



# UST TALK

A Newsletter for Underground Storage Tank Owners (UST) / Operators  
Published by Waste Management & Prevention Division



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### Petroleum Cleanup Fund’s Richard E. Barnes recognition!

Richard (Dick) E. Barnes of the A.R. Sandri Company has been recognized by Vermont Governor Peter Shumlin for his long-term service to the state of Vermont as a member of the state's Petroleum Cleanup Fund Advisory Committee. Barnes, who also chairs the Vermont Petroleum Association's Executive Committee, retired last month from A.R. Sandri, Inc., a petroleum distributor operating in Vermont, New Hampshire and Massachusetts and headquartered in Greenfield, Mass.



Photo of Richard E. Barnes and Chuck Schwer

The letter of recognition signed by the governor was presented during a meeting of the committee on Tuesday, September 13, by Chuck Schwer, Director of the Waste Management & Prevention Division, Department of Environmental Conservation, who managed the state's sites management section (SMS) before he was promoted a year ago.

Shumlin noted that Barnes was appointed to the PCF Advisory Committee when it was first established and that he has served continuously since then. He thanked him for his insights and contributions over the years and added "You were a true leader for the industry and you proved that government and the private sector can work together to solve critical environmental issues. With your help the (Vermont) Petroleum Cleanup Fund is considered one of the best UST financial assurance programs in the country. Best wishes for a happy and

healthy retirement." The Vermont PCF Advisory Committee is comprised of government officials and representatives of the petroleum industry. It meets several times per year to review the status of the PCF and its effectiveness in meeting the goals of the fund, which are to protect human health and the environment from petroleum contamination caused by leaking USTs.

The problem of leaking steel tanks was first identified across the country in the early 1980s, and Vermont adopted UST management standards beginning in 1986. The Vermont industry was the first in the nation to meet all state and federal requirements for tank upgrades by December, 1998, and received the Environmental Merit Award from the U.S. Environment Protection Agency on Earth Day in 1999 to recognize its successful public/private partnership.

Barnes has spent 51 years working in the petroleum industry. He lives with his wife in Hinsdale, N.H.

### Inside Story

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## Stage I Vapor Recovery – Past and Present



In July of 2015 amendments to the Air Quality & Climate Division's (AQCD) Stage I vapor recovery regulation went into effect, in part, to bring Vermont's Stage I vapor recovery requirements in line with a federal regulation (40 CFR Part 63

Subpart CCCCCC). What do these amendments mean for you as a gasoline dispensing facility owner or operator?

First, all gasoline dispensing facilities need Stage I vapor recovery unless all gasoline deliveries come from "peddle or account trucks" with a capacity of less than 4000 gallons. If all deliveries come from these type trucks you don't need Stage I but do need to receive deliveries via submerged fill either with a drop tube that extends to within 6 inches of the bottom of the storage tank or through bottom filling.

If Stage I vapor recovery is required, the necessary equipment is the same regardless of gasoline throughput. Larger facilities (gasoline throughput of 100,000 gallons/month or greater) are also required to perform testing every three years. There are some differences in the prescribed equipment between the amended and the original regulation that can be summarized as follows:

- Specific performance requirements apply to the pressure vacuum (P/V) valve to be installed on the storage tank vent line.
- Both the fill adaptor and vapor adaptor (poppet valve) must swivel or use a locking clamp so that they can't be loosened or overtightened by the product or vapor recovery hoses during deliveries.
- All facilities constructed or reconstructed after July 1, 2015 need to install a dual-point Stage I system.

The testing requirement for the larger facilities consists of two tests; a pressure decay test and a P/V valve cracking pressure and leak rate test. From observations of tests conducted so far the AQCD has identified some

issues to keep in mind when preparing for a test:

- In order to conduct the pressure decay test a vapor adaptor has to be removed, tested for vapor tightness, and replaced. Vapor adaptors that have seized onto the riser pipe and can't be removed with the usual tools have to be cut off and replaced.
- Where a P/V valve is installed on the vent pipe with a slip-on adaptor, the adaptor is prone to vapor leakage that can cause the pressure decay test to fail. Threaded adaptors have not shown this problem.
- Not all P/V valves are manufactured to meet the performance specifications referenced above and will need to be replaced with a P/V valve that does.

