



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

Charles D. Baker  
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### **APPROVAL FOR GENERAL USE**

Pursuant to Title 5, 310 CMR 15.000

Name and Address of Applicant:

SludgeHammer Group Ltd.  
336 S. Division Road  
Petoskey, MI 49770

Trade name and model of technology: SludgeHammer ABG, models S-46 and S-86 (hereinafter the "System"). Schematic drawings of a typical System and technology checklist are attached as part of this Approval.

Transmittal Number: **X265058**

Date of Issuance: April 2, 2015

### **Authority for Issuance**

Pursuant to Title 5 of the State Environmental Code, 310 CMR 15.000, the Department of Environmental Protection hereby issues this Approval for General Use to: SludgeHammer Group Ltd. 336 S. Division Road, Petoskey, MI 49770 (hereinafter "the Company"), approving the System described herein for General Use in the Commonwealth of Massachusetts. Sale and use of the System are conditioned on and subject to compliance by the Company and the System owner with the terms and conditions set forth below. Any noncompliance with the terms or conditions of this Certification constitutes a violation of 310 CMR 15.000.

David Ferris, Director  
Wastewater Management Program  
Bureau of Waters Resource

April 2, 2015

Date

## **I. Purpose**

1. The purpose of this Certification is to allow use of the System in Massachusetts, on a General Use basis to enhance and maintain performance of properly functioning soil absorption System (SAS).
2. With the necessary permits and approvals required by 310 CMR 15.000, this Approval for General Use authorizes the use of the System in Massachusetts.
3. The System is approved for the use at facilities with a maximum design flow less than 2,000 gallons per day (GPD).
4. The System may only be installed at facilities where a system in full compliance with 310 CMR 15.000 exists or will be built and has been approved by the local approving authority.
5. This Approval is limited to the applicant's use of the technology. MassDEP makes no determination concerning any ownership interest or any other property or legal rights associated with the use of the technology.

## **II. Design Standards**

1. The System consists of an aeration device, 40 watt unit operated on a continuous basis, and a System bacterial source installed in an existing septic tank or a new septic tank designed in accordance with 310 CMR 15.223 through 15.228. The bacterial source consists of plastic media coated with the bacteria. The System converts the septic tank into a facultative bioreactor to treat residential strength wastewater from facilities with a design flow of less than 2,000 GPD. The treated effluent is discharged to the SAS.
2. A microbial culture is established in the septic tank and maintained using aeration device and the microbial source. The aerator mixes the contents of the septic tank with the microbes and aerates the liquid. The System's biomass reduces both the biochemical oxygen demand (BOD<sub>5</sub>) and the total suspended solids (TSS) concentration in the effluent from the septic tank.
3. For seasonal use, the System shall be reactivated by the addition of a fresh culture of microbes at each start up.

## **III. General Conditions**

1. The provisions of 310 CMR 15.000 are applicable to the use of the System, the system owner and the Company, except those that specifically have been varied by the terms of this Approval.

2. The facility served by the System, and the System itself, shall be open to inspection and sampling by the Department and the local approving authority at all reasonable times.
3. In accordance with applicable law, the Department and the local approving authority may require the System owner to cease use of the System and/or to take any other action as it deems necessary to protect public health, safety, welfare or the environment.
4. The Department has not determined that the performance of the System will provide a level of protection to the environment that is at least equivalent to that of a sewer. Accordingly, no new System shall be constructed, and no System shall be upgraded or expanded, if it is feasible to connect the facility to a sanitary sewer, unless allowed pursuant to 310 CMR 15.004.

#### **IV. Conditions Applicable to the System Owner**

1. The System is approved for the treatment and disposal of sanitary sewage only. Any wastes that are non-sanitary sewage generated or used at the facility served by the System shall not be introduced into the on-site sewage disposal system and shall be lawfully disposed of.
2. Operation and Maintenance Agreement
  - A. Throughout its life, the System owner shall operate and maintain the system in accordance with the Company and designer's operation and maintenance requirements and this Approval. To ensure proper operation and maintenance (O&M), the System owner shall enter into an O&M agreement. No O&M agreement shall be less than one year.
  - B. No System shall be used until an O&M agreement is submitted to the approving authority which:
    - i. Provides for the contracting with the Company or its approved operation and maintenance contractor, trained by the Company as provided in Section V(7), to operate the System's specifications and the operation and maintenance requirements specified by the designer and any specified by the Department;
    - ii. Contains procedures for notification to the Department and the local board of health within five days of system failure or alarm event and for corrective measures to be taken immediately;
    - iii. Provides the name of an operator, which must be a Massachusetts certified operator if one is required by 257 CMR 2.00 that will operate and monitor the System. The operator must inspect the System at least every six months and anytime there is an alarm event.
3. The System owner shall at all times have the System properly operated and maintained in accordance with this Approval, the designer's operation

and maintenance requirements and the company's approved operating procedures. The System owner shall notify the Department and the local approving authority in writing within seven days of any cancellation, expiration or other change in the terms and/or conditions of their O&M agreement.

