

**WASTEWATER SYSTEM AND POTABLE WATER SUPPLY
INNOVATIVE AND ALTERNATIVE (I/A) TECHNOLOGY
EXPERIMENTAL USE APPROVAL PERMIT****LAWS/REGULATIONS INVOLVED**10 V.S.A. Chapter 64, Potable Water Supply and Wastewater System Permit
Wastewater System and Potable Water Supply Rules, Effective April 12, 2019

Permittee:	SeptiTech 69 Holland Street Lewiston, ME 04240 (207)-333-6940 www.septitech.com	Permit Number:	EX-2020-01-R0
		Date Issued:	03/19/2020
		Date Expires:	03/19/2021

This permit is for the following Enhanced Recirculating Biological Trickling Filter I/A technology models:

Product Name	Model Number(s)	Design Flow (gpd)
SeptiTech Pilot Commercial System	N/A	300

The technology listed in this permit is to be used to treat high-strength effluent to discharge to a soil-based wastewater disposal system. The technology, consisting of an experimental use of an enhanced recirculating biological trickling filter to treat and reduce the high-strength wastewater effluent of Vernon Hall Retirement Residence in Vernon, VT, with a commercial kitchen employing the use of quaternary ammonia as a cleaning agent, to levels that may be discharged in a soil-based dispersal system, is hereby approved under the requirements of the regulations named above subject to the following conditions.

1. GENERAL

- 1.1 The technologies listed in this permit may be used as part of a soil-based wastewater system permitted under the Rules provided the conditions of this permit are met.
- 1.2 Failure by the Permittee to comply with these conditions is grounds for the Secretary to revoke or not renew the Approval Permit.
- 1.3 The approval shall expire on **March 19, 2021**. This approval will not be renewable.
- 1.4 No changes shall be made to the approved technology without prior review and approval by the Secretary.
- 1.5 This Approval Permit is based on the design, operation, and maintenance manuals submitted by the Permittee to the Secretary. Misrepresentation in the application material is grounds for the Secretary to revoke this permit.
- 1.6 If the Rules are revised during the term of this Approval Permit, this permit shall be revised as needed to conform to the revisions.
- 1.7 This permit is not a representation or guarantee of the effectiveness, efficiency, or operation of the approved technology.
- 1.8 This approval is based on information submitted by the Permittee indicating that the technology will treat the effluent to reduce the biochemical oxygen demand (BOD₅) to 30 mg/L or less and total suspended solids (TSS) to 30 mg/L or less.
- 1.9 Each Vermont landowner in interest shall be shown a copy of the Wastewater System and Potable Water Supply Innovative and Alternative System Experimental Use Approval Permit, the Operation and Maintenance manuals, and projected maintenance costs prior to the installation of any permitted unit.



- 1.10 All components of the technology shall be warranted for the entire time the experimental use of technology unit. The permittee shall have an inventory of replacement parts available locally or available for delivery within 24 hours.

2. DOCUMENTS

- 2.1 The approval of the I/A technology is based on the following documents submitted by the permittee:

Title	Submission Date	Revision
Infiltrator IM1060 Install Schematic STAAR .50-INSTALL	3/10/2020	NONE
Infiltrator IM1060 Total Tank Layout STAAR .50-LAYOUT	3/10/2020	NONE
VH IA – Pilot Equipment Layout	3/10/2020	3/16/2020*
Vernon Hall Wastewater Pre-treatment System Pilot Study Memorandum	3/10/2020	*subject to conditions in email: Vernon Hall Experimental Use Application 3/19/2020

- 2.2 Use of the I/A technology in ways not depicted or described in the documents, and or identified in this permit, is not allowed without prior approval by the Drinking Water and Groundwater Protection Division.

3. SERVICE PROVIDER

- 3.1 The Permittee shall contract with and maintain an agreement with Weston & Sampson to perform the inspections, sampling, maintenance, and repairs required by this permit.
- 3.2 The Permittee shall provide training to Weston & Sampson for the proper inspection, sampling, operation, maintenance, and repair of the approved technology.
- 3.3 Maintenance and inspections of the approved technology must be performed by either a representative of the Permittee or an authorized member Weston & Sampson. Reports shall be provided to the Permittee, landowner, and Division in a timely manner so that they can ensure conditions of this Experimental Use Approval are met.

