

TO: Underground Storage Tank Owners
 Certified Tank Installers
 Certified Tank Inspectors

FROM: Maine Department of Environmental Protection

DATE: May 27, 2008

RE: Petrometer Interstitial Monitoring Systems

Petrometer® interstitial monitoring systems include an air bell inside a tank's interstitial space connected by hollow copper tubing to a pressure switch inside a console. When a Petrometer system is intact and functioning properly, fluid in a tank interstice will enter the air bell, causing the air pressure inside the copper tubing to increase and trip the pressure switch, which activates an alarm.

The alarm test pushbutton on the console tests the alarm circuit, but cannot confirm that the copper tubing is intact or that the air bell is properly located at the bottom of the tank interstice. If the copper tubing has corroded or cracked, fluid in the air bell will not affect the air pressure within the tubing and leaks will not be detected. If the air bell is located too high in the interstitial space, a leak will not be detected until the fluid level reaches the air bell. In both cases the console will incorrectly indicate that the system is operational. Both problems have been discovered during inspections of Petrometer systems in Maine.

Since 2003, the Department's *Rules for Underground Oil Storage Facilities*, Chapter 691, § 5(D)(8) have required that continuous electronic leak detection systems be tested annually. The proper location of equipment (ie. air bell) and proper function of the equipment when exposed to fluids must be confirmed. If the equipment is not accessible for inspection, the underground oil storage tank cannot pass an annual tank system inspection.

If a tank or facility fails an annual tank system inspection for leak detection, the failure must be corrected within 30 days. For facilities with Petrometer systems, this may require installing tank-top access or even replacement of the electronic monitoring system.

If you have you any questions, please contact the Underground Tanks Unit at (207) 287-2651.