



RHODE ISLAND

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF WATER RESOURCES

235 Promenade Street, Providence, Rhode Island 02908

Alternative and Experimental OWTS Technology Program

Vendor Information:

Geomatrix Systems, LLC

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Technology Name:

GST™ Leaching System

37" and 62" widths, 6", 12", and, 18" heights:

GST 3706, GST 3712, GST 3718

GST 6206, GST 6212, GST 6218

Technology Type:

Alternative Leachfield Component - Class Two

Certification Date:

Issued: December 28, 2023

Expires: December 28, 2028

CERTIFICATION

The Rhode Island Department of Environmental Management (RIDEM) has reviewed the Alternative Component application submitted by Geomatrix Systems, LLC, hereafter referred to as the "Vendor", for GST™ Leaching System, hereafter referred to as the "Component". Based upon information contained in the application the RIDEM hereby accepts the Component for listing on the RIDEM Alternative and Experimental (A/E) Technology List as a Class Two Leachfield Component. The Component is configured of alternating stone leaching "fingers" and sand-filled "fingers" installed over a minimum two-inch depth of ASTM C-33 sand. The stone leaching fingers and sand-filled spaces are oriented perpendicular to a stone-lined trench on which a distribution line is placed.

Design and installation of the Component shall be in accordance with the following terms and conditions:

I. General Design Requirements

1. The Component is configured of alternating 4-inch-wide stone leaching "fingers" and 4-inch-wide sand "fingers" of equal depth. The stone leaching fingers and sand-filled spaces are 25-inches long in GST-37 designs, and 50-inches long in GST-62 designs and are oriented perpendicular to a 12-inch wide stone-lined trench on which a distribution line is placed. This construction is covered by filter fabric. Depth of stone and sand may be 6-inches, 12-inches or 18-inches deep; this is referred to as the "height" of the system and does not include the diameter of the distribution pipe.
2. The Component may receive septic tank effluent, or RIDEM-approved advanced treatment system effluent. Sizing will be in accordance with the RIDEM OWTS Rules, as applicable and the GST™ Leaching System Design Manual's specified total surface area (SF/LF).
3. No reduction of required leachfield area will be allowed.
4. The Component may be specified for H-20 loading in traffic areas, according to the design parameters in the approved Design Manual and the Installation and Operation Manual. Areas subject to vehicular traffic, including parking areas, shall be limited to twenty-five percent (25%) of the leachfield area, except in cases where SoilAir™ is also specified. The requirements of the OWTS Rules for trenches shall apply unless otherwise

addressed in this Certification or in the approved Design Manual and the Installation and Operation Manual.

5. The sand media used in construction shall meet the ASTM-C33 specifications and other requirements stated in the Design Manual and the Installation and Operation Manual.
6. The stone media used in construction shall meet the specifications in the Design Manual and Installation and Operation Manual.
7. The vertical separation distance shall be measured from the base of the Component (the natural receiving soil surface below the specified sand), to the seasonal high groundwater table or impervious layer.
8. The minimum cover over the distribution pipe shall be 6 inches and maximum 30 inches.
9. When specified for H-20 loading, the GST must be covered by a minimum of 12 inches of load bearing material over the distribution pipe.
10. The Component may be installed in parallel, spaced 1.5-feet edge-to-edge.
11. Design shall be in strict conformance with the RIDEM-approved Component Design Manual dated: **May 20, 2022**. Design and installation shall only be performed by a Rhode Island Designer/Installer who has received training and is authorized in writing by the Vendor to design/install the Component.
12. Design and installation of the Component receiving effluent via low pressure pipe (LPP) shall only be performed by RIDEM-licensed Designers and Installers who have received training and are authorized in writing by the Vendor to design/install (as applicable) this configuration.
13. The installation of GST must be completed in the presence of an authorized Geomatrix representative or a Geomatrix Systems, LLC certified installer.
14. Each Component design and installation shall meet all applicable OWTS standards and receive approval by the RIDEM pursuant to the OWTS Rules in effect at the time of application.

