INFILTRATOR®
systems inc.

May 10, 2010

Mr. Allen Knapp, Program Manager
Division of Sewage & Water Services
Virginia Office of Environmental Health Services
1500 E. Main St., Rm. 115
Richmond, VA 23219

Re: Request for Review and Approval of Infiltrator TW-300 and TW-500 Tanks

Dear Mr. Knapp,

Infiltrator Systems Inc. (Infiltrator) has added 300- and 500-gallon tanks to its current TW-Series tank product line. The new tanks are designated as the TW-300 and TW-500. By way of this letter, Infiltrator requests a review and approval of the TW-300 and TW-500 tanks by the Virginia Department of Health (VDH) under 12 VAC 5-610-815. Information supporting this request is provided below and in the attachments to this letter.

Design Compared to Approved TW-Series Tanks

The TW-300 and TW-500 tank body designs mirror those of Infiltrator's other approved TW-Series tanks, with the tank wall designed as a 3-layer high-density polyethylene (HDPE) composite. Infiltrator will use the same blend of HDPE resin to manufacture the TW-300 and TW-500 as it currently uses to manufacture the approved TW-Series tanks. The tanks will be molded using the same rotational molding (rotomolding) process and equipment as is used for the current line of TW-Series tanks. The access manhole size for each tank is the same as the approved TW-series tanks. Markings on the two new tank models match the markings on the approved TW-375 model. Design drawings for each tank are provided in Attachment 1.

Structural Integrity and Watertightness

Infiltrator TW-series tanks are designed to provide resistance to lateral compressive and bearing loads to which a septic tank is expected to be subjected per 12 VAC 5-610-815(E). In compliance with the International Association of Plumbing and Mechanical Officials (IAPMO) IGC 262-2008, which establishes the standards for manufacture of multi-layered corrugated polyethylene tanks, both the TW-300 and TW-500 tanks have been shown to withstand a vertical earth load of 500 pounds per square foot (psf). Structural calculations demonstrating that these tank designs can be installed at a depth of 4 feet below ground surface have been reviewed by a 3rd party licensed professional engineer from Gibble Norden Champion Brown Consulting Engineers, Inc. (GNCB). Attachment 2 provides signed and sealed letters and schematics for each tank model.

Watertightness will be achieved through the use of the rotomolding process as with the current TW-Series tanks,. The rotomolding process is a high-temperature, low-pressure plastic forming process that uses heat and biaxial rotation (i.e. rotation on two axes) to produce hollow, single-piece parts. The only opening in the tank body following the rotomolding process is at the 24-inch-diameter access opening.

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Installation Instructions

The TW-300 and TW-500 tanks are to be installed using the same methods as Infiltrator's other approved tank models. Updated installation instructions are provided in Attachment 3.

Review and Approval Request

Infiltrator's TW-300 and TW-500 designs are consistent with the existing TW-series tanks which have been approved for use in Virginia. Infiltrator requests approval of these additional tank models on the merits of Infiltrator's proposed product configuration and design, as well as the evaluations and analyses provided in Attachment 2.

A draft suggested approval document modeled after your department's previous August 6, 2008 and August 27, 2008 tank approval letters, and now including the TW-300 and TW-500 tanks, has been provided in Attachment 4.

If any additional information is needed for review and approval of these tank models, please contact me at 901-854-9682 or by email at bberteau@infiltratorsystems.net. Thank you in advance for your time and consideration.

Sincerely,

Ben Berteau
Science & Government Affairs
Infiltrator Systems Inc.

cc: John J. Aulbach II, P.E., VDH
Tim Wood, Infiltrator Systems Inc.
Greg Harris, Infiltrator Systems Inc.