THINK TANK

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Life after 1998?

by Mick Butler

As the program manager of the compliance side of the UST Program it is very difficult for me to think that for UST owners, life after 1998 will be free from UST problems. The UST regulations are generally designed, not to prevent all releases, but to minimize the damage of those releases by early detection. Hopefully, early detection will mean reduced investigation and cleanup costs. For those owners who have selected secondary containment for tanks and lines and have added containment sumps around submersible pumps and under dispensers, your efforts may all be for nothing if you neglect monitoring and maintenance.

An example common to all of us is the oil pressure warning light on the dash board of our cars. The warning system is designed to alert us if the oil gets low by causing a warning light to come on and urge us to perform some type of maintenance. However, there are at least two reasons why this system might fail. The first could be that either the oil sensing probe or the warning light is broken. The second is that the operator of the car fails to heed the warning of the light and have the oil level checked. The end result of the engine seizing up and perhaps the car catching on fire is what the warning system was supposed to prevent.

Of the two reasons in the example above, if I had limited resources, I would focus my efforts on the operator that, for whatever reason, failed to heed the warning of the light. Any monitoring and maintenance plan should start with increased education or involvement of the operator of the system. UST operators are on the front line, so to speak, and are in the position to be the first to notice the signs or indications of a leaking system or a failed maintenance plan. I have had UST operators at the time of inspection tell me that they remembered the UST system being tested a few years ago but they had not seen anyone around to test since the parent company reorganized. It is every regulator's dream that this operator would have noticed that the required testing or maintenance was not being done and called the main office to report it. It is even more upsetting to review daily inventory records

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1998 UST Trade Show

Mark your calendars now for Delaware's UST Trade Show, to be held March 17, 1998 at the Dover Sheraton Conference Center. A full day of activities are planned to provide information exchange between Delaware's UST regulatory program people, UST vendors and UST owners and operators from throughout Delaware and surrounding states. Seminars are planned to cover the timely topics of the 1998 deadline compliance and Risk Based Corrective Action. Agenda and registration information will be mailed out later this year. Please contact Carl Riegel or Ellen Malenfant if you have any suggestions or questions.■

Onboard Cannisters — Replacement for Stage II?

by Carl F. Riegel

Automobile manufacturers are being required, beginning with the 1998 model year, to add **O**nboard **R**e-fueling **V**apor **R**ecovery (ORVR) systems to new vehicles. Forty percent of all new cars produced in 1998 will be equipped with ORVR, followed by 80 percent in 1999 and 100 percent in 2000. Light and heavy duty trucks will be similarly phased in beginning in 2001. You may previously have heard about the "onboard canister" which was to be added to new cars to capture vapors. The original concept was that of a disposable canister that would be replaced every six or twelve months depending on the mileage driven. This design has been refined to that of the ORVR.

The ORVR system captures vapors at the fill neck that are generated during re-fueling. These vapors are stored until they can be incinerated in the automobile engine. The ORVR system is designed to last the life of the vehicle. The theory is that at some time in the future there will be enough cars equipped with ORVR systems so that shutting down Stage II Vapor Recovery systems will not have a negative effect on air quality.

The EPA estimates that, nationwide, when the ORVR program is fully implemented, there will be a reduction of some 300,000 to 400,000 tons annually of volatile organic compounds (VOCs) and toxics. A couple of other numbers help put this in perspective. The average automotive assembly plant releases 1,000 tons of VOCs in a year. The total of all the VOCs released by all the industry in the State of Delaware is estimated at 36,000 tons per year.

It makes sense, of course, to test the ORVR systems before they are added to new vehicles. Prototype tests were performed by the California Air Resource Board (CARB) in cooperation with the automotive industry and the manufacturers of gasoline dispensing equipment.

The tests demonstrated that the ORVR systems work well. It is predicted that they will continue to work for the life of the vehicle. Unfortunately the California tests also demonstrated that some Stage II Vapor Recovery systems have problems when cars with ORVR systems attempt to refuel. Some Stage II systems utilizing Husky, Healy and Saber nozzles have experienced premature shut-offs when attempting to refuel new cars equipped with ORVR systems. **Please understand, this is NOT every vehicle or every nozzle. It is a small percentage.**

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Now for the specifics. The nozzles which have experienced premature shut-offs in the California tests are the Husky nozzle when used with the Amoco V-1 Stage II system, the Husky V34-6250 nozzle when used with either the Dresser/Wayne WayneVac or Tokheim MaxVac Stage II systems, the Healy Model 200, 200X and 400 nozzles, and all Saber nozzles.

But hold on, there is good news. There are fixes for these problems. To the best of our knowledge there are no Saber nozzles in the State of Delaware. Since Saber has recently gone out of business, that eliminates them as a problem.

Husky has solved the problem by modifying the vapor splash guard. This modification has been CARB approved. Nozzles shipped after March 1, 1997 will include the modified splash guard and should not experience the problem. For nozzles in service, you may either replace the original splash guard with the modified one, or perform a simple field modification. Instructions for making this field modification are available from Husky.

Healy nozzles typically seal to the side of the vehicle when they exhibit premature shut-off. The suggested solution is to break the seal between the boot and the side of the vehicle allowing a small amount of air to enter the system. Once done, refueling may continue without further problems. Healy is developing a permanent fix which, when finalized, will be CARB certified before it is made available for use.

