Questions And Answers About The 2015 Underground Storage Tank Regulation

As Of May 2017

The questions and answers below provide information about the 2015 federal underground storage tank (UST) regulation. The general topic areas and their respective page numbers are listed in the order presented.

Does The 2015 Federal UST Regulation Apply To You?

These questions and answers pertain to the 2015 revised **federal** UST regulation. Many states and territories (referred to as states) have state program approval from EPA. To find a list of states with state program approval, see www.epa.gov/ust/state-underground-storage-tank-ust-programs.

If your UST systems are located in a state **with** state program approval, your requirements may be different from those described in these questions and answers. To find information about your state's UST regulation, contact your implementing agency or visit its website. You can find links to state UST websites at www.epa.gov/ust/underground-storage-tank-ust-contacts#states.

If your UST systems are located in a state **without** state program approval, both the requirements associated with these questions and answers and the state requirements apply to you. To make sure you are in compliance, you should follow the more stringent requirement.

If your UST systems are located in Indian country, these questions and answers apply to you.

Topic	Question	Answer
Applicability		
Applicability	Are there any exemptions to the new regulations? Or are all USTs covered? For example, is there an exemption for a 1,000-gallon UST that is filled with heating oil?	The 2015 UST regulation discusses partial and complete exclusions from applicability in § 280.10 and definitional exemptions in § 280.12 (see the definition of underground storage tank). See the UST regulation at www.epa.gov/ust/revising-underground-storage-tank-regulations-revisions-existing-requirements-and-new.

Topic	Question	Answer
	Added: September 2015	The definition of underground storage tank at § 280.12 exempts tanks used to store heating oil for consumptive use on the premises where stored. So if this is a heating oil tank where the contents are used on the site where that tank is located, then EPA would not regulate this tank. Note that state UST programs may regulate tanks that EPA excludes from regulation or exempts by definition.
Implementation		
Implementation – Effective Dates	What are the effective dates for the requirements in the 2015 UST regulation? Added: September 2015	Generally, most requirements take effect October 13, 2018, which is 3 years after the effective date of the 2015 UST regulation. However, some requirements take effect on October 13, 2015, which is the effective date, or April 11, 2016, which is 180 days after the effective date. For example, the changes to compatibility take effect on October 13, 2015 and the secondary containment and under-dispenser containment requirements take effect April 11, 2016. For details about implementation time frames, see page 41570 of the *Federal Register* containing the 2015 UST regulation at www.gpo.gov/fdsys/pkg/FR-2015-07-15/pdf/2015-15914.pdf. In addition, EPA developed a brochure about implementation time frames, available at www.epa.gov/ust/implementation-time-frames-2015-underground-storage-tank-requirements.
Implementation – SPA	States have three years to obtain SPA or redo their SPA application. I assume that gives them 3 years to write a rule. If the operation and maintenance requirements have to be initiated within 3 years of the effective date of the rule, does that give SPA states 3 years or 6 years to start O&M requirements? Added: September 2015	In **states without state program approval (SPA) and in Indian country**, the 2015 federal requirements apply according to time frames specified in the 2015 UST regulation. In **states with SPA**, none of the 2015 federal requirements apply until a state adopts the federal requirements or if a state does not adopt the federal requirements, until EPA withdraws approval of SPA for that state. Owners and operators in states with SPA must continue to meet the state UST requirements. States with SPA have 3 years from October 13, 2015, which is the effective date of the 2015 UST regulation, to revise their regulations and submit a revised SPA application. States can give owners the same amount of time to meet the state requirements as the federal regulation gives owners to meet the federal requirements (that is, 3 years after the effective date of the state regulation.) However, EPA expects that many states will impose shorter time frames than those in the federal requirements and may even impose more stringent requirements than the federal regulation.
State Program Approval		
SPA And Meeting The Operator Training Requirement	Where in the preamble or regulations does it state that if the state meets the operator training requirement of the statute (and not the new regulations) they do not have to change their program requirements?	EPA agreed very early in the federal regulatory development process that we would allow states to continue to implement their state-specific operator training programs according to EPA's *Grant Guidelines To States For Implementing The Operator Training Provision Of The Energy Policy Act Of 2005*, despite differences that may exist with the operator training requirements in the 2015 UST regulation. The revised SPA regulation at § 281.39 – Operator Training, states: "In order to be considered no less stringent than the corresponding federal requirements for operator training, the state must have an operator training program that meets the minimum requirements of § 9010 of the Solid Waste Disposal Act." EPA developed operator training grant guidelines that meet § 9010 of the Solid Waste Disposal Act. As long as a

Topic	Question	Answer
		state meets the grant guidelines, it will be in compliance with § 9010 and, therefore, in compliance with § 281.39. So a state with SPA would meet the operator training requirement even if it is different from the 2015 UST regulation. Note that in non-SPA states, both state and federal operator training requirements apply.
	Added: September 2015	
Spill Buckets, Under Dispenser Containment Sumps, Containment Sumps		
Spill Bucket Testing On Stage I Vapor Recovery Lines	If an owner has spill containment buckets installed on the Stage I fittings on the UST systems, would those be required to be tested every 3 years as well (or monitored monthly)? Or would they not require a test because they are not attached to the tank fill? Added: September 2015	40 CFR part 280.20(c)(1)(i) only requires spill prevention equipment where the transfer hose is detached from the fill pipe. There is no requirement in the 2015 UST regulation for containment around a Stage I vapor recovery port. While it would be prudent to test any containment around the vapor recovery port, the 2015 UST regulation does not require owners and operators to perform this testing since the containment is not required by the UST regulation. Please note that the 2015 UST regulation requires testing of the containment if both the fill pipe and vapor recovery port are located in a single containment area. Note that state UST programs may have more stringent requirements and may require testing of containment around Stage I vapor recovery ports.
Spill Bucket Testing Of Double-Walled Spill Buckets	Are tank owners required to test double wall spill buckets if the interstitial space is periodically checked and found to have integrity? Added: September 2015	Spill containment 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 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.
Containment Sump – Liquid Tightness	EPA states that both new and existing containment sumps, when used for interstitial monitoring must be liquid tight. Does EPA require that containment sumps and under-dispenser containment (UDC) sumps be liquid tight on top, regardless of whether they have a lid or other cover? Added: September 2015	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 3 years to ensure the equipment is liquid tight. There are no further details in the 2015 UST regulation for containment sump testing. Using a liquid test method to test a containment sump does not test the top or lid of the containment. In a vacuum test method, typically the lids are removed during the test. Based on this information, EPA does not think containment sumps must be liquid tight on top, whether or not they have a lid or other cover.
Containment Sump – Dispenser Replacement And Under-	Are tank owners required to install UDC if only several components of the dispenser system are replaced, but not the entire dispenser system (for	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, unburied risers or flexible connectors, or other transitional components that connect the dispenser to the underground piping. This means that the

