

October 23, 2023

Brian Koski
Wexco Environmental
6074 Keystone Road
Milaca, MN 56353

RE: Product Registration Initial – Notice of Conditional Product Registration for Proprietary Treatment Product Listing

Description: Sewage Treatment System, Moving Bed Biofilm Reactor
(MBBR) Manufacturer: Wexco Environmental
Product Name: Alpha Onsite Wastewater Treatment Systems
Models: Alpha Maxx, Alpha Flex, Alpha Hydra
Product Listing: Category B (high strength sewage)

Dear Brian Koski:

Thank you for your application for product renewal for Alpha Onsite Moving Bed Biofilm Reactor (MBBR) Wastewater Treatment System. Treatment components consist of septic tank (and grease interceptor when needed), pump tank, aerobic reactor tankage, secondary solids operation, and effluent discharge to a subsurface soil treatment and dispersal system.

In accordance with Minn. R. ch. 7080 through 7083, the Minnesota Pollution Control Agency (MPCA) has reviewed Environmental Health Products and Service's submitted materials requesting registration for Category B (high strength sewage) treatment product listing of the Alpha Onsite Wastewater Treatment System in this application. Based on the submitted documentation, the MPCA finds that Alpha Onsite Wastewater Treatment System is eligible for Conditional Product Registration as meeting the following treatment level:

- **Treatment Level C** (cBOD₅ of 125 mg/L, TSS of 60 mg/L and Oil & Grease of 25 mg/L)

The design of each Alpha Onsite System will include: 1) hydraulic and organic loading rates, 2) pretreatment tanks (septic tank and grease interceptor), 3) Alpha component tank, air flow and biofilm carrier element volume, and 4) biological solids separation tank.

The Alpha Onsite Wastewater Treatment System is registered for high strength wastewater applications with design flows up to 10,000 gallons per day.

Subject to this determination, Alpha Onsite Wastewater Treatment System will be placed on the List of Registered Subsurface Sewage Treatment System (SSTS) Products for High Strength Wastewater. The product information listed in this Notice of Conditional Product Registration for Proprietary Treatment 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.

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

1. Products must be used in compliance with the MPCA rules, and the plans and design information provided during the period of initial product application.

2. The manufacturer shall have readily accessible information, specific to a product’s registered use in Minnesota, for designers, regulators, installers, system owners, service providers and other interested parties for the following items: a) product manual; b) design instructions; c) installation instructions; d) information regarding operation and maintenance; e) owner instructions; and f) list of representatives and manufacturer-certified service providers, if any, as required by Minn. R. ch. 7083.4040(H).

3. The design organic loading for the Alpha Onsite Wastewater Treatment System is as specified in Table 1 below. The manufacturer’s designated representative(s) is required to review all designs provided by Advanced Designers (i.e.: evaluation worksheets for high strength wastewaters) for treatment systems proposed to use the Alpha Wastewater Treatment System. Designers need to work directly with the manufacturer to ensure the wastewater is properly characterized and that Alpha Onsite Wastewater Treatment Systems, and other related components used in treatment train (i.e.: septic tank, pump tank, and grease interceptor) are properly sized and compatible to meet designed performance requirements.

Table 1.

Product Name Model	Treatment Process		BOD ₅ Removed (lbs/day)	Highest Treatment Level	Product Information
ALPHA MAXX-5.0	MBBR		5.0	C	<ul style="list-style-type: none"> • Notice of Product Listing <ul style="list-style-type: none"> ○ MPCA Letter ○ Conditions of Registration ○ Expiration Date • Alpha Onsite Manual <ul style="list-style-type: none"> ○ Submitted Drawings ○ Known Limitations ○ Installations ○ O&M ○ Owners Information ○ Regulators Checklist ○ Service Contract • Management Plan • Operating Permit Template
ALPHA MAXX-8.0	MBBR		8.0	C	
ALPHA MAXX-11.0	MBBR		11.0	C	
ALPHA MAXX-14.0	MBBR		14.0	C	
ALPHA MAXX-17.0	MBBR		17.0	C	
ALPHA MAXX-20.0	MBBR		20.0	C	

