

SUBJECT: *EPA UST Regulations*

ISSUE: *Final UST Rules*

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U.S. EPA FINAL UNDERGROUND STORAGE TANK REQUIREMENTS:

I. BACKGROUND

The U.S. EPA published the final UST system testing and inspection rule on June 15, 2015. The PMAA UST Task Force worked closely with the Small Business Administration (SBA), The White House Office of Management and Budget (OMB), key members of Congress as well as EPA's Office of Underground Storage Tanks to reduce compliance costs on tank owners to the greatest extent possible. The PMAA UST Task force was largely successful in this effort reducing annual costs of the final rule from \$6,966.per site to \$2,377 per site. Overall, total annual compliance costs on the industry as a whole were reduced from \$1,533,172,720 billion to \$530,444,189 million as a result of PMAA's efforts.

PMAA was successful in achieving three of its primary goals aimed at reducing compliance costs imposed by the rule. First, PMAA convinced the EPA to drop regularly scheduled testing of the interstitial spaces of UST secondary containment equipment. PMAA's second goal of delaying implementation of testing and inspection requirements was also successful. PMAA was able to delay these requirements for three years instead of the EPA's proposed 90 day implementation schedule. PMAA also met its third primary goal to reduce the frequency of sump inspections from 30 days to once per year. PMAA achieved many additional cost reductions as well. PMAA's effort on behalf of tank owners was unparalleled in the industry.

II. STATE IMPLEMENTATION OF THE NEW UST REQUIREMENTS:

States with EPA UST Program Approval - Over the next three years, 38 states will be amending their UST program regulations to implement the new federal requirements. These states have EPA approved UST programs that grants them the authority to implement their own version of the federal regulations provided they are equally protective of the environment. The 38 states with EPA program approval have until October 13, 2018 to amend their UST program regulations. ***This three year implementation time frame provides the opportunity to make changes to the UST rule on the state level that are beneficial to tank owners while at the same time being equally protective of the environment.*** [Click here](#) for a list of the states with EPA approved UST programs.

States without EPA UST Program Authority – There are 12 states that do not have EPA UST program authority. Accordingly, in these states, the U.S. EPA regulations apply automatically, as written and there is no opportunity to make changes. The effective date of the rule in these states is October 13, 2015. However, most of the compliance deadlines for tank owners do not occur until October 13, 2018. (See compliance deadlines for specific provisions below.) [Click here](#) for a list of the 12 states that do not have U.S. EPA UST program authority.

III. NEW REGULATORY REQUIREMENTS AND COMPLIANCE DEADLINES

Adoption of Existing EPA Operator Training, Secondary Containment and Delivery Prohibition Guidelines into Regulations – The Energy Policy act of 2005 required states receiving LUST money from the EPA to meet certain guidelines. The EPA guidelines include; UST inspections; operator training, secondary containment requirements for new tanks and piping, and delivery prohibition restrictions. The EPA required states to adopt these guidelines by 2009. The final UST rule simply adopts the EPA guidelines as *federal* regulatory requirements. This is a procedural change that will not affect tank owners who already must comply with these requirements on the state level. The final rule also adds a number of new regulatory requirements for tank owners. [Click here](#) for a copy of the final EPA UST rule. The major provisions in the new UST rules affecting petroleum marketers include:

- **Secondary Containment for all New or Replaced Tanks, Piping and Under Dispenser Containment** – The Energy Policy Act of 2005 requires all new or replaced USTs, piping and dispensers to be equipped with secondary containment. Under dispenser containment is only required when the dispenser is replaced along with all of the equipment used to connect it to the vertical riser pipe from the UST system. **Compliance Date: EPA is not requiring secondary containment equipment and UDC for UST systems where installation began on or before 180 days October 13, 2015.**
- **Walk Through Inspections** – The final rule requires tank owners to conduct UST system walk through inspections every 30 days on the following equipment; spill buckets, fill caps and check release detection equipment operability. Once per year, tank owners must check sump areas for damage, release or leaks. **Compliance Date: October 13, 2018 and monthly thereafter.**
- **Spill Prevention Equipment Tests** - The final rule requires spill prevention equipment testing once every three years. The final rule does not require periodic testing of double walled spill containment equipment if the integrity of both walls is periodically monitored. **Compliance Date: October 13, 2018 and once every three years thereafter.**
- **Overfill Prevention Equipment Inspections** – The final rule requires to testing and inspect operation of overfill protection equipment once every three years. Tank owners must inspect automatic shut-off devices, flow restrictors and alarms. The test requires a demonstration that the equipment will operate or activate properly. **Compliance Date: October 13, 2018 and once every three years thereafter.**
- **Secondary Containment Testing** – The final requires the testing once every three years of all sumps that are used for secondary containment and interstitial monitoring of double walled

