

THINK



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AST Regulations Adopted June 11

by Jill Hall

The Delaware Department of Natural Resources and Environmental Control announces the adoption of the Delaware *Regulations Governing Aboveground Storage Tanks* (the Regulations), effective June 11, 2004. The Regulations were developed pursuant to the requirements of Title 7 Del. C., Chapter 74A, *The Jeffrey Davis Aboveground Storage Tank Act*. Contact the Tank Management Branch at 302-395-2500 to obtain a hard copy at a cost of \$15.00 or the Regulations are available at no cost on the aboveground storage tank (AST) home page at <http://www.dnrec.state.de.us/dnrec2000/Divisions/AWM/ast/>.

The Regulations are intended to address existing and potential sources of pollution that may result from ASTs. AST design criteria promulgated under the Regulations will minimize the risk of regulated substances being released and impacting the environment. Release confirmation and remediation standards are set forth to require the cleanup of any release that does occur. Financial responsibility requirements ensure that AST owners show proof of the ability to pay should a cleanup be required.

What is an aboveground storage tank?

- A single containment vessel
- Greater than 250 gallons
- Currently or previously having contained regulated substances on or after January 1, 1992.
- Includes all ancillary aboveground pipes up to the first point of isolation
- Includes all underground pipes and dispensing systems

What is not an aboveground storage tank?

- Septic tanks
- Pipelines
- Flow through process tanks
- Surface impoundments, pits, ponds or lagoons
- Liquid trap or gathering lines related to oil or gas production or gathering operations
- Wastewater containment at POTW

What is a Regulated Substance?

A liquid or gas that:

- Is a petroleum product; *or*
- Contains 1% or more (by concentration) of a hazardous substance as defined in CERCLA; *or*
- Contains 0.1% or more (by concentration) of a carcinogen as defined by IRIS; *or*
- Is a substance determined by the Secretary through regulation to pose a risk to public health, welfare or the environment if released into the environment.

Which ASTs must be registered with the Department?

All ASTs greater than 250 gallons that contain a regulated substance must register, **except:**

- Farm tanks less than 1,100 gallons
- Heating fuel tanks used for consumptive purposes on premises and less than 1,100 gallons
- Motor fuel or motor oil tanks used for non-commercial purposes and less than 1,100 gallons
- Tanks regulated by the Boiler Safety Program (Pressure vessels)
- Tanks regulated by the Accidental Release Prevention Program (Extremely hazardous substances)
- Propane tanks
- Temporary tanks, not to exceed six months

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What are the requirements for installation of a new AST, greater than 12,499 gallons containing a Regulated Substance? (for ASTs containing Heating Fuel, Diesel or Kerosene the capacity must be greater than 40,000 gallons for new tank installation requirements to apply)

- have installation plans approved by DNREC
- be placed on a Release Prevention Barrier (1×10^{-7})
- have Secondary Containment
- have a method of Leak Detection
- be protected from corrosion
- have an Overfill and Spill prevention system
- be designed, constructed and installed in accordance with industry standards

What are the inspection requirements for existing ASTs, greater than 12,499 gallons containing a Regulated Substance? (for ASTs containing Heating Fuel, Diesel or Kerosene the capacity must be greater than 40,000 gallons for existing tank inspection requirements to apply)

- Inventory control
- Routine in-service inspection (every 30 days)
- Routine Internal and External inspections
- Maintenance requirements for leak detection, overfill prevention, secondary containment and cathodic protection equipment

What upgrades are required for existing ASTs?

- Within 1 year a device for measuring the level in the tank
- Within 1 year an overfill prevention device
- Within 3 years normal and emergency venting
- Within 10 years overfill prevention equipment and measuring devices must operate independently

AND

- Within **7** years for ASTs *not* equipped with cathodic protection or an internal liner; OR
- Within **15** years for ASTs equipped with cathodic protection or an internal liner;

ASTs must be upgraded with **one** of the following:

- Leak Detection
- Release Prevention Barrier
- Double bottom
- Annual in-service test or inspection
- Annual API 653 internal inspection

What are the Financial Responsibility requirements for regulated ASTs?

