and tank car loading or unloading facilities shall be separated from aboveground tanks, warehouses, other plant buildings or nearest line of adjoining property which may be built upon by a distance of 25 feet for Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ and 15 feet for Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) and Category 4 flammable liquids and liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids), ~~Class II and Class III liquids~~ measured from the nearest position of any fill stem. Buildings for pumps or shelters for personnel may be a part of the facility. Operations of the facility shall comply with the appropriate portions of Article 147, Bulk Plants.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Modify Section 5560 as follows:
§5560. Sources of Ignition.

***

(b) Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ shall not be dispensed into ~~metal~~ containers unless the nozzle or fill pipe and container are electrically interconnected. ~~is in electrical contact with the container.~~ This can be accomplished by maintaining metallic contact during filling, by a bond wire between them, or by other conductive path having an electrical resistance not greater than 10^6 ohms. ~~Bonding is not required where a container is filled through a closed system, or the container is made of glass or other nonconducting material.~~

***

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

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

Subchapter 7. General Industry Safety Orders
Group 20. Flammable Liquids, Gases and Vapors
Article 144. Service Stations

Modify Section 5566 as follows:
§5566. Storage.

***

(b)(1) Aboveground tanks, located at an adjoining bulk plant, may be connected by piping to service station underground tanks if, in addition to valves at aboveground tanks, a valve is also installed within control of service station personnel.
(2) Apparatus dispensing Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ into the fuel tanks of motor vehicles of the public shall not be located at a bulk plant unless separated by a fence or similar barrier from the area in which bulk operations are conducted.
(c) Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ shall not be stored or handled within a building having a basement or pit into which flammable vapors may travel, unless such area is provided with ventilation which will prevent the accumulation of flammable vapors therein.

***

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

Modify Section 5568 as follows:
§5568. Inside Buildings.
(a) Except where stored in tanks as provided in Section 5567, no Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ shall be stored within any service station building except in closed containers of aggregate capacity not exceeding 60 ~~120~~ gallons. One container not exceeding 60 gallons capacity equipped with an approved pump is permitted.
(b) Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ may be transferred from one container to another in lubrication or service rooms of a service station building provided the electrical installation complies with Table FL-9 and provided that any heating equipment complies with Section 5575. See also Section 5580 for other possible sources of ignition.
(c) Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) and Category 4 flammable liquids and liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids), ~~Class II and Class III liquids~~ may be stored and dispensed inside service station buildings from tanks of not more than 120 gallons each.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

PROPOSED STATE STANDARD,
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Modify Section 5569 as follows:
§5569. Piping, Valves and Fittings.
(a)…
(1) Piping handling Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Where excessive stray currents are encountered, piping handling Class I and Class II liquids~~ at marine service stations shall be ~~electrically insulated from the shore piping.~~ grounded to control stray currents.

***

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

Modify Section 5570 as follows:
§5570. Remote Pumping Systems.
(a) This Section shall apply to systems for dispensing Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ where such liquids are transferred from storage to individual or multiple dispensing units by pumps located elsewhere than at the dispensing units.

***

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

Modify Section 5573 as follows:
§5573. Fuel Dispensing Units.
(a) Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ shall be transferred from tanks by means of fixed pumps designed and equipped to allow control of the flow and prevent leakage or accidental discharge.
(b) Only listed devices may be used for dispensing Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C). No such device ~~Only listed nozzles may be used for dispensing Class I liquids. No such nozzle~~ may be used if it shows evidence of having been dismantled.
EXCEPTION: Nozzles which are an integral part of a gasoline vapor recovery system, certified by the State Air Resources Board and the State Fire Marshal pursuant to the provisions of Sections 41954 through 41961, inclusive, of the California Health and Safety Codes.
(c) Every dispensing device for Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~nozzle for Class I liquids~~ installed after December 31, 1978, shall contain evidence of listing so placed that any attempt to dismantle the device ~~nozzle~~ will result in damage to such evidence, visible without disassembly or dismounting of the nozzle.

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EXCEPTION: Nozzles which are an integral part of a gasoline vapor recovery system, certified by the State Air Resources Board and the State Fire Marshal pursuant to the provisions of Sections 41954 through 41961, inclusive, of the California Health and Safety Codes.

***

(e) Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ shall not be dispensed by applying pressure to drums, barrels and similar containers. Approved pumps taking suction through the top of the container or approved self-closing faucets shall be used.

***

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

Modify Section 5574 as follows:
§5574. Electrical Equipment.
(a) This Section shall apply to areas where Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ are stored, handled or dispensed. For areas where Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) or Category 4 flammable liquids or liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids), ~~Class II or Class III liquids~~ are stored, handled or dispensed, the electrical equipment may be installed in accordance with the provisions of the California Electrical Safety Orders for nonclassified (ordinary) locations.

***

(c) Table FL-9 shall be used to delineate and classify areas for the purpose of installation of electrical equipment under normal circumstances. A classified area shall not extend beyond an unpierced wall, roof or other solid partition.

