



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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Commissioner

MODIFIED APPROVAL FOR GENERAL USE

Pursuant to Title 5, 310 CMR 15.000

Name and Address of Applicant:

SepTech/Pirana System
1875 Joy Road
Occidental, CA 95465

Trade name of technology: Pirana system (hereinafter the "System"). Schematic drawings of a typical System and technology checklist are attached as part of this Approval.

Transmittal Number: W165620

Date of Issuance: August 21, 2008; Modified September 22, 2011

Expiration Date: August 21, 2013

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: SepTech/Pirana System, 1875 Joy Road, Occidental, CA 95465 (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 Resource Protection

September 22, 2011
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 2000 gallons per day (GPD).
4. The System may only be installed on all facilities where a system in full compliance with 310 CMR 15.000 exists on site or will be built and has been approved by the local approving authority, or by DEP if DEP approval is required.
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 microbial source installed in an existing septic tank or a new septic tank designed in accordance with 310 CMR 15.223 through 15.228 and in full compliance with 310 CMR 15.000. The microbial source consists of permeable bag containing microbes. 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 either an existing soil absorption system or to a new SAS designed and installed in accordance with 310 CMR 15.000.
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 (BOD₅) 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 of 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 within 10 days of such notice being given.
5. By September 30th of each year for the previous year, the System owner shall submit to the approving authority 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. By February 15th of each year, the Company shall submit to the Department a report, signed by a corporate officer, general partner, or Company owner that contains information on the System for the previous calendar year. The report shall identify all locations where the System was installed in the prior year, state known failures, malfunctions, and corrective actions taken for the System as well as the date and address of each event.
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. The Company shall furnish the Department any information that the Department requests regarding the System, within 21 days of the date of receipt of that request.
4. 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.
5. 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.
6. The Company shall not sell the System to installers unless they are trained to install these Systems by the Company.
7. 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 15th of each year. The company shall make the list known to users of the technology.

8. 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. All 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.