



OFFICE OF STATE FIRE MARSHAL
Common Residential LPG Inspection Elements
General Guidelines

Contact: Jay Hardwick, OSFM Compliance Specialist at (503) 373-1540 ext 278.

Send email to: jay.hardwick@state.or.us

NOTE: The Building Codes Divisions have jurisdiction downstream of the first stage regulator.

Mechanical Permits are required for LPG piping systems. Two of the common deficiencies are the lack of evidence that “tracer wire” was entrenched with poly type piping, and the point of discharge of the second stage regulator vent in regards to sources of ignition and openings below such points of discharge.

NFPA 58-6.8.4.6, NFPA 58-6.7.4.5 & NFPA 58-6.7.4.6

1. The tank installation notice must be complete and accurate, including a detailed site map. Notices of tank installation are necessary for all new installations, and for **all** “change outs.”
ORS 480.450
2. The required specific tank data and data plate must be legible. **NFPA 58-5.2.1.1 & 58-5.2.8**
3. If the container is in a recognized “flood plane” (per county planning department data) it shall be securely anchored to prevent floatation due to possible high water. **NFPA 58-6.6.1.6**
4. A container must have a 6 foot clearance by vertical plane downward from high voltage lines that might be overhead. **NFPA 58-6.4.5.12**
5. Containers over 125 gallons we must be 20 feet from other fuel storages having flash points below 200 degrees F. Containers under 125 gallons are exempt from this standard as long as the adjacent fuel tank is less than 660 gallons. **NFPA 58-6.4.5.5 & 58-6.4.5.7**
6. All the piping, fittings, and tubing components must be made of materials in accordance with **NFPA 58-5.8** (I.E.) wrought iron, steel, copper, brass, polyethylene, etc.
7. Regulators should be attached directly to the service valve. If flexible connectors (pigtailes, copper tubing, hose, etc) are used they must be less than 36 inches in length.
NFPA 58-6.8.7.2 & 58-6.7.4
8. Pressure relief valves must be covered with an industry standard “weather cap” and they must be unobstructed and have the ability to “drain” any water that might enter. **NFPA 58-6.7.2.4**
9. Containers and piping systems must be leak free. **NFPA 58 & Oregon Fire Code**

10. Containers must not have signs of denting, bulging, gouging or excessive corrosion.
NFPA 58-5.2.1.4. National Board Inspection Code Appendix H: Recommended Guide for the Inspection of Pressure Vessels in LP Gas Service.
11. Tanks must be painted and maintained. **NFPA 58-6.6.1.4**
12. Shut off valves and all tank appurtenances must be easily accessible. **NFPA 58-6.6.1.5**
13. Structures cannot be built around or over containers including aesthetic fencing. Aesthetic fencing may be built around containers with certain specification applied. See Oregon “fencing” interpretation. ASME containers cannot be placed under decks.
14. Containers fabricated after July 1, 1961 must have a Check-Lok® or other applicable liquid withdrawal valves. **NFPA 58-5.7.7.1(B)** & LP Gas Code Handbook 2004 58-3.3.1 (commentary)
15. The system must be a two stage regulator system, an integral regulator system, or a 2 psi regulator system. **NFPA 58-6.7.3**
16. The container’s pressure relief valve, liquid level vent, and fill valve must be at least 10 feet (measured in any direction) from exterior sources of ignition, direct vent, or mechanical air intakes. **NFPA 58-6.3.10 & NFPA 58 Table 6.3.9**
17. The pressure relief valve point of discharge on ASME containers must have a distance measured horizontally of at least 5 feet to openings below the point of discharge. **NFPA 58-6.3.9**
18. Regulator vent points of discharge must be at least 3 feet (measured horizontally) from openings below the point of discharge and 5 feet (measured in any direction) from exterior sources of ignition. **NFPA 58-6.7.4.5 & 58-6.7.4.6**
19. Regulator vents must be installed pointing vertically downward or under and industry standard lid or dome. Note: Regulator vents positioned near an opening in a lid or dome may still be susceptible to the elements. **NFPA 58-6.7.4.4**
20. A gas system must be installed in a way that protects it from physical damage this includes regulators, valves, piping and other appurtenances. **NFPA 58-5.7.11.2, NFPA 54-7.2.1, 54-5.8.4 & Oregon Mechanical Specialty Code C404.7.**
21. Any portion of tanks must be located with respect to the adjacent containers, buildings, or lines of adjoining property that can be built upon, in accordance with **NFPA 58-6.3.1 Table 6.3.1 & NFPA 58-6.3.12.**
22. Containers must have level, firm and stable foundations. Typically positioned solidly on concrete blocks (ASME containers minimum 1 heavy block per support leg), or concrete pads. Hollow blocks are prohibited. Vertical 420# DOT cylinders typically required 3 concrete blocks, or pad. Containers must not be in contact with the soil. See Exhibit 6.9 LP Gas Code Handbook 2004. **NFPA 58-6.6.3.1 & 58-6.6.2.1**
23. Combustible materials including weeds, long dry grass, fire wood, stacked lumber, etc. must be separated from containers by a minimum of 10 ft. **NFPA 58-6.4.5.2**