



RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767

TDD 401-222-4462

Innovative/Alternative ISDS Technology Program

Vendor Information:

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Technology Name & Model Numbers:

OSI PVU Series Biotube Vault Technology
PVU57-1819
PVU57-2419
PVU68-1819
PVU68-2425

Technology Type:

Component Technology
Class I

Certification Date:

Issued: October 10, 2007

CERTIFICATION

The RI Department of Environmental Management has reviewed the Class I Innovative/Alternative Component application for Orenco Systems, Inc. (OSI)'s PVU series screened pump vault technology. The technology includes four model series of pump vaults, hereafter referred to as "Vault Component", and the Biotube[®] effluent filters, hereafter referred to as "Filter Component". The term "Component" (used alone) refers to both the Vault and Filter Components.

Orenco Biotube[®] pump vaults are used to filter effluent from septic tanks or separate dosing tanks. The pump vault houses a Biotube effluent filter. Effluent from the relatively clear zone of the septic tank flows into the vault through inlet holes in the housing, within the Biotube filter housing, the effluent flows through the vertically oriented tubes, material greater than 1/8-inch diameter is retained between the exterior of the Biotubes and the interior of the cartridge. They can be used in single-compartment septic tanks with flows up to 40 gpm. When flows are greater

than 40 gpm, a double-compartment septic tank or separate dosing tank is recommended. Pump vaults are 12 in. in diameter polyethylene, and accommodate one pump (simplex) or two pumps (duplex). Each pump vault comes with the Biotube filter cartridge, support pipes, and float bracket to hold the float assembly.

Based upon information contained in the application submitted by Orenco Systems, Inc., hereafter referred to as the "Vendor", the Department hereby accepts the Component for listing on the RI DEM Innovative/Alternative Technology List. Design and installation of the Component shall be in accordance with the following terms and conditions:

I. Design Requirements

1. The model of Component used for each installation shall be based on manufacturer's specifications.
2. Vault Components shall only be installed in tanks that meet the Vendor's set design specifications.
3. Manhole access to grade shall be provided over the Component at the outlet of the septic tank or on the dosing tank, as applicable.
4. Effluent pumps used with the Vault Component need not be able to pass solids larger than 1/8 inch.
5. The Vault Component with a dosed or pressurized discharge may be installed directly within the septic tank; a separate pumping/dosing tank is not required.
6. The Vault Component may be installed in two compartment septic tanks without a variance, provided the first compartment shall have a liquid volume of approximately two-thirds (2/3) of the required liquid volume for the entire tank.

II. General Requirements

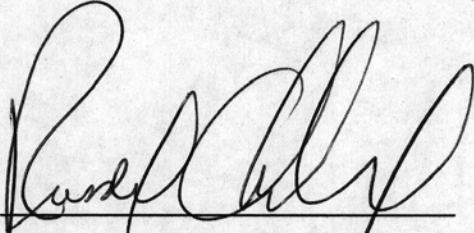
1. The Vendor shall submit a finalized guidance document detailing all design, installation, operation and maintenance requirements for the Component. Once this guidance document has been submitted and accepted, the Component shall be placed on the Department's list of approved Innovative/Alternative Technologies.
2. The Vendor shall notify the Department at least 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 technology. All provisions of this approval shall be applicable to any new owners.

III. Operation and Maintenance Requirements

1. Operation and Maintenance instructions shall be provided to the Owner/Operator.
2. Components shall be maintained according to the manufacturer's specifications.
3. Vault Components installed in a conventional septic system should be inspected annually initially and cleaned as necessary. Future inspections should be scheduled as deemed appropriated based upon observations.
4. Vault Components installed in conjunction with an innovative/alternative (I/A) technology system requiring more frequent maintenance or inspection shall be inspected at the same time as the I/A technology and cleaned as necessary. Should the required inspections reveal that a more frequent inspection interval is needed, then the inspection schedule should be modified accordingly.

IV. Rights of the Department

1. The Department may suspend, modify or revoke this approval for cause, including but not limited to: non-compliance with any of the conditions or provisions of this approval, misrepresentation or failure to disclose all relevant data, receipt of new information indicating that the use of the Component is contrary to the public interest, public health or the environment, or in the event the Department promulgates standards for filter components, or provisions thereto, which differ from this technology.
2. This approval does not represent an endorsement of the Component by the Department. This letter of approval may be reproduced only in its entirety.



Russell J. Chateaufneuf, P.E.
Chief of Groundwater & Wetlands Protection
Office of Water Resources

10/10/07
Issuance Date