



Las Vegas Fire & Rescue Fire Prevention Division Information Sheet



Effective Date: March 2, 2015

CLV Ordinance #6325

The items listed are basic information only. Additional requirements may apply.

Liquid & Compressed CO₂ Systems

Construction and operational permits shall be required for the installation and use of liquid CO₂ systems in excess of 100 pounds or for compressed CO₂ gas systems exceeding 6000 cubic feet. **2012 IFC 105.6.8 & 5307.3**

Cylinders, containers, and tanks used for liquid carbon dioxide shall be listed for that use. They shall be equipped with valve protection, pressure relief devices, and pressure and level gauges. In areas subject to seismic activity, a means to secure the tanks will be provided. If filled from a remote location, a means to determine when the containers have been filled to their design capacity shall be provided. **NFPA 55, chap 13**

All piping shall be located and supported to protect against damage from vibrations/movement. Piping shall be installed to prevent strain on piping and fittings. All piping shall be marked with contents name and the direction of flow. All piping and fittings shall also be constructed to withstand the potential exposure to a temperature of -109.3°F (-78.5°C). **NFPA 55, chap.7 & 13; 2012 IFC 5303; ASME A13.1**

Indoor rooms/areas or enclosed outdoor locations where container systems are filled or used shall be provided with a gas detection and alarm system. The system must be capable of detecting a gas release that creates a carbon dioxide rich environment in excess of the *Permissible Exposure Limits* (PEL) and the *Immediately Dangerous to Life and Health* (IDLH) limit. The system must also be designed to notify the building occupants of said release. **NFPA 55, chap 13**



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Warning sign shall be posted at the entrance to the building, room, enclosure, or confined area where a container is located. The sign shall be at least 8 in. (200mm) wide by 6 in. (150mm) high and state the following:

CAUTION — CARBON DIOXIDE GAS

Ventilate the area before entering.

**A high carbon dioxide (CO₂) gas concentration in this
area can cause suffocation**

Visible hazard identification signs, as specified in NFPA 704 for the specific material contained, shall be placed on stationary containers, aboveground tanks, and at entrances to locations where hazardous materials are stored, dispensed, used, or handled in quantities requiring a permit. **2012 IFC, 5003.5, NFPA 55, chap 13**

A sign shall be provided to clearly identify the shutoff valve for the CO₂ system. **2012 IFC**

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(702)229-0366
www.lasvegasnevada.gov/LawsCodes/fire_code.asp