From: Simon Payne [mailto:simon.payne@atcassociates.com]
Sent: Wednesday, April 27, 2016 11:33 AM
To: Carrosino, Glynis (ECY) <GCAR461@ECY.WA.GOV>
Cc: CGurney@Weingarten.com; Andrew Stuart <andrew.stuart@atcassociates.com>; Terry McDunner <terry.mcdunner@atcassociates.com>
Subject: VCP Site NW2902 - Harbour Pointe Cleaners, Lynnwood

Glynis,

Review of Ecology's April 4th 2016 Opinion Letter regarding ATC's (formally Cardno ATC) September 17, 2015 *Feasibility Study and Disproportionate Cost Analysis* identified some delinquencies with our submittal, including further information regarding groundwater, soil conditions between 16 and 25 feet below ground surface, submittal of a Terrestrial Ecology Evaluation, provide appropriate professional stamp on reports, and enter data on the EIM.

The following is a summary of groundwater evaluation at the property (boring logs and maps are attached):
Environmental assessment activities were initiated at the Site in June, 2006 by Buchanan Environmental Associates (BEA). Between June and August, 2006, BEA installed a total of five groundwater monitoring wells at depths between 15 and 25 feet bgs, designated MW-1 through MW-5. A groundwater sample collected from groundwater monitoring well MW-1 in June, 2006 contained concentrations of several volatile organic compounds VOCs, including toluene, ethylbenzene, xylene, and naphthalene which are typically associated with gasoline and fuel products. All the detected VOCs were at concentrations below MTCA regulatory cleanup or risk-based formula values and BEA suggested that the VOCs may be from an offsite source or were inadvertently introduced during well construction. Laboratory analytical results from groundwater samples collected from groundwater monitoring wells MW-1 through MW-3 in July, 2006 identified the presence of VOCs, including TCE in the groundwater sample collected from groundwater monitoring well MW-2, although in concentrations below MTCA regulatory cleanup or risk-based formula values. Laboratory analytical results from groundwater samples collected from groundwater monitoring wells MW-1 through MW-5 in August, 2006 only identified the presence of the VOC, 1,1-dichloroethane, although at a concentration below the MTCA Method B noncarcinogenic standard formula value (1,1-dichloroethane is not regulated under MTCA Method A cleanup levels).

Based on the lack of dissolved PCE and any degradation compounds detected in groundwater samples at concentrations above MTCA regulatory cleanup or risk-based values, BEA did not recommend further investigation, although they did recommend the retro-fitting the dry cleaning machine with secondary containment and the termination of operations with PCE.

Environmental assessment activities resumed in March 2013, EBI Environmental and Engineering (EBI), advanced two soil boring designated B-1 and B-2 south and north of the tenant space, respectively and three soil borings, designated B-3 through B-5 within the tenant space and in the vicinity of the dry cleaning machine. Groundwater was not encountered in any of the soil boring, including soil boring B-1, which was advanced to 25 feet bgs, south of the tenant space. The drilling technology was switched from direct push to hollow stem auger below 16 feet and according to the boring log, no sample recovery and no groundwater was encountered to a terminal depth of 25 feet.

Assessment work performed by ATC has concentrated within the building and drilling refusal has not allowed any boring to reach groundwater. Vertical attenuation of VOC concentrations in shallow soil indicate that releases have been contained to shallow soil only.

The BEA report did not include boring logs, but rather Well Completion Reports as supplied by the drillers, these have been attached to this email along with a well location map. Your opinion letter indicates that you already have a copy of this report.

Boring logs for soil borings B-1 through B-5 advanced by EBI are also included.

Soil conditions below 16':
Boring logs and well completion reports indicate that soil between 16 and 25' are a continuation of the dense glacial till sediments, dominantly consisting of silt with sand and gravel. Porosity, being a function of sediment sorting, grain shape, and matrix density, is typically low and heterogeneous in such sediments and therefore water bearing horizons tend to be noncontiguous. The boring logs for soil borings advanced below 16 feet are attached. Additional boring logs for soil borings advanced in shallower soils should be attached in reports already submitted to Ecology, although should you need these as a separate attachment, please let us know.

