

Title 19, Division 1, Chapter 3

INITIAL STATEMENT OF REASONS

Pursuant to Health and Safety Code Sections 13160 through 13190.4, the State Fire Marshal shall adopt regulations and standards deemed necessary to control the servicing, including charging and testing, of all portable fire extinguishers. In adopting these regulations, the State Fire Marshal shall consider the standards of the National Fire Protection Association (NFPA).

SPECIFIC PURPOSE, PROBLEM, RATIONALE AND BENEFITS

Health and Safety Code Sections 13160 through 13190.4 contain the provisions authorizing the State Fire Marshal to regulate placement, servicing, testing, selling and marketing of portable fire extinguishers. The State Fire Marshal is relying on the national standard for portable fire extinguishers as reference documents. The proposed regulations modify several Sections of Title 19, Chapter 3, for portable fire extinguishers and will also update, to more recent editions, the standards referenced in the regulations.

Title 19 has various referenced standards that no longer exist, are outdated or are not current or consistent with those referenced and identified in the California Building Standards Code, Title 24 California Code of Regulations. These referenced standards include: UL 711, Standard for Fire Extinguishers, Rating and Fire Testing 7th Edition, 2009; UL Subject 711A, Fire Test Method for Portable Hand-Held Extinguishers Intended For Use on Residential Cooking Equipment July 21, 2005; UL 154, Standard for Carbon Dioxide Fire Extinguishers, 9th Edition, 2009; UL 299, Standard for Dry Chemical Fire Extinguishers, 10th Edition, 2009; UL Subject 299D, Dry Chemical Fire Extinguishers for Residential Cooking, July 9, 2010 as amended; UL 626, Standard for Water Fire Extinguishers, 8th Edition, 2007; UL 8, Standard for Water Based Agent Fire Extinguishers, 6th Edition, 2005; and UL 2129 Standard for Halocarbon Clean Agent Fire Extinguishers 2nd Edition, 2005. This document also clarifies the section of Code of Federal Regulations (CFR) Title 49 which is required to be followed when conducting a hydrostatic test on a portable fire extinguisher.

The referenced documents are formal publications reasonably available from a commonly known source but are not reprinted in this rulemaking because to do so would be cumbersome, unduly expensive, and otherwise impractical.

In addition, the proposed regulations will clarify fire extinguisher service licensee's requirements. These proposed regulations will also address electronic monitoring of fire extinguishers, fire extinguisher cabinets, add requirements for water mist fire extinguishers and designate several types of fire extinguishers as obsolete. These amendments are necessary to carry out the provisions found in Health and Safety Code Sections 13160 through 13190.4.

TECHNICAL, THEORETICAL, AND/OR EMPIRICAL STUDY, OR REPORT

In connection with proposing the regulation amendments, the State Fire Marshal consulted with the State Fire Marshal Fire Extinguisher Advisory Committee consisting of local fire, industry and regulatory personnel, to provide recommendations and review the proposed regulations. These were conversations only, and there were no technical, theoretical, and/or empirical study, or reports relied upon in connection with these consultations.

NECESSITY

Health and Safety Code Section 13160 mandates the State Fire Marshal to consider the National Fire Protection Association standards when adopting regulations and standards deemed necessary to control the servicing, including charging and testing, of all portable fire extinguishers. The proposed additions and amendments will make Title 19 California Code of Regulations consistent with NFPA Standards.

REASONABLE ALTERNATIVES TO THE REGULATION AND THE STATE FIRE MARSHAL'S REASONS FOR REJECTING THOSE ALTERNATIVES

The State Fire Marshal staff has thoroughly reviewed this proposed regulatory action, including both the positive and negative impacts it will place upon the industry. No alternatives considered by the State Fire Marshal would be more effective in carrying out the purpose of these proposed regulations or be less burdensome to the affected parties than the proposed regulations.

ALTERNATIVES – SMALL BUSINESSES

The proposed regulations have no substantial effect to small businesses. The State Fire Marshal has identified no alternatives that would lessen adverse impact, if any, on small businesses and still allow the State Fire Marshal to effectively enforce the regulations.

