Monitoring A Double Wall UST System Correctly

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New EPA mandated regulations require that underground storage tank (UST) installations and upgrades meet the new secondary containment guidelines. These guidelines include the installation of double wall tanks, double wall piping, and piping sumps (tank-top, intermediate, and under-dispenser containment).

According to the DNR rules [567 IAC Subrule 135.3(9)] all new and replacement UST systems installed after **November 28, 2007** must have secondary containment. This includes tanks and piping. This means that all tanks installed after this date must be double walled. In addition, the primary method of monthly leak detection for these tanks must be monitoring of the interstice (space between the inner and outer tank walls). In most tanks, the interstitial space is monitored electronically with a liquid sensor, but some tanks do allow for a manual or "sticking" process.

The same is true for the piping system; if you are installing a new system or planning an upgrade (replacing 10 feet or more), secondary containment must be installed. This includes double wall pipe and sumps at all piping connections. Again, monthly monitoring of the pipe interstice and sumps is required to be the primary method of leak detection. The sumps can be monitored with a liquid sensor or by physically checking the condition of the sump. This method of leak detection requires that the containment be liquid-tight, meaning all entry boots, conduits, and walls are not damaged and are intact. It also requires that the double wall pipe drains freely between dispenser sump and tank-top sump (i.e. piping test boots are open).

Another very important part of secondary containment is correctly documenting that you are monitoring and maintaining the double walled UST systems. This must be done to satisfy your monthly leak detection requirements. Also remember that you must continually maintain 12 months worth of these monthly records. If you are monitoring electronically with liquid sensors, then you must retain the sensor status reports or manual log (if the monitor does not print a report). If you are physically checking the interstitial spaces/sumps, then you must update the manual log every time you confirm the status. Obviously, any issues indicated by this monitoring must be addressed immediately.

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Even though secondary containment is now required on most upgrades and new installations, it really does make good sense. Adequate secondary containment will capture a leak before it is released to the environment.