

| Observation and Monitoring Well Installation Review Wastewater Treatment Facility At Stonewater Creek Fairmount, Sussex County, Delaware Project No.: 5708.YD | | Date Started : June 29, 2005 | Drilling Equipment : ATV-mounted CME-55 | Drilling Methods : 4.25" H.S.A. | Surface Elevation : 24.4 feet | Northing : 238,360 U.S. Feet DE SPC NAD 83 | Easting : 714,118 U.S. Feet DE SPC NAD 83 |
|---|-------|---|--|---------------------------------|-------------------------------|--|--|
| Sample Condition <input checked="" type="checkbox"/> Remolded | | Water Levels ▼ During Drilling ▼ 7/7/2005 | Sample Number | Blows per 6 inches | Recovery (ft) | Well Construction Details | Observation Well 209180 Top of Well Elev. PVC = 26.76 |
| DEPTH | USCS | USDA | DESCRIPTION | | | | |
| 0 | | | | | | | Surf. Elev. 24.4 ft |
| 2 | | | APPARENT FILL: dark brown, dark grayish brown fine to medium sand, little silt, trace coarse sand (dry). | | | | |
| 21.5 | SM | LS/SL | POSSIBLE FILL: brown, grayish brown fine to medium SAND, little to some silt, trace coarse sand (dry). Light brown, brown, reddish brown fine SAND, little to some medium sand, little to some silt, trace coarse sand (silt content increasing with depth) (damp). | 1A | 1.7 | Bentonite Plug - 3/8" granular bentonite | |
| 4 | | | Brown, yellowish brown, reddish yellow fine to medium SAND, trace to little silt with silty sand (some silt) lenses (dry to damp). | 1B | | | |
| 20.4 | | | SAME with small, more irregular and discontinuous silty sand lenses (dry to damp) (silt content decreasing with depth). | 2 | 1.5 | 2" Schedule 40 PVC Well Casing | |
| 6 | SP-SM | LS | | 3 | 2.0 | Sand Pack - #2 well sand | 18.4 |
| 8 | | | SAME with trace silt and no silty sand lenses (dry). | 4A | | | |
| 16.1 | SP | S | White, pale yellow, light gray medium to coarse sand, trace very coarse granules, trace silt (well sorted) (dry) | 4B | | | |
| 15.4 | | | Light brown, light brownish gray mottled fine SAND and SILT with lenses of fine sand with some silt fining down to mostly silt with trace to little clay, some fine sand (moist). | 4C | | | 15.7 |
| 10 | SM | FSL | | | | Top of Screen | |
| 13.4 | | | | | | | |
| 12 | SP | S | Light gray, gray fine to medium SAND, trace to no silt (saturated) (rapid drainage) (well sorted). | 5A | 1.6 | | |
| 10.7 | | | Light gray medium SAND, trace fine sand, trace to little coarse sand, trace to no silt (saturated) (rapid drainage) (well-sorted). | 5B | | | |
| 14 | SP | S | | | | | |
| 16 | | | | | | | |

NOTES:

1. Observation Well OW-2 (DNREC ID 209180) installed upon completion.
2. Wet-on-spoon encountered at 11.5 feet +/-; water level observed at 10.8 feet +/-; bottom of augers at 13.0 feet +/-; b.e.g.s.
3. EZ Mud used to wash out soils from the augers for samples 6 through 7.
4. Auger boring performed in general accordance with ASTM D 1452. Mud rotary drilling started at 14 feet b.e.g.s.

5. Continuous, split-barrel sampling performed in general accordance with the Method for Penetrative Test and Split-Barrel Sampling (ASTM D 1586).
6. Soil descriptions performed in general accordance with ASTM D 2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).
7. Grain size scale utilized for soil descriptions based on a hybrid of the Udden-Wentworth Scale described in Delaware Geological Survey Open File Report 34 "Methodology for Mapping Groundwater Recharge in Delaware's Coastal Plain."



DUFFIELD ASSOCIATES
Consultants in the Geosciences

TEST BORING OW-2

Permit No : 209180

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Observation and Monitoring Well Installation Review
Wastewater Treatment Facility
At Stonewater Creek
Fairmount, Sussex County, Delaware
Project No.: 5708.YD

Date Started : June 29, 2005
Date Completed : June 29, 2005
Logged by : JPC
Weather : Overcast to Partly Sunny
Driller/Agency : J. Foley/Walton Corporation

Drilling Equipment : ATV-mounted CME-55
Drilling Methods : 4.25" H.S.A.
Surface Elevation : 24.4 feet
Northing : 238,360 U.S. Feet DE SPC NAD 83
Easting : 714,118 U.S. Feet DE SPC NAD 83

| Depth in feet | Surf. Elev. 24.4 ft | GRAPHIC | USCS | USDA | Sample Condition ☒ Remolded | Water Levels ▼ During Drilling ▼ 7/7/2005 | SAMPLER | Sample Number | Blows per 6 inches | Recovery (ft) | Well Construction Details | WATER LEVEL | Observation Well 209180 Surf. Elev. 24.4 ft |
|---------------|---------------------|---------|-------|------|--------------------------------|---|---------|---------------|--------------------|---------------|--|-------------|---|
| | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | |
| 18 | | | SP | S | | | ☒ | 6A | 6-11-12-7 | 1.0 | 2" Schedule 40 PVC Screened Casing - 0.020" slot | | |
| 20 | 5.9 | | SP | S | | | ☒ | 6B | | | | | |
| 22 | | | | | | | | | | | | | |
| 24 | 2.9 | | SP-SM | S | | | | 7A | 4-4-6-6 | 1.6 | | | |
| 24 | 0.6 | | SC | SCL | | | | 7B | | | | | |
| 24 | 0.5 | | SP-SM | S | | | | 7C | | | | | |
| 26 | | | | | | | | | | | | | |
| 28 | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | |
| 32 | | | | | | | | | | | | | |

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