ECONOMIC IMPACT ANALYSIS AND ASSESSMENT

The SFM has assessed whether or not and to what extent this proposal would have cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action. There is a one-time fire extinguisher service company expenditure for equipment that tests all system gauges for accuracy and another to consumers for replacement of obsolete portable fire extinguishers when they have not already been removed from service. Both costs are minimal, do not pose significant economic impact, and will comply with minimum safety standards and prevent possible safety hazards.

EVIDENCE SUPPORTING FINDING OF NO SIGNIFICANT ADVERSE ECONOMIC IMPACT ON ANY BUSINESS

The State Fire Marshal can find no facts, documents, testimony or evidence that this action will have a significant adverse economic impact on any business.

COORDINATION WITH FEDERAL LAW

The State Fire Marshal has determined that this proposed regulatory action neither conflicts with, nor duplicates, any federal regulation contained in the Code of Federal Regulations.

Specific sections which have been modified:

Section 557.4 (b) is being proposed to be amended to more clearly define a Dry Chemical Closed Recovery System.

Necessity: The current definition is inadequate for two reasons. First, it does not include the requirement for the prevention of the introduction of foreign material into the system. Second, it does not include the requirement for a visual means of inspection of the agent. These two essential elements are necessary to properly ensure the recovered agent can be reused.

Section 557.5 (d) is being proposed to be amended to add a definition of Electronic Monitoring.

Necessity: There is not a clear definition of Electronic Monitoring and it is used in Sections 574.2(c), 574.5(c) and in Table 4.

Section 557.5 (h) is being proposed to be amended to add a definition of an Extinguisher Cabinet.

Necessity: There is not a clear definition of an Extinguisher Cabinet and it is used in Sections 563(b), 567.2, 567.3 and 567.7.

Section 557.8 (b) is being proposed to be amended to replace “Halon” with “Halogenated,” the broader category of agents using a Closed Recovery System. This section also defines when a listed system is required.

Necessity: Halon was the only halogenated-type material utilized as a fire extinguisher agent at the time the original regulations were adopted. Today, there are a number of halogenated products other than Halon that are used as fire extinguisher agents. Therefore, the broader category “Halogenated” Closed Recovery System needs to be used and a better description of the system provided. It also defines when a listed system is required.

Section 557.13 (b) is being proposed to be amended to add a definition of Master Gauge.

Necessity: A new requirement for a Master Gauge has been added to Section 594.3 for testing pressure gauges of low pressure test equipment; this definition is needed to define the requirements for the gauge.

Section 557.23 (a) is being proposed to be amended to add a definition of Water Mist Fire Extinguisher.

Necessity: The Water Mist Fire Extinguisher is a recently developed type of fire extinguisher and needs to be integrated into these regulations. The function of a Water

Mist Fire Extinguisher is different from the Water-Type Fire Extinguisher and requires a unique definition.

Section 561.2 (a) is being proposed to be amended to add new and to update the edition of the national test standards for portable fire extinguishers.

- Section 561.2(a)(1) is being split into two subsections, adding a second fire test standard to Section 561.2(a)(1)(B) UL 711A
- Section 561.2(a)(2) contains the Performance Standards which are being updated to current editions as follows.
 - Section 561.2(a)(2)(A) is updating ANSI/UL 154, 8th Edition to the 9th Edition, 2009.
 - Section 561.2(a)(2)(B) is updating ANSI/UL 299, 10th Edition, 2002, to Revised, 2007.
 - Section 561.2(a)(2)(C) is adding and amending UL Subject 299D Dry Chemical Fire Extinguishers for Residential Cooking Section 7.1 to clarify the print size on the fire extinguisher label.
 - Section 561.2(a)(2)(D) is updating ANSI/UL 626 7th Edition, 1995, to the 8th Edition, 2007, and updating the standard name.
 - Section 561.2(a)(2)(F) is updating ANSI/UL 8, Standard 5th Edition, 1995, to the 6th Edition, 2005, and updating the standard name.
 - Section 561.2(a)(2)(G) is updated ANSI/UL 2129, Standard 1st Edition, 1999, to the 2nd Edition, 2005, and updating the standard name.
 - Section 561.2(a)(2)(H) is updating ANSI/UL 8, Standard 5th Edition, 1995, to the 6th Edition, 2005, and updating the standard name.
 - Section 561.2(a)(2)(I) is updating UL 2006 Standard 3rd Edition, 1997, to the 5th Edition, 2011, and being added here and removed from Section 575.6.

