

# Southeastern Soil & Environmental Associates, Inc.

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December 15, 2005

Mr. Joe West  
Harnett County Health Dept.  
PO Box 09  
Lillington, NC 27546

Re: Hydraulic conductivity (Ksat) analysis for pretreatment, Lot 75, Woodshire  
Subdivision, Harnett County, North Carolina

Dear Mr. West,

An evaluation of soil and hydraulic conductivity (Ksat) has been conducted on the  
aforementioned property. The purpose of the investigation was to determine soil  
absorption rates for a proposed pretreatment/low pressure pipe (LPP) septic system to  
serve as a repair area for a 3 bedroom single family residence. All ratings and  
determinations were made in accordance with "Laws and Rules for Sanitary Sewage  
Collection, Treatment, and Disposal, 15A NCAC 18A .1900".

Two compact constant head permeameter (CCHP) measurements were made to determine  
a Ksat rate at depths of 18 and 22 inches. The two Ksat measurement in the Bt horizon  
averaged 1.06 cm/hr. This equates to 6.22 gpd/sq.ft. Using 10% of this average (typical  
for systems without pretreatment), Ksat measurement equates to 0.622 gpd/sq.ft. (1/2 of  
which is 0.31 for LPP)

Using pretreatment, we are proposing a 0.225 gpd/sq. ft. which is less than 10 percent of  
the measured rate. Therefore, by using pretreatment, the LTAR can be increased to 0.225  
and be expected to function hydraulically.

Sincerely,



Mike Eaker  
President



SOUTHEASTERN SOIL & ENVIRONMENTAL ASSOC., INC.

PROPOSED SUBSURFACE WASTE DISPOSAL SYSTEM DETAIL SHEET

SUBDIVISION Woodshire LOT 75

INITIAL SYSTEM pump to Gravelless 3' REPAIR SYSTEM LIP with pretreatment

BENCHMARK ELEV. 100.0 LOCATION Front corner 75/77

TYPE OF DISTRIBUTION pump to D-box

*proposed LTAR 0.3 gpd/ft<sup>2</sup>  
initial*

| LINE | ELEVATION | LENGTH     | FLAG COLOR |
|------|-----------|------------|------------|
| 1    | 96.50     | 50         | Y          |
| 2    | 95.33     | 70         | B          |
| 3    | 94.75     | 85         | W          |
| 4    | 94.00     | 95         | B          |
|      |           | <u>300</u> |            |
| 5    | 93.92     | 100        |            |
| 6    | 93.08     | 110        |            |
| 7    | 92.00     | 120        |            |
|      |           | <u>330</u> |            |

*Initial*

BY M.E. Keiser DATE 12/2005

FLAG COLOR: Y = YELLOW R = RED W = WHITE B = BLUE O = ORANGE P = PINK

*(WITH) OLIVER, JOE*

