



STATE OF RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WASTE MANAGEMENT
UNDERGROUND STORAGE TANK PROGRAM
235 PROMENADE STREET
PROVIDENCE, RI 02908
(401) 222-2797
Fax (401) 222-3813

***INVENTORY, LEAK DETECTION, TESTING, AND INSPECTION REQUIREMENTS
FOR SINGLE-WALLED AND DOUBLE-WALLED UST SYSTEMS***

INVENTORY RECORD KEEPING

(with the exception of those tanks storing fuel oil of any grade that is consumed on-site solely for heating purposes)

SW USTs W/O ELECTRONIC GAUGING

- Stick tank daily (stick marked to 1/8").
- Include inflows and outflows.
- Calculate daily reconciliation between inflows, outflows, and volume on hand.
- Check for water in bottom of the tank at least once per month.
- Perform monthly reconciliation (1% of total gallons pumped + 130 gallons discrepancy allowance).
- All confirmed or suspected releases shall be immediately reported in accordance with the UST regulations.
- An EPA-approved electronic gauging system is required after 12/22/98 (see requirements for SW USTs w/ electronic gauging).

SW USTs W/ ELECTRONIC GAUGING

- Daily printout (can be transferred to a table).
- Include inflows and outflows.
- Calculate daily reconciliation between inflows, outflows, and volume on hand.
- Check for water in bottom of the tank at least once per month.
- Perform monthly reconciliation (1% of total gallons pumped + 130 gallons discrepancy allowance).
- All confirmed or suspected releases shall be immediately reported in accordance with the UST regulations.

DW USTs W/O GAUGING

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DW USTs W/ GAUGING

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- Check for water in bottom of the tank at least once per month.

- Perform monthly reconciliation (1% of total gallons pumped + 130 gallons discrepancy allowance).
- All confirmed or suspected releases shall be immediately reported in accordance with the UST regulations.

LEAK DETECTION REQUIREMENTS FOR TANKS

(with the exception of those tanks storing fuel oil of any grade that is consumed on-site solely for heating purposes)

SW USTs W/O ELECTRONIC GAUGING

- Precision testing required (5, 8, 11, 13, and annually thereafter). Test results are to be submitted within 15 calendar days of test completion. Failed tests shall be immediately reported to the Department in accordance with the UST regulations.
- An EPA-approved electronic gauging system is required after 12/22/98 (see requirements for SW USTs w/ electronic gauging).

SW USTs W/ ELECTRONIC GAUGING

- Precision testing required (5, 10, 15, 20, and every two years thereafter). Test results are to be submitted within 15 calendar days of test completion. Failed tests shall be immediately reported to the Department in accordance with the UST regulations.
- Monitoring system tested by the owner/operator on a monthly basis to ensure effective operation.
- Monitoring system tested annually by qualified personnel to insure proper operation.
- A leak test is run at least once per month to detect a leak rate of at least 0.2 gallons per hour. All confirmed or suspected releases shall be immediately reported in accordance with the UST regulations.
- Monitoring devices shall not be shut off or deactivated at any time except for repair. Any malfunction shall be repaired within 15 working days of its first occurrence. If the device(s) cannot be repaired within 15 days, the affected system(s) shall be temporarily closed until satisfactory repairs are made. Any deactivation of a monitoring device shall be immediately reported to the Department by the owner/operator.

DW USTs (CONTINUOUS MONITORING SYSTEM REQUIRED)

- Continuous monitoring of interstitial space is required.
- A tightness test of the interstitial space shall be performed when the tank has been installed for a period of 20 years, and every 2 years thereafter.
- An EPA-approved electronic gauging system is optional. (When present, the tank gauging system can be used to run a monthly leak test which detects a leak rate of at least 0.2 gallons per hour.)
- All confirmed or suspected releases shall be immediately reported in accordance with the UST regulations.
- All monitoring systems shall be tested by the owner/operator on a monthly basis to ensure effective operation.
- All monitoring systems shall be tested annually by qualified personnel to insure proper operation.
- Monitoring devices shall not be shut off or deactivated at any time except for repair. Any malfunction shall be repaired within 15 working days of its first occurrence. If the device(s) cannot be repaired within 15 days, the affected system(s) shall be temporarily closed until satisfactory repairs are made. Any deactivation of a monitoring device shall be immediately reported to the Department by the owner/operator.