Submittal of TEE:
A TEE has been completed and a hard copy has been put in the mail, attached is an electronic copy for your records.

Professional Stamp:
ATC is willing to re-submit any ATC issued report under a WA State Licensed Geologist stamp, ATC cannot stamp any report submitted by other consultants. Please let us know how you would like to proceed with this.

EIM Data Submittal:
ATC will initiate data submittal in the EIM database and inform you when it has been completed and approved by Ecology.

Meeting with ATC and Weingarten:
As previously requested we would like to set up a meeting to discuss the path forward for this site and have requested a date during the month of May, 2016. Please let us know you availability as we need to make travel and schedule arrangements. Your expediency with this is appreciated.

Thanks,
Simon Payne
Simon Payne, LG | PROJECT MANAGER | **ATC Group Services LLC**
+1 206 781 1449 Ext 216 | +1 206 664 1899 mobile
6347 Seaview Avenue NW | Seattle, WA 98107
+1 206 781 1543 fax | simon.payne@atcassociates.com | www.atcgroupservices.com

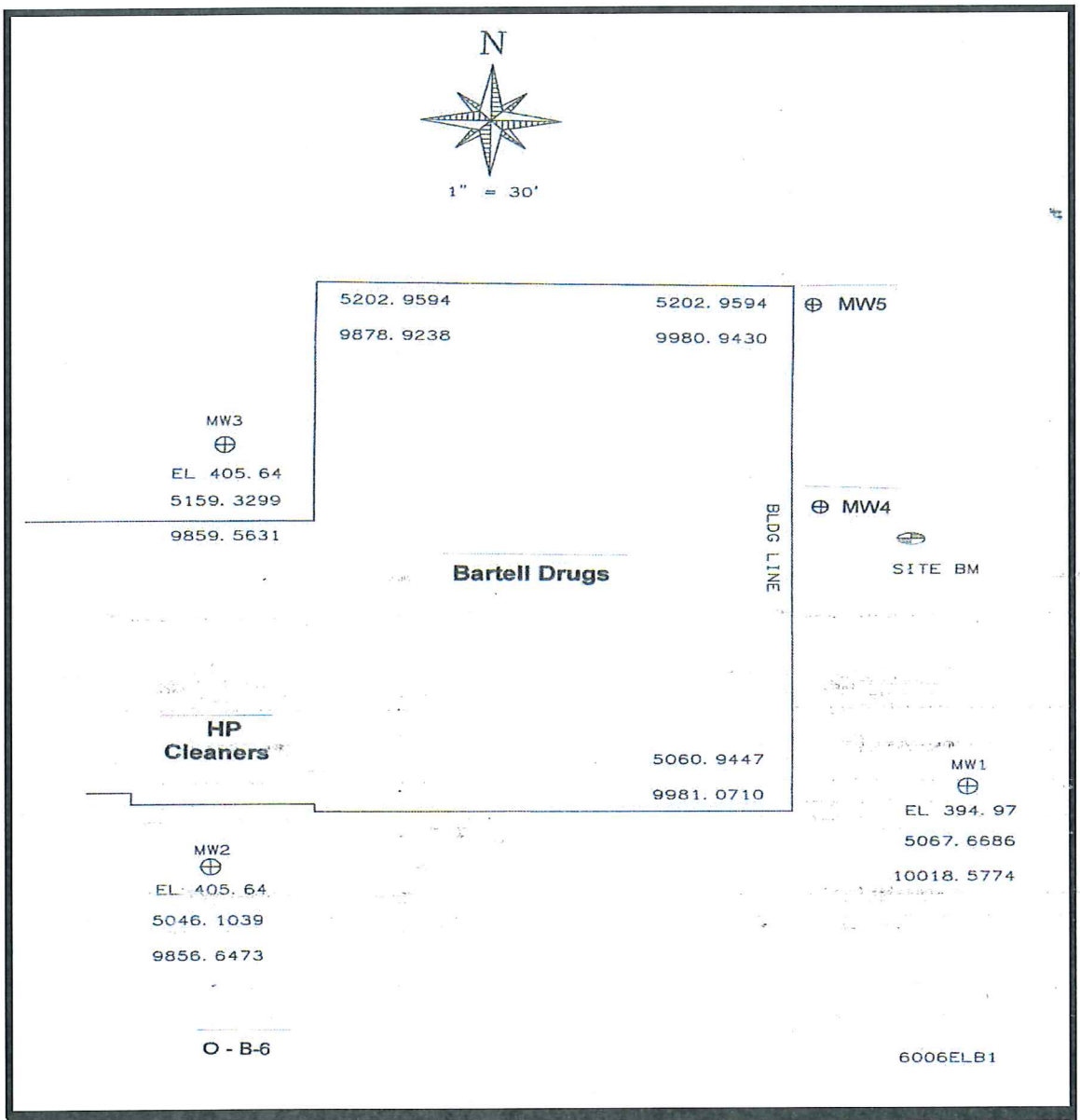


FIGURE 2 – WELL LOCATIONS

Buchanan Environmental Associates
Project No. 206120

Weingarten Realty Investors
Mukilteo Speedway Center
13619 Mukilteo Speedway
Lynnwood, WA

Source: Base Map – C & C Surveying and Buchanan Environmental Associates Field Notes
Approximately 1" = 30'

North

RESOURCE PROTECTION WELL REPORT

Washington State Department of Ecology

Original and 1st copy – Ecology, 2nd Copy – owner, 3rd copy - driller

PROPOSED USE:
- [x] Construction
- [ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____
