

## 15A NCAC 02N .0904 PIPING

(a) Piping, with the exception of flexible connectors and piping connections, shall be pre-fabricated with double-walled construction. Any flexible connectors or piping connections that do not have double-walled construction shall be installed in containment sumps that meet the requirements of Rule .0905 of this Section.

(b) Piping, with the exception of metal flex connectors and piping connections, shall meet the requirements of Subparagraph (1) or (2) of this Paragraph. Metal flexible connectors and piping connections shall be installed in containment sumps that meet the requirements of Rule .0905 of this Section.

(1) Primary and secondary piping are constructed of non-corroding materials and shall comply with the Underwriters Laboratories Standard (UL) 971 standard "Nonmetallic Underground Piping for Flammable Liquids" that is in effect at the time the piping is installed. UL 971 "Standard for Nonmetallic Underground Piping for Flammable Liquids" is hereby incorporated by reference, including subsequent amendments and editions. A copy may be obtained from Underwriters Laboratories at <https://www.shopulstandards.com/PurchaseProduct.aspx?UniqueKey=7936> at a cost of four hundred and two dollars (\$402.00).

(2) Primary piping is constructed of stainless steel and secondary piping is constructed of non-corroding materials and shall comply with UL 971A "Outline of Investigation for Metallic Underground Fuel Pipe." UL 971A "Outline of Investigation for Metallic Underground Fuel Pipe" is hereby incorporated by reference, including subsequent amendments and editions. A copy may be obtained from Underwriters Laboratories at <https://www.shopulstandards.com/PurchaseProduct.aspx?UniqueKey=15373> at a cost of two hundred and twenty-five dollars (\$225.00).

(c) Piping that is buried underground shall be constructed with a device or method that allows it to be located once it is installed.

(d) Piping that conveys regulated substances under pressure shall also be equipped with an automatic line leak detector that meets the requirements of 40 CFR 280.44(a).

(e) At the time of installation, the primary containment and interstitial space of the piping shall be initially tested, monitored during construction, and finally tested in accordance with the manufacturers written guidelines and PEI/RP100, "Recommended Practice for Installation of Underground Liquid Storage Systems." The presence of soap bubbles or water droplets or any loss of pressure beyond the limits specified by the piping manufacturer during testing shall be considered a failure of the integrity of the piping. If the piping fails a tightness test, it shall be replaced by the owner or operator or repaired by the manufacturer or the manufacturer's authorized representative in accordance with the manufacturer's written specifications. Following any repair, the piping shall be re-tested for tightness in accordance with the manufacturers written guidelines and PEI/RP100, "Recommended Practice for Installation of Underground Liquid Storage Systems."

(f) Piping that is not monitored continuously for releases using vacuum, pressure, or hydrostatic methods, shall be tested for tightness every three years following installation. The primary containment shall be tested using a piping tightness test method that is capable of detecting a 0.10 gallon per hour leak rate with a probability of detection (Pd) of at least 95 percent and a probability of false alarm (Pfa) of no more than five percent. The test method shall be evaluated by an independent testing laboratory, consulting firm, not-for-profit research organization, or educational institution using the most recent version of the United States Environmental Protection Agency's (EPA's) "Standard Test Procedures for Evaluating Release Detection Methods: Pipeline Release Detection (EPA 510-B-19-005)." EPA's "Standard Test Procedures for Evaluating Release Detection Methods: Pipeline Release Detection (EPA 510-B-19-005)" is hereby incorporated by reference, including subsequent amendments and editions. A copy may be obtained by visiting EPA's Office of Underground Storage Tank website: <https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P100WW8T.txt> and may be accessed free of charge. The independent testing laboratory, consulting firm, not-for-profit research organization, or educational institution shall certify that the test method can detect a 0.10 gallon per hour leak rate with a Pd of at least 95 percent and a Pfa of no more than five percent. The interstitial space of the piping 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. If the piping 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 piping shall be re-tested for tightness in accordance with Paragraph (f) of this Rule. The most recent 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(a)(2)(h);*

*Eff. November 1, 2007;*  
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