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Dispenser Containment Installation Requirements	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? Added: September 2015	UDC requirement is not triggered until the dispenser and everything between the dispenser and the underground piping is installed. Note that most states have already implemented their own requirements for secondary containment and UDC. The 2015 UST regulation primarily applies to owners and operators of UST systems in Indian country.
Containment Sump – UDC Installation With Sensor Monitoring	Will the replacement of a dispenser at a site trigger the need to add an under-dispenser containment sump and sensor monitoring? Added: December 2015	If an existing dispenser and the equipment used to connect the dispenser to the underground piping are removed and replaced with a new dispenser, then under-dispenser containment is required for that dispenser [see § 280.20(f)]. EPA does not require owners and operators to add sensors for monitoring under-dispenser containment when UDC is required. Owners and operators may need to add sensors to UDC areas to meet the periodic monitoring requirement for sumps that cannot be visually inspected or to meet the piping interstitial monitoring requirement when piping is installed or replaced after April 11, 2016 [see § 280.20(f)(2)].
Containment Sump – UDC Testing	Are tank owners required to test all UDC or only UDC used for both secondary containment and interstitial monitoring of pipes? Added: September 2015	Periodic testing of containment sumps, including UDC, is required only when the containment sump is used for secondary containment of the piping and 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, owners and operators have 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.
Containment Sump – Testing For Systems With Double-Walled Piping	Is containment sump testing required for double-walled piping systems that use sump sensors as a good management practice but rely on a method other than interstitial monitoring to meet the piping release detection requirement? Added: December 2015	No. The 2015 UST regulation does not require containment sump testing if the release detection method for the piping is something other than interstitial monitoring. While EPA does not require this testing, some states may treat redundant release detection systems differently. Owners and operators should check with their UST implementing agencies to determine applicable requirements.
Containment Sump – Testing For Systems with Double-Walled Piping – Open and Closed To The UDC	Do UDC sumps need to be tested once every 3 years if the double-walled piping is closed to the sump (i.e., the piping is double-walled throughout the dispenser and the containment sump is not used as part of the secondary containment of the piping)?	The requirement to test sumps, or have double-walled sumps with periodic monitoring, hinges on whether that sump is used as part of the piping secondary containment when interstitial monitoring is used as release detection for the piping. The requirement to test the sump is independent of whether the sump is open or closed or whether sensors reside in that sump or somewhere else. And it applies to any containment sump used for piping interstitial monitoring, independent of whether the containment sump is old or new. Any sump used as part of the secondary containment system that is interstitially monitored must either be double-walled with periodic monitoring of the space between the sump walls or be tested once every 3 years.

Topic	Question	Answer
	If the double-walled piping is open under the dispenser allowing a leak to drain into the dispenser sump or the submersible turbine pump (STP) sump, then do the UDC sumps and the STP sump have to be tested once every 3 years? Added: September 2015	For the question about closed piping under dispensers, in this case, the under-dispenser containment does not need to be tested because the UDC is not part of the piping secondary containment where interstitial monitoring is used. If the outer wall of the double-walled piping is open in the UDC, or ends at the UDC wall, then the UDC would be considered secondary containment for the single-walled piping in the UDC, independent of whether the UDC was open or closed to the STP sump. In this case, the UDC is part of the secondary containment and interstitial monitoring for the piping, and therefore would have to be tested once every 3 years, or be double-walled with periodic monitoring of the space between the walls.
Containment Sump – Testing For Systems With Single-Walled Piping	Suppose there is single-walled piping in a UDC sump leading up to the dispenser, below the shear valve, and the single-walled piping is connected by single-walled flex connector to double-walled piping. Does the single-walled piping have to meet the secondary containment and interstitial monitoring requirement? Does the UDC have to meet the 3 year testing requirement? Added: March 2017	Yes, to both questions. According to the 2015 federal UST regulation, all piping installed or replaced after April 11, 2016 must meet the secondary containment and interstitial monitoring requirement. EPA considers the UDC as secondary containment for the single-walled piping, including the single-walled flex connector, beneath the shear valve. According to § 280.43(g), owners must monitor the UDC by interstitial monitoring as the primary method of release detection. In this case, the UDC is part of the secondary containment and interstitial monitoring for the single-walled piping; it must be tested once every 3 years or be double-walled with periodic monitoring of the space between the walls. Note that most states have already implemented their own requirements for secondary containment and UDC. The 2015 federal UST regulation primarily applies to owners and operators in Indian country.
Containment Sump – Alternative Test Procedures	What is an example of an alternative sump testing procedure that would be considered no less protective of human health and the environment under 40 CFR 280.35(a)(1)(ii)(C)? **Regulatory requirement** 40 CFR 280.35(a)(1)(ii) requires spill prevention equipment and containment sumps used for interstitial monitoring of piping be tested at least once every	EPA allows a variety of approaches for testing spill prevention equipment and containment sumps (referred to as sumps), including following a code of practice developed by a nationally recognized association or independent testing laboratory per 40CFR 280.35(a)(1)(ii)(B). At this point, the Petroleum Equipment Institute's Recommended Practice 1200-12 is the only code of practice EPA is aware of. PEI RP 1200-12 requires testing the sump to 4 inches above the highest penetration. EPA is aware that in some situations, such as for certain older systems, testing to 4 inches above the highest penetration may create unusual challenges and unintended consequences. These include: • It could be difficult to access the sump, requiring the dispenser be removed in order to do the testing. • The challenges and costs of testing above penetration fittings may lead some owners to abandon their interstitial monitoring and move to a different and possibly less protective release detection method.

