

Joint Committee on Administrative Rules

ADMINISTRATIVE CODE

TITLE 41: FIRE PROTECTION

CHAPTER I: OFFICE OF THE STATE FIRE MARSHAL

PART 180 STORAGE, TRANSPORTATION, SALE AND USE OF GASOLINE AND VOLATILE OILS

SECTION 180.20 ABOVEGROUND STORAGE – DISPENSING

Section 180.20 Aboveground Storage – Dispensing

- a) Storage of Class I, II or III liquids (except kerosene) shall be in accordance with 41 Ill. Adm. Code 160 and 41 Ill. Adm. Code 170, except aboveground storage for dispensing may occur at the following facilities under the following circumstances:
 - 1) Agricultural storage, which is limited to farms, tree nurseries, fish farms, tree farms, sod farms or orchards;
 - 2) Storage at commercial, industrial, governmental or manufacturing establishments for fueling vehicles used in connection with their business;
 - 3) Storage at construction sites for refueling construction equipment; or
 - 4) Storage at airports as addressed in Section 180.22 of this Part.
- b) Dispensing at the facilities specified in subsection (a)(2) shall only be in accordance with the following:
 - 1) An inspection of the premises and operations has been made and approval granted by the Office of the State Fire Marshal (approval shall be granted if curb pumps are not present and if pumps are not located in any portion of a public roadway);
 - 2) The dispensing is done on premises not open to the public;
 - 3) The tanks are safeguarded against collision, spillage or overflow to the satisfaction of the authorities having jurisdiction;
 - 4) Each tank system is listed or approved for such aboveground use by the Office of the State Fire Marshal; in granting such approval, the Office shall consider the following elements:
 - A) leaks;
 - B) compatibility of the tank and line with the product contained in the tank;

- C) whether any equipment has been recalled by the manufacturer;
 - D) whether wiring at the dispensing location is in a rigid metal conduit within a radius of 30 feet and is otherwise in compliance with the National Electric Code (NFPA 70) 1987 (no subsequent dates or editions); and
 - E) whether the dispensing location has seal-offs at all connections;
- 5) A top-fill opening shall be provided and shall be equipped with a closure designed so that it may be locked;
 - 6) A vent shall be provided to relieve such vacuum or pressure as will develop in normal operation. The vent shall have a minimum unobstructed opening of one and one-half inches in diameter and the vent shall be elevated to a height of at least four feet (unless directed in writing by the Office of the State Fire Marshal to a greater height, based on construction characteristics of the tank and fire safety considerations) or unless approval in writing for a lower height is granted by the Office of the State Fire Marshal, based upon construction characteristics of the tank in question or unique physical conditions that prevent a vent of that height from being installed;
 - 7) Tanks shall be equipped with a permanently connected pumping device listed by Underwriters Laboratories (UL) (as printed on page 4 of the Fire Protection Equipment Directory published by Underwriters Laboratories, January 1988 (no subsequent dates or editions)) or FM Engineering (as printed on page ii of the Factory Mutual System Approval Guide 1989 published by Factory Mutual Research Corporation, 1989 (no subsequent dates or editions)). The pump shall be equipped with a padlock to prevent tampering. An antisiphoning device shall be included in the pump discharge and siphons or internal pressure discharge devices are prohibited. Gravity method of discharge is prohibited;
 - 8) Tanks for the storage of flammable or combustible liquids shall be marked with the name of the product they contain and "FLAMMABLE – KEEP FIRE AND FLAME AWAY", both in letters at least four inches high and in contrasting color from the tank on which they are marked;
 - 9) Except as provided in Section 180.22 of this Part and except tanks installed at mining facilities or coal fired electric generating facilities in accordance with subsection (b)(11), a maximum of two aboveground tanks per facility of up to 2,500 gallons each shall be allowed for storage of flammable or combustible liquids, provided such liquid is stored outside buildings in tanks constructed throughout of steel and made vapor tight (as determined by such tests as a pressure test and volumetric test). Tanks shall be designed and constructed according to standards specified in 41 Ill. Adm. Code 160.15, 160.70-160, 160.80-240;
 - 10) Tanks shall be kept outside and at least 30 feet from any building or combustible or flammable stored liquid or liquid petroleum and shall be so located, or such additional distance to buildings shall be provided, to insure that no vehicle, equipment or vessel being filled directly from any such tank shall be closer than 30 feet to any building, combustible or flammable stored

