



## EULESS FIRE DEPARTMENT FIRE MARSHAL'S OFFICE

EFD-FMO 6-4

### INFORMATION LINE: *Installation And Operation Aboveground Fuel Storage Tanks Revised 9/16*

2015 Edition  
International Fire  
and Building Code  
as Amended NFPA  
Standards Adopted

Fire Chief Wes Rhodes

Fire Marshal Paul Smith

**SCOPE:** These provisions apply to any permanent above ground fuel storage tanks including generator or pump tanks containing diesel fuel in excess of four hundred ninety nine (499) gallons or gasoline in excess of fifty (50) gallons.

**PERMIT:** A permit is required to install, operate, repair or modify a protected aboveground tank used for storage and/or dispensing of flammable or combustible liquid motor fuels. The permit fee is based on the cost of the installation as established by the building code fee schedule. An annual fire permit fee is then assessed for the use, storage and operation of aboveground fuel storage tanks.

**For permit fee or other information call: 817-685-1600.**

**TO OBTAIN A PERMIT:** To obtain a permit three (3) sets of plans shall be submitted with a permit application to the Fire Marshal's Office. The plans shall include the design, details and specifications of the following:

- (a) Quantities and types of liquid to be stored;
- (b) Distances from tanks and dispensers to property lines and buildings (site plan);
- (c) Emergency equipment access easements;
- (d) Location of portable fire protection appliances;
- (e) Vehicle impact protection devices;
- (f) Protected aboveground tanks and their supports;
- (g) Method of storage and dispensing;
- (h) Overfill prevention, spill containment, vents, vapor recovery, dispensers and other equipment and accessories;
- (i) Seismic designs in accordance with the building code;
- (j) Secondary containment provisions;
- (k) Diking design and capacity;
- (l) Venting;
- (m) Piping;
- (n) Electrical systems;
- (o) Emergency controls; and,
- (p) Other information as required by the Fire Marshal.

### TANK DESIGN

**PROTECTION:** Protected aboveground tanks shall meet the requirements of Underwriters Laboratories Standard 2085. Vaulted aboveground tanks in accordance with U.L. 2085 are any U.L. listed standard 142 steel aboveground tank for flammable or combustible liquid all portions of which shall be enclosed in a secondary containment and encased with approved material to obtain a two (2) hour fire resistance rating. All permanent tanks must be in compliance with the International Fire Code, UL 2085, NFPA #30, #30A and be approved by the Fire Marshal.

**PRIMARY TANKS:** Primary tanks shall be designed in accordance with Chapter 23 and 57 of the International Fire Code as amended and UL 2085.

**SIZE:** Tanks containing Class I motor fuels shall not exceed ten thousand (10,000) gallons in individual and aggregate capacity. Tanks containing Class II or III-A liquid fuels shall not exceed twelve thousand (12,000) gallons in individual capacity or more than thirty six thousand (36,000) gallons in aggregate capacity. The total maximum

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aggregate capacity of all motor fuels in aboveground tanks on a site shall not exceed thirty six thousand (36,000) gallons.

VENTS

Atmospheric and emergency venting is required. Approved flame arresters shall be installed in normal vents.

LOCATION OF TANKS

Aboveground fuel storage tanks are permitted in specific zoning districts only (TX-10, C-2, L-1, L-2, I-1, I-2 or TX-121). Tanks must be located within one hundred and fifty feet of a public street or fire lane and within five hundred feet of a fire hydrant.

INSTALLATION OF TANKS:

❖ Aboveground storage tanks may **NOT** be used for retail sales.

Protected aboveground tanks shall be installed in accordance to the following provisions:

- (a) Separation Distances: A protected aboveground tank shall be separated from tanks, structures and property lines as defined in the distances established in Table 2306.2.3 of the 2015 International Fire Code.
- (b) Total Quantity: Protected aboveground tank installations shall not exceed the capacity limits referenced in this document.

**“2306.2.3 Above-ground tanks located outside, above grade.** Above-ground tanks shall not be used for the storage or dispensing of Class I, II or III-A liquid motor fuels except as provided by this section:

- 1. Above-ground tanks used for outside, above-grade storage of Class I liquids shall be listed and labeled as protected above-ground tanks and be in accordance with Chapter 34. Such tanks shall be located in accordance with Table 2306.2.3.
- 2. Tank Design. Tanks must have a minimum two (2) hour fire resistive rating, which shall be installed at the factory and shall be certified by the manufacturer. Tanks must be of an approved concrete vault design or a double wall, concrete filled steel tank or approved alternative design. Tanks must be UL #2085 listed. Tanks must comply with NFPA #30 and #30A and other applicable recognized standards. Tanks must include secondary containment as an integral part of the tank design. Tanks must be located within one hundred and fifty (150) feet of a public street or fire department access road and within a five hundred (500) foot hose lay of a fire hydrant. Each tank shall have a factory installed liquid level indicating gauge with a fill alarm, have atmospheric venting with a flame arrestor and emergency venting, be properly labeled, and be equipped with a fill limiter that will stop tank filling operations when the tank has reached 90% of its capacity. Tanks shall be equipped with an approved remote fill port or an approved spill containment basin designed to catch any spillage that occurs during tank fill operations. Tanks must be designed to provide vapor recovery if the tank capacity exceeds one thousand (1,000) gallons.”
- 3. Size. Tanks containing Class I motor fuels shall not exceed ten thousand gallons (10,000) in individual and aggregate capacity. Tanks containing Class II or III-A liquid fuels shall not exceed twelve thousand (12,000) gallons in individual capacity or thirty six thousand (36,000) gallons in aggregate capacity. The total maximum aggregate quantity of all flammable and combustible liquid motor fuels in aboveground storage tanks on a site shall not exceed 36,000 gallons.

