

PMCI Meeting

March 9th, 2016

Secondary Containment and Operator Training Requirements

New federal regulation includes secondary containment and operator training, which was part of the Energy Policy Act of 2005.

These have already been implemented in Iowa:

Operator Training

- ⦿ Operator Training for Class A/B/C operators became effective December 31, 2011
- ⦿ Recordkeeping including names of currently designated operators and proof of their training is required for as long as the operator is designated at the facility
- ⦿ Retraining is required for Class A and/or B operators at facilities determined to be out of compliance

Secondary Containment

- ⦿ Secondary containment became effective November 28, 2007
- ⦿ Requires UDC, double wall piping, double wall tanks and tank sumps and interstitial monitoring as primary method of leak detection

Notification

Owners notify the department within 30 days of UST system ownership change.

EPA adds a requirement that, within three years, owners submit a one-time notification for previously deferred Field Constructed Tanks and Airport Hydrant Systems.



Iowa Department of Natural Resources
Underground Storage Tank Section
502 East 9th Street
Des Moines, IA 50319-0034

Notification of Change of Ownership

1. LOCATION OF TANKS			
Facility Name	Registration No		
Street Address	Phone		
City	ZIP	FAX	
2. TYPE OF OWNER			
<input type="checkbox"/> Private or Corp <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> State <input type="checkbox"/> Federal <input type="checkbox"/> School <input type="checkbox"/> Indian Trust Land			
3. TYPE OF FACILITY			
<input type="checkbox"/> Petroleum Retail Sales <input type="checkbox"/> Non-Retail Sales <input type="checkbox"/> Government <input type="checkbox"/> Farm/Residential <input type="checkbox"/> Emergency Power			
4. OWNERSHIP OF TANKS (NEW OWNER)			
Owner Name (Corp., Individual, Agency)			
Contact Person	Email		
Street Address	Phone		
City	State	ZIP	FAX
Iowa Secretary of State Corporation No			
Iowa Secretary of State Corporation Registered Agent			
5. AUTHORIZED REPRESENTATIVE (PERSON TO RECEIVE ALL CORRESPONDENCE)			
Name	Email		
Street Address	Phone		
City	State	ZIP	FAX
6. LESSEE (IF YOU ARE LEASING THE SITE, COMPLETE THIS SECTION)			
Name (Corp., Individual, Agency)			
Contact	Email		
Street Address	Phone		
City	State	ZIP	FAX
7. PREVIOUS TANK OWNER			
Individual or Company Name			
Mailing Address	Phone		
City	State	ZIP	FAX
8. THE TYPE OF CHANGE BEING SUBMITTED			
<input type="checkbox"/> Ownership <input type="checkbox"/> Authorized Rep <input type="checkbox"/> Lessee <input type="checkbox"/> Facility Name Change <input type="checkbox"/> New Address <input type="checkbox"/> New Contact			
A person who sells, installs, modifies, or repairs a tank used or intended to be used in Iowa shall notify, in writing, the purchaser and the owner or operator of the tank of the obligations specified in paragraphs 135.3(3)"c" and "j" and the financial assurance requirements in 567—Chapter 136. The notification must include the prohibition on depositing a regulated substance into tanks which have not been registered and issued tags by the department.			

Product Compatibility:

Notify the department at least 30 days prior to switching to a regulated substance containing greater than 10 percent ethanol, greater than 20 percent biodiesel.

Product compatibility must be demonstrated and the results retained as long as product is stored.



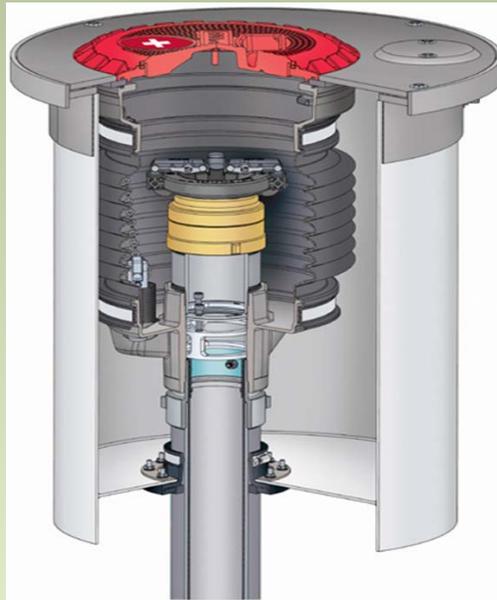
Technical Requirements (all facilities):

Spill Prevention Test Requirement:

Test spill buckets every 3 years
(vacuum/pressure/liquid)

Implementation:

No later than 3 years of
adopted date of rule.

