

May 12, 1999

To: District Directors **GMP #97**
District Environmental Health Managers
Office of Environmental Health Services
Virginia Tech Contract Soil Scientists

From: E. Anne Peterson, M.D. M.P.H.
Acting State Health Commissioner

Subject: Variance to the *Sewage Handling and Disposal Regulations*
(12 VAC 5-610-10 et. sec.)

This GMP is intended to build on GMP #20 by recognizing a portion of the siting criteria for absorption systems contained in the proposed revisions to the *Sewage Handling and Disposal Regulations (Regulations)* that provide equal consideration for all pretreatment systems meeting secondary performance standards and address all soil-based absorption systems (i.e., gravity flow and all manners of pressure dosed systems). The success of GMP #20 is apparent by its widespread recognition and use. In particular, the variance allowing systems to be installed at 12 inches has provided an opportunity for citizens to obtain permits, thereby reducing the number of permit denials. Over time the concepts of GMP #20 systems were included in at least one other GMP (#88) in modified form and incorporated as proposed revisions to the *Regulations*.

Section 190.B of the *Sewage Handling and Disposal Regulations (the Regulations)* states that a variance may be granted if a thorough investigation reveals that the hardship imposed (which may be economic) by the *Regulations* outweighs the benefits that may be received by the public. if granting the variance does not subject the public to unreasonable health risks.

On March 18, 1993, the Commissioner granted three general variances (GMP #20) to address technical and administrative problems associated with the handling of some individual variances. These general variances were granted in part to eliminate steps in processing variances that had become routine and were not justified by a significant increase in public health protection. These variances were also intended to improve program management by placing permit decision-making responsibility with field staff.

Most policies of the Division of Environmental Health Services address only one issue. GMP #20 is perhaps the most obvious exception to this unwritten rule. It addresses variances to three sections of the *Regulations*: easement requirements, mound criteria, and the minimum installation depth of drainfield trenches. This GMP supersedes that portion of GMP #20 dealing with the minimum installation depth of drainfield trenches. All other portions of GMP #20 will stay in effect. This GMP (GMP #20 will expire when the proposed changes to the *Regulations* become effective.

Variances may be granted for either construction permits or certification letters. When a variance is granted for a certification letter, a copy of the variance shall be attached to the certification letter. The certification letter shall indicate that the attached variance and associated conditions may be included in the construction permit when it is issued.

No system design shall be required prior to issuing a certification letter pursuant to this variance unless the design is necessary to establish the suitability of the site, in which case a system design can be required prior to issuing a certification letter.

The following procedure has been developed to facilitate the processing of the attached variance:

Scope of Variance: The authority to review requests for variances and to complete the documentation necessary for granting variances under this procedure is limited to applications for construction permits or certification letters where all of the following criteria are met:

1. The effluent dispersal systems are installed not less than 12 inches deep.
2. Flows are less than 1,200 GPD.
3. The wastewater is domestic strength (i.e., the raw wastewater BOD₅ is 300 mg/l or less).
4. All other site and soil criteria fully comply with the Regulations without exception.

Goal: To provide for competent and timely responses to variance requests where site factors and appropriate use of technology have routinely indicated that little or no additional health risks will result from granting the variances.

Procedure: The Environmental Health Specialist will identify sites that meet the specific criteria for a variance during routine site and soil evaluations. Letters of denial, consistent with the

Department's current policy, are *required* for all sites that do not meet the minimum requirements of the *Regulations*,

The Environmental Health Specialist will notify the applicant that a variance may be granted, and make appropriate documentation of that notification, if the applicant wants to pursue a variance, a written variance request must be submitted, signed by the owner of the property.

Owners may designate an agent to act on their behalf by providing a written statement to the local health department. Requests for variances from lawyers who are representing owners should be handled the same as requests from owners.

The Environmental Health Specialist will prepare a brief statement (suggested form letter is included with this memorandum) explaining the nature of the variance. This statement shall confirm that there are no other conditions associated with the site, other than the specific one(s) for which the variance is being granted, that do not meet the minimum requirements of the *Regulations*. A copy of the appropriate pre-signed variance, as attached to this memorandum, must be included with the permit.

When an application for a variance is not granted under this procedure, the Environmental Health Specialist will notify the owner or agent in writing that the request cannot be granted. If the applicant wishes to pursue a variance, an individual request may be sent to the State Health Commissioner for action. Such individual requests shall comply with the criteria contained in 12 VAC 5-610-190.

Time Frame: Consideration of the variance shall be completed within 10 business days of receipt of the written request for a variance.

Level of Review: All variances granted under this procedure must be reviewed and counter-signed by the District Health Director (unless delegated) prior to the issuance of either a construction permit or a certification letter. At their discretion, District Directors may delegate this responsibility to the Environmental Health Manager assigned to the onsite sewage and water programs. Two copies of each signed variance are attached, one for use when the District Director is reviewing and approving the variance and, the other for when the review is delegated to the Environmental Health Manager.