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Installations with the maximum allowable aggregate capacity shall be separated from other such installations by not less than one hundred (100) feet unless approved by the Fire marshal. For purposes of this section, a site is a piece of property owned, operated, controlled or managed by a common entity or person.

4. Pad Requirements. All tanks shall be installed on a concrete slab. The slab shall be designed to support the full weight of the tank and shall extend a minimum of three (3) feet past all portions of the tank. When required by the fire code official the pad shall have a minimum six (6) inch containment curb with an approved drain valve.”
5. Bump posts shall be placed around the pad to protect the curbing and the tanks. The bump posts shall be a minimum of four (4) inch diameter, concrete filled steel piping or approved equivalent placed at a maximum of four (4) foot spacing around the pad perimeter.
6. Security Measures. When the fire code official determines additional security measures such as fencing and/or monitoring capabilities are needed, they shall be provided to prevent tampering with the above ground tanks.
7. A three-foot (3’) clear space must be maintained around the tank(s).
8. Repairs. When repairs and maintenance are required, they shall be made in accordance with the recommendations of the manufacturer. The owner of the tank shall provide the fire prevention office with documentation that verifies that the repairs were made in accordance with the manufacturer’s recommendation.
9. The provisions of this section shall apply to all above ground fuel storage tanks regulated by the *International Fire Code*, and any generator or pump fuel tanks containing diesel fuel in excess of four hundred ninety nine (499) gallons or gasoline in any quantity above fifty (50) gallons. If a conflict exists between sections, the more restrictive regulation will prevail.
10. Aboveground fuel tanks may not be used for retail sales of fuel.
11. Signage complying with Section 2305.6 and NFPA 704 shall be installed on each tank and as required by the fire code official.
12. A minimum of one 40BC rated fire extinguisher shall be located not closer than twenty-five (25) feet and no further than fifty (50) feet from the dispensing device accessible during hours of pump operations.
13. Tanks located at construction projects or similar approved temporary use locations shall comply with 2304.5 and may be exempted from specific provisions of this section on an item by item basis.”

**INSTALLATION OF DISPENSING AND PIPING SYSTEMS**

Dispensing and piping systems and electrical controls shall be installed in accordance with International Fire Code as amended (See Chapter 23):

- (a) Tank Openings: Tank openings in protected aboveground tanks shall be through the top only.
- (b) Dispensing Devices: Dispensing devices are allowed to be installed on top of or immediately adjacent to protected aboveground tanks.

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- (c) Dispensing devices shall be located such that nozzles cannot reach within five (5) feet of building openings.
- (d) Dispensing devices shall be twenty (20) feet from fixed ignition sources.
- (e) Anti-siphon Devices: Approved anti-siphon devices shall be installed in each external pipe connected to the tank when the pipe extends below the level of the top of the tank.

**PARKING OF TANK VEHICLES**

Tank vehicles shall not be parked within twenty-five (25) feet of a protected aboveground tank.

*EXCEPTION:* When the tank is being filled from the tank vehicle.

**MAINTENANCE**

Protected aboveground tanks, piping and dispensing system shall be maintained in a safe operating condition. Protected aboveground tanks and components of dispensing system shall be maintained in accordance with their listings.

Damage to protected aboveground tanks shall be repaired using materials having equal or greater strength and fire resistance.

**FIRE PROTECTION**

- (a) Smoking is prohibited within fifty (50) feet of all storage and dispensing devices. Signs which prohibit smoking "No Smoking-Stop Engine By order of the Fire Marshal", shall be conspicuously posted. Signage prohibiting dispensing of gasoline into non approved containers shall also be posted.
- (b) Portable fire extinguishers shall be provided in accordance with NFPA 10 for high hazard classification. (This is generally a minimum of a ten pound ABC type extinguisher.) Additional fire control equipment may be required where in the opinion of the Fire Marshal an unusual exposure hazard exists.
- (c) Labeling of all tanks shall be in accordance with NFPA 704. The tank must display the name of the product, the tank capacity in gallons, a DOT placard and an NFPA 704 placard.
- (d) Fire Department access shall be provided to within one hundred fifty (150) feet of the tank area and a fire hydrant must be located within five hundred (500) feet. Note that larger installations may require hydrants placed closer if required by the Fire Marshal.
- (e) Emergency shut offs may be required remote from the tank at the discretion of the fire marshal.