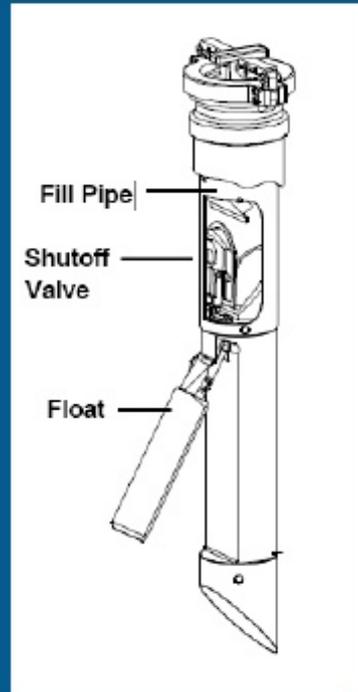


Overfill Prevention Test Requirement:

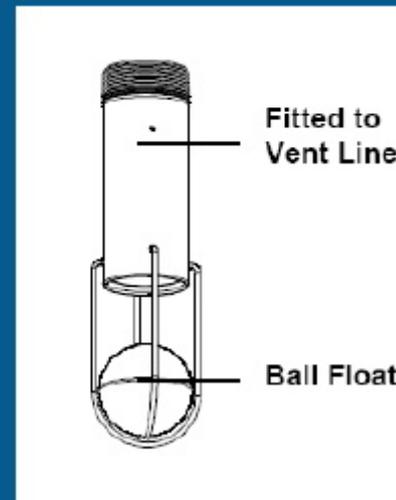
Inspect overfill devices every 3 years.

Overfills account for 15% of releases from UST systems.

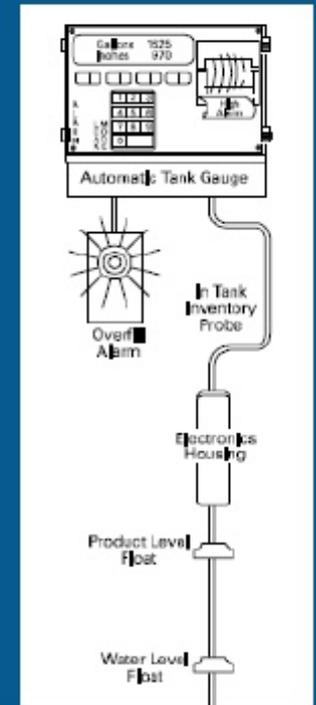
Automatic Shut Off



Ball Float Vent



High Level Alarm



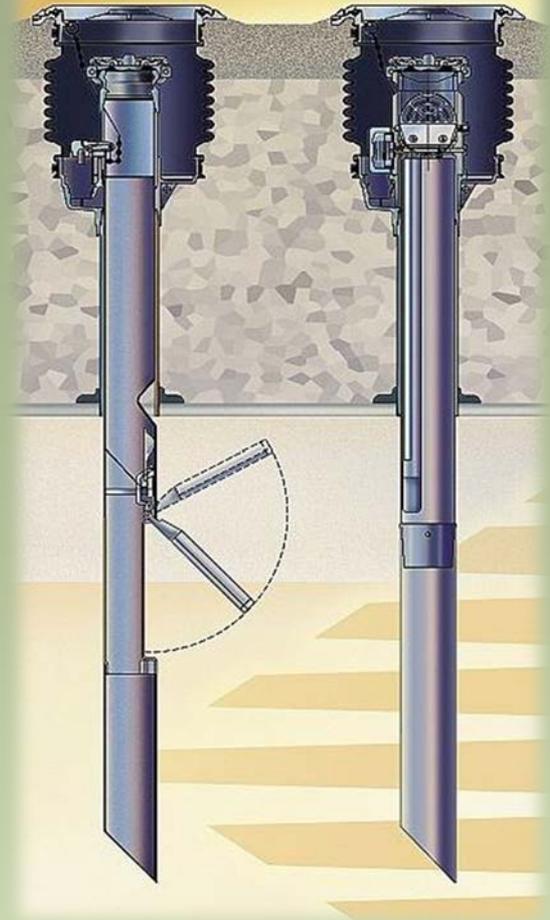
Implementation:

No later than 3 years of adopted date of rule.

