

**OFFICE OF THE STATE FIRE MARSHAL
STATE OF ILLINOIS**

Statute, Rule or Standard Policy Interpretation:

Policy Number: 15-PCS-001 Stand Alone System Effective Date: January, 1, 2015

Title:	41 Ill. Adm. Code
Part:	175
Part Title:	Technical Requirements For Underground Storage Tanks and the Storage, Transportation, Sale and Use of Petroleum and Other Regulated Substances
Subpart (1 of 3):	C
Subpart Title:	Permits, Fees and Scheduling
Section Numbers:	175.300 & 175.320
Section Titles:	Permitted UST Activity; Scheduling of UST Activity
Subpart (2 of 3)	D
Subpart Title:	Design, Installation and Construction Requirements
Section Numbers	175.415
Section Titles:	UST Compatibility with Product Stored
Subpart (3 of 3):	F
Subpart Title:	Release Detection
Section Numbers:	175.610; 175.630
Section Titles:	General Release Detection Requirements for All USTs; Methods of and Requirements for Release Detection for Tanks

Purpose: This policy addresses a proprietary product now available to Illinois UST owners which is called the Stand Alone System (SAS) by its developer and installer, Tank Tech, Inc. This product, a field-installed UST upgrade to a qualifying single or double wall UST, provides a noncorrodible and secondarily contained product storage tank capable of being monitored interstitially when installed within an existing UST.

Scope: Statewide

Current Code: 175.300 Permitted UST Activity

- Upgrading a single wall tank using the SAS will be done as an Upgrade under an OSFM issued UPG permit, following current requirements of the section for permitted activity.

175.320 Scheduling of UST Activity

- 175.320(c) states in part as follows: *OSI activity includes removal, abandonment-in-place, and any hot work.*
- 175.320(d) states in part as follows: *PAI permitted activity includes installation, upgrades, flex connector activity, repairs not involving hot work, or cathodic protection activity.*

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Policy Interpretation: While permitted UST upgrade activities are assigned PAI status, for SAS upgrades the activity will be scheduled as an OSI for the initial tank entry, tank cleaning, qualifying evaluation and, if indicated, removal of any existing lining materials. The final inspection shall also be scheduled as an OSI activity. Installation of the SAS in a cleaned and vapor freed UST will be under PAI scheduling requirements.

Current Code: 175.415 UST Compatibility with Product Stored

- 175.415 states in part as follows: *Owners and operators shall use a UST compatible with the product stored in the UST.*

Policy Interpretation: As part of the UL1316 certification process, the SAS was found by UL to be approved “for use in the storage of petroleum products, alcohols and alcohol-gasoline mixtures” (UL letter dated 11/22/2011 from Tim Crews, Staff Engineer, *re* Tank Tech Inc.’s Stand Alone Tank System). Non-petroleum products, or liquids other than alcohols and alcohol-gasoline mixture liquids must be independently certified as compatible with the SAS before OSFM can approve the use of an SAS for such product storage.

Current Code: 175.610 General Release Detection Requirements for all USTs

- 175.610(a) states in part as follows: *Owners or operators of new and existing USTs shall provide a method, or combination of methods, of release detection that: 1) Can detect a release from the entire tank.*
- 175.630(g) states in part as follows: *Interstitial monitoring between the UST and a secondary barrier immediately around or beneath it, or interstitial monitoring as required by Sections 175.400(a) and 175.420(b) and meeting the requirements of this Section may be used but only if the system is designed, constructed and installed to detect a leak from any portion of the tank that routinely contains product.*

Policy Interpretation: Tank Tech Inc. attests that their “SAS is uniquely designed with a proprietary monitoring housing which allows for continuous monitoring of the annular space and guarantees 360° of communication” in their product literature. This is supported by the UL1316 certification which found the annular space able to be monitored by wet, dry, vacuum or pressurized leak detection methods.

Further Information: 1.) Eligibility and Exclusion: Tanks eligible to have a SAS upgrade installed can be steel or FRP, lined or unlined, single wall or double wall tanks which meet the SAS qualifying conditions as specified by the installer, Tank Tech, Inc.

