DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WATER PROTECTION SECTION

North Carolina Prefabricated Tank Approval

Issued To: Roth Global Plastics
PO Box 245
Syracuse, NY 13211

For: 1060, 1250, and 1500 Gallons Polyethylene Septic Tanks and 1000, 1337, 1469, and 1771 Gallons Polyethylene Pump Tanks

Date: May 30, 2008

I. Material

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 1-percent carbon black); and shall have the following physical properties:

Property	Minimum value	Test procedure
Stress crack resistance	150 hours	ASTM D 1693
Ultimate tensile strength	2400 psi	ASTM D 638
Flexural modulus of elasticity	85,000 psi	ASTM D 790

II. Design Criteria

a. Wall thickness: 0.25-inch, minimum.
b. Inlet, liquid depth, risers, effluent filters, access covers as per Rules .1954(a) and (b) and other dimensions as shown on the plans.

Tank Size	**1000 gallons (PT)**	**1060 gallons (ST) 1337gallons (PT)**	**1250 gallons (ST) 1469 gallons (PT)**	**1500 gallons (ST) 1771 gallons (PT)**
Length (outside)	**103 inches**	**133 inches**	**148 inches**	**177 inches**
Width (outside)	**62 inches**	**62 inches**	**62 inches**	**62 inches**
Height (outside)	**51 inches**	**51 inches**	**51 inches**	**51 inches**
Liquid Level	**40 inches (ST)** **51 inches (PT)**	**40 inches (ST)** **51 inches (PT)**	**40 inches (ST)** **51 inches (PT)**	**40 inches (ST)** **51 inches (PT)**
Access opening inside diameter	**24 inches (PT)**	**18 inches (ST)** **24 inches (PT)**	**18 inches (ST)** **24 inches (PT)**	**18 inches (ST)** **24 inches (PT)**

III. Tank sizing

Per the criteria established in 15A NCAC 18A .1952.

IV. Risers and Effluent Filters

Risers and effluent filters to be provided by the tank manufacturer. Approved risers for use with Roth tanks are STAR (Septic Tank Access Riser) 24-inch risers, manufactured by Roth.

The septic tank riser will have a bottom ledge with an 18 inch plug in it. The plug will be attached with stainless steel screws to the bottom ledge. The lid will be secured to the riser with stainless steel screws.

The pump tank riser lid will be secured to the riser with stainless steel screws and a deadbolt lock installed in a hole drilled through the lid and riser lip.

V. Pump Tank Calibration

A dipstick (measuring stick) and calibration chart specific to the pump tank size must be provided to allow the operator to perform a valid pump draw 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 that are to be subject to vehicular loading of any kind.
c. Tanks shall not be installed in areas that may be subject to exposure to open flame or heat in excess of 180 degrees, Fahrenheit.
d. Tanks shall be located and oriented in such a way that the inlet pipe shall enter the tank through the preformed inlet pipe penetration point at its inlet end wall. No side entry of these tanks is allowed. Inlet shall be through a gasket provided by the manufacturer.
e. Tank top must be at least 6 inches below the finished grade. Maximum burial depth is 36 inches below grade. The riser over the pump (outlet end) must be 6 inches above finished grade.
f. 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. Sharp objects must be kept away from the tanks.
b. The excavation should be sized to allow for approximately 2 feet around the entire tank

and 6 inches below the tank.

c. The bottom of the excavation must be filled with 6 inches of pea stone (1/8"-3/4" diameter rounded stone) or sand, leveled off.
d. The following items must be done before the setting the tank into the excavation: drill inlet and outlet holes; install rubber gaskets for inlet and outlet holes; install inlet straight pipe and outlet effluent filter and pipe; and install threaded tank riser.
e. Lower the tank into the excavation.
f. Backfill in an alternating method around the tank using native material free of debris, sharp stones, and stones greater than 2" in diameter. Compact in 6-inch lifts. Installer may place water in the tank to stabilize during backfilling.
g. A 24-hour tank leakage test may be required by the local health department following tank installation. Vacuum testing is not recommended for buried polyethylene tanks.
h. Manufacturer's installation instructions for Roth Global Plastics Polyethylene Tanks shall be adhered to, except as required herein or by 15A NCAC 18A .1900, et seq.
i. Tanks shall be distributed through a network of dealers/distributors authorized by Roth Global Plastics after all personnel involved in the sale of the septic tanks have completed Roth Global Plastics authorized product training. Authorized dealers may only sell tanks to authorized installers.
j. Tanks shall installed by an installer who has been authorized in writing by Roth Global Plastics.

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. 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 signs of infiltration, leakage and structural failure. Any problems noted shall be reported to the local health department, Roth Global Plastics, and the Division of Environmental Health, On-Site Wastewater Section. Repairs made shall be consistent with the recommendations of Roth Global Plastics, and the Division of Environmental Health, On-Site Wastewater Section.