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UST TALK

A Newsletter for Underground Storage Tank Owners / Operators

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Underground Storage Tank (UST) Program

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New rules mean all underground storage tanks at public buildings must be registered



The Vermont underground storage tank (UST) rules that were revised last summer now require all tanks serving public buildings – regardless of size – to be registered.

Large residential, farm and public building tanks (greater than 1,100 gallons) have been required to be registered with the Agency of Natural Resources UST Program since 1985.

However, the number and location of underground heating oil tanks smaller than 1,100 gallons is unknown. Since heating oil USTs are generally

not double-walled and cannot be monitored for leaks, these tanks pose considerable risk to human health and the environment in Vermont. The new provision hopes to get these tanks identified so environmental assessments can be conducted when the tank is closed (removed from service).

“The registration of these tanks will allow us to evaluate whether there have been spills or releases from the system” said Marc Roy, UST program manager. “In addition, we will be able to assist with property transactions, and help with the costs of proper remediation if eligible through our petroleum

cleanup fund.” This information will also help the program evaluate the potential liability to the cleanup fund and plan for future needs.

Heating oil USTs at stores, municipal offices, schools and other public buildings must be registered with the UST Program no matter what the size. The registration requires the payment of a small recording fee to the municipality where the tank is located for updating the land records.

Registration forms can be obtained by calling the UST Program at 802-241-3874, or complete the form online, print, and submit it to the UST Program. The registration form can be found at: <http://www.anr.state.vt.us/dec/wastediv/ust/permit/FullUstApp.pdf>

When to Expect an Inspection



The UST Program currently plans to conduct routine inspections of all permitted UST systems once every three years.

You may see us at your facility more frequently than that for several reasons. In 2008, we must also conduct routine inspections at 100 randomly-selected facilities. Inspectors will also be visiting about 130

facilities in 2008 that we inspected in 2006 in order to even out the annual workload (we did a lot of inspections in 2006!). Finally, if you did not submit your Self-Certification, you will be inspected in 2008.

The UST Program inspectors attempt to contact each tank owner before a routine inspection. If your facility had a routine inspection and you received and responded to a Notice of Alleged Violation (NOAV), you may be subject to an unan-

nounced follow-up inspection to verify that the requested actions were completed.

The UST Program posts a list of all the facilities we plan to visit for a routine inspection on our website, <http://www.anr.state.vt.us/dec/wastediv/ust/home.htm>.

The UST Program reserves the right to inspect facilities that are not on this list.

Spill Buckets – the Weak Link in the UST Chain

By Ted Unkles, UST Program Coordinator

Everyone is familiar with the old saying that a chain is only as strong as its weakest link. The same principle holds true for UST systems: a UST system is only as reliable as its least reliable component. In my opinion, the least reliable component in a typical UST system is the spill bucket. (I would rank overfill prevention devices and older flexible piping are the second and third least reliable components, but those can be discussed in future newsletter articles.) Spill buckets are the least reliable component for two reasons: spill buckets are subjected to very harsh treatment, and they are not designed to last very long.

It is fairly common to see cars and trucks driving over spill buckets, subjecting them to a great deal of strain. Here in Vermont, spill buckets frequently fill with water which quickly freezes in winter. Delivery drivers are often seen breaking through ice with large hammers and steel bars. It doesn't take a very powerful imagination to see how spill buckets can become damaged very quickly. This past winter, one of our inspectors found spill buckets at one facility that had been filled with several inches of rock salt, to prevent water from freezing. The water probably did not freeze, but I have no doubts that the salt accelerated the deterioration of the spill bucket.



Here is a spill bucket we found in Vermont this past winter – partially filled with road salt!

Although it was not widely understood until recently, spill buckets are designed and built with a five year life expectancy. Since many tank owners (and regulators) did not know this,

many people did not understand that spill buckets have to be replaced regularly.