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	three years to ensure the equipment is liquid tight. Options for conducting the testing include: (A) requirements developed by the manufacturer, (B) a code of practice developed by a nationally recognized association or independent testing laboratory, (C) requirements developed by the implementing agency determined to be no less protective of the environment than (A) or (B) above. Added: May 2017	• The increased costs incurred for testing to the higher level may serve as a disincentive for owners to upgrade existing systems to include double-wall piping with interstitial monitoring and containment sumps. While testing to a level less than 4 inches above the highest penetration may be less protective than the current code of practice, if included in a package of requirements, the implementing agency may be able to determine the package is as protective as the code of practice. This example discusses what EPA considers to be no less protective under 40 CFR 280.35(a)(1)(ii)(C). **Example**: • A liquid level sensor is mounted at the lowest point in the sump and a periodic test is performed by adding liquid to a point that will ensure activation of the sensor*; and ▪ The pump automatically shuts off when product activates the sensor, or ▪ The dispenser automatically shuts off when product activates the sensor, and the facility is always staffed when the pumps are operational. *Check with the sensor manufacturer to determine the amount of liquid required to ensure activation of the sensor. Written documentation from the manufacturer detailing the minimum amount of liquid required to activate the sensor must be provided when the implementing agency requests it.
UST Sump Test Water Characterization And Disposal	Because petroleum constituents may be present, is the used test water considered a hazardous waste under 40 CFR Part 261, *Identification and Listing of Hazardous Waste*, (RCRA Subtitle C)?	Under the Resource Conservation and Recovery Act (RCRA), Subtitle C, a material must first be a solid waste as described under 40 CFR 261.2 before it can be a hazardous waste. As long as the test water is suitable for reuse and is continuing to be reused, it is not considered a waste. When it is to be disposed, it becomes a solid waste and must be evaluated to determine whether it is a hazardous waste. Once the sump test water will be disposed, the test water will be a hazardous waste if it exhibits any of the characteristics of hazardous waste described in 40 CFR 261.21-24. With the test water, the most likely characteristics that could apply are the toxicity characteristic (TC) in 40 CFR 261.24 and ignitability characteristic in 40 CFR 261.21. • Toxicity characteristic: The chemical benzene, often found in petroleum products, is the constituent most likely to be found in UST sump test water in concentrations equal to or greater than the TC regulatory value, which for benzene is 0.5 mg/l. Thus approximately 0.007 ounces of benzene in 100 gallons of test water would exceed the TC limit. Note: The water solubility of benzene at 23.5 degrees C is 0.188 percent, or 1880 ppm. While gasoline has typically contained approximately 1 percent benzene, in 2011 EPA required benzene to be limited to 0.62 percent; see entry 1094 of the Merck Index, 12th Ed., 1996, and www.epa.gov/gasoline-standards/gasoline-mobile-source-air-toxics. • Ignitability characteristic: If a representative sample of the sump test water exhibits a flash point below 140 degrees F at the point of generation or during the course of its management, it would be an ignitable hazardous waste. Note: Pure benzene has a closed cup flash point of 12 degrees F; see entry 1094 of the Merck Index, 12th Ed., 1996.

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		• Gasoline is more likely than diesel fuel, kerosene, or heating oil to be hazardous for benzene or flash point. Kerosene has a flash point of 150-185 degrees F; see entry 5305, Merck Index, 12th Ed, 1996.
	What procedures can be used to determine if the test water is hazardous waste under RCRA Subtitle C?	40 CFR Section 262.11, *Standards Applicable to Generators of Hazardous Waste*, requires generators to employ one of two procedures to determine whether or not a solid waste is a hazardous waste: • Analytical testing: With respect to the sump test water, the relevant tests for benzene are: EPA Method 1311/8260 or 1311/5030/8015 or 1311/5030/8021 to determine if there is enough benzene in the test water that it fails for toxicity, and EPA Methods 1010A or 1020B to determine if the test water fails for ignitability. Toxicity characteristic leaching procedure, or TCLP, is the method used for determining whether a waste exhibits the toxicity characteristic; see 40 CFR 262.11. Note the TCLP test considers the solids content of the test water. More information about these laboratory test methods are available on EPA's website www.epa.gov/hw-sw846/sw-846-compendium. • Generator knowledge: Generators may apply knowledge of the hazard characteristics of the waste in light of the materials or the process used to generate the waste. The key to using a knowledge of process is that it should be scientifically defensible and capable of reliably and accurately determining whether or not the waste is hazardous, particularly for non-hazardous determinations. Because only a very small amount of benzene needs to be present in order for the test water to be TC hazardous (approximately 0.007 ounces of benzene in 100 gallons of water), a knowledge of process evaluation is in all likelihood incapable of ascertaining that the test water is non-hazardous, but it certainly could be used to determine the water to be hazardous (based on the water solubility of benzene and its presence in gasoline). Appropriate knowledge of materials and process for a waste stream like the test water could include information such as: ▪ The process that generated the waste (that is, the fact that this process brings water into contact with gasoline, which contains benzene). ▪ Observation of visible free petroleum in the test water, since the test water is likely to fail analytical testing if visible petroleum is present. ▪ Past sampling results of prior test water generated under similar conditions. ▪ Basic physical and chemical knowledge about likely waste constituents.
	Is the test water exempt from the hazardous waste requirements via the exemption in 40 CFR 261.4 (b)(10)? This exemption states that the following solid wastes are not hazardous wastes: 40 CFR 261.4(b)(10): "*Petroleum-contaminated media and debris that fail the test for the Toxicity Characteristic of §261.24 (Hazardous Waste Codes D018 through D043 only)*	The test water does not qualify for this exemption from the hazardous waste requirement for several reasons. First, the test water is not consistent with the term media or debris as defined in 40 CFR 261 and 40 CFR 268.2(g). That is, the water being discarded has been used as a product for testing sump integrity and is not ambient media that has been contaminated by an outside source. Second, even if it were media or debris that fails the toxicity characteristics of § 261.24, the test water is not subject to the corrective action regulations under 40 CFR 280. Water used to test multiple sumps may pick up petroleum constituents but would not generally require reporting under the UST regulations, unless there is an indication of a release from the UST system. Therefore, sump test water does not meet the requirements for the exemption. *Federal Register*, Vol 58, No 28 www.gpo.gov/fdsys/pkg/FR-1993-02-12/pdf/FR-1993-02-12.pdf.

