

Yankee Energy Update: Underground Storage Tank (UST) Hazards*

SUMMARY.

Traditional oil tank installation techniques involved burying storage tanks outside the residence or business whenever possible. However, underground storage tanks (USTs) have become a common source of groundwater contamination in Connecticut, prompting the State legislature to rule that home and business owners with USTs must take responsibility for their removal – and for environmental and property damage resulting from negligence.

BACKGROUND.

UST regulation and enforcement programs have been in effect since late 1985, when regulations were adopted at both the state and federal levels to prevent pollution of groundwater and runoff, as well as to enforce cleanup of leakage.

The enforcement of these legislative efforts was spurred by a sharp increase in incidents during the early 1980s when tanks installed in the 1950s, 60s, and 70s began leaking, causing soil and groundwater contamination. Nationally, there are approximately 30,000 UST leaks reported per year. In Connecticut, as of February 28, 1999, 15,456 USTs have been closed or removed; there have been 1,863 incidents of oil leaks from USTs; more than 1,818 cleanups have occurred; and a total of 91 oil leakage emergencies have been reported.

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CAUSES...

Water, when introduced to oil, combines with sulfur and other chemical components of the oil to become corrosive. Rust forms inside the tank, eventually causing a leak. While a certain amount of water in a UST is normal, potentially dangerous amounts of water may enter the tank in several ways – through a poorly sealed fill pipe, loose pipe fittings, or from fuel contaminated by water from an improperly maintained bulk storage facility. Tanks may also be compromised by improper installation. While there is no true standard for how long a UST should last, it is usually about 20 to 30 years. Quality of the steel used and soil composition are the two main factors in determining the lifespan of a UST.

...AND EFFECTS.

Oil tank leakage may cause contamination of soil, groundwater and private wells. Such releases are hazardous to the health of humans, plants and animals. They also are capable of causing significant damage to property if flammable vapors enter buildings. Oil tank leakage may incur significant environmental remediation costs.

TESTING.

There are several methods for testing the structural integrity of USTs. However, be aware that different types of tanks require different tests: No single test is suitable for all tanks. Virtually all test methods detect one of two things – evidence of a leak inside the tank or soil contamination around the tank. Test results are not guaranteed, and are generally valid for no more than one year. For a complete list of test methods, go to the United States Environmental Protection Agency web site at www.epa.gov.

WARNING SIGNS.

The best early warning of UST leaks is testing by a qualified professional contractor. The following warning signs, however, are detectable through sight, smell and sound. 1) Unusual operating conditions such as erratic pump function. Equipment failure that might result in a leak can be repaired if caught early. 2) Complaints from family or neighbors about oil vapors or stains on the basement wall, or water that tastes or smells of petroleum. 3) Stained or dead grass around the fill pipe. 4) Dead or dying bushes or trees around the tank.

OPTIONS.

Once a tank is determined to be leaking oil, the owner has several options. First, the extent of the leakage should be determined by a certified contractor. Then, a UST may be drained and either filled with an inert substance (such as sand, foam, or concrete) to render it properly closed, or removed and replaced with an above-ground tank or alternate home heating energy source such as natural gas.

STATE REQUIREMENTS.

Currently, the state Department of Environmental Protection offers an amnesty program that protects residential property owners from absorbing the full cost of environmental remediation for oil leaks. For information on Connecticut state regulations concerning residential and commercial oil tank safety, go to <http://dep.state.ct>. Or call the DEP at 800-424-3374.

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