



**US Army Corps
of Engineers**

ENGINEERING AND CONSTRUCTION BULLETIN

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Subject: Aboveground Steel Fuel Tank and Dispensing Systems

Applicability: Directive

1. References:

- a. Unified Facilities Criteria (UFC) 3-460-01, Design: Petroleum Fuel Facilities.
- b. Unified Facilities Criteria (UFC) 3-600-01, Design: Fire Protection Engineering For Facilities.
- c. National Fire Protection Association (NFPA) 30A, Code for Motor Fuel Dispensing Facilities and Repair Garages (2003 edition)
- d. National Fire Protection Association (NFPA) 30, Flammable and Combustible Liquid Code (2003 edition).

2. Background:

- a. There are commercially available aboveground steel fuel tank and dispensing systems that do not comply with NFPA 30A (reference 1c).
- b. There are basically two types of these systems. One is a system that dispenses fuel directly into motor and marine vehicles and has an open port nozzle, similar to those used in retail facilities. These dispense fuel at rates no greater than 25 gallons per minute. The applicable code for these systems is NFPA 30A (reference 1c). The other type of fuel dispensing system are known as bulk loaders. Bulk loaders transfer fuel directly into fuel tank vehicles. Bulk loaders transfer fuel at higher rates, e.g. 200 gallons per minute and higher, and use a closed port nozzle. The applicable code for these systems is NFPA 30 (reference 1d).

3. Criteria: UFC 3-460-01 (reference 1a) refers to UFC 3-600-01 (reference 1b) for fire protection requirements, and has specific requirements applicable to fueling of aircraft refuelers which are fuel tank vehicles that fuel aircraft. UFC 3-600-01 requires that all facilities comply with the NFPA fire codes. NFPA 30A is the primary code applicable to fuel dispensing for motor and marine vehicles. NFPA 30 is applicable to bulk loaders that transfer fuel into fuel tank vehicles.

4. Dispensing fuel into motor or marine vehicle:

- a. NFPA 30A, Paragraph 4.3.2, requires that aboveground fuel tanks, that are not protected, are not fire-resistant or are not located in vaults, be separated from the dispensing device by 50 feet.

CECW-CE

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b. In addition, the size of the fuel tank is limited to 12,000 gallons with an aggregate limitation of 48,000 gallons.

c. There are commercially available aboveground non-fire-resistant steel tanks that can be purchased with the dispensing device mounted a few feet from the tank. This arrangement does not comply with NFPA 30A. The dispensing device is required to be relocated 50 feet from the tank. This can be accomplished by relocating the dispensing device 50 feet from the tank using underground double wall piping.

5. Transferring fuel into fuel tank vehicles:

a. UFC 3-460-01, Paragraph 4.4.1.1, requires aircraft refueler loading facilities to be not less than 75 feet from the nearest aboveground storage (fuel) tank.

b. For other fuel tank trucks, NFPA 30 is applicable. Paragraph 7.6.3 of NFPA 30 requires that the tank vehicle must be separated from the aboveground fuel tank by a distance of 25 feet for Class I fuel, such as JP-4, and 15 feet for Class II fuels, such as JP-8, measured from the nearest fill spout or transfer connection.

6. The point of contact for this action is Robert DiAngelo, HQUSACE/CECW-CE, 202-761-0703.



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