Lastly, there are several operational requirements to be aware of:



- Maintain a record of the volume of gasoline delivered to or dispensed from the facility and report the monthly throughput on the annual Underground Storage Tank tax assessment invoice.
- Conduct a monthly visual inspection of specified storage tank system components and maintain a record of the findings.
- Conduct an annual inspection of a specified list of storage tank system components and report the findings as part of the annual Underground Storage Tank Self-Certification.

More detailed information about Stage I vapor recovery is available on the AQCD website including a fact sheet, annual inspection form, monthly inspection form and lists of contractors who install or test Stage I vapor recovery systems. You can also contact Dave Shepard of the AQCD at [dave.shepard@vermont.gov](mailto:dave.shepard@vermont.gov) or 802-272-4088.

## SITES MANAGEMENT SECTION's (SMS) CORNER!!

As most of you know, the Sites Management Section (SMS) is part of the Waste Management and Prevention Division (WMPD). We work closely with the Tanks Program, and they were gracious enough to offer us a portion of their regular newsletter!! We will be providing a regular update in the Tanks Newsletter, and who knows, maybe we will eventually have our very own newsletter!!

2016 has been busier than any other year! This is mostly due to the Perfluorooctanic Acid (PFOA) issues discovered in the southern portion of the State last winter. In addition, we have put a great deal of time into turning our current Investigation and Remediation of Contaminated Properties Procedure (April 2012) into a Rule. The Investigation and Remediation of Contaminated Properties Procedure is the document which spells out how properties where releases of hazardous materials have occurred are investigated and remediated. This has been a huge effort, and it isn't quite done! We are currently on track to send the draft "I-Rule" (our new catch-phrase for it) to the Interagency Committee on Administrative Rules (ICAR) the end of the year. This will be the first step towards the final Rule making!

How is the I-Rule different from the current Procedures? Well, mostly it will look different, but many of the steps in the process are the same. We will be implementing a "streamlined" way of addressing residential heating oil sites. We will be looking for more initial site characterization via high or adequate resolution techniques, rather than slapping in four monitoring wells in an effort to determine the degree and extent of contamination\*. Corrective action will also need to be evaluated at every site (including monitored natural attenuation) – this will likely result in faster cleanups at lower costs! With the looming adoption of the new Groundwater Protection Rule and Strategy, more sites will also require groundwater reclassification.

Didn't have time to review the draft document during pre-Rule making?

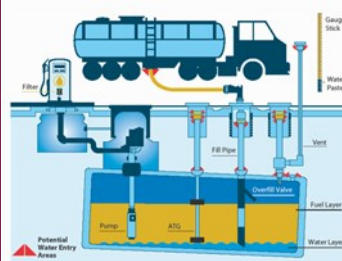
No problem!!! It will be available again once it is submitted to ICAR, AND there will be public meetings scheduled.

**\*Recommended bedtime reading: ITRC's Integrated DNAPL**

**Site Characterization; May 2015 – available for FREE on ITRC's website!!** <http://www.itrcweb.org/Guidance/ListDocuments?TopicID=5&SubTopicID=49> .



## water risk for tank owners



STI-SPFA has developed an informational brochure for UST owners, encouraging them to monitor and remove water from their tanks. The brochure has easy-to-understand text, a clear illustration of where water enters underground

tanks, and a list of further resources.

Particularly with today's newer fuels, poor operations and maintenance procedures for monitoring and removing water from steel and fiberglass-reinforced plastic (FRP) storage tank systems can lead to a number of risks, from fuel quality degradation and frequent fuel filter changes, to microbial contamination and damage to the entire storage system, including, without limitation, submersible turbine pumps overfill prevention, dispensing and metering equipment, and leak detection equipment.

Just as compatibility of newer fuels with FRP tanks is a growing concern, so too is water in tanks storing newer fuels. In a [recent blog on FuelMarketerNews.com](#), Paul Nazarro of Advanced Fuel Solutions, Inc., said that "Water is both the most common and most harmful contaminant to distillate fuel...Once in the tank, water is harmful in the exact opposite way that oil is harmful to water: while oil threatens life in water, water promotes life in petroleum."

Regulators, tank owners, consultants-all are welcome to download, distribute, and link to the ["Protect your tanks, Reduce your downtime, Reduce your risk" brochure](#) on STI-SPFA's website.