Topic	Question	Answer
	and are subject to the corrective action regulations under part 280 of this chapter."	
	Is the test water exempt from the hazardous waste requirements if it is sent for reclamation per 40 CFR 261.2(c)(3)?	The regulation at 40 CFR 261.2(c)(3) exempts from regulation off-specification commercial chemical products that are legitimately reclaimed to produce fuels. EPA has interpreted this exemption to include off-specification fuel materials such as fuel and water mixtures. See https://yosemite.epa.gov/osw/rcra.nsf/0c994248c239947e85256d090071175f/2AADE9885915F9F98525807900511B76/$file/14883.pdf This exemption could apply to the test water, if the test water contains enough fuel such that fuel could be legitimately reclaimed if the test water is sent to a fuel recycling facility for recovery.
	If the water is reused multiple times and transferred from one sump to another, when does a hazardous characterization have to occur?	If the testing contractor or UST facility owner and operator can and does reuse the test water to perform testing at another facility, then the test water is not a waste at that point. A testing contractor or UST facility owner and operator could potentially reuse the water over and over again, especially if the test water is filtered in between uses to remove any free or dissolved petroleum. When the tester decides not to reuse the water, it then becomes a waste, must be characterized, and either properly disposed or determined if it can be reclaimed as discussed in question above about reclamation.
	If the test water is characterized as hazardous waste, how must it be properly managed?	Possible options include legitimate reclamation of the test water or disposing of it according to prescribed RCRA regulations. • See question and answer above for possible reclamation options. • Possible disposal options include: ▪ If the test water is not ignitable, it may be acceptable to dispose of it via the sanitary sewer. Approval from the local sewer authority is generally required and it is highly recommended that you check with your state, tribal, and local authorities for rules or other restrictions regarding such a disposal method. ▪ You may drum and store the test water properly until a hazardous waste hauler picks it up according the hazardous waste generator regulations which specify accumulation time and management standards depending on how much hazardous waste is generated in a calendar month; see EPA hazardous waste generator website for more info www.epa.gov/hwgenerators. Check with your state, tribal, and local authorities for the applicable requirements for hazardous waste stored on site by generators and also to determine if there are licensing requirements for hazardous waste haulers in your jurisdiction. ▪ You may filter the test water through an oil-water separator and properly dispose of the oil and water. Check with your state, tribal, and local authorities for requirements regarding disposal of the oil and water from the oil-water separator. It is possible that even after the water is filtered, it may contain enough benzene to be considered hazardous waste.

Topic	Question	Answer
	If the test water is not characterized as being a hazardous waste, how can it be properly disposed?	Even where the water is non-hazardous under the RCRA regulations, the testing contractor or UST facility owner and operator should check with state, tribal, and local authorities regarding applicable requirements for disposal, including disposal to the sanitary sewer or other safe waste management practice.
	Who becomes the generator for the test water when it is no longer usable and becomes a waste?	This depends on when and where the test water becomes a waste. If the test water is used just once prior to being disposed, then the facility where the test is conducted is the generation site. Under the RCRA hazardous waste generator requirements, where more than one party's actions contribute to a waste being generated, all parties are subject to joint and several liability as generators – they are co-generators. For example, the testing contractor is a generator under 40 CFR 262.10 because his actions produce the waste test water, and the owner and operator of the facility is a generator because they own the equipment from which the waste is generated. Joint and several liability dictates that both generators are responsible for ensuring compliance with applicable hazardous waste requirements. However, EPA prefers and even encourages one party to assume and perform the duties and responsibilities of generator on behalf of all parties, as appropriate. EPA recommends that co-generators specify via a contract who is responsible for compliance with hazardous waste and disposal requirements.
	What if it is not determined whether the test water will be reused until after the test water is returned to the testing contractor's home site? Added: May 2017	If the test water is returned to the testing contractor's home site and it is then determined the test water will not be reused, the testing contractor is the sole generator and solely responsible for evaluating and properly managing the waste. For additional information, see EPA's *Waste Analysis at Facilities that Generate, Treat, Store and Dispose of Hazardous Waste – Final: A Guidance Manual* www.epa.gov/sites/production/files/2015-04/documents/tsdf-wap-guide-final.pdf
Secondary Containment And Interstitial Monitoring		
Secondary Containment And Interstitial Monitoring	After April 2016 new installations must use interstitial monitoring for release detection. Can locations installed prior to April 2016 that have all components necessary to perform interstitial monitoring use another form of release detection? For examples, could double-walled tanks use SIR or CSLD? Could double-walled piping use 3 gph LLDs and annual line tightness testing? Added: September 2015	The 2015 federal UST requirement for secondary containment and interstitial monitoring only applies to tanks and piping installed after April 11, 2016. Owners and operators who install petroleum tanks on or before April 11, 2016 may choose to use any of the release detection options listed in Subpart D of the UST regulation. They are not restricted to only interstitial monitoring. Owners and operators who install piping on or before April 11, 2016 may choose to use any of the release detection options listed in Subpart D of the UST regulation. They are not restricted to only interstitial monitoring. Note that some states already have secondary containment requirements in place, so to determine their requirements, owners and operators need to check with the state in which the USTs reside.

Topic	Question	Answer
Interstitial Monitoring	Do new or replacement fiberglass clad steel tanks need interstitial monitoring? Added: September 2015	The 2015 UST regulation requires all underground storage tanks and piping to have secondary containment and interstitial monitoring when installed or replaced after April 11, 2016. A fiberglass clad steel tank is not considered secondarily contained unless it has two steel walls. However, a steel tank jacketed with fiberglass is a secondarily contained tank. Note that some states already have secondary containment and interstitial monitoring requirements in place, so to determine their requirements, owners and operators need to check with the state in which the USTs reside.
Piping Run Replacement And Secondary Containment	When is secondary containment required when a piping run is replaced? Added: March 2017	After April 11, 2016 when 50 percent or more of the piping connected to a single tank is removed and replaced, the piping must have secondary containment. § 280.12 Replaced means:…(2) For piping – to remove 50 percent or more of piping and install other piping, excluding connectors, connected to a single tank. For tanks with multiple piping runs, this definition applies independently to each piping run. § 280.20 Performance standards for new UST systems…tanks and piping installed or replaced after April 11, 2016 must be secondarily contained and use interstitial monitoring in accordance with § 280.43(g)…For cases where the piping is considered to be replaced, the entire piping run must be secondarily contained.
Secondary Containment For Piping Run Replacements With More Than One STP	How do I apply the requirement for secondary containment when 50 percent of a piping run is replaced when there is more than one STP (either manifolded or in line)?	Each UST site may have unique characteristics that require implementing agencies to think about how to apply the piping run definition. As a general rule of thumb, EPA considers all piping downstream from a single submersible turbine pump (STP) to be part of a single piping run. Likewise, all piping upstream from the suction pump to the storage tank would be part of a single piping run. The examples and graphics below help explain this. **Example 1**: If an owner and operator have two STPs on a single tank where piping leaves each STP and then joins together at some later point, these are two piping runs with some of the same piping attributed to each piping run. Changes to the piping that is shared by both piping runs will impact the calculation of the 50 percent replacement and secondary containment requirements for each entire piping run. If the secondary containment is only triggered for one of the piping runs, then secondary containment is only required for that one entire piping run.

