

# NEW REQUIREMENTS FOR UST SYSTEMS

## North Carolina's Updated UST Regulations

### Effective June 1, 2017



The US Environmental Protection Agency updated the federal underground storage tank (UST) regulation 40 CFR Part 280 on July 15, 2015. These updates impact North Carolina's UST rules, 15A NCAC 02N *Criteria and Standards Applicable to Underground Storage Tanks*. The majority of the changes affecting North Carolina's UST rules are summarized below.

All forms mentioned below can be found on our website.

When a repair is made to any of the UST system components listed below, and to secondary containment areas of tanks and piping used for interstitial monitoring, the equipment must be tested or inspected (as applicable) within 30 days following the repair to ensure it is operating properly.

#### Monthly Walkthrough Inspections

Walkthrough inspections of spill prevention (spill buckets) and release detection equipment are required every month\*. The UST-27 form should be used to record this monthly inspection.

The first walkthrough inspection must be completed, and recorded on the form, by October 13, 2018. The forms must be kept for 12 months.

*\*Note: If you can document that you receive fuel deliveries that are 30 days or more apart, you can perform the spill bucket inspection before each delivery.*

#### Annual Walkthrough Inspections

Walkthrough inspections of sump areas (contained or uncontained) and hand-held release detection equipment are required every year (examples of hand-held release detection equipment include tank gauge sticks and groundwater bailers).

The UST-22B form should be used to record the yearly inspection of release detection equipment, and the UST-22C form should be used to record the yearly inspection of sump areas.

The first walkthrough inspection must be completed, and recorded on the applicable form, by October 13, 2018. The forms must be kept for 12 months.

#### Overfill Prevention Equipment

Inspection of overfill prevention equipment is required every three years.

Overfill inspections must ensure two things: 1. That the equipment is set to activate at the correct level, and 2.

that the equipment *will* activate when regulated substance reaches that level.

Also, flow restrictors (ball float valves) can no longer be used as an overfill method when replacing or installing a new overfill prevention device on or after June 1, 2017. If a ball float valve that is currently in use fails a test or inspection, then it must be replaced with a high-level alarm or an automatic shutoff device (flapper valve).

When replacing a ball float valve with a flapper valve, the ball float valve assembly must be removed. The ball float valve assembly can remain only if documentation is provided showing that the ball float valve will not interfere with the operation of the flapper valve. The ball float valve assembly does not have to be removed if a high-level alarm is used.

The UST-22A form should be used to record overfill inspections. The first inspection must be completed, and recorded on the form, by October 13, 2018. After that, an inspection is required every three years\*.

Each UST-22A form must be kept for three years\*.

#### Spill Prevention Equipment

Spill prevention equipment (spill buckets) must be tested every three years or be double-walled and the integrity of both walls monitored at least every 30 days\*. The UST-23A form should be used to record tests of spill prevention equipment.

The first test must be conducted, and recorded on the form, by October 13, 2018. After that, a test is required every three years.

Each UST-23A form must be kept for three years.

*\* Note: Spill buckets installed after November 1, 2007 must be double-walled, continuously monitored, as well as tested every three years (unless monitored using vacuum, pressure or hydrostatic methods).*

#### Containment Sumps Used for Interstitial Monitoring of Piping

Containment sumps that are used for interstitial monitoring of piping must be tested every three years or be double-walled and the integrity of both walls monitored at least once per year\*.

The UST-23B form should be used to record containment sump tests. The first test must be conducted, and recorded on the form, by October 13, 2018. After that, a test is required every three years.

Each UST-23B form must be kept for three years.

*\* Note: Containment sumps installed after November 1, 2007 must be continuously monitored, as well as tested every three years (unless double-walled and monitored using vacuum, pressure or hydrostatic methods).*

### **Operability Tests for Release Detection Equipment**

A test of the proper operation of your release detection method must be performed at least annually, and at a minimum, cover the following (as applicable):

- Automatic tank gauge and other controllers: test alarm, verify system configuration, test battery backup.
- Probes and sensors: inspect for residual buildup, ensure floats move freely, ensure shaft not damaged, ensure cables are free of kinks and breaks, test alarm operability and communication with controller.
- Automatic line leak detectors: test operation by simulating a leak.
- Vacuum pumps and pressure gauges: ensure proper communication with sensors and controller.
- Hand-held electronic sampling equipment associated with groundwater and vapor monitoring: ensure proper operation.