pipes and/or other equipment including under dispenser containment. The test must show that the sump is water or vacuum pressure tight. Double walled sumps used for interstitial monitoring of piping are not required to be tested if both walls of the containment sump are periodically monitored. **Compliance Date: October 13, 2018 and once every year thereafter.**

- **Release Detection Equipment Tests** – The final rule requires annual operational and maintenance tests on electronic and mechanical components of release detection equipment to ensure proper operation. Owners must: check ATG systems and other controllers, test alarm, verify system configuration, test battery back-up, inspect probes and sensors, automatic line leak detectors, vacuum pumps and pressure gages, as well as hand held electronic sampling equipment. **Compliance Date: October 13, 2018 and once every year thereafter.**
- **E-15 Compatibility Requirements** – The final rule incorporates as regulatory requirements previously adopted EPA guidelines that require tank owners to demonstrate UST system compatibility with ethanol gasoline blends greater than E-10 or diesel fuel blends greater than B-20 by; certification and listing of equipment by a nationally recognized testing laboratory; equipment manufacturer approval; or an alternative method developed by a state UST authority. Tank owners who plan to place fuel blends greater than E-10 or B-20 in a UST system must first provide 30-day prior notice to state UST program authorities. This is purely a “housekeeping” measure by the EPA and does not change existing E-15 compatibility requirements which PMAA believes are inadequate to protect tank owners from liability in the event of a release.
- **Statistical Inventory Reconciliation** – the final rule adds statistical inventory reconciliation (SIR) as an approved method of leak detection. The final rule also provides performance standards that SIR methods must meet. **Compliance Date: October 13, 2015.**
- **Vent Line Flow Restrictors** – the final rule requires ball float valves to be tested periodically for operability. The final rule prohibits the installation of new ball float valves as the primary method of overfill protection. The rule does not require ball float valves to be removed. Instead, existing ball float valves may continue in service until they are replaced with a different method of overfill protection. However, new ball float valves may be installed if not used as the primary method of overfill protection but used as a back-up to a primary method instead. **Compliance Date: October 13, 2015.**
- **Internal Tank Linings** – The final rule requires tank owners to permanently close USTs that use internal tank liners as the *sole* method of corrosion protection when an inspection determines the lining is no longer performing to original design specifications and cannot be repaired. Lining must be inspected within ten years after lining and every five years thereafter. **Compliance Date: October 13, 2015.**
- **Change of Ownership Notification** – The final rule requires tank owners to provide notice to state regulatory authorities anytime ownership of a tank system is changed. The final rule

provides a new notification form entitled: *Notification of Ownership Change for Underground Storage Tanks*. [Click here](#) for a copy of the change of ownership notification form. **Compliance Date: October 13, 2015.**

IV. OPPORTUNITIES FOR MAKING STATE RULES LESS BURDENSOME:

The 38 states with EPA UST program authority are allowed to adopt regulations that differ from the EPA UST requirements so long as they are equally protective of the environment. These states are not required to adopt the EPA regulations word for word. This provides an opportunity to make the implementation of the EPA regulations on the state level less burdensome on tank owners. There are five key areas where it is advisable for states to adopt less burdensome alternative language:

1. 30- Day Walk Through Inspections – The federal regulations require walk through inspections of UST system components. The requirements for walk through inspections are specified in the EPA’s final rule. [Click here](#) and scroll down to page 41632 for the EPA list of walk through requirements. As an alternative to the walk through inspection list in the rule, the EPA allows tank owners to follow the Petroleum Equipment Institute’s **Recommended Practice for the Inspection and Maintenance of UST Systems* (RP-900). However, the list of items in the PEI RP-900 walk through inspection is significantly more comprehensive than required by the EPA regulations. State regulations **should not** adopt the RP-900 check list as a requirement but limit walk through inspections to the list required **in the EPA rule**.