- Proof of Financial Responsibility is required for all regulated ASTs with the exception of Agricultural ASTs by June 1, 2005
- A graduated system based on aggregate aboveground storage capacity in the state is used to determine the amount of financial responsibility required ■

So you just purchased an UST... now what?

by Becky Keyser

You recently purchased an UST, perhaps at a gas station or some other place of business. You're pretty sure that the State is somehow involved and that there's probably some paperwork to complete. But now what?

Well, you're right. The State of Delaware regulates all petroleum tanks (except home heating oil) that are 110 gallons in volume or larger. If you have a heating oil tank that's 1,100 gallons or smaller, your tank is not regulated and you do not need to notify DNREC. Part of the UST Regulations requires that the State be notified when a regulated tank is bought or sold. To properly notify DNREC that you're now the new owner of a regulated UST, you will need to submit a form and a few pieces of transfer documentation:

First, you will need an "Underground Storage Tank Ownership Transfer Notification" form. This form can be found on the TMB web page at <http://www.dnrec.state.de.us/dnrec2000/Divisions/AWM/ust/Download/pdf/ownerfrm.pdf> or you can call the TMB to have a copy mailed to you. This form must be filled out completely (including both the buyer's and seller's signatures!).

Next, you need to provide a copy of the Bill of Sale. In addition you need the tank registration certificate and the vapor recovery operating permits (if applicable).

These documents should be obtained from the seller at the time of sale. Any other documents pertaining to the UST and vapor recovery systems, including inventory control, release detection, and testing records must also be obtained at this time and kept on file. TMB inspectors may ask to see these documents during a future compliance inspection.

The last and most important piece of documentation is proof that you have financial responsibility (FR) in place **before** you operate the UST. FR is most often in the form of commercial pollution liability insurance. If you chose this option, request that your insurance agent provide you with a certificate of insurance (*not* an insurance ACORD) that is worded identically to Appendix D in Delaware's UST Regulations. If the wording is not identical, it may hold up your ownership transfer while a correct document is obtained.

Once you have gathered all of these materials together, make copies of them for your own records and send the originals to the TMB within 30 days of the date of sale. You will receive your new tank registration certificate and vapor recovery operating permits in the mail shortly thereafter.

That's all there is to it! As always, please call the TMB with any questions you may have. ■

Inventory Control

By Chris Brown

It shouldn't be news to owners and operators of regulated USTs in Delaware that inventory control is a required method of release detection. However, in the Summer-Fall 2003 issue of *Think Tank* the Tank Management Branch (TMB) presented a summary of the most common compliance deficiencies encountered at UST facilities, and sure enough, inventory control was featured in that article.

So, what is happening — or not happening? When performed consistently and correctly, inventory control procedures are easy to follow — and most importantly — are a powerful release detection tool. By neglecting inventory control, or failing to do it correctly, a product release may go undetected even when other methods of release detection are working properly.

The key to conducting inventory control is spending just a few minutes on it *every day*, and a few extra minutes at the end of each month. That way a simple task doesn't get complicated, and a release detection tool stays running at optimum.

Almost every day an UST may have at least a little inventory variance — the difference between what the ATG system (or stick) says is in the tank, and what “the book” says. A daily look at the variance column can reveal if a leak is developing even before the monthly inventory reconciliation, or “leak check,” is calculated. Daily variance should be low, and within a month's time about half of the values are negative and the other half are positive, with occasional zero values. There may be a “bounce” in the variance, where an unusually large variance is followed the next day by a similarly large value of opposite sign. Bounce may be attributed to recording error, such as failure to record a product delivery on the correct day, and if infrequent should not affect the overall inventory variance. However, large variance values that cannot be explained by errors may indicate a leak. If a daily variance value exceeds five percent of daily product sales, release investigation procedures are required. If the source of the variance cannot be attributed to errors in recording or measurement, theft, or verified by visual inspection of the UST system, the TMB must be notified and the release investigation expanded.

