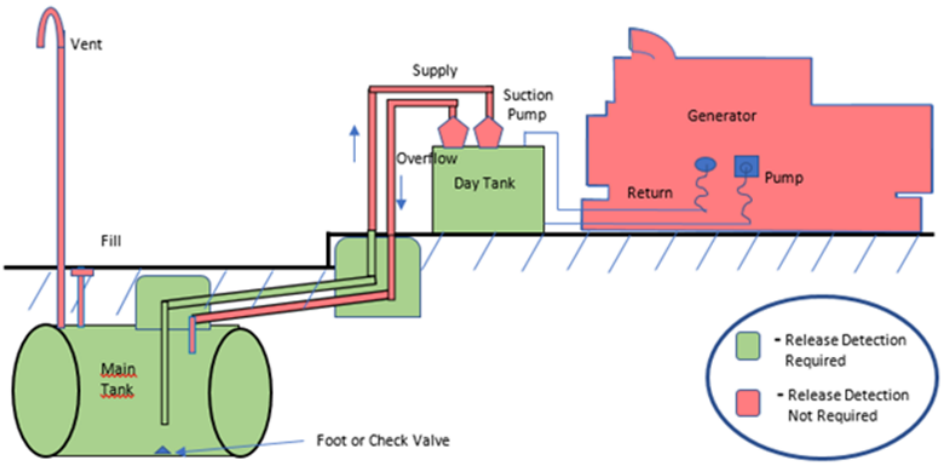
FREQUENTLY ASKED QUESTIONS
about
Emergency Generator UST system leak detection requirements if installed prior to 11/1/2007

Beginning on October 13, 2018 regulated emergency generator tank systems installed prior to 11/1/2007 are required to implement tank and piping leak detection. For tanks that means one of the permanent tank leak detection methods will need to be conducted. Of those permanent tank leak detection methods, only the following will typically be a valid method for an emergency generator tank.

- Monthly in-tank leak detection with an automatic tank gauge (ATG)
- Monthly interstitial monitoring (If the tank is double walled)

For piping leak detection, the first step would be to determine the configuration of your supply and return lines. Are they pressurized, suction, gravity, or some hybrid of these configurations? If pressurized, do you have or can you install an automatic line leak detector (ALLD)? The following diagrams show 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 then contact the UST section at (919) 707-8171 or michael.phelps@ncdenr.gov at (336) 776-9684.

Generator UST Piping Version 1A
(Piping installed prior to 11/1/2007)



- **Underground supply and return lines slope back to tank.**
  - Supply is “suction”
  - Return is “gravity” with a pump at day tank
- **Supply Line:**
  - Foot or check valve is at tank, then supply is standard suction. Requires LTT every 3 years.
- **Return Line:**
  - Underground piping is a nonoperational component and does not require leak detection.

Revised 2/21/2022

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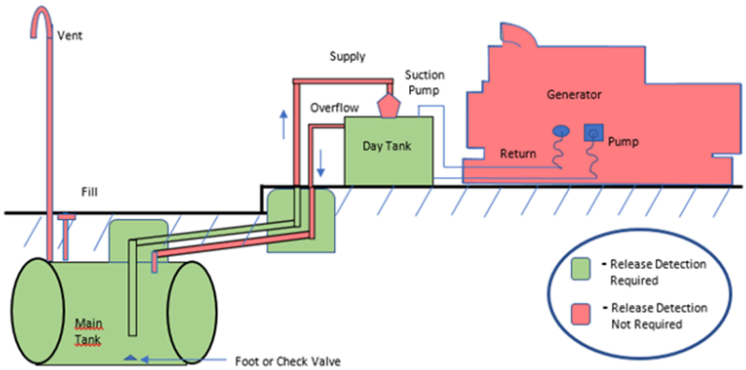
Generator UST Piping Version 1B
(Piping installed prior to 11/1/2007)



- **Underground supply and return lines slope back to tank.**
  - Supply is "suction"
  - Return is "gravity" without a pump at day tank
- **Supply Line:**
  - Foot or check valve is at tank, then supply is standard suction. Requires LTT every 3 years.
- **Return Line:**
  - Underground piping is a nonoperational component and does not require leak detection.