Necessity: Portable fire extinguishers are tested by the State Fire Marshal approved laboratories. New extinguishers are manufactured and tested to the latest American National Standard Institute/Underwriters Laboratories (ANSI/UL) standards; therefore, the regulations need to reference the latest editions. Some of the references to the ANSI/UL standards under Section 561.2 (a) need to be updated to new standards or current editions of existing standards.

UL Subject Guides 299D and 711A are being added to address the need for listed residential kitchen fire extinguishers.

Section 561.2(c) is being proposed to be amended to correct grammatical errors in the present language and to update the standard and to remove several Health and Safety Code References.

Necessity: Correction of these errors removes any misunderstanding of the section and will also be updating UL 1803 from 2nd Edition, 1997, to the 3rd Edition, 2006. These Health and Safety Code References are being removed because they are unrelated to the section.

Section 567(k) is being proposed to be amended to add specific requirements for the placement and selection of fire extinguishers containing halogenated agent in confined spaces.

Necessity: There is a potential safety hazard if halogenated agent fire extinguishers are placed in confined areas. The risk of reaching higher concentration levels of halogenated agent in a confined area could create a health hazard. The space volume requirement warnings are contained on the label of these types of extinguishers and must be followed.

Section 567(l) is being proposed to be amended to add specific requirements for the placement and selection of wheeled fire extinguishers.

Necessity: Previously, Title 19 did not address where and when wheeled fire extinguishers should be considered. These guidelines help to determine where these extinguishers should be placed.

Section 567.8 is being proposed to be amended to use the temperature requirements stated on the label of the fire extinguisher instead of mandating a specific temperature range.

Necessity: All fire extinguishers are required to have labels which indicate the operating temperature ranges that they are limited to. These ranges can differ depending on the manufacturer of the fire extinguisher and are also included in their service manuals.

Section 573 (d) is being proposed to be amended to add specific requirements for a placard to be displayed near the extinguisher indicating the fire protection system shall be used prior to the fire extinguisher.

Necessity: NFPA 96, 2008 Edition, Section 10.2.2 requires a placard identifying the use of the extinguisher as the secondary backup to the automatic fire-extinguishing system. The extinguisher is an added safety measure and the sign is necessary to prevent the otherwise automatic response of utilizing the fire extinguisher first.

Section 573 (e) is being proposed to be amended to add specific requirements for the placement and selection of fire extinguishers used for the protection of commercial cooking operations with solid fuel appliances.

Necessity: This addition is needed because solid fuel commercial cooking operations appliances are becoming more common in California restaurants. They have specific requirements for these appliances and were previously not covered.

Section 574.4 is being proposed to be amended to identify halogenated agents as the broad category of non-rechargeable fire extinguishers containing halogenated agents.

Necessity: Halon was the only halogenated-type material utilized as a fire extinguisher agent at the time the original regulations were adopted. Today, there is a greater range of products other than Halon that are used as fire extinguisher agents; therefore, the broader category "Halogenated" is used where appropriate.

Section 575.1 is being proposed to be amended to replace “Halon” with “Halogenated,” the broader category of agents of non-rechargeable fire extinguishers containing halogenated agents.

Necessity: Halon was the only halogenated-type material utilized as a fire extinguisher agent at the time the original regulations were adopted. Today, there are a number of halogenated products other than Halon that are used as fire extinguisher agents; therefore, the broader category “Halogenated” is used where appropriate.

Section 575.3(a) Exceptions is being proposed to be amended to list which fire extinguishers are not required to be disassembled during the annual maintenance and also adds water mist, pressure water type fire extinguishers and dry chemical and dry powder extinguishers requiring a 5-year hydrostatic test.

Necessity: The first paragraph was amended and reconstructed into a list to make it more understandable as a reference.

The following items were added to that list:

(C) Stored pressure dry chemical or dry powder fire extinguisher that require a 5-year hydrostatic test was added to the list as it was missing from the original exception.

Manufacturer’s requirements do not mandate internal examinations on an annual basis
(F) Pressure water type was added to the list as it was missing from the original exception. Manufacturer’s requirements do not mandate internal examinations on an annual basis.

(G) Water mist type was added to the list as it is a new fire extinguisher. The regulations and manufacturer’s requirements do not mandate internal examination on an annual basis.

