DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH SECTION
ON-SITE WATER PROTECTION BRANCH

North Carolina Prefabricated Tank Approval

Issued To: Norwesco, Inc.
4365 Steiner St
PO Box 439
St. Bonifacius, MN 55375-0439

For: Norwesco and Snyder 1,000 gallon, 1,250 gallon, and 1,500 gallon Polyethylene Low Profile Septic and Pump Tanks

Date: May 24, 2013

I. Material
- A. The tanks shall be manufactured as per the approved drawings, specifications and testing results. All other wastewater system components shall be as described in 15A NCAC 18A .1900, et seq.
- B. Polyethylene shall be Type II or III and Category 3 per ASTM Standard D 1248 Specification for Polyethylene Plastics Molding and Extrusion Materials, Class B (requiring an ultraviolet stabilizer) or Class C (requiring a minimum of one percent carbon black).
- C. Specific criteria for these tanks have been based primarily on ASTM standards and IAMPO/ANSI Z1000-2007, Prefabricated Septic Tanks. The criteria that have been demonstrated via third-party testing for the material to meet include:

| Material Property | Value |
|---|---|
| Ultimate tensile strength | 2,400 psi, minimum |
| Stress crack resistance | 150 hours |
| Flexural modulus of elasticity | 85,000 psi, minimum |

- D. Structural integrity and tank watertightness in accordance with CSA B66-M90, Vacuum Test.

II. Design Criteria
- A. Nominal wall thickness: 0.25 inches, minimum
- B. Tank dimensions as shown on the plans

| Tank Size | 1000 gallon (ST)<br>1000 gallon (PT) | 1250 gallon (ST)<br>1250 gallon (PT) | 1500 gallon (ST)<br>1500 gallon (PT) |
|---|---|---|---|
| Approval Number | STB-2092<br>PT-2092 | STB-2093<br>PT-2093 | STB-2094<br>PT-2094 |
| Length (outside) | 127 inches | 157 inches | 157 inches |
| Width (outside) | 60 inches | 60 inches | 69 inches |
| Height (outside) | 51 inches | 51 inches | 51 inches |

III. Tank Sizing

Based on the criteria established in 15A NCAC 18A .1952.

IV. Risers

Approved risers for use with Norwesco and Snyder tanks are the Norwesco/Snyder low profile manhole extensions.

V. Pump Tank Calibration

A calibration chart specific to the pump tank size must be provided to allow the operator to perform a valid pump drawn down test.

VI. Siting Criteria

A. Tanks shall not be installed in areas with saturated soil conditions or indication of a seasonal high water table, per 15A NCAC 18A. 1942(a), between the ground surface and the bottom of the proposed tank installation excavation.
B. Tanks shall not be installed in areas which are to be subject to vehicular loading of any kind.
C. Tanks shall not be stored or installed in areas which may be subject to exposure to open flame or heat in excess of 180 degrees Farenheit.
D. Tanks shall be located and oriented in such a way that the inlet pipe shall enter the tank though the preformed inlet pipe penetration point and gasket located at the inlet end of the tank. The gasket shall be provided by the manufacturer. No side entry of these tanks is allowed.
E. The tank outlet pipe shall be installed in through the preformed outlet pipe penetration point located at the outlet end of the tank. The outlet shall be through a gasket provided by the manufacturer.
F. Tank top must be at least 6 inches below the finished grade. Maximum burial depth is 36 inches below grade. The pump tank riser over the pump (outlet end) must be 6 inches above finished grade.
G. Other siting criteria as specified in 15A NCAC 18A .1900, et seq. and minimum setback distances, as specified in 15A NCAC 18A .1950, shall be met.

VII. Installation and testing procedures

A. Manufacturer's installation instructions for Norwesco, Inc./Snyder Industries, Inc. tanks shall be adhered to, except as required herein or by 15A NCAC 18A .1900, et seq.
B. Tanks shall be distributed through a network of dealers/distributors authorized by Norwesco, Inc/Snyder Industries, Inc., after all personnel involved in the sale of the septic tanks have completed Norwesco, Inc./Snyder Industries, Inc. authorized product training. Authorized dealers may only sell tanks to authorized installers.
C. All Norwesco, Inc./Snyder Industries, Inc. approved tanks shall be installed by an installer who has been authorized in writing by Norwesco, Inc./Snyder Industries, Inc.
D. The preferred tank bedding material is well packed sand with minimums of 6 inches in soil terrain and 12 inches in rock terrain. Native soil can be used if it is flowable, compactable, rock free, and can provide uniform tank support in the recessed rib areas. Shrink/swell clays should be avoided as backfill material. The tank should be installed level.
E. The excavation hole must be as small as possible while allowing for 18 to 24 inches of sidewall and endwall clearance.
F. The following items must be done after the setting the tank into the excavation and before backfilling the tank: inlet pipe is entered straight from the opening provided (no side entry), effluent filter installed (only for septic tanks), and manhole extensions and/or lids installed.
G. Backfill and compact around the tank in 12 inch layers. Each of the interior support columns must be filled with free-flowing soil and compacted in 6 inch layers. Backfill under inlet and outlet pipes must be tamped and compacted.

VIII. Operation, maintenance and monitoring requirements

A. System management entity, inspection/maintenance and reporting frequency requirements shall be in accordance with 15A NCAC 18A .1961
B. Operation, maintenance and monitoring requirements shall be in accordance with the manufacturer's installation instructions, except as required herein or by 15A NCAC 18A .1900, et seq.
C. The operator in responsible charge (ORC), where applicable, during their regular inspection and the local health department, during their regular system review, should remove any access lids and inspect the tanks for sign of infiltration, leakage and structural failure. Any problems noted shall be reported to the local health department, Norwesco, Inc./Snyder Industries, Inc., and the Environmental Health Section, On-Site Water Protection Branch. Repairs made shall be consistent with the recommendations of Norwesco, Inc./Snyder Industries, Inc. and the Environmental Health Section, On-Site Water Protection Branch.