

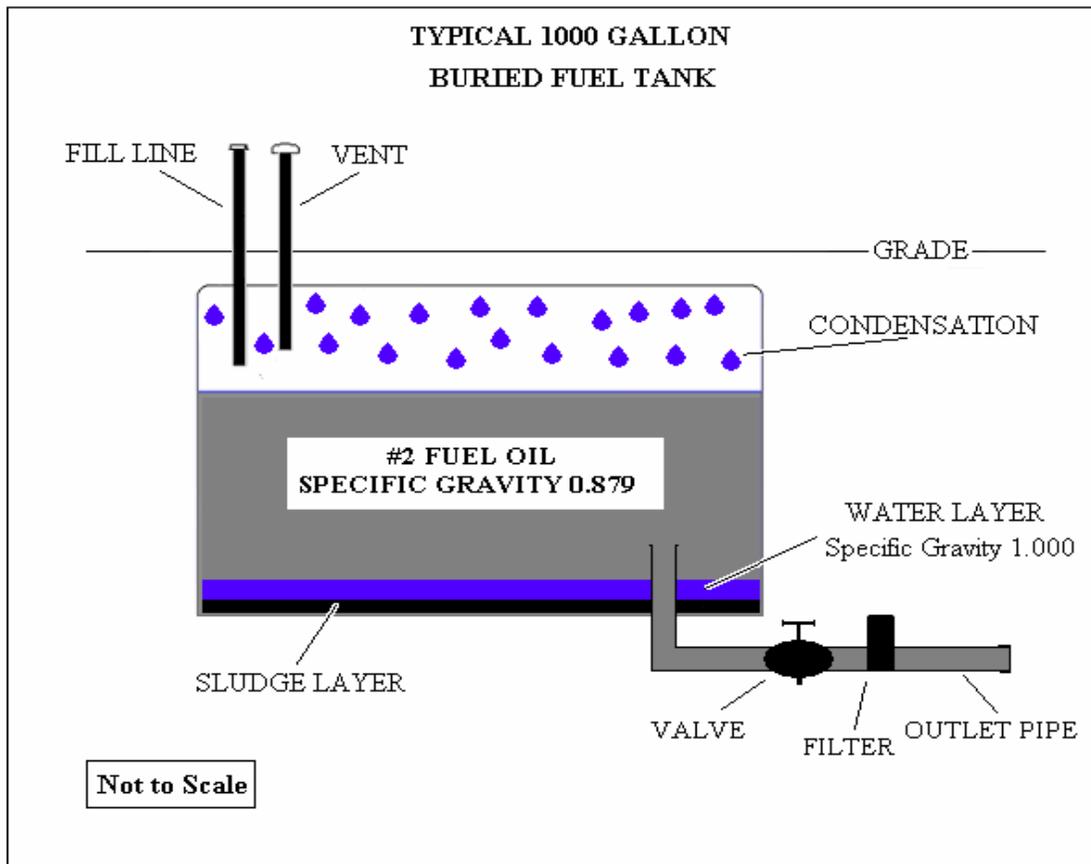


STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH SECTION
PRIVATE WELL PROGRAM

Additives Can Extend Life of Underground Fuel Tanks

There are many things a homeowner can do that will help in protecting the aquifer(s) which may supply the ground water for their own or their neighbor's well. Below is just one proactive measure we suggest you consider.



All of us are aware that condensation occurs inside all atmospheric storage tanks due to changing climactic conditions. This becomes painfully obvious, after a hot humid summer with its elevated dew points, when we experience gas-line freeze up in our cars on a cold winter's morning as we attempt to go to work. This is the main reason why one adds dry gas to the fuel tank of our cars on a regular basis, to disperse the accumulated condensate water in the tank's bottom.

What we may not realize is that the same condition takes place in our home heating oil tanks, be they 275-gallon tanks in our basements, or 500-1000 gallon tanks buried in the yard. Rarely does an underground storage tank (UST) develop a leak from the outside in, unless the tank was



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improperly backfilled using cast-off construction materials or fill material containing cobbles/rocks that damage the exterior coating. A common practice is to coat the outside of new metal storage tanks with a thick layer of asphaltum or black mastic which does a good job of protecting the tank's exterior from groundwater corrosion unless the coating was damaged during the backfilling procedure. So the majority of UST failures are due to corrosion from the inside out.

I have witnessed an incident involving a failed UST at a small public water system that underscores this type of corrosion. The leaking tank was located directly up gradient from one of the system's pumping wells. Luckily the discharge never affected the well. As we all know, fuel oil has a lighter specific gravity than water and as such floats on the water, or the water, following gravity's attraction, flows down through the less dense oil forming a layer between the denser bottom sludge and less dense fuel oil. (*see diagram*). The subject tank failed from the inside and exhibited several small pinholes along the bottom of the tank at the sludge/water interface.

Periodically, twice a year, and depending on climatic conditions, adding a fuel additive, similar to dry gas, would have prevented this failure as the water layer would never form to attack the tank's interior surface. Additives, such as dry gas, are dispersants as they reduce the surface tension of water to make it more easily mixed with the oil so it flows out with the fuel and is burned accordingly in small enough concentration so as not to negatively impact combustion.

Products on the market for this purpose are: "Hydrosol", "Prist" and "Heat 4 in 1", to name but a few. They can be found at your local oil burner service shop or your local hardware store. These products are presented for informational purposes only - no endorsement or recommendation by the DPH is implied. You may want to pass this information along to homeowners.

Remember, "An ounce of prevention (of fuel oil additive) is worth a pound of cure (especially a pound of fuel oil in the groundwater and/or your well).

Additional information can be found by contacting the CTDEP at 860-424-3369.

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