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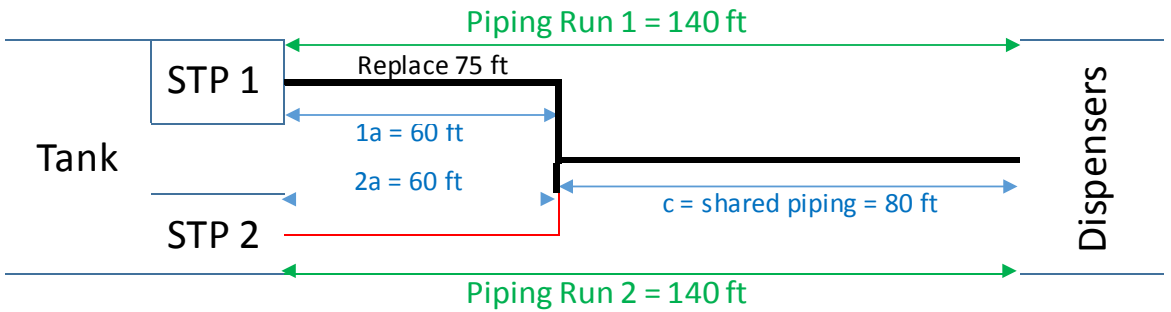
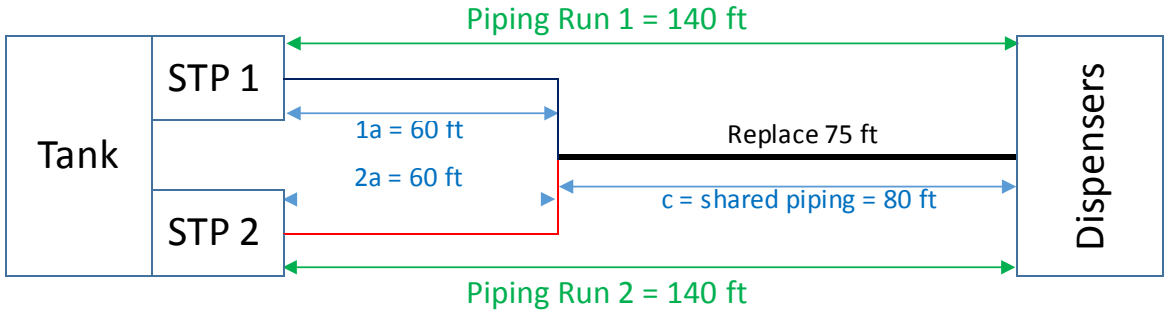
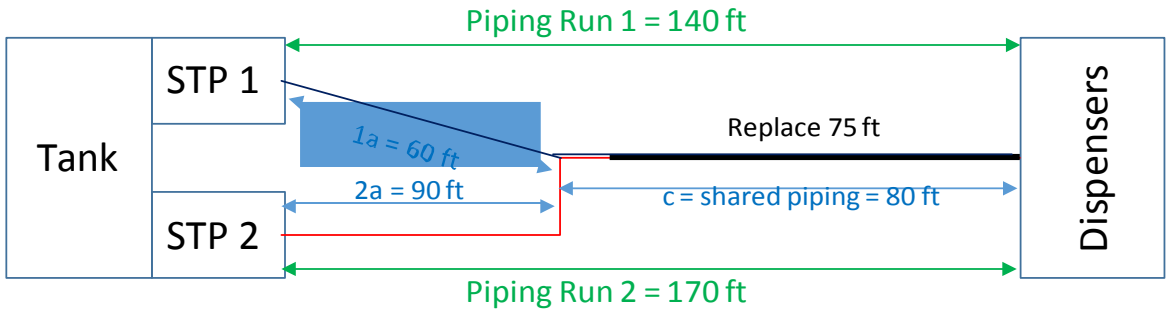
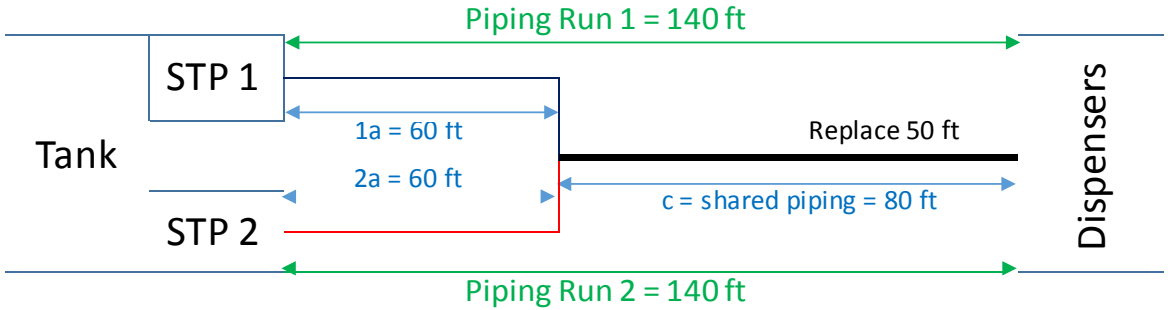
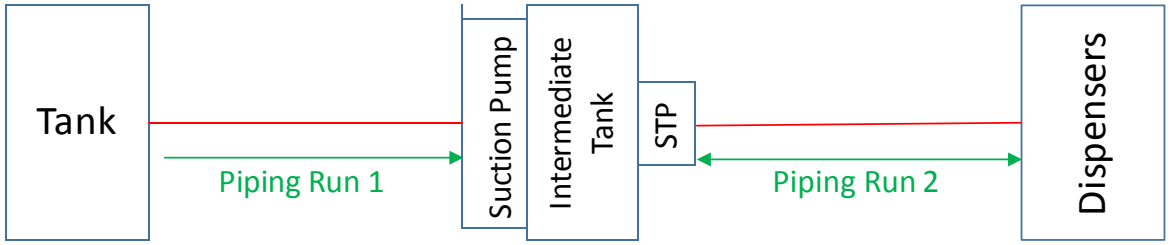
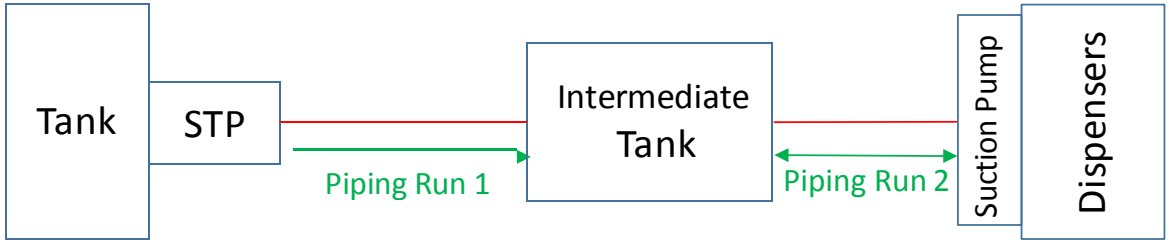
		Example 1A  • 75 feet of piping run 1 is replaced, beginning at the STP and ending 15 feet into the shared piping run c. • This equals more than 50 percent of the 140 feet total length of piping run 1; therefore, all of piping run 1 must be replaced and have secondary containment. The piping run begins at the STP and ends at the dispensers and equals 140 feet. • Because the piping segment that is shared by both piping runs is now required to be replaced, this may impact piping run 2. • The 80-foot replacement of shared piping run c, is greater than 50 percent of the 140 feet total length of piping run 2; therefore, all of piping run 2 must be replaced and have secondary containment. **Example 1B**  • 75 feet of shared piping run c is replaced. • This is greater than 50 percent of the 140 feet total length of piping run 1 and greater than 50 percent of the 140 feet total length of piping run 2; therefore, all of piping run 1 and all of piping run 2 must be replaced and have secondary containment.

