



Emergency Generator Underground Storage Tank System Leak Detection Requirements

South Carolina Underground Storage Tank (UST) Control Regulations R.61-92 states that underground storage tanks connected to emergency generators are regulated. Previously, emergency generator tank systems permitted/installed **prior to May 23, 2008** were exempt from release detection requirements. However, **effective May 26, 2017**, the South Carolina UST Control Regulations R.61-92, Section [280.10\(a\)\(1\)\(iii\)](#) now states that exemption no longer applies and the release detection requirements must be met no later than **May 26, 2020**.

By this date, all emergency generator UST systems must have release detection for both tanks and piping. European Suction lines, however, still remain exempt from release detection requirements. In order to meet this requirement, certain equipment may need to be installed or removed. If additional equipment is needed, it must be installed, tested, and operational no later than **May 26, 2020**.

For Underground Storage Tank(s), the following options are available:

- **Automatic Tank Gauging (ATG);**
- **Groundwater Monitoring** (requires PG or PE signature on Site Assessment);
- **Vapor Monitoring** (requires PG or PE signature on Site Assessment);
- **Interstitial Monitoring** (double walled tanks only);
- **Manual Tank Gauging** (for tanks 550 gallons or less only); or
- **Statistical Inventory Reconciliation (SIR).**

For any associated pressurized underground piping, you must choose an automatic line leak detector option and a monthly monitoring/annual requirements listed below:

- **Automatic Line Leak Detectors:**
 - ❖ Mechanical Line Leak Detector [note: MLLD may not work properly with all designs] ; or
 - ❖ Electronic Line Leak Detector
- **Monthly Monitoring/Annual Requirements:**
 - ❖ Interstitial Monitoring (double-walled piping only) with sump sensors (monthly);
 - ❖ Statistical Inventory Reconciliation (SIR) (monthly);
 - ❖ 0.2 gph Electronic Line Leak Detector report (monthly);
 - ❖ Line Tightness Test (annual); or
 - ❖ 0.1 gph test using the Electronic line leak detector (annual).

[If the program has concerns regarding any selected method of release detection, documentation regarding how the method meets the requirements for release detection will be required.]

DHEC 24-Hour Emergency Response Line: 1-888-481-0125

DHEC Report It Webpage: www.scdhec.gov/HomeAndEnvironment/ReportIt/

DHEC UST Management Division: (803) 898-0589 / (803) 898-2544

DHEC Website: www.scdhec.gov/ust

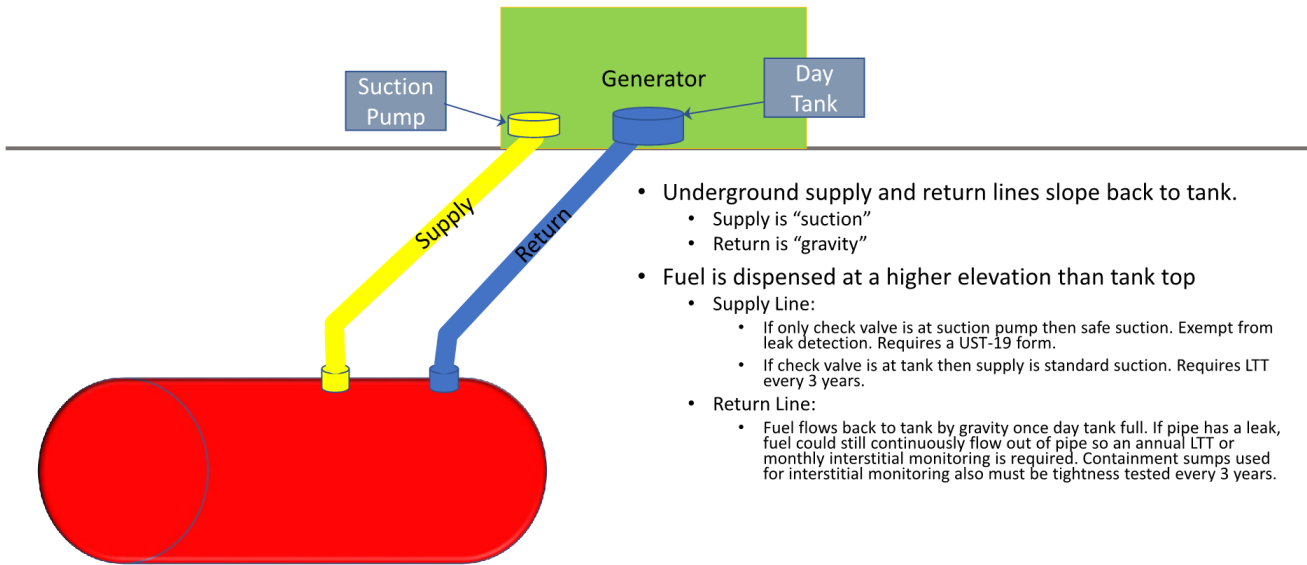
UST Forms: www.scdhec.gov/permits-regulations/forms-applications-registration-reporting-etc

EPA UST Website: www.epa.gov/ust

Disclaimer: This document is provided by DHEC as a condensed reference for the regulated community. Every effort has been made to ensure its accuracy; however, it is not intended as a substitute for the requirements in the South Carolina Underground Control Regulations (SCUSTCR) R.61-92, Part 280 as published in the State Register. Tank owners/operators are responsible for compliance with SCUSTCR R.61-92, Part 280.

