



North Carolina Department of Environment and Natural Resources

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General Synopsis of the Amendments to North Carolina's Underground Storage Tank Rules (15A NCAC 2N)

Amendments and additions to Title 15A North Carolina Administrative Code Subchapter 2N (15A NCAC 2N) "Criteria and Standards Applicable to Underground Storage Tanks" will go into effect November 1st, 2007. What this means is that for underground storage tank (UST) system installations completed on or after November 1st, 2007 certain new standards will need to be met. In addition to new installations, all UST system components replaced on existing systems on or after November 1st, 2007 must also meet the new standards. Please take special note that if you are in the middle of an UST system installation and the installation is completed on or after November 1st, you will be required to meet the new requirements.

On the following pages is a synopsis of the new system requirements and procedures for notifying the state of upcoming UST system installations. For a more comprehensive list of requirements, please see the finalized version of 15A NCAC 2N, which is posted at www.wastenotnc.org.

A. NEW PERFORMANCE STANDARDS

TANKS

- Must be protected from external corrosion by being constructed of non-corrodible materials [e.g., fiberglass reinforced plastic (FRP), steel clad with FRP or polyurethane, jacketed tanks, etc.)
- Must be of double-walled construction with continuous interstitial monitoring using a pressure, vacuum or hydrostatic method

[Note: Liquid-detecting probes in a dry interstitial space is not a viable option]

[Note: a printed record of release detection monitoring results and alarm history for each month is required]

PIPING

- Must be constructed of non-corrodible materials (e.g., FRP, flex piping, etc.)
- Must be of double-walled construction with continuous interstitial monitoring using a pressure, vacuum, hydrostatic method or by using an electronic sensor placed in a containment sump that the interstitial space would drain to.

[Note: piping not continuously monitored using a pressure, vacuum or hydrostatic method must be tested for tightness every three years]

[Note: suction piping, including European suction, is required to meet the above requirements as well]

[Note: a printed record of release detection monitoring results and alarm history for each month is required]

- Must be constructed with a device or method that allows the piping to be located once it is installed (e.g., trace tape commonly used by utilities)
- For pressurized piping systems, an automatic line leak detector (ALLD) must be installed
- Flex connectors and piping connections that are not double-walled must be installed in monitored containment sumps

OTHER UST SYSTEM COMPONENTS

- All other UST system components, such as, underground ancillary equipment, dispensers, line leak detectors, submersible pumps, siphon bars, remote fill pipes, etc. must be provided

secondary containment with interstitial monitoring. For the most part, this requirement will be met by installing containment sumps and under dispenser containment so that every non-tank/non-piping component will be contained and then monitored with sump sensors to detect releases

[Note: a printed record of release detection monitoring results and alarm history for each month is required]

- Vent lines, vapor recovery lines, gravity-fed fill ports and containment sumps are excluded from the secondary containment requirement

CONTAINMENT SUMPS

- Must be constructed of non-corrodible materials
- Must be designed, constructed, installed and maintained to prevent water infiltration
- Must be monitored continuously for releases using a pressure, vacuum or hydrostatic method (mostly used for monitoring double-walled sumps) or by using an electronic liquid-detecting sensor (mostly used for monitoring single-walled sumps)

[Note: a printed record of release detection monitoring results and alarm history for each month is required]

- Must be tested for integrity every three years, unless monitored continuously for releases using vacuum, pressure or hydrostatic methods
- Must be visually inspected annually for the presence of water or regulated substance. Any water or regulated substance must be removed from the sump within 48 hours

SPILL BUCKETS

- Must be constructed of non-corrodible materials or isolated from the backfill
- Must be prefabricated of double-walled construction
- Must be designed, constructed, installed and maintained to prevent water infiltration
- Must be monitored continuously for releases using a pressure, vacuum or hydrostatic method or by using an electronic liquid-detecting sensor

[Note: a printed record of release detection monitoring results and alarm history for each month is required]

