



## **CITY OF MANTECA - FIRE DEPARTMENT**

### **FIRE PREVENTION BUREAU**

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## **CRYOGENIC FLUIDS PERMIT REQUIREMENTS**

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**105.6.11** An operational permit is required to produce, store, transport on site, use, handle or dispense cryogenic fluids in excess of the amounts listed in Table 105.6.11

**Exception:** Permits are not required for vehicles equipped for and using cryogenic fluids as a fuel for propelling the vehicle or for refrigerating the lading.

### **DEFINITIONS**

**Cryogenic Fluid.** A fluid having a boiling point lower than -130 degrees at 14.7 pounds per square inch atmosphere.

**Cryogenic container.** A cryogenic vessel of any size used for the transportation, handling or storage of cryogenic fluids.

**Cryogenic Vessel.** A pressure vessel, low-pressure tank or atmospheric tank designed to contain a cryogenic fluid on which venting, insulation, refrigeration or a combination of these is used in order to maintain the operating pressure within the design pressure and the contents in a liquid phase.

**5503.1 Containers.** Containers employed for storage or use of cryogenic fluids shall comply with Sections 5503.1.1 through 5503.1.3.2 and Chapter 50

**5503.2 Pressure Relief Devices.** Pressure relief Devices shall be provide in accordance with Sections 5503.2.1 through 5503.2.7 to protect containers and systems containing cryogenic fluids from rupture in the event of overpressure. Pressure relief devices shall be designed in accordance with CGAS-1.1, CGA S-1.2 and CGA S-1.3.

**5503.3 Pressure relief vent piping.** Pressure relief vent-piping systems shall be constructed and arranged so as to remain functional and direct the flow of gas to a safe location in accordance with Sections 5503.3.1 and 5503..3.2.

**5503.4 Marking.** Cryogenic Containers and systems shall be marked in accordance with Sections 5503.4.1 through 5503.4.6.

**5503.5 Security.** Cryogenic containers and systems shall be secured against accidental dislodgement and against access by unauthorized personnel in accordance with Sections 5503.5.1 through 5503.5.4

**5503.6 Electrical wiring and equipment.** Electrical wiring and equipment shall comply with the California Electrical Code and Sections 5503.6.1 and 5503.6.2.

**5503.7 Service and repair.** Service, repair, modification or removal of valves, pressure relief devices or other container appurtenances shall comply with Sections 5503.7.1 and 5503.7.2 and the ASM# Boiler and Pressure Vessel Code, Section VIII or DOT n49 CFR Parts 100-185.

**5503.8 Unauthorized use.** Containers shall not be used for any purpose other than to serve as a vessel for containing the product that it is designed to contain.

**5503.9 Leaks, damage and corrosion.** Leaking, damaged or corroded containers shall be removed from services. Leaking, damage or corroded systems shall be replaced, repaired or removed in accordance with Section 5503.7.

**5503.10 Lighting.** Where required, lighting, including emergency lighting, shall be provided for fire appliances and operating facilities such as walkway, control valves and gates ancillary to stationary containers.

**5504.2 Indoor Storage.** Indoor storage of containers shall be in accordance with Sections 5504.2.1 through 5504.2.2.3.

**5505.2 Indoor use.** Indoor use of cryogenic fluids shall comply with the material-specific provisions of Section 5501.1.

**5504.3 Outdoor use.** Outdoor use of cryogenic fluids shall comply with the material specific provisions of 5501.1, 5505.3.2.

Additional requirements may apply.