Looking at trends in the daily variance can also provide an early alert to a possible release. There are recent cases in Delaware in which significant petroleum releases went undetected despite normally functioning ATG sys-

tems. At one facility, the USTs even passed monthly inventory reconciliation, yet several inches of free product were detected in an on-site groundwater monitor well. Over 2,000 gallons of product were released at this site. While investigating the source of the release, a review of inventory records showed a pattern that could have been picked up by a little closer attention to inventory. The daily variance numbers for one UST showed a strongly negative trend rather than the roughly equal balance among positive and negative values. The negative values in a month easily outnumbered the positive, with many days in a row having negative values. The total monthly variances for this tank, although within the “one percent + 130 gallon” tolerance, were in the hundreds of gallons, much larger than for the other tanks. Upon thorough in-

spection of the entire UST system, the culprit turned out to be a failed functional element in the submersible pump, allowing a small amount of product to discharge every time the pump activated. Remember, everything “tested tight” at this facility, even in the monthly inventory reconciliation. The only indication of a problem (other than about eight inches of product in a well) was the negative trend in the inventory variance which could have been discovered much earlier with a little more attention being paid to inventory.

So, inventory control is not just paper work that must be done because it is “in the regulations.” It really works as a method of release

detection — when used daily and correctly. If tank owners and operators are having problems with the procedures the TMB can help by providing a copy of the guide book *Doing Inventory Control Right for Underground Storage Tanks*, copies of spread sheets for doing inventory on your computer, and can provide a little “coaching” to ensure the power of such a useful release detection tool is understood. ■

References

Churchill, B.H., 2002, “Compliance Issues”: *Think Tank* # 40.

Moreau, M., 2003, “Baffled by a Leak? Check the Inventory Records”: *LUSTLine* # 44



THINK TANK

Gary Charles, Editor
Emil Onuschak, Jr., Asst. Editor
Frank Gavas, Graphics Editor
Tripp Fischer, Technical Editor

Contributing Staff

Chris Brown
Becky Keyser
Colin Gomes
Jill Hall
Tara Chambers Susee

DNREC
Tank Management Branch
391 Lukens Drive
New Castle, DE 19720
Tel: (302) 395-2500
Fax: (302) 395-2555

Kathleen Stiller Banning
Branch Manager

Ellen Malenfant
UST/LUST Program Manager

James Harlan
Director, Boiler Safety
(302) 744-2735



Don't Top Off

This summer DNREC, in cooperation with EPA Region 3, is conducting a program aimed at educating drivers and gas station owners and operators about the problems associated with "topping off" when they fill up. By now, we're all familiar with those strange nozzles that appeared at gas station dispensers over the past few years. You know the ones: they either have a fat black "boot" over the metal nozzle or, if you look closely, other metal nozzles without "boots" have elongate slots near their tip.

Remember what they're for?

That's right! They capture the vapors coming out of your vehicle's gas tank as you fill up and return the vapors to the gas station's underground storage tanks. This accomplishes two things: it decreases air pollution, which Delaware needs to do, and it protects you from breathing in harmful vapors.

But many drivers are creatures of habit. And their habit is to "top off" their gas tank until the dispenser shows some even dollar amount. Why? The gas station can make change and the credit card companies can handle odd amounts as easily as even amounts! "Topping off" serves no purpose and it can even be harmful!

Huh?

Think about it. You're filling your gas tank. The vapors from your vehicle's tank are returning to the station's underground storage tank through the coaxial (hose within a hose) dispenser hose. Your tank is filled and the dispenser clicks off. You want to add "just a little bit more." You want to "top off." You depress the dispensing lever.

In the old days, any excess gas would have spilled down the side of your vehicle and maybe onto your shoes. Remember? Today, however, the excess gas in your overfilled tank has nowhere to go but *back through the coaxial hose to the gas station's underground storage tanks!* You're giving back gas that you have already paid for! After all, the dispenser's cost wheels don't stop turning just because you're "topping off."

And...you're failing to allow expansion room in the gas tank, which can degrade your vehicle's performance, you're breathing in vapors potentially harmful to your health and you're causing the gas station's vapor recovery system to malfunction. And you thought you were just "gassing up" for a quick trip somewhere!

Let's all drive smarter this summer — *don't top off!*

DNREC/TMB
391 Lukens Drive
New Castle, DE 19720

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