

UST SYSTEM LEAK DETECTION

Approved Method	Tanks	Piping			Record Keeping/Testing Required By Operator And Due Upon Inspection
		Pressurized (Two Methods Required) ¹	Suction ²	Gravity Flow	
Automatic Tank Gauging (ATG)	X			Tested With Tank	Monthly, For Last 12 Months
Secondary Containment w/Interstitial Monitoring (IM) ³	X	X	X		Monthly, For Last 12 Months
Statistical Inventory Reconciliation (SIR)	X	X	X		Daily Product Measure, Monthly SIR Report
Tank Tightness Testing/Inventory Control (TTT/IC) ⁴	X				5-Year Tank Test, Daily Product Measure, Monthly Overage/Shortage Calculation
Manual Tank Gauging (MTG) ⁵	X				Weekly Product Measure, Monthly Average Of Weekly Measurement
MTG/TTT ⁶	X				As Per TTT/IC
Vapor Monitoring	X	X	X		Monthly, For Last 12 Months
Groundwater Monitoring	X	X	X		Monthly, For Last 12 Months
"Other" (Must Be Approved By DEQ/UST)	X	X	X		Approval Dependent
Line Tightness Testing (Pressure System)		X			Yearly
Line Tightness Testing (Suction System)			X		Every 3 Years
Line Leak Detector		X			Yearly
Sump Sensor ⁷		X			Yearly (Sensor Functionality), Monthly (Sump Check)
0.2 gph Line Leak Testing		X	X		Yearly

¹One method of piping leak detection for a pressurized system must be an automatic line leak detector. The other method can be any one of the above.

²Leak detection is not required if safe suction is verifiable.

³Secondary containment can be (1) double-walled tank and/or piping, (2) concrete vault, with or without lining, (3) tank fitted with internal bladder, (4) leak proof excavation liner that partially or completely surrounds tank. Interstitial monitoring can be (1) interstitial space filled with liquid brine solution that activates sensor-alarm if brine reservoir drains or overfills, (2) liquid sensor that detects presence of liquid in interstitial space, (3) vacuum or air pressure monitor that detects loss of vacuum/pressure from interstitial space, (4) vapor sensor that detects presence of petroleum vapor in interstitial space, (5) manual device such as dipstick or bailer used to determine if liquid product has leaked and pooled at lowest point of containment.

⁴TTT/IC is only good for 10 years after installation of new tanks or after upgrading old tanks. ("Upgraded" tanks have been equipped with spill, overflow, and corrosion protection.) After the 10-year period, the system must be upgraded to a monitoring method that can be performed at least once per month.

⁵Only applicable for tanks with a capacity of <1,000 gallons.

⁶Only applicable for tanks with a capacity of 1,001 - 2,000 gallons. Tanks >2,000 gallons must use another method of leak detection.

⁷Can only be used as second form of line leak detection if sensor and entire containment system are third-party certified.

UST SYSTEM CATHODIC (CORROSION) PROTECTION

Component	Material Of Construction/Installation Method		Requirement	Record Keeping/Testing Required By Operator And Due Upon Inspection
Tanks	Non-Metallic	FRP	Not Required	<ul style="list-style-type: none"> ● Where Cathodic Protection Is Not Required, Record keeping/Testing Is Not Required. ● Where Sacrificial Anodes are Used, A Structure-To-Soil Voltage Potential Test Is Required Every 3 Years. ● Where Impressed Current Is Used, A Structure-To-Soil Voltage Potential Test Is Required Every 3 Years <u>and</u> An Equipment (Rectifier) Operation Check/Log Is Required Every 2 Months, For The Last 6 Months.
		Concrete	Not Required	
	Metallic	Bare Steel	Impressed Current Or Sacrificial Anodes	
		STiP3	Pre-Attached Sacrificial Anodes. No Further CP Needed.	
		Composite (External Epoxy Coating)	Not Required	
		Internally Lined (Coating or Bladder)	Not Required ¹	
Piping	Non-Metallic	FRP	Not Required	
		Flexible Plastic	Not Required	
	Metallic	Bare Steel	Impressed Current or Sacrificial Anodes	
		Copper	Impressed Current or Sacrificial Anodes	
		Coated or Wrapped Steel	Impressed Current or Sacrificial Anodes	
Connectors	Non-Metallic	FRP	Not Required	
		Flexible Plastic	Not Required	
	Metallic	Bare Iron Pipe	Impressed Current or Sacrificial Anodes	
		Bare Flex Connector (Iron Elbow)	Impressed Current or Sacrificial Anodes	
		Coated or Wrapped Iron	Impressed Current or Sacrificial Anodes	
		Within Total Containment Sump	Not Required	
		Booted	Not Required	
Not In Contact With Soil	Not Required			

¹Internal coating or bladder must be inspected 10 years after installation and every 5 years thereafter. If system has cathodic protection in addition to an internal liner, 10-year and repetitive 5-year inspections are not required.