**Section 175.910 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 and 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, 2018, airport hydrant systems and UST systems with field-constructed tanks, when installation commenced on or before October 13, 2015, must meet the following requirements or be permanently closed pursuant to Section 175.830 or 175.840.

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

A) Except as provided in subsection (a), the new UST system performance standards for tanks at Section 175.400 and for piping at Section 175.420; or

B) Be constructed of metal and be cathodically protected, according to a code of practice developed by a nationally recognized association or independent testing laboratory, and meet the following:

i) Cathodic protection must meet the requirements of Sections 175.400(b) and 175.510 for tanks and Sections 175.420(a) and 175.510 for piping.

ii) Pursuant to Section 175.510(a), tanks 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 OSFM to adequately assess the tank for structural soundness and corrosion holes.

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 Section 175.405.

c) Walkthrough inspections. In addition to the walkthrough inspection requirements in 41 Ill. Adm. Code 176.655(b), 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 1910) is not required, or at least annually, if confined space entry is required, and keep documentation of the inspection (see 41 Ill. Adm. Code 176.655(b)).

1) Hydrant pits: Visually check for any damage; remove any liquid or debris; check for any leaks.

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, when installation commenced on or before October 13, 2015, must begin meeting the release detection requirements described in this Subpart not later than October 13, 2018.

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 Subpart F. Owners and operators of field-constructed tanks with a capacity greater than 50,000 gallons must meet either the requirements in Subpart F (except Section 175.630(d) and (e)) must be combined with inventory control (see subsection (d)(1)(E)) or use one or a combination of the following alternative methods of release detection:

A) Conduct an annual tank tightness test that can detect a 0.5 gallon per hour leak rate;

B) 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 one 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 3 years;

C) 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 2 years;

D) Perform vapor monitoring (conducted in accordance with Section 175.630(d) for a tracer compound placed in the tank system) capable of detecting a 0.1 gallon per hour leak rate at least every 2 years;

E) Perform inventory control (conducted in accordance with Department of Defense Manual 4140.25; the 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% of flow-through and either:

i) Perform a tank tightness test that can detect a 0.5 gallon per hour leak rate at least every 2 years; or

ii) Perform vapor monitoring or groundwater monitoring (conducted in accordance with Section 175.630(d) and (e), respectively, for the stored regulated substance) at least every 30 days; or

F) Another method approved by OSFM if the owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in subsections (d)(1)(A) through (d)(1)(E). Demonstration of any such method shall be submitted in writing to OSFM. In comparing methods, OSFM shall consider the size of release that the method can detect and the frequency and reliability with which it can be detected. If the method is approved, the owner or operator shall comply with any conditions imposed by OSFM on its use to ensure the protection of human health and the environment. Before the utilization of the method, OSFM shall issue written approval.

2) 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 Subpart F. 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 Subpart F (except Section 175.630(d) and (e) must be combined with inventory control; see subsection (d)(2)(C)) or use one or a combination of the following alternative methods of release detection:

A) Acceptable methods of leak detection:

i) Perform a semiannual or annual line tightness test at or above the piping operating pressure in accordance with the following table.

**Maximum Leak Detection Rate Per Test Section Volume**

|  |  |  |
| --- | --- | --- |
| **Test Section**  **Volume (gallons)** | **Semiannual Test**  **leak detection rate**  **not to exceed**  **(gallons/hour)** | **Annual Test**  **leak detection rate**  **not to exceed (gallons/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 |

ii) 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, 2018 (may use up to 6.0 gph leak rate) |
| Second Test | Between October 13, 2018 and October 13, 2021 (may use up to 6.0 gph leak rate) |
| Third Test | Between October 13, 2021 and October 13, 2022 (must use 3.0 gph for leak rate) |
| Subsequent Tests | After October 13, 2022, begin using semiannual or annual line testing according to the Maximum Leak Detection Rate Per Test Section Volume table in subsection (d)(2)(A)(i) |

B) Perform vapor monitoring (conducted in accordance with Section 175.630(d) for a tracer compound placed in the tank system) capable of detecting a 0.1 gallon per hour leak rate at least every 2 years;

C) Perform inventory control (conducted in accordance with Department of Defense Manual 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% of flow-through and either:

i) Perform a line tightness test (conducted in accordance with subsection (d)(2)(A) using the leak rates for the semiannual test) at least every 2 years; or

ii) Perform vapor monitoring or groundwater monitoring (conducted in accordance with Section 175.630(d) or (e), respectively, for the stored regulated substance) at least every 30 days; or

D) Another method approved by OSFM if the owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in subsections (d)(2)(A) through (d)(2)(C). Demonstration of any such method shall be submitted in writing to OSFM. In comparing methods, OSFM shall consider the size of release that the method can detect and the frequency and reliability with which it can be detected. If the method is approved, the owner or operator shall comply with any conditions imposed by OSFM on its use to ensure the protection of human health or the environment. Before the utilization of the method, OSFM shall issue written approval.

3) Recordkeeping for release detection. Owners and operators must maintain release detection records according to the recordkeeping requirements in Section 175.650.

e) Applicability of closure requirements to previously closed UST systems. When directed by OSFM, the owner and operator of a UST system, with field-constructed tanks or airport hydrant system permanently closed before October 13, 2015, must assess the excavation zone and close the UST system in accordance with Section 175.830 or 175.840, and 41 Ill. Adm. Code 176.Subpart C, if releases from the UST may, in the judgment of OSFM, pose a current or potential threat to human health and the environment.

(Source: Added at 42 Ill. Reg. 10476, effective October 13, 2018)