4. Prior to transferring any or all interest in the property served by the system, or any portion of the property, including any possessory interest, the System owner shall provide written notice of all conditions contained in this Approval to the transferee(s). Any and all instruments of transfer and any leases or rental agreements shall include as an exhibit attached thereto and made a part thereof a copy of this Approval for the System. The System owner shall send a copy of such written notification(s) to the local approving authority/ Board of Health within 10 days of such notice being given.
5. By February 15<sup>th</sup> of each year for the previous year, the System owner shall submit to the local approving authority/ Board of Health all operation, maintenance, and monitoring data collected by the System operator, including an O&M checklist and a technology checklist. This information shall be completed by the System operator for each inspection performed during the previous calendar year. A copy of the technology checklist is attached to this Approval.
6. Prior to the issuance of a Certificate of Compliance for the system, the System owner shall record and/or register in the appropriate Registry of Deeds and/or Land Registration Office, a Notice disclosing the existence of the alternative system subject to this Approval on the property. If the property subject to the Notice is unregistered land, the Notice shall be marginally referenced on the owner's deed to the property. Within 30 days of recording and/or registering the Notice, the System owner shall submit the following to the local approving authority: (i) a certified Registry copy of the Notice bearing the book and page/or document number; and (ii) if the property is unregistered land, a Registry copy of the owner's deed to the property, bearing the marginal reference.

**V. Conditions Applicable to the Company**

1. The Company shall maintain the following additional information for the Systems installed in Massachusetts and make it available to the Department within 30 days of a request by the Department:
  - A. The total number of units of the System sold for use in Massachusetts during the previous year; the address of each installed System, the owner's name and address, the type of use (e.g. residential, commercial, institutional) and the design flow;
  - B. Date when system was installed and started up;
  - C. Tabulation of the sampling parameters and results with backup inspection and laboratory sheets;

- D. Tabulation of systems that are in failure as described in 310 CMR 15.303 (1)(a)(1) or (2) due to excessive ponding of effluent in the SAS, reasons for non-compliance and any corrective action taken including but not limited to design, installation and/or operation or maintenance changes required to reach compliance;
  - E. Completed technology inspection checklists shall be maintained by the Company or Company's representative on file for possible Department auditing;
  - F. A general summary of the results for the year, any recommended changes to the design, installation and/or operation and maintenance procedures and a schedule for implementing those changes; and
  - G. Warranty issues both resolved and unresolved or an explanation of any warranty claims that have been received and their resolution.
2. The Company shall notify the Department's Director of Wastewater Management Program at least 30 days in advance of any proposed transfer of ownership of the technology for which this Certification is issued. Said notification shall include the name and address of the proposed new owner and a written agreement between the existing and proposed new owner containing a specific date for transfer of ownership, responsibility, coverage and liability between them. All provisions of this Certification applicable to the Company shall be applicable to successors and assigns of the Company, unless the Department determines otherwise.
  3. Prior to any sale of the System, the Company shall provide the purchaser with a copy of this Certification. In any contract for distribution or sale of the System, the Company shall require the distributor or seller to provide the purchaser of the System, prior to any sale of the System, with a copy of this Certification.
  4. The Company shall prepare and provide the Department an installation manual specifically detailing procedures for installation of its System. The Company shall institute and maintain a training program in the proper installation of its System in accordance with the manual and provide a training course at least annually for prospective installers. The Company shall certify that installers have passed the Company's training qualifications, maintain a list of certified installers, submit a copy to the Department, and update the list annually. Updated lists shall be forwarded to the Department.
  5. The Company shall not sell the System to installers unless they are trained to install these Systems by the Company.
  6. The Company shall institute and maintain a program of operator training. The Company shall maintain and annually update, and make the list of qualified operators available by February 1<sup>st</sup> of each year. The company shall make the list known to users of the technology.

7. The Company or the Company's approved operation and maintenance contractor shall maintain a contract with the system owner that:
  - A. Provides for operating and maintaining the System with an operator that has been trained by the Company to operate the System consistent with the System's specifications and any additional operation and maintenance requirements specified by the designer or by the Department;
  - B. Contains procedures for notification to the System owner, the Department and the local approving authority within five days of knowledge of a System failure and for corrective measures to be taken immediately;
  - C. Contains procedures for inspecting the plastic media bacterial source at each bi-annual visit and if necessary replacing the media. At minimum, the microbial inoculants shall be replaced annually.

#### **VI. Conditions Applicable to Installers of the System**

1. Each Installer shall install the System in accordance with Company training on the installation of the System and the conditions of this Certification.
2. No Installer shall install the System unless the Installer has been trained by the Company on installation of the System.

#### **VII. Reporting**

1. Any submittals of notices and documents to the Department required by this Certification shall be submitted to:

Director  
Wastewater Management Program  
Department of Environmental Protection  
One Winter Street - 5th floor  
Boston, Massachusetts 02108

#### **VIII. Rights of the Department**

1. The Department may suspend, modify or revoke this Certification for cause, including, but not limited to, non-compliance with the terms of this Certification, non-payment of an annual compliance assurance fee, for obtaining the Certification by misrepresentation or failure to disclose fully all relevant facts or any change in or discovery of conditions that would constitute grounds for discontinuance of the Certification, or as necessary for the protection of public health, safety, welfare or the environment, and as authorized by applicable law. The Department reserves its rights to take any enforcement action authorized by law with respect to this Certification, the System, the owner, or operator of the System and the Company.