Water mist was also added to the reference to Section 575.16 as it has the same internal maintenance requirements as wet chemical types.

The reference to Section 575.13 was added to include antifreeze and loaded stream type fire extinguishers since they were not previously included and needed to be referenced with the other types of extinguishers.

Section 575.3(f) is being proposed to be added to clarify the required items to be removed from the fire extinguisher when conducting a thorough annual cylinder examination.

Necessity: Moisture can collect and cause cylinder corrosion under such boots, foot rings and attachments that will compromise the cylinder integrity leading to an unsafe condition. It is necessary to remove these items to properly inspect the cylinder for possible corrosion or other damage that would be otherwise hidden.

Section 573.5(g) is being proposed to be added to require hoses on wheeled-type extinguishers to be completely uncoiled and examined for damage.

Necessity: The hoses on wheeled-type extinguishers are subject to damage and may develop cracks in certain environments or under certain conditions leading to an unsafe

condition or failure when activated. This step is necessary to inspect these hoses to discover any change in condition that requires attention.

Section 575.6 (b) is being proposed to be amended to require a listed Halon closed recovery system be used and the reference to the reference standard is being moved to Section 561.2.

Necessity: Existing regulations do not require Halon closed recovery system used to be listed. Now all Halon closed recovery system will be required to be listed for their use. Performance Standards in this section is being moved to Section 561.2 to be combined with all other test standards.

Section 575.8 is being proposed to be amended to delete the obsolete solid-type Fire Extinguisher requirements.

Necessity: Deleting the obsolete solid-type Fire Extinguisher requirement has no adverse effects. Solid-type cartridges for aqueous film forming foam are no longer available and this type of extinguisher is being added to the obsolete extinguisher list under Section 577.2(8) and should no longer be serviced.

Section 575.13 is being proposed to be amended to clearly identify the requirements for internal maintenance of antifreeze and loaded stream fire extinguishers. It also clarifies when the antifreeze and loaded stream solution can be reused.

Necessity: Antifreeze and loaded stream extinguishers require annual internal maintenance unlike other types of Water-Type extinguishers and defines when the solution can be reused.

Section 575.16 is being proposed to be amended to add the water mist fire extinguishers to these requirements.

Necessity: The Water Mist Fire Extinguisher is a recently developed type of fire extinguisher and needs to be integrated into the regulations. These extinguishers have the same internal maintenance requirements as the wet chemical fire extinguisher.

Section 577.2 (8) is being proposed to be amended to add Solid charge-type AFFF fire extinguishers to the list of obsolete fire extinguishers that cannot be serviced.

Necessity: Solid charge-type AFFF fire extinguishers required periodic replacement of the cartridge every 3 years. These cartridges have not been available since the early 1990s.

Section 577.2 (9) is being proposed to be amended to add pre-1971 pressurized water fire extinguishers to the list of obsolete fire extinguishers that cannot be serviced.

Necessity: Pre-1971 pressurized water extinguishers were constructed of dissimilar metals such as stainless steel shells with brass domes. These metals caused a galvanic reaction that lead to several units blowing apart during hydrostatic retest or recharge causing injuries. The requirements for stainless steel shells were changed after 1971 making them safer.

Section 577.2 (10) is being proposed to be amended to add inverting-type, dry-chemical fire extinguishers to the list of obsolete fire extinguishers that cannot be serviced.

Necessity: Inverting types of extinguishers were de-listed by Underwriters Laboratories in 1969 (paragraph A-2-2.1.1 in NFPA-10, Portable Fire Extinguishers, 1984 Edition, states that the manufacture of inverting types of extinguishers and their listing by Underwriters Laboratories Inc. was discontinued in 1969).

Section 577.2 (11) is being proposed to be amended to add fire extinguishers manufactured prior to 1955 to the list of obsolete fire extinguishers that cannot be serviced.

Necessity: Pre-1955 requirements for gauges and shell construction for fire extinguishers and the rating system established were different than today's requirements. Fire extinguishers manufactured prior to 1955 are incompatible with the current rating requirements for the selection and placement of extinguishers outlined in Title 19 CCR and the California Fire Code. Furthermore, parts for these fire extinguishers have been discontinued for many years rendering them unserviceable.