CAUTION! Do not add holes to boots or splash guards other than those specifically mentioned in the manufacturer's instructions. This would interfere with the proper functioning of the nozzle and could be considered tampering. It would also void the CARB approval, subjecting the facility to enforcement action by the DNREC.

Another area of concern is how ORVR will effect the operating efficiency of existing Stage II vapor recovery systems. At present, CARB's concern is fresh air that is returned to the UST system will cause vapors to escape out the vent lines. We will report their findings when available. ■

What would you do?

by David H. Lerner

A 550 gallon residential heating oil UST is removed by a local contractor. Soil samples are collected and analyzed for TPH-DRO by a local environmental consultant. No soil staining or odor is present in the excavated soils and nothing is registered on properly-calibrated field-screening instruments (e.g., a PID or OVA).

Even though no contamination was detected using field methods, the analyses show that the soils surrounding the former tank contain from < 10 ppm TPH to 150 ppm TPH. What are the *owner*, *contractor*, and *consultant* required to do at this point? Four possible responses are listed below. Select the correct response.

A. They are not required to do anything, including reporting, cleanup, or submission of site assessment results to DNREC because TPH concentrations in the soils are below DNREC's action level of 1,000 ppm for heating oil and the tank is not regulated.

B. They must by law immediately report it to the UST Branch at (302) 323-4588 because elevated TPH levels in the soils indicate that a release of a regulated substance has occurred. This includes submission of all sample data and supporting documentation.

C. They must by law immediately report it to DNREC's Emergency Response Hot Line at 1-800-662-8802 because elevated TPH levels in the soils indicate that a release of a regulated substance has occurred.

D. They are not required to report or submit any data to the UST Branch or the Emergency Response Hot Line. They must, however, remove and dispose of all soils greater than 100 ppm TPH no later than 30 days after the tank has been removed.

Answer and discussion:

The correct response is C. All releases, identified or suspected, must be reported to DNREC's Emergency Response Hot Line at **1-800-662-8802** in accordance with regulations promulgated under Section 6028, 7 Del. Code, Chapter 60, the *Delaware Air and Resources Reporting Act*. In other words, calling the Hot Line establishes a legal record of compliance with these regulations. *Contacting the UST Branch is not legally considered reporting a release* and will result in the owner, contractor, and consultant being in violation if it is not reported to the Hot Line. DNREC reserves the right to take enforcement action against anyone who is in violation of Chapter 60 or any regulations promulgated under Chapter 60. A copy of these regulations may be obtained at a cost of $10.00 by contacting the Air Resources Branch in Dover at (302) 739-4791.

After the release is reported, the Emergency Response Team will determine what further actions are needed if any, including whether or not to refer it to the UST Branch for further investigation or corrective action. A follow-up call to the UST Branch at 302-323-4588 will help expedite matters regarding release reporting and cleanup.

DNREC considers the above situation to be an *identified release*, even though no contamination was indicated using field-screening methods. Because a release has occurred, the 550 gallon heating oil tank *is now regulated* and the tank owner, operator, and responsible parties must bring the tank into compliance with Chapter 60, as well as 7 Del. Code, Chapter 74 (i.e., the *Underground Storage Tank Act)* and any regulations promulgated under Chapters 60 and 74. ■

State RBCA Implementation Status

by Ellen Malenfant

The UST Branch is working to implement a risk based corrective action (RBCA) process for making clean up and closure decisions at LUST sites. LUST site project officers attended training on fate and transport modeling and risk assessment. Earlier in the year these UST Branch staff received training that focused on where changes to Delaware's UST current corrective action process may be needed.

The UST Branch is currently identifying a stakeholder workgroup that will assist in making several risk related policy and process decisions that are needed before implementation can occur. If you are interested in participating on this workgroup please contact the author.

We expect to implement RBCA with a kickoff at the UST Trade Show on March 17, 1998, including seminars to train consultants and owners and operators on the new Delaware RBCA requirements and an updated UST *Technical Guidance Manual.* Custom RBCA spreadsheet software is also planned to assist in corrective action report preparation. ■

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Life after '98 - Cont. from p.1

following a tank test failure and discover that the inventory showed the leak occurred months before the test was conducted.

Now enter reality. In most organizations, the act of dispensing fuel either for sale or operational use has become just a small part of the operator's responsibilities. (i.e., how many products can you buy at the typical convenience store?) The more this becomes the case, the less likely your operator will be able to recognize problems with the UST system monitoring or maintenance. Add to this the fact that many organizations continue to experience a high turnover of personnel and the training of new personnel may not even mention the possible impacts of a leaking UST.

Overall, I would expect there will be less emphasis by UST owners on maintenance and monitoring following compliance with 1998 standards because of a letdown in concern after a goal is achieved. I urge you to look at your organization and assess how vulnerable you may be to an operator not understanding the warning signs of a problem. I also suggest that perhaps within the petroleum industry there may be a place for a voluntary non-government UST operator certification program to provide training and focus to help keep the impacts of the inevitable future leaking USTs to a minimum.

The UST Branch compliance side will be busy inspecting and enforcing those that miss the 1998 deadline. This may result in an increased time between inspections at facilities already in compliance with 1998 until the backlog is reduced. In the meantime be forever watchful. ■

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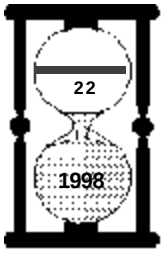
Corrosion Protection Required



As of November 17 you have only
57
Weeks