The following is the complete list of walk through requirements in the EPA rule that states should adopt:

Beginning on October 13, 2018 owners and operators must conduct walk through inspections at their UST facility. The walk through inspection must be conducted once every 30-days and includes spill prevention and release detection equipment.

When conducting the 30- day walkthrough inspection, check the following:

- **Spill Prevention Equipment**
 - Check for damage.
 - Remove any liquid or debris.
 - Check for and remove any obstructions in the fill pipe.
 - Check the fill cap to make sure it is securely on the fill pipe.
 - For double walled spill prevention equipment with interstitial monitoring - check for a leak in the interstitial area.
- **Release Detection Equipment**
 - Ensure it is operating with no alarms or other unusual operating conditions present.
 - Ensure records of release detection testing are reviewed and current.
- **Containment Sumps**
 - Check for damage, leaks into the containment area, or releases to the environment
 - Remove any liquid or debris.

- For double walled containment sumps with interstitial monitoring check for a leak in the interstitial area.
- **Hand held release detection equipment** (for example tank gauge sticks or groundwater bailers)
 - Check for operability and serviceability.

2. Spill Prevention and Containment Sump Testing - Spill prevention equipment and containment sumps used for interstitial monitoring of piping must be tested once every three years under the EPA rule. The test must determine the equipment is liquid tight by using either vacuum, pressure, or liquid testing according to one of the following. Vacuum and pressure tests are generally not practical methods for testing spill prevention and containment sump testing due to the difficulty of obtaining an air tight seal. Therefore, liquid testing is the most likely option to test this equipment.

The EPA regulation does not set out any specific test procedure. Instead, the EPA **recommends** the use of Petroleum Equipment Institute's *RP-1200 *Recommended Practice for Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities*. However, RP-1200 requires liquid testing **to the top of the sump** above the penetration points where pipes enter the sump area. Filling the sumps to the top with liquid to test for tightness is problematic because it generates a tremendous amount of hazardous waste water that must be properly handled and disposed. This generates additional expense and waste water to the test process. In addition, preparing the penetration points in the sump area with new fittings and grommets that are liquid tight is extremely expensive and could cost as much as \$8,000 per site.

A better sump tightness test method that states should adopt is to allow liquid testing **only to the level where the sensor alarm will sound** and shut down the system turbine. The sensor alarm is below the penetration points in the sump where leaks are more likely to occur. California allows low liquid level testing because it detects leaks sooner, prevents further release by shutting down the UST system turbine and produces far less hazardous waste water. This test method is **more** protective of the environment than the liquid test method in RP-1200, and far less burdensome on tank owners.

3. Under Dispenser Containment - The EPA rule requires the installation of under dispenser containment when the dispenser is replaced. EPA clarified to PMAA that **this requirement is triggered only when the dispenser and all of the equipment used to connect it to the vertical riser pipe** from the UST system is changed. State regulators should be reminded of this clarification so that simply replacing a dispenser will not trigger the UDC requirement.

4. Ball Float Valves – The EPA prohibits the installation of ball float valves in vent lines as the primary method of overfill protection. Replacement of ball float valves is not required while the equipment is function properly. Moreover, new ball float valves may be installed as a secondary means of overfill prevention, acting as a backup from some other primary method. State regulators should recognize that the EPA rule does not require immediate replacement of ball float valves and that they may continue to be used and installed as a back-up method of overfill protection. This is important because PMAA has learned that many new UST system installations use ball float valves as a backup to a primary overfill method. States failing to recognize this may inadvertently require removal of all ball float valves which would be a significant cost to tank owners.

