

TITLE 15A – DEPARTMENT OF ENVIRONMENTAL QUALITY

Notice is hereby given in accordance with G.S. 150B-21.2 that the Environmental Management Commission intends to amend the rules cited as 15A NCAC 02N .0406, .0901, .0905, and .0906.

Link to agency website pursuant to G.S. 150B-19.1(c): <https://deq.nc.gov/permits-regulations/rules-regulations/proposed-main>

Proposed Effective Date: Pending Legislative Review

Public Hearing:

Date: August 3, 2021

Time: 6:00 p.m.

Location: In an abundance of caution and to address protective measures to help prevent the spread of COVID-19, this public hearing will be held by webinar. WebEx Events meeting link:

<https://ncdenrits.webex.com/ncdenrits/onstage/g.php?MTID=e9c6e4d44cd6121746ecfced5f43dc3d0>

Event number: 161 060 8781 Event password: 02NRU

Reason for Proposed Action: The rule changes to 15A NCAC 02N are necessary to incorporate two North Carolina Session Laws (NCSL): NCSL 2018-114 Sections 19.(a)-(e) and 19.1.(a)-(e) and NCSL 2020-74 Section 17.(a)-(e).

Comments may be submitted to: Andria Archer, NCDEQ/DWM/UST Section 1646 Mail Service Center, Raleigh, NC 27699-1646; phone (919) 707-8157; fax (919) 715-1117; email andria.archer@ncdenr.gov

Comment period ends: August 27, 2021

Rule(s) is automatically subject to legislative review. Cite statutory reference: SL 2018-114, Sections 19.(d) and 19.1.(d) and SL 2020-74, Section 17.(d)

Fiscal impact. Does any rule or combination of rules in this notice create an economic impact? Check all that apply.

- State funds affected
- Local funds affected
- Substantial economic impact (\geq \$1,000,000)
- Approved by OSBM
- No fiscal note required

CHAPTER 02 - ENVIRONMENTAL MANAGEMENT

SUBCHAPTER 02N – CRITERIA AND STANDARDS APPLICABLE TO UNDERGROUND STORAGE TANKS

SECTION .0400 - GENERAL OPERATING REQUIREMENTS

15A NCAC 02N .0406 PERIODIC TESTING OF SPILL PREVENTION EQUIPMENT AND CONTAINMENT SUMPS USED FOR INTERSTITIAL MONITORING OF PIPING AND PERIODIC INSPECTION OF OVERFILL PREVENTION EQUIPMENT

The regulations governing "Periodic testing of spill prevention equipment and containment sumps used for interstitial monitoring of piping and periodic inspection of overfill prevention equipment" set forth in 40 CFR 280.35 are hereby incorporated by reference, excluding any subsequent amendments and editions, except that:

- (1) UST system or UST system component installations or replacements completed on or after November 1, 2007, shall meet the requirements of Section .0900 of this Subchapter.
- (2) 40 CFR 280.35(a)(1)(ii)(C) shall be rewritten as follows: (C) Requirements determined by the US Environmental Protection Agency or the Division to be no less protective of human health and the environment than the requirements listed in Paragraphs (a)(1)(ii)(A) and (B) of this section.

History Note: Authority G.S. 143-215.3(a)(15); 143B-282(a)(2)(h);
Eff. June 1, 2017;
Amended Eff. January 1, 2021.

SECTION .0900 - PERFORMANCE STANDARDS FOR UST SYSTEM OR UST SYSTEM COMPONENT INSTALLATION OR REPLACEMENT COMPLETED ON OR AFTER NOVEMBER 1, 2007

15A NCAC 02N .0901 GENERAL REQUIREMENTS

- (a) This Section applies to a UST system or UST system component installation or replacement completed on or after November 1, 2007.
- (b) A UST system or UST system component shall not be installed or replaced within an area defined in Rule .0301(b) of this Subchapter.

(c) A tank shall meet the requirements for secondary containment including interstitial release detection monitoring in accordance with this Rule.

(d) All UST system components other than tanks including connected piping, underground ancillary equipment, dispensers, line leak detectors, submersible pumps, spill buckets, siphon bars, and remote fill pipes shall meet the requirements for secondary containment including interstitial release detection monitoring in accordance with this Rule. Spill buckets replaced on tanks installed prior to November 1, 2007 may comply with the interstitial monitoring requirements described in Paragraph (k) of this Rule. Gravity-fed vertical fill pipes, vapor recovery, vent lines, and containment sumps are excluded from the secondary containment requirements in this Rule.

(e) A UST system design is required for installation or replacement of a UST system, UST, or connected piping. If required by G.S. 89C, UST system designs must be prepared by a Professional Engineer licensed by the North Carolina Board of Examiners for Engineers and Surveyors.

[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined via letter dated December 20, 1993, that preparation of a UST system design constitutes practicing engineering under G.S. 89C.]

(f) If required by the equipment manufacturer, persons installing, replacing or repairing UST systems or UST system components must be trained and certified by the equipment manufacturer or the equipment manufacturer's authorized representative to install, replace or repair such equipment.