LEAK DETECTION REQUIREMENTS FOR PIPING

(with the exception of those tanks storing fuel oil of any grade that is consumed on-site solely for heating purposes)

SW SUCTION PIPING

- Precision test required (5, 8, 11, 13, and annually thereafter). Failed tests shall be immediately reported to the Department in accordance with the UST regulations.

SW PRESSURIZED PIPING

- Precision test required annually. Failed tests shall be immediately reported to the Department in accordance with the UST regulations.
- Required to be equipped with a UL-approved line leak detector capable of detecting a line leakage rate of at least 3 gallons per hour at 10 pounds per square inch of line pressure within one hour.
- Line leak detectors shall be tested annually in accordance with the manufacturer's requirements.

DW SUCTION PIPING (CONTINUOUS MONITORING SYSTEM REQUIRED)

- Tank top is required to be equipped with a liquid-tight piping sump which is continuously monitored. Sump sensors shall be mounted such that a minimum of liquid is present to activate an alarm and shall be located at least 1" below the lowest conduit/piping penetration fitting.
- Sump sensors shall be tested annually by qualified personnel to insure proper operation.
- Monitoring devices shall not be shut off or deactivated at any time except for repair. Any malfunction shall be repaired within 15 working days of its first occurrence. If the device(s) cannot be repaired within 15 days, the affected system(s) shall be temporarily closed until satisfactory repairs are made. Any deactivation of a monitoring device shall be immediately reported to the Department by the owner/operator.
- A tightness test of the interstitial space shall be performed when the piping has been installed for a period of 20 years, and every 2 years thereafter.
- All confirmed or suspected releases shall be immediately reported in accordance with the UST regulations.

DW PRESSURIZED PIPING (CONTINUOUS MONITORING SYSTEM REQUIRED)

- Required to be equipped with a UL-approved line leak detector capable of detecting a line leakage rate of at least 3 gallons per hour at 10 pounds per square inch of line pressure within one hour.
- Line leak detectors shall be tested annually in accordance with the manufacturer's requirements.
- Tank top is required to be equipped with a liquid-tight piping sump which is continuously monitored. Sump sensors shall be mounted such that a minimum of liquid is present to activate an alarm and shall be located at least 1" below the lowest conduit/piping penetration fitting.
- Sump sensors shall be tested annually by qualified personnel to insure proper operation.
- Monitoring devices shall not be shut off or deactivated at any time except for repair. Any malfunction shall be repaired within 15 working days of its first occurrence. If the device(s) cannot be repaired within 15 days, the affected system(s) shall be temporarily closed until satisfactory repairs are made. Any deactivation of a monitoring device shall be immediately reported to the Department by the owner/operator.
- A tightness test of the interstitial space shall be performed when the piping has been installed for a period of 20 years, and every 2 years thereafter.
- All confirmed or suspected releases shall be immediately reported in accordance with the UST regulations.

TESTING REQUIREMENTS FOR SHEAR/CRASH/IMPACT VALVES

(for pressurized piping systems)

- Remote pumping systems shall be equipped with an emergency shut-off valve designed to close automatically in the event of a severe impact or fire exposure.

- The automatic closing feature of this valve shall be checked at least once a year by manually tripping the hold-open linkage.