***

Table FL-9
Electrical Equipment Classified Areas—Service Stations

Location	Class I, Group D, Division	Extent of Classified Area
UNDERGROUND TANK		
Fill Opening	1	Any pit, box or space below grade level, any part of which is within the Division 1 or 2 classified area.
	2	Up to 18 inches above grade level within a horizontal radius of 10 feet from a loose fill connection and within a horizontal radius of 5 feet from a tight fill connection.

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Location	Class I, Group D, Division	Extent of Classified Area
Vent Discharging Upward	1 2	Within 3 feet of open end of vent, extending in all directions. Area between 3 feet and 5 feet of open end of vent, extending in all directions.
DISPENSER: ~~DISPENSING UNITS (except overhead-type)~~		
Pits	1	Any pit, box or space below grade level, any part of which is within the Division 1 or 2 classified area.
Dispenser enclosure	1 ~~2~~	The area up to 4 feet vertically above the base within the enclosure, ~~or up to a solid partition less than 4 feet above the base, located above the nozzle insertion level and above the level of any gasketed joint, hose or stuffing box.~~ and ~~Within~~ 18 inches horizontally in all directions. ~~from the Division 1 area within the enclosure.~~
Outdoor	2	Up to 18 inches above grade level within 20 feet horizontally of any edge of enclosure.
INDOOR With Mechanical Ventilation With Gravity Ventilation	2 2	Up to 18 inches above grade or ~~Ventilation~~ floor level within 20 feet horizontally of any edge of enclosure. Up to 18 inches above grade or floor level within 25 feet horizontally of any edge of enclosure.
DISPENSING UNITS, OVERHEAD TYPE	1 2 2	Within the dispenser enclosure and 18 inches in all directions from the enclosure where not suitably cut off by ceiling or wall. All electrical equipment integral with the dispensing hose or nozzle. An area extending 2 feet horizontally in all directions beyond the Division 1 area and extending to grade below this classified area. Up to 18 inches above grade level within 20 feet horizontally measured from a point vertically below the edge of any dispenser enclosure.
REMOTE PUMP – OUTDOOR	1 2	Any pit, box or space below grade level if any part is within a horizontal distance of 10 feet from any edge of pump. Within 3 feet of any edge of pump, extending in all

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Location	Class I, Group D, Division	Extent of Classified Area
		directions. Also up to 18 inches above grade level within 10 feet horizontally from any edge of pump.
REMOTE PUMP - INDOOR	1 2	Entire area within any pit. Within 5 feet of any edge of pump, extending in all directions. Also up to 3 feet above floor or grade level within 25 feet horizontally from any edge of pump.
LUBRICATION OR SERVICE ROOM ~~WITH DISPENSING~~	1 ~~2~~ 2	Entire area within any pit. ~~Any pit within any unventilated area.~~ ~~Any pit with ventilation.~~ Area up to 18 inches above floor or grade level within entire lubrication room. ~~and 3 feet horizontally from a lubrication pit.~~
DISPENSER FOR ~~CLASS I LIQUIDS~~ Liquids with a flashpoint below 100°F (37.8°C) (1)	2	Within 3 feet of any fill or dispensing point, extending in all directions.
~~LUBRICATION OR SERVICE ROOM – WITHOUT DISPENSING~~	~~2~~ ~~2~~	~~Entire area within any pit used for lubrication or similar services where Class I liquids may be released.~~ ~~Area up to 18 inches above any such pit, and extending a distance of 3 feet horizontally from any edge of the pit.~~
SPECIAL ENCLOSURE INSIDE BUILDING PER SECTION 5567	1	Entire enclosure.
SALES, STORAGE AND REST ROOMS	~~non-classified~~ (2)	If there is any opening to these class-rooms within the extent of a Division 1 area, the entire room shall be classified as Division 1.

Footnote (1) Category 1 or 2 flammable liquids, or for Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C).
Footnote (2) Ordinary
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

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TITLE 8, DIVISION 1, CHAPTER 4

Modify Section 5575 as follows:
§5575. Heating Equipment.

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(b) Heating equipment may be installed in a special room separated from an area classified as Division 1 or Division 2 in Table FL-9 by walls having a fire-resistance rating of at least one hour and without any openings in the walls within 8 feet of the floor into an area classified as Division 1 or Division 2 in Table FL-9. This room shall not be used for combustible storage, and all air for combustion purposes shall come from outside the building.
(c) Heating equipment using gas or oil fuel may be installed in the lubrication or service room where there is no dispensing or transferring of Category 1 or 2 flammable liquids or 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ provided the bottom of the combustion chamber is at least 18 inches above the floor and the heating equipment is protected from physical damage.
(d) Heating equipment using gas or oil fuel listed for use in garages may be installed in the lubrication or service room where Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ are dispensed provided the equipment is installed at least 8 feet above the floor.

***

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

Modify Section 5576 as follows:
§5576. Fuel Delivery Nozzles.
(a) A listed manual or automatic-closing type hose nozzle valve shall be provided on dispensers used for the dispensing of Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) ~~Class I liquids~~.

