

Frank L. O'Bannon  
Governor

Gregory A. Wilson, M.D.  
State Health Commissioner



# Indiana State Department of Health

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July 3, 2002

Mr. Douglas A. Wenninger  
Haviland Drainage Products Company  
P. O. Box 97  
100 West Main Street  
Haviland, Ohio 45851  
Phone 419.622.4611

Dear Mr. Wenninger:

Re: Gravelless Pipe Alternative Technology  
Low Profile Effluent Distribution System-56/S Gravelless Pipe

The use of Haviland LPS-56/S Gravelless Pipes system as an alternative gravelless system is hereby approved by the Indiana State Department of Health (department) subject to the conditions listed below.

The gravelless system for which you submitted information is a subsurface absorption system, which provides an alternative to the use of gravel in gravity flow soil absorption fields. This is accomplished by the installation of five corrugated pipes, each with an outside diameter of seven and one-eighth (7.125) inches. The pipes are laid side by side in a thirty-six (36) inch trench width for the length of the trench, covered with a barrier material of geotextile fabric, and back-filled with soil. This piping is provided with six (6) rows of drain slots, each slot one (1) inch by one-eighth (1/8) inch; or, six (6) rows of holes, each hole one-half (1/2) inch in diameter. The rows of slots or holes are separated sixty (60) degrees on center. The pipes have six (6) slots or holes per corrugation valley. The barrier material used to cover the pipes is of Spun-bonded Nylon, or Non-woven polyester geotextile fabric with a weight of 1/2 or 3/4 ounce per square yard.

As stated in your literature, this gravelless system is designed to be installed in any application where a conventional gravel-filled system is allowed. It is not intended for use in areas where conventional gravity flow systems would be prohibited due to poor permeability, high groundwater, or insufficient depth to bedrock or other limitations for conventional systems.

Approval of the use of Haviland LPS-56/S Gravelless Pipes system is subject to the following conditions:

1. The Haviland LPS-56/S Gravelless Pipes system must be used only in gravity flow subsurface trench and gravity flow alternating subsurface trench soil absorption field systems.
2. The Haviland LPS-56/S Gravelless Pipes system cannot be used with or in lieu of flood dose or pressure distribution subsurface trench soil absorption field systems.
3. The pipes used in the absorption field trenches must meet the standards of AASHTO M-252 Type SP.

4. The geotextile fabric used as a barrier material must meet the department's minimum specifications for geotextile nonwoven fabric.
5. A permit for each individual system must be obtained from the health department having jurisdiction prior to the start of construction.
6. The absorption field size must be computed using the number of bedrooms and bedroom equivalents and the soil loading rates for subsurface absorption systems set by department Rule 410 IAC 6-8.1 or 6-10, whichever is applicable. At least one lineal foot of the Haviland LPS-56/S Gravelless Pipes system (five pipes, each at seven and one-eighth inch outside diameter) must be required for each lineal foot of three-foot wide gravel-filled trench that would be required.
7. Each Haviland LPS-56/S Gravelless Pipes system soil absorption field trench must be individually connected to the distribution box by at least five (5) feet of four (4) inch gravity effluent sewer.
8. Each gravity effluent sewer must connect to the center pipe of Haviland LPS-56/S Gravelless Pipes absorption field trench.
9. Each twenty-foot section of the Haviland LPS-56/S gravelless pipe must be connected to the next section throughout the length of each soil absorption trench.
10. The distal ends of the soil absorption field trenches may not be not manifolded together.
11. The distal end of each of the Haviland LPS-56/S gravelless pipes must be capped with end caps.
12. The Haviland LPS-56/S gravelless pipes must be level throughout their lengths.
13. The trench excavations for the Haviland LPS-56/S Gravelless Pipes system must be at least thirty-six (36) inches in width and level throughout their lengths.
14. The absorption field trenches for the Haviland LPS-56/S gravelless pipe system must be covered with a minimum of twelve (12) inches of soil material. The soil cover must be crowned or sloped over the absorption field so as to promote surface runoff
15. The use of gravelless systems shall meet all other applicable department standards for residential and commercial subsurface soil absorption systems.
16. All determinations for site suitability for subsurface soil absorption systems shall be made using procedures and criteria established by the department.

If you have any questions regarding this approval, please contact Alan Dunn, Chris Bourke, David Ortel, or Ed Miller of my staff by mail, by telephone at 317-233-7177, or by e-mail (adunn@isdh.state.in.us; cbourke@isdh.state.in.us; dortel@isdh.state.in.us; or, emiller@isdh.state.in.us, respectively).

Sincerely,



HOWARD W. CUNDIFF, P. E., DIRECTOR  
CONSUMER PROTECTION

cc: Onsite staff  
Local Health Departments