

ried by the latter cannot be transmitted to the tank.

2. The distance from any part of a tank storing liquids to the nearest wall of a *basement*, pit, cellar or *lot line* shall not be less than 3 feet (914 mm).
3. A minimum distance of 1 foot (305 mm), shell to shell, shall be maintained between underground tanks.

**5704.2.11.3 Depth and cover.** Excavation for underground storage tanks shall be made with due care to avoid undermining of foundations of existing structures. Underground tanks shall be set on firm foundations and surrounded with at least 6 inches (152 mm) of noncorrosive inert material, such as clean sand.

**5704.2.11.4 Overfill protection and prevention systems.** Fill pipes shall be equipped with a spill container and an overfill prevention system in accordance with NFPA 30.

**5704.2.11.5 Leak prevention.** Leak prevention for underground tanks shall comply with Sections 5704.2.11.5.1 and 5704.2.11.5.2.

**5704.2.11.5.1 Inventory control.** Daily inventory records shall be maintained for underground storage tank systems.

**5704.2.11.5.2 Leak detection.** Underground storage tank systems shall be provided with an *approved* method of leak detection from any component of the system that is designed and installed in accordance with NFPA 30.

**5704.2.12 Testing.** Tank testing shall comply with Sections 5704.2.12.1 and 5704.2.12.2.

**5704.2.12.1 Acceptance testing.** Prior to being placed into service, tanks shall be tested in accordance with Section 21.5 of NFPA 30.

**5704.2.12.2 Testing of underground tanks.** Before being covered or placed in use, tanks and piping connected to underground tanks shall be tested for tightness in the presence of the *fire code official*. Piping shall be tested in accordance with Section 5703.6.3. The system shall not be covered until it has been *approved*.

**5704.2.13 Abandonment and status of tanks.** Tanks taken out of service shall be removed in accordance with Section 5704.2.14, or safeguarded in accordance with Sections 5704.2.13.1 through 5704.2.13.2.3 and API 1604.

**5704.2.13.1 Underground tanks.** Underground tanks taken out of service shall comply with Sections 5704.2.13.1.1 through 5704.2.13.1.5.

**5704.2.13.1.1 Temporarily out of service.** Underground tanks temporarily out of service shall have the fill line, gauge opening, vapor return and pump connection secure against tampering. Vent lines

shall remain open and be maintained in accordance with Sections 5704.2.7.3 and 5704.2.7.4.

**5704.2.13.1.2 Out of service for 90 days.** Underground tanks not used for a period of 90 days shall be safeguarded in accordance with all the following or be removed in accordance with Section 5704.2.14:

1. Flammable or *combustible liquids* shall be removed from the tank.
2. All piping, including fill line, gauge opening, vapor return and pump connection, shall be capped or plugged and secured from tampering.
3. Vent lines shall remain open and be maintained in accordance with Sections 5704.2.7.3 and 5704.2.7.4.

**5704.2.13.1.3 Out of service for one year.** Underground tanks that have been out of service for a period of one year shall be removed from the ground in accordance with Section 5704.2.14 or abandoned in place in accordance with Section 5704.2.13.1.4.

**5704.2.13.1.4 Tanks abandoned in place.** Tanks abandoned in place shall be as follows:

1. Flammable and *combustible liquids* shall be removed from the tank and connected piping.
2. The suction, inlet, gauge, vapor return and vapor lines shall be disconnected.
3. The tank shall be filled completely with an *approved* inert solid material.
4. Remaining underground piping shall be capped or plugged.
5. A record of tank size, location and date of abandonment shall be retained.
6. All exterior above-grade fill piping shall be permanently removed when tanks are abandoned or removed.

**5704.2.13.1.5 Reinstallation of underground tanks.** Tanks which are to be reinstalled for flammable or *combustible liquid* service shall be in accordance with this chapter, ASME *Boiler and Pressure Vessel Code* (Section VIII), API 12-P, API 1615, UL 58 and UL 1316.

**5704.2.13.2 Above-ground tanks.** Above-ground tanks taken out of service shall comply with Sections 5704.2.13.2.1 through 5704.2.13.2.3.

**5704.2.13.2.1 Temporarily out of service.** Above-ground tanks temporarily out of service shall have all connecting lines isolated from the tank and be secured against tampering.

**Exception:** In-place fire protection (foam) system lines.

**5704.2.13.2.2 Out of service for 90 days.** Above-ground tanks not used for a period of 90 days shall be safeguarded in accordance with Section 5704.2.13.1.2 or removed in accordance with Section 5704.2.14.