***

NOTE: Authority and reference cited: Section 142.3, Labor Code.

Modify Section 5577 as follows:
§5577. Dispensing into Portable Containers.
(a) No delivery of any Category 1, 2 or 3 flammable liquids, ~~Class I or Class II liquid~~ shall be made into portable containers unless the container is constructed of metal or is approved for such use, has a tight closure with screwed or spring cover, and is fitted with spout or so designed that the contents can be poured without spilling.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

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Modify Section 5578 as follows:
§5578. Attendance or Supervision of Dispensing.

***

(b) The provisions of Section 5566(a) shall not prohibit the dispensing of Category 1, 2 or 3 flammable liquids ~~Class I and Class II liquids~~ in the open from a tank vehicle to a motor vehicle. Such dispensing shall be permitted provided:
(1) The dispensing is done on premises not open to the public.
(2) The dispensing hose does not exceed 50 feet in length.
(3) The dispensing nozzle is a listed automatic-closing type without a latch-open device.
NOTE: Authority and reference cited: Section 142.3, Labor Code.

Modify Section 5579 as follows:
§5579. Drainage and Waste Disposal.
(a) Provision shall be made in the area where Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) ~~Class I liquids~~ are dispensed to prevent spilled liquids from flowing into the interior of service station buildings. Such provision may be by grading driveways, raising door sills, or other equally effective means.
(b) Crankcase drainings and flammable or combustible liquids shall not be dumped into sewers, streams or adjoining property, but shall be stored in tanks or drums outside any building until removed from the premises.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Modify Section 5580 as follows:
§5580. Sources of Ignition.
In addition to the previous restrictions of this Article the following shall apply: There shall be no smoking or open flames in the areas used for fueling, servicing fuel systems for internal combustion engines, receiving or dispensing of Category 1, 2 or 3 flammable ~~Class I and Class II~~ liquids. Conspicuous and legible signs prohibiting smoking shall be posted within sight of the customer being served. The motors of all equipment being fueled shall be shut off during the fueling operation except for emergency generators, pumps, etc., where continuing operation is essential.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

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Subchapter 7. General Industry Safety Orders
Group 20. Flammable Liquids, Gases and Vapors
Article 145. Tank Storage

Modify Section 5583 as follows:
§5583. Materials.
(a) Tanks shall be built of steel except as provided in (b) through (d).
(b) Tanks may be built of materials other than steel:
(1) If required by the properties of the liquid stored. In case of doubt, the supplier, producer of the flammable or combustible liquid, or other competent authority should be consulted as to the suitability of the material of construction to be used;
(2) For installation underground;
(3) If used for the storage of ~~Class IIIB~~ combustible liquids (as defined in Section 5415) aboveground in areas not exposed to a spill or leak of a Category 1, 2 or 3 flammable ~~Class I or Class II~~ liquid. If tanks storing ~~Class IIIB~~ combustible liquids are located where they are exposed to a spill or leak of a Category 1, 2 or 3 flammable ~~Class I or Class II~~ liquid, they shall be constructed in accordance with Section 5585; or
(4) If used for the storage of ~~Class IIIB~~ combustible liquids inside a building protected by an approved automatic fire extinguishing system.

***

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

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Modify Section 5585.1 as follows:
§5585.1. Liquid Level Indicator, Temperature Regulator, ~~Class IIIB~~ Combustible Liquids.
Atmospheric tanks used for storing ~~Class IIIB~~ combustible liquids (as defined in Section 5415) heated by internal heating coil/element shall be equipped with a liquid level indicator or equivalent device that displays the liquid level in the tank; or a temperature regulating system. When equipped with a temperature regulating system, the temperature regulating system shall automatically shut off the heat source to the tank before the tank contents reach the ignition temperature. If a liquid level indicator is the sole sensing method, 1) the liquid level indicator shall be affixed to the tank or located elsewhere, such as in a control room, 2) the liquid level indicator shall be monitored when filling or emptying the tank, 3) the location of the internal heating coil/element on the tank shall be clearly indicated.

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

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Modify Section 5589 as follows:
§5589. Installation of Outside Aboveground Tanks.
(a) Every aboveground tank for the storage of Category 1, 2, 3 or 4 flammable ~~Class I, Class II or Class IIIA~~ liquids, except those liquids with boil-over characteristics and unstable liquids, operating at pressures not in excess of 2.5 psig and designed with a weak roof-to-shell seam or equipped with emergency venting devices which will not permit pressures to exceed 2.5 psig, shall be located in accordance with Table FL-10.

***

(b) Every aboveground tank for the storage of Category 1, 2, 3 or 4 flammable ~~Class I, Class II or Class IIIA~~ liquids, except those liquids with boil-over characteristics and unstable flammable or combustible liquids, operating at pressures exceeding 2.5 psig or equipped with emergency venting which will permit pressures to exceed 2.5 psig shall be located in accordance with Table FL-11.
(c) Every aboveground tank for the storage of Category 1, 2, 3 or 4 flammable ~~Class I, Class II or Class IIIA~~ liquids with boil-over characteristics shall be located in accordance with Table FL-12.

