

LIQUIFIED CARBON DIOXIDE STORAGE

The City of Ventura Fire Department requires that an installation permit be obtained prior to installing any container whose volume equals or exceeds 24 gallons (23 pounds or 1700 cubic feet). Further, in accordance with 2010 California Fire Code Section 105.6.10, VFD requires that an annual operating permit, be obtained should indoor storage volume equal or exceed 60 gallons (57 pounds or 4200 cubic feet) or outdoor storage volume equal or exceed 500 gallons (479 pounds or 35000 cubic feet). Permits are issued by the Ventura City Fire Department, Fire Prevention Division.

Permitting, Submittals, Installation and Scheduling

- Contractor shall secure an installation permit from the Fire Prevention Division prior to the start of installation. Three (3) sets of plans shall be submitted for review and approval.
- Contractor shall secure all other associated permits as required prior to the start of installation. For electrical, plumbing and/or mechanical permit(s), contact Building and Safety at 805/654-7869.
- Under no circumstances shall product be placed into liquefied carbon dioxide container(s) without prior approval from the Fire Prevention Division.
- Contractor shall install and test liquefied carbon dioxide container(s) in accordance with the manufacturer's recommendations/guidelines.
- Contractor shall be responsible for scheduling all associated inspections. *Fire Prevention shall withhold approval to operate the liquefied carbon dioxide container until verification has been received indicating satisfactory completion of all associated inspections.*

Site Inspection Criteria (witnessed by Inspector)

- Stationary containers shall be located at least 1 foot from building and wall openings, 5 feet from lot lines, 10 feet from air intakes, and 15 feet from combustible materials. CFC Table 3204.3.1.1. In addition, portable containers shall be located at least 3 feet from room or area exits and 10 feet from building exits. *CFC Table 3204.3.1.2.1.*
- Stationary containers shall be secured to foundation per the CA Building Code. Portable containers subject to upset shall be secured. *CFC 3203.5.2*
- Containers, piping and other appurtenances shall be protected from physical damage and tampering. *CFC 3203.5.4*
- Stationary containers shall identify manufacturer specifications and maximum allowable working pressure. *CFC 3203.4.3*
- All associated electrical wiring shall conform to the California Electrical Code. Systems shall not be located where they could become part of an electrical circuit and shall not be used for electrical grounding. *CFC 3203.6*
- Shutoff valves shall be provided on all container connections except pressure relief devices. CFC 3205.1.2.3.1 for outdoor installations, emergency shutoff valves shall be located at source of supply and at the point of entry into building. *CFC 3205.3.2*
- Pressure relief devices shall be provided on all containers. *CFC 3203.2.1*
- Pressure relief devices shall not discharge to enclosed spaces or to areas that could impinge on personnel, containers, equipment and adjacent structures. *CFC 3203.3.2*
- Piping systems shall be tested to 150% of maximum working pressure (hydraulic) or 110% of maximum working pressure (pneumatic). *CFC 3205.1.2.6*
- Container shall be clearly identified "Liquefied Carbon Dioxide". *CFC 3203.4.2*
- Entrances to the container storage area shall be identified in accordance with NFPA 704. *CFC 3203.4.1*
- Emergency shut of valves shall be identified and readily accessible. *CFC 3203.4.6*