TESTING REQUIREMENTS FOR CATHODIC PROTECTION SYSTEMS

(with the exception of those tanks storing fuel oil of any grade that is consumed on-site solely for heating purposes)

IMPRESSED CURRENT SYSTEMS

- The owner/operator inspects the rectifier every 60 days and reads and records the DC current output and voltage output.
- A complete operational survey of the system is performed by a qualified cathodic protection tester within 6 months of installation or repair, at least every two (2) years following the installation date, and whenever construction or maintenance in the area of the structure occurs.
- Failed tests must be reported to the Department by the tester and/or owner-operator within 24 hours.
- The cathodic protection system shall not be shut off or deactivated at any time except for repair. Any malfunction must be repaired within 30 days of first occurrence. If the device cannot be repaired within 30 days, then the affected UST system(s) shall be temporarily closed in accordance with the UST regulations until satisfactory repairs are made. Malfunctioned systems not repaired within 180 days require the UST to be permanently closed in accordance with the regulations. Any deactivation or failure of the system shall be reported within 24 hours to the Department by the owner/operator or designee.

SACRIFICIAL ANODE (sti-P₃) SYSTEMS

- Tested by a qualified cathodic protection tester within 6 months of installation or repair, at least every three (3) years following the installation date, and whenever construction or maintenance in the area of the structure occurs.
- Failed tests must be reported to the Department by the tester and/or owner-operator within 24 hours.
- The cathodic protection system shall not be deactivated at any time except for repair. Any malfunction must be repaired within 30 days of first occurrence. If the cathodic system cannot be repaired within 30 days, then the affected UST shall be temporarily closed in accordance with the UST regulations until satisfactory repairs are made. Malfunctioned systems not repaired within 180 days require the tank to be permanently closed in accordance with the UST regulations. Any deactivation or failure of the system shall be reported within 24 hours to the Department by the owner/operator or designee.

INSPECTION REQUIREMENTS FOR INTERNALLY LINED USTs

(with the exception of those tanks storing fuel oil of any grade that is consumed on-site solely for heating purposes)

W/O CATHODIC PROTECTION

- Within 10 years after lining, and every 5 years thereafter, the lined tank shall be internally inspected in accordance with NLPAs Standard 631 and found to be structurally sound with the lining still performing in accordance with original design specifications.

W/ CATHODIC PROTECTION

- Internal inspections of lined tanks are not required when the tank has external cathodic protection meeting the requirements of the UST regulations.

GROUNDWATER MONITORING WELL CHECKS

- Groundwater monitoring wells are to be equipped with water-tight road boxes and locking grippers (caps), cannot be slotted to the surface, and are to be properly identified, in accordance with the RI DEM *Rules and Regulations for Groundwater Quality*.
- Groundwater monitoring wells are to be bailed and evaluated visually, noting odors, for the presence of free product no less than once per year.
- Written records of all well check observations shall be kept for 3 years or for the life of the facility, whichever is greater.

SPILL CONTAINMENT BASIN REQUIREMENTS AND FILL PIPE LABELING

- Spill containment basins are required to be properly maintained and kept free of water, product, or debris.
- Fill pipes and/or fill box covers are to be permanently labeled or marked so that the product inside the tank is properly identified.

SUMP/CONTAINMENT STRUCTURE REQUIREMENTS

- Piping collection and transition sumps, submersible pump head containment structures, and dispenser pans/sumps, where existing, shall be maintained such that all penetration fittings and entry boots are in good condition, all sensors are secured in an upright position and located at least one inch below the lowest penetration fitting or entry boot, and are kept clean and dry.

ENVIRONMENTAL RESULTS PROGRAM (ERP)

- The Environmental Results Program (ERP) is a mandatory, bi-annual facility compliance inspection program.
- Owners/Operators shall ensure that their facilities comply with these regulations by conducting their own inspections and certifying their compliance by completing and submitting a *Compliance Certification Checklist & Forms Booklet* (the "ERP" Certification Booklet").

MANDATORY DEADLINE FOR PERMANENT CLOSURE OF SINGLE- WALLED UST SYSTEMS (TANK AND/OR PIPING)

(with the exception of those tanks storing fuel oil of any grade that is consumed on-site solely for heating purposes)

- Single-walled tanks and/or piping installed prior to May 8, 1985 shall be permanently closed by December 22, 2015.
- Single-walled tanks and/or piping installed between May 8, 1985 and July 20, 1992 shall be permanently closed within 30 years of the date of installation.

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