(g) UST systems or UST system components shall be installed, tested, operated, and maintained in accordance with the manufacturer's specifications and the codes of practice, and industry standards described in Rule .0907 of this Section.

(h) UST systems or UST system components shall not be installed or replaced in areas where they will be in contact with contaminated soil or free product.

(i) Secondary containment systems shall be designed, constructed, installed and maintained to:

- (1) detect the failure of the inner wall and outer wall for UST system components with double wall construction;
- (2) contain regulated substances released from a UST system until they are detected and removed;
- (3) prevent a release of regulated substances to the environment outside of the containment system;
- (4) direct releases to a monitoring point or points;
- (5) provide a release detection monitoring device or monitoring method for the interstitial space;
- (6) on an uninterrupted basis, monitor the inner and outer walls of double-walled tanks for breaches of integrity using pressure, vacuum or hydrostatic monitoring methods or monitor the interstitial space of double-walled tanks for releases using an electronic liquid detecting sensor method along with periodic testing as specified in Rule .0903(f) of this Section;
- (7) on an uninterrupted basis, monitor the inner and outer walls of double-walled non-tank components for breaches of integrity using pressure, vacuum, or hydrostatic methods, or monitor a non-tank component for releases by using an electronic liquid detecting sensor placed in a containment sump and in the interstitial space of a double-walled spill bucket along with periodic integrity testing as specified in Rules .0904(f), .0905(g) and .0906(e) of this Section; and
- (8) provide a printed record of release detection monitoring results and an alarm history for each month.

(j) Electronic liquid detecting sensors used to monitor the interstitial space of double-walled tanks and non-tank components shall meet the following requirements:

- (1) Electronic liquid detecting sensors used for tanks and spill buckets shall be located at the lowest point in the interstitial space. Electronic liquid detecting sensors used for containment sumps shall be located as specified in Rule .0905(d) of this Section.
- (2) A tank shall have a method to verify that an electronic liquid detecting sensor is located at the lowest point of the interstitial space. Verification of the sensor location shall be available for inspection.
- (3) Electronic liquid detecting sensors shall detect the presence of any liquid in the interstitial space and shall activate an alarm when any type of liquid is detected.
- (4) Any liquid detected in the interstitial space must be removed within 48 hours of discovery.

(k) Spill buckets replaced on tanks installed prior to November 1, 2007 may use mechanical liquid detecting sensors for interstitial leak detection monitoring instead of electronic liquid detecting sensors. If a mechanical liquid detecting sensor is used, then Subparagraphs (i)(7) and (8) of this Rule do not apply. However, the spill bucket shall comply with all spill bucket requirements of Rule .0906 of this Section. In addition, the following specific requirements shall be met:

- (1) mechanical liquid detecting sensors shall be located at the lowest point in the interstitial space;
- (2) mechanical liquid detecting sensors shall detect the presence of any liquid in the interstitial space. The presence of liquid shall register on a gauge that can be viewed from within the spill bucket;
- (3) spill buckets shall be monitored every 30 days. The interstitial leak detection monitoring results shall be documented for each month;
- (4) any liquid detected in the interstitial space shall be removed within 48 hours of discovery; and
- (5) spill buckets shall be integrity tested every three years in accordance with Rule .0906(e) of this Section.

~~(l)~~ New or replacement dispensers shall be provided with under dispenser containment sumps and shall meet the secondary containment requirements and performance standards of this Rule.

~~(m)~~ All release detection monitoring equipment shall be installed, calibrated, operated and maintained in accordance with manufacturer's instructions. All release detection monitoring equipment shall be checked annually for operability, proper operating condition and proper calibration in accordance with the manufacturer's written guidelines. The results of the last annual check must be recorded, maintained at the UST site or the tank owner or operator's place of business, and made available for inspection.

~~(n)~~ Releases detected in an interstitial space shall be reported in accordance with Rule .0601 of this Subchapter and investigated in accordance with the manufacturer's written guidelines. Any changes in the original physical characteristics or integrity of a piping system or a containment sump shall also be reported in accordance with Rule .0601 of this Subchapter and investigated in accordance with the manufacturer's written guidelines.

~~(a)(o)~~ UST systems and UST system components shall also meet all of the requirements specified in 40 CFR 280.20(c), (d), and (e). In addition, overfill prevention equipment shall be ~~checked annually~~ inspected at least once every three years for operability, proper operating condition and proper calibration in accordance with:

- (1) written requirements developed by the manufacturer;
- (2) a code of practice developed by a nationally recognized association or independent testing laboratory; or
- (3) requirements determined by the US Environmental Protection Agency or the Division to be no less protective of human health and the environment than the requirements listed in Subparagraph (1) or (2) of this Paragraph. The inspection shall ensure that overfill prevention equipment is set to activate at the correct level specified in 40 CFR 280.20(c)(1)(ii) and will activate when regulated substance reaches that level.
- (4) The results of the last ~~annual~~ triennial check shall be recorded, maintained at the UST site or the tank owner or operator's place of business, and made available for inspection.

History Note: Authority G.S. 143-215.3(a)(15); 143B-282(a)(2)(h);
Eff. November 1, 2007;
Amended Eff. February 1, 2010;
Readopted Eff. January 1, 2021.

