

August 21, 1997

**GMP #91**

To: District Environmental Health Managers  
District Health Directors  
OEHS Staff

From: Donald J. Alexander, Director  
Division of Onsite Sewage and Water Services

Subject: Use of Recycled Tire Chips

The Department of Environmental Quality (DEQ) has requested that VDH consider the use of recycled tire chips as a replacement for gravel in drainfield systems. Disposing of used tires has been problematic and DEQ has determined that their use as an aggregate material in drainfields could provide a beneficial use for a material that has been an environmental liability. This GMP authorizes the use of tire chips as an alternative aggregate in lieu of stone in gravel absorption trenches under the conditions in Appendix I.

Procedurally, no permit changes will be necessary. Any drainfield installer may, at their discretion, substitute chipped tire aggregate meeting the attached specifications, for gravel in any non-proprietary subsurface absorption system designed by the Department which requires aggregate. In general these will be conventional drainfield systems, pressure dosed systems, and low pressure distribution systems. This GMP does not include proprietary systems such as Puraflo™, the Aquarobic Filter Bed, or any other proprietary system with current or future approval. Systems designed by professional engineers (with either formal or informal plans) are excluded from this GMP unless the engineer specifies, or otherwise approves (in writing) chipped tire aggregate.

When an environmental health specialist (EHS) inspects a system where chipped tire aggregate has been used, the installer will request the EHS to sign a certification that tire chips were used. Department field staff are directed to sign the DEQ-VDH form entitled "Certification of Use of Tire Chips in a Residential Septic Drainfield" in the appropriate block, when it appears that tire chips were used to construct the system and after the form has been properly filled out and signed by the contractor and the homeowner. Incomplete forms should not be signed. The EHS should also note the permit number and enter the date of the inspection. The blue copy of the form is to be retained by the EHS and filed with permit. A copy of this form is attached.

Attachments

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Onsite - Recycled chipped tire aggregate

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Appendix I

**Application**

1. Tire chips are approved by the Virginia Department of Health (VDH) and the Virginia Department of Environmental Quality (DEQ) for use as coarse aggregate in non-proprietary subsurface absorption fields and may be substituted for stone aggregate on a one-for-one basis, volumetrically.
2. Trench design, installation, and location are to remain unchanged. Untreated building paper or a geotextile (synthetic) fabric cover shall be provided to prevent soil infiltration.
3. Each installation must have a valid VDH permit, must be authorized by the property owner and certified by VDH and the installation contractor using the 4 part VDH-DEQ Certification of Use of Tire Chips in a Residential Septic Tank Drainfield system.
4. Proprietary systems and systems designed by a professional engineer are not automatically authorized for use. Changes to the aggregate must be approved in writing by either the manufacturer or the professional engineer prior to approval.

**Chip Specifications**

1. Chips are to be a nominal 2 inches in size and may range from one-half ( $\frac{1}{2}$ ) to a maximum of four (4) inches in any one dimension.
2. Exposed wire may protrude no more than one-half ( $\frac{1}{2}$ ) inch from the chip.
3. At least 95% of the aggregate by weight shall comply with the above specifications.
4. Fines are defined as any material less than 2 mm in size and are prohibited.