5. Industry Standards – The EPA rule provides options for tank owners to meet the new UST requirements. Following an established industry code of practice is not a requirement under the rule. States can develop their own protocol apart from, or including all or part of an industry practice so long as what states come up with is as equally protective of the environment as the EPA requirements. This gives states enormous flexibility to craft implementing regulations that differ from the EPA rule. It is important for state program authorities to understand their ability to fine tune the EPA regulations.

*** PEI Recommended Practices are copyrighted and must be purchased individually @ pei.org. The cost of RP-900 and RP-1200 is \$95 each.**

V. EPA RESPONSE TO PMAA REQUEST FOR CLARIFICATION OF CERTAIN PROVISIONS IN NEW UST RULE:

The following Q&A is the result of PMAA's request for clarification by the EPA Office of Underground Storage Tanks on key provisions in the UST rule. These clarifications should be passed along to state UST authorities as a guide when implementing state rules. These clarifications generally make compliance less burdensome for tank owners.

1. Overfill Protection: Will EPA provide a definition of "inspect" with respect to overfill protection equipment? Are tank owners required to pull the automatic shut off device out during this process?

EPA Answer: EPA did not specifically define the term inspect. Rather, EPA specified in the 2015 UST regulation what to inspect for. 280.35(a)(2) indicates the inspection must ensure overfill prevention equipment is set to activate at the correct level and will activate when regulated substance reaches that level. The 2015 UST regulation does not require the automatic shutoff device to be removed during the inspection. However, EPA is not aware of any way to properly inspect the shutoff device to ensure it is set at the correct level without removing it.

2. Spill Bucket Testing: In the final rule EPA addressed PMAA's concern over the disposal cost of water/liquid used for spill bucket testing by indicating that vendors typically re-use this potentially contaminated liquid from site to site, thus reducing disposal costs by spreading out over multiple retailers. Does the EPA intend to send a written guidance document to state UST regulators explaining that vendors are permitted to re-use testing liquid and transport it between sites in this manner?

EPA Answer: The 2015 UST regulation does not prohibit vendors from reusing test liquids and transporting the liquid to different sites. As you indicate, the preamble describes that some vendors already do this. EPA will ensure states are aware that the UST regulation does not prohibit vendors from transporting and reusing test liquids.

3. Spill Bucket Testing: Are tank owners required to test double wall spill buckets even if the interstice is found to be liquid free (dry)?

EPA Answer: Testing is not required if the integrity of both walls of a double-walled spill bucket is periodically monitored. However, owners and operators must test double-walled spill buckets only if they choose not to periodically monitor the integrity of both walls (see 280.35(a)(1)(i)). The frequency of periodic monitoring in the 2015 UST regulation for spill buckets is typically 30 days – the frequency required in the walkthrough inspection.

4. Under Dispenser Secondary Containment Testing: Are tank owners required to test all UDC or only UDC used for both secondary containment AND interstitial monitoring of pipes.

EPA Answer: Periodic testing of containment sumps (including UDC) is required only when the containment sump is used for secondary containment of the piping and when interstitial monitoring is used for release detection of that piping. The location of the interstitial monitoring device is not a factor in determining whether periodic testing is required. For example, an owner/operator has UDC that is used as the secondary containment for piping where regulated substances can drain to another sump that is monitored with a sensor. In this case UDC must meet the periodic testing requirement because it is used as part of secondary containment and interstitial monitoring of the piping.

5. Under Dispenser Containment: Are tank owners required to install UDC if only *several* components of the dispenser system are replaced, but not the entire dispenser system (for example a shear valve but not flexible connectors)? Or, are tank owners required to install UDC if *any single* component of the dispenser system is replaced.

EPA Answer: The 2015 UST regulation at 280.20(f) indicates that a dispenser system is considered new when both the dispenser and the equipment needed to connect the dispenser to the underground storage tank system are installed. That equipment may include check valves, shear valves, unburred risers or flexible connectors, or other transitional components that connect the dispenser to the underground piping. *This means that the UDC requirement is not triggered until the dispenser and everything between the dispenser and the underground piping is installed.* Please note that most states have already implemented their own requirements for secondary containment and UDC. The 2015 UST regulation will primarily apply to owners and operators of UST systems in Indian country.

