

15A NCAC 18E .0805 TANK LEAK TESTING AND INSTALLATION REQUIREMENTS

- (a) All tanks installed under the following conditions shall be leak tested:
- (1) when a SWC is present within four feet of the elevation of the top of a mid-seam pump tank;
 - (2) with advanced pretreatment when required in the RWTS or PIA Approval;
 - (3) when required in the approved plans and specifications for a wastewater system designed by a PE or AOWE;
 - (4) when the tank is constructed in place at the jobsite by a person not approved by the Department as a tank manufacturer using bricks, blocks, or poured in place concrete; or
 - (5) as required by the authorized agent based upon site or system specific conditions, such as misaligned seams, exposed reinforcement, or damage observed that may have occurred during transport or installation.
- (b) Tanks subject to leak testing in accordance with Paragraph (a) of this Rule shall be leak tested using either a hydrostatic test procedure or vacuum test procedure as follows:
- (1) The operational procedures to be followed for the hydrostatic test are:
 - (A) fill tank with water to the underside of the top of the tank or, for corrugated tanks, to the bottom of the upper most corrugation that forms the top of the tank;
 - (B) allow the tank to sit for one hour;
 - (C) tank shall be approved if the water level drops less than or equal to one-eighth inch in one hour;
 - (D) if a leak is detected, the tank may be repaired in accordance with the tank manufacturer's written instructions, refilled, and retested;
 - (E) surface wetness or condensation shall not be considered an active water leak; and
 - (F) the tank manufacturer or installer is allowed one attempt to retest the tank before the authorized agent can deny the tank for use in the installation based on failure to pass the leak test.
 - (2) The operational procedures to be followed for the vacuum test are:
 - (A) temporarily seal inlet and outlet pipes and access openings;
 - (B) using calibrated equipment, draw a vacuum on the empty tank to a negative pressure of two and one half inches of mercury;
 - (C) hold the vacuum for five minutes and re-measure and record the ending negative pressure inside the tank;
 - (D) no bracing or internal support that is not part of the approved tank shall be allowed;
 - (E) tank shall be approved if the difference between the starting negative pressure and the ending negative pressure is less than or equal to one-fifth inch;
 - (F) if a leak is detected, the tank may be repaired in accordance with the tank manufacturer's written instructions and retested;
 - (G) the tank manufacturer or installer is allowed one attempt to retest the tank before the authorized agent can deny the tank for use in the installation based on the failure to pass the leak test; and
 - (H) all tank openings shall be un-sealed after the vacuum test is completed.
 - (3) Instead of the operational procedures set out in Paragraphs (b)(2)(B) and (b)(2)(E) of this Rule, a tank manufacturer may choose to use a negative pressure of five inches of mercury held for two minutes with the tank approved if the difference between the starting negative pressure and the ending negative pressure is less than or equal to two-fifths of mercury.
- (c) The LHD shall document the observation of the leak testing.
- (d) Tanks unable to pass a leak test or be repaired to pass a leak test shall be removed from the site and the imprint described in Rule .1402(d)(15) or (e)(8) of this Subchapter marked over.
- (e) The septic tank outlet pipe shall be inserted through the outlet pipe penetration boot, creating a watertight joint, and extending beyond the septic tank outlet. The pump tank outlet pipe shall be inserted through the outlet pipe penetration boot, creating a watertight joint, or through another watertight joint, such as a rubber grommet, in the pump tank riser.
- (f) The septic tank outlet pipe and pump tank outlet pipe shall be placed on undisturbed soil, compacted soil, or bedded in accordance with Rule .0703(b) of this Subchapter to prevent differential settling of the pipe. The pump tank outlet pipe shall be level for a minimum of two feet after exiting the tank.
- (g) The tank shall be installed level. A tank is considered level if the difference between the front and back is plus or minus one inch and the difference from side to side is plus or minus one inch. The tank excavation, bedding,

backfill, and compaction shall be in accordance with the tank manufacturer's installation requirements, specifications, and the tank approval.

(h) The tank excavation shall be separated from the dispersal system by at least two feet of undisturbed soil. Piping from the tank to the next component shall be placed on undisturbed soil, compacted soil, or bedded using sand, gravel, stone, or other aggregate.

(i) Effluent filters and risers shall be installed in accordance with the design and construction criteria of Rule .1402(b) and (c) of this Subchapter.

(j) Any system serving a facility with a DDF greater than 3,000 gpd shall have access manholes installed on the tank and extending at a minimum to finished grade. The access manholes shall be designed and maintained to prevent surface water inflow and sized to allow access for routine inspections, operation, and maintenance.

*History Note: Authority G.S. 130A-335(e), (f), and (f1); S.L. 2023-77, s.15; S.L. 2024-49, s.4.27;
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