

State of Vermont
Department of Environmental Conservation
Wastewater Management Division
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Agency of Natural Resources

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

#2010-01

Vendor Information

Advanced Drainage Systems, Inc.
4640 Trueman Boulevard
Hillard, Ohio 43026

Technology Name

ARC 18 Chamber
ARC 24 Chamber
ARC 36 Chamber
ARC 36HC Chamber

Contact

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ADS, Inc.
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Technology Type

Aggregate Free Leaching Chamber

Expiration Date

September 1, 2012

Approval

BioDiffuser 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 BioDiffuser 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 BioDiffuser Chamber systems, except for mound, at-grade, filtrate effluent, or any wastewater disposal system that requires pressure distribution of the effluent.



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2. System sizing must be in accord with the Rules and the manufacturer's recommendations. The manufacturer prefers to express the system capacity as the equivalent bottom area based on a linear foot of the specific product. To size the system under the Vermont Rules, the designer uses the design factors in the Rules to determine the number of square feet of application area required for the application of septic tank effluent. This number is divided by equivalent bottom area number for the particular product to determine the linear feet of that product required for the particular system and then converted into the number of units required. 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

The Side Port Coupler (SPC) are 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

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.

No additional reduction in size is allowed for the application of filtrate effluent, though the reduction in separation to bedrock and the seasonal high water table (SHWT) is allowed.

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.
4. BioDiffuser 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.
6. The Designer shall provide a copy of this approval letter to any landowner on whose property a wastewater disposal system incorporating BioDiffuser Chambers in accordance with this approval is being proposed, prior to the filing of any application for a site-specific approval by the Agency for the landowner's property. The application filed with the Agency shall include the landowner's written acknowledgement of this approval letter. Prior to any sale of the property or completion of a sales agreement to sell the property, a copy of the site-specific permit shall be provided to the prospective purchaser.

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7. 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 a list of all known problems or failures, with a brief summary of the cause and remedial measures taken.
8. Site-specific permission 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 Infiltrator Chamber wastewater disposal system.

Design and Review Conditions

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

Equipment

- Advanced Drainage System Inc. Chambers

Design and Application

- 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 and the Rules.
- 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. There is no additional reduction for the use of filtrate effluent. Only the uncovered bottom area of the trench or bed may be used when calculating system size.
- The designer shall include in the design a septic tank effluent filter with easy access for inspection and cleaning.

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Installation Inspection

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

Permitting

- The permit shall run with the land.
- A copy of the site-specific permit shall be provided to any prospective purchaser prior to the sale of the property.
- Each new owner of the property shall inform the appropriate Regional Environmental Office of the Agency, and the Vendor, within 30 days of the transfer of the property and include the name and mailing address of the new owner.

Effective September 20, 2010

by Roger Thompson Jr
Roger Thompson, Jr.
Regional Office Program Manager

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