EPG UST System Compliance: Where Are We, and Where Do We Need to Go?

NTC-2025 - September 24, 2025

Tim Smith

EPA Office of Underground Storage Tanks

Introduction

1. Systems no longer deferred from release detection (RD).
2. Does the system have to comply?
3. What are the release detection requirements?
4. EPA resources and highlights of recent publications.
5. Options in the RD toolbox to consider.
6. What's the current picture with state inspections?

No Longer Deferred From Meeting Release Detection (RD) Requirements

Emergency power generator UST systems must meet RD requirements.

- Required at installation for UST systems installed after October 13, 2015.
- Systems installed on or before October 13, 2015, must meet RD requirements by October 13, 2018.

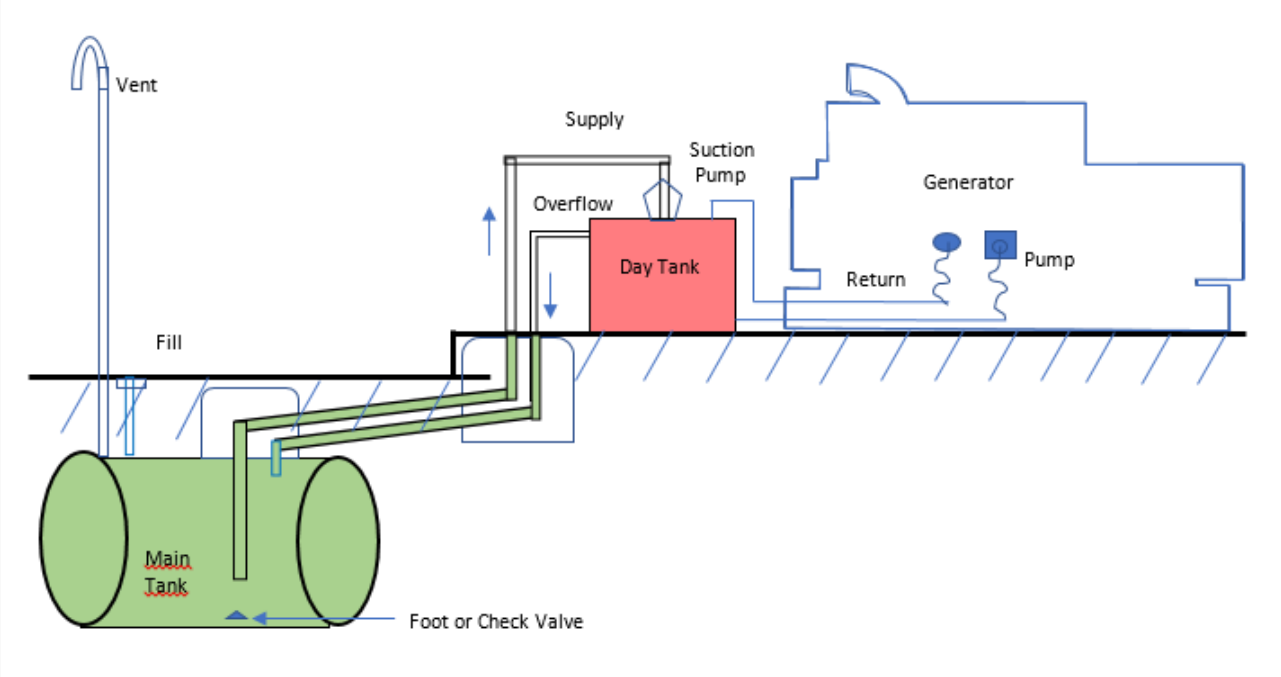
Does The Power Generator System Have To Comply?

Underground Storage Tank or UST –

Means any one or combination of **tanks** (including underground pipes connected thereto) that is used to contain an accumulation of regulated substances, and the volume of which (including the volume of underground pipes connected thereto) is 10 percent or more beneath the surface of the ground. This term does not include any…

Does The Power Generator System Have To Comply? (Cont.)

