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## **The Emergency Regulations for Gravelless Material and Drip Dispersal (12VAC5-610) Frequently Asked Questions**

### **General**

**Question:** *Why did VDH develop regulations rather than modify the existing GMPs?*

**Answer:** Chapter 202 of the 2013 Acts of Assembly ([House Bill 1726](#)) required the Board of Health to promulgate regulations for chambers and bundled expanded polystyrene effluent distribution systems. Furthermore, the bill required that the regulations be enacted within 280 days, which prompted the Board of Health to use the emergency rulemaking process authorized by the Administrative Process Act.

**Question:** *When do the emergency regulations go into effect?*

**Answer:** The emergency regulations for gravelless material and drip dispersal and Guidance Memorandum and Policy (GMP) [135.A](#) became effective on January 2, 2014.

### **Gravelless Material – General**

**Question:** *Do the emergency regulations apply to permits issued prior to the effective date for the emergency regulations?*

**Answer:** When gravelless material is installed in lieu of gravel and pipe, the installation must comply with the emergency regulations regardless of whether the permit was issued before or after the effective date of the emergency regulations. GMP 116, GMP 127, and GMP 135 were rescinded on January 2, 2014, and are no longer applicable.

**Question:** *Can gravelless material be used for commercial designs?*

**Answer:** Yes. Limitations contained in previous GMPs to only use gravelless material for systems serving single-family dwellings or duplex dwellings, not exceeding six bedrooms total, were not carried over to the emergency regulations or GMP 135.A.

**Question:** *Are professional engineers (PE) required to follow the minimum sizing criteria for gravelless material contained in revised Table 5.4?*

**Answer:** Conventional onsite sewage systems (COSS) using gravelless material, designed pursuant to Va. Code Section 32.1-163.5, must be sized (at a minimum) in accordance with revised Table 5.4 of the emergency regulations. Alternative onsite sewage systems (AOSS) using gravelless material, designed pursuant to Va. Code Section 32.1-163.5, must comply with

the Regulations for Alternative Onsite Sewage Systems (12VAC5-613). COSS and AOSS using gravelless material, designed by PEs pursuant to Va. Code Section 32.1-163.6 must: 1) comply with standard engineering practice, 2) comply with applicable performance requirements established by the Board of Health, 3) comply with those horizontal setback requirements necessary to protect public health and the environment, and 4) must reflect the degree of skill and care ordinarily exercised by licensed members of the engineering profession. (Also see [GMP #146](#))

### **Gravelless Material – VDH OSE Permit Statement**

**Question:** *If the property owner does not want to use a gravelless material, are VDH OSEs still required to include the gravelless material statement on the permit?*

**Answer:** Yes.

**Question:** *To clarify, private OSEs and PEs have the discretion to allow or disallow the use of gravelless material at minimum sizing contained in the emergency regulations; VDH OSEs do not?*

**Answer:** Correct. VDH employees have a ministerial duty to approve materials that meet minimum regulatory requirements. While GMP 135.A does require that a statement be included on all VDH OSE permits allowing the use of gravelless material, the VDH OSE is tasked with determining the appropriate method by which gravelless material should be installed, at minimum regulatory sizing, based on their professional judgment.

### **Gravelless Material – Largest Gross Available Area Sizing**

**Question:** *If the largest gross available absorption area is based on gravelless material sizing, are VDH OSEs required to design a system to minimum gravelless material sizing contained in revised Table 5.4?*

**Answer:** Yes. The method for determining the largest gross available absorption area is outlined in GMP 135.A, Appendix C.

**Question:** *Can VDH OSEs specify which gravelless material to use?*

**Answer:** VDH OSEs must allow the use of gravelless material from the list of approved gravelless materials (see <http://www.vdh.virginia.gov/EnvironmentalHealth/ONSITE/gmp/gravellessMateriallist>). VDH OSEs must only allow the use of gravelless material on the approved list. If an owner wishes to use a particular product from the approved list, then the VDH OSE can make a note of the owner's preference; however, any gravelless material on the approved list is acceptable. VDH OSEs must confirm at the time of construction inspection whether the installed gravelless material is on the approved list.

**Question:** *Can gravelless material be installed 1 for 1 in lieu of gravel and pipe?*

**Answer:** 1 for 1 replacement of gravelless material in lieu of gravel and pipe is permissible. Private OSEs and PEs can specify the use of gravelless material at sizing greater than the

minimum requirements contained in the emergency regulations (e.g. 1 for 1). VDH OSEs must issue construction permits for gravelless material (and gravel) on the minimum sizing of Table 5.4.

**Question:** *At the bottom of the flow chart for construction permits (see GMP 135.A, Appendix C) it states that VDH is to deny a permit if there is not sufficient area for a primary area using gravelless material and a reserve area using gravelless material, TL-2, or TL-3. What does this mean?*

**Answer:** The flow chart should include the caveat “if applicable” regarding the reserve area. If the primary absorption area requires pre-treatment or pressure distribution for a construction permit, then VDH staff must include the need for supporting work from the private sector in its denial letter. VDH does not offer design services for alternative onsite sewage systems.

**Question:** *Does Appendix C of GMP 135.A apply to both new construction and repairs?*

**Answer:** Yes. Additionally, the gravelless material statement for VDH OSE construction permits, shown in the footnote on page 2 of GMP 135.A, applies to new construction and repairs.