- Consulting Firm _____

Current Notice of Intent No. RE01509

Type of Well [x] Resource Protection [ ] Geotech Soil Boring

Unique Ecology Well ID Tag No. APP716

DRILLING METHOD
- [x] Hollow Stem Auger
- [ ] Air Rotary
- [ ] Mud Rotary
- [ ] Dual Rotary
- [ ] Core
- [ ] Other _____

Borehole Diameter 6

WELL LOCATION

Project Name N4

Owner Mukilteo Properties LLC

Well Address 15619 Mukilteo Speedway

City Lynnwood County Snohomish

Location SE 1/4 NE 1/4 Sec 34 Twn 28 R 4 E or W

MONUMENT
- [ ] Above Ground Riser [ ] 6" x 5' [ ] 8" x 5' Stick up height ____ ft
- [x] Flush Mount [x] 8" [ ] 12" [ ] Other _____

Amount of Concrete used 7 SACKS

Tax Parcel No. _____

Construction/Decommission Start Date 6-13-06

Construction/Decommission Completed Date 6-15-06

Static Level _____

CASING INSTALLED
- [ ] PVC [x] Sch 40 [ ] Sch 80 [ ] Inclinometer [ ] Other _____
- [ ] Threaded _____" Diameter from _____ ft to _____ ft
- [x] Glued 2" Diameter from 0 ft to 5 ft
- [ ] Welded _____" Diameter from _____ ft to _____ ft

SCREEN
- [ ] PVC [x] Sch 40 [ ] Sch 80 [ ] Other
- Diameter 2 Slot Size .020 from 5 ft to 15 ft
- [ ] Pre Pack Type [ ] PVC [ ] Sch 40 [ ] Sch 80 [ ] Other _____
- Diameter of inner screen _____" x Diameter of outer screen _____"
- Slot Size _____ Installed from _____ ft to _____ ft
- [ ] Stainless Steel _____" Diameter from _____ ft to _____ ft
- [ ] Other _____ _____" Diameter from _____ ft to _____ ft

SEAL

Type of material used [x] Bentonite Chips Amount 0 SACKS
- [ ] Bentonite Grout Amount _____
- [ ] Portland Cement Amount _____
- [ ] Other _____ Amount _____