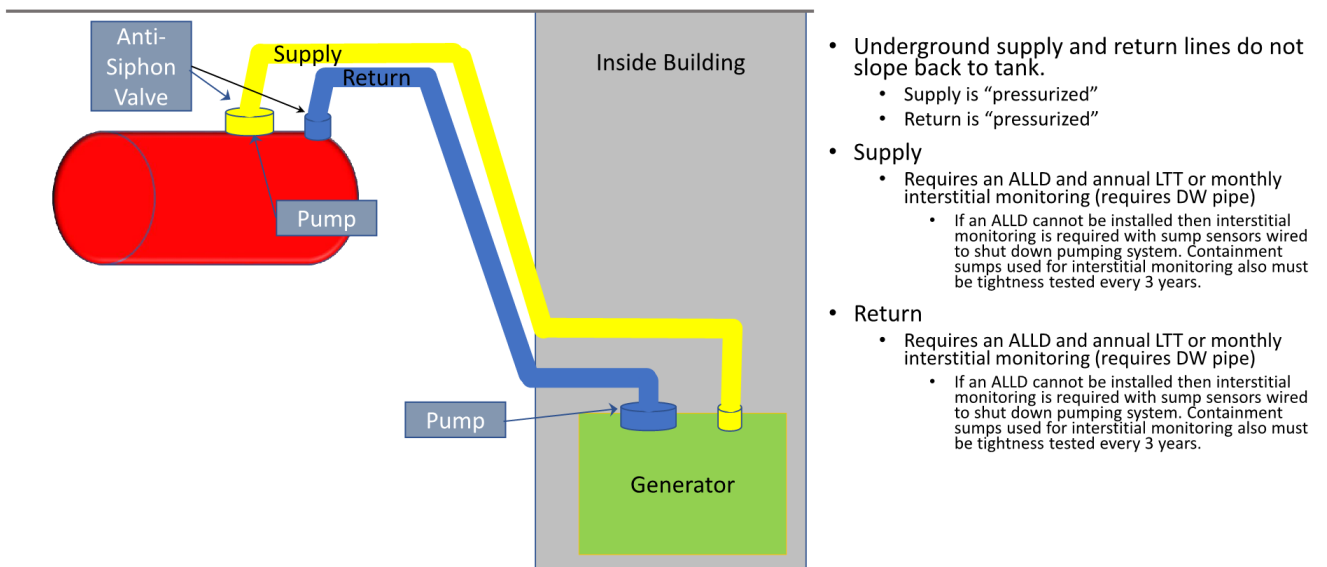
The following diagrams show five typical configurations of piping for emergency generators and the types of piping leak detection that are acceptable. If your system is not configured like these and you are unsure what leak detection methods will be acceptable, contact the UST Management Division at (803) 898-0589 for compliance assistance.

Generator UST Piping Version 1



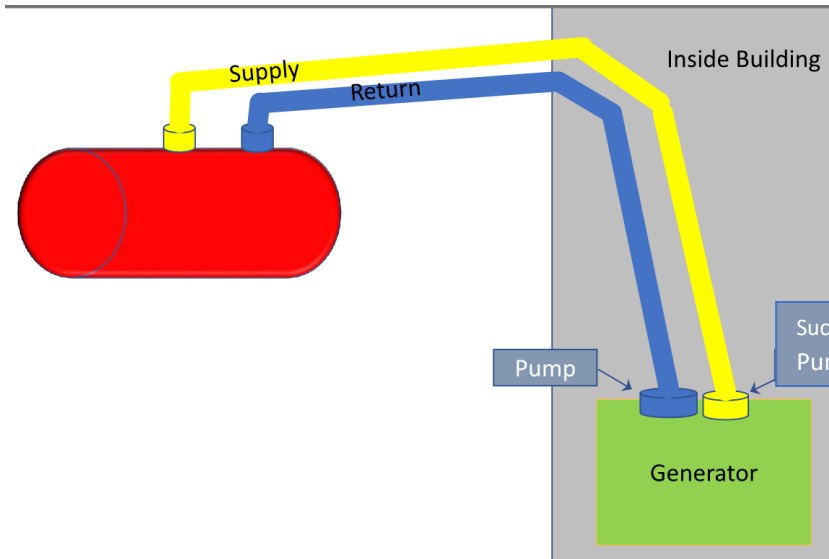
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Generator UST Piping Version 2