liquid, liquid petroleum (LP) gas tank or property lines, except that a tank protected within a two-hour fire resistant enclosure (the time, in minutes or hours, that materials or assemblies have withstood a fire exposure as established in accordance with the test procedures of NFPA 251, Standard Methods of Fire Tests of Building Construction and Materials, 1985 (no subsequent dates or editions)) may be located adjacent to a structure after a request in writing to construct such an enclosure has been submitted to the Office of the State Fire Marshal and the Office has issued an approval in writing; and

- 11) Aboveground tanks used exclusively to fuel off-road diesel equipment at mining facilities or coal fired electric generating facilities shall be allowed a maximum capacity of 12,000 gallons per tank. Aboveground tanks of greater than 2,500 gallons capacity shall be separated from property lines, buildings, LP storage tanks, and other aboveground flammable or combustible liquid storage tanks by a minimum distance of 50 feet. The facility shall receive written approval from the local fire authority having response jurisdiction over the facility for the installation of tanks greater than 2,500 gallons capacity.
- c) Dispensing at facilities specified in subsections (a)(1) and (a)(3) of this Section shall only be in accordance with the following:
- 1) A top-fill opening shall be provided and shall be equipped with a closure designed so that it may be locked;
 - 2) A vent shall be provided to relieve such vacuum or pressure as will develop in normal operation or fire exposure; such vent shall have a minimum unobstructed opening of one and one-half inches in diameter;
 - 3) Tanks equipped with a permanently connected pumping device shall be equipped with a padlock to prevent tampering; an effective antisiphoning device shall be included in the pump discharge; and siphons or internal pressure discharge devices are prohibited;
 - 4) Tanks elevated for gravity discharge may be designed with an opening in the bottom or end of the tank for gravity dispensing of flammable or combustible liquids and shall be mounted and equipped as follows:
 - A) Supports to elevate the tank shall be of steel and designed to provide stability;
 - B) Openings for gravity discharge shall be equipped with an internal safety valve, which will close automatically in the event of fire through the operation of a heat actuated releasing device. The valve shall also be capable of being manually operated. If this valve cannot be operated manually, it shall be supplemented by a second manually operated valve. The gravity discharge outlet shall be provided with an approved hose equipped with a self-closing nozzle at the discharge end and be of a type that can be padlocked to its hanger to prevent tampering;
 - C) When not being used to dispense fuel, nozzles shall be hung off of

the ground on a hanger and shall be padlocked in place to avoid tampering;

- 5) Tanks for the storage of flammable or combustible liquids shall be marked with the name of the product they contain and "FLAMMABLE – KEEP FIRE AND FLAME AWAY", both in letters at least four inches high and in contrasting color from the tank on which they are marked;
 - 6) Facilities described in subsection (a)(1) of this Section shall be allowed a maximum of four aboveground tanks per facility of up to 2,500 gallons each for storage of flammable or combustible liquids, provided the total amount of any single type of fuel does not exceed 5,000 gallons, and any such liquid is stored outside buildings in a tank constructed throughout of steel and made vapor tight;
 - 7) Facilities described in subsection (a)(3) of this Section shall be allowed a maximum of two aboveground fuel dispensing tanks per facility of up to 2,500 gallons each for storage of flammable or combustible liquids, provided any such liquid is stored in a tank constructed throughout of steel and made vapor tight;
 - 8) Tanks installed or replaced after January 1, 1998 shall be located as required by subsection (b)(10) of this Section.
- d) Storage of Kerosene Inside Buildings.
- 1) At a facility, for personal or private use, a maximum of 12 gallons of kerosene inside buildings may be stored aboveground in containers that meet the requirements of NFPA 30 (Flammable and Combustible Liquids Code) (1987).
 - 2) Sixty gallons or less may be stored in an aboveground tank at a facility for retail trade within a building, providing storage is in compliance with the following:
 - A) Storage is in a tank of at least 14 gauge steel or aluminum;
 - B) The tank shall sit in a metal pan extending at least eight inches beyond the sides and rear of the tank and 18 inches beyond the front;
 - C) The tank shall be located on the first floor in an area supplied with natural light and ventilation;
 - D) The room or area where the tank is located shall be separated from any heat producing appliance, such as a hot water heater, furnace or space heater (radiators and hot air ducts are not considered heating appliances for this purpose), by one hour fire resistance as defined in ASTM E-119 (Fire Endurance Test) (1989);
 - E) The dispensing nozzle or spigot of the tank shall be spring loaded so as to return to the off position when pressure is stopped and so that pressure is constantly required to cause release of the kerosene;

