



STATE OF NEW JERSEY  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
P.O. Box 029, TRENTON, NJ 08625-0029

**PERMIT TO CONSTRUCT AND OPERATE\* TREATMENT WORKS**

*\*Local Agency approval required prior to operation*

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations.

<b>PERMIT NO.</b>	<b>ISSUANCE DATE</b>	<b>EXPIRATION DATE</b>	<b>DESIGN FLOW</b>
04-3487-4SG	September 1, 2004	See below	N/A

**NAME AND ADDRESS OF APPLICANT**

New Jersey Department of Environmental Protection  
Bureau of Nonpoint Pollution Control  
P.O. Box 029  
Trenton, New Jersey 08625-0029

**LOCATION OF ACTIVITY**

Counties: All  
Municipalities: All

**General Requirements:**

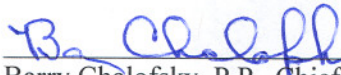
This approval allows for a reduction in the area required for disposal systems associated with residential individual subsurface sewage disposal systems that use a chamber product in lieu of the gravel filter material, gravity distribution pipe, and drainage fabric in a system designed pursuant to N.J.A.C. 7:9A-1 et seq. Local administrative authorities may allow reductions in disposal area sizing up to the level specified in this approval. All other aspects of the onsite wastewater treatment and disposal system design, construction and operation not specifically covered by this approval must conform to N.J.A.C. 7:9A-1 et seq.

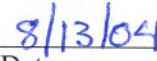
**Product Specifications:**

Chamber products covered by this TWA are listed in the table below. Additional chamber products covered by this TWA may be listed in the Department's guidance as approved for reduced sizing and use in lieu of gravel filter material, gravity distribution pipe, and drainage fabric. These chamber products may be used for a trench or bed configuration according to these guidelines and as described in N.J.A.C. 7:9A-10.

COMPANY	PRODUCTS	TYPE
ADS	BioDiffuser	Chamber
Cultec	Contactor, Recharger	Chamber
Infiltrator	Infiltrator	Chamber
Hancor	EnviroChamber	Chamber

**APPROVED** by the Department of Environmental Protection

  
Barry Chalofsky, P.P., Chief  
Bureau of Nonpoint Pollution Control

  
8/13/04  
Date

*This permit is also subject to special provisos and general conditions stipulated on the attached page(s) which are agreed to by the permittee upon acceptance of the permit.*



**Expiration Date:**

1. This approval, and any local approval issued in conformance with this approval, to construct and operate shall cease upon the written revocation of this approval by the New Jersey Department of Environmental Protection.
2. Any local administrative authority approval issued under this general TWA shall include an expiration date not to exceed 3 years from the date of issuance of that construction approval.

**Prohibitions:**

1. The use of this approval shall not be combined with any other general or individual treatment works approval issued by the Department.
2. A reduced sized chamber system disposal area may not be located in those areas within the Pinelands boundaries of jurisdiction subject to N.J.A.C. 7:50 until the Pinelands Commission has provided written specific approval for the location of the reduced sized chamber system disposal area within their area of jurisdiction.
3. A reduced sized chamber system may not be located within 100-feet of any private drinking water supply well, regardless of the depth of the solid casing or depth of the well.
4. The system design shall not be based on the permeability of fill material.

**Site Requirements:**

1. The location of the onsite wastewater treatment system must conform to all provisions of N.J.A.C. 7:9A-1 et seq.
2. The site plan must delineate a disposal area sized at 100% of that which is required by Table 10.2(b) or Table 10.2(c) in which all requirements of N.J.A.C. 7:9A-1 et seq. are satisfied. The reduced sized chamber system may be placed in that area or in another location.
3. No construction of the onsite wastewater treatment and disposal system or the proposed realty improvement shall begin until the administrative authority has provided written notification to the applicant that all aspects of the design and construction of the onsite wastewater treatment and disposal system which are not authorized under this treatment works approval are otherwise in strict conformance with N.J.A.C. 7:9A-1 et seq.
4. The issuance of this approval does not exempt the applicant or his agents from the responsibility to comply with all other applicable Federal, State, County and Municipal rules and regulations.

**System Design Requirements:**

The septic system designer shall certify that all aspects of the system designed under this approval are in strict conformance with the following provisions:

1. The system is designed in conformance with the manufacturer's specifications.
2. If the reduced sized chamber system disposal area is to be located within the 100% sized reserve area required in Site Requirement #2, above, setback requirements shall be applied to the 100% area reserved for the disposal area. If the reduced sized chamber system disposal area is to be



located outside that 100% sized reserve area, setback requirements shall be applied to both the 100% area reserved for the disposal area and the reduced sized chamber system disposal area.