USTs which have a pending NOV ordering removal as a result of a failed internal lining inspection are not eligible to upgrade to SAS.

2.) Cathodic Protection: Steel tanks with installed cathodic protection, be it galvanic or impressed current, which are upgraded with a SAS, will not be required to maintain cathodic protection. However, cathodic protection must be maintained on piping, flex connectors or any other ancillary equipment associated with the UST that has been upgraded with a SAS. Any other cathodically protected tanks or tank systems that are not

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upgraded to a SAS must maintain cathodic protection for the tank and all ancillary components.

3.) Installation Requirements: SAS upgrades installed in Illinois must be performed by Tank Tech, Inc.'s trained technicians. The Tank Tech, Inc. technicians shall follow all Tank Tech, Inc.'s recommended procedures and instructions. Moreover, installation will be consistent with established industry guidelines and the UL1316 certification requirements. These procedures, instructions, guidelines and requirements pertain to, but are not limited to, the following activities:

- Tank opening, emptying of product, vapor-freeing, access/entry and monitoring of internal tank conditions and entry crews.
- Cleaning of the existing internal UST wall and removal of existing internal lining materials as indicated.
- Evaluation of existing UST as meeting Tank Tech Inc.'s specified deflection criteria for a SAS upgrade.
- Installation of the SAS inside a qualifying UST.
- Testing and evaluation of each layer of the SAS, including the interstitial matrix material, as each layer is installed.
- Testing of the interstitial space with positive pressure within the manufacturer's specified tolerances.

Test results must be documented, made available to the OSFM inspector for review, and left with the UST owner/operator. All SAS upgrade installation literature from Tank Tech, Inc. must be left with the owner of the UST(s), including the 30 year manufacturer's warranty.

4.) Classification of UST(s) Following SAS Upgrade: SAS upgrades will be installed in qualifying single wall or double wall USTs. Once installation is completed and all layers of the SAS have cured, the SAS upgrade is no longer structurally dependent upon the existing UST. The SAS is described as being self-structural by Tank Tech, Inc., and this is supported by the UL1316 certification, which tested the SAS as an independent tank. When installed in an existing single wall tank, this upgrade results in a secondarily contained UST which can be monitored by any NWGLDE listed method for interstitial monitoring. Following a SAS upgrade to a single wall UST, the UST will no longer be classified as a single wall UST. In addition, the materials used in the construction of the SAS are rated as compatible with all blends of motor fuels.

Subsequent to a SAS upgrade installation, the OSFM database Tank Equipment record for the affected UST(s) will show the following:

- The upgraded UST will be listed as "Stand Alone System with Secondary Containment" under "Tank."
- Corrosion Resistance of the UST(s) will be listed as "Non-Corrosive Stand Alone System" under "Corrosion Prot – Tank."
- Tank Leak Detection will show "Interstitial Monitoring" under "Leak Detect – Tank."

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- The date of the passing Final inspection of the upgrade, scheduled as an OSI, will be listed for each entry listed above in the “Install Date” column of the Equipment screen for the upgraded UST.
- The “Tank Nbr” in the column on the “Tanks” screen will not be changed.

5.) Subsequent Testing Requirements: USTs upgraded with SAS must conform to all applicable requirements as outlined in 41 IAC Parts 174, 175, 176 & 177. This will now include:

- Annual functionality testing of the SAS interstitial sensors by a licensed contractor per 175.630(g)(2).
- Monthly operability tests of the tank interstitial monitoring sensors demonstrating Normal or Pass status per 175.630(g)(3), which may be done by the owner/operator.

For steel USTs formerly protected from corrosion by sacrificial anodes or impressed current systems, if upgraded to SAS, the upgraded UST will no longer be required to be tested by a CP tester. Any other equipment with CP requirements must maintain all such existing CP including any required periodic testing. Systems which have installed impressed current CP systems must also continue to maintain the Monthly Impressed Current Log.

Repealed Date:

Superseded: