567—135.21(455B) UST systems with field-constructed tanks and airport hydrant fuel distribution systems.

135.21(1) *General requirements.*

a. Implementation of requirements. Owners and operators must comply with the requirements of this rule for UST systems with field-constructed tanks and airport hydrant systems as follows:

(1) For UST systems installed on or before June 23, 2021, the requirements are effective according to the following schedule:

Requirement	Effective Date
Upgrading UST systems, general operating requirements, and operator training	October 13, 2021
Release detection	October 13, 2021
Release reporting, response, and investigation; closure; financial responsibility and notification (except as provided in paragraph 135.21(1)*"b"*)	June 23, 2021

(2) For UST systems installed after June 23, 2021, the requirements apply at installation.

b. All owners of previously deferred UST systems must submit a registration form provided by the department. Owners and operators of UST systems must demonstrate financial responsibility at the time of submission of the registration form.

c. Except as provided in subrule 135.21(2), owners and operators must comply with the requirements of rules 567—135.1(455B) through 567—135.20(455B) and 567—Chapter 136.

d. In addition to the codes of practice listed in subrule 135.3(1), owners and operators may use military construction criteria, such as Unified Facilities Criteria (UFC) 3-460-01, Petroleum Fuel Facilities, when designing, constructing, and installing airport hydrant systems and UST systems with field-constructed tanks.

135.21(2) *Additions, exceptions, and alternatives for UST systems with field-constructed tanks and airport hydrant systems.*

a. Exception to piping secondary containment requirements. Owners and operators may use single-walled piping when installing or replacing piping associated with UST systems with field-constructed tanks greater than 50,000 gallons and piping associated with airport hydrant systems. Piping associated with UST systems with field-constructed tanks less than or equal to 50,000 gallons not part of an airport hydrant system must meet the secondary containment requirement when installed or replaced.

b. Upgrade requirements. Not later than October 13, 2021, airport hydrant systems and UST systems with field-constructed tanks where installation commenced on or before June 23, 2021, must meet the following requirements or be permanently closed pursuant to rule 567—135.15(455B).

(1) Corrosion protection. UST system components in contact with the ground that routinely contain regulated substances must meet one of the following:

1. Except as provided in paragraph 135.21(2)*"a,"* the new UST system performance standards for tanks in paragraph 135.3(1)*"a"* and for piping in paragraph 135.3(1)*"b"*; or

2. Be constructed of metal and cathodically protected according to a code of practice developed by a nationally recognized association or independent testing laboratory, and meet the requirements of paragraphs 135.3(1)*"a"*(2)"3" and "4" for tanks, and subparagraphs 135.3(1)*"a"*(2), (3) and (4) for piping. A tank greater than ten years old without cathodic protection must be assessed to ensure the tank is structurally sound and free of corrosion holes prior to adding cathodic protection. The assessment must be by internal inspection or another method determined by the department to adequately assess the tank for structural soundness and corrosion holes.

NOTE regarding paragraph 135.21(2)*"b"*: The following codes of practice may be used to comply with this paragraph:

- NACE International Standard Practice SP 0285, "External Control of Underground Storage Tank Systems by Cathodic Protection";
- NACE International Standard Practice SP 0169, "Control of External Corrosion on Underground or Submerged Metallic Piping Systems";

- National Leak Prevention Association Standard 631, Chapter C, "Internal Inspection of Steel Tanks for Retrofit of Cathodic Protection"; or
- American Society for Testing and Materials Standard G158, "Standard Guide for Three Methods of Assessing Buried Steel Tanks."

(2) Spill and overfill prevention equipment. To prevent spilling and overfilling associated with product transfer to the UST system, all UST systems with field-constructed tanks and airport hydrant systems must comply with new UST system spill and overfill prevention equipment requirements specified in paragraph 135.3(1)*"c."*

c. Walkthrough inspections. In addition to the walkthrough inspection requirements in subrule 135.4(13), owners and operators must inspect the following additional areas for airport hydrant systems at least once every 30 days if confined space entry according to the Occupational Safety and Health Administration (see 29 CFR part 1910) is not required or at least annually if confined space entry is required and keep documentation of the inspection according to paragraph 135.4(13)*"e."*

(1) Hydrant pits: visually check for any damage; remove any liquid or debris; and check for any leaks, and

(2) Hydrant piping vaults: check for any hydrant piping leaks.

d. Release detection. Owners and operators of UST systems with field-constructed tanks and airport hydrant systems must begin meeting the release detection requirements described in this subrule not later than October 13, 2021.

(1) Methods of release detection for field-constructed tanks. Owners and operators of field-constructed tanks with a capacity less than or equal to 50,000 gallons must meet the release detection requirements in rule 567—135.5(455B).

(2) Owners and operators of field-constructed tanks with a capacity greater than 50,000 gallons must meet either the requirements in rule 567—135.5(455B) (except paragraphs 135.5(4)*"e"* and *"f"* must be combined with inventory control as stated below) or use one or a combination of the following alternative methods of release detection:

1. Conduct an annual tank tightness test that can detect a 0.5 gallon per hour leak rate;
2. Use an automatic tank gauging system to perform release detection at least every 30 days that can detect a leak rate less than or equal to 1 gallon per hour. This method must be combined with a tank tightness test that can detect a 0.2 gallon-per-hour leak rate performed at least every three years;
3. Use an automatic tank gauging system to perform release detection at least every 30 days that can detect a leak rate less than or equal to 2 gallons per hour. This method must be combined with a tank tightness test that can detect a 0.2 gallon-per-hour leak rate performed at least every two years;
4. Perform vapor monitoring (conducted in accordance with paragraph 135.5(4)*"e"* for a tracer compound placed in the tank system) capable of detecting a 0.1 gallon-per-hour leak rate at least every two years;
5. Perform inventory control (conducted in accordance with Department of Defense Directive 4140.25; ATA Airport Fuel Facility Operations and Maintenance Guidance Manual; or equivalent procedures) at least every 30 days that can detect a leak equal to or less than 0.5 percent of flow-through; and
   - Perform a tank tightness test that can detect a 0.5 gallon per hour leak rate at least every two years; or
   - Perform vapor monitoring or groundwater monitoring (conducted in accordance with paragraph 135.5(4)*"e"* or *"f,"* respectively, for the stored regulated substance) at least every 30 days; or
6. Another method approved by the department if the owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in subparagraph 135.21(2)*"d"*(2). In comparing methods, the department shall consider the size of release that the method can detect and the frequency and reliability of detection.

(3) Methods of release detection for piping. Owners and operators of underground piping associated with field-constructed tanks less than or equal to 50,000 gallons must meet the release detection requirements in rule 567—135.5(455B). Owners and operators of underground piping associated with airport hydrant systems and field-constructed tanks greater than 50,000 gallons must follow either the

requirements in rule 567—135.5(455B) (except paragraphs 135.5(4)*"e"* and *"f"* must be combined with inventory control as stated below) or use one or a combination of the following alternative methods of release detection:

1. Perform a semiannual or annual line tightness test at or above the piping operating pressure in accordance with the table below.

Maximum Leak Detection Rate Per Test Section Volume

Test Section Volume (Gallons)	Semiannual Test— Leak Detection Rate Not to Exceed (Gallons Per Hour)	Annual Test— Leak Detection Rate Not to Exceed (Gallons Per Hour)
< 50,000	1.0	0.5
≥ 50,000 to < 75,000	1.5	0.75
≥ 75,000 to < 100,000	2.0	1.0
≥ 100,000	3.0	1.5

Piping segment volumes ≥ 100,000 gallons not capable of meeting the maximum 3.0 gallon per hour leak rate for the semiannual test may be tested at a leak rate up to 6.0 gallons per hour according to the following schedule:

Phase in for Piping Segments ≥ 100,000 Gallons in Volume

First test	Not later than October 13, 2021 (may use up to 6.0 gph leak rate)
Second test	Between October 13, 2021, and October 13, 2024 (may use up to 6.0 gph leak rate)
Third test	Between October 13, 2024, and October 13, 2025 (must use 3.0 gph for leak rate)
Subsequent tests	After October 13, 2025, begin using semiannual or annual line testing according to the Maximum Leak Detection Rate Per Test Section Volume table above

2. Perform vapor monitoring (conducted in accordance with paragraph 135.5(4)*"e"* for a tracer compound placed in the tank system) capable of detecting a 0.1 gallon per hour leak rate at least every two years;

3. Perform inventory control (conducted in accordance with Department of Defense Directive 4140.25, ATA Airport Fuel Facility Operations and Maintenance Guidance Manual; or equivalent procedures) at least every 30 days that can detect a leak equal to or less than 0.5 percent of flow-through, and

- Perform a line tightness test (conducted in accordance with paragraph 135.21(2)*"d"*(3)"1" using the leak rates for the semiannual test) at least every two years; or
- Perform vapor monitoring or groundwater monitoring (conducted in accordance with paragraph 135.5(4)*"e"* or *"f,"* respectively, for the stored regulated substance) at least every 30 days; or

4. Another method approved by the department if the owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in paragraphs 135.21(2)*"d"*(3)"1" to "3." In comparing methods, the department shall consider the size of release that the method can detect and the frequency and reliability of detection.

(4) Record keeping for release detection. Owners and operators must maintain release detection records according to the recordkeeping requirements in subrule 135.5(6).

e. Applicability of closure requirements to previously closed UST systems. When directed by the department, the owner and operator of a UST system with field-constructed tanks or airport hydrant system permanently closed before June 23, 2021, must assess the excavation zone and close the UST system in accordance with rule 567—135.15(455B) if releases from the UST may, in the judgment of the department, pose a current or potential threat to human health and the environment.

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