4. REPORTS

- 4.1 The Permittee shall submit electronically within 24 hours of installation and commenced use:
- A. An installation certification from a Vermont-licensed Designer;
 - B. the name of the Vermont-licensed Designer providing the installation certification;
 - C. the name of the contracted and authorized individual inspecting the technology at the time of installation;
 - D. the date installed, and;
 - E. the date and time of initial use of the technology (beginning of the warrantee period).
- 4.2 The Permittee shall ensure that Weston & Sampson are submitting to the Division the following reports;
- A. an initial report of an inspection conducted within 48 hours of initial usage (to be submitted to the Division within 24 hours);
 - B. inspection reports of the I/A technology conducted biweekly for the first two weeks of usage (to be submitted within 48 hours) that will include the sampling of effluent from both the influent and effluent of the technology for testing of the following parameters
 - 1. Biological Oxygen Demand (BOD)
 - 2. Chemical Oxygen Demand (COD)
 - 3. Total Suspended Solids (TSS)
 - 4. Total Kjeldahl Nitrogen (TKN)
 - 5. Fats, Oils and Grease (FOG)

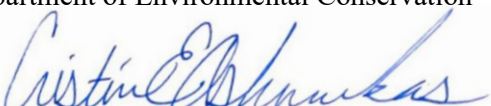
6. Quaternary Ammonia (sampled every other week from the technology effluent only);
- C. C. inspection reports of the I/A technology conducted weekly for the remaining use of the experimental system (to be submitted within 48 hours) that will include the sampling of effluent from both the influent and effluent of the technology for testing of the following parameters
 1. Biological Oxygen Demand (BOD)
 2. Chemical Oxygen Demand (COD)
 3. Total Suspended Solids (TSS)
 4. Total Kjeldahl Nitrogen (TKN)
 5. Fats, Oils and Grease (FOG)
 6. Quaternary Ammonia (sampled every other week from the technology effluent only);
 - D. a final report that will include all data collected during the experimental use of the technology, a description of system operations during that time period, and conclusions concerning the effectiveness of the system for full-scale replacement of the current system (to be submitted within 3 weeks of the end of the experimental use).
- 4.3 Maintenance and inspections reports, and the final report shall be submitted electronically to Division via email to Cristin Ashmankas: Cristin.Ashmankas@Vermont.gov.
 - 4.4 Inspection reports by the Weston & Sampson shall include but not be limited to a summary of all known problems, damages, and/or failures of the technology to comply with this approval and operating requirements for the technology, including:
 - A. a description of any problems, damages, and/or failures;
 - B. potential/known causes of any problems, damages, and/or failures;
 - C. a statement of system operability including whether the technology is operating in compliance with this approval and operating specifications following repairs or corrections of any problems, damages, and/or failures;
 - D. a listing of the required repair/remediation;
 - E. identification of changes to the technology specifications; and
 - F. any observed failure of the wastewater system including wastewater exposed to the open air, wastewater pooling on the surface of the ground, wastewater discharging directly to surface water, or wastewater backing up into the building or structure.
 - 4.5 Problems, damages, and/or failures of the technology identified during an inspection per condition 4.4 of this permit must be reported immediately to the landowner and within 24 hours to the Division.
 - 4.5 Maintenance and inspections shall be performed in accordance with the requirements of the Permittee.

5. INSTALLATION SPECIFICATIONS

- 5.1 The approved technology shall be installed under the guidance of a Vermont-licensed Designer from Weston & Sampson.
- 5.2 The installation of each technology shall be in accordance with the Permittee's technical requirements approved by the Secretary.

Any person aggrieved by this permit may appeal to the Environmental Court within 30 days of the date of issuance of this permit in accordance with 10 V.S.A. Chapter 220 and the Vermont Rules of Environmental Court Proceedings.

Peter Walke, Commissioner
Department of Environmental Conservation

By  Dated March 19, 2020
Cristin Ashmankas, Environmental Analyst V
Regional Office Program
Drinking Water and Groundwater Protection Division