***

(e) Every aboveground tank for the storage of liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) ~~Class IIIB liquids~~, excluding unstable liquids, shall be located in accordance with Table FL-14 except when located within a diked area or drainage path for a tank or tanks storing a Category 1, 2 or 3 flammable ~~Class I or Class II~~ liquid. When a combustible liquid (formerly designated Class IIIB liquid) storage tank is within the diked area or drainage path for a Category 1, 2 or 3 flammable ~~Class I or Class II~~ liquid, (a) or (b) shall apply.

***

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

Modify Section 5590 as follows:
§5590. Spacing (Shell-to-Shell) Between Aboveground Tanks.
(a) The distance between any two flammable or combustible liquid storage tanks shall not be less than three feet.
(b) Except as provided in (c), the distance between any two adjacent tanks any one of which stores Category 1, 2, 3 or 4 flammable ~~Class I, Class II or Class IIIA~~ liquids shall not be less than one-sixth the sum of their diameters, except when the diameter of one tank is less than one-half the diameter of the adjacent tank, the distance between the two tanks shall not be less than one-half the diameter of the smaller tank. Tanks used only for storing liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) ~~Class IIIB liquids~~ may be spaced as provided in (a) unless within a diked area or drainage path for a tank storing a Category 1, 2 or 3 flammable ~~Class I or Class II~~ liquid.

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(d) For unstable flammable or combustible liquids, the distance between such tanks shall not be less than one-half the sum of their diameters.
(e) When tanks are in a diked area containing Category 1, 2 or 3 flammable ~~Class I or Class II~~ liquids, or in the drainage path of Category 1, 2 or 3 flammable ~~Class I or Class II~~ liquids, and are compacted in three or more rows or in an irregular pattern, greater spacing or other means shall be provided to make inside tanks accessible for fire fighting purposes.
(f) The minimum separation between a liquefied petroleum gas container and a flammable or combustible liquid storage tank shall be 20 feet, except in the case of flammable or combustible liquid tanks operating at pressures exceeding 2.5 psig or equipped with emergency venting which will permit pressures to exceed 2.5 psig in which case the provisions of (a) and (b) shall apply. Suitable means shall be taken to prevent the accumulation of flammable or combustible liquids under adjacent liquefied petroleum gas containers such as by diversion curbs or grading. When flammable or combustible liquid storage tanks are within a diked area, the liquefied petroleum gas containers shall be outside the diked area and at least 10 feet away from the center line of the wall of the diked area. The foregoing provisions shall not apply when liquefied petroleum gas containers of 125 gallons or less capacity are installed adjacent to fuel oil supply tanks of 550 ~~660~~ gallons or less capacity.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Modify Section 5592 as follows:
§5592. Normal Venting for Aboveground Tanks.

***

(f) Tanks and pressure vessels storing ~~Class IA~~ Category 1 flammable liquids shall be equipped with venting devices which shall be normally closed except when venting to pressure or vacuum conditions. Tanks and pressure vessels storing Category 2 flammable liquids and Category 3 flammable ~~Class IB and IC~~ liquids with a flashpoint below 100 °F (37.8 °C) shall be equipped with venting devices which shall be normally closed except when venting under pressure or vacuum conditions, or with approved flame arresters.
EXCEPTION: Tanks of 3,000 bbls. capacity or less containing crude petroleum in crude-producing areas; and, outside aboveground atmospheric tanks under 1,000 gallons capacity containing other than Category 1 ~~Class IA~~ flammable liquids may have open vents. (See Section 5594(b).)
(g) Flame arresters or venting devices required in (f) may be omitted for Category 2 flammable liquids and Category 3 flammable ~~IB and IC~~ liquids with a flashpoint below 100 °F (37.8 °C) where conditions are such that their use may, in case of obstruction, result in tank damage. Liquid properties justifying the omission of such devices include, but are not limited to, condensation, corrosiveness, crystallization, polymerization, freezing or plugging. When any of these conditions exist, consideration may be given to heating, use of devices employing special materials of construction, the use of liquid seals, or inserting.

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

Modify Section 5593 as follows:
§5593. Emergency Relief Venting for Fire Exposure for Aboveground Tanks.

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(b) Tanks larger than 12,000 gallons capacity storing liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) ~~Class IIIB liquids~~ and not within the diked area or the drainage path of Category 1, 2 or 3 flammable ~~Class I or Class II~~ liquids do not require emergency relief venting.

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

Modify Section 5594 as follows:
§5594. Vent Piping for Aboveground Tanks.

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(b) Where vent pipe outlets for tanks storing Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ are adjacent to buildings or public ways, they shall be located so that the vapors are released at a safe point outside of buildings and not less than 12 feet above the adjacent ground level. In order to aid their dispersion, vapors shall be discharged upward or horizontally away from closely adjacent walls. Vent outlets shall be located so that flammable vapors will not be trapped by eaves or other obstructions and shall be at least five feet from building openings.