2

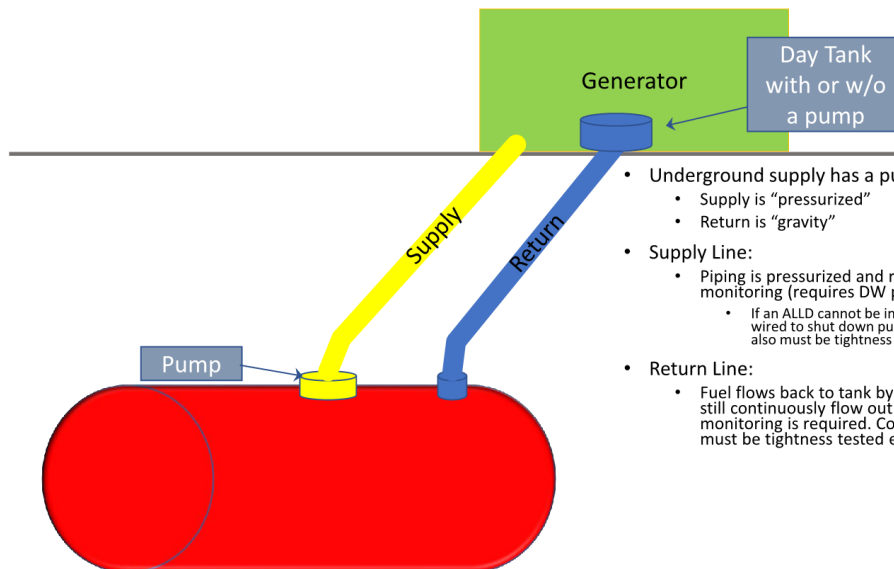
Generator UST Piping Version 3



- Below ground portion of supply and return are sloped back to tank.
 - Supply is "suction"
 - Return is "gravity"
- Supply line
 - If check valve is at tank then supply is standard suction. Requires LTT every 3 years.
 - If there is not a check valve at the tank then "safe suction" and exempt from leak detection. Requires a UST-19 form.
- Return line:
 - Below ground portion is gravity feed back to tank, however fuel still will get pumped through pipe if there is a leak.
 - Requires an annual LTT or monthly monitoring such as interstitial monitoring with sump sensors that are wired to shut down pumping system. Containment sumps used for interstitial monitoring also must be tightness tested every 3 years.

3

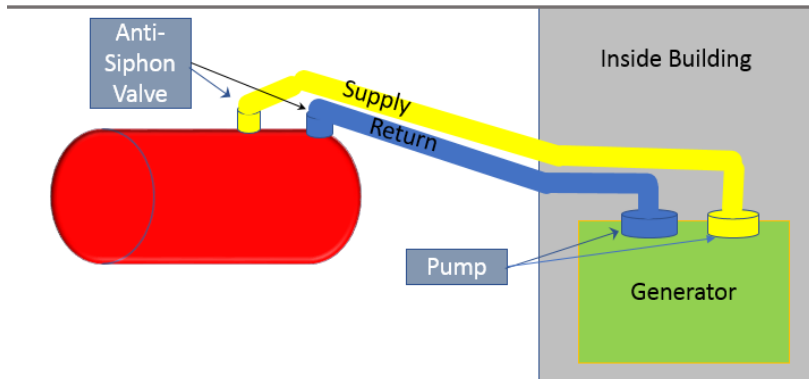
Generator UST Piping Version 4



- Underground supply has a pump at tank and return line slopes back to tank.
 - Supply is "pressurized"
 - Return is "gravity"
- Supply Line:
 - Piping is pressurized and requires an ALLD and annual LTT or monthly interstitial monitoring (requires DW pipe).
 - If an ALLD cannot be installed then interstitial monitoring is required with sump sensors wired to shut down pumping system. Containment sumps used for interstitial monitoring also must be tightness tested every 3 years.
- Return Line:
 - Fuel flows back to tank by gravity once day tank full. If pipe has a leak, fuel could still continuously flow out of pipe so an annual LTT or monthly interstitial monitoring is required. Containment sumps used for interstitial monitoring also must be tightness tested every 3 years.

4

Generator UST Piping Version 5



- Underground supply and return lines do not slope back to tank.
 - Supply is “standard suction”
 - Return is “pressurized”
- Supply
 - Requires a LTT every three years or monthly interstitial monitoring (requires DW pipe)
- Return
 - Requires an ALLD and annual LTT or monthly interstitial monitoring (requires DW pipe)
 - If an ALLD cannot be installed then interstitial monitoring is required with sump sensors wired to shut down pumping system. Containment sumps used for interstitial monitoring also must be tightness tested every 3 years.