

Existing Underground Storage Tanks

Underground storage tanks (UST) that were installed before April 4, 2008 may use one of the following methods of release detection only if the USTs meet the requirements for the specific method. All USTs installed after April 4, 2008 shall only use interstitial monitoring as the method of release detection.

Automatic Tank Gauging

Automatic Tank Gauging (ATG) may be used as a method of release detection for USTs if it meets the following:

- 1) Conducts tests for loss of product monthly and is capable of detecting a 0.2 gallon per hour leak rate from any portion of the tank that routinely contains regulated substances.
- 2) Conducts inventory control as follows:
 - a) Volume measurements for deliveries, withdrawals, and amount still remaining in the tank are recorded each operating day.
 - b) The equipment used is capable of measuring the level of regulated substance over the full range of the UST's height to the nearest one-eighth of an inch.
 - c) Deliveries are reconciled with delivery receipts by measurement of the tank volume before and after each delivery.
 - d) Deliveries are made through a drop tube that extends to within one foot of the tank bottom.
 - e) Dispensing or pumping is metered and recorded within the state standards for meter calibration or an accuracy of six cubic inches for every five gallons pumped.
 - f) Measurement of any water level in the bottom of the tank is made to the nearest one-eighth of an inch at least once a month.

Ground Water Monitoring

Ground Water Monitoring may be used by owners and operators as a method of release detection for USTs as long as the testing & monitoring for liquids on the groundwater meets all of the following:

- 1) The regulated substance stored is immiscible in water and has a specific gravity of less than one.
- 2) Groundwater is no more than 20 feet from the ground surface.
- 3) The hydraulic conductivity of the soil between the UST system and the monitoring wells or devices is not less than 0.01 centimeters per second.
- 4) Monitoring wells shall be sealed from the ground surface to the top of the filter pack.
- 5) Monitoring wells or devices intercept the excavation zone or as close to it as is technically feasible.
- 6) The continuous monitoring devices or manual methods used can detect the presence of at least one-eighth of an inch of non-aqueous phase liquid on top of the groundwater in the monitoring wells.
- 7) The site is assessed within and immediately below the UST system excavation zone to ensure compliance with the requirements in paragraphs 1 through 6 above. Also, the site will be assessed to establish the number and positioning of monitoring wells and devices that will detect releases from any portion of the tank that routinely contains product.
- 8) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

Vapor Monitoring

Vapor Monitoring may be used for USTs as long as the testing or monitoring for vapors within the soil gas of the excavation zone meets all of the following:

- 1) The materials used as backfill are sufficiently porous to readily allow diffusion of vapors from releases into the excavation area.
- 2) The stored regulated substance, or tracer compound placed in the UST, is sufficiently volatile to result in a vapor level that is detectable by the monitoring devices located in the excavation zone in the event of a release from the UST.
- 3) The measurement of vapors by the monitoring device is not rendered inoperative by groundwater, rainfall, or soil moisture or other known interferences so that a release could go undetected for more than 30 days.
- 4) The level of background contamination in the excavation zone will not interfere with the method used to detect releases from the UST.
- 5) The vapor monitors are designed and operated to detect any significant increase in concentration above background of the regulated substance, components of the regulated substance, or tracer compound stored in the UST system.
- 6) The site is assessed within and immediately below the UST system excavation zone to ensure compliance with the requirements in paragraphs 1 through 4 above. Also, the site will be assessed to establish the number and positioning of monitoring wells that will detect releases within the excavation zone from any portion of the tank that routinely contains product.

- 7) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

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Automatic Tank Gauging, Groundwater Monitoring, and Vapor Monitoring as Release Detection Methods for Underground Storage Tank Systems existing before April 4, 2008



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