

Date: February 19, 2021

To: Environmental Health Managers

From: Douglas F. Canody, PE – Technical Services Engineer, VDH-OEHS

Through: Marcia J. Degen, Ph.D., PE – Technical Services Manager, VDH – OEHS

Subject: Biomicrobics MicroFAST treatment units installed in Infiltrator IM-1530 plastic tanks.

VDH-OEHS Technical Services recently received an inquiry from the Central Shenandoah Health District regarding the acceptability of an Infiltrator IM-1530 injection molded plastic tank as a containment vessel for a Biomicrobics MicroFAST 0.50 treatment units, utilized for compliance with TL-3 with nitrogen removal (NSF Standard 245) effluent requirements. The Central Shenandoah HD recognized that the vertical dimensions of the standard MicroFAST 0.50 treatment unit appeared to exceed the available height within the Infiltrator IM-1530 tanks.

In response, OEHS Technical Services contacted Michael Burch of Nature Works, Inc. who represents the Biomicrobics MicroFAST ATU treatment units in Virginia. Mr. Burch confirmed that the Infiltrator IM-1530 tank was conditionally approved by Biomicrobics as a containing vessel for MicroFAST units including the 0.50, 0.625, 0.75 treatment units when utilized for TL3 and nitrogen reduction as well as the MicroFAST 0.25 and 0.375 TL2 Treatment Units. The conditions of this approval by Biomicrobics are:

1. Shortening of the manufactured supplied legs, and setting the unit on PVC pipe legs inside the tank,
2. This modification must be completed by a MicroFAST authorized agent prior to delivery of the treatment units to the site. The modification cannot be completed by the licensed installer at the site. The insertion of the MicroFAST units into the IM-1530 tank must occur before the top and bottom parts of the IM-1530 tank are assembled. When a combination of the MicroFAST treatment unit and the Infiltrator IM-1530 is desired, it must be ordered from either Nature Works, Inc., May Supply, Inc., Cheuvront's Supply, or Wastewater Solutions, who are approved by Biomicrobics to make the modifications and deliver the combined units to the construction site.
3. The combined IM-1530 tank containing the MicroFAST 0.50, 0.625 or 0.75 Units must be provided with three 24 inch diameter risers in top of the IM-1530 tank to insure adequate access for proper operation and maintenance. (The IM-1530 tank is manufactured to facilitate attaching 3 - 24-inch risers to the top surface of the tank.)

Nature Works, Inc., has verified the minimum volumes required for settling and treatment zones (as specified in the file entitled [MicroFast-VA-Tank-Sizes.pdf](#) already posted on the VDH website and attached to this memorandum) are provided in the IM-1530 tank with the MicroFAST 0.50, 0.625 and 0.75 units installed. The IM-1530 tank can also accommodate the MicroFAST 0.25 and 0.375 TL-2 (NSF 40) Treatment Units. However these TL-2 treatment units have not been certified as NSF 245 compliant for removing nitrogen. It should be noted that required volumes for TL-2 compliance effluent quality are smaller than for TL3 effluent quality with nitrogen effluent removal. Mr. Burch also notes that the O&M provider should monitor sludge depths and schedule pump-out of solids when sludge accumulation is 8-10 inches in either compartment regardless of the unit capacity or design effluent quality criteria.

This memorandum will be posted in the MicroFAST section of the listing of Generally Approved TL-3 Units here: <https://www.vdh.virginia.gov/environmental-health/onsite-sewage-water-services-updated/onsite-sewage-system-septic-system-component-approvals/treatment-devices-and-systems/evaluation-completed/> . Also, two other documents - [IM-1530 Compartment Volume.pdf](#) and [Installation Guidelines for FAST® into IM-1530-Version 2.2.pdf](#) submitted by Nature Works Inc., pertinent to this issue, are attached to this memorandum, and will also be posted on the Generally Approved TL-3 Unit webpage. If you have any questions or concerns, please contact VDH – OEHS – Technical Services.