II. Training

1. The Vendor shall make training available for Designers, Installers and Service Providers.
2. The Vendor shall notify the RIDEM of the date and time of each training seminar and submit to the RIDEM a detailed agenda, material to be distributed to attendees and a list of presenters specifying their credentials at least six weeks in advance of the date of the scheduled seminar. Please consult the RIDEM-issued requirements for Vendors' technology training available on the RIDEM website in the A/E technology section.
3. The Vendor shall make available to the public, a means of verifying individuals, by name and category, who have received training and are authorized in writing by the Vendor to design, install and maintain the Component.

III. General Certification Requirements

1. The Vendor shall submit a manual detailing design, installation, operation, and maintenance requirements for the Component. When this certification and associated design, installation and operation and maintenance manual(s) are approved by RIDEM, training may be held.
2. The Vendor is responsible for providing any revisions to the design, installation, operation and maintenance manual(s) for all models applicable to this certification to RIDEM for review and approval within thirty (30) days of RIDEM request or one hundred and eighty (180) days prior to the expiration date of this Certification. All manuals must be provided to the RIDEM in electronic portable document format (pdf).

3. This Class Two Certification shall be effective until its expiration and may be renewed according to the provisions of the latest OWTS Rules.
4. The Vendor shall notify the RIDEM in writing of any changes to the Component, including its discontinuation. Modifications deemed by the RIDEM to be substantial, may require re-application to the A/E program.
5. The Vendor shall notify the RIDEM at least thirty (30) days prior to any proposed transfer of ownership of the Component technology. Notification shall include the name and address of the new owner and a written agreement between the existing and new owner specifying a date for transfer of ownership, responsibility, and liability for the Component. All provisions of this Certification shall be applicable to any new owners.
6. The Vendor shall provide any purchaser of the Component with a copy of this Certification prior to the sale of the Component.

IV. Operation and Maintenance

1. Operation and maintenance of the Component shall be performed in strict conformance with the RIDEM approved Installation and Operation Manual dated: **May 20, 2022**.
2. The RIDEM-approved Installation and Operation Manual shall be provided to the Owner/Operator.
3. The Component shall be maintained according to the Vendor's specifications.
4. Where the Component is installed with SoilAir™ or following a RIDEM-approved alternative technology treatment system, the RIDEM will not issue a conformance without documentation of recording in the Land Evidence Records a minimum two-year service contract for service of all A/E components in the treatment train.
5. Properly trained system owners may perform O&M on their own Component.
6. System owners who are authorized by the appropriate Vendor(s) to perform O&M on their own Component(s) must file a Vendor-authorization for each component for which they are performing O&M service.
7. A public or private maintenance entity (Service Provider) shall be retained continuously for the life of the Component if SoilAir™ is specified as part of the design and for all other A/E systems and/or A/E components of the treatment train, unless a Vendor-authorized system owner is functioning as a Service Provider for their own Component and all other A/E systems/components of their Component. No agreement with a maintenance entity shall be for less than two years.
8. The Service Provider shall perform needed preventative maintenance, perform repairs, respond to emergency calls and conduct performance monitoring when required by this Certification or by Permit. The Service Provider shall perform an inspection of the Component at least quarterly at commercial establishments, and systems with a design flow of 2,000 gpd or more, and at least twice annually for residential systems.
9. The Vendor shall provide to the RIDEM within two-years of the issuance of this Certification, a list of trained Service Providers.

V. Rights of the RIDEM

1. The RIDEM may suspend, modify or revoke this Certification for cause, including but not limited to: Non-compliance with any of the provisions or conditions of this Certification, misrepresentation or failure to fully disclose all relevant data, or receipt of new information indicating the use of the Component is contrary to the public interest, public health or the environment.
2. The design and installation and operation manuals referenced herein are approved upon the date of approval of this Certification.

3. The RIDEM reserves the right to suspend or revoke this Certification if updated design, installation, and O&M manuals are not provided to the RIDEM within thirty (30) days of RIDEM request or one hundred and eighty (180) days prior to the expiration date of this Certification. All revisions must be reviewed and approved by the RIDEM prior to re-Certification.
4. This Certification does not represent an endorsement of the Component by the RIDEM. This Certification may be reproduced only in its entirety.

Mohamed J Freij

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RIDEM – Office of Water Resources
Onsite Wastewater Treatment Systems

12-28-2023

Issuance Date