## Do you have an emergency generator?

Emergency generators are essential devices for many facilities: hospitals, nursing homes, schools, police & fire stations, etc. The critical thing about emergency generators is that when the power grid goes down emergency generators must work properly. If a huge storm eliminates power to a large area, that is not the time to discover that the generator does not work.

Recent changes in the formulation of diesel fuel have mandated some changes in the management of diesel tanks that supply emergency generators, and not all managers of generators are aware of these changes.

About a decade ago, federal rules mandated a drastic reduction in the sulfur content of diesel fuel. Today, all diesel fuel sold in the US must have no more than 15 parts per million (ppm) of sulfur. This has contributed to cleaner air, and we are all better off because of that change. But one unintended consequence of that change is that diesel fuel is no longer as stable as it used to be. If diesel fuel sits in a tank unused for a long time the fuel can start to break down, and micro-organisms can start to grow in the fuel, causing buildup of sludge and acids inside the tank. If left unchecked, these contaminants can clog filters and plug up suction stubs, causing generators to cease functioning.

The American Society for Testing materials (ASTM) now recommends that diesel fuel in tanks that supply emergency generators be replaced every year. If the diesel fuel is a biodiesel blend, they recommend that it be replaced every six months!

Tanks that supply heating oil to a furnace or boiler and that also supply fuel to a generator do not need to replace fuel as often, since the heating system uses a lot of fuel each winter, which is then replenished with fresh fuel. But if a tank is piped only to a generator, the diesel fuel can sit inside the tank for a long time. If the diesel fuel inside your generator tank has been in the tank for more than a year (or more than 6 months if it's a biodiesel blend), talk with your fuel dealer about pumping the tank out and refilling it with fresh fuel.



## Monthly Inspections

The last version of UST Rules (2011) included the requirement to conduct monthly inspections. Even though the requirement is over 5 years old, it is still the most common violation found by state inspectors! The Class A/B operator, or a person working under the supervision of the Class A/B operator, is required to conduct and document a monthly inspection of the facility (this is **not** the same as the Stage I monthly inspection requirement by the Air Pollution Control Division). The operator must inspect the facility for any conditions that would require an immediate response, such as any indication of a spill or release or any alarms indicating a possible release. A sample checklist is included in Appendix A of the Operator Training Guidance Document. The guidance document can be found on-line at [http://dec.vermont.gov/sites/dec/files/wmp/UST/OperatorTrainingGuidance\\_Final.pdf](http://dec.vermont.gov/sites/dec/files/wmp/UST/OperatorTrainingGuidance_Final.pdf).

You are not required to use that checklist, but at a minimum, you must document the same information the sample checklist covers. This monthly task can help identify problems before they grow too large, and make sure the facility is running well. The inspection looks at above ground and easily accessed components of the UST system. Here's a quick review of the requirements:

1. Weekly Release Detection-does the weekly release detection (either electronic or manual) indicate any problem with the tank and/or piping?
2. Dispensers – check the hoses for signs of wear; open the dispensers and check for leaks or drips from the dispenser components, check the dispenser sump (if there is one) for liquid. While you are there, check that required information/labels on the pump are visible and legible.
3. Fill ports – open the fill ports and remove any accumulated debris and/or liquid. Check the bottom of the containment bucket for cracks or holes. Check the product identification tags (if present) to see if they are legible. Look at the lids to see if any gaskets need replacing, and to see if the lids need re-painting.
4. Check any piping sump covers to be sure there is a tight seal, and examine covers for cracks or stress that could indicate a need for replacement.

While it is not required, we also recommend leak detection records are examined. Records should be examined to ensure all information is collected, record frequency is adequate (at least weekly), and records are stored chronologically. In addition, records should be examined for any discrepancy or alarm that indicates a problem with a tank system.





## Permit Renewal?

Permit holders (the “Permittee”) should know when the facility permit expires, and make sure the renewal application gets submitted well before the old permit expires. It has been UST Program practice to send out renewal applications along with annual fee invoices. When you receive your permit renewal application review the information for accuracy, sign and return the application with your check made payable to the Treasurer, State of Vermont.

Before we issue a permit renewal, we check to verify that all required UST system testing is current. System tests are line leak detector (for pressurized systems) and/or cathodic protection (CP – steel tanks). Both tests must be conducted by a qualified technician. The Agency cannot issue an operating permit for a tank that is known to be out of compliance with these tests.