6. Sump Inspection: If a tank owner uses SIR, what must tank owners inspect on a monthly basis? How does ATG and SIR impact inspection sump inspection? If using ATG and SIR, would sump inspection be required more often than once per year?

EPA Answer: For the release detection part of the walkthrough inspection described in 280.36, owners and operators using SIR must ensure their SIR records are reviewed and current. In addition, if they use any electronic equipment (for example an ATG if SIR data is gathered from the ATG), they must look at it to make sure it is on and operating normally. The annual containment sump inspection part of the walkthrough inspection is required for all containment sumps and is independent of the release detection method used. The 2015 UST regulation does not require containment sump inspections more often than annually.

7. Sump Inspection: Can tank owners perform an annual precision primary line test (as is the case with single wall piping systems) on double walled systems in lieu of monthly sump inspection if installed before secondary containment became a regulatory requirement?

EPA Answer: The walkthrough inspection only requires annual inspections of containment sumps. There is no monthly containment sump inspection requirement in the walkthrough inspection. The annual containment sump inspection must be conducted no matter what method of release detection is used. Owners and operators of UST systems installed on or before April 11, 2016 may choose to perform an annual line tightness test (or any other release detection method allowed in the UST regulation) to meet the piping release detection requirement. All UST systems installed after April 11, 2016 must use

interstitial monitoring for release detection. Note that in all cases, pressurized piping must also have an automatic line leak detector.

8. Sump and Spill Bucket Testing Pass Fail Criteria: EPA mentions the criteria for a pass/fail determination for sump and Spill bucket testing set forth in PEI RP1200. An eighth of inch change in liquid level over one hour is specified for both sumps and spill buckets. Considering spill buckets normally are sized between 5 and 15 gallons, and that containment sumps normally hold 200-300+ gallons of liquid, and that the surface area of any test liquid that is exposed to the ambient air is vastly different for sumps and spill buckets, Is EPA aware of the scientific basis for the criteria?

EPA Answer: EPA understands the standard provides a single pass/fail criteria to indicate a tight or non-tight containment area, albeit at different leak rates depending on the size and shape of the containment. In addition, EPA understands the one eighth inch criteria represents current testing practices when using hydrostatic testing. We believe PEI RP1200 is based on common industry practice. For more information about the recommended practice, please contact the Petroleum Equipment Institute.

9. Liquid Tight Sumps: EPA states that both new and existing containment sumps used for intestinal [sic] monitoring must be "liquid tight" Does EPA require that sumps and under dispenser containment are liquid tight on top, whether they have a lid or cover or not?

EPA Answer: For UDC, the 2015 UST regulation at 280.20(f)(2) indicates that UDC must be liquid tight on its sides, bottom, and at any penetrations. It does not indicate that UDC must be liquid tight on top. For other containment sumps, 280.35(a)(1)(ii) indicates that the containment sump must be tested once every three years to ensure the equipment is liquid tight. There are no further details in the UST regulation for containment sump testing. However, we know that using a liquid to test a containment sump does not test the top or lid of the containment sump. In addition, in our observation of vacuum testing demonstrations, we note that the lids are removed for this testing. Based on this, EPA does not believe containment sumps must be liquid tight on top, whether or not they have a lid or cover.

10. Electronic Monitoring of Sumps: The EPA allows the installation of electronic monitoring of sumps that cannot be accessed for inspection. If a sump has electronic monitoring, do inspections and testing need to be performed?

EPA Answer: EPA assumes PMAA is referring to the provision for periodic monitoring of leaks in UDC at 280.20(f)(2). This provision only applies to UDC where access to the components in the UDC is not possible. This provision exists because some fire code officials interpret the fire codes to require the sump be filled with stone or dirt for fire safety. In this case, components in the containment sump are not accessible, so EPA requires containment sumps where components cannot be accessed for inspection be periodically monitored for leaks from the dispenser system.

Annual walkthrough inspections must be conducted on all containment sumps, independent of whether a sump has electronic monitoring (though it is possible that the owner/operator may not see anything if, for example, the sump is filled with dirt or stone). Three year testing of containment sumps is also required even if a sump has electronic monitoring except when the containment sump is double-walled and the integrity of both walls is periodically monitored.