

PROPOSED CHANGE TO THE 2015 ONTARIO FIRE CODE

(O. Reg. 213/07, as amended current to January 1, 2015)

CHANGE NUMBER: N/A

CODE REFERENCE: Division B, New Article 5.1.4.2.

DESCRIPTION OF PROPOSED CHANGE:

New Ventilation Requirements for Processing Operations involving Flammable Gases

- Add a new requirement**
 - Making a technical change to an existing requirement**
 - Making an editorial/administrative change to an existing requirement**
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EXISTING OFC PROVISIONS

N/A

PROBLEM

Although the provisions outlined in Sentence 5.6.2.4.(4) address ventilation requirements for the indoor storage of flammable compressed gas cylinders, there is a higher likelihood of a leak occurring where processing operations involving these materials are taking place. The main hazard of concern is the lack of specific ventilation requirements that would otherwise address the increased risk where flammable gases are part of the process. Such processing areas would typically be located in industrial type occupancies, but in the case of cannabis extraction operations that use flammable gases as an extraction solvent, could also be located in areas of farm buildings.

PROPOSED OFC CHANGE

Note for Proposed OFC Change:

- Red underline indicates new text

Ventilation of processes using flammable gas

5.1.4.2.(1) Except as provided in Sentence (2), process operations involving flammable gas shall be provided with continuous mechanical ventilation that
(a) is sufficient to ensure that flammable gas concentrations outside the zone identified as Class I, Division 2 in conformance with Article 5.1.3.1. do not exceed 25% of the lower explosive limit of the flammable gas.

- (b) is provided with automatic interlocks so that the processes using flammable gas cannot be performed when the ventilation system is not in operation,
- (c) is provided with an audible alarm in an attended area that activates upon shutdown of the ventilation system,
- (d) conforms to NFPA 91, “Standard for Exhaust Systems for Air Conveying of Vapors, Gases, Mists and Noncombustible Particulate Solids”,
- (e) is not used for any other purpose than the ventilation and exhaust system,
- (f) is kept free of obstructions that may interfere with its operation, and
- (g) if it recirculates exhaust air, it is provided with a fail-safe gas detection and alarm system that continuously monitors the flammable gas concentration in the exhaust air, so that flammable gas concentrations exceeding 25% of the **lower explosive limit** will
 - (i) sound an alarm in an attended area
 - (ii) stop the recirculation of air, and
 - (iii) redirect the exhaust air to an outdoor location.

5.1.4.2.(2) Flammable gases in Sentence (1) do not include gases being used as a fuel.

PROPOSED IN FORCE DATE

July 1, 2019

RATIONALE FOR CHANGE

Proposed ventilation requirements for processing areas involving flammable gases are modelled on requirements in the Fire Code that apply to areas where processing of flammable and combustible liquids is taking place. These requirements address the enhanced fire safety risk that exists where flammable gases are being used in processes.

IMPACT

- Proposed new ventilation requirements would impact occupancies that use flammable gases in processing operations, except where used as a fuel.
- As a result of the proposed new Article 1.3.1.2. of Division A, proposed new Article 5.1.4.2. would also apply to floor areas or portions of floor areas within farm buildings that contain extraction operations related to the processing of cannabis and involve the use of flammable liquids, combustible liquids or flammable gases. However, it would not apply to other processing operations involving flammable gases in farm buildings given the farm building exemption provided in Article 1.3.1.1. of Division A.

- Enhanced fire safety of processing operations that involve flammable gases in the types and areas of buildings described above.
- Potential cost impact for building owners that do not currently meet proposed standards.

OBJECTIVE BASED ANALYSIS OF THE CHANGE OR NEW PROVISION

N/A

FUNCTIONAL STATEMENT(S) AND LINK(S) TO OBJECTIVE(S)

5.1.4.2.(1) – [F01-OS1.1, OP1.1]][F11-OS1.1,OS1.4,OP1.1,OP1.4]

5.1.4.2.(2) – Note1