15A NCAC 02N .0905 CONTAINMENT SUMPS

- (a) Containment sumps shall be constructed of non-corroding materials.
- (b) Containment sumps shall be designed and manufactured expressly for the purpose of containing and detecting a release.
- (c) Containment sumps shall be designed, constructed, installed, and maintained to prevent water infiltration.
- (d) Electronic sensor probes used for release detection monitoring shall be located no more than two inches above the lowest point of the containment sump.
- (e) At installation, containment sumps shall be tested for tightness after construction, but before backfilling. Tightness testing shall be conducted in accordance with the manufacturer's written guidelines and PEI/RP100, "Recommended Practice for Installation of Underground Liquid Storage Systems." Other tightness test methods may be used if they are approved by the Division. In approving a containment sump tightness testing method the Division shall consider the following factors:
 - (1) the inner surface of the sump is tested to at least four inches above the highest joint or penetration fitting, whichever is higher; and
 - (2) the method is capable of detecting a fracture, perforation or gap in the sump within the specified test period.
- (f) If a containment sump fails an installation tightness test, the sump shall be replaced or repaired by the manufacturer or the manufacturer's authorized representative in accordance with the manufacturer's specifications. Following replacement or repair, the containment sump shall be re-tested for tightness in accordance with Paragraph (e) of this Rule.
- (g) Containment sumps that are not monitored on an uninterrupted basis for releases using vacuum, pressure or hydrostatic interstitial monitoring methods shall be tested for tightness every three years following installation in accordance with:
 - (1) written requirements developed by the manufacturer;
 - (2) a code of practice developed by a nationally recognized association or independent testing laboratory; or
 - (3) requirements determined by the US Environmental Protection Agency or the Division to be no less protective of human health and the environment than the requirements listed in Subparagraph (1) and (2) of this Paragraph.

If a containment sump fails a periodic tightness test, the sump shall be replaced in accordance with Paragraphs (a), (b) and (c) of this Rule or repaired by the manufacturer or the manufacturer's authorized representative in accordance with the manufacturer's specifications or a code of practice developed by a nationally recognized association or independent testing laboratory. Following replacement or repair, the containment sump shall be re-tested for tightness in accordance with Paragraph (e) of this Rule. The last periodic tightness test record shall be maintained at the UST site or the tank owner or operator's place of business and shall be available for inspection.

(h) All containment sumps shall be visually inspected at least annually in accordance with Rule .0407 of this Subchapter. Any water or regulated substance present in a sump at the time of inspection shall be removed from the sump within 48 hours of discovery. The visual inspection results shall be documented and shall be maintained for at least one year at the UST site or the tank owner's or operator's place of business and shall be available for inspection.

History Note: Authority G.S. 143-215.3(a)(15); 143B-282(2)(h);
Eff. November 1, 2007;
Readopted Eff. January 1, 2021.

15A NCAC 02N .0906 SPILL BUCKETS

- (a) Spill buckets shall be pre-fabricated with double-walled construction.
- (b) Spill buckets shall be protected from corrosion by being constructed of non-corroding materials.
- (c) Spill buckets shall be designed, constructed, installed, and maintained to prevent water infiltration.
- (d) After installation but before backfilling, the primary containment and interstitial space of the spill bucket shall be tested in accordance with the manufacturer's written guidelines or a code of practice developed by a nationally recognized association or independent testing laboratory. Any change in vacuum during a vacuum test or any change in liquid level in an interstitial space liquid reservoir beyond the limits specified by the equipment manufacturer shall be considered a failure of the integrity of the spill bucket. If the spill bucket fails a tightness test, it shall be replaced or repaired by the manufacturer or the manufacturer's authorized representative in accordance with the manufacturer's specifications. Following any repair, the spill bucket shall be re-tested for tightness in accordance

with the manufacturers' written guidelines or a code of practice developed by a nationally recognized association or independent testing laboratory.

(e) Spill buckets that are not monitored on an uninterrupted basis for releases using vacuum, pressure or hydrostatic methods, shall be tested for tightness at installation and every three years following installation. The primary containment and interstitial space of the spill bucket shall be tested in accordance with:

- (1) written requirements developed by the manufacturer;
- (2) a code of practice developed by a nationally recognized association or independent testing laboratory; or
- (3) requirements determined by the US Environmental Protection Agency or the Division to be no less protective of human health and the environment than the requirements listed in Subparagraph (1) and (2) of this Paragraph.

If the spill bucket fails a tightness test, it shall be replaced and tested in accordance with Paragraphs (a) through (d) of this Rule or repaired by the manufacturer or the manufacturer's authorized representative in accordance with the manufacturer's specifications. Following any repair, the spill bucket shall be re-tested for tightness in accordance with the manufacturers' written guidelines or a code of practice developed by a nationally recognized association or independent testing laboratory. The last periodic tightness test record shall be maintained at the UST site or the tank owner or operator's place of business and shall be available for inspection.

*History Note: Authority G.S. 143-215.3(a)(15); 143B-282(2)(h);
Eff. November 1, 2007;
Readopted Eff. January 1, 2021.*