Topic	Question	Answer
		Example 1C  • 75 feet of shared piping run c is replaced. • This is greater than 50 percent of the 140 feed total length of piping run 1; therefore, all of piping run 1 must be replaced and have secondary containment. • Because the piping segment that is shared by both piping runs is now required to be replaced, this may impact piping run 2. • The total length of piping run 2 is 170 feet. The 80-foot replacement of shared piping run c does not equal 50 percent of the length of piping run 2; therefore piping run 2a, from the STP to the junction where shared piping begins, does not have to be replaced and may remain single walled. **Example 1D**  • 50 feet of shared piping run c is replaced. • Because 50 feet is less than 50 percent of the total of either piping run 1 or piping run 2, no secondary containment is required on the replaced section of piping.
	How do I apply the piping run definition if the piping has both a suction pump and a pressurized pump?	**Example 2:** If an owner and operator has a suction piping system from the tank to an intermediate storage tank, followed by a pressurized piping system from the intermediate tank to the end of the piping. EPA considers these are two piping runs.

Topic	Question	Answer
		 • The suction piping run 1 passes from the tank to the suction pump. • The pressurized piping run 2 passes from the STP to the dispensers. **Example 3:** If an owner and operator has an STP with pressurized piping beginning at the tank followed by a suction pump at some point in the piping, these are two piping runs. For this configuration, there needs to be some intermediate storage from which the suction pump draws the regulated substance. This scenario assumes the pressurized piping pumps regulated substance to an intermediate storage area where it is then drawn using a suction system. EPA considers these are two piping runs.  • The pressurized piping run 1 passes from the STP to the intermediate storage tank. • The suction piping run 2 passes from the intermediate tank to the suction pump. Note that in all of these examples, the UST regulation does not include aboveground piping.
	Added: December 2015 Modified: March 2017	
Day Tanks	Do day tanks that are considered underground storage tanks need secondary containment if they are less than 1,100 gallons?	Generally, yes. Day tanks that are part of a regulated UST system installed after April 11, 2016 must be secondarily contained and have interstitial monitoring; see § 280.20. If day tanks were installed prior to October 13, 2015, owners and operators have until October 13, 2018 to begin meeting the release detection requirements in subpart D of the 2015 UST regulation. There are two exceptions: • An owner and operator has an aboveground day tank associated with an airport hydrant system or field-constructed tank where the overall system meets EPA's definition of UST system. In this case, the aboveground day tank is partially excluded from most of the 2015 UST regulation, including secondary containment and interstitial monitoring; see § 280.10(c).

Topic	Question	Answer
	Added: December 2015	• The definition of underground storage tank in § 280.12 excludes (1) farm or residential tanks of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes and (2) tanks used for storing heating oil for consumptive use on the premises where stored.
Secondary Containment Requirements For Interstitial Connection Tube	In a double-walled piping system where the interstitial space is connected around a pipe fitting in the UDC via a single-walled jumper connection tube, would the jumper connection tube require secondary containment? Would the UDC need to be periodically tested to provide secondary containment for the jumper connection tube? Added: March 2017	The jumper connection tube connecting the secondary containment interstice around a pipe fitting in the UDC does not require secondary containment. The UDC, therefore, would not have to be periodically tested as a means of secondary containment for the interstice jumper connection tube. However, according to the 2015 federal UST regulation, all piping installed or replaced after April 11, 2016 must meet the secondary containment and interstitial monitoring requirement. If single-walled piping is present, EPA considers the UDC as secondary containment for the single-walled piping, including the single-walled flex connector, riser, or tee beneath the shear valve. In this case, the UDC is part of the secondary containment and interstitial monitoring for the single-walled piping and, therefore, it must be tested once every 3 years or be double-walled with periodic monitoring of the space between the walls.
Overfill Protection		
Overfill Prevention Inspections	Are tank owners required to pull the automatic shut off device out of the tank during the periodic overfill inspection process? Added: September 2015	The 2015 UST regulation in § 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 be removed during the inspection. The inspection criteria are listed in § 280.35 (a)(1)(ii)(A-C).
Overfill Prevention Inspections – Multiple Devices	Some UST systems use two or more of the overfill prevention options listed in the federal UST regulation. Do owners and operators have to inspect all overfill devices used on the tank or only the one being used to meet the overfill prevention requirement? Added: December 2015	From EPA's perspective, only the method of overfill prevention being used to meet the UST regulation must meet the overfill prevention inspection requirement in § 280.35. One note: owners and operators must ensure any secondary overfill methods they use do not interfere with the primary method they use to meet the overfill prevention requirement. You should not use an automatic shutoff device if the UST receives pressurized deliveries. Some states may require inspections of all overfill prevention equipment used on the UST system. Please check with implementing agencies to determine their requirements.
Ball Float Valves	If a tank owner and operator is using a high level alarm set to 90 percent capacity to meet the overfill prevention requirements, can the tank owner still install a ball float valve after October 13,	Owners and operators may not use flow restrictors in vent lines (also called ball float valves) to meet the overfill prevention requirement when overfill prevention equipment is installed or replaced after October 13, 2015. The preamble to the 2015 UST regulation (see July 13, 2015 *Federal Register*, Vol. 80, No. 135, page 41600, 2nd column at www.gpo.gov/fdsys/pkg/FR-2015-07-15/pdf/2015-15914.pdf indicates that flow restrictors can continue to be used for reasons other than meeting the overfill prevention requirement so long as the flow restrictor does not interfere with the operation of the overfill prevention equipment being used.

