

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

SEPTIC TANK EFFLUENT FILTER APPROVAL

Septic Tank Effluent Filter Approval Number: EF-21

Issued to: Theo B. Terry, III
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For: Septic Tank Effluent Filter Models ML3-916, ML3-925, ML3-932, ML2-920, BS-416
 and ML2-416

Date: August 27, 2014

In accordance with North Carolina General Statute 130A-335, 130A-335.1, and 15A NCAC 18A .1954, an application by Theo B. Terry, III of Bear Onsite, LLC for a modified approval of septic tank effluent filters has been reviewed and the above referenced filter models have been found to meet the requirements established by statute and rule for approved effluent filters, when the following conditions for use, installation, operation and maintenance are met:

I. Description

- A. Filters shall be designed and manufactured in accordance with plans, specifications and supporting documents provided by the manufacturer in their application for approval submitted to the On-Site Water Protection Branch. The On-Site Water Protection Branch shall be notified in writing of any additions or modification to the approved filter models prior to use in septic tank systems.
- B. Filters shall meet the following specifications (see Table 1).
- C. This approval shall be amended to incorporate additional filter models when they are found to meet the requirements of GS 130A-335, 130A-335.1, and other applicable rules.

Table 1. Approved Filter Model Specifications ML3-916, ML3-925, ML3-932, ML2-920, BS-416, and ML2-416						
Filter Models	Size	Support Case ¹	Case Dimensions		Min. Tank Liquid Depth Required	Min. Access Opening Size ²
			Above Liquid Level	Below Liquid Level		
ML3-916	9.53" x 18"	9-CASE	6"	12.19"	36"	15 x 15 in. or 17 in. dia. or equal
ML3-932	9.53" x 18"	9-CASE	6"	12.19"	36"	15 x 15 in. or 17 in. dia. or equal
ML3-932	9.53" x 18"	9-CASE	6"	12.19"	36"	15 x 15 in. or 17 in. dia. or equal
ML2-920	9.53" x 18"	9-CASE	6"	12.19"	36"	15 x 15 in. or 17 in. dia. or equal
BS-416	4.5" x 28"	4-TGB/ 4-UNI-T	6"	22"	36"	15 x 15 in. or 17 in. dia. or equal
ML2-416	4.5" x 28"	4-TGB/ 4-UNI-T	6"	22"	36"	15 x 15 in. or 17 in. dia. or equal

Notes:

1. Support case provided by septic tank manufacturer.
2. Other minimum opening sizes or configurations proposed by the septic tank manufacturer shall be approved by the State on a case-by-case basis if documentation is provided showing both adequate access is provided for filter maintenance and for pumping the tank outlet compartment.

II. Use

A septic tank manufacturer may use one or more of these approved effluent filters in one or more of their septic tanks. The septic tank manufacturer must notify the On-Site Water Protection Branch in accordance with Rule .1953 of the tanks in which they propose to utilize any of these approved filters, showing any modifications to the approved tank plans which may be necessary to utilize the proposed filter.

III. Sizing

Approved filter models may be used in systems that meet the capacities and wastewater characteristic limitations stated in the following table, in accordance with manufacturer's specifications:

Table 2. Filter Sizing Criteria ML3-916, ML3-925, ML3-932, ML2-920, BS-416, and ML2-416 ¹	
Filter Models	Maximum Design Flow (gpd,

	residential)
ML3-916, ML3-925, and ML3-932	2,750
ML2-920	2,750
BS-416	1,000 (four bedroom maximum)
ML2-416	1,650 (five bedroom maximum)

Notes:

1. Sizing based on typical residential strength septic tank effluent (with or without garbage disposals), including effluent CBOD₅ ≤ 300 mg/l; TSS ≤ 150 mg/l; TKN ≤ 150 mg/l; Oil & Grease ≤ 25 mg/l.

The filter sizing must be compatible with tank sizing requirements established based upon Rules .1949 and .1952(d). Both the maximum filter design flow and the maximum tank design flow must be equal to or greater than the maximum design flow rate for the system.

IV. Installation

The effluent filters and filter support cases shall be assembled and installed in accordance with filter manufacturer's specifications and applicable rules. The filter case shall be located in such a manner that the filter can be readily accessible by the operator beneath the access manhole opening and removable by hand from above finished grade, while also providing enough room to allow for pumping of the tank outlet compartment.

V. Operation and Maintenance

The effluent filters shall be used and maintained in accordance with filter manufacturer's specifications and applicable laws and rules. Manufacturer-specified procedures shall be followed to minimize the bypass of unfiltered effluent while the filter is being serviced. Debris washed off the filter during servicing must be returned to the septic tank, or otherwise handled in accordance with an alternate approved sanitary disposal method.

VI. Literature

The filter manufacturer shall furnish with each filter the following:

1. Literature to be provided by the tank manufacturer to the system installer describing installation procedures.
2. Literature to be provided by the installer to the system owner/user describing filter and recommended maintenance and servicing procedures.

VII. Maintaining Approval Status

The approval status is governed by Rule .1954(e).