RESCINDED See Interp. #11-06

OREGON FIRE CODE
Interpretations and Technical Advisories

A collaborative service by local and state fire professionals, along with our stakeholders and customers, to provide consistent and concise application of Oregon's fire prevention and life safety regulations.

Date: January 26, 2010

Ruling: Interpretation No.08-01 (Revised #02-23 & 05-02)

Subject: LP-Gas Tank (Container) concealment for installations of 2000 gallons water capacity (aggregate) or less.

Code Reference: 2007 Oregon Fire Code, Section 3807.3.

Question(s): 1) Is it permissible to conceal LP-Gas tanks (containers)?

2) What are the requirements for concealment around LP-Gas tanks (containers)?

Answer(s): Question #1: Yes.

Question #2: Fencing that allows 50% of the container's perimeter to be open to the atmosphere is permitted. All other fencing may be permitted under the following guidelines:

a) Fencing is constructed to a maximum height of 12 inches above the highest point of an industry standard tank (container) and height shall not exceed 72 inches above grade.
b) Fencing is constructed with a minimum clearance of 6 inches above grade.
c) Fencing shall be a minimum distance of 36 inches, measured horizontally, from all sides of the tank (container).

Exceptions:

1. Containers under 125 gallons water capacity may be set next to a building with the remaining sides maintaining a minimum distance of 36 inches measured horizontally.
2. An average distance of 36 inches, measured horizontally, from all sides of the tank (container) may be allowed to meet the intent at the discretion of the AHJ on a case-by-case basis.
3. All types of lattice fencing that have 50% open is permitted without restriction to horizontal distances from the container. Lattice fencing with baseboards 6 inches or less inches in width must maintain 6 inches of clearance above grade.
4. Horizontal distance requirements may be reduced to 18 inches on *wood* fencing when spacing between vertical runners (boards)

allows 25% of the containers perimeter to be open to the atmosphere.

d) Gates, if supplied, shall not be locked.
e) Container valves and appurtenances shall be readily accessible.
f) Fencing shall not limit the ability to maintain any container.
g) Storage shall not be allowed within the enclosure.
h) Weeds and grass shall be maintained so they do not create a fire hazard within the fenced enclosure.

NOTE: Check with local building official for permit requirements.

Other References: NFPA 58 (2008) and LP-Gas Handbook (Eighth Edition), Sections 6.4.5.2, 6.4.7, A.6.4.7 and 6.6.1.5.

In recent years there has been a desire to aesthetically conceal residential propane tanks (containers) and the regulatory codes are not very clear. The issue of wood fencing around propane tanks (containers) has surfaced time and time again from both industry and the general public. The current codes and standards appear to allow fencing but do not give clear and concise requirements. The goal of this interpretation is to provide guidelines on what would be acceptable wood fencing.

REFRENCE MATERIAL

Oregon Fire Code (2007 Edition)

3807.3 Weeds, grass, brush, trash and other combustible materials shall be kept a minimum of 10 feet (3048 mm) from LP-gas tanks or containers.

NFPA 58 (2008) and LP-Gas Code Handbook (Eighth Edition)

6.4.5.2 Loose or piled combustible material and weeds and long dry grass shall be separated from containers by a minimum of 10 ft. (3.0 m).

The 10-ft (3-m) separation helps prevent a possible grass or brush fire from affecting the LP-Gas container. Note that the separation requirement does not apply to live vegetation and to wood fences, which are not piled material.

6.4.7 Structures such as fire walls, fences, earth or concrete barriers, and other similar structures shall not be permitted around or over installed non-refrigerated containers. Unless specifically allowed as follows:

Structures partially enclosing containers shall be permitted if designed in accordance with a sound fire protection analysis.

Structures used to prevent flammable and combustible liquid accumulation or flow shall be permitted in accordance with 6.4.5.3.

Structures between LP-Gas containers and gaseous hydrogen containers shall be permitted in accordance with 6.4.5.9.

Structures such as fences shall be permitted in accordance with 6.18.4.

A.6.4.7 The presence of such structures can create significant hazards, such as the following:

(1) Pocketing of escaping gas.
(2) Interference with application of cooling water by fire departments.
(3) Redirection of flames against containers.
(4) Impeding the egress of personnel in an emergency.

*Paragraph 6.4.7 was inspired by a serious BLEVE of an aboveground propane container that had been enclosed in a roof-over enclosure for aesthetic reasons. The enclosure not only contributed to ignition but also made it difficult for the fire department to apply cooling water to the container. The technical committee also was aware of an increasing use of fences to hide LP-Gas containers. Paragraph 6.4.7.(1) recognizes that the problems associated with such structures can be prevented by design**s** that eliminate the problems cited in A.6.4.7.*

If a structure is used to hide a LP-Gas container, it is important to use materials that allow air to circulate freely. Examples of such materials are chin-link fence or materials that have significant openings on all sides. Wood can be used, but combustibility must be considered. Wood cannot be stacked around a LP-gas container per 6.4.5.2, but its use in a structure is not prohibited. A light fence constructed of wood, if ignited, would probably be consumed before generating enough heat to affect a LP-gas container.

6.6.1.5 Containers shall be installed so that all container operating appurtenances are accessible.

Although the requirement in 6.6.1.5 would appear to be obvious, it is necessary to state this practical requirement because it prevents containers from being installed with valves, gauges or controls that are inaccessible. Occasionally a storage container must be evacuated before it is moved or for other reasons. Fittings for container evacuation eliminate the need to roll a container on its side to pump it out. Many other installation situations in which the container appurtenances may not be accessible will occur unless attention is given to the container position before installation.