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.

Inventory Control with Tank Tightness Testing

Inventory Control with Tank Tightness Testing is a two part method which requires owners and operators to maintain strict control of their inventory of regulated substances in their USTs. The second part is to perform tank tightness testing on a routine basis. This method of release detection can only be used for the first ten years after a UST has been installed or upgraded to meet the December 22, 1998 requirements. As mentioned earlier this method only applies to USTs installed before April 4, 2008. After the tenth anniversary of the installation of the UST owners and operators must choose a permanent method of release detection for the tank. Examples of permanent methods of release detections are Statistical Inventory Reconciliation, Automatic Tank Gauging, Ground Water Monitoring, and Vapor Monitoring. Only Statistical Inventory Reconciliation (SIR) will be discussed in this brochure.

Requirements for Inventory Control

1) Conducted monthly to detect a release of at least one percent of monthly flow-through plus 130 gallons.

2) Volume measurements for deliveries, withdrawals, and amount still remaining in the tank are recorded each operating day.

3) 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.

4) Deliveries are reconciled with delivery receipts by measurement of the tank volume before and after each delivery.

5) Deliveries are made through a drop tube that extends to within one foot of the tank bottom.

6) 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.

7) 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.

Tank Tightness Testing Requirements

1) The test must be performed at a minimum of every five years.

2) The test shall be capable of detecting a 0.1 gallon per hour leak rate from any portion of the tank that routinely contains product.

Statistical Inventory Reconciliation

Statistical Inventory Reconciliation better known as SIR is a method of release detection which must meet the following requirements:

1) Owners and operators conduct inventory control monthly and then send their inventory data to a SIR vendor at the beginning of the following month.

2) The SIR vendor shall complete their analysis of the inventory data and provide a report by the 15th of the month.

3) The SIR method used by the vendor must be capable of detecting 0.2 gallon per hour leak rate monthly from any portion of the tank that routinely contains product.

4) The method must have a probability of detection of 0.95 and a probability of false alarm of 0.05.

Manual Tank Gauging

Owners and operators may use this method of release detection for USTs with capacities of 2,000 gallons or less. The following are the requirements for Manual Tank Gauging:

1) Tank liquid level measurements are taken at the beginning and ending of a period of at least 36 hours during which no liquid is added to or removed from the tank.

2) Level measurements are based on an average of two consecutive stick readings at the beginning and ending of the period.

3) The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch.

4) Used as the sole method of release detection for USTs of 550 gallons or less nominal capacity.

5) For USTs with capacities from 551 to 2,000 gallons this method will be used in conjunction with tank tightness testing conducted every five years.

6) A leak is suspected if the variations between beginning and ending measurements exceeds any of the weekly or monthly standards as follows:

a) UST with nominal capacity of 550 or less the weekly standard for one test exceeds ten gallons; or the monthly standard for four tests exceeds five gallons.

b) UST with nominal capacity of 551 to 1000 gallons where the weekly standard for one test

exceeds thirteen gallons; or the monthly standard for four tests exceeds seven gallons.

c) UST with a nominal capacity of 1001 through 2000 gallons where the weekly standard for one test exceeds twenty six gallons; or the monthly standard for four tests exceeds thirteen gallons.

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Using Inventory Control with Tank Tightness Testing, Statistical Inventory Reconciliation, and Manual Tank Gauging as Release Detection for Underground Storage Tanks Existing before April 4, 2008.

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