Placed from 1 ft to 3 ft

SAND/GRAVEL PACK

Type of material used [x] Silica Sand Size 10/20 [ ] Pea Gravel
- [ ] Other _____

Placed from 3 ft to 15 ft

Amount of material used 10 SACKS

CONSTRUCTION OR DECOMMISSION PROCEDURE

Material or Formation	From	To
Asphalt	0	3"
Poorly Graded Sand+Gravels - Fill	3"	6
Sandy Silt Brown	6	9
Silty Sand Brown	9	12
Fill - Refusal	12	15

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief

[ ] Driller [x] Trainee Name (print) Cory M James

Driller / Trainee Signature _____

Driller or Trainee License No. 2828T

Drilling Company Gregory Drilling, Inc.

If Trainee, licensed driller's Signature and License No. Lawrence M Gregory 1973

RESOURCE PROTECTION WELL REPORT

Washington State Department of Ecology

Original and 1st copy – Ecology, 2nd Copy – owner, 3rd copy - driller

PROPOSED USE:
☒ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____
Consulting Firm _____

Current Notice of Intent No. RE01537

Type of Well ☐ Resource Protection ☐ Geotech Soil Boring
Unique Ecology Well ID Tag No APP 738

DRILLING METHOD
☒ Hollow Stem Auger ☐ Air Rotary
☐ Mud Rotary ☐ Dual Rotary
☐ Cable ☐ Other _____
Borehole Diameter 6

WELL LOCATION
Project Name N/A
Owner Mukilteo Properties LLC
Well Address 13619 Mukilteo Speedway
City Lynnwood County Snohomish
Location SE 1/4 NE 1/4 Sec 29 Twn 28 R 4 ☒ E or W
Tax Parcel No. _____
Construction/Decommission Start Date 7-27-06
Construction/Decommission Completed Date 7-27-06
Static Level _____

MONUMENT
☐ Above Ground Riser ☐ 6" x 5' ☐ 8" x 5' Stick up height _____ ft
☒ Flush Mount ☒ 8" ☐ 12" ☐ Other _____
Amount of Concrete used _____

CASING INSTALLED
☐ PVC ☒ Sch 40 ☐ Sch 80 ☐ Inclinometer ☐ Other _____
☒ Threaded 2 " Diameter from 0 ft to 8 ft
☐ Glued _____ " Diameter from _____ ft to _____ ft
☐ Welded _____ " Diameter from _____ ft to _____ ft

SCREEN
☐ PVC ☒ Sch 40 ☐ Sch 80 ☐ Other _____
Diameter 2 Slot Size .020 from 8 ft to 18 ft
☐ Pre Pack Type ☐ PVC ☐ Sch 40 ☐ Sch 80 ☐ Other _____
Diameter of inner screen _____ " x Diameter of outer screen _____ "
Slot Size _____ Installed from _____ ft to _____ ft
☐ Stainless Steel _____ " Diameter from _____ ft to _____ ft
☐ Other _____ _____ " Diameter from _____ ft to _____ ft

SEAL
Type of material used ☒ Bentonite Chips Amount 2 SACKS
☐ Bentonite Grout Amount _____
☐ Portland Cement Amount _____
☐ Other _____ Amount _____
Placed from 2 ft to 6 ft

SAND/GRAVEL PACK
Type of material used ☒ Silica Sand Size 10/20 ☐ Pea Gravel
☐ Other _____
Placed from 6 ft to 18 ft
Amount of material used 12 SACKS

CONSTRUCTION OR DECOMMISSION PROCEDURE

Material or Formation	From	To
Asphalt	0	4
Gravels + Poorly Graded Sand	4	1
Fine/med Brown Sand	1	6
Till	6	8
med/course Brown Sand	8	14
Till	14	18

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Trainee Name (print) Corey M James
Driller / Trainee Signature _____
Driller or Trainee License No. 2828

Drilling Company Gregory Drilling, Inc.
If Trainee, licensed driller's Signature and License No. Lawrence H. Gregory 1973

RESOURCE PROTECTION WELL REPORT #5

WELL TAG NO. APP 741 START CARD NO. RED1562

PROJECT NAME: Mukilteo Properties LLC

WELL IDENTIFICATION NO. Monitoring

DRILLING METHOD: Hollow Stem Auger

DRILLER: Corey M James

FIRM: Gregory Drilling inc.