- Is 10 percent or more of “total system” beneath the surface of the ground?



Does the Power Generator System Have To Comply? (Cont.)

- Does any federal UST regulatory exclusion apply?
- **Most are unlikely to apply:**
  - Farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes.
  - Septic tank.
  - Surface impoundment, pit, pond, or lagoon.
  - Storm water or wastewater collection system.
  - Flow-through process tank.
  - Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations.

Does the Power Generator System Have To Comply? (Cont.)

- **There are two most likely to apply:**

1. Heating oil exclusion

Storage systems used for storing heating oil for consumptive use on the premises where stored.

See www.epa.gov/ust/frequent-questions-about-underground-storage-tanks

– If product is **heating oil** used on premises where stored. Automatically meets exemption.

– If product is not heating oil but substitute **to produce heat** – **only then does it meet the exemption**.

Does The Power Generator System Have To Comply? (Cont.)

- **There are two most likely to apply:**

2. Underground exclusions areas

Storage systems situated in an underground area—such as a basement, cellar, mineworking, drift, shaft, or tunnel—if the tank or combination of tanks is situated on or above the surface of the floor.

No portion of any tank can be beneath the surface of the ground or otherwise covered with earthen material.

What Are The Release Detection Requirements

Subpart D

April 11, 2016

- Installed on or before – All method options available.
- Installed after – Secondary containment and interstitial monitoring.
- Tank
- Piping
  - Suction systems.
  - Pressurized systems.

What Are the Release Detection Requirements (Cont.)

2015 Operational Requirements: Annual release detection equipment testing

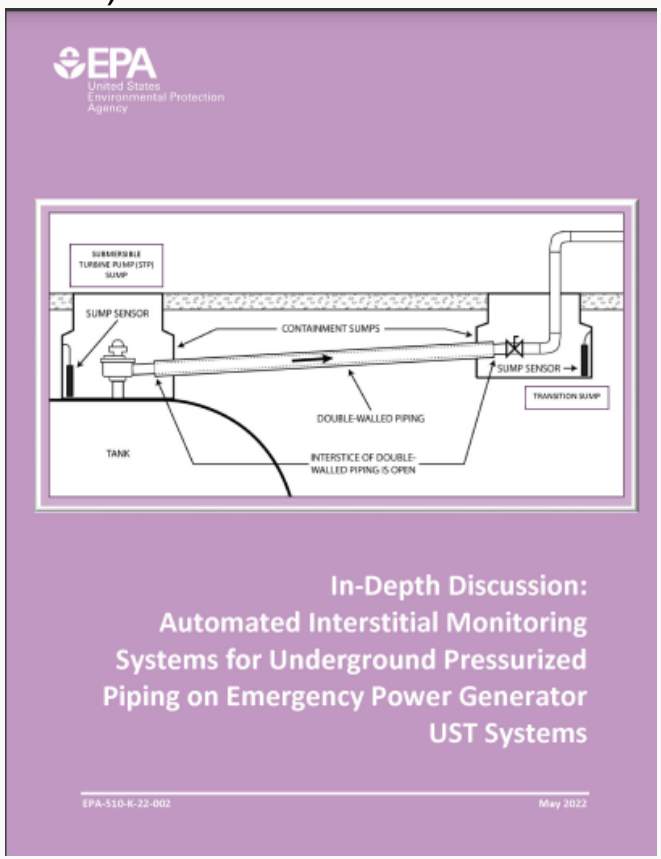
- Ensure release detection equipment is operating properly.
- Completed by October 13, 2018.
- Keep records for 3 years.