Topic	Question	Answer
	2015 set at a higher level as a second line of defense? Added: December 2015	Owners and operators should check with their state UST implementing agencies since those requirements may be more stringent.
Internal Lining		
Internal Lining For Reasons Other Than Meeting The Tank Corrosion Protection Requirement	The 2015 UST regulation no longer allows internal lining to meet the corrosion protection requirement for existing tanks. Can an owner and operator add an internal lining for reasons other than meeting the corrosion protection requirement? Added: December 2015	Although owners and operators may no longer line their UST systems to meet the corrosion protection requirement for tanks [see § 280.21(b)(1)], they may internally line their tanks for other reasons. For example, owners and operators may internally line their tanks for compatibility reasons or to add secondary containment to their tanks.
Walkthrough Inspections		
Walkthrough Inspection Requirements When Using SIR For Release Detection	If a tank owner uses SIR, what must the tank owner inspect on a monthly basis? How does ATG and SIR impact sump inspection? If using ATG and SIR, would sump inspections be required more often than once per year? Added: September 2015	For the release detection part of the walkthrough inspection described in § 280.36, owners and operators using statistical inventory reconciliation (SIR) must ensure their SIR records are reviewed and current. In addition, if they use electronic equipment, for example an automatic tank gauge (ATG) to gather the SIR data, they must look at the ATG 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.
Walkthrough Inspection For Emergency Generator USTs	How does the 30-day walkthrough inspection apply to remote, unmanned emergency generator UST systems? Added: September 2015	EPA provides some additional flexibility to the 30-day walkthrough inspection for remote, unmanned facilities. The 2015 UST regulation allows checks of the spill containment area before each delivery at these facilities, since someone should be on site for the delivery, instead of once every 30 days if deliveries are received less frequently than every 30 days. Remember to keep records of the delivery in this case. In addition, the preamble to the 2015 UST regulation indicates that owners and operators who monitor their release detection system remotely may check the release detection equipment and records remotely every 30 days, as long as the release detection system at the UST system location is determined to be in communication with the remote monitoring equipment.
Electronic Monitoring Of Sumps	EPA allows the installation of electronic monitoring of sumps that cannot be accessed for	The periodic monitoring of under-dispenser containment (UDC) at § 280.20(f)(2) only applies to UDC where access to the components in the UDC is not possible. This provision was included because some fire code officials interpret the fire codes to require the sump be filled with stone or dirt for fire safety. In this

Topic	Question	Answer
	inspection. If a sump has electronic monitoring, do inspections and testing need to be performed? Added: September 2015	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 the owner and operator may not see much 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.
Release Detection		
Release Detection Testing Of Electronic Line Leak Detectors	Do electronic line leak detectors (ELLDs) used to meet the 0.2 or 0.1 gph release detection requirement have to be tested by simulating a 0.2 or 0.1 gph leak? Added: September 2015	The 2015 UST regulation at § 280.40(a)(3)(iii) specifically requires annual testing of automatic line leak detectors (ALLD) be performed by simulating a leak to test the performance standard of the equipment – that is, ensure it is capable of detecting a leak rate of 3 gallons per hour (gph) at 10 pounds per square inch line pressure within 1 hour. EPA's annual testing requirement for release detection equipment targets electronic and mechanical components typically permanently installed on the UST system. EPA did not specifically include equipment such as line tightness testing as part of the annual testing requirement since this equipment is typically not permanently installed and is brought in and removed by third-party service providers. Some states allow owners and operators to use ALLDs to meet the pressurized piping release detection requirements, specifically, as equivalents to monthly monitoring that targets a 0.2 gph leak rate and the annual line tightness testing requirement that must meet a 0.1 gph leak rate. While the 2015 UST regulation does not specifically say owners and operators must test ALLDs at 0.2 or 0.1 gph, owners and operators who use their ALLD to meet EPA's requirements for 0.2 or 0.1 gph testing must test that device for proper operation according to § 280.40(a)(3). Although not explicitly stated in the 2015 UST regulation, one way to test an ALLD for proper operation would be to simulate a 0.2 or 0.1 gph leak. Note that such a test must be conducted according to manufacturer's instructions; a code of practice developed by a nationally recognized association or independent testing laboratory; or requirements determined by the implementing agency to be no less protective of human health and the environment.
Compatibility		
Compatibility – B100	Is B100 a regulated substance in the 2015 UST regulation? Added: September 2015	In order to be a regulated substance, B100, which is 100 percent biodiesel, must be petroleum or a CERCLA-listed hazardous substance. Petroleum is defined to be a complex blend of hydrocarbons. B100 is not a hydrocarbon, so B100 stored in an UST would not meet the definition of petroleum. In addition, B100 is not on the CERCLA list of hazardous substances. Therefore, USTs storing 100 percent biodiesel are not regulated under the 2015 UST regulation. EPA understands that most biodiesel is blended with some regular diesel. If the biodiesel is blended with any amount of diesel, including even a de minimus or trace amount of diesel, then USTs storing that blend would be regulated as petroleum USTs under the 2015 UST regulation.