VARIANCE

This is a variance to 12 VAC 5-610-950 C.1 of the Sewage Handling and Disposal Regulations (the *Regulations*) granted pursuant to § 190 of the *Regulations* and §32.1-12 of the *Code of Virginia* Section 950 C.1 establishes 18 inches as the minimum installation depth for absorption trenches. This variance is granted to allow installation of all absorption system, whether trench-based or not, at depths as shallow as 12 inches. This variance is valid only when signed by the Department and the following criteria are met:

1. The effluent dispersal system will be installed not less than 12 inches deep.
2. Flows are less than 1,200 GPD.
3. The wastewater is domestic strength (i.e. the raw wastewater BOD₅ is 300 mg/l or less).
4. All other site and soil criteria fully comply with the *Regulations* without exception.

The site and soil evaluations conducted by the Department indicate that a shallow-placed sewage treatment and disposal system installed on the proposed site will treat and dispose of sewage effluent properly. Attention to design details such as protection of the absorption area before, during and after construction, specifically including site clearing, and proper construction techniques, which may not be as critically important when a system is installed at traditionally approved depths, are absolutely necessary to assure this system functions properly.

This variance is granted with the following conditions:

1. The absorption system must be installed on contour at a depth specified by the permit but not less than 12 inches from the ground surface of the absorption area. The design percolation rate should be increased based on the most limiting condition identified from the ground surface up to 12 inches below the installation depth. This increase will affect only the square footage of the absorption area and shall not be applied to the determination of separation distance to seasonal water table, reserve area, or any other percolation-rate dependent variables. A requirement for additional soil cover may be made by placing the requirement on the permit. The purpose of the soil cover is to promote surface runoff and provide frost protection over gravel trenches and distribution piping. Other trench-type systems, such as chamber systems, shall be installed according to tile manufacturer's recommendation.
2. Effluent treatment shall be provided to assure that the effluent dispersed by the absorption system meets or exceeds secondary effluent limits (30 mg/l BOD₅ and 30 mg/l SS). Treatment may be provided by a sand filter, aerobic treatment unit, biofilter, or other method approved by the Division.

3. When a sand filter is used it should be designed to be accessible, and must be lined to prevent infiltration of ground water. The sand filter design shall not be reduced because of a reduction in the proposed sewage flow as a result of water saving plumbing fixtures. The sand filter should be designed using accepted engineering practice and the criteria established in the U.S. EPA Design Manual for Onsite Wastewater Treatment and Disposal Systems. The filter should be capable of producing an effluent meeting discharge limits of 30 mg/l BOD₅ and 30 mg/l suspended solids.
4. Aerobic treatment units shall be certified as meeting ANSI/NSF Standard 40 Class I effluent standards.
5. An annual inspection shall be required for each system permitted under this variance. The inspection shall be conducted by a certified wastewater treatment operator who will submit a written statement on system performance including, but not limited to, measuring septic tank sludge and scum levels, treatment unit performance based on a visual examination, and performance of the absorption area. All mechanical and disposal deficiencies shall be reported to the homeowner and the District office of the health department. Reports shall be submitted within 30 calendar days of the anniversary date of the operation permit.
6. The construction permit and this variance letter are to be recorded and indexed in the grantor index under the holder's name in the land records of the clerk of the circuit court having jurisdiction over the site of the septic system. Permanent water saving fixtures shall be specified as a condition of the construction permit; however, there shall be no corresponding reduction in the absorption area required.
7. The sewage treatment and dispersal system shall be considered a Type III System. Formal plans and specifications prepared by a licensed professional engineer licensed in Virginia shall be required.
8. An Operation and Maintenance Manual shall be developed to assist the homeowner. This manual shall become part of the permit and shall impose operational conditions upon the owner or future owners of the system. The manual should assist the homeowner in performing any maintenance that is appropriate and should advise when to seek professional service for the system.
9. If this is a wooded site, all clearing must be done by hand. No traffic or equipment is allowed on the site at any time, other than the minimum activities required to install the system.

This variance is granted to the holder of the permit to which it is attached for the sewage disposal system covered by the construction permit. This variance is not transferable to another sewage disposal system or property. This variance shall expire with the permit to which it is attached,

and shall be revoked when the permit to which it is attached is revoked, This variance shall be permanent as long as an operation permit for the system has been properly issued and remains in effect.

The effective date of this variance shall be 15 calendar days from the date of issuance of the construction permit to which it is attached. If the owner wishes to challenge the terms of this variance, a written request must be received in the office of the State Health Commissioner within 30 days of the effective date.