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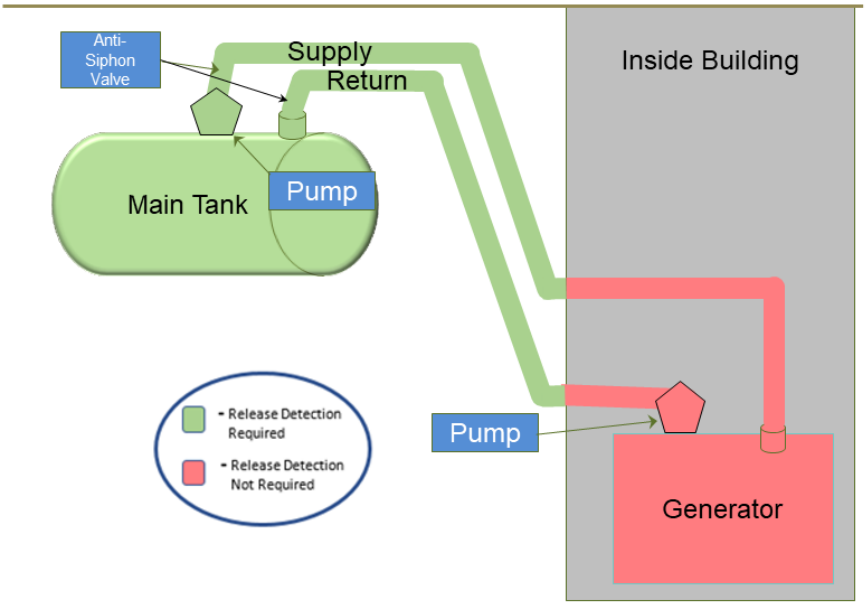
Generator UST Piping Version 2
(Piping installed prior to 11/1/2007)



- **Underground supply and return lines do not slope back to tank.**
  - Supply is "pressurized"
  - Return is "pressurized"
- **Supply:** Requires an ALLD and annual LTT or monthly interstitial monitoring (requires DW pipe)
  - If an ALLD cannot be installed see requirements in note below.
- **Return:** Requires an ALLD and annual LTT or monthly interstitial monitoring (requires DW pipe)
  - If an ALLD cannot be installed see requirements in note below.

Note: If an ALLD cannot be installed, then electronic interstitial monitoring is required that meets the requirements in the US EPA's *Automated Interstitial Monitoring (AIM) Systems for Underground Pressurized Piping on Emergency Power Generator UST Systems* (to be released spring 2022) document. Additionally, containment sumps used for interstitial monitoring also must be tightness tested every 3 years.

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FREQUENTLY ASKED QUESTIONS
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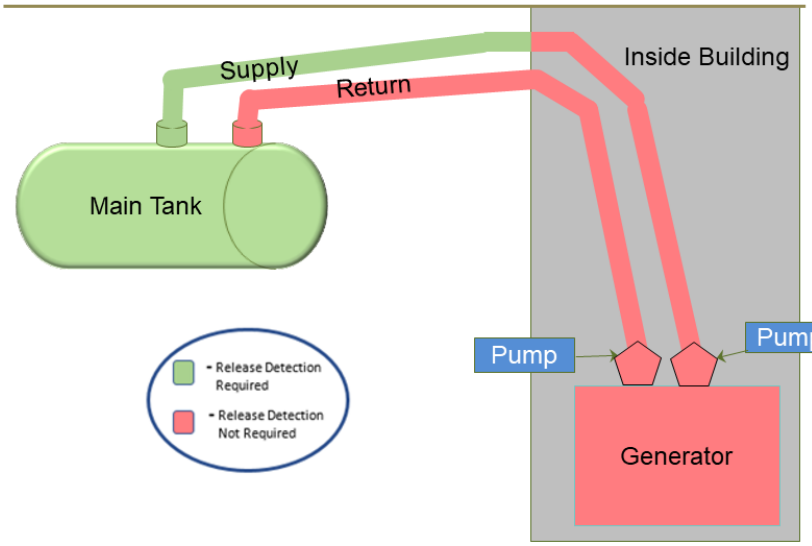
Emergency Generator UST system leak detection requirements
if installed prior to 11/1/2007