In addition, annual functionality testing is now required for electronic line leak detectors (ELLDs), similar to what has previously been required for mechanical line leak detectors (MLLDs).

The UST-22B form should be used to record the annual release detection equipment operability checks.

The first test for proper operation of release detection equipment must be completed, and recorded on the form, by October 13, 2018. The form must be kept for 12 months.

### **USTs Used for Emergency Power Generation**

USTs and associated piping used with emergency power generators and installed before November 1, 2007\* are now required to conduct release detection. These systems must begin meeting release detection requirements by October 13, 2018.

Many owners and operators of emergency generator UST systems already voluntarily conduct release detection on tanks. However, associated piping systems must also meet the release detection requirements with monthly methods such as interstitial monitoring, statistical inventory reconciliation, or annual line tightness testing for pressurized piping, and triennial line

tightness testing for suction piping. Piping that can be demonstrated to be European suction is exempt from the release detection requirement.

In addition, if a supply or return line associated with an emergency generator tank is pressurized, then an automatic line leak detector (ALLD) is required. The functionality of an ALLD (ELLD or MLLD) must be tested annually.

For more information about North Carolina's release detection requirements in general, refer to 15A NCAC 02N 0501-.0506. Additionally, you may refer to NC's plain-language publication titled *Operation and Maintenance Manual for USTs* which summarizes release detection methods.

Records demonstrating compliance with release detection must be kept for 12 months.

*\* Note: Emergency generator USTs and associated piping that were installed after November 1, 2007 must already be meeting release detection requirements with interstitial monitoring.*

### **Vapor and Groundwater Monitoring**

Facilities using vapor or groundwater monitoring must keep a record of site assessments for as long as the method is used.

### **SIR Performance Criteria**

Owners and operators of USTs using Statistical Inventory Reconciliation (SIR) to meet the federal tank release detection requirement must determine the leak status of their USTs within a 30-day monitoring period. EPA established the 30-day monitoring period in the 1988 federal UST regulation and re-confirmed it in the 2015 federal UST regulation.

### **For More Information**

For more information about the new requirements, contact the NCDEQ Division of Waste Management UST Section at 919-707-8171 or visit our website at <http://deq.nc.gov/about/divisions/waste-management/ust>.

**AT A GLANCE – NEW REQUIREMENTS<sup>1</sup>**

<b>New Requirement</b>	<b>Frequency</b>	<b>Due date</b>
Eliminate flow restrictors (ball float valves) as overfill prevention method	At installation or when replaced	Beginning on 6-1-17
Add SIR to regulation with performance criteria (determine leak status within a 30-day monitoring period)	One time	Beginning on 6-1-17
Site assessment – vapor or groundwater monitoring	One time	By 10-13-18
Remove release detection deferral for emergency generator tanks	One time	By 10-13-18
Remove deferral for airport hydrant fuel distribution systems <sup>2</sup>	One time	By 10-13-18
Remove deferral for systems with field-constructed tanks <sup>2</sup>	One time	By 10-13-18
Overfill prevention test after repair	Within 30 days of repair, <i>UST-22A form</i>	Beginning on 10-13-18
Spill prevention inspection after repair	Within 30 days of repair, <i>UST-23A form</i>	Beginning on 10-13-18
Secondary containment test after repair	Within 30 days of repair	Beginning on 10-13-18
Walkthrough inspections for spill buckets and release detection	Every month, <i>UST-27 form</i>	First by 10-13-18, monthly thereafter
Walkthrough inspections for sumps and hand-held release detection equipment	Every year, <i>UST-22B and UST-22C forms</i>	First by 10-13-18, annually thereafter
Operability tests for release detection equipment	Every year, <i>UST-22B form</i>	First by 10-13-18, annually thereafter
Overfill prevention inspections	Every 3 years, <i>UST-22A form</i>	First by 10-13-18, every three years thereafter
Spill prevention equipment tests	Every 3 years, <i>UST-23A form</i>	First by 10-13-18, every three years thereafter
Testing of containment sumps used for interstitial monitoring of piping	Every 3 years, <i>UST-23B form</i>	First by 10-13-18, every three years thereafter

<sup>1</sup> Table does not include existing requirements in 15A NCAC 02N .0901-.0907 for equipment installed on or after 11-1-07

<sup>2</sup> Details not included in this publication