VERMONT

State of Vermont
Department of Environmental Conservation
Drinking Water and Groundwater Protection Division
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Agency of Natural Resources

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Innovative/Alternative System Approval
General Use per §1-1001 of the
Wastewater System and Potable Water Supply Rules, effective September 29, 2007

Approval Number: 2010-01-R4
Approval Date: August 22, 2016

Vendor Information
Infiltrator® Water Technologies, LLC
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Technology Name
ARC 18 Chamber, ARC 24 Chamber
ARC 36 Chamber; ARC 36HC
Chamber, ARC 36LP Chamber, and
BioDiffuser 1620 Chamber

Technology Type
Gravelless Leaching Chamber
Dispersal System

Expiration Date
August 21, 2018

Approval

The Infiltrator ARC BioDiffuser Series Chambers may be used as part of a subsurface wastewater disposal system approved under the Wastewater System and Potable Water Supply Rules, effective September 29, 2007 under the following conditions:

1. The ARC BioDiffuser Series Chamber wastewater disposal systems must be designed, installed, and operated in accordance with the Rules and the manufacturer's recommendations. No distribution piping is required within the Infiltrator Chamber systems, unless otherwise required by the Rules including but not limited to, mound, at-grade, and filtrate effluent wastewater disposal systems.

2. System sizing must be in accord with the Rules and the manufacturer's recommendations, except that the allowable application rate may be increased by up to two times that allowed for a conventional pipe and stone system based on the application of septic tank effluent. Application of filtrate effluent will be sized at the same rate per square foot of bottom area as for conventional pipe and stone systems applying filtrate effluent. As with a conventional pipe and stone system, only the uncovered bottom area of the trench or bed may be used when calculating the system size. The sizing shall be based on the calculated design flow per §1-808 of the Rules. The equivalent bottom area for each product is as follows:

ARC 18 Chamber	2.18 ft^2 per linear foot	10.9 ft^2 per unit
ARC 24 Chamber	3.18 ft^2 per linear foot	15.9 ft^2 per unit
ARC 36 Chamber	4.54 ft^2 per linear foot	22.7 ft^2 per unit
ARC 36HC Chamber	4.86 ft^2 per linear foot	24.3 ft^2 per unit
ARC 36LP Chamber	4.88 ft^2 per linear foot	24.4 ft^2 per unit
BioDiffuser 1620 Chamber	4.86 ft^2 per linear foot	30.1 ft^2 per unit

The Side Port Coupler (SPC) is sized as follows:

ARC 18 SPC	1.7 ft^2 per unit
ARC 24 SPC	2.3 ft^2 per unit
ARC 36 SPC	3.55 ft^2 per unit
ARC 36HC SPC	4.45 ft^2 per unit

3. This approval is based on disposal only of domestic wastewater of low and moderate strength as specified in §1-915(a)(1)(C) & (D) of the Rules in order to qualify for the sizing reduction credit. Systems to treat higher strength wastes may be approved by the Secretary on a case-by-case basis with the Vendor's agreement.

4. ARC BioDiffuser Series Chambers may be used for both new and replacement systems.

5. If the Rules are revised during the term of this approval, this approval may be revised as need to conform to the revisions.

8. Site-specific approval for the use of this product is required in the form of a Wastewater System and Potable Water Supply Permit.

9. A site-specific permit for the use of this product may be revoked if the system fails to function properly. Revocation of the permit will require that the use of the building be discontinued unless another wastewater disposal system is installed based on prior written approval by the Agency.

10. This approval is not a representation or guarantee of the effectiveness, efficiency or operation of an ARC BioDiffuser Series Chamber wastewater disposal system.

11. This approval shall expire on the date stated above. Applications for renewal of this approval shall be submitted 45 days before the expiration date. The renewal request shall include a description of any changes to the equipment, technical specifications and drawings, installation requirements, operation and maintenance requirements, and homeowner's manuals. If new models are introduced or changes are made to the technology, the vendor shall submit detailed descriptions of any modifications to existing approved models as part of the renewal application.

Landowner Requirements

1. A copy of the permit shall be provided to any prospective purchaser prior to the sale.
2. Each new landowner of the property shall inform the appropriate Regional Office of the Agency within 30 days of the transfer of the property and include the name and mailing address of the new owner.

Vendor Requirements

1. The vendor shall submit an annual report to the Agency by April 1 of each year for the 12 month period ending December 31 of the previous year. The report shall contain the following information:

    A. All known new permitted systems installed in Vermont for the previous year including:
        i. Assigned WW permit number;
        ii. Physical and landowner mailing addresses;
        iii. Name of current landowner;
        iv. Name of Designer providing the installation certification; and
        v. Name of installer.

    B. All known existing permitted systems with changes in ownership shall include the WW permit number; the physical and mailing address, and the name of the current landowner.

    C. All known problems, damages and/or failures, including:
        i. Description of the issues;
        ii. Potential/known causes of problems;
        iii. System operability;
        iv. Recommended repair/remediation;
        v. Date(s) of repair/remediation; and
        vi. System effectiveness.

    Note: Repairs that are not defined by the Rules as a "Minor Repair" require approval by the Division prior to making the repair.

D. A list of names of Designers and Installers trained by the vendor or their representative.

2. The vendor or their representative shall train and certify designers and installers in the proper use and installation of the ARC Biodiffuser Chambers.

Design and Review Conditions

The following conditions will be used by the Department in reviewing permit applications that include ARC Biodiffuser Chamber wastewater disposal systems designed in accordance with this approval:

Equipment

1. Infiltrator® Water Technologies, LLC ARC BioDiffuser Series Chambers

Design and Application

1. The Designer shall specify which chamber model is to be installed.

2. Within 30 days of this approval, the Vendor shall provide an updated Design and Installation Manual for Chambers in Vermont including the new chamber models.

3. The wastewater disposal system shall be designed by a Licensed Class 1 Designer or a Licensed Class B Designer in accordance with the manufacturer's recommendations including the approved Design and Installation Manual and the Rules.

4. In sizing the system, the designer may use an application rate of up to twice the rate allowed for septic tank effluent in a conventional pipe and stone wastewater disposal system. Only the uncovered bottom area of the trench or bed may be used when calculating system size.

5. The designer shall provide the landowner with written guidance on the maintenance requirements and homeowner responsibilities in the care and use of an onsite wastewater system.

Installation Inspection

1. The wastewater disposal system shall be installed in accordance with the approved plans and under the instruction and guidance of an installer/inspector trained by the vendor.

2. The wastewater disposal system shall be inspected by a Licensed Class 1 Designer or a Licensed Class B Designer, approved by the Vendor, during installation of the system and installation of any tanks before backfilling, and after backfilling and grading is complete. The inspection shall include checking for levelness of the chambers, and inspecting for damage and proper assembly.

3. A Licensed Class 1 Designer or a Licensed Class B Designer shall inspect all transport piping for proper installation and watertightness before backfilling.

4. A letter certifying that the system is correctly installed (including the language specified in §1-308 of the Rules) shall be provided electronically to the vendor and the approving Regional Office that issued the permit.

Permitting

1. The permit shall run with the land.

Effective Date: August 22, 2016

By _____
Ernest Christianson
Regional Office Program Manager