



NEXT
Environmental Inc.

Project No.: JDY010103.01

Project: DSI

Location
of Borehole: North of BH201

Site Address: 5850 Production Way, Langley

Borehole Log: BH204D

Logged By: RS

Client: Ms. Joan Dyck

| SUBSURFACE PROFILE | | | | SAMPLE | | | | |
|--------------------|--------|--|-------------|-------------------------|--------|--------|---------------|--------------|
| Depth | Symbol | Description | Depth/Elev. | Well Completion Details | Number | Type | Vapour (ppmv) | Lab Analysis |
| 0 | | Ground Surface | 0.0 | | | | | |
| 0 | | GRAVEL FILL | 0.1 | | | | | |
| 1 | | SAND and GRAVEL Brown SAND and GRAVEL, moist. | | | | | | |
| 2 | | | 0.8 | | 204-1 | | 450ppm | |
| 3 | | CLAY Mottled grey/orange CLAY, moist. | | | 204-2 | | 475ppm | BTEXS, VPH |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | 204-3 | | 290ppm | |
| 8 | | Wet @ 8ft | | | | | | |
| 9 | | | | | | | | |
| 10 | | | 3.0 | 204-4 | | 300ppm | BTEXS, VPH | |
| 11 | | EOR | | | | | | |
| 12 | | | | | | | | |

Drilled By: Tri-Tech Drilling

Drill Method: Vacuum (0-5ft), Solid stem (5-10ft)

Drill Date: July 15, 2004

Depth to Water
(below top) & Date: 2.870 m, July 20, 2004

Top of Pipe (top)
Well Elevation: N/A

Surface Grade Elevation: N/A

Groundwater

Analysis: BTEXS, VPH, LEPH/HEPH/PAH

Sheet: 1 of 1

on the results of rising head (slug) tests. The hydraulic gradient is determined by referring to the piezometric surface of the Site, and porosity is estimated based on the type of soil.

One aquifer was identified at the Site, which was comprised primarily of clay. The depth to water in the unconfined aquifer ranged from 0.5 to 1.5 metres below grade.

The following subsections detail the results of the hydrogeological investigation.

7.2.1 Groundwater Flow Direction and Hydraulic Gradient

Groundwater elevations were calculated based on measurements recorded on July 29, 2004.

As can be seen on Figure 5, (using BH103D, BH202S, BH209D, BH210) a general gradient to the south is evident. For the purpose of determining the applicability of the CSR aquatic life standards for the Site, a groundwater gradient of approximately 0.007 m/m was used.

7.2.2 Hydraulic Conductivity

To estimate horizontal hydraulic conductivity, slug tests (rising head tests) were conducted in a number of monitoring wells considered representative of the Site stratigraphy. The data was collected using a water level meter.

Based on the rising head test data and monitoring well construction, hydraulic conductivities were calculated using the software program "Aquifer Test" version 2.5.7 by Waterloo Hydrogeologic. The results of the testing are outlined in Table E.

Table E – Rising Head Test Results – Clay Aquifer

| Monitoring Well | Soil Type | Screen Interval (mbg) | Analytical Method | Hydraulic Conductivity (m/s) |
|------------------------|------------------|------------------------------|--------------------------|---|
| BH204D | CLAY | 2.4 – 3.0 | Bouwer-Rice | Max - 1.6 E-06 Likely value - 8.4 E-07 |
| BH205D | CLAY | 2.4 – 3.0 | Bouwer-Rice | 2.6 E-07 |
| BH206D | CLAY | 2.4 – 3.0 | Bouwer-Rice | 9.9 E-08 |

Note: mbg – meters below grade

The results of the calculated hydraulic conductivity varied between 9.9×10^{-8} m/s and 1.6×10^{-6} m/s.