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Indiana State Department of Health

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Indiana State Department of Health Sanitary Engineering Program

PROGRAM GUIDANCE LETTER Tire Chips and On-site Sewage Systems

Program Guidance Letter

Number: SE-2006-01
Effective Date: January 3, 2006
Cancels: N/A
Revised: N/A

DATE: January 3, 2006

SUBJECT: Tire Chips and Onsite Sewage Systems

Purpose

To provide guidance to local health departments and others on the use of tire chips in onsite sewage systems.

Background

The Indiana Department of Environmental Management (IDEM) administers environmental statutes and rules regarding waste tires. In December 2005, IDEM issued a nonrule policy document approving the use of chipped tires in on-site sewage (septic) systems when such use is approved by the Indiana State Department of Health (ISDH). IDEM determined that the use of chipped tires in septic systems is a legitimate reuse of waste tires.

The ISDH administers statutes and rules regarding onsite sewage systems. The ISDH approves experimental sewage systems. The ISDH has been requested to issue guidance on the use of and approval of chipped tires in an experimental on-site sewage system.

Discussion

Research suggests that tire chips are chemically relatively stable and perform as well or better than stone when substituted as aggregate in a soil absorption system. Tire chips have been approved as a substitute for aggregate in a limited number of states and many other states are experimenting with the technology.

Under the commercial on-site wastewater disposal rule, ISDH rule 410 Indiana Administrative Code (IAC) 6-10, the substitution of tire chips for stone in a commercial onsite sewage system constitutes an experimental technology. Under the residential sewage disposal system rule, ISDH rule 410 IAC 6-8.1, the substitution of tire chips for stone in a residential onsite sewage system is likewise an experimental technology.

Decision

The ISDH approves the use of tire chips in place of stone for commercial and residential onsite sewage system constructed wetlands, perimeter drain backfill, or soil absorption fields on a one-for-one basis, volumetrically. Tire chips used for soil absorption fields or perimeter drain backfill must have a nominal size of two (2) inches with chip dimensions being no less than one-half ($\frac{1}{2}$) inch and no greater than four (4) inches. While tire chips may not be used to replace the pea gravel cover in a constructed wetland, they may be used in place of the base aggregate as long as they are sized as follows:

1. Chips used near wetland inlets or outlets must be no less than one and one-half ($1\frac{1}{2}$) inches and no greater than three (3) inches; and
2. Chips used in the area between wetland ends must be no less than one-half ($\frac{1}{2}$) inch and no greater than one (1) inch.

Designs submitted to ISDH for commercial onsite sewage systems that incorporate tire chips in place of stone must meet all other requirements of 410 IAC 6-10 and include specifications for nominal tire chip size and removal of fines. The ISDH encourages local health departments to adopt the same policy with respect to any commercial onsite sewage system they permit in accordance with 410 IAC 6-10.

The ISDH likewise encourages local health departments to issue permits for residential onsite sewage systems that incorporate tire chips in place of stone as long as:

1. The substitution is on a one-for-one basis, volumetrically;
2. All other requirements of 410 IAC 6-8.1 are followed; and
3. The local health department maintains an inventory of systems installed using tire chips and provides that information to ISDH upon request.

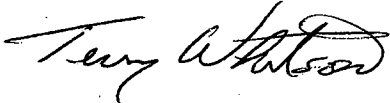
When permits are issued for systems that incorporate tire chips, they should note in writing that tire chips will be utilized and should include requirements for nominal tire chip size and removal of fines.

System installers should be aware that tire chips will have protruding wires, and should take appropriate safety measures during handling and installation. For the same reason, tire chips should be removed from the ground surface during site clean-up.

The information contained herein should be shared with local health departments, designers, and installers of onsite sewage systems.

For questions concerning this program guidance letter, please contact the ISDH Director of the Consumer Protection Division, Howard Cundiff, at 317-233-7182 or hcundiff@isdh.in.gov; or the Residential Sewage Disposal Program Director, Alan Dunn, at 317-233-7179 or adunn@isdh.in.gov.

Cordially,



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