Tank owners should plan ahead to make sure these tests are current and in compliance well in advance of permit expiration. Testers for line leak detectors are more readily available than CP testers. This year in particular some tank owners have had a problem scheduling the CP testing. The risk of CP failure increases as the tank gets older and upgrading or retrofitting a system can take some time.

**PLEASE TAKE NOTE:** If you have steel tanks subject to the CP test (either annual or 3-year) and the operating permit is up for renewal be sure the test is done well before the expiration date. If the tank(s) fails the CP test the application to renew the permit will be denied. No more deliveries of product will be allowed. The tank must be emptied and placed out of service until CP is restored.

An application for an operating permit can be resubmitted once the tank(s) has had its CP restored. The restoration of the CP either by field installed anodes or an impressed current system must be designed by a corrosion engineer or corrosion specialist.

If all tests are up-to-date and passing, we will review the system to determine the duration of the permit. The Agency has authority to issue an operating permit for an underground storage tank for up to five years. Most operating permits are issued for the full five years. However, we issue permits for lesser amounts of time if one or more of the tanks are:

- ◆ subject to the upcoming single wall deadline date of 1/1/2018;
- ◆ subject to the 10 year lining inspection
- ◆ new tank owner.

## Petroleum Cleanup Fund (PCF) Advisory Committee

The Petroleum Cleanup Fund (PCF) Advisory Committee meets throughout the year, and at the end of each year is responsible for submitting a Report on the Fund, which is submitted to the Legislature by January 15.

The committee members for the upcoming year include a representative from each of the following state agencies or departments:

- ◇ Natural Resources, Department of Environmental Conservation, and Financial Regulation.
- ◇ A member of the House - Michael Marcotte
- ◇ A member of the Senate – Mark MacDonald and the following persons from the petroleum industry who willingly volunteer their valuable time:
- ◇ Joseph Choquette, III: Vermont Petroleum Association
- ◇ Scott Bigger: representing the gasoline Retailers
- ◇ Richard (Dick) Browne: Champlain Oil Co., Inc., a licensed gasoline distributor
- ◇ Peter Bourne: Bourne’s Energy, a licensed fuel dealer
- ◇ Matt Cota: Vermont Fuel Dealers Association
- ◇ Peter Tucker: A licensed real estate broker representing home owners.

The Annual PCF Report is available on the Waste Management & Prevention’s website - <http://dec.vermont.gov/waste-management/contaminated-sites/PCF>.



Name

Address

City, State, Zip

# Weekly Leak Detection



Over the past couple of years, through the course of routine inspections, we have found a number of cases where facility owners/operators have been cited for weekly leak detection violations. We feel this recent spate of problems with a critical part of UST operation is worth examination.

First and foremost, the UST Program has always considered this requirement to be critical. While all the permitted facilities in VT have been upgraded to modern standards, the weekly leak detection test or check is an easily accomplished chore that ensures the expensive equipment is working.

Since we began inspections on a 3-year rotation in 2005, and started the self-certification program in 2007, leak detection (and the accompanying records) have been featured. Due to the importance of this essential part of safe UST operations, and the risk to human health and the environment from not conducting leak detection, we have referred all of these cases for enforcement actions.

So what is the reason for this rash of leak detection violations? Here's the spread:

1. Turnover – there is one case where the person conducting weekly leak detection (manually) retired, and the owner did not assign anyone to pick up this duty.
2. Weather – in two cases, facility staff stated when the weather was bad monitoring wasn't done.
3. Employee Performance – in one case, the owner stated personnel assigned the task were not doing it.
4. Lack of training – employee responsible stated he had not been trained.

The UST Rules require three-year's worth of leak detection records are maintained either at the site or in VT at another site (corporate office). UST inspectors will ask to see records and expect either hand-written lists documenting weekly manual checks of the interstitial space – or for electronic systems that do not have printers, or print-outs from electronic interstitial monitoring that shows weekly system checks.

Weekly leak detection records demonstrate someone at the facility is paying attention to the UST system – more than just inventory. Owners/operators should make sure this critical function is being conducted – monthly facility inspections are a great time to ensure it is being done. Checking for system leaks can find a small problem before it gets big, and keep fuel from escaping out of the system.