SIGNATURE: Cory M James

CONSULTING FIRM: Buchanan Environmental

REPRESENTATIVE: Dave Buchanan

COUNTY: Snohomish

LOCATION: SE ¼ NE ¼ Sec 34 Twn 28 R 4 E

STREET ADDRESS OF WELL: 1561g Mukilteo Speedway Lynnwood, WA.

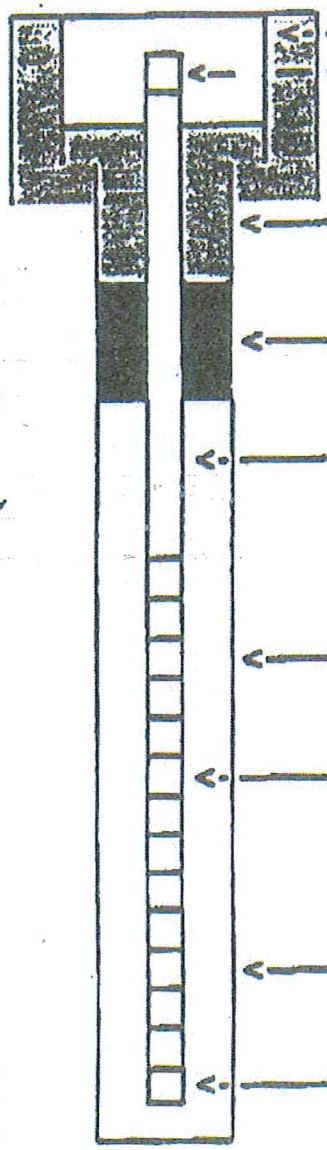
WATER LEVEL ELEVATION: N/A

GROUND SURFACE ELEVATION: N/A

INSTALLED: 8-22-06

DEVELOPED: Buchanan Environmental

Soil Type	Depth (in feet below ground surface)
0 – 8" Asphalt	0
8" – 4.5' Poorly Graded Sand & Gravel	2'
4.5' – 13' Sandy Silt Brown	4'
13' – 20' Medium Grade Sand	5'
20' – 25' GLACIAL TILL Sand – Rounded Gravel & SILT!	25'



Stick-up Height (if applicable)

Monument Type 8" flush Monument

Well Cap Type 2" Cap

Grout Type/#Sacks 2 sk Concrete mix

Bentonite Seal/#Sacks 2 sk Bentonite chip

Well Casing I.D.: 2"

Type of casing Sch 40 PVC

Type of connection Flush Thread

Filter Pack/size/#Sacks 10-20 Silica, 21 sks

Well Screen I.D 2"