Available Resources

- Straight Talk On Tanks.
- UST Technical Compendium.
  - https://www.epa.gov/ust/underground-storage-tank-ust-technical-compendium-about-2015-ust-regulation#generators
- Requirements For Emergency Power Generator UST Systems
- AIM (Automated Interstitial Monitoring) Systems Guidance (2 parts)
  - Using An Automated Interstitial Monitoring System To Meet Federal UST Requirements For Underground Pressurized Piping On Emergency Power Generator UST Systems
  - Federal UST Requirements: Automated Interstitial Monitoring Systems For Emergency Power Generator UST Systems

Highlights of EPA's Guidance Documents

(https://www.epa.gov/ust/emergency-power-generator-ust-systems-2015-requirement-release-detection)



Highlights of EPA's Guidance Documents
(Requirements For Emergency Power Generator UST Systems)

- Spill & overfill for ASTs.
- CP requirements for ASTs.
- RD for ASTs.
- Piping in aboveground rooms such as basements.
- Recommended walkthrough inspection items for ASTs.
- Addressing leaks and releases from aboveground components.

Various Piping Layouts

- Suction piping
- Pressurized piping
- Nonoperational components
  - Fill lines
  - Vent lines
  - Gravity feed piping

- **Consider**:
  - Unimpeded drain-back to main tank
  - Ability to install solenoid valve
  - Separation of belowgrade and abovegrade piping

Highlights of EPA's Guidance Documents

[AIM (Automated Interstitial Monitoring) Systems Guidance (2 parts)]

- Part 1: User's guide.
  - Descriptions & examples of systems.
  - Checklists.
- Part 2: Rationale, reg. allowance, technical.

- 3 categories of AIM systems.
- Relies on integrity of secondary containment.
- Recommended for EPG UST systems only.

Release Detection And Broader Release Response Concerns

- Release detection concerns are not specific to underground components.
- Facility concern is for complete environmental protection.
- Actions may be required by federal UST regulation due to aboveground component impacts.
- Other local, state, and federal programs may apply.

Release Detection And Broader Release Response Concerns (Cont.)

- Facilities subject to the SPCC regulation
  - Intended to help facilities prevent a discharge of oil into navigable waters or adjoining shorelines) are required to follow certain federal reporting requirements.
  - In general, SPCC requires that any person in charge of an onshore or offshore facility must notify the National Response Center (NRC) immediately after he or she has knowledge of the discharge. Oil discharges that reach navigable waters must be reported to the NRC at 1-800-424-8802 or 1-202 426-2675. The NRC is the federal government's centralized reporting center, which is staffed 24 hours per day by U.S. Coast Guard personnel.

Options in the RD Toolbox to Consider

USTs

- AIM systems

ASTs

- Manual tank gauging
- Visual-based assessment

Visual-based Assessment

At a minimum and as applicable, the practice must include checking for:

- External damage to the tank.
- Problems or damage to piping connections.
- Product leaks from the tank or piping connections.
- Cracks or deformations to the tank pad, support structures, and containment areas that could allow leaked product to escape the containment area, as applicable.
- For tank bottoms, ensure there is no puddling of product around the base of the tank, or staining or discoloration of the area potentially indicative of a release from an unobservable portion of tank bottom.

Automated Interstitial Monitoring (AIM) Systems

3 Categories

- **Category 1:** Continuous monitoring using pressure or vacuum methods
- **Category 2:** Continuous monitoring using liquid-filled piping interstice methods
- **Category 3:** Liquid detecting sensors – sump monitoring to activation point

FFS EVO 550/5000 Platform

3GPH gross line testing as alarm-notification-only

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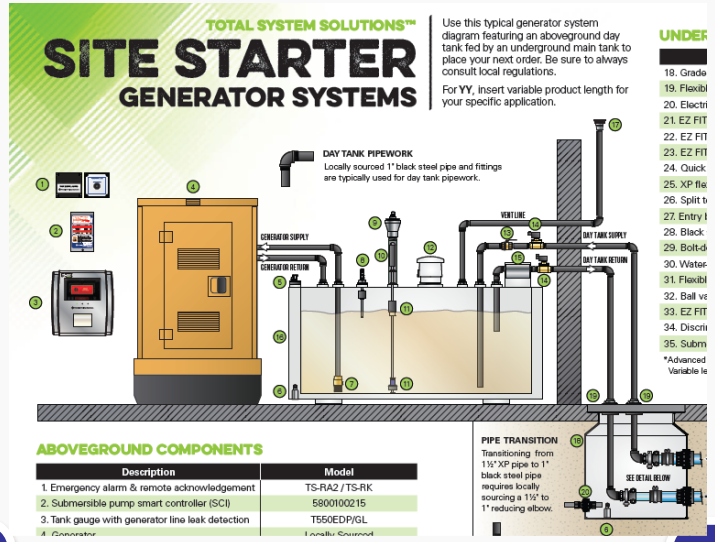