- F) The tank shall be blue in color and marked with the word "Kerosene" in letters at least two and one-half inches high in contrasting color.
- 3) Sixty gallons or less may be stored in a metal drum at a facility for retail trade within a building, provided storage is in compliance with the following:
- A) The metal drum shall be stored in a storage cabinet that meets the requirements of 49 CFR Chapter I (1987);
 - B) The storage cabinet shall sit in a metal pan extending at least eight inches beyond the sides and rear of the storage cabinet;
 - C) The room or area where the storage cabinet is located shall be separated from any heat producing appliance, such as a hot water heater, furnace or space heater (radiators and hot air ducts are not considered heating appliances for this purpose), by one hour fire resistance as defined in ASTM E-119 (Fire Endurance Test) (1989); and
 - D) The design and construction of storage cabinets, except as otherwise provided in this subsection (d)(3), shall be in compliance with 4-3 of NFPA 30 (Flammable and Combustible Liquids Code) (1987).
- 4) Factory-sealed containers of 1-K grade kerosene may be stored at a facility for retail trade within a building in compliance with ASTM F 976-86 (Portable Kerosene Containers for Consumer Use) (1986) and 4-5.5 of NFPA 30 (Flammable and Combustible Liquids Code) (1987).
- e) Storage of kerosene outside buildings shall be in accordance with 41 Ill. Adm. Code 160 and 170, except a maximum of 550 gallons of kerosene may be kept aboveground at a facility (including at service stations) in a tank or tanks of 550 gallons or less capacity under the following conditions:
- 1) When located at a service station, the dispensing tank shall be in a location at least eight feet away from driveways and other areas used by vehicles for customers or to deliver products;
 - 2) The dispensing nozzle or spigot of the tank shall be spring loaded so as to return to the off position when pressure is stopped and so that pressure is constantly required to cause release of the product;
 - 3) The tank shall be a skid tank or on a noncombustible base and the area under the tank and for 24 inches in all directions shall be either paved or covered with gravel and kept free of vegetation and combustible material;
 - 4) The tank shall be blue in color and marked with the word "Kerosene" in letters at least two and one-half inches high in a contrasting color;
 - 5) The dispensing nozzle or spigot of the tank shall be locked when the kerosene is not being dispensed; and

- 6) The kerosene may only be dispensed by the owner, lessor or lessee of the facility, or their employees; no self-service of kerosene from an aboveground tank shall be allowed.
- f) Kerosene Labeling.
- 1) A sign with the following caution shall be posted at the point of sale and the dispensing point: "Caution Portable Unvented Kerosene Heaters Must Only Be Fueled With Grade 1-K Kerosene". This sign shall be of all-weather material and not less than 12" x 18" in size with letters at least one inch high on a contrasting background; and
 - 2) Where other grades of kerosene than 1-K are offered for sale, the grade of kerosene shall be identified at the point of sale or dispensing.
- g) Any spill of Class I, II or III liquids in excess of 25 gallons at any facility at which they may be dispensed pursuant to this Section shall be reported to the Illinois Emergency Management Agency within 24 hours after such spill.

(Source: Amended at 27 Ill. Reg. 7230, effective April 15, 2003)