
DATE: January 21, 2009

TO: Lew Hicks, Owner - 3389 Head of River Road, Virginia Beach, VA
Franklin G. Rutledge, P.E. - Project Design Engineer
Dan Horne, VDH Environmental Health Supervisor - Virginia Beach, VA

FROM: Engineering Design Review Panel pursuant to § 32.1-163.6

SUBJECT: Summary of IFFC Conducted January 13, 2009
Location (County/City): 3389 Head of River Road, Virginia Beach
Owner: Lew Hicks
Engineer: Franklin G. Rutledge
Onsite Treatment System for 450 gpd

Cc: Division of Onsite Sewage and Water Services
VPI/SU Contract Soil Scientist
Karen Remley, M.D., M.B.A., F.A.A.P., State Health Commissioner

A design for a 450 gallon per day onsite treatment system was submitted to the Virginia Beach Health Department on October 31, 2008 for review and approval. The Virginia Beach Health Department with concurrence from the VDH Review Engineer denied the submittal because "dispersal within six (6) inches of the seasonal high water table is considered as not meeting the requirements of standard engineering practices" (from November 18, 2008 VDH denial letter to owner).

An Informal Fact Finding Conference (IFFC) was requested by the design engineer and the owner and held on January 13, 2009, at the VDH OEHS office in Richmond, VA. In attendance as members of the Engineering Design Review Panel were Chairman Marcia Degen, Ph.D. P.E. (DEQ); Joel Pinnix, P.E. (American Council of Engineering Companies of Virginia); John Schofield, P.E. (VDH); and Rick Blackwell, P.E. (Virginia Society of Professional Engineers).

The Panel first requested that any questions for Mr. Aulbach, who conducted the VDH engineering review, be asked first as Mr. Aulbach was only available by phone for a short period. During the questioning it was confirmed that Mr. Aulbach supported the denial based on lack of six inch vertical separation between the dispersal depth and the seasonal water table.

The Panel gave VDH an opportunity to summarize the reasons behind their denial. The main points that VDH made were:

1. VDH found gray mottles to the ground surface over most of this site which are indicative of a seasonal high water table. (soil evaluation conducted 3/05)

2. The soil was found to have a prismatic structure which retards lateral movement through the site.
3. During the VDH soil evaluation, free water was noted at depths ranging from 3 inches to 20 inches and the site was noted as marshy, in a drainage way, and subject to flooding. (The site is not eligible for Soil Drainage Management due to lot size and landscape position.)
4. The site has an existing house, but the house is unoccupied. The house was served by a pit privy.
5. The option of a discharging system is not available due to local ordinances.

This was followed by an opportunity for the engineer to describe why his design overcame the site restrictions described by VDH.

1. The engineer's soil scientist (AOSE -Mr. Willoughby) did not agree with VDH's interpretation of the soils and did not encounter any free water on the site during his site evaluation with auger holes to 40 inches. (soil evaluation conducted 9/08)
2. The engineer presented an aerial photo of other lots in the area that had onsite systems installed that to his knowledge were functional.
3. The engineer did not review his design, but the Panel noted that the engineer provided secondary treatment with UV disinfection and a drip dispersal field installed at 10 inches based on a conservative perc rate of 75 mpi.

The Panel's comments/concerns revolved around two main issues:

1. The engineer and AOSE did not agree with the VDH assessment of the location of the seasonal water table.
2. If the Panel used the VDH soils evaluation, the design did not address how water would be moved off the site and surfacing would most likely result. By the Code of Virginia, §32.1-163.6.A., this Panel must maintain the performance requirements established by the Board along with certain horizontal setbacks. Based on GMP 146, the performance requirement to be maintained is no surfacing of effluent. That aspect was not addressed due to the differing interpretation of the seasonal high water table.

A number of site mitigation options were discussed, but there was uncertainty over the depth of the seasonal high water table. The Panel recommended and all parties agreed to the following:

1. The Panel granted a continuance of the IFFC until April 7, 2009, to allow for more information to be gathered.

2. VDH will provide a second soil evaluation by a VDH soil consultant. VDH is to notify the owner, the engineer, and the Panel when that evaluation is to be conducted.
3. Based on the results of that evaluation, the engineer and owner may choose to modify their design to mitigate the site restrictions. If so, that modified design will be reviewed by VDH-Virginia Beach. If the denial stands, then the IFFC will continue on April 7, 2009, with the new information and the new design. If the modified design is approved by VDH, then the IFFC will be considered resolved and the continuance will be cancelled.