FFS developed a new 'generator-compliant' strain of code to enable 3GPH gross line testing as alarm-notification-only optional setting, as opposed to the previous 'vehicle fueling' automatic lockstep positive shutdown.

FFS supports genset run detection to trigger generator run reporting (e.g. fuel consumption with start/stop triggered by 'engine on' external events) as a standard feature on our EVO 550/5000 platform.

This feature is useful also to air quality enforcement, as they like to see even routine monthly genset operational tests to be documented, and know how long engines were run, and how much fuel was 'burned' during that period.

The ‘engine on’ trigger event can be activated in any of three means:

- Low-voltage input, using one of the 2 built-in *powered* LV inputs on every EVO 550/5000 console’s Power Supply Module, wired thru a set of dry contacts, typically a relay on the engine’s control panel.
- Low or Hi-voltage (unpowered) input via any of the 8 input channels on our TS-IO (Input/Output) Module
- Hi-voltage (AC line voltage) input via any of the 12 input channels on our TS-ACI (AC Input) Module.

Circa 2018, many CA contractors were in the throes of adding FFS’ ELLD-G to existing sites.

- Some do so as a ‘bolt-on’ sidecar approach alongside an existing ATG.
- Others opt to ‘start new’ and trade in existing systems and replace entirely with EVO.
- A third group will use EVO for complete generator fuel control, not just tank gauging and leak detection.

TECH UPDATE

TB0816-01

FFSPRO UNIVERSITY

TS-550 EVO™/TS-5000 EVO™ SOFTWARE UPGRADE 2.11.0.8502

Console Software Release Kit Description

The Franklin Fueling Systems TS-550 evo™/TS-5000 evo™ Software Upgrade Kit contains the latest release of software for the TS-550 evo™/TS-5000 evo™. This kit is for the TS-550 evo™/TS-5000 evo™ console only. You can use it to connect and upgrade the TS-550 evo™/TS-5000 evo™ to the current firmware release. Changes to the software are explained in this document. Franklin Fueling Systems recommends upgrading your system(s).

Component Details

When upgrading a console with this firmware release it is imperative that all modules display the latest version of firmware as listed below:

Component Changes

Component	New Version		Prior Version
T5 Series Upgrade Software	2.11.0.8502		2.10.0.8346
Control Module	2.11.0.8502		2.10.0.8346
4-20mA Module	1.1.4		1.1.0
Power Supply	1.2.4		1.2.2
3-Wire Sensor Module	0.9.6		0.9.1

Component	Current Version
AC Input Module	0.9.0
Relay Module	0.9.1
2-Wire Sensor Module	0.9.0
IO Module	0.9.1
Printer Module	1.0.1
Probe Module	1.1.9

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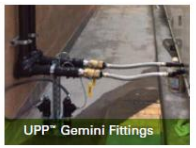
CASE STUDY

Backup Generator Control & Monitoring


TS-550 evo™ Exterior Mounting Application


UPP™ Pipe Installation


UPP™ Gemini Fittings


Long UPP™ Pipe Run


UPP™ Fiberglass Sump Entry

The INCON™ brand TS-550 evo™ fuel management system can be used for more than just tank gauging and leak detection. See how one customer applied it's powerful features to a generator fuel system with UPP™ brand pipework.

CHALLENGE

Lescure Company of Lafayette, California USA needed a fuel system controller to help them with a wastewater treatment backup generator project. They needed inventory management, leak detection sensors, hydrostatic and vacuum monitoring, as well as day tank fuel cycle controls. Normally this requires two separate systems: one for leak detection and one for fuel control. They also required a double wall pipework system that could easily be integrated into their fuel management system for full secondary containment space monitoring.