3. Provide a copy of the written approval that the proposed reduced sized chamber system is acceptable to the Pinelands Commission for projects within the boundaries of jurisdiction subject to N.J.A.C. 7:50. In accordance with N.J.A.C. 7:9A-3.8 any proposal for a reduced sized chamber system must receive specific written approval from the Pinelands Commission prior to the issuance of any local approval which includes the use of this general TWA.
4. A reduced sized chamber system disposal area must meet a 100-foot setback distance to all existing private drinking water supply well, regardless of the depth of the solid casing or depth of the well.
5. Permeability testing to determine the sizes for the disposal areas required (100% and reduced sized areas) must be completed in native soils. Testing conducted on fill material shall not be used. For native soil systems, permeability testing must be conducted in the most hydraulically restrictive zone within the zone of treatment. For fill replacement systems, permeability testing must be conducted within the most restrictive soil unit within the zone of disposal. If the permeability of the zone of disposal for a fill replacement system is greater than 20 inches per hour, in a soil replacement system, the design engineer shall use a design value of 6 inches per hour for the purposes of sizing the disposal field.
6. When pressure dosed distribution is incorporated into the system design, distribution pipe meeting the specifications required by N.J.A.C. 7:9A-1 et. seq. shall be installed according to manufacturer's instructions.
7. When fill material is required within the zone of treatment, the fill immediately below the chambers shall be compacted by passing across the entire infiltrative surface with a plate compactor, bulldozer tracks, or backhoe tires.
8. No reduced sized chamber system shall be sized at less than 400 square feet.
9. Any proposed system that will include the use of a garbage grinder or sewage ejector pump, the liquid capacity of the septic tank shall be a minimum of 200% of the design flow of the facility or 1500 gallons or meet the requirements of N.J.A.C. 7:9A-8.2(c), whichever value is greatest.
10. The area required for 100% disposal area sizing, upon which any reduction in disposal area is based, shall be increased by 50% for any proposed system that will include the use of a garbage grinder or sewage ejector pump.
11. Any proposed system including a design for a reduced size chamber disposal area under this approval must reference this specific approval on all submitted design plans and applications.
12. It is the responsibility of the septic system designer to ensure that any system they design has adequate levels of safety and protectiveness built into the system. Providing larger areas of disposal than what is required by code or by this approval provide higher levels of safety and protectiveness. Use of these approved products without reducing the size of the area of disposal or reducing those levels of safety and protectiveness may be approved under general TWA 00-3847-4SG. Any septic system designer that determines adequate levels of safety and protectiveness can be maintained using these products, disposal area reduction allowances may be approved up to the identified levels, below, and must clearly identify the exact size reduction incorporated on all signed and sealed plans submitted for approval.



**Bed Design:** The following represents the reductions that may be applied to chamber systems in bed designs. To calculate the reduction the design engineer must determine the 100% area required for a bed design in N.J.A.C. 7:9A-10.2(c). The reduction shall then be applied to the total bottom area of chamber product.

Native soil permeability (in/hr)	Native soil percolation rate (min/inch)	Percentage Reduction Allowed	
		Maximum Reduction – Gravity <sup>1</sup>	Maximum Reduction – Pressure Dosed <sup>2</sup>
6-20	3-15	31%	35%
2-6	16-30	32%	40%

**Trench Design:** The following represents the reductions that may be applied to chamber systems in trench designs. To calculate the reduction the design engineer must determine the 100% area required for a trench system in N.J.A.C. 7:9A-10.2(b). The reduction shall then be applied to the total length of chamber product. Any chamber product used must have a width no less than three (3) inches smaller than the trench design width required by N.J.A.C. 7:9A-Table 10.2(b).

Native soil permeability (in/hr)	Native soil percolation rate (min/inch)	Percentage Reduction Allowed	
		Maximum Reduction – Gravity <sup>1</sup>	Maximum Reduction – Pressure Dosed <sup>2</sup>
6-20	3-15	25%	29%
2-6	16-30	27%	32%
0.6-2	31-45	14%	19%

<sup>1</sup>- “Maximum Reduction – Gravity” means the maximum reduction that may be allowed by a local administrative authority in gravity or gravity dosed systems.

<sup>2</sup>- “Maximum Reduction – Pressure Dosed” means the maximum reduction that may be allowed by a local administrative authority to a system that incorporates pressure dosing.

All other aspects of the design of the onsite wastewater treatment and disposal system must conform to the provisions of N.J.A.C. 7:9A-1 et seq.

### System Construction Requirements:

Onsite wastewater treatment and disposal systems constructed using a reduced sized chamber system disposal area shall comply with all construction aspects of N.J.A.C. 7:9A-1 et seq. and the following requirements:

1. Only individuals trained and certified by the manufacturer shall install reduced sized chamber disposal systems. Individuals installing these systems must provide documentation to verify this training and certification upon request by any local administrative authority or the Department.
2. No gravel may be used in the installation of any reduced sized chamber system disposal area installed under this approval.
3. Inspection ports must be installed with watertight caps at or above grade at a minimum of one inspection port at each end of every row of chamber products to allow for adequate inspection of the disposal area.



