

Missouri Department of Natural Resources
Water Pollution Control Program

UST Technical Bulletin
Leak Detection Methods
#7 of 8

INTERSTITIAL MONITORING

What is it?

Interstitial monitoring is checking for product between the inner tank and outer tank or barrier. The device can be a small monitoring well, a tube, an automatic leak detection cable, or any other device that can detect product between the inner tank wall and the outer barrier.

This is the only approved method of release detection for new hazardous substance USTs. *Note: 100% methanol and 85% methanol products are hazardous substances.*

Product detected between the inner and outer walls is a leak.

Requirements:

1. Must detect a leak from anywhere in the inner tank.
2. Secondary barrier must be artificial material (not soil) that contains the product and channels it to the detector.
 - permeability of 10^{-6} cm/sec. or less.
 - liner must be compatible with product.
 - liner/vault/barrier can not interfere with cathodic protection.
 - rainfall, soil moisture, and groundwater cannot interfere with leak detection.
 - barrier above ground water table and 25 year flood plain unless properly built.
 - wells must be marked and secured.

Advantages: Complete capture of any leak. Method allows complete recovery of product. Can be applied to the piping.

Disadvantages: Initial capital cost of a new installation. Difficult to install on an existing tank.

Interstitial Monitoring Data Requirements.

As-built drawings which indicate the location/identification/number of monitoring points.

1. Show the extent and type of secondary containment/double-wall system.
2. Show that the monitoring points are the lowest points in the system.
3. Indicate how non-secondary portions of system will be monitored.