Topic	Question	Answer
Release Reporting		
Implementing Agency Notification	If the owner immediately responds to the alarm of liquid in an interstitial space, the liquid is removed, repairs made (if necessary) and everything is back in normal operating condition within 24 hours, is notification of the interstitial alarm condition still required to be made to the implementing agency within that 24 hour period? Added: December 2015	Liquid in the interstitial space of secondarily contained systems is an unusual operating condition except when the interstitial space is filled with a liquid, such as brine for interstitial monitoring. Alarms must be investigated and their cause determined to ensure a release of product to the environment has not occurred. If the alarm is caused by liquid in the interstice and the liquid is immediately removed according to § 280.50(c)(2)(i) and defective system equipment is immediately repaired or replaced according to § 280.50(c)(2)(ii), then owners and operators are not required to notify implementing agencies. Owners and operators should check with their state UST implementing agencies since those requirements may be more stringent.
Temporarily Out Of Use Facilities		
Temporarily Out Of Use Facilities	Do the new UST regulations apply to temporarily out of use (TOU) facilities? Added: September 2015	Yes. But EPA excluded TOU facilities from some of the 2015 requirements. See 40 CFR part 280.70 for specific requirements related to TOU tanks. In addition, EPA's website also describes the TOU requirements in the 2015 UST regulation; see www.epa.gov/ust/resources-ust-owners-and-operators#closing.
Partially Excluded USTs		
Financial Responsibility	How do the financial responsibility requirements in subpart H apply to UST systems partially excluded from the federal UST regulation at § 280.10(c)? Added: December 2015	The financial responsibility requirements **do not** apply to these partially excluded UST systems, see § 280.90: • Wastewater treatment tank systems; • UST systems containing radioactive material regulated under the Atomic Energy Act of 1954; and • UST systems that are part of an emergency generator system at nuclear power generation facilities licensed by the Nuclear Regulatory Commission (NRC) and subject to NRC requirements regarding design and quality criteria. The financial responsibility requirements **do** apply to these partially excluded UST systems, as discussed in the 2015 UST regulation; see § 280.90: • Aboveground storage tanks associated with airport hydrant fuel distribution systems; and • UST systems with field-constructed tanks.
Statistical Inventory Reconciliation		
30-Day Release Detection Requirement	What is EPA's position on using statistical inventory reconciliation (SIR) methods to meet the 30-day release detection monitoring	Owners and operators of underground storage tanks using SIR to meet the federal tank release detection requirement must determine the leak status of their underground storage tanks within the 30-day monitoring period. EPA established the 30-day monitoring period in the 1988 federal UST regulation and re-confirmed it in the 2015 federal UST regulation.

Topic	Question	Answer
	requirement in the federal underground storage tank regulation? Added: September 2016	UST system owners and operators may use SIR or another method to meet the tank release detection requirement, as long as the method meets specified performance standards. One performance standard that applies to all release detection methods is the need to determine the tank's leak status in a 30-day monitoring period. That means owners and operators using SIR or another release detection method must determine the leak status of their USTs within the 30-day monitoring period. For UST system owners and operators who use SIR methods that have difficulty meeting the tank release detection requirement, owners can address this by: • Conducting a more frequent analysis; • Sending data more expeditiously by electronic means; • Using a SIR vendor that currently meets the 30-day requirement; • Discussing changing method or data collection procedures with their SIR vendor in order to meet EPA's release detection requirement; or • Using another type of release detection method.
Rolling Data Collection	Can EPA explain how UST owners and operators use rolling data collection to conduct more frequent analyses of the SIR method? Added: September 2016	EPA is allowing UST owners and operators the option of performing their SIR analyses more frequently using inventory data from the current monitoring period combined with data from the previous monitoring period. For example, for vendors that require 30 days of data, tank owners and operators could: • Collect data approximately every 16 days and combine this with approximately 14 days of previous inventory data for a combined 30 days of data; and • Receive leak status results from their vendors in a timely manner – approximately 3 to 5 days. This example assumes the SIR vendor will use data submitted by the owner and operator for the previous monitoring period or the owner and operator will resend that previously submitted data to their vendor. The result is more frequent analyses of the UST system's leak status, and EPA thinks this is an acceptable option. UST system owners and operators must check with their UST implementing agency to determine if this option is allowed.
Applicability Of SIR In SPA Versus Non-SPA States	What must owners and operators using SIR in a state with state program approval do to be in compliance with the federal UST regulation? How about using SIR in a state without state program approval? Added: September 2016	Owners and operators using SIR in a state with state program approval (SPA) may continue to comply with their state's existing regulation until either the state changes its requirements or the state no longer has SPA status. The federal UST regulation will apply if a state no longer has SPA status. States with SPA have until October 13, 2018 to reapply. Owners and operators using SIR or another release detection method in a state without SPA must now and in the future meet the federal UST requirements, as well as requirements of their state.
Background On SIR	What background information can EPA provide regarding our position on SIR?	EPA added SIR to the 2015 federal UST regulation and clarified that SIR must: • Report a quantitative result with calculated leak rate; • Be capable of detecting a leak rate of at least 0.2 gallon per hour with a probability of detection of not less than 0.95 and a probability of false alarm of no greater than 0.05; and • Use a threshold that does not exceed one-half the minimum detectable leak rate.

Topic	Question	Answer
	Added: September 2016 Modified: March 2017	The 2011 proposed UST regulation (76 Fed. Reg. 71745, November 18, 2011) and the 2015 final UST regulation (80 Fed. Reg. 41610, July 15, 2015) provide additional background about EPA's decision to not include a special designation that SIR users must meet the 30-day requirement. In the 1988 UST regulation, EPA allowed use of SIR under the other methods category; that regulation required SIR users to meet the 30-day monitoring period. EPA requires that all release detection methods, including SIR, must obtain a conclusive result of pass or fail within a 30-day monitoring period. SIR results are sometimes inconclusive, and EPA considers inconclusive results from SIR to mean owners have not performed release detection for that 30-day monitoring period. The National Work Group on Leak Detection Evaluations (NWGLDE) provides a table of recognized third-party evaluated SIR methods. The table includes data requirements for each SIR method. EPA encourages UST system owners and operators to use this table to identify whether their SIR method may have difficulty meeting EPA's 30-day monitoring requirement.