

## PRESBY ENVIRONMENTAL, INC.

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### TECHNICAL BULLETIN

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## Introduction of Advanced Enviro-Septic™ in Indiana

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**Advanced Enviro-Septic™ is now available in Indiana:** Presby Environmental, Inc. continually seeks to offer the latest and most effective technological advances to their customers. We are proud to announce a new Indiana Department of Health Approval (issued September 2010) for the Advanced Enviro-Septic™ Treatment System (“AES”). Advanced Enviro-Septic™ is the “next generation” of our effective and reliable Enviro-Septic® technology. AES has been thoroughly tested and proven to treat wastewater as well as or better than mechanical devices and advanced treatment units (ATU’s). The Advanced Enviro-Septic™ System is non-mechanical, provides combined treatment and dispersal, and does not require replacement media, special maintenance or electricity. (Refer to full text approval letter available on our website, [www.PresbyEnvironmental.com](http://www.PresbyEnvironmental.com).)

**Product Enhancement:** AES provides superior treatment and dispersal processes as a result of the addition of Bio-Accelerator™. This proprietary enhancement filters additional solids from effluent, enhances and accelerates treatment, facilitates quick start-up after periods of non-use, provides additional surface area for bacterial growth, promotes even distribution, and further protects outer layers and the receiving surfaces so they remain permeable. Accelerated bacterial treatment processes make AES an excellent choice for properties that receive intermittent or seasonal use. By protecting the receiving surfaces better, treatment, function and longevity are all improved.

**Design and Installation of AES Systems in Indiana:** The Design and Installation criteria for AES are nearly identical to those for Enviro-Septic®; the only **differences** are:

1. To ensure that pipes are positioned so that the white Bio-Accelerator™ is centered along the bottom of the pipe. The AES pipes include a label that is clearly marked “THIS SIDE UP” to ensure correct placement during installation, and
2. Venting is mandatory for AES systems.

The State of Indiana has approved AES under the same terms and conditions and using the same manual as is currently being used for Enviro-Septic®. It is acceptable to substitute AES into a plan for an Enviro-Septic® system; however, if a designer’s plan specified AES, Enviro-Septic® cannot be substituted for AES. For a limited time during this transition, we will continue to sell existing Enviro-Septic® inventory on hand in Indiana to accommodate customers who have already submitted plans for or contracted for an Enviro-Septic® system. New orders will be fulfilled with Advanced Enviro-Septic™. Industry Professionals who are certified to design/install Enviro-Septic® in Indiana will not be required to re-certify in order to use AES. However, we do encourage you to visit our website to learn more about the many advantages offered by Advanced Enviro-Septic™.

**How can Advanced Enviro-Septic™ be used?** For the majority of residential and commercial applications, AES is installed in a bed format (subsurface or elevated mound) with dispersal after treatment into underlying soils; in other words, it is used in the same way as Enviro-Septic®. Like Enviro-Septic®, AES provides *exceptional* design flexibility by offering a multitude of possible shapes and configurations that allow each system to be customized to suit the soil conditions and topography of the site. Advanced Enviro-Septic™ designs are required to include venting. Bed sizing, loading rates, minimum/maximum line lengths, separation distances, construction procedures, maintenance instructions, etc. for Advanced Enviro-Septic™ are the same as for original Enviro-Septic®. The only difference to be noted when installing AES is to ensure that the pipe is positioned so that the Bio-Accelerator™ layer (white geotextile) is at the bottom; each pipe is clearly labeled “THIS SIDE UP” to alert installers to the proper positioning of the pipe.

**What are the results of Advanced Enviro-Septic™ testing?** Ongoing testing of the Advanced Enviro-Septic™ System has proven that it not only meets but far exceeds the effluent quality standards set forth in the US EPA's Tertiary Treatment guidelines. During the most recent testing of the product at the Bureau de Normalization du Quebec (“BNQ”), the effluent treated by Advanced Enviro-Septic™ averaged <2 mg/L of CBOD5 and <2 mg/L TSS, in addition to achieving significant removal of fecal coliforms.

<b>Results of Performance Testing by BNQ 04/06/08 to 10/04/08</b>				
Parameter Measured (Averages)	EPA Tertiary Treatment Guidelines	NSF-40 Class I (EPA Secondary)	BNQ Advanced Secondary	<b>Advanced Enviro-Septic™ Test Results</b>
<b>CBOD5</b> (mg/L)	10	< 25	< 15	<b>&lt;2</b>
<b>TSS</b> (mg/L)	10	< 30	< 15	<b>&lt;2</b>
<b>Fecal Coliforms</b> (CFU/100 mL)	1,000	n/a	50,000	<b>218</b>

**Advanced Enviro-Septic™’s Track Record:** While new to the US market, Advanced Enviro-Septic™ has a track-record of reliable performance for several years throughout Canada, where it has achieved BNQ certification for both Secondary and Advanced Secondary treatment (see BNQ Certificate Number 890, [www.bnq.qc.ca](http://www.bnq.qc.ca)). AES improves upon and incorporates all the features of original Enviro-Septic®, which has earned an excellent reputation for effectiveness and reliability based on its successful use in tens of thousands of systems in New England, Canada and the Midwest. AES provides accelerated and enhanced environmental protection comparable to a mechanical device in a significantly smaller footprint than conventional systems like pipe and stone and chamber leaching systems. By offering exceptional performance that is comparatively inexpensive to own and simple to maintain, Advanced Enviro-Septic™ offers consumers an environmentally responsible alternative that is also cost-effective.