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(d) Vent piping for tanks storing Category 1 or 2 flammable liquids or Category 3 flammable ~~Class I~~ liquids with a flashpoint below 100 °F (37.8 °C) shall not be manifolded with vent piping for tanks storing Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) or Category 4 flammable liquids or liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids), ~~Class II or Class III liquids~~ unless positive means are provided to prevent the vapors from Category 1 or 2 flammable liquids or Category 3 flammable ~~Class I~~ liquids with a flashpoint below 100 °F (37.8 °C) from entering tanks storing Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) or Category 4 flammable liquids or liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) ~~Class II or Class III liquids~~, to prevent contamination and possible change in classification of the less volatile liquid.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

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Modify Section 5595 as follows:
§5595. Drainage, Dikes and Walls for Aboveground Tanks.
(a) The area surrounding a tank or group of tanks storing Category 1, 2, 3 or 4 flammable ~~Class I, Class II or Class IIIA~~ liquids shall be provided with drainage as in (b), or shall be diked as provided in (c), to prevent accidental discharge of liquid from endangering employees or facilities. Tanks storing liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) ~~Class IIIB liquids~~ do not require drainage or dikes.

***

(c) Where protection is accomplished by retaining the liquid around the tank by means of a dike, the volume of the diked area shall comply with the following requirements:
(1) …
(2) Walls of the diked area shall be of earth, steel, concrete or solid masonry designed to be liquid-tight and to withstand a full hydrostatic head. Earthen walls 3 feet or more in height shall have a flat section at the top not less than 2 feet wide. The slope of an earthen wall shall be consistent with the angle of repose of the material of which the wall is constructed. Diked areas for tanks containing Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ located in extremely porous soils may require special treatment to prevent seepage of hazardous quantities of liquids to low lying areas or waterways in case of spills.
(3)…
(4) Dikes may be higher than an average of six feet above interior grade where provisions are made for normal and necessary emergency access to tanks, valves and other equipment, and safe egress from the diked enclosure.
(A) Where the average height of the dike containing Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ is over 12 feet high, measured from interior grade, or where the distance between any tank and the top inside edge of the dike wall is less than the height of the dike wall, provisions shall be made for normal operation of valves and for access to tank roof(s) without entering below the top of the dike. These provisions may be met through the use of remote operated valves, elevated walkways or similar arrangements.

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

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Modify Section 5596 as follows:
§5596. Tank Openings Other Than Vents for Aboveground Tanks.

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(b) Openings for gaging on tanks storing Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ shall be provided with a vaportight cap or cover. Such covers shall be closed when not gaging.
(c) For Category 2 flammable liquids and Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class IB and Class IC liquids~~ other than crude oils, gasolines and asphalts, the fill pipe shall be so designed and installed as to minimize the possibility of generating static electricity. A fill pipe entering the top of a tank shall terminate within six inches of the bottom of the tank and shall be installed to avoid excessive vibration.
(d) Filling and emptying connections for Category 1, 2, 3 or 4 flammable ~~Class I, Class II and Class IIIA~~ liquids which are made and broken shall be located outside of buildings at a location free from any source of ignition and not less than five feet away from any building opening. Such connections for any liquid shall be closed and liquid-tight when not in use and shall be properly identified.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Modify Section 5597 as follows:
§5597. Installation of Underground Tanks.
(a) Excavation for underground storage tanks shall be made with due care to avoid undermining of foundations of existing structures. Underground tanks or tanks under buildings shall be so located with respect to existing building foundations and supports that the loads carried by the latter cannot be transmitted to the tank. The distance from any part of a tank storing Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ to the nearest wall of any basement or pit shall be not less than one foot, and to any property line that may be built upon, not less than three feet. The distance from any part of a tank storing Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) or Category 4 flammable ~~Class II or Class III~~ liquids or liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids), to the nearest wall of any basement, pit or property line shall be not less than one foot.

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

Modify Section 5598 as follows:
§5598. Vents for Underground Tanks.
(a) Location and arrangement of vents for Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C). Vent pipes from underground

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storage tanks storing Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) ~~Class I liquids~~ shall be so located that the discharge point is outside of buildings, higher than the fill pipe opening, and not less than 12 feet above the adjacent ground level. Vent pipes shall not be obstructed by devices that will cause excessive back pressure. Vent outlets shall be so located and directed that flammable vapors will not accumulate or travel to an unsafe location, enter building openings or be trapped under eaves or other obstructions. Tanks containing Category 1 flammable ~~Class IA~~ liquids shall be equipped with pressure and vacuum venting devices which shall be normally closed except when venting to pressure or vacuum conditions. Tanks storing Category 2 or 3 flammable liquids with a flashpoint below 73 °F (22.8 °C) ~~Class IB or Class IC liquids~~ shall be equipped with pressure-vacuum vents or with approved flame arresters. ~~Tanks storing gasoline are exempt from the requirements for pressure and vacuum venting devices or flame arresters provided the vent does not exceed 3 inches in nominal inside diameter.~~

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(c) ~~Vent pipes from tanks storing Class II or Class III liquids~~ Location and arrangement of vents for Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C), Category 4 flammable liquids and liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids). Vent pipes from tanks storing Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C), Category 4 flammable liquids or liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) shall terminate outside of building and higher than the fill pipe opening. Vent outlets shall be above normal snow level. They may be fitted with return bends, course screens or other devices to minimize ingress of foreign material.

