

RULE 1418

Halon Emissions From Fire Extinguishing Equipment

(a) Purpose

The purpose of this rule is to reduce halon emissions by requiring the recovery and recycling of halon from fire extinguishing systems, by limiting the use of halon to specified necessary applications, and by prohibiting the sale of portable halon fire extinguishers that contain less than 5 pounds of halon.

(b) Applicability

This rule applies to any person who owns, operates, or services a halon fire extinguishing system, as defined below. This rule also applies to retailers of portable fire extinguishing systems.

(c) Definitions

For purposes of this rule, the following definitions shall apply:

- (1) ACCIDENTAL DISCHARGE is a halon discharge caused by a false alarm or a leaking total flooding system.
- (2) ACTUAL FIRE is a fire event that is not intentionally ignited for testing or training purposes.
- (3) DISCHARGE TEST is a method of testing the effectiveness of total flooding systems after their installation by releasing halon or another stratospheric ozone-depleting gas from the total flooding system.
- (4) HALON is any one of the following compounds or any combination of these compounds: bromochlorodifluoromethane (Halon 1211), bromotrifluoromethane (Halon 1301), dichlorodifluoromethane (Halon 112), dibromotetrafluoroethane (Halon 2402), dibromodifluoromethane (Halon 1202), bromochloromethane (Halon 1011), and bromodifluoromethane (Halon 1201 or FM-100).
- (5) LEAK-FREE is a condition where halon gas is detected at levels no greater than 1000 parts per million during recovery or recycling operations as measured by an electronic halon detector used in accordance with manufacturer's specifications.
- (6) LOCAL AUTHORITY is any organization, office, or individual having statutory power for approving the installation of total flooding systems.

- (7) PERSON is any firm, business establishment, association, partnership, corporation or individual, whether acting as principal, agent, employee, or other capacity, including any governmental entity or charitable organization.
- (8) PORTABLE FIRE EXTINGUISHER is a cylinder or cartridge containing halon which is used for extinguishing fires, and can be carried or wheeled to the site of a fire.
- (9) RECYCLE is to remove halon from a portable or total flooding system for reuse in the same or another system.
- (10) RECOVER is to capture halon from a portable or total flooding system container to a receiving container.
- (11) SERVICE is to inspect, install, maintain, test, replace, relocate, or remove either a portable fire extinguishing system or a total flooding system, the result of which may cause the release of halon.
- (12) TOTAL FLOODING SYSTEM is a halon-containing, stationary system which is engineered, pre-engineered, or a subfloor system, used for extinguishing fires.

(d) Requirements

- (1) On and after July 1, 1992, the following requirements shall apply to portable fire extinguishers:
 - (A) No person shall release halon from any portable fire extinguisher unless such person recovers and/or recycles the halon using recovery or recycling equipment with an efficiency of at least 97 percent, or such release is for an actual fire.
 - (B) No person shall sell, distribute, or offer for sale or distribution any portable fire extinguisher which contains less than 5 pounds of halon, unless such an extinguisher is rechargeable, and is assigned a minimum Underwriter's Laboratory extinguisher rating of 5B.
- (2) On and after July 1, 1992, the following requirements shall apply to total flooding systems:
 - (A) Except as provided in subparagraph (d)(2)(B), no person shall release halon from any total flooding system unless such person recovers and/or recycles the halon using recovery or recycling equipment with an efficiency of at least 95 percent, or such release is for an actual fire.
 - (B) No person shall conduct a discharge test unless the following conditions apply:

- (i) A written determination is received from any local authority stating that limitations exist which cause difficulty in predicting the level of the halon/air mixture using other test methods; or an applicable ordinance requires only the use of a discharge test; and
 - (ii) A test gas other than Halon 1301 is used.
- (C) No person shall service a total flooding system unless that person has or is working under the supervision of a person who has a C-16 classification contractor's license for fire protection, pursuant to Business and Professions Code Division 3, Chapter 9, or has a license issued by the State Fire Marshal, pursuant to California Health and Safety Code, Section 13196.5, Chapter 1.8.
- (D) No person shall operate or possess a total flooding system unless each tank for the system is labeled with the following statement: "License required to remove, relocate, or service this system, pursuant to South Coast Air Quality Management District Rule 1418."

(e) Reporting

- (1) No later than July 1, 1992, or within 30 days of the installation of a total flooding system, whichever is later, any person who owns or maintains a total flooding system shall register with the District by submitting the following information on a District approved form:
- (A) Name of the owner and operator, company name and address, address and location of each total flooding system; and
 - (B) A description and capacity of each total flooding system.
- (2) No later than July 1, 1992, or within 30 days of the initiation of any halon servicing activity, whichever is later, any person who services portable fire extinguishers or total flooding systems shall register with the District, by submitting the following information on a District approved form:
- (A) Name of the owner and operator, and company name and address;
 - (B) Description of the system for recycling and recovery of halon;
 - (C) Location of recovery and recycling operations;
 - (D) License number, as specified in subparagraph (d)(2)(C); and
 - (E) Minimum efficiency of the recovery and/or recycling operations, as calculated in subdivision (f), if recycling equipment is not certified pursuant to UL Standard 2006.

- (3) Any change in the information required under subsection (e)(1) or (e)(2) shall require the resubmittal of the information using a District approved form 30 days of such change.
- (4) Any person who conducts a discharge test shall submit information to verify compliance with discharge test requirements of subparagraph (d)(2)(B)(i) and (ii) on a District approved form within 14 days after the discharge test.
- (5) An owner or operator of any total flooding system shall submit the following information within 14 days of the recharge if the system requires the recharging of more than 10 pounds of halon due to accidental discharge: name, address, telephone number, and signature of the owner or operator; the cause of the accidental discharge; and measures taken to prevent another occurrence.

(f) **Efficiency Determination**

- (1) For recovery or recycling equipment that is not certified pursuant to Underwriter's Laboratory Standard 2006, the efficiency of either equipment shall be demonstrated by using the following calculation on three recovery or recycling trials:

$$\frac{W_2 - W_1}{W_2 - W_c} \times 100$$

Where:

W_2 = Weight of the portable fire extinguisher or total flooding system container and halon prior to recovery or recycling, using a scale that is accurate to the nearest ounce for portable fire extinguishers, and accurate to the nearest pound for total flooding systems.

W_1 = Weight of the portable fire extinguisher or total flooding system container and all residual halon immediately after recovery operation takes place, using a scale that is accurate to the nearest ounce for portable fire extinguishers and to the nearest pound for total flooding systems.

W_c = Empty weight of container assembly. For total flooding systems, use the weight stamped on the container by the manufacturer, to the nearest pound. For portable fire extinguishers, weigh the entire halon-containing assembly, to the nearest ounce, after it has been emptied.

- (2) During recovery and/or recycling operations, the receiver container, portable fire extinguisher, and the total flooding system container shall be leak-free, and no halon shall be vented from these containers or the recycling and/or recovery system.

(g) Exemptions

- (1) Accidental discharges from total flooding systems are exempt from the requirements of subparagraph (d)(2)(A), provided that requirements of paragraph (e)(5) are met, and the discharge is not a result of gross negligence on the part of any person.
- (2) Manufacturers of total flooding systems used for aircraft are exempt from requirements of subparagraph (d)(2)(C).

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