

**OFFICE OF THE STATE FIRE MARSHAL**  
**STATE OF ILLINOIS**

Statute, Rule or Standard Policy Interpretation: **Indoor Storage Tanks of Flammable and Combustible Liquids**

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Title:	Storage, Transportation, Sale and Use of Gasoline and Volatile Oils: Rule and Regulations Relating to General Storage
Part:	41 Ill. Adm. Code 160 and 41 Ill. Adm. Code 180
Section Number:	Multiple Sections
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Policy Number:	07-TS-004

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**Purpose:** This instruction provides for current policy and guidance to ensure uniform enforcement of Title 41 Illinois Administrative Code Part 160 *“Storage, Transportation, Sale and Use of Gasoline and Volatile Oils: Rule and Regulations Relating to General Storage”* and specifically for the interpretation of rules to be applied to the indoor storage of flammable and combustible liquids in aboveground storage tanks.

**Scope:** Statewide

**Current Code:** The Part 160 and Part 180 rules recognize only minor allowances for the indoor use of flammable or combustible liquids and do not recognize indoor locations for aboveground storage tanks whatsoever.

**Policy:** It is the policy of the Office of the Illinois State Fire Marshal that aboveground bulk storage tanks containing flammable or combustible liquids may be located within buildings/occupancies if the following conditions are met:

- Aboveground flammable or combustible liquid storage tanks to be used for dispensing purposes are not allowed to be located within buildings.
- Aboveground indoor bulk storage tanks are required to undergo the OSFM’s application and field inspection processes if larger than 110 gallons capacity. The agency’s “Application for Non-Dispensing Above Ground Bulk Storage Tank Installation”.
- Aboveground tanks containing flammable or combustible liquids are required to be separated from remaining areas of the building/occupancy by enclosing construction that provides a minimum of 2-hour fire resistance. (See exceptions below for Class IIIB combustible liquids). In lieu of this requirement, tanks that are listed by a recognized third party laboratory as a fire insulated tank listed in accordance with U.L. Standard #2085, or a fire resistant tank listed in accordance with U.L. Standard #2080 are acceptable without further enclosure. (Owners should also be aware that the OSFM has adopted the 2000 edition of the NFPA Life Safety Code that may, dependent upon occupancy classification, contain requirements for enclosure of rooms containing flammable or combustible liquids even when fire insulated or fire resistant tanks are used).

- Obviously, Part 160 mandated separation distances to property lines and buildings are negated when the AST is located within a structure.
- Aboveground tanks containing flammable or combustible liquids are required to be vented to, and filled from, the exterior of the building. (See exceptions below for Class III combustible liquids).
- Emergency venting by the use of weak roof-to-shell seam shall not be permitted.
- Aboveground tanks containing flammable or combustible liquids that are installed in indoor locations that may be subject to vehicular traffic are required to be supplied with a form of vehicular collision protection commensurate with the type of vehicle traffic that is expected.
- No combustible material shall be permitted under, or within 10 feet of, any storage tanks.
- Class I liquids shall not be permitted in basement areas. Class II and Class IIIA liquids shall be permitted to be stored in basements provided that automatic sprinkler protection and other fire protection facilities are provided.
- The storage of any liquids shall not physically obstruct any means of egress.
- The storage tank installation and adjacent indoor areas, including areas where flammable or combustible liquids may be used, must comply with the requirements of National Fire Protection Association 70, *The National Electrical Code*.
- There are no maximum capacity limits on the capacity of indoor storage tanks.
- All other requirements of Title 41 Illinois Administrative Code Part 160 “*Storage, Transportation, Sale and Use of Gasoline and Volatile Oils: Rule and Regulations Relating to General Storage*” applicable to bulk aboveground storage tanks continue to apply to the indoor tank (e.g., listing and labeling of the storage tank by a recognized third-party evaluation company, electrical grounding, secondary containment, sizing of normal and emergency venting, material of construction, testing and protection of piping, etc.).
- These requirements are not retroactively applicable to previously approved indoor storage tanks and apply only to storage tanks installed after the effective date of the policy.

**It is further the policy of the Office of the Illinois State Fire Marshal that the storage of Class IIIB combustible liquids are subject to the following:**

- Aboveground Class IIIB liquid storage tanks are not required to be equipped with secondary containment.
- Aboveground Class IIIB liquid storage tanks are not required to be electrically grounded.

- Aboveground Class IIIB liquid storage tanks are required to be separated from combustible material by a minimum separation distance of 5 ft.
- Aboveground Class IIIB liquid storage tanks are required to be separated by only 3 ft. from other tanks storing Class IIIB liquids. (Tank-to-tank separation distances from Part 160 rules would continue to apply if the adjacent tank is other than a Class IIIB liquid storage tank).
- Aboveground indoor Class IIIB liquid storage tanks are not required to be physically separated from other areas of an occupancy by fire rated barriers or by fire-rated tank design (regardless of occupancy classification).
- Aboveground indoor Class IIIB liquid storage tanks are not required to have vent piping extend to outside the building enclosure.
- Aboveground indoor Class IIIB liquid storage tanks are not required to be filled or emptied from connections located outside the building.
- Aboveground indoor Class IIIB liquid storage tanks are allowed to be located in the basement of buildings.
- Aboveground indoor Class IIIB liquid storage tanks are allowed to be located in buildings of combustible construction.

Aboveground Class IIIB liquid storage tanks continue to be required to:

- Complete and submit an OSFM “bulk storage” AST application and undergo field inspection processes for new or relocated tank installations;
- Comply with UL listing requirements appropriate for the aboveground storage of combustible liquids;
- Be provided with proper regular and emergency venting applicable to the AST;
- Comply with collision protection requirements;
- Have any attached product piping testing upon installation in accordance with Part 160 rule requirements;
- Have each connection below normal liquid level through which liquid can normally flow equipped with an internal or external valve located as close as practical to the shell of the tank.

Reason:

Nationally recognized codes addressing flammable and combustible liquid storage address indoor locations for aboveground storage tanks containing flammable and/or combustible liquids. The OSFM believes it reasonable, until such allowances and restrictions can be codified into administrative rules, to allow for indoor aboveground storage tanks if conducted in a safe manner.

Furthermore, the OSFM has separately determined that there are several allowances (less restrictive requirements) for Class IIIB combustible liquids which have high associated flash points. These policy modifications represent a relaxing of previously enforced agency policies and are based upon the absence of fire history related to the storage of Class IIIB liquids along with an examination of the nationally-recognized standard for the storage of flammable and combustible liquids – National Fire Protection Association (NFPA) Standard #30. Those allowances are repeated within this policy.

Effective Date: April 2007