

EMA comments on PEI RP-900

[Request for Comments – Petroleum Equipment Institute](#)

Section 1.4. Revise the first sentence to clarify the scope and regulatory relationship of the practices outline in the document. The first sentence should read: These recommended practices apply to USTs and associated equipment intended to store and dispense petroleum products at vehicle fueling facilities regulated under the federally UST regulations (40 CFR 280) including gasoline, gasoline-ethanol blends, diesel, and diesel-biodiesel blends.

Section 1.7. The term knowledgeable person is used several times in the document but not defined. What is the difference between a knowledgeable person and an appropriate person, qualified person, qualified technician, other person designated by the UST owner, Class A, B, or C operator? Should a Class C operator be considered a knowledgeable person? This section goes on to state that operators should be trained to perform inspections, which seems to suggest that an operator should be a Qualified Person. Delete the term knowledgeable person and revise the three uses of this term (6.3 p22, 7.3 p34, A-4.3 p 66) to read: "A site information sheet (see Section 4.5) should be completed by a person familiar with the tank location, features..." While qualified person and qualified technician are the only applicable levels of qualification personnel required for the practice, multiple other terms and references related to knowledge and experience are used in the document. Eliminating this term removes what can appear to be another type of individual needed to perform the inspections.

Section 2.6. It should be noted that USEPA no longer allows ball floats (also referred to as flow restrictors) in vent lines as a form of overfill prevention when overfill prevention is installed or replaced (40 CFR 283.30(b)). Provides clarity on the use/limitations of ball float valves.

2.14. There is inconsistency in the use of terms. For example, Fill Sump is defined in this section; however, the term fill sump and fill containment sump are used throughout the document. Given the definition, only fill sump should be used. This is also the case for STP sump; although it is usually used with the fill containment sump (STP or fill containment sump). Replace fill containment sump with fill sump throughout the document. This would also address the STP sump. There is one incidence of dispenser containment sump in the A-2 form on page 60 that should be replaced with dispenser sump.

Section 2.28. A distinction should be made between the types of dispensers. The term suction pump is used a number of times in the document. Old school would refer to a dispenser or suction pump. In the case of a pressurized system, the dispenser is a

metering device while in the case of a suction system the dispenser is the pumping system in addition to the metering components. Add: "A fuel dispenser transferring liquid fuel under pressure from an STP in the UST is a metering device while a fuel dispenser transferring liquid fuel under suction (also referred to as a suction pump) contains both a metering device and a pumping system. Clarify the use of terms and distinction between a dispenser and suction pump.

Section 2.30. The requirements for groundwater monitoring are much more complex than just depth to water table. Revise the last sentence to read: To be used for leak detection the site must be assessed to ensure effectiveness of the monitoring wells to detect a release, and the water table must always be within 20 feet of the ground surface (40CFR 280.43 (f)). The requirement for the site assessment is the most important requirement for the use of groundwater monitoring as a release detection method.

Section 2.36. Leak detection also includes line leak detectors, containment sump sensors. Revise the next to last sentence to: Leak detection methods include inventory control, tank and line testing, interstitial monitoring, line leak detectors, and containment sump sensors. See 40CFR 280.43 for additional methods of release detections. Provide additional common leak detection methods.

Section 2.43. A monitoring well is used for groundwater monitoring as well as discussed in 2.30. Revise the sentence: "...obtain monitor groundwater for leak detection and to obtain groundwater samples as part of site assessment activates to determine extent and concentration of groundwater contamination. Site assessment monitoring wells should not be accessed for purposes of leak detection unless specifically identified for that purpose." For purposes of inspection and maintenance requirements site personnel should not be accessing site assessment monitoring wells.

Section 2.44. Observation wells typically do not meet the requirements for leak detection. Add to the beginning of the sentence: "...vertically within the underground tank excavation backfill." Delete the remainder of the sentence and add a new sentence: "Observation wells are typically not considered a release detection method unless they meet the requirements for groundwater monitoring (40 CFR 280.43(f)) or vapor monitoring (40 CFR 280.43(e)). Observation wells, however, permit an operator to investigate a potential release from the UST by checking for the presence of product floating on groundwater present in the UST excavation." Observation wells typically do not meet the requirements for leak detection. This makes a distinction between a monitoring well and observation well that is not obvious. The federal rule uses the term monitoring well with respect to the release detection requirements. This is acknowledged in Section 6.8. A clear distinction needs to be made between monitoring wells and observation wells. These are not the

same. It is not unusual to have vapors in a UST excavation, particularly for older sites. The presence of vapors in an observation well may not be evidence of a release.

Section 2.56. Delete “but not a release of product to the environment.” It is not appropriate to suggest that a release will not occur. A small release could still occur.

Section 2.62. Delete this section. Replace the term spill bucket with spill containment manhole in 6.7.1.3, A-4.5.2.2, B-7, B-10. The term should be replaced regardless of the decision on deleting this section. The term is used infrequently and many times it is also noted that it is referred to as spill bucket. A single term should be used in the document.

Section 4.2. Add to the end of section: "At minimum, in accordance with federal UST regulations (40 CFR 280.36(b) and 40 CFR 280.45(c), monthly inspection records should be maintained for one year and annual inspections should be retained for a period of five years. Maintaining monthly records for two to five years can provide information on typical failure rates and problem issues with various components to inform future inspections and maintenance." A minimum record retention should be consistent with the UST regs. 40 CFR 280.36(b) requires walkthrough inspections to be retained for one year. 40 CFR 280.45(c) requires release detection records to be maintained for five years. A minimum record retention time should be recommended. Multiple years of records can provide information on failure rates/problem issues with various components.

