February 20, 2026

**FIRE PREVENTION & COMMUNITY RISK REDUCTION DIVISION**

**INFORMATION NOTICE 2026-03**

**SUBJECT:** Requirements for dry ice (carbon dioxide – $CO_2$) hazards in freezers, walk-in coolers, and similar environments, and means for emergency escape.

**EFFECTIVE:** February 20, 2026 **Shall apply indefinitely, and in accordance with any updates to any adopted Fire Code.*

**CODE REFERENCE:** IFC, Section 102.9; 407.4; 5001.3.3.8; 5307.2.1
(2024 edition as adopted for all sections noted)

**SCOPE:**
These requirements are essential for addressing carbon dioxide – $CO_2$ hazards commonly found in the food/restaurant industries where dry ice is used to keep food products cold, often as part of vendor-supplied packaging, or when used to maintain food products cold during electrical power interruptions, etc.

When dry ice [carbon dioxide – $CO_2$] sublimates from a solid to a gaseous state, it can rapidly displace the available oxygen in a confined space, such as a walk-in freezer or cooler, or other spaces. Carbon dioxide – $CO_2$ is a colorless and odorless gas incapable of being detected in harmful concentrations by humans and is an asphyxiation hazard. Persons exposed to carbon dioxide – $CO_2$ rich environments where oxygen is depleted can rapidly become incapacitated and may lose the capability for self-preservation.

Data suggests that deaths caused by exposure to oxygen depleted environments inside freezers, coolers and similar spaces, or because of an inability to make escape, are not uncommon. This presents a specific hazard to employees working in the food/restaurant industries where products stored in walk-in freezers and coolers routinely change, and the employee may be unaware of the hazards associated with the use of dry ice.

**TECHNICAL INTERPRETATION:**
It is the position of PFA that the most appropriate means and methods for ensuring a reasonable degree of life-safety for the use of dry ice in walk-in freezers, coolers, and similar spaces is defined in IFC Sections 5307.2.1 and 916. While these code sections are specific to insulated carbon dioxide systems used in beverage dispensing applications, these code requirements are directly applicable for the use of dry ice in walk-in freezers, coolers, or similar conditions where a carbon dioxide– $CO_2$ hazard exists.

**WHAT IS REQUIRED:**
Where an approved ventilation system is provided and serves the walk-in freezer, cooler, or similar space and the potential for a carbon dioxide – $CO_2$ rich environment is mitigated by this ventilation system, the following requirements shall apply:

- **Emergency Release Mechanism-** All walk-in coolers, freezers, or similar rooms or spaces where there exists a potential for a person to be locked inside said space, shall be equipped with an interior emergency release mechanism that is designed to provide a means of escape for persons who may become entrapped. This requirement shall apply to all new and existing installations.

- **Employee Training-** The property owner, business, or responsible person(s) shall develop written policies and procedures, and conduct employee training as it pertains to the hazards associated with the use of dry ice, including the potential for freeze-related burns, safe storage, disposal methods, asphyxiation hazards, and how to use the emergency release mechanism if entrapped.

Where there is no approved ventilation system designed to mitigate the accumulation of carbon dioxide – $CO_2$, the following requirements shall be in addition to those outlined above:

- **Warning Signage-** Approved permanent and durable signage shall be posted outside the main entrance to any walk-in cooler, freezer, or similar space(s) which states, "PRODUCTS USING DRY ICE ARE NOT PERMITTED TO BE STORED WITHIN." Signage shall have text of a plain font, a minimum of 1/2"-inches in height, and text shall contrast with the sign's background.

- **Oxygen Depletion Alarm-** A gas detection/oxygen depletion alarm system in accordance with IFC Section 916 shall be required for all spaces where the hazard is present. The installation shall meet all provision of IFC Section 916, including required permits; annual operational permits; equipment designed for oxygen depletion detection in low temperature environments; power connections; emergency & standby power; sensor locations; gas sampling; system activation; signage; fire alarm system connection [not required]; and inspection, testing, and sensor calibration requirements.

  **Exception:** The business shall furnish written notification to PFA from their vendor or food supplier which confirms that dry ice will not be part of the products delivered and stored, and that a carbon dioxide – $CO_2$ hazard is not present. The business shall furnish an updated notification for these matters at the request of PFA from time to time.

**APPLICABLE CODE REFERENCES:**

**IFC 102.9 Matters not provided for-** *Requirements that are essential for the public safety of an existing or proposed activity, building or structure, or for the safety of the occupants thereof, that are not specifically provided for by this code, shall be determined by the fire code official.*

**IFC, 407.4 Training**- *Persons responsible for the operation of areas in which hazardous materials are stored, dispensed, handled or used shall be familiar with the chemical nature of the materials and the appropriate mitigating actions necessary in the event of a fire, leak or spill. Responsible persons shall be designated and trained to be liaison personnel to the fire department. These persons shall aid the fire department in preplanning emergency response identification of where hazardous materials are located, and shall have access to Safety Data Sheets and be knowledgeable in the site emergency response procedures.*

**IFC 5001.3.3.8 Detection of gas or vapor release-** *Where a release of hazardous materials gas or vapor would cause immediate harm to persons or property, means of mitigating the dangerous effects of a release shall be provided.*

**IFC 5307.2.1 Gas detection system-** *In rooms or areas not provided with ventilation in accordance with Section 5307.2, a gas detection system complying with Section 916 or, where approved, an oxygen depletion alarm system, either of which initiates audible and visible alarm signals in the room or area where sensors are installed, shall be provided.*

**APPROVED:**

Shawn McGaffin, Division Chief – Fire Marshal



Poudre Fire Authority
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