Prepared by,

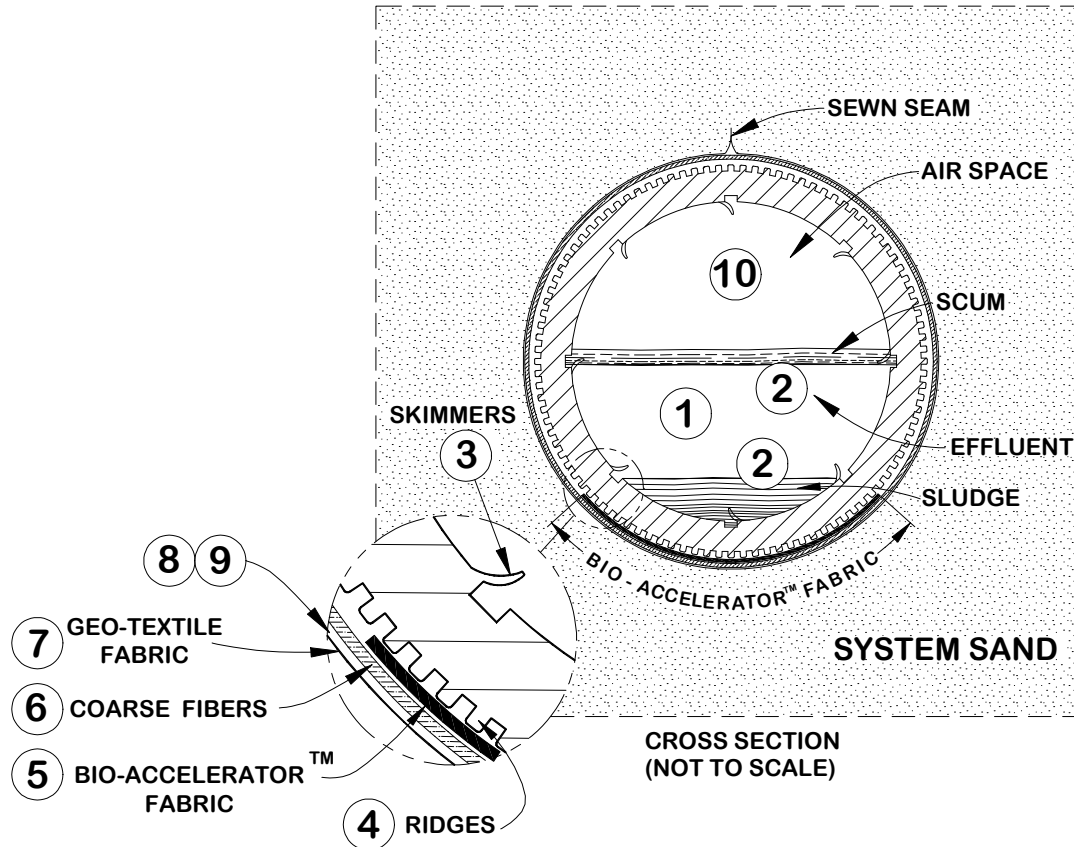
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# ADVANCED ENVIRO-SEPTIC™ WASTEWATER TREATMENT SYSTEM

TEN STEPS OF WASTEWATER TREATMENT: ADVANCED ENVIRO-SEPTIC™ TREATS EFFLUENT MORE EFFICIENTLY TO PROVIDE LONGER SYSTEM LIFE AND TO PROTECT THE ENVIRONMENT.



- STAGE 1: WARM EFFLUENT ENTERS THE PIPE AND IS COOLED TO GROUND TEMPERATURE.
- STAGE 2: SUSPENDED SOLIDS SEPARATE FROM THE COOLED LIQUID EFFLUENT.
- STAGE 3: SKIMMERS FURTHER CAPTURE GREASE AND SUSPENDED SOLIDS FROM THE EXITING EFFLUENT.
- STAGE 4: PIPE RIDGES ALLOW THE EFFLUENT TO FLOW UNINTERRUPTED AROUND THE CIRCUMFERENCE OF THE PIPE AND AID IN COOLING.
- STAGE 5: BIO-ACCELERATOR™ FABRIC SCREENS ADDITIONAL SOLIDS FROM THE EFFLUENT AND DEVELOPS A BIOMAT WHICH PROVIDES TREATMENT AND ENSURES ACCELERATED BIOMAT DEVELOPMENT.
- STAGE 6: A MAT OF COARSE RANDOM FIBERS SEPARATES MORE SUSPENDED SOLIDS FROM THE EFFLUENT.
- STAGE 7: EFFLUENT PASSES INTO THE GEO-TEXTILE FABRICS AND GROWS A PROTECTED BACTERIAL SURFACE.
- STAGE 8: SAND WICKS LIQUID FROM THE GEO-TEXTILE FABRICS AND ENABLES AIR TO TRANSFER TO THE BACTERIAL SURFACE.
- STAGE 9: THE FABRICS AND FIBERS PROVIDE A LARGE BACTERIAL SURFACE TO BREAK DOWN SOLIDS.
- STAGE 10: AN AMPLE AIR SUPPLY AND FLUCTUATING LIQUID LEVELS INCREASE BACTERIAL EFFICIENCY.