***

(f) Vent piping for tanks storing Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) ~~Class I~~ liquids shall not be manifolded with vent piping for tanks storing Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) or Category 4 flammable liquids or liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) ~~Class II or Class III liquids~~ unless positive means are provided to prevent the vapors from Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) ~~Class I liquids~~ from entering tanks storing Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) or Category 4 flammable liquids or liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) ~~Class II or Class III liquids~~, to prevent contamination and possible change in classification of the less volatile liquid.

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

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Modify Section 5599 as follows:
§5599. Tank Openings Other Than Vents for Underground Tanks.

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(d) For Category 2 flammable liquids and Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class IB and Class IC liquids~~ other than crude oils, gasolines and asphalts, the fill pipe shall be so designed and installed as to minimize the possibility of generating static electricity by terminating within six inches of the bottom of the tank.
(e) Filling and emptying connections ~~for Class I, Class II or Class IIIA liquids~~ which are made and broken shall be located outside of buildings at a location free from any source of ignition and not less than five feet away from any building opening. Such connection for any liquid shall be closed and liquid-tight when not in use and shall be properly identified.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Modify Section 5600 as follows:
§5600. Installation of Tanks Inside of Buildings.

***

(b) Vents. Vents for tanks inside of buildings shall be as required in Sections 5592, 5593, 5594(b) and 5598 except that emergency venting by the use of weak roof seams on tanks shall not be permitted. Automatic sprinkler systems installed in an approved manner, shall be accepted as equivalent to approved water spray systems for purposes of calculating the required air flow rates for emergency vents in Section 5593(g). Except for tanks containing liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) ~~Class IIIB liquids~~, vents shall terminate outside the buildings.

***

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

Modify Section 5601 as follows:
§5601. Tank Openings Other Than Vents for Tanks Inside Buildings.

***

(c) Flammable or combustible liquid storage tanks located inside of buildings, except in one-story buildings designed and protected for flammable or combustible liquid storage, shall be provided with an automatic-closing heat-actuated valve on each withdrawal connection below the liquid level, except for connections used for emergency disposal, to prevent continued flow in the event of fire in the vicinity of the tank. This function may be incorporated in the valve required in (b), and if a separate valve, shall be located adjacent to the valve required in (b).
(d) Openings for manual gaging of Category 1, 2 or 3 flammable ~~Class I or Class II~~ liquids, if independent of the fill pipe, shall be provided with a vaportight cap or cover. Openings shall be kept closed when not gaging. Each such opening for any liquid shall be protected against liquid

overflow and possible vapor release by means of a spring loaded check valve or other approved device. Substitutes for manual gaging include, but are not limited to, heavy-duty flat gage glasses, magnetic, hydraulic or hydrostatic remote reading devices and sealed float gages.
(e) For Category 2 flammable liquids and Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class IB and Class IC liquids~~ other than crude oils, gasolines and asphalts, the fill pipe shall be so designed and installed as to minimize the possibility of generating static electricity by terminating within six inches of the bottom of the tank.

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(g) The inlet of the fill pipe for Category 1, 2, 3, and 4 flammable ~~Class I, Class II and Class IIIA~~ liquids shall be located outside of buildings at a location free from any source of ignition and not less than five feet away from any building opening. The inlet of the fill pipe for any liquid shall be closed and liquid-tight when not in use, and the fill connection shall be properly identified.
(h) Tanks storing Category 1, 2, 3, and 4 flammable ~~Class I, Class II and Class IIIA~~ liquids inside buildings shall be equipped with a device, or other means shall be provided, to prevent overflow into the building. Suitable devices include, but are not limited to, a float valve, a preset meter on the fill line, a valve actuated by the weight of the tank contents, a low head pump which is incapable of producing overflow, or a liquid-tight overflow pipe at least one pipe size larger than the fill pipe discharging by gravity back to the outside source of liquid or to an approved location.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Modify Section 5602 as follows:
§5602. Supports, Foundations and Anchorage for All Tank Locations.

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(b) When tanks are supported above from the foundations, tank supports shall be installed on firm foundations. Supports for tanks storing Category 1, 2, 3, and 4 flammable ~~Class I, Class II or Class IIIA~~ liquids shall be of concrete, masonry or protected steel. Single wood timber supports (not cribbing) laid horizontally may be used for outside aboveground tanks if not more than 12 inches high at their lowest point.
(c) Steel supports or exposed piling for tanks storing Category 1, 2, 3, and 4 flammable ~~Class I, Class II or Class IIIA~~ liquids shall be protected by materials having a fire resistant rating of not less than two hours, except that steel saddles need not be protected if less than 12 inches high at their lowest point. Water spray protection or its equivalent may be used in lieu of fire-resistive materials to protect supports.

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

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Subchapter 7. General Industry Safety Orders
Group 20. Flammable Liquids, Gases and Vapors
Article 146. Piping, Valves and Fittings

Modify Section 5606 as follows:
§5606. General.
(a) The design, fabrication, assembly, test and inspection of piping systems containing flammable or combustible liquids shall be suitable for the expected working pressures and structural stresses. Conformity with the applicable provisions of ~~sections~~ of ANSI B31 American National Standard Code for Pressure Piping, and the provisions of this Article ~~chapter~~, shall be considered prima facie evidence of compliance with the foregoing provisions.

***

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

Modify Section 5607 as follows:
§5607. Materials for Piping, Valves and Fittings.

***

(c) Valves at storage tanks, as required by Sections 5596(b) and 5601(b), and their connections to the tank shall be of steel or nodular iron, or malleable iron except as provided in (1) or (2).
(1) …
(2) Cast iron, brass, copper, aluminum, and similar materials may be used on tanks described in Section 5590(c) or for tanks storing liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) ~~Class IIIB liquids~~ when the tank is located outdoors and not within a diked area or drainage path of a tank storing a Category 1, 2, 3 or 4 flammable ~~Class I, Class II or Class IIIA~~ liquid.
(d) Low melting point materials, such as aluminum, copper and brass; or materials which soften on fire exposure, such as plastics; or non-ductile material, such as cast iron, may be used underground for all flammable and combustible liquids within the pressure and temperature limits of the ANSI B31, American National Standard Code for Pressure Piping, if such materials are used outdoors in aboveground piping systems handling Category 1, 2, 3 or 4 flammable ~~Class I, Class II or Class IIIA~~ liquids or within buildings handling any flammable or combustible liquid, they shall be either suitably protected against fire exposure, or so located that any leakage resulting from the failure would not unduly expose persons, important buildings or structures or located where leakage can readily be controlled by operation of an accessible remotely located valve or valves.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

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Modify Section 5608 as follows:
§5608. Pipe Joints.
(a) Joints shall be made liquid-tight. Welded or screwed joints or approved connectors shall be used. Threaded joints and connections shall be made up tight with a suitable lubricant or piping compound. Joints and piping systems handling Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) ~~Class I liquids~~ where located in concealed spaces within buildings or structures shall be welded.

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

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Subchapter 7. General Industry Safety Orders
Group 20. Flammable Liquids, Gases and Vapors
Article 147. Bulk Plants

Modify Section 5616 as follows:
§5616. Storage.
(a) Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) ~~Class I liquids~~ shall be stored in closed containers, or in storage tanks aboveground outside of buildings, or underground in accordance with Article 145.
(b) Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C), Category 4 flammable ~~Class II and Class III~~ liquids and liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) shall be stored in containers, or in tanks within buildings or aboveground outside of buildings, or underground in accordance with Article 145.

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

Modify Section 5617 as follows:
§5617. Buildings.

***

(b) Rooms in which Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) ~~Class I liquids~~ are stored or handled shall be heated only by means not constituting a source of ignition, such as steam or hot water. Rooms containing heating appliances involving sources of ignition shall be located and arranged to prevent entry of flammable vapors. ~~(Title 24, T8-5617)~~
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Modify Section 5618 as follows:
§5618. Ventilation.
(a) Ventilation shall be provided for all rooms, buildings, or enclosures in which Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) ~~Class I liquids~~ are pumped or dispensed. Design of ventilation systems shall take into account the relatively high specific gravity of the vapors. Ventilation may be provided by adequate openings in outside walls at floor level unobstructed except by louvers or coarse screens. Where natural ventilation is inadequate, mechanical ventilation shall be provided. (See Section 5143).
(b) Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) ~~Class I liquids~~ shall not be stored or handled within a building having a

basement or pit into which flammable vapors may travel, unless such area is provided with ventilation designed to prevent the accumulation of flammable vapors therein.
(c) Containers of Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) ~~Class I liquids~~ shall not be drawn from or filled within buildings unless provision is made to prevent the accumulation of flammable vapors in hazardous concentrations. Where mechanical ventilation is required, it shall be kept in operation while flammable liquids with a flashpoint below 100 °F (37.8 °C) are being handled. ~~(Title 24, T8-5618)~~
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Modify Section 5619 as follows:
§5619. Loading and Unloading Facilities.
(a) Tank vehicle and tank car loading and unloading facilities shall be separated from aboveground tanks, warehouses, other plant buildings or nearest line of adjoining property that may be built upon by a distance of 25 feet for Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ and 15 feet for Category 3 flammable liquids with a flashpoint at or above 100°F (37.8 °C), Category 4 flammable liquids and liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids), ~~Class II and Class III liquids~~ measured from the nearest position of any fill spout. Buildings for pumps or shelters for personnel may be a part of the facility.
(b) Equipment such as piping, pumps, and meters used for the transfer of Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ between storage tanks and the fill stem of the loading rack shall not be used for the transfer of Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C), ~~Class II~~ or ~~Class III liquids~~ Category 4 flammable liquids or liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids).
(c) Except for Category 4 flammable ~~Class III~~ liquids and liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids), valves used for the final control for filling tank vehicles shall be of the self-closing type and manually held open except where automatic means are provided for shutting off the flow when the vehicle is full or after filling of a preset amount.
(d) Bonding facilities for protection against static sparks during the loading of tank vehicles though open domes shall be provided:
(1) Where Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) ~~where Class I liquids~~ are loaded, or
(2) Where Category 3 flammable liquids with a flashpoint at or above 100°F (37.8 °C), Category 4 flammable liquids or liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) are loaded into vehicles which may contain vapors

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from previous cargoes of Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C).
~~where Class II or Class III liquids are loaded into vehicles which may contain vapors from previous cargoes of Class I liquids.~~

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(g) Bonding as specified in (d), (e), and (f) is not required:
(1) …
(2) Where no Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) ~~Class I liquids~~ are handled at the loading facility and the tank vehicles loaded are used exclusively for Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C), Category 4 flammable liquids or liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids); ~~Class II and Class III liquids;~~ and
(3) …

***

(i) Stray currents. Tank car loading facilities where Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~flammable and combustible liquids~~ are loaded or unloaded through open domes shall be protected against stray currents by permanently bonding the pipe to at least one rail and to the rack structure, if of metal. Multiple lines ~~pipes~~ entering the rack area shall be permanently electrically bonded together. In addition, in areas where excessive stray currents are known to exist, all pipes entering the rack area shall be provided with insulating sections to electrically isolate the rack piping from the pipe lines. These precautions are not necessary where Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C), Category 4 flammable liquids or liquids with a flashpoint greater than 199.4 °F (93 °C) (formerly designated Class IIIB Combustible liquids) ~~Class II or Class III liquids~~ are handled exclusively and there is no probability that tank cars will contain vapors from previous cargoes of Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) ~~Class I liquids~~. ~~Temporary bonding is not required between the tank car and the rack or piping during either loading or unloading irrespective of the class of liquid handled.~~
(j) Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) ~~Class I liquids~~ shall not be dispensed into ~~metal~~ containers unless the nozzle or fill pipe ~~is in electrical contact with the container~~ and container are electrically interconnected. This can be accomplished by maintaining metallic contact during filling, by a bond wire between them, or by other conductive path having an electrical resistance not greater than 10^6 ohms. ~~Bonding is not required where a container is filled through a closed system, or is made of glass or other nonconducting material.~~
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

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Modify Section 5620 as follows:
§5620. Wharves.

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(d) Piping, valves and fittings shall be in accordance with Article 146, with the following exceptions and additions:

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(5) In addition to the requirements of (4), each line conveying Category 1, 2 or 3 flammable liquids~~,~~ ~~Class I and Class II liquids~~ leading to a wharf shall be provided with a readily accessible block valve located on shore near the approach to the wharf and outside of any diked area. Where more than one line is involved, the valves shall be grouped in one location.
(6) Means of easy access shall be provided for cargo line valves located below the wharf deck.
(7) Pipe lines on wharves shall be adequately bonded and grounded if Category 1, 2 or 3 flammable ~~Class I and Class II~~ liquids are handled.

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

Modify Section 5621 as follows:
§5621. Electrical Equipment.
(a) This section shall apply to areas where Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ are stored or handled. For areas where ~~Class II or Class III liquids~~ only Category 3 flammable liquids with a flashpoint at or above 100 °F (37.8 °C) or Category 4 flammable liquids are stored or handled, the electrical equipment may be installed in accordance with the provisions of the California Electrical Safety Orders for ordinary locations.

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

Modify Section 5622 as follows:
§5622. Sources of Ignition.
Category 1 or 2 flammable liquids or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C) ~~Class I liquids~~ shall not be handled, drawn, or dispensed where flammable vapors may reach a source of ignition. Smoking shall be prohibited except in designated localities. "NO SMOKING" signs shall be conspicuously posted where hazard from flammable vapors is normally present.
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Modify Section 5624 as follows:

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

§5624. Fire Control.
Suitable fire-control devices, such as small hose or portable fire extinguishers, shall be available to locations where fires are likely to occur. Additional fire-control equipment may be required where a tank of more than 50,000 gallons individual capacity contains Category 1 or 2 flammable liquids, or Category 3 flammable liquids with a flashpoint below 100 °F (37.8 °C), ~~Class I liquids~~ and where an unusual exposure hazard exists from surrounding property. Such additional fire-control equipment shall be sufficient to extinguish a fire in the largest tank. The design and amount of such equipment shall be in accordance with approved engineering standards. ~~(Title 24, T8-5624)~~
NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

For informational purposes only:
For references in this proposed rulemaking to Section 5194, Appendix B, see Title 29 Code of Federal Regulations section 1910.1200 Appendix B which has been incorporated by reference in Title 8, Section 5194.