The construction of the onsite wastewater disposal system must conform to all other provisions of N.J.A.C. 7:9A-1 et seq.

### **Record Keeping:**

The administrative authority issuing an approval to construct a reduced sized chamber system disposal area must keep a spreadsheet log of all approvals issued under this treatment works approval. A spreadsheet file will be provided by the Department and must be submitted electronically upon request or on an annual basis due by January 31<sup>st</sup> of each calendar year. No submittal is required if no systems were constructed under this approval during the applicable year. Each system installed using this approval must be listed and include, at a minimum, municipal block and lot information, street address, date of installation, type of disposal area, the number of bedrooms at the facility and the size of the disposal area in square feet, the type of chamber system used, the percent reduction allowed and identification of the system designer and installer.

### **System Owner Requirements:**

1. The operation and maintenance of the individual subsurface sewage treatment and disposal system must conform to all provisions of N.J.A.C. 7:9A-1 et. seq.
2. The facility served by the reduced sized disposal area shall be open to inspection and sampling by the Department and the local administrative authority at all reasonable times.
3. In accordance with applicable law, the Department and the local administrative authority may require the owner of the reduced sized disposal area to cease use of the reduced sized disposal area and/or to take any other actions as it deems necessary to protect public health, safety, welfare or the environment.
4. The reduced sized chamber system disposal area is approved for use in conjunction with the treatment and disposal of sanitary sewage only. Any wastes that are non-sanitary sewage generated or used at the facility served by the reduced sized disposal area shall not be introduced into the on-site sewage disposal system and shall be lawfully disposed of.
5. Garbage grinders and ejector pumps may not be used in conjunction with systems utilizing a reduced sized chamber system disposal area unless the system was specifically approved for use with a garbage grinder or ejector pump.

### **System Abandonment Requirements:**

The system abandonment requirements of the individual subsurface sewage treatment and disposal system must conform to all provisions of N.J.A.C. 7:9A-1 et seq.

### **Conditions Applicable to Manufacturers:**

Any Manufacturer whose technology is installed under this approval must:

1. Submit to the Department a report, by January 31<sup>st</sup> of each year, signed by a corporate officer, general partner or Company owner that contains information on the chamber system for the previous calendar year. The report shall state known failures, malfunctions, and corrective actions taken for the reduced area chamber disposal systems installed in the State, and the date and address of each event.
2. Submit to the Department any requested information within 21 days of the date of receipt of that request.



3. Prior to the sale of any reduced sized chamber disposal systems, provide the purchaser with a copy of this approval. In any contract for distribution or sale of the reduced area chamber disposal systems, the manufacturer must require the distributor or seller to provide the purchaser of the system with a copy of this approval, prior to any sale of the reduced sized chamber disposal system.
4. Prepare an installation manual for the procedures for designing and installing their reduced area chamber disposal systems. The manufacturer shall institute and maintain a training program in the proper design and installation of its system in accordance with the manual and provide a training course at least annually for prospective designers and installers. The manufacturer shall certify that installers have passed the training program. The manufacturer shall provide the Department with all training materials, the expected qualifications for installers and maintain a list of certified installers. All updated information shall be forwarded to the Department within 30 days of the update. The Department shall be notified of any training event at least 30 days prior to the event.
5. Institute and maintain a training program in the proper design and installation of its system in accordance with the manual and provide a training course at least annually for administrative authorities that have the authority to approve reduced area chamber disposal systems. Training for administrative authorities shall be provided without charge and contain all training materials used for certification of installers. A minimum of 30 days advanced notice must be provided to all administrative authorities to attend the training. No administrative authority or its authorized agent shall issue an approval for a system using this approval unless the manufacturer has adequately satisfied the administrative authority's requirements for approving the system.
6. The manufacturer, its distributors or representatives shall not sell the technology to any installer unless they are certified by the manufacturer to install these systems.

**Rights of the Department:**

The Department may suspend, modify or revoke this approval for cause, including, but not limited to, non-compliance with the terms of this approval, non-payment of an annual compliance assurance fee, for obtaining the approval by misrepresentation or failure to disclose fully all relevant facts or any change in or discovery of conditions that would constitute grounds for discontinuance of the approval, or as necessary for the protection of public health, safety, welfare or the environment, and as authorized by applicable law. The Department reserves its rights to take any enforcement action authorized by law with respect to this approval, the reduced sized chamber system disposal area, the owner, or operator of the system and the manufacturer.

**Basis for Approval:**

This approval was granted based on a Memorandum of Understanding (MOU) on environmental technology approval with the State of Massachusetts. The State of Massachusetts has issued general use approvals allowing reduced disposal area sizes for chamber system technology. This approval provides for generally equivalent sized disposal areas for realty improvements with equivalent number of bedrooms in New Jersey as allowed for in Massachusetts. Precise equivalents were not possible due to variations in each State's regulatory framework.