The inspector determines whether the equipment operates or activates properly. Inspector requirements are determined by the manufacturer such as OPW or Franklin Fueling or a code of practice such as PEI RP1200.

Overfill Prevention Cont....

- Auto shutoff or flapper valve: probably involves removing the drop tube and the auto shutoff is inspected for proper operation: Does it completely shut off the flow at 95 percent capacity?
- Ball Floats: PEI recommends these be removed and another method used. Ball floats have to be positioned at the correct height to restrict the flow of product at 90 percent capacity. The ball float would have to be removed from the tank for it to be inspected.
- Overfill alarms provide warning when the tank is no more than 90 percent full. Inspection involves removing probe and probe cap, disconnecting the cable and then moving the product float to 90 percent fill level. The alarm should sound.



Containment Sump Test Requirement:

Test containment sumps used for piping interstitial monitoring every three years (vacuum/pressure/liquid).

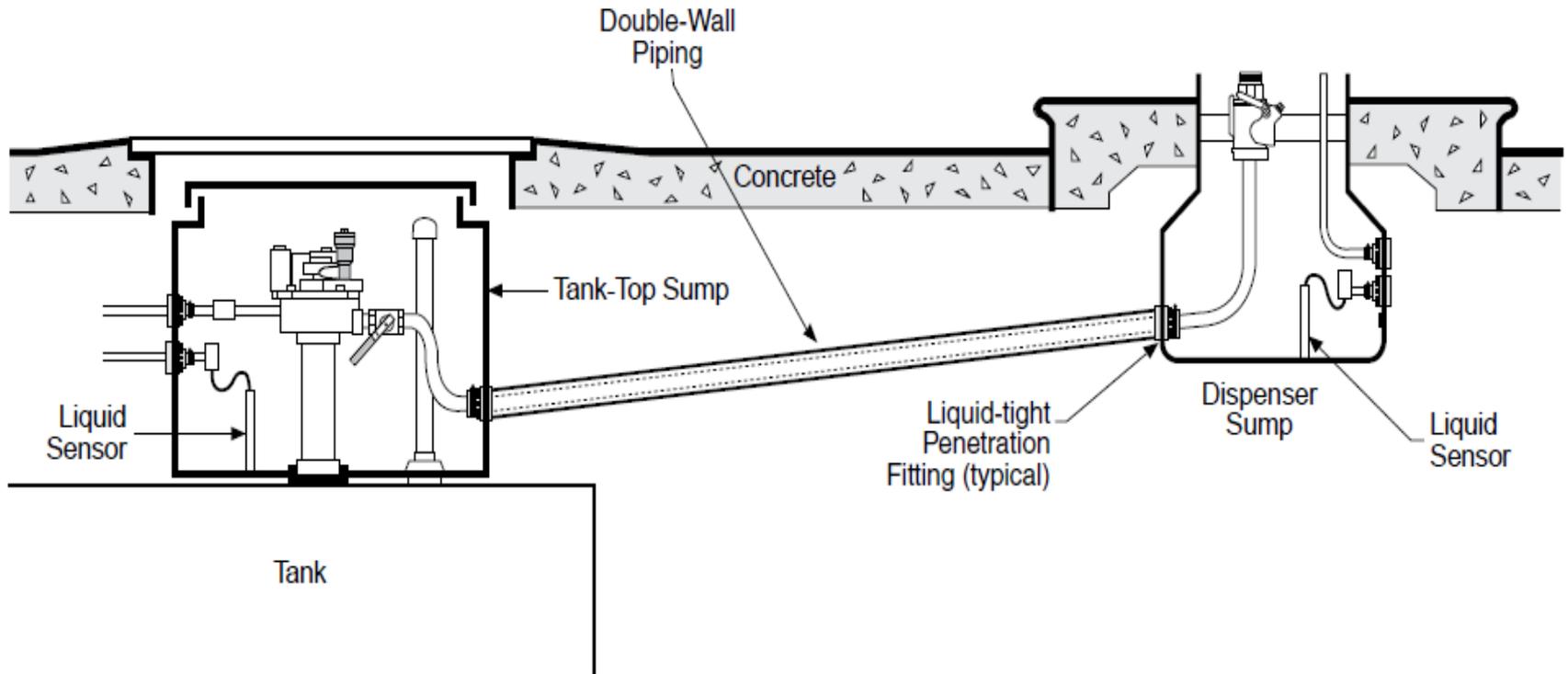
This means the interstitial space between the primary and secondary walls of the piping is open allowing the product to drain into the sump .