SOLUTION

The TS-550 evo™ system fit the bill perfectly, consolidating functions into one system for both operations. At the same time the system offered the client a more sophisticated yet intuitive user interface along with remote access and email notifications. The UPP™ pipework system was also integrated with the tank gauge to provide full secondary containment monitoring.

RESULTS

The combined system provided substantial cost savings by reducing the amount of equipment, simplifying wiring, and interfacing with the pipework.

> **"Using the TS-550 evo™ and UPP™ pipework together in our design always gives us confidence in knowing we are using the best product with the best platform. We can deliver a system to our customers that is efficient as well as dependable for decades to come."**
>
> Brian Lescure - VP Fuel Delivery Systems

PRODUCTS

- INCON™ TS-550 evo™ fuel management system
- INCON™ secondary containment monitoring (SCM)
- UPP™ 2" double wall pipework with Gemini™ fittings
- APT™ single wall fiberglass dispenser sumps

franklinfueling.com

FFS-0377 10-14

TOTAL SYSTEM SOLUTIONS™

SITE STARTER GENERATOR SYSTEMS

Use this typical generator system diagram featuring an aboveground day tank fed by an underground main tank to place your next order. Be sure to always consult local regulations.

For **YY**, insert variable product length for your specific application.

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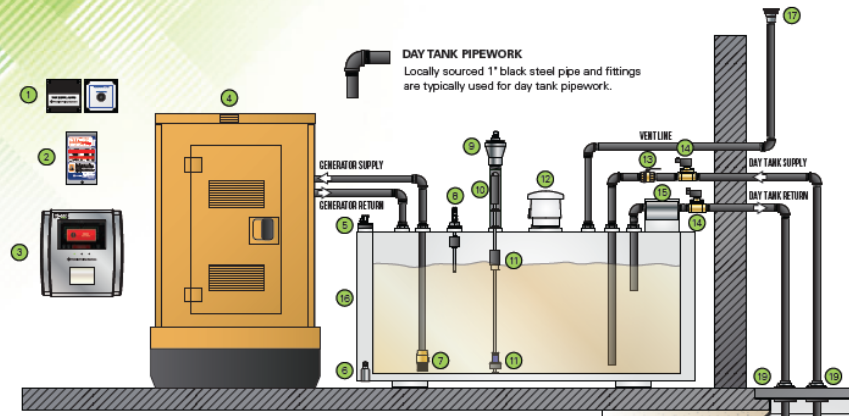


UNDERGROUND COMPONENTS

Description	Model
18. Grade level transition sump	AST-2922
19. Flexible entry boot (1")	FEB-100-SC
20. Electrical conduit entry boot (¾")	REB-C-0075
21. EZ FIT flange x hex male adapter (1½")	EZX15HMPL
22. EZ FIT clamp	EZCLAMP
23. EZ FIT gasket	407493002
24. Quick release fitting (1½")	QRS-XP-150-200
25. XP flexible double wall pipe (1½")	XP-150-SC-**YY**
26. Split test boot (1½")	SPTB-150
27. Entry boot	REB-150-SC
28. Black steel reducing elbow (1½" to 1")	Locally Sourced
29. Bolt-down manway (36")	78145606
30. Water-resistant tank sump	TSM-W-4736
31. Flexible connector (EZ flange x male)	FF20X**YY**XEZXHM
32. Ball valve (2")	BV200FPBRASS
33. EZ FIT 90° elbow flange x male adapter	EZX20HM90
34. Discriminating sump sensor	FMP-DTS
35. Submersible pump* (¾ hp)	STPAPK75-VL2

*Advanced protection pump with factory-installed intake filter screen. Variable length can accommodate 88" to 149" installation.

