Technical Procedures

Aboveground Storage Tank Leak Detection Test

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The test procedure determines the amount and rate of change of the mass of the product contained within the tank during a data collection period. The test data is used to calculate a leak rate and the mechanical integrity of the tank.

Test Procedures

- A sensor is placed on the tank bottom through a 3 inch or larger opening in the tank top
- A hose and tech cable connects the sensor to a remote PC and differential pressure transducer located beside the tank
- Nitrogen is conveyed to the sensor at a precisely controlled rate
- The amount of pressure applied against a stream of bubbles at the tank bottom corresponds to the differential pressure
- The pressure is measured by a micro sensitive pressure transducer and is recorded on a real time basis
- Data analysis accurately calculates any change in the mass of fluid and determines if there is a loss
- Test results are generated onsite with 30-foot diameter tanks and larger tanks require off site data analysis

Test Specifications

- Non intrusive, non hazardous and intrinsically safe
- The tank must contain 50% or greater fluid volume
- Inlets and outlets should be blinded
- Meets regulatory requirements
- Tanks must be taken out of service during the data collection

Tank diameter	Data Collection Time
Up to 30 feet	6 hours
30 to 80 feet	48 hours
Greater than 80 feet	72 hours



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