- Must be tested (both primary and secondary walls) for integrity every three years, unless monitored continuously for releases using vacuum, pressure or hydrostatic methods

UST SYSTEM SITING

- May not be installed in areas where the UST system will be in contact with contaminated soil or free product
- May not be installed within 100 feet of a well serving a public water system
- May not be installed within 50 feet of any other well supplying water for human consumption

OTHER OPERATION AND MAINTENANCE

- Overfill prevention equipment must be checked annually for operability, proper operating condition and proper calibration
- Release detection monitoring equipment must be checked annually for operability, proper operating condition and proper calibration

EMERGENCY GENERATOR TANKS

In the past, UST systems storing fuel solely for use by emergency power generators were deferred from release detection requirements. Emergency generator UST systems installed and/or completed on or after November 1st, 2007 are required to be in compliance with the new construction requirements including secondary containment and interstitial monitoring.

REPLACING COMPONENTS ON AN EXISTING SYSTEM

All UST components replaced on existing systems on or after November 1st, 2007 must meet the requirements of the new rules. For example, if the piping on an UST system were being replaced, the replacement piping would need to be of double-walled construction, non-corrodible, interstitially monitored, etc.

- When replacing dispensers, under dispenser containment with continuous monitoring must be added
- When replacing flex connectors, submersible pumps or other ancillary equipment, containment sumps with continuous monitoring must be added

- When a length of piping is replaced or extended on a piping system, the entire piping system has to meet the new standards
- When a new UST is installed to replace an existing UST, the UST can not be connected to piping that does not meet the new standards

B. NEW PROCEDURE FOR UST SYSTEM INSTALLATIONS AND REPLACEMENTS

North Carolina is instituting a new process of notification and review for installing new UST systems that will store regulated substances (e.g., petroleum or hazardous substance), as well as, the installation of new USTs and piping or extensions to existing piping. Currently, when installing UST systems in North Carolina, a UST-6 form has been used to let the State know that an UST system was going to be installed and then a UST-8 form was used to document the equipment that was installed. Under the new process, owners and operators will need to submit the following documents and wait for approval before proceeding with the installation:

PRE-INSTALLATION

- 1) UST-6A "Application to Install or Replace Underground Storage Tank Systems (Pre-Installation)" form,
- 2) UST system design plans prepared by a licensed North Carolina Professional Engineer
- 3) A scale drawing no larger than 11" x 17" showing among other things the proposed location of UST system and schedule of materials

INSTALLATION

Provided that the UST system design is satisfactory, a letter from the State will be issued letting the owner/operator know that they can proceed with the UST system install. Also included in the approval letter will be the name and contact information for the UST inspector that they will need to contact to set up two installation inspections. Specifically, the UST inspector will need to be contacted at least 48 hours in advance prior to the pre-installation tightness testing of the tanks and again prior to the final tightness testing of the piping before it is back-filled.

POST-INSTALLATION

After the installation has been completed, the following items will need to be submitted and reviewed in order for an annual UST operating permit to be issued:

- 1) UST-6B "Application to Install or Replace Underground Storage Tank Systems (Post-Installation)" form;
- 2) Completed manufacturers' installation checklists for tanks, piping and other applicable equipment;
- 3) Pre-installation and post-installation tests of tanks and piping
- 4) As-built plans no larger than 11" x 17" showing among other things the location of the UST system(s) and a schedule of materials;
- 5) UST-15A "Ownership of UST System(s)" form;
- 6) Proof of Financial Responsibility;
- 7) Certification of Financial Responsibility form;
- 8) Appropriate annual operating fees; and
- 9) A UST-20 "Alternative Fuel Compatibility Checklist" form if the UST system will store alternative fuels (e.g., ethanol blends greater than 10% or biodiesel blends greater than 20%)

Copies of the new UST-6A and UST-6B forms along with detailed instructions can be found on the UST Section's web site at www.wastenotnc.org.