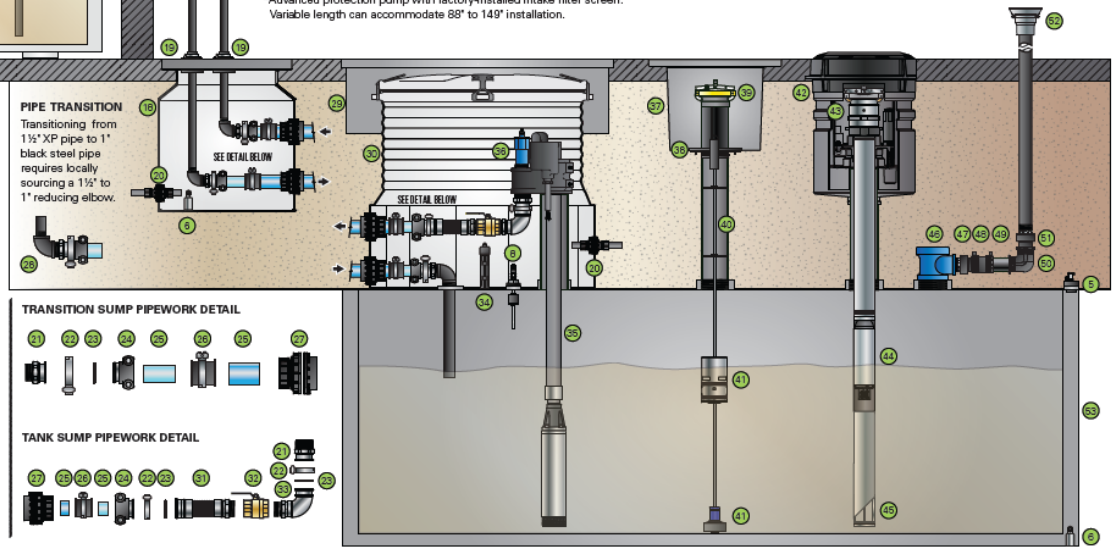
Description	Model
36. Electronic line leak detection	TS-LS500/2
37. Probe access manhole	20URTATG
38. Entry boot (4")	FEB-400-F
39. Probe cap and adapter (for 4" risers)	TSP-C4A
40. Inventory control probe	FMP-LL3-**YY**-I
41. Diesel density float kit (4")	TSP-IDF4D3
42. Double wall spill container	705555111CI-GKT
43. Swivel adapter kit	70541202
44. Overfill prevention valve (5' top, 8' bottom)	708591901
45. Tank bottom protector	77310004
46. Extractor vent valve (4" x 4" x 2')	31040001
47. Male termination fitting (2")	91-063 NPT-U
48. Electrofusion coupler (2")	02-063-L-U
49. UPP® 2" semi-rigid pipe (19' stick)	001.063.019V
50. Electrofusion 90° elbow (2")	03-063-EIF-U
51. Female termination fitting (2")	92-063 NPT-U
52. Pressure vacuum vent	80230301
53. Main tank (double wall)	Locally Sourced

ABOVEGROUND COMPONENTS

Description	Model
1. Emergency alarm & remote acknowledgement	TS-RA2 / TS-RK
2. Submersible pump smart controller (SCI)	5800100215
3. Tank gauge with generator line leak detection	T550EDP/GL
4. Generator	Locally Sourced
5. Sensor cap installation kit	TSP-KI2
6. Liquid sensor	TSP-ULS
7. Foot valve (foot valve extractor available)	101-100-01 (320-302-01)
8. High level sensor	TSP-HLS-15
9. Probe installation kit (for 2" risers)	TSP-K2A
10. Inventory control probe	FMP-LL3-**YY**-I
11. Diesel float kit (2")	TSP-IDF2
12. Emergency vent* (4")	803-200-01
13. Ball valve (1")	Locally Sourced
14. Solenoid valve	Locally Sourced
15. Return pump	Locally Sourced
16. Day tank (double wall)	Locally Sourced
17. Vent valve (2")	800-207-02

*Some double wall tanks may require a second emergency vent for the interstitial space.