**Question:** *Do the sizing requirements for gravelless materials contained in the emergency regulations override previous GMPs and manufacturer sizing charts?*

**Answer:** Yes. GMP 116, GMP 127 and GMP 135 are rescinded. Revised product manuals containing sizing charts can be found [here](#).

**Question:** *Can gravelless material, sized in accordance with minimum area requirements contained in Table 5.4, be used in combination with conditional permits which reduce the design sewage flow (i.e. water saving plumbing devices, limitation on the number of persons occupying the dwelling).*

**Answer:** Yes

## **Gravelless Material – Approved Gravelless Materials**

**Question:** *Are manufacturers still required to provide a warranty for gravelless material?*

**Answer:** No.

**Question:** *Are tire chips considered gravelless material?*

**Answer:** Tire chips are not an approved gravelless material and must be used on a 1 for 1 replacement of gravel in accordance with [GMP 91.A](#).

**Question:** *Are the Eljen Mantis models approved for TL-2?*

**Answer:** Eljen has two types of models approved for use in Virginia. The Eljen Mantis models are approved for use as gravelless material only. The Eljen GSF models are approved for TL-2.

### **Gravelless Material – Used in Lieu of Gravel and Pipe**

**Question:** *When gravelless material is used in lieu of gravel and pipe, is the owner still required to maintain the total area (“footprint”) required for the gravel and pipe system?*

**Answer:** No. This requirement was not carried over from previous GMPs into the emergency regulations or GMP 135.A. GMP 135.A discusses the option to shift the reserve area into the undisturbed portion of the primary when gravelless material is used in lieu of gravel and pipe.

**Question:** *When gravelless material is used in lieu of gravel and pipe, do we still have to maintain at least 90% of the longest permitted gravel and pipe trench length?*

**Answer:** No. This requirement was not carried over from previous GMPs into the emergency regulations or GMP 135.A. When gravelless material is used in lieu of gravel and pipe at minimum regulatory sizing contained in Table 5.4, it is at the professional discretion of the certifying OSE or PE to specify how gravelless material will be used within the approved primary absorption area. For example, if the gravel and pipe design calls for 4 trenches, 100 feet long, the certifying OSE or PE will determine if gravelless material is installed with 3 trenches, 100 feet long, or 4 trenches, 75 feet long (assumes texture group I, II, or III soils).

### **Gravelless Material – Enhanced Flow**

**Question:** *The emergency regulations require open-bottom gravelless material to contain 10 feet of percolation pipe when using enhanced flow distribution. However, standard pump dosing can result in a larger pump volume and/or pump rate than an enhanced flow pump dose. Are open-bottom gravelless materials required to contain 10 feet of percolation pipe anytime the dose volume and rate is equal to, or greater than, an enhanced flow dosing volume and pump rate?*

**Answer:** The Emergency Regulations require open-bottom gravelless material, such as chambers, to contain a percolation pipe that extend a minimum of 10 feet from the trench intersection with the header line when enhanced flow distribution is required by the regulations (e.g. flow is split more than 12 times, etc.). If enhanced flow distribution is not required, then the 10 feet of percolation pipe is not required, even if the dosing volume or doing rate is equal to, or greater than, an enhanced flow dosing volume or pump rate.

**Question:** *Can you use enhanced flow with chambers? They do not have a 4" pipe as part of the material.*

**Answer:** While open-bottom gravelless material do not typically contain a 4" pipe, the 10 foot section can be installed within the open-bottom gravelless material trench and tied into the header line at the end cap so that enhanced flow can be used.

## **Gravelless Material - Installation**

**Question:** *Are gravelless material trenches installed level, or do they require the same fall as a gravel and pipe trench?*

**Answer:** The bottom of each gravelless material trench shall have a uniform slope not less than two inches or more than four inches per 100 feet, as required for gravel and pipe trenches, unless a specific deviation to this requirement is granted for the specific gravelless material. Such deviations would be address in the manufacturer's approved design and installation manual.

**Question:** *Are contractors still required to provide a Notice of Substitution and as-built drawing when installing gravelless material?*

**Answer:** No.

**Question:** *Can an installer use gravelless material in lieu of gravel and pipe, at the minimum sizing allowed by the emergency regulations, without receiving approval from VDH?*

**Answer:** Construction permits issued by VDH OSEs allow the use of any gravelless material on VDH's approved list, as allowed by the regulations. Just as the contractor can use any gravel material (sedimentary, igneous, or metamorphic) that meets the requirements of the regulations, the contractor can use any approved gravelless material. The contractor has permission to use any gravel or gravelless product that is approved for use by virtue of the construction permit. The regulations require the certifying OSE to inspect the system's construction in accordance with the construction permit and the plans and specifications from the designer. Pursuant to GMP 135.A, construction permits issued by VDH OSEs will allow the use of gravelless material in accordance with the regulations. . The VDH OSE must specify the manner in which gravelless material is used before the contractor installs gravelless material. If the contractor wants to use a different configuration than prescribed in VDH's construction permit, then the contractor should contact the local health department.

## **Drip Dispersal – General**

**Question:** *Why were the requirements for slope correction contained in GMP 107 not carried over to the emergency regulations?*

**Answer:** A slope correction is not necessary. In developing the emergency regulations, stakeholders and experts in design reported that landscape linear loading rate is the critical design component, not slope.