District Health Director

E. Anne Peterson. M.D., MPH.
Acting State Health Commissioner

Rescinded

VARIANCE

This is a variance to 12 VAC 5-610-950 C.1 of the Sewage Handling and Disposal Regulations (the *Regulations*) granted pursuant to § 190 of the *Regulations* and §32.1-12 of the *Code of Virginia*. Section 950 C.1 establishes 18 inches as the minimum installation depth for absorption trenches. This variance is granted to allow installation of an absorption system, whether trench-based or not, at depths as shallow as 12 inches. This variance is valid only when signed by the Department and the following criteria are met:

1. The effluent dispersal system will be installed not less than 12 inches deep.
2. Flows are less than 1,000 GPD.
3. The wastewater is domestic strength (i.e. the raw wastewater BOD₅ is 300 mg/l or less).
4. All other site and soil criteria fully comply with *Regulations* without exception.

The site and soil evaluations conducted by the Department indicate that a shallow-placed sewage treatment and disposal system installed on the proposed site will treat and dispose of sewage effluent properly. Attention to design details such as protection of the absorption area before, during and after construction, specifically including site clearing, and proper construction techniques, which may not be as critically important when a system is installed at traditionally approved depths, are absolutely necessary to assure this system functions properly.

This variance is granted with the following conditions:

1. The absorption system must be installed on contour at a depth specified by the permit but not less than 12 inches from the ground surface of the absorption area. The design percolation rate should be increased based on the most limiting condition identified from the ground surface up to 12 inches below the installation depth. This increase will affect only the square footage of the absorption area and shall not be applied to the determination of separation distance to seasonal water table, reserve area, or any other percolation-rate dependent variables. A requirement for additional soil cover may be made by placing the requirement on the permit. The purpose of the additional cover is to promote surface runoff and provide frost protection over gravel trenches and distribution piping. Other trench-type systems, such as chamber systems, shall be installed according to the manufacturer's recommendation.
2. Effluent treatment shall be provided to assure that the effluent dispersed by the absorption system meets or exceeds secondary effluent limits (30 mg/l BOD₅ and 30 mg/l SS). Treatment may be provided by a sand filter, aerobic treatment unit, biofilter, or other method approved by the Division.

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4. Aerobic treatment units shall be certified as meeting ANSI/NSF Standard 40 Class I effluent standards.
5. An annual inspection shall be required for each system permitted under this variance. The inspection shall be conducted by a certified wastewater treatment operator who will submit a written statement on system performance including, but not limited to, measuring septic tank sludge and scum levels treatment unit performance based on a visual examination, and performance of the absorption area. All mechanical and disposal deficiencies shall be reported to the homeowner and the District office of the health department. Reports shall be submitted within 30 calendar days of the anniversary date of the operation permit.
6. The construction permit and this variance letter are to be recorded and indexed in the grantor index under the holder's name in the land records of the clerk of the circuit court having jurisdiction over the site of the septic system. Permanent water saving fixtures shall be specified as a condition of the construction permit however, there shall be no corresponding reduction in tile absorption area required.
7. The sewage treatment and dispersal system shall be considered a Type III System. Formal plans and specifications prepared by a licensed professional engineer licensed in Virginia shall be required.
8. An Operation and Maintenance Manual shall be developed to assist the homeowner. This manual shall become part of the permit and shall impose operational conditions upon the owner or future owners of the system. The manual should assist the homeowner in performing any maintenance that is appropriate and should advise when to seek professional service for the system.
9. If this is a wooded site, all clearing must be done by hand. No traffic or equipment is allowed on the site at any time, other than the minimum activities required to install the system.

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permanent as long as an operation permit for the system has been properly issued and remains in effect.

The effective date of this variance shall be 15 calendar days from the date of issuance of the construction permit to which it is attached. If the owner wishes to challenge the terms of this variance, a written request must be received in the office of the State Health Commissioner within 30 days of the effective date.

Environmental Health Manager

E. Anne Peterson, M.D., M.P.H.
Acting State Health Commissioner

Rescinded

[On Letterhead]

MEMORANDUM

TO: FILE

FROM: _____
Environmental Health Specialist

SUBJECT: Variance to § 12 VAC 5-610-950 C.1 of the *Sewage Handling and Disposal Regulations*

In accordance with GMP #97, this is to confirm that I have evaluated the site and soil conditions on the property located at _____ Tax Map Number _____, _____ County. Based on my site and soil evaluations, a variance to § 12 VAC 5-610-950 C.1 of the *Sewage Handling and Disposal Regulations* may be granted as outlined in the above reference Guidance Memorandum,

I further certify to the best of my knowledge that the site and soil conditions on the proposed site comply with the minimum requirements of the *Sewage Handling and Disposal Regulations* with the exception of the specific requirement for which a variance is being granted.

Environmental Health Specialist