system" performance standards (corrosion protection, spill prevention and overfill prevention) by that date are exempt from this requirement.

2) USTs (tanks only) **installed after January 1, 1991 and before May 1, 2000** that are conducting **Enhanced Leak Detection** (as described in this brochure). These tanks (piping should have already been provided with secondary containment[1]) are allowed an extended schedule to provide secondary containment. Secondary containment must be provided for these tanks by **January 1, 2016**. If piping and ancillary equipment (including metal flexible connectors, "European" suction piping, and siphon manifold piping) does not already have secondary containment[1] then it must be provided immediately.

Note: Ancillary equipment means any devices including, but not limited to, such devices as piping, fittings, flanges, valves, and pumps used to distribute, meter or control the flow of regulated substances to and from an UST

- All new UST systems and all replacements to UST systems **installed on or after May 1, 2000 should have been** provided with secondary containment[1] at the time they were installed or replaced if located between 100 and 500 feet of a public water supply well, between 50 and 100 feet of any other well used for human consumption or within 500 feet of specified surface waters. These requirements are listed in 15A NCAC 2N .0304 and became effective May 1, 2000.

[1] UST systems and UST system components installed or replaced after November 1, 2007 must meet the secondary containment requirements of 15A NCAC 2N .0900. UST systems or UST system components installed or replaced prior to November 1, 2007 must meet the secondary containment requirements of 40 CFR 280.42(b)(1) – (4).

Enhanced Leak Detection

Enhanced leak detection monitoring is a combination of leak detection monitoring and well sampling that allows UST system owners an extended deadline to comply with secondary containment requirements for affected tanks. Enhanced leak detection monitoring is **only applicable to tanks installed after January 1, 1991 and before May 1, 2000**. Also, enhanced leak detection may only be used at facilities where environmental contamination is not already present.

Enhanced leak detection consists of the following:

- Install an automatic tank gauge (ATG) for each UST and conduct at least one valid 0.1 gallon per hour (gph) leak test per month or one valid 0.2 gph leak test per week.
- Public water supply wells and any other well used for human consumption must be sampled once per year for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs). If the UST system contains waste oil, the wells must also be sampled for lead and chromium. The results for each sample must be submitted to your UST Section Regional Office each year.

Other Possible Remedies

Depending on your specific situation, other remedies may include discontinuing the use of a supply well and hooking up to municipal water or constructing a new well outside the prohibited area or areas requiring secondary containment. When constructing a new well, refer to the appropriate well construction standards. Another possible remedy may be to prevent access to the water by the public (e.g., closing bathrooms, removing water fountains, etc.)

Questions?

More specific information on these regulations can be found in 15A NCAC 2N .0301, .0302, .0304 and .0900. If you have any other questions, please contact the UST Section at (919) 707-8171 or visit our web page at http://portal.ncdenr.org/web/wm/.

November 2011

Siting and Secondary Containment Requirements for Underground Storage Tank Systems Installed prior to 11/1/2007 and near Wells and Surface Waters

NCDENR

N.C. Department of Environment and Natural Resources

Division of Waste Management UST Section

Introduction

Protecting North Carolina's water resources is a very important goal. Because underground storage tank (UST) systems pose a potential risk to public health and the environment, they are required to be sited at certain distances from wells and specified surface waters. In some cases, secondary containment on the UST system may be required. When siting UST systems, three water sources must be considered:

- Public Water Supply Wells
- Any Other Wells Used for Human Consumption
- Certain Surface Waters

The requirements listed in this brochure apply only to UST systems and UST system components installed before to 11/1/2007. If the UST system or UST system component was installed on or after that date, then refer to 15A NCAC 2N .0900.

Public Water Supply Wells (please see Figure 1)

- No regulated UST systems (including tanks, piping and dispensers) are allowed to be located within 100 feet of a public water supply well.
- Regulated UST systems are allowed to be located between 100 and 500 feet of a public water supply well, but secondary containment (double-walled UST systems with interstitial monitoring) is required.

Note: A public water supply well (as determined by the Public Water Supply Section of DENR) includes any well where the water is available to the public. Examples include: water used to make coffee or other beverages for public consumption, water in bathrooms, water fountains or outside spigots. Public water supply wells include most wells at convenience stores and service stations.

