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Maine Department of Environmental Protection

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Tanks in Maine

News for those who install, inspect or manage underground or aboveground tanks
from the Maine Department of Environmental Protection.

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A Cautionary Tale of Failed Flex Piping

by Ted Scharf

Replacing damaged piping before it fails is easier and less expensive than having to do so after a failure. So, look for crimped or damaged piping anytime you are working in a tank top or dispenser sump.

Recently a section of Total Containment Enviroflex FP 1501 piping (the bone or white colored second generation piping, not to be confused with the yellow first generation piping) failed during a precision test at a retail facility in York County. The piping was not holding pressure so the dispensers were opened. Spraying gasoline was observed in one of the dispenser sumps and product had leaked into the rock guard which originally served as secondary containment for the primary piping. The piping was quickly taken out of service and excavated a few days later.



The piping looks as if it may have been bent. It may have grown as it was exposed to moisture, product, and fluctuating temperatures. With nowhere to go, it folded onto itself. Fortunately, only a small amount of product reached the environment and minimal clean-up was required. ♦



What About Those Annual Inspections?

by Tim Rector

The annual inspection form you fill out for your customer is DEP's window into the equipment at that facility. It also serves as a tool for us to evaluate risk to the environment. The more information you are able to provide, especially through notes and diagrams, the better we can all be at preventing releases of petroleum to the environment. In addition, please keep the following in mind when completing annual inspection forms:

Check for Completeness: Be sure that the summary and cathodic protection pages are signed.

Ask About the Delivery Method: See "Overfill Prevention" by Wayne Paradis in this newsletter.

Attach Copies of Electronic Line Leak Detection Results: DEP needs this information to count an Annual Inspection Form as passing.

Review Daily Inventory & Monthly Reconciliation: These calculations must be reviewed by CTIs in order for an Annual Inspection Form to count as passing. If there are any questions, CTIs and facility owners or operators are welcome to contact DEP UST staff for assistance.

Thank you all for your good work. Annual Inspection Forms are an important tool for tank owners and operators, CTIs and the Department and with your help we have prevented and mitigated many releases of petroleum over the years. ♦

Board Members Needed

The Board of Underground Storage Tank Installers is looking for public members to fill two board seats.

If you know anyone who might be interested in filling these vacancies please contact Theresa.J.Scott@maine.gov or (207) 287-7169.

Overfill Prevention *by Wayne Paradis*

Certified Tank Installers and Inspectors (CTIs) visiting facilities for inspections and repairs should be vigilant for signs of a change in delivery method. While this may be obvious if a 2" scully adapter is found attached to a 4" riser, it is important to ask the UST owner or operator how their fuel is delivered. To lower up-front fuel costs some UST owners are switching from multi-thousand gallon gravity drops to smaller peddle truck fuel deliveries.

Department rules require underground oil storage tanks (USTs) to have proper and compatible overfill prevention equipment. This equipment may include automatic shutoff devices (flapper valves); mechanical or electronic overfill alarms; and flow restrictors (ball float valves). Every overfill prevention device must be planned and routinely reevaluated for compatibility based on:

- 1) Product delivery method (gravity drop vs. pump-off);
- 2) Type of pump used to dispense product (pressurized vs. suction); and
- 3) Type of fuel (consumptive use heating oil vs. motor fuel).

A system equipped with a standard flapper valve designed for use with gravity drops or ball float valve is incompatible with the smaller, pressurized peddle truck deliveries.

This type of delivery will require either:

- 1) A flapper valve designed by the manufacturer to accept pressurized deliveries (for example: OPW 61Fstop; Morrison Bros. 9095A; Franklin Fueling Systems Model 709 Warden; or Clay & Bailey Mfg. Co. 1228ALL); or
- 2) An electronic or mechanical overfill alarm set at 90 percent tank capacity.

In addition, remember that vent balls may not be installed on motor fuel tanks that have suction pumps. However, if installed prior to December 24, 1996, a vent ball may remain in use, but upon failure must be replaced with an appropriate flapper valve or alarm system.

Regardless of method, all deliveries must be made with tight connections. At no time may product be delivered to a tank through a loose fill by inserting a "stinger" through the fill riser to by-pass the overfill prevention device. ♦

We hope to see you at the training on November 13th! For more information go to www.maineenergymarketers.com.

Comments on the new format of Tanks In Maine? Ideas for articles in future issues?

Please contact Eileen McCue at (207) 441-3294 or Eileen.McCue@maine.gov.

DEF in USTs *by Diana McLaughlin*

What is DEF? Diesel Exhaust Fluid is a solution consisting of 32.5 percent urea (which contains ammonia) and 67.5 percent deionized water. DEF is used in medium and heavy duty vehicles through a Selective Catalytic Reduction process to reduce the concentration of nitrous oxides (NOx) in exhaust emissions by converting them to harmless nitrogen and water when DEF is injected into the exhaust stream. NOx is an air pollutant produced by high temperature diesel combustion that contributes to acid rain, smog, greenhouse gas levels and global climate change.

Does an underground tank storing DEF have to be registered?

Is the tank covered by Maine's Rules for Underground Oil Storage Facilities, Chapter 691?

The answers are "no" and "no."

However *ammonia*, a component of DEF, is a hazardous substance under Maine rule. Additionally, the Maine Center for Disease Control's Maximum Exposure Guideline (MEG) for ammonia in drinking water is 30,000 parts per billion, or 0.003 percent. Therefore, a significant volume of DEF discharged directly to a drinking water intake would be considered a threat to drinking water.

So, while the Department does not require registration of USTs storing DEF, DEP does recommend that underground DEF tanks be designed, installed, operated and maintained to the same standards that apply to underground petroleum storage tanks.

In the event of a DEF spill, the Department advises the following: If the spill occurs on an impervious surface such as a paved area and does not reach soil, clean it up as you would clean up any spilled non-hazardous liquid. If DEF is spilled to an unpaved area or other location where it cannot be immediately and completely cleaned up, promptly notify DEP's Division of Response Services at (800) 452-4664. ♦