Section 5.10. Spills can also occur during fueling at a dispenser, during fuel deliveries to the UST, and during underground storage system equipment maintenance activities. Spills can occur at the dispenser islands during vehicle fueling.

Section 6.5. Replace the last sentence: "Regulations require that release detection methods, at minimum, be monitored monthly; however, many release detection methods monitor for release continually. As a general rule, regulations require that underground storage tank systems (tanks and piping) be inspected on a monthly basis for proper operation and indications of a potential release. The last sentence of the first paragraph referring to the general rule for evaluated leaks is misleading. Certain release detection devices are evaluated monthly for a release, but many release detection devices provide continuous release detection. The rule may require inspection/evaluation of the operation of the release detection device monthly, but many release detection methods are continuous. There is a difference between conducting monthly release detection and inspecting the UST system for proper operation and signs of a release.

Section 6.5.6. A checklist item similar to 6.5.6.1 should be added to verify that the SVM monitoring device is functioning properly. At minimum there should be a section that for manual soil vapor monitoring, the vapor monitoring equipment should be inspected for

proper operation and calibration and maintained in accordance with the manufacturer's requirements?

Section 6.6. Move 6.6.1 Spill Kit up to next level as a separate item (6.11) under the monthly checklist and update forms as needed. The spill kit is used for more than just tank related spills. This could get lost in the way it is presented.

Section 6.6.3. A comment should be added something similar to B-7 – spill containment manhole valves can introduce water into the tanks. If water is present in the spill containment manhole, do not drain water into the tank.

Section 6.7.1.3. Delete the term bulges in this section and sections 7.6.6, A-4.5.2.2 and occurrence on forms. Possibly add here and in the other sections: Sumps constructed of plastic are not rigid and may have deformities in the sides and bottom of the sump. These deformities should be inspected for signs of stress or cracks and monitored for changes in the deformity." It would seem this is referring to a deformation of the sump walled that could result in a failure of the wall. A deformity may be something that is monitored for change over time. Sumps constructed of plastic (not so much with FRP) all have bulges on the sides and bottom of the sumps. Polyethylene sumps are not structurally strong enough to not bulge. Bulges themselves are not of concern, cracks from excessive bulging are a concern. This section should talk of a visual inspection of the bottom and side walls looking for a crack, call it excessive deformity in the side bottom or side walls.

Section 6.8. Observation wells and monitoring wells are already defined in sections 2.43 and 2.44 (See comments on sections 2.43 and 2.44). Delete and replace 6.8 with: "Observation wells may be present in the UST excavation backfill, while monitoring wells may be present outside the UST excavation area for release detection or groundwater site assessment activities. This text mischaracterizes the used of observation wells and monitoring wells. The issue here is proper marking. There are significant differences in the placement and construction of wells. As discussed in comments on observation wells and monitoring wells (See comments on section 2.43 and 2.44).

Section 6.8.1. Revise sentence: "...monitoring wells that can be used to monitor groundwater for leak detection and to obtain groundwater samples as part of site assessment activities to determine extent and concentration of groundwater contamination."

Section 6.8.1. Symbol and requirement apply to both observation wells and monitoring wells. Replace occurrences of "observation well" with "observation and monitoring well"

Section 6.10. While unmonitored is explained in section 6.10, consider adding a definition for the terms unmonitored dispenser and unmonitored STP since these terms are used on forms and other areas of the document. Add definitions:

"Unmonitored dispenser. Unmonitored dispenser is a dispenser that is not equipped with a dispenser sump or dispenser pan or is equipped with a dispenser sump and dispenser pan but not continuously monitored with sensors."

"Unmonitored STP. Unmonitored STP is an STP that is not equipped with a STP sump or are equipped with an STP sump but not continuously monitored with sensors."

Section 7.10.1.2 and 7.10.2.3. Delete "in diesel tanks." It is prudent to inspect the drop tub shutoff regardless of the product stored. Also, consider adding a description of what is meant by excessive corrosion such as "corrosion posing a risk to structural integrity or performance of the equipment." Ethanol content can also cause corrosion on metallic parts. Corrosion could be an issue for gasoline tanks as well see Section 7.6.3. Also, consider adding a description of what is meant by excessive corrosion such as posing risk to structural integrity or performance.

Section A-4.5.2.3. For clarity replace the two occurrences of "containment manhole" with "spill containment manholes" where it is used instead of the defined term "spill containment manholes" Add the defined term.

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Section B-7. Does ethanol blended gasoline include E10 is this suggesting higher blends. Also, while this is under a section dealing with ethanol blended fuels, preventing water entry into the tank applies to spill containment manholes for all fuel types. This section should apply to all tanks and all fuels. Combine this section (B-7) and first part of the diesel section (B-10), they are essentially the same and retitle "Strategies for Detecting Water Intrusion.". See also comment on Section 6.6.3. Modify the discussion to note that for some fuels such as ethanol blends, use water paste and ATG probes that detect phase separation designed for use with the fuel. The strategies presented are no different than any fuel other than the type of past or components and may downplay the importance of water in other fuels. Also, this seems to create a difference between E10 and ethanol blended gasoline.