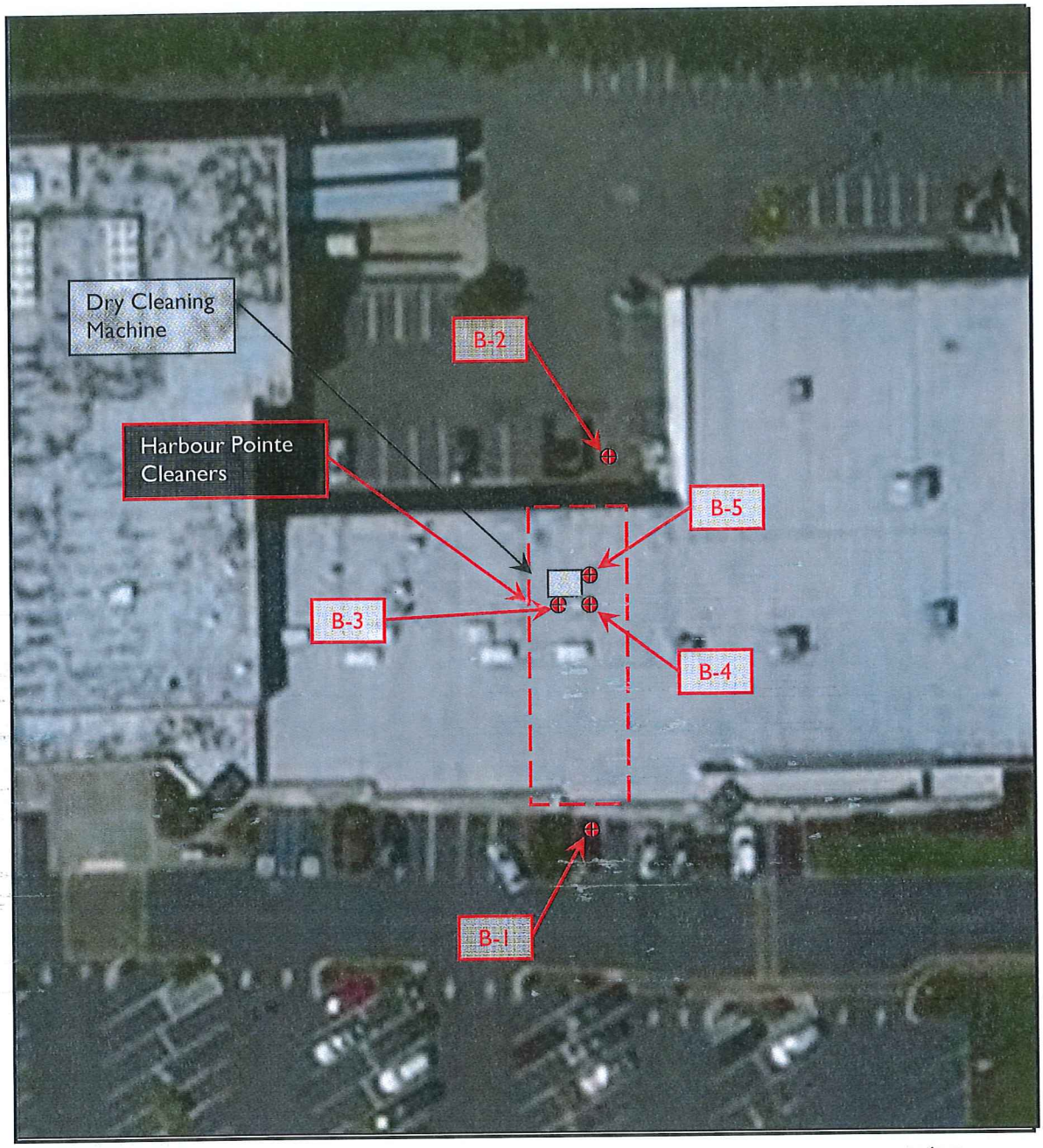
Type of Screen Sch 40 PVC

Slot size .020

Diameter of borehole 8"

Endcap Type 2" Cap

Remarks: Trainee – Cory M James # 2828 T
Driller – Laurence N. Gregory # 1993



Boring Location Map

SOIL BORING LOG - FIELD READINGS

EBI Project #12130032
Project Name: Speedway Shopping Center
Lynnwood, Snohomish County, Washington
BORING METHOD: Direct Push/Combo Auger and Limited Access DP DATE: 03/05/12

Sample #	Depth (Ft)	Moisture (S-H-M-L)	PID Reading	Soil Description/Notes
B-1	0 - 2.5	M	7.0	Light green sandy clay, some gravel/cobbles
B-1	2.5 - 5	M	7.5	Light green sandy clay, some gravel/cobbles
B-1	5 - 7.5	M	12.5	Light brown sandy clay, some gravel/cobbles
B-1	7.5 - 10	M	4.7	Light green sandy clay