The State of Mississippi recently found a heavily contaminated site that was apparently caused by leaking spill buckets. The facility is a busy truck stop that was equipped with double-wall tanks and piping. The system was equipped with electronic sensors in all the tank-top sumps and all tank interstitial spaces. No sensors indicated any problem. But during a routine inspection an employee of the Mississippi DEQ discovered something that shocked everyone. Staining around the fill pipes suggested that spills had regularly occurred during deliveries, and the inspector noticed visible holes and cracks in the spill buckets. When a groundwater sample was drawn from an existing monitoring well, they found more than two feet of diesel fuel floating on the ground water.



Note the extensive staining surrounding the fill ports at the Mississippi truck stop. Clearly, the delivery drivers were not being as careful to avoid spills as they should have been. Photo courtesy of the Mississippi Department of Environmental Quality

Thus far, more than 4,800 gallons of diesel fuel have been removed from the groundwater. It's possible that even more petroleum product is bound up in the soil. Remember – the tanks and piping at this truck stop did not leak. This release appears to

have been caused entirely by spills during delivery, and by spill buckets that did not contain the product.



A close-up view of the interior of one of the spill buckets at the Mississippi truck stop. The backfill material is clearly visible through the cracked plastic. Photo courtesy of the Mississippi Department of Environmental Quality.

So what can be done to address this problem?

First and most important, make sure the delivery driver is as careful as possible. In theory, the delivery driver should not spill a single drop of product. It's a good idea to watch as the driver makes the delivery.

Second, maintain your spill buckets properly: they should always be free of liquid and debris, and they absolutely must be liquid tight at all times. The Vermont Underground Storage Tank Rules require that any liquid that accumulates in a spill bucket during a delivery must be removed from the bucket before the delivery truck leaves the premises. All materials removed from spill buckets must be managed in accordance with the Vermont Hazardous Waste Regulations.

Finally, remember that spill buckets wear out and must be replaced regularly. Vermont's rules require that unless the UST Program has granted a variance, all new and replacement spill buckets must have a capacity of 15 gallons or more. Vermont's UST Rules also require that permittees notify the UST program before performing any repair or replacement work. ♦

Cathodic Protection (CP) News

Many of you are aware there are some changes in the requirements for CP Testing since the adoption of Vermont's new 2007 UST Rules (effective August 1, 2007). Just in case you were unaware of these changes or needed a refresher, the following are some of the most important changes to remember:

Impressed current systems have to be inspected and tested at least annually.

- This has been an EPA federal regulation requirement since the 1980's, so it really isn't new. Vermont's new rules require that the person inspecting and testing the system must be a certified or licensed professional engineer specialized in corrosion control or a person certified by NACE International as one of the following:

- Corrosion Specialist
- Cathodic Protection Specialist
- Senior Corrosion Technologist
- Corrosion Technologist
- Cathodic Protection Tester

Systems using field installed galvanic anodes must be tested every year.

Before the new rules it was required that field installed galvanic anodes be tested every three years. Because the installation of supplemental anodes modifies the original protection engineering substantially, annual testing is required to ensure that the CP is operating correctly after an installation.



Beginning June 1, 2008, anyone testing a cathodic protection system must be NACE certified as a Cathodic Protection Tester, or hold an equivalent level of expertise.

Becoming a NACE certified Cathodic Protection Tester involves taking a week-long course, and passing a rigorous exam. Taking the exam without first taking the course is an option, and anyone who passes the exam will be certified by NACE; however only contractors intimately familiar with the principles of cathodic protection should consider this option. A NACE certification is widely considered to be the most thorough CP training and the most widely accepted, however other acceptable options are available. Some training courses that are available include the short course in cathodic protection offered by West Virginia University, or The Steel Tank Institute's course on testing cathodic protection systems on USTs. The International Code Council (ICC) does not offer training courses, but offers an exam on UST cathodic protection, which may be equivalent to NACE certification. For more info visit these web sites:

- **NACE International:**
www.nace.org
- **International Code Council:**
www.iccsafe.org
- **Appalachian Underground Corrosion Short Course:**
<http://aucsc.com>
- **Steel Tank Institute:**
www.steeltank.com

Training Offered In Vermont in the Works

The UST Program was notified that a Cathodic Protection certification training course sponsored by The Steel Tank Institute and SB Collins will be offered in late October in Chittenden County. This is a two day course and will be accepted as an equivalent to the NACE certification. Notices will be sent and the Vermont UST webpage will be updated as more details become available. <http://www.anr.state.vt.us/dec/wastediv/ust/home.htm>

PLEASE REMEMBER....