Product Name Model	Treatment Process		BOD ₅ Removed (lbs/day)	Highest Treatment Level	Product Information
ALPHA MAXX-23.0	MBBR		23.0	C	
ALPHA MAXX – 26.0	MBBR		26.0	C	
ALPHA MAXX-30.0	MBBR		30.0	C	
ALPHA MAXX-40.0	MBBR		40.0	C	
ALPHA MAXX-50.0	MBBR		50.0	C	
ALPHA FLEX - 750	MBBR	750	3.0	C	
ALPHA FLEX - 1000	MBBR	1000	4.5	C	
ALPHA FLEX - 1500	MBBR	1500	6.0	C	
ALPHA HYDRA	MBBR	450-2000	0.5	C	0.5 lbs./BOD/Hydra unit Expandable to 8 units/blower

4. Sewage tank capacity, tank geometry, burial depth, and other tank requirements shall meet the manufacturer’s requirements and Minn. R. 7080.1900-2030 and be registered for use by the MPCA. Sewage tank(s) shall be designed to withstand the pressures to which it will be subjected. Tanks and all pipe penetrations, risers, and other connections to tanks shall be watertight. The external grease interceptor (also known as external grease trap and grease tank) shall be sized according to the manufacturer’s size requirements. Designer’s must utilize manufacturers recommended installation practices to secure the Alpha system’s aeration network, which shall be done in a manner as to not alter the tank’s registration, watertightness, or structural integrity.

5. Systems installed using Alpha Onsite Wastewater Treatment System shall be timed- dosed when deemed necessary by the product manufacturer. In such instances, adequate storage capacity shall be provided in the surge tank to prevent nuisance high water conditions from occurring. An alarm is required on tanks in the event the pump malfunctions.

6. Each Alpha Onsite Wastewater Treatment System must be delivered with an installation manual and detailed operation and maintenance manual for each system. Each component must be installed in accordance with the manufacturer's installation manual.
7. The Alpha Onsite Wastewater Treatment System is registered to be used in systems to achieve Treatment Level C. The effluent loading rates to the soil, method of distribution, and vertical separation requirements shall meet the minimum requirements contained in Minn. R. ch. 7080.2150 for flows less than 5,000 GPD. For flows greater than 5,000 GPD, final treatment and dispersal must also meet Minn. R. ch. 7081.0270.
8. All systems shall be designed and operated with a manufacturer approved effluent screen. All systems shall be designed and operated with a suitable alarm device(s) should the effluent screen malfunction.
9. Systems may only be designated as Type IV systems when designed and installed per the drawings submitted as part of the Application for Registration, received May 26th, 2023, and subsequent documents submitted prior to this registration.
10. As a Type IV system, the system must be constructed and operated under the required local permits.
11. As specified in the Owner's Manual, limitations of the product are identified. The manufacturer is responsible to provide a listing of other known limitations, made available on the company's website or other means. The level of maintenance required for Alpha Onsite Wastewater Treatment System shall be as specified in the products Operation and Maintenance Manual.
12. Training shall be provided to MPCA-licensed Subsurface Sewage Treatment System practitioners before designing, installing, or providing service to Alpha Onsite Wastewater Treatment System registered for use in Minnesota.
13. At the time of product renewal during the year 2027, performance data on systems installed in Minnesota are required to be submitted to the MPCA to substantiate product performance in accordance with Minnesota's HSW product registration guidance and protocol which can be found at the following webpage: <https://www.pca.state.mn.us/sites/default/files/wq-wwists4-95.pdf>. The data would be contained in a Summary Report submitted to the MPCA.
14. 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, 2027. Manufacturers desiring to continue product registration beyond this date must obtain MPCA renewal according to the requirements in Minn. R. ch.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.

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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 Cody Robinson at 651-757-2535 or by email at cody.robinson@state.mn.us.

Sincerely,

Cody Robinson

This document has been electronically signed.

Cody Robinson
Soil Scientist
Municipal Division

CR:map

cc: File