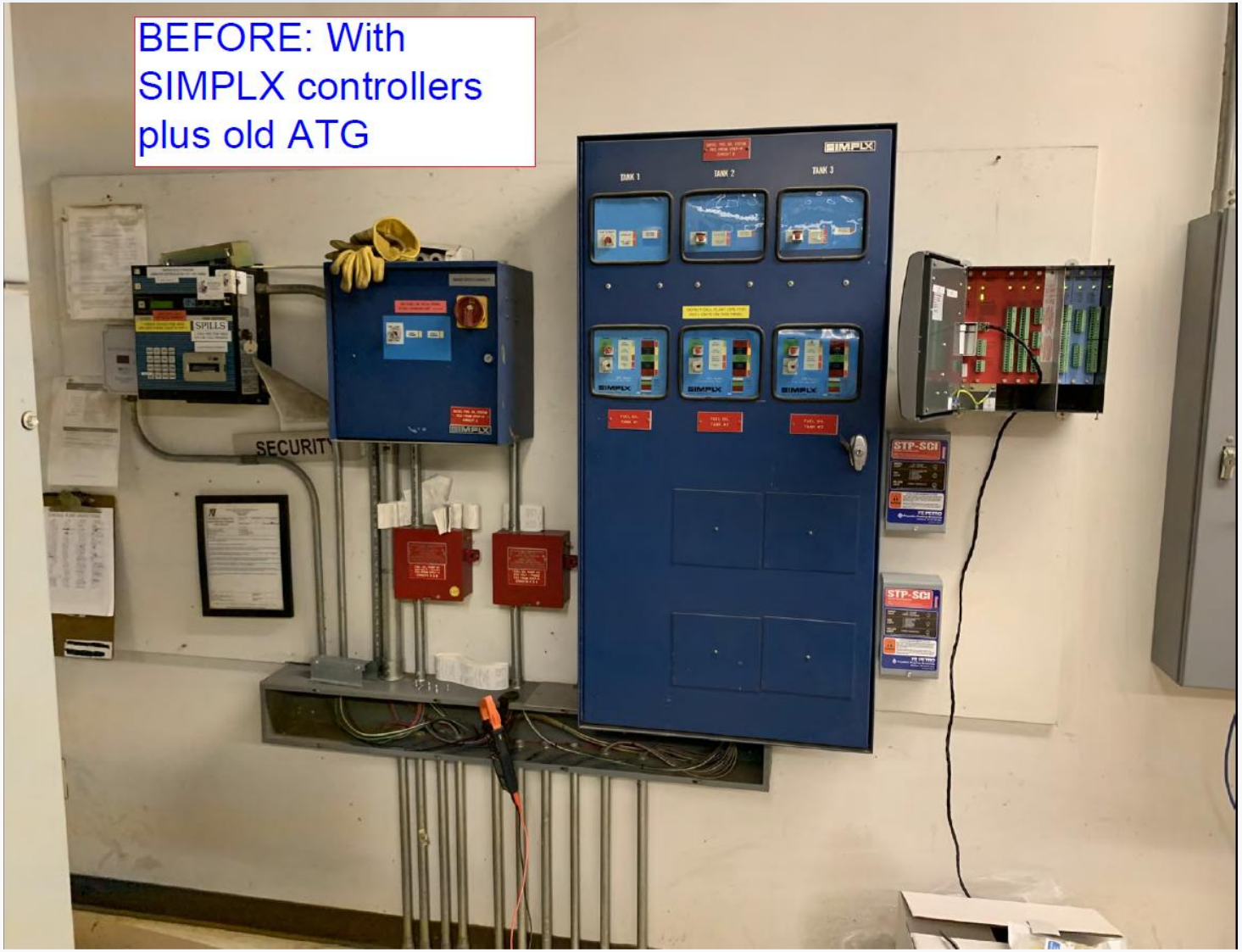
PIPE TRANSITION
Transitioning from 1½" XP pipe to 1" black steel pipe requires locally sourcing a 1½" to 1" reducing elbow.