**Exceptions:**

1. Tanks and containers connected to oil burners that are not in use during the warm season of the year or are used as a backup heating system to gas.
2. In-place, active fire protection (foam) system lines.

**5704.2.13.2.3 Out of service for one year.** Above-ground tanks that have been out of service for a period of one year shall be removed in accordance with Section 5704.2.14.

**Exception:** Tanks within operating facilities.

**5704.2.14 Removal and disposal of tanks.** Removal and disposal of tanks shall comply with Sections 5704.2.14.1 and 5704.2.14.2.

**5704.2.14.1 Removal.** Removal of above-ground and underground tanks shall be in accordance with all of the following:

1. Flammable and *combustible liquids* shall be removed from the tank and connected piping.
2. Piping at tank openings that is not to be used further shall be disconnected.
3. Piping shall be removed from the ground.

**Exception:** Piping is allowed to be abandoned in place where the *fire code official* determines that removal is not practical. Abandoned piping shall be capped and safeguarded as required by the *fire code official*.

4. Tank openings shall be capped or plugged, leaving a  $\frac{1}{8}$ -inch to  $\frac{1}{4}$ -inch-diameter (3.2 mm to 6.4 mm) opening for pressure equalization.
5. Tanks shall be purged of vapor and inerted prior to removal.
6. All exterior above-grade fill and vent piping shall be permanently removed.

**Exception:** Piping associated with bulk plants, terminal facilities and refineries.

**5704.2.14.2 Disposal.** Tanks shall be disposed of in accordance with federal, state and local regulations.

**5704.2.15 Maintenance.** Above-ground tanks, connected piping and ancillary equipment shall be maintained in a safe operating condition. Tanks shall be maintained in accordance with their listings. Damage to above-ground tanks, connected piping or ancillary equipment shall be repaired using materials having equal or greater strength and *fire resistance* or the equipment shall be replaced or taken out of service.

**5704.3 Container and portable tank storage.** Storage of flammable and *combustible liquids* in closed containers that do not exceed 60 gallons (227 L) in individual capacity and

portable tanks that do not exceed 660 gallons (2498 L) in individual capacity, and limited transfers incidental thereto, shall comply with Sections 5704.3.1 through 5704.3.8.5.

**5704.3.1 Design, construction and capacity of containers and portable tanks.** The design, construction and capacity of containers for the storage of Class I, II and IIIA liquids shall be in accordance with this section and Section 9.4 of NFPA 30.

**5704.3.1.1 Approved containers.** Only *approved* containers and portable tanks shall be used.

**5704.3.2 Liquid storage cabinets.** Where other sections of this code require that liquid containers be stored in storage cabinets, such cabinets and storage shall be in accordance with Sections 5704.3.2.1 through 5704.3.2.2.

**5704.3.2.1 Design and construction of storage cabinets.** Design and construction of liquid storage cabinets shall be in accordance with Sections 5704.3.2.1.1 through 5704.3.2.1.4.

**5704.3.2.1.1 Materials.** Cabinets shall be *listed* in accordance with UL 1275, or constructed of *approved* wood or metal in accordance with the following:

1. Unlisted metal cabinets shall be constructed of steel having a thickness of not less than 0.044 inch (1.12 mm) (18 gage). The cabinet, including the door, shall be double walled with  $1\frac{1}{2}$ -inch (38 mm) airspace between the walls. Joints shall be riveted or welded and shall be tight fitting.
2. Unlisted wooden cabinets, including doors, shall be constructed of not less than 1-inch (25 mm) exterior grade plywood. Joints shall be rabbeted and shall be fastened in two directions with wood screws. Door hinges shall be of steel or brass. Cabinets shall be painted with an intumescent-type paint.

**5704.3.2.1.2 Labeling.** Cabinets shall be provided with a conspicuous label in red letters on contrasting background which reads: FLAMMABLE—KEEP FIRE AWAY.

**5704.3.2.1.3 Doors.** Doors shall be well fitted, self-closing and equipped with a three-point latch.

**5704.3.2.1.4 Bottom.** The bottom of the cabinet shall be liquid tight to a height of at least 2 inches (51 mm).

**5704.3.2.2 Capacity.** The combined total quantity of liquids in a cabinet shall not exceed 120 gallons (454 L).

**5704.3.3 Indoor storage.** Storage of flammable and *combustible liquids* inside buildings in containers and portable tanks shall be in accordance with Sections 5704.3.3.1 through 5704.3.3.10.

**Exceptions:**

1. Liquids in the fuel tanks of motor vehicles, aircraft, boats or portable or stationary engines.