

January 21, 2022

Dr. Daniel Wickham, President
SludgeHammer Group, Ltd.
4772 US-131 South, Building D
Petoskey, MI 49770

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

Description: Sewage Treatment System, Extended Aeration, Fixed Film
Manufacturer: SludgeHammer Group Ltd.
Product Name: SludgeHammer®
Model Numbers: S-400 and S-600; (Design Flow 400 and 600 GPD per unit)
Product Listing: Category A (residential sewage)

Dear Dr. Wickham:

Thank you for your application for product renewal for the SludgeHammer Series, Models S-400 and S-600. This renewal is conditional based on the results of a comprehensive review of SludgeHammer'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 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 Minn. R. Ch. 7080 through 7083, the Minnesota Pollution Control Agency (MPCA) has reviewed SludgeHammer Group's submitted materials requesting registration for Category A (residential) treatment product listing of the SludgeHammer in this application. Based on the submitted documentation, the MPCA finds that the SludgeHammer is eligible to be registered per Minn. R. Ch. 7083.4030 as meeting the following treatment level:

- **Treatment Level B2** (cBOD5 of 25 mg/L, TSS of 30 mg/L) without disinfection
- **Treatment Level C** (cBOD5 of 125 mg/L, TSS of 60 mg/L and Oil & Grease of 25 mg/L) without disinfection

The SludgeHammer is registered with a design rated capacity of 400 and 600 gallons per day per unit, as shown in Table 1.

Subject to this determination, the SludgeHammer, including models S-400 and S-600, 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. SludgeHammer, Models S-400 and S-600.

Product Name Model	Treatment Process	Design Flow (gpd)	BOD ₅ Removed (lbs/day)	Highest Treatment Level	Important Product Use Information
SludgeHammer Model S-400	Extended Aeration, Fixed Film	400	0.58	B2	<ul style="list-style-type: none"> • Notice of Product Listing <ul style="list-style-type: none"> ○ MPCA Letter ○ Conditions of Registration ○ Expiration Date • SludgeHammer Manual <ul style="list-style-type: none"> ○ Submitted Drawings ○ Known Limitations ○ Installation ○ Operation & Maintenance ○ Owners Information ○ Regulators Checklist ○ Service Contract • Management Plan • Operating Permit Template
SludgeHammer Model S-600	Extended Aeration, Fixed Film	600	0.87	B2	

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 Minn. R. Ch. 7083.4040 (H).
3. The design flows for the registered SludgeHammer are as follows:
 - 400 gallons per day for the S-400
 - 600 gallons per day for the S-600
4. Septic tank capacity for dwellings shall meet the manufacturer’s size and configuration (two compartment tank or two separate tanks) requirements consistent with 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. Systems installed using the SludgeHammer (Models S-400 and S-600) shall be equipped with an effluent screen, consistent with the type used during the Standard 40 NSF test of the product. An alarm device is required in the event the effluent screen malfunctions.
6. Each system must be delivered with an installation manual and owner's manual for the SludgeHammer (Models S-400 and S-600) used in the system. Each component must be installed in accordance with the manufacturer's installation manual.
7. All systems shall be designed and operated with (a) suitable alarm device(s) should the SludgeHammer (Models S-400 and S-600) units malfunction.
8. This treatment product is a Minnesota-registered product for Type IV systems. For Treatment Levels B2 and C, 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 thru 7080.2350. The effluent, following treatment in the SludgeHammer, is required to be uniformly distributed to the soil for final treatment and dispersal.
9. 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 April 7, 2010, 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. The level of maintenance required for SludgeHammer components shall be as specified in the products Operation and Maintenance Manual. This includes, but is not limited to, inspections and maintenance at six month intervals, or as specified in the local operating permit.
12. 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, to be made available on the company's website or other means.
13. Training shall be provided to MPCA-licensed Subsurface Sewage Treatment System practitioners before designing, installing, or providing service to SludgeHammer (Model S-400 and S-600) treatment systems registered for use in Minnesota.
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.

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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 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.

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.

Sincerely,



This document has been electronically signed.

Katie Dowling
Environmental Specialist
Municipal Division

KD:lm

cc: File