Generator UST Piping Version 3
(Piping installed prior to 11/1/2007)



- **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:**
  - Underground piping is a nonoperational component and does not require leak detection

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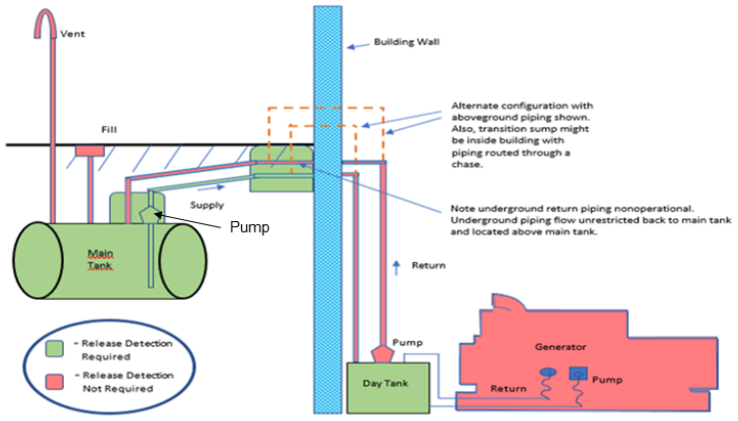
Generator UST Piping Version 4
(Piping installed prior to 11/1/2007)



- **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 electronic interstitial monitoring is required that meets the requirements in the US EPA's *Automated Interstitial Monitoring (AIM) Systems for Underground Pressurized Piping on Emergency Power Generator UST Systems* (to be released spring 2022) document. Additionally, containment sumps used for interstitial monitoring also must be tightness tested every 3 years.
- **Return Line:**
  - Underground piping is a nonoperational component and does not require leak detection.

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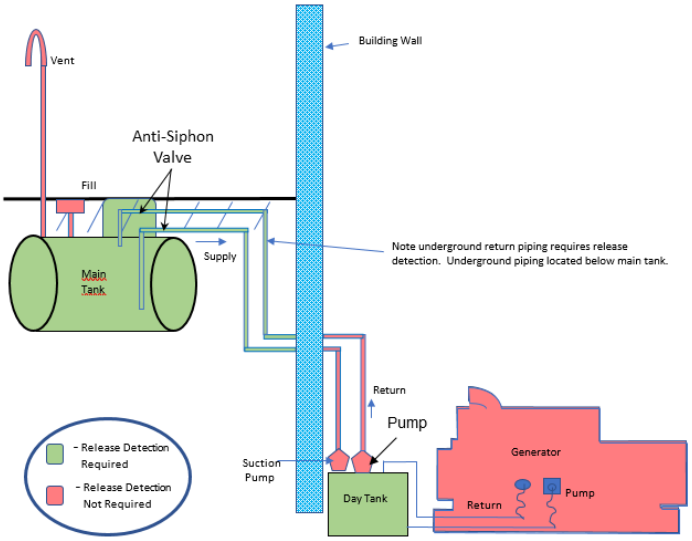
Generator UST Piping Version 5
(Piping installed prior to 11/1/2007)



- **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 electronic interstitial monitoring is required that meets the requirements in the US EPA's *Automated Interstitial Monitoring (AIM) Systems for Underground Pressurized Piping on Emergency Power Generator UST Systems* (to be released spring 2022) document. Additionally, containment sumps used for interstitial monitoring also must be tightness tested every 3 years.

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