TRANSITION SUMP PIPEWORK DETAIL

TANK SUMP PIPEWORK DETAIL

franklinfueling.com
3760 Marsh Rd. • Madison, WI 53718, USA
Tel: +1 608 838 8786 • Fax: +1 608 838 8433
Tel: USA & Canada +1 800 225 9787 • Tel: UK +44 (0) 1473 243300
Tel: Mex 001 800 738 7810 • Tel: CH +86 10 8565 4566


BEFORE: With SIMPLX controllers plus old ATG
SIMPLX
TANK 1
TANK 2
TANK 3
SPILLS
SECURITY
STP-SCI
STP-SCI

TECH UPDATE

TB0816-01

FFSPRO UNIVERSITY

Release Notes

This software upgrade...

- Prevents the Statistical Continuous Automatic Leak Detection (SCALD®) Volume Qualify % from being set below 14%.
  You cannot set the SCALD® Volume Qualify % for a percentage less than 14%.
- Adds the SCALD® Volume Qualify % setting to regulatory reports.
  The programmed setting for the SCALD® Volume Qualify % is now on all regulatory reports.
- Adds a High Vapor mode setting for Discriminating Turbine Sump sensors and Discriminating Dispenser Sump sensors.
  The new setting prevents nuisance sensor alarms in high vapor locations when no liquid is present.
- Adds a Registration option for Generator Line Test software.
  You can use a Registration software option that facilitates proper line leak detection operation when installed in emergency generator applications.
- Adds the ability to group product types in Dispenser Reconciliation.
  Dispenser Reconciliation can now be calculated by product. This allows sites with the same product in multiple tanks to be reconciled correctly.
- Corrects an issue that occurs when you perform a Density Measurement Calibration.
- Adds DEF (Adblue®) as a standard product.
- Enhances the Leveling Adjust Priority operation in the Turbine Pump Interface.
  Improvements were made to increase the leveling functionality during times of increased product demand and applicable pump controller alarms.
- Adds a special product mode that results in no temperature correction.
- Adds Kilopascals as a unit of measurement for pressure readings.
- Adds the UK English language option.
- Makes the Mass reading visible in the graphical user interface when you use density float kits.
- Makes some of the logic conditions a standard feature on the systems.
- Corrects the Setup Report button missing text in the graphical user interface.
- Changes the SMTP hostname to prevent potential email exchange issues.
  Some SMTP email systems rejected the handshake message, which prevented emails from being sent by the TS-550 evo™/TS-5000 evo™.
- Adds the option to choose Level or Volume as a Tank Low Product Limit.

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A Franklin Fueling Systems Brand
franklinfueling.com
3760 Marsh Rd. • Madison, WI 53718, USA
Tel: +1 608 838 8786 • Fax: +1 608 838 6433
Tel: USA & Canada +1 800 225 9787 • Tel: UK +44 (0)1473 243300
Tel: Mex 001 800 738 7610 • Tel: FR +33 (0)1 69 21 41 41 • Tel: CH +86 10 8565 4566

Madison Office
Franklin Fueling Systems
3760 Marsh Road
Madison, WI 53718
608-838-8786
USA
August 31, 2010 13:28

GENERATOR REPORT
Last Available

Units: gal, in, ºF, gpm

TANKS

87 West
Diesel
Capacity 89,992.98
----------Usage----------

Begin	End
08/16/2010 23:59:23 PM	08/17/2010 01:10:23 AM
----------Gross----------	
45,699.93	87,398.98
----------Net----------	
45,000.98	46,673.00
----------Ullage----------	
40.65	75.98
----------Level----------	
450.98	466.00
------Temperature--------	
70.65	75.98
--------Water Level--------	
0.98	0.90
------Water Volume-------	
0.65	0.98

QUESTIONS?

Contact Information

- Tim Smith
  - (202) 564-0643
  - smith.timr@epa.gov

- **Dan Williams**| Regional Sales Manager, Western US
  - **Franklin Electric** | Fueling Systems
  - 510.246.1070
  - dan.williams@franklinfueling.com