Section 577.2 (12) is being proposed to be amended to add fire extinguishers with 4B, 6B, 8B, 12B, and 16B fire ratings to the list of obsolete fire extinguishers that cannot be serviced.

Necessity: Extinguishers with 4B, 6B, 8B, 12B, and 16B fire ratings are no longer used and will not meet the current rating requirements for selection and placement of fire extinguishers in Title 19 CCR and the California Fire Code. They achieved their rating using different test scenarios than adopted today and there are no parts left available for these extinguishers rendering them unserviceable.

Section 577.2 (13) is being proposed to be amended to add water fire extinguishers with fiberglass shells to the list of obsolete fire extinguishers that cannot be serviced.

Necessity: Water fire extinguishers with fiberglass shells were voluntarily recalled by the Ansul in 1973 after serious injuries were reported. Any units still in service need to be removed.

Section 577.2 (14) is being proposed to be amended to add Dry Chemical Fire Extinguishers manufactured prior to 1984 to the list of obsolete fire extinguishers that shall be removed from service at the next required 6-year maintenance or hydrostatic test.

Necessity: Major changes were made in 1984 to two UL Standards: (1) UL 299, Dry Chemical Fire Extinguishers and (2) UL 711, Rating and Fire Testing of Fire Extinguishers. Fire extinguishers must comply with both of the UL Standards as both are required for their listing. This only applies to those extinguishers as they are due for their 6-year maintenance or 12-year hydrostatic test. This lessens the economic impact on the consumer.

There were major changes in the following areas:

(1) Hose Requirement

Chapter 6 of UL 299, 1984 edition, required extinguishers rated from 2A to 4A and 10B to 60B to be equipped with a discharge hose. Previously, directing the discharge to the base of the flame was difficult. The major accomplishment of the change was in making the operator use the fire extinguisher in the upright position. The addition of the hose simplifies the usage of the fire extinguisher.

(2) Minimum Discharge Time

UL 711, 1984 edition requires a minimum of 13-second discharge duration for an extinguisher rated 2A. Previously, fire extinguishers had discharge durations of only eight to ten seconds. The revision to the standard mandates a 50 percent to 60 percent increase in the minimum discharge duration for a 2A-rated dry chemical extinguisher.

(3) Pull Pins

UL 299, 1984 edition, requires a maximum of 30 pounds of force to remove a safety pin or pull pin from a fire extinguisher. Previously, this was not addressed in the standard. The standards also included a design requirement so the pin is visible from the front of the extinguisher unless noted by the operating instructions.

(4) Operating Instructions/Marking

UL 299, 1984 edition, required the use of pictographic operating instructions and use Code Symbols on fire extinguishers (Class D fire extinguishers and wheeled extinguishers are exempt). The result was a uniform, consistent set of easily understood symbols that makes using the extinguisher more understandable.

(5) Service Manuals

UL 299, 1984 edition, for the first time requires that manufacturers provide a service manual for their products and references to the service/maintenance manual on the extinguisher nameplate. This improves proper continued maintenance of the fire extinguisher while it is in service.

Section 578.6 is being proposed to be amended to replace “Halon” with “Halogenated” as the broad category for fire extinguishers containing halogenated agents.

Necessity: Halon was the only halogenated-type material utilized as a fire extinguisher agent at the time the original regulations were adopted. Today, there are a number of halogenated products other than Halon that are used as fire extinguisher agents; therefore, the broader category “Halogenated” should be used.

Section 591.6(d) is being proposed to be amended to clearly identify when a fire extinguisher exposed to heat and flames shall be examined.

Necessity: Although a fire extinguisher may not have been directly exposed to a fire, the exposure to heat could present great danger.

Section 592.1 EXCEPTION is being proposed to be amended to update the section with current Code Federal Regulation Section.

Necessity: Compressed Gas Cylinders and Cartridges outlined in 2000 Code of Federal Regulations (CFR) Title 49 had a revision; 173.34(e) 15 with reference to 3HT cylinders is now renumbered to 180.209(k).

Section 592.2(a) is being proposed to be amended to include the requirement for hydrostatic testing of high-pressure and low-pressure accessory hoses used on wheeled extinguishers.

Necessity: High and low pressure hoses on fire extinguishers were not included in the regulations. The hoses used on extinguishers need to have periodic hydrostatic tests performed to ensure safety and reliability.

Section 592.2(b)(3) is being proposed to be amended to add requirements for hydrostatic testing of accessory hoses on wheeled fire extinguisher.

Necessity: Accessory hoses on wheeled fire extinguishers are required to be hydrostatically tested in accordance with the manufacturer's specifications.

Section 593.1 is being proposed to be amended to direct service technicians to the Department of Transportation (D.O.T.) reference for hydrostatic testing of fire extinguishers with D.O.T. specification cylinders.

Necessity: All high pressure D.O.T. specification cylinders are inspected and tested under strict requirements of the D.O.T. and the regulations need to simply defer to that authority.

Section 594.3(a)(5) is being proposed to be amended to add requirements to test all system gauges for accuracy with a master gauge and also requires a log of these tests.

Necessity: The pressure reading gauge is an important component of the test equipment assembly. Its capability as well as its accuracy is paramount to its proper function. An accuracy check quarterly by means of a master gauge is similar to what is required with high pressure D.O.T. test equipment. The longest low pressure hydrostatic test duration for fire extinguisher is 12 years; therefore, these logs must be maintained for 13 years.

Section 594.4 (a) is being proposed to be amended to direct service technicians to the D.O.T. reference for hydrostatic testing of fire extinguishers with D.O.T. specification cylinders.

Necessity: All high pressure D.O.T. specification cylinders and cartridges are inspected and tested under strict requirements of the D.O.T. and the regulations need to simply refer to that authority.

Section 594.4 (b) (4) is being proposed to be amended to provide requirement for all hoses to be removed during hydrostatic test.

Necessity: The section is being reworded to clearly state the requirement to remove all hose assemblies during hydrostatic testing of fire extinguishers. All hose assemblies are hydrostatically tested to separate requirements.

Section 594.4 (b) (5) is being proposed to be amended to identify halogenated agents as the broad category for fire extinguishers containing halogenated agents.

Necessity: Halon was the only halogenated-type material utilized as a fire extinguisher agent at the time the original regulations were proposed. Today, there is a greater range of products other than Halon that are used as fire extinguisher agents; therefore, the broader category "Halogenated" is used where appropriate.

Section 594.4 (b) (8) is being proposed to be amended to eliminate the use of air or other gases as the sole medium for hydrostatic testing of fire extinguishers.

Necessity: The use of air and other gases as a sole test medium is unsafe during hydrostatic testing.

Section 594.5 (c)(4) is being proposed to be amended to require the hydrostatic test log be maintained for thirteen years.

Necessity: A log was mandated without a requirement as to how long it was to be maintained. The longest low pressure hydrostatic test cycle period is 12 years; therefore, these logs are to be maintained for thirteen years.

Section 595.5 (a)(7) is being proposed to be amended to clarify what type of maintenance a Type L Concern License can perform.

Necessity: Type L Concern Licenses are only intended for public and private entities to conduct external annual maintenance of their own portable fire extinguishers. This section clarifies that Type L Concern Licenses are not allowed to perform internal maintenance on fire extinguishers.

Section 595.5 (f) is being proposed to be amended to reconstruct the experience requirements for obtaining a concern license into a list.

Necessity: Reconstructing this section into a list clarifies the experience requirements for obtaining a concern license.

Section 595.5 EXCEPTION is being proposed to be amended to add an exception for the 24-month experience requirements for Type L Concern license.

Necessity: Type L Concern Licenses are only intended for public and private entities to conduct external annual maintenance of their own portable fire extinguishers. This license is not allowed to perform internal maintenance on fire extinguishers.

Section 596 (a) is being proposed to be amended to add statement that nothing can be added to the front of the tag, collar or label.

Necessity: Allowing items to be placed on the front of the tag, collar or label can obstruct the required information.

Section 596 (c) EXCEPTION is being proposed to be amended to remove the requirement for a verification of service collar for carbon dioxide extinguishers.

Necessity: Carbon dioxide extinguishers do not require that the valve assembly be removed or an internal examination be conducted during recharge. In addition, the internal examination is required at the 5-year hydrostatic test cycle. Carbon Dioxide extinguishers are required to be internally inspected and marked in accordance with the D.O.T. requirements making the addition of a verification of service collar unnecessary.