

January 21, 2022

Mr. Wes Combs, Product Manager  
Zoeller Pump Company  
3649 Cane Run Road  
Louisville, KY 40245

**RE: Product Registration Renewal #4 – Notice of Conditional Proprietary Treatment Product Listing**

Description: Sewage Treatment System, Attached and Suspended Growth  
Manufacturer: Zoeller Pump Company  
Product Name: Fusion Series Treatment Systems®  
Model Numbers: ZF-450; ZF-600; ZF-800 (Max Design Flow 450, 600, and 800 GPD per unit)  
Product Listing: Category A (residential sewage)

Dear Wes Combs:

Thank you for your application for product renewal for the Zoeller Pump Company's Fusion Model Series Treatment Systems. This renewal is conditional based on the results of a comprehensive review of Zoeller Pump Company's manuals submitted for initial registration of the product. This registration letter may be discontinued at any time between now and the expiration listed below if the Minnesota Pollution Control Agency (MPCA) cannot obtain manuals that meet the recommendations from the Technical Advisory Panel to remain in compliance with Minn. R. 7083.4040 Item H.

In accordance with Minnesota Rules Chapter 7080 through 7083, the MPCA has reviewed Zoeller Pump Company's submitted materials requesting registration for Category A (residential) treatment product listing of the Fusion Model Series in this application. Based on the submitted documentation, the MPCA finds that the Fusion Model Series is eligible to be registered per Minnesota Rules Chapter 7083.4030 as meeting the following treatment levels:

- **Treatment Level A2** (cBOD<sub>5</sub> of 15 mg/L, TSS of 15 mg/L) without disinfection
- **Treatment Level B2** (cBOD<sub>5</sub> of 25 mg/L, TSS of 30 mg/L) without disinfection
- **Treatment Level C** (cBOD<sub>5</sub> of 125 mg/L, TSS of 60 mg/L and Oil & Grease of 25 mg/L) without disinfection

The Fusion Model Series is registered with a design rated capacity of 450, 600, and 800 gallons per day per unit, as shown in Table 1.

Subject to this determination, the Fusion Model Series, including the Fusion ZF-450, Fusion ZF-600, and Fusion ZF-800, will be placed on the List of Registered Subsurface Sewage Treatment System (SSTS) Products. The product information listed in this Notice of Proprietary Product Listing will be maintained on the MPCA website and may not be altered or misrepresented by the manufacturer or any other person without permission by the MPCA.

**Table 1. Fusion Model Series without disinfection**

Product Name Model	Treatment Process	Design Flow (gpd)	BOD5 Removed (lbs/day)	Highest Treatment Level	Important Product Use Information
Fusion Model ZF-450	Suspended and Attached Growth	450	0.94	A2	<ul style="list-style-type: none"> <li>● Notice of Product Listing <ul style="list-style-type: none"> <li>○ MPCA Letter</li> <li>○ Conditions of Registration</li> <li>○ Expiration Date</li> </ul> </li> </ul>
Fusion Model ZF-600	Suspended and Attached Growth	600	1.25	A2	<ul style="list-style-type: none"> <li>● Fusion Manual <ul style="list-style-type: none"> <li>○ Submitted Drawings</li> <li>○ Known Limitations</li> <li>○ Installation</li> <li>○ Operation &amp; Maintenance</li> <li>○ Owners Information</li> <li>○ Regulators Checklist</li> <li>○ Service Contract</li> </ul> </li> </ul>
Fusion Model ZF-800	Suspended and Attached Growth	800	1.67	A2	<ul style="list-style-type: none"> <li>● Management Plan</li> <li>● Operating Permit Template</li> </ul>

The registration of the treatment products in Minnesota is contingent upon compliance with the following conditions:

1. Products must be used in compliance with MPCA rules and the plans and design specifications provided. Any deviation from the plans and specifications shall not be permitted unless authorized by National Sanitation Foundation (NSF) and, in writing, by the MPCA for registered use.
2. The manufacturer shall have readily accessible information, specific to a product's registered use in Minnesota, for designers, installers, service providers, regulators, and interested parties for the following items: a) product manual, b) design instructions, c) installation instructions, d) operation and maintenance requirements, e) homeowner instructions, and f) list of manufacturer-certified service providers, if any, as required by Minnesota Rules Chapter 7083.4040 (H).
3. The design flows for the registered Fusion Model Series are as follows:
  - 450 gallons per day for the Fusion ZF-450
  - 600 gallons per day for the Fusion ZF-600
  - 800 gallons per day for the Fusion ZF-800
4. Septic/trash tank capacity for dwellings shall meet the manufacturer's size requirement consistent with National Sanitation Foundation (NSF) testing and as specified in the Application for Registration. The tank(s) shall be designed to withstand the pressures to which it will be subject to. The tank(s) and all pipe penetrations, risers, and other connections to the tank shall be watertight.

5. Each system must be delivered with an installation manual and owner's manual for the Fusion Model Series (Fusion ZF-450, Fusion ZF-600, and Fusion ZF-800). Each component must be installed in accordance with the manufacturer's installation manual.
6. All systems shall be designed and operated with a suitable alarm device(s) should the Fusion Model Series (Fusion ZF-450, Fusion ZF-600, and Fusion ZF-800) units malfunction.
7. This treatment product is a Minnesota-registered product for Type IV systems. For Treatment Levels A2, B2 and C, effluent loading rates to the soil, method of distribution, and vertical separation requirements shall meet the minimum requirements contained in Minnesota Rules Chapter 7080.2150 thru 7080.2350. The effluent, following treatment in the Fusion Model Series, is required to be uniformly distributed to the soil for final treatment and dispersal.
8. Systems may only be designated as Type IV systems when designed and installed per the drawings submitted as part of the Application for Product Registration, dated November 9, 2009, and subsequent documents submitted prior to this renewal.
9. As a Type IV system, the system must be constructed and operated under the required local permits.
10. The level of maintenance required for Fusion Model Series components shall be as specified in the products Operation and Maintenance Manual. This includes, but is not limited to, maintenance every six months.
11. As specified in Owner's Manual, limitations of the product are identified, including a list of unsuitable wastes that must not be discharged into the system. The manufacturer is responsible to provide a listing of other known limitations, made available on the company's website or other means.
12. Training shall be provided to MPCA-licensed Subsurface Sewage Treatment System practitioners before designing, installing, or providing service to Fusion Model Series Fusion ZF-450, Fusion ZF-600, and Fusion ZF-800) treatment systems registered for use in Minnesota.
13. During the period of product registration and as part of the renewal process, systems using registered treatment products are subject to an audit by the MPCA.

**Please be advised that this registration expires December 31, 2024.** Manufacturers desiring to continue product registration beyond this date must obtain MPCA renewal according to the requirements in Minnesota Rules Chapter 7083.4040 (E). If the product has changed or is retested according to the protocol required for registration, renewal shall be based on the most recent test results. If the MPCA finds the product has changed in any way that may affect performance, it may not be renewed and must meet the requirements for initial registration.

The MPCA is in no way endorsing these products or any advertising, and is not responsible for any situation which may result from its use or misuse. The MPCA is not liable for any product failure and these statements are not intended and cannot be relied upon to establish any substantive or procedural rights with the state of Minnesota or the MPCA, either express or implied, that can be enforced in litigation or any administrative proceeding.

If you have any questions, please contact Katie Dowling at 651-757-2301 or by email at [katie.dowling@state.mn.us](mailto:katie.dowling@state.mn.us).

Sincerely,

*Katie Dowling*

*This document has been electronically signed.*

Katie Dowling  
Environmental Specialist  
Municipal Division

KD:lm

cc: File