Owners and operators of regulated underground storage tanks (USTs) on tribal lands must comply with the federal UST regulation.

This compliance assistance brochure highlights tips to help you manage your piping release detection.

Note: This document is a resource to promote compliance and does not replace the federal UST regulation.

This brochure is one in a series of EPA compliance assistance brochures designed to help owners and operators in Indian country comply with the federal UST regulation.

Other brochures focus on implementation, compatibility, spill buckets, overfill protection, recordkeeping and notification, financial responsibility, insurance, and tank release detection.

www.epa.gov/ust/managing-your-usts-indian-country

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PIPING RELEASE DETECTION

MANAGING YOUR UNDERGROUND STORAGE TANK

Compliance Assistance In Indian Country

RELEASE DETECTION

Piping release detection is a method or combination of methods designed to help quickly detect releases from underground piping.

What type of release detection must you use?

A line leak detector must be installed on your pressurized piping and must be tested ***annually***.

Also, if your pressurized piping was installed or replaced on or before April 11, 2016, you must use one of the following release detection methods:

- Annual tightness test
- Monthly monitoring using either
  - Interstitial monitoring for double-walled piping
  - Continuous in-tank leak detection
  - Vapor monitoring
  - Groundwater monitoring
  - Statistical inventory reconciliation
- Other methods approved by the implementing agency

If you use vapor monitoring or groundwater monitoring, you must keep records of a site assessment showing that the monitoring system is set up properly.

If your pressurized piping was installed or replaced after April 11, 2016, your system must be secondarily contained and you must use interstitial monitoring. .

What type of release detection can you use for suction piping?

Release detection **is not** required if the suction piping:

- Operates at below atmospheric pressure
- Sloped so its contents drain back into the tank, and
- Only one check valve directly below the dispenser pump

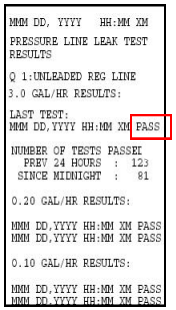
Suction piping system

If your suction piping does not exactly match the characteristics above, you must use one of the monthly methods used for pressurized piping, or conduct a tightness test at least once every three years.

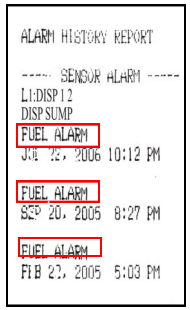
What should you do to ensure your release detection device is working properly? If you use a:

Control panel

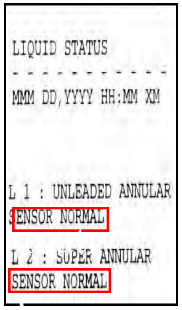
- **Check your printout**
  - What does the printout show? Is the system working properly or are there problems that need to be addressed?



Piping leak test results



Sump sensor alarm history



Sump sensor status report

Immediately respond to and investigate any control panel alarms or flashing lights.

Make sure alarms function properly. Releases may go undetected if you ignore or disable the alarms.

Control panel indicator lights

Containment sump

- **Check your sump**
  - Is a sensor present?
  - Is the sensor positioned correctly?
  - Is there any liquid or product present?
  - Does the lid have a tight seal and is it securely fastened?
  - Is the sump damaged? *A damaged sump will not hold product if a release occurs.*

Tank top sump with double-walled piping and liquid sensor

Tank top sump full of liquid

Containment sumps that are part of the piping interstitial monitoring system must be tested at least once every three years for liquid tightness.

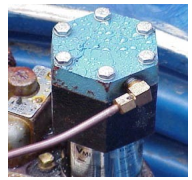
How do you avoid common piping release detection problems?

Line leak detectors (LLD)

- Make sure the LLD is installed or functions correctly
- Test annually with simulated leak at three gallons per hour at 10 psi line pressure
- Make sure the LLD is programmed or properly connected

Submersible turbine pump without a LLD installed

Electronic LLD



Mechanical LLD

Sensors

- Make sure sensors are present and functioning
- Make sure sensors are properly installed and test annually

Tank top sump sensor installed too high

Moved sensor cannot detect liquid

Tightness Testing

- Test every three years including *suction systems that do not meet the exemption requirements*
- Conduct an annual line test for pressurized piping

Recordkeeping

- Keep records of annual tightness tests
- Keep records of annual release detection equipment tests for LLD and sensors
- Keep release detection performance claims or repair and maintenance records
- Keep records of the 30-day visual equipment inspection or annual walkthrough inspection
- Keep site assessment records for vapor and groundwater monitoring

For more information on piping release detection, see EPA's *Release Detection For Underground Storage Tanks and Piping: Straight Talk on Tanks* or order free copies by calling (800) 490-9198.