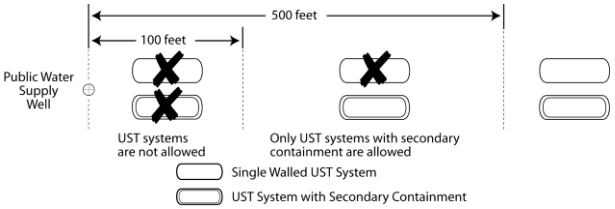

Figure 1. *Siting / secondary containment requirements for UST systems near public water supply wells.*

Any Other Well Used for Human Consumption (please see Figure 2)

- No regulated UST systems (including tanks, piping and dispensers) are allowed to be located within 50 feet of any other well used for human consumption.
- Regulated UST systems are allowed to be located between 50 and 100 feet of any other well used for human consumption, but secondary containment (double-walled UST system with interstitial monitoring) is required.

Note: Human consumption includes, but is not limited to: drinking, bathing, showering, cooking, dishwashing, laundering and oral hygiene. Water for toilets or sinks is also considered human consumption.

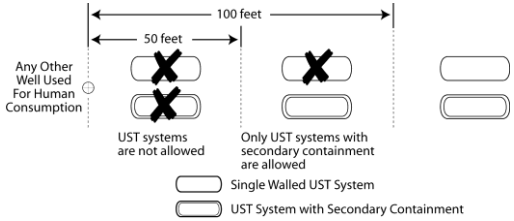

Figure 2. *Siting / secondary containment requirements for UST systems near any other well used for human consumption.*

Surface Waters (please see Figure 3)

Regulated UST systems within 500 feet of any surface water designated as any of the following classifications by the Division of Water Quality (DWQ) require secondary containment (double-walled UST system with interstitial monitoring).

- High Quality Water (HQW)
- Outstanding Resource Water (ORW)
- Water Supply I (WS-I)
- Water Supply II (WS-II)
- Shellfishing (SA)

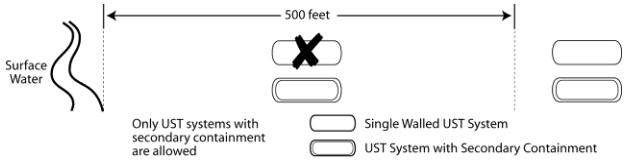

Figure 3. *Siting / secondary containment requirements for UST systems near designated surface waters.*

To determine if surface waters near you meet the DWQ classifications, please contact DWQ at 919-807-6300. This information is also on the DWQ web page at: http://h2o.enr.state.nc.us/bims/reports/reportsWB.html

Secondary Containment Upgrade Requirements

- Secondary containment[1] must be provided immediately for UST systems that are within 100 feet of a public water well or within 50 feet of any other well used for human consumption. (In most cases the UST system and/or UST system components have to be replaced and if replaced may not be located within 100 feet of a public well or within 50 feet of a private well.) These requirements are listed in 15A NCAC 2N .0301/.0302 and became effective January 1, 1991. UST systems existing in these locations as of January 1, 1991 should have been upgraded with secondary containment no later than December 22, 1998. After January 1, 1991, no UST systems were allowed to be installed at these locations.
  The only exception to this upgrade requirement is:
  2) UST systems **installed on or before January 1, 1991** that met the "new tank system" performance standards (corrosion protection, spill prevention and overfill prevention) by that date are exempt from this requirement.
- Secondary containment[1] must be provided immediately for UST systems that are between 100 and 500 feet of a public water well or between 50 and 100 feet of any other well used for human consumption or within 500 feet of specified surface water. These requirements are listed in 15A NCAC 2N .0304 and became effective May 1, 2000. These requirements provided extended deadlines to upgrade UST systems with secondary containment provided that enhanced leak detection was conducted. All of the extended deadlines have passed with the exception of one for USTs (tanks only) installed after January 1, 1991 and before May 1, 2000 (see below).
  The only exceptions to this upgrade requirement are:
  1) UST systems **installed on or before January 1, 1991** that met the "new tank