Implementation:

No later than 3 years of adopted date of rule.

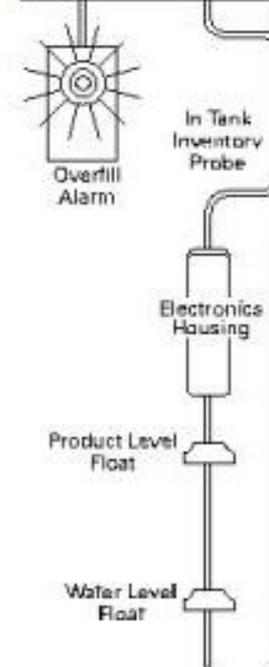
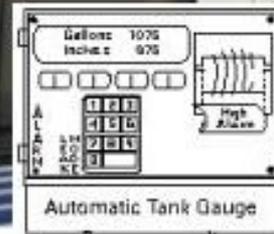




Double walled spill buckets and sumps that are periodically monitored—no testing is required.

Annual Release Detection Test Requirement:

- ATG systems: test alarm, verify system configurations, test battery backup
- Probes and sensors: inspect for residual buildup, ensure floats move freely, ensure shaft is not damaged, ensure cables are free of kinks and breaks, test alarm operability and communication with controller
- ALLD: simulate leak which determines capability to detect a leak
- Vacuum pumps and pressure gauges: ensure proper communication with sensors and controller
- Ensure proper operation of handheld electronic sampling equipment associated with vapor and groundwater monitoring



This reflects a concern about the performance of release detection equipment, which fails to detect 23 percent of releases.

Monthly and Annual Walkthrough Inspections

Every 30 days

Conduct walkthrough inspections according to a standard code of practice, which must include:

- Check spill bucket for damage and remove liquid or debris
- Check for and remove obstructions in fill pipe
- Check fill cap to ensure it is securely on the fill pipe
- For DW spill bucket with interstitial monitoring: make sure there is no leak



Who can conduct the walkthrough?

Annual Walkthrough Inspection

Conduct walkthrough inspections according to a standard code of practice or state standard, which must include:

- ⦿ Check containment sumps for damage and leaks to the containment area or releases to the environment
- ⦿ Remove liquid or debris in contained sumps
- ⦿ For DW containment sumps with interstitial monitoring, check for leaks in the interstitial area
- ⦿ Check hand-held release detection equipment, e.g., bailers, gauge sticks



Coordinate walkthroughs with compliance inspections, regular maintenance and service visits and annual inspection/testing of leak detection equipment.

State Proposed Changes to Chapter 135

PMCI Meeting, March 9, 2016

Definitions

- Added definitions for ethanol, temporarily closed tank, UST professional and training program

135.3 UST systems—design, construction, installation and notification

135.3(1) "a" Performance standards for new USTs

- Impressed current (IC) systems must show current operating status
- IC must be designed not to cause stray current
- Corrosion expert must contact local utilities to when IC systems are installed or changes made to output

135.3 UST systems—design, construction, installation and notification

135.3”b” Piping

- Remote fill piping must meet product piping design and construction standards
- Piping must maintain structural integrity or be replaced

135.3 UST systems—design, construction, installation and notification.

135.3(1)"b"

- Remote fill piping material must meet the same design and construction standards as the product piping

135.3(1)"d"

- Installer licensed by the department must be used on all tank installs

135.3(1)"e"

- Owners must ensure that the installer has been licensed by the department.

135.3 notification requirements

135.3(1)"d"

- Owners of new UST systems must certify in the registration form
 - (5) UST system detail information and site diagram and (6) Class A and B operator certification
 - (7) NESHAP Stage 1 VRS
- Change of ownership notification: include copies of the training certificates for Class A/B
- New owner is responsible for current and back tank management fees

Registration tags and annual Tank management fee

135.3(5)

135.3(5)''b''

- Changed the deadline date to March 1 after which the late fee will be enforced
- Tank management tags will be issued if there are no outstanding significant operational compliance violations. Tags may be withheld until violations corrected.

135.3(8) Delivery Prohibition process

135.3(8)''b'' Delivery prohibition eligibility criteria

- If the owner/operator fails to provide documentation of Class A/B training
- Failed to install secondary containment
- Fails to pay tank management fee
- When tanks are no longer in use or temp closed
- Failure to conduct monthly or annual walkthrough inspections

567—135.3(455B) UST systems—design, construction, installation and notification

Impressed Current Cathodic Protection

- Problem: addressing tanks without continuous CP (usually temp closed or a repair that has not been completed)
- Up to 0-90 days: restore power, repair, CP test
- 90-365 days: restore power, repair, CP test, precision test and retested (CP) within 6 months
- >365 days (active site): internal inspection, inspect metallic components, repair/replace corroded components, precision test on components, restore power if all passing, retest CP within 6 months
- >365 days (inactive): permanently close

135.4(8) Operator training course requirements

- Class A/B operators must pass department prepared exam with 85% correct
- Added monthly and annual walkthrough inspection requirements to Class A/B operator training
- Added UST system overview to Class C operator training as well as training “specific to their UST system.”
- Submit certificate of training for Class A/B operator within 30 days of assuming duties

135.5 Release Detection

- Require the owner/operator to find alternative method of leak detection if unable to effectively conduct leak detection with current method
- ATG system tests must be performed within 20 percent of the highest product level for the month

135.15(1) Temporary Closure

- Problem: addressing indefinite temporary closure
- IDNR must be consistent with state fire code

According to UST Database

- 45 sites temp closed with no FR
- 27 sites temp closed with FR
- 25 “abandoned” sites
- 10 temp closed farm/residential sites

The International Fire Code states:
3404.2.13.1.3 Out of service for one year. Underground tanks that have been out of service for a period of one year shall be removed from the ground in accordance with Section 3404.2.14 or abandoned in place in accordance with Section 3404.2.13.1.4.

135.15(1) Temporary Closure

- Specify procedures for proper temporary closure and return to service after being temporarily closed

- When a UST system is closed for >12 months
 - Permanently close or
 - Must first obtain variance from State Fire Marshal which adopts IFC [404.2.13.1.3]
 - Department reviews variance
 - May not be temporarily closed for more than 2 years
 - Procedures for returning to service

135.15(3) Permanent Closure

- “At some tank and piping closures a minimum of one monitoring well may not be sufficient to represent a release where it is most likely to be present. An additional groundwater monitoring well or wells may be necessary.”
- If water is present in the tank pit collect samples from the walls of the excavation at the oil water interface
- Soil samples must be taken at least every 10 feet of piping (unless alternate sampling is approved by the department)

MONTHLY WALKTHROUGH

Page 1

Date:

IOWA MONTHLY UNDERGROUND STORAGE TANK INSPECTION CHECKLIST

Facility Registration #	Facility Name	Facility Location	Inspector
		Address:	Name:
		City:	Position:

ITEM	Mark "Y" for Yes and "N" for No or "N/A" if not applicable	N/A	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Spill Containment at Fill Port							
1	Containment not damaged – no longer capable of holding liquid, holes or cracks present						
2	No Water in Containment						
3	No Fuel in Containment						
4	No Debris in Containment						
5	No Liquid in interstitial space (if containment is double walled)						
Overfill Prevention in Fill Pipe (Auto Shutoff)							
6	No obstructions in fill pipe preventing overfill equipment from functioning						
7	No damage to fill pipe or cap (fill cap attaches securely to fill pipe)						
8	Fill cap gasket not damaged preventing tight seal						
Tank Release Detection		Type (circle): Interstitial ATG SIR Groundwater Vapor Manual Tank Gauging					
9	Tank leak detection operating						
10	No leak detection alarms present						
11	Leak detection records reviewed and current						
12	Equipment in operating conditon						
13	Groundwater/Vapor wells capped and locked						

ANNUAL WALKTHROUGH

Page 1

Date:

IOWA ANNUAL UNDERGROUND STORAGE TANK INSPECTION CHECKLIST

Facility Registration #	Facility Name	Facility Location	Inspector
		Address:	Name:
		City:	Position:

ITEM	Mark "Y" for Yes and "N" for No or "N/A" if not applicable	N/A	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Monthly Inspections							
1	Completed monthly inspection and checklist						
2	12 months of monthly inspections reviewed and adequate						
3	Deficiencies in monthly inspections over past year corrected						
Submersible Turbine Pump (STP) Sump							
4	No fuel leaks present (piping, STP, or other)						
5	Junction boxes sealed; seal-offs present						
6	Flexible connector is not twisted, kinked or bent beyond manufacturers specifications						
7	Submersible pump, piping and fittings show no signs of leaking						
8	Sump is free of cracks, holes, bulges or other defects						
9	Penetration fittings intact and secured; boots in good condition						
10	Sump sensor properly mounted at the bottom of the sump						
11	No water in containment						
12	No fuel in containment						
13	Containment lid, gaskets and seals are in good condition						
14	Interstitial monitor not in alarm/ No leak into interstitial space						

IOWA ANNUAL UNDERGROUND STORAGE TANK INSPECTION CHECKLIST

ITEM	Mark "Y" for Yes and "N" for No or "N/A" if not applicable	N/A	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Other Sumps		Mark N/A if no other sumps					
15	No fuel leaks present						
16	Piping not in contact with soil without cathodic protection						
17	Penetration fittings intact and secured; boots in good condition						
18	Sump is free of cracks, holes, bulges or other defects						
19	No water in containment						
20	No fuel in containment						
21	No leaks to containment area						
22	Containment lid, gaskets and seals are in good condition						
23	Sump sensor properly mounted at the bottom of the sump						
24	Interstitial monitor not in alarm/ No leak into interstitial space						
Dispensers		Provide name of dispenser(i.e. 1/2, 3/4)					
25	No fuel leaks present (dispenser or piping)						
26	Piping not in contact with soil without cathodic protection						
27	Flexible connectors not twisted, kinked or bent beyond manufacturers specifications						
28	Penetration fittings intact and secured; boots in good condition						
29	Sump is free of cracks, holes, bulges or other defects						
30	No water in containment						
31	No fuel in containment						
32	Sump sensor properly mounted at the bottom of the sump						
33	Interstitial monitor not in alarm/ No leak into interstitial space						
Hand Held Release Detection Equipment							
34	Tank gauge stick is operable and serviceable						
35	Groundwater bailer is operable and serviceable						
36	Vapor monitoring device is operable and serviceable						

LUST Revisions

135.10(4) Modeling

“At Tier 2, the groundwater well located within the modeled plume is assumed to be drawing from the contaminated aquifer, and the groundwater transport model is designed to predict horizontal movement to the well. If the groundwater professional or the department determines that assessment of the vertical movement of contamination is advisable to determine the potential or actual impact to the well source, a Tier 3 assessment of this vertical pathway may be conducted.”

- IDNR has rescinded this proposed change and removed “or the department”

UST Professionals and Financial Responsibility

Chapter 134

- Remove outdated requirements such as pixel size and temporary certification for Cis
- Include Sec. Cont. testing documents with items to submit at install

Chapter 136

- All federal revisions (edits)

Implementation Dates

Federal Regulation to be Implemented	Proposed Date of Implementation
Flow restrictors in vent lines	Immediate upon adoption
Testing following a repair	Implemented
Closure of internally lined tanks that fail periodic inspection	Implemented
Demonstrating compatibility	Implemented
Airport hydrant fuel systems and field constructed tanks	Three years after adoption
Secondary containment and interstitial monitoring	Implemented
UDCs for new dispensers—implemented	Implemented
Operator training	Implemented
Previously deferred UST systems (emergency generators, airport hydrant fuel systems and field constructed tanks)	Implemented for new for emergency generators. No later than three years after adoption for airport hydrant fuel systems, field constructed tanks and existing emergency power generators.
Spill prevention equipment testing	
Overfill prevention equipment inspections	
Containment sump testing for sumps used for piping interstitial monitoring	No later than three years after adoption
Release detection equipment testing	
Walkthrough inspections	