Even if they are not due for their next test until fall, it's a good idea to test them in spring or early summer since it is much easier to install new galvanic anodes or an impressed current system during the warm months. And keep in mind that cathodic protection contractors are busy, so report a failed test to the UST Program as soon as you receive the results, then call a CP specialist or engineer. The UST Program requires that failed CP systems must be repaired or replaced within 90 days of the failed test, so there is no time to lose. ■

A Gentle Reminder!

Second annual Self Certification of UST facilities due December 31, 2008.

The self certification workbook is available on line at <http://www.anr.state.vt.us/dec/wastediv/ustselfcert.htm>

We hope to have the 2008 checklist on line by October.

You must re-register!

Don't worry if you have forgotten your access code, we will mail this information to you. That will also be the time to request a paper copy of the checklist if you were one of the 15% who did not file on line.

Online filing is easier so, if you can, please file on line.

UST Compliance Rate – Just What We Hoped For!



The initial analysis of our compliance rate after the first round of self-inspection and certification shows an improvement of approximately 16%! The compliance rate determined after almost 100 randomly selected facilities were inspected in 2008 is 83.5%, compared to a baseline rate of 68% in 2005. The 2005 baseline was determined as the result of 100 inspections at randomly selected UST facilities.

The self-inspection/certification program was implemented with the hope that facility owners/operators would, through the course of conducting the self-inspection, find and correct problems with either their equipment or their operations. The 2008 inspections seem to verify that this is indeed the case. The 100 inspections have resulted in only 16 Notices of Alleged Violation being sent out.

Notices are only sent to facilities where equipment or operational issues could result in releases. As the summer progresses, we'll look more closely at the inspection data to see if there are trends or specific areas where it appears that more education or outreach is needed.

Spotlight on BMPs—Dispensers



Your old dispenser may give you an ulcer when it stops at \$3.9999 as the price of fuel passes four dollars; it may cause your blood pressure to rise when someone drives off with your nozzle still in their gas tank; but you are guaranteed at least one headache if you find that your dispenser has been leaking and releasing product into the environment. Anecdotal evidence from our UST inspectors shows that if they find a leak, it's usually from a dispenser. After July 1, 2007, all new dispensers and all dispensers connected to new piping must be installed with dispenser sumps. Those sumps must be monitored for leak detection. But for the many dispensers out there that don't fall under this requirement, we have a few Best Management Practices (BMPs) that we recommend.

If you have exempt suction piping or pressurized piping that was installed before 1990, you may not have a sump under your dispenser (i.e., there is just bare dirt underneath it). The UST Program recommends as a BMP that all dispensers be retrofitted with sumps. Why else would we have made it a requirement for all new piping and dispensers? Whether or not you have a sump under your dispenser, we also recommend as a BMP that you check inside your dispenser weekly for any leaks. If you have a dispenser sump, you may have the option of installing an electronic sensor in the sump to do the leak detection for you.

If you find a leak in your dispenser equipment and it is going straight into the soil, immediately take the dispenser out of service, place absorbent material or small bucket underneath the leak, and contact the UST Program and a contractor for repairs. Use your best judgment if you find a leak fully contained by a sump. Take the dispenser out of service if there is any risk of a release to the environment. Always get a leak repaired immediately.

Just like we all need a regular doctor's visit to check on that blood pressure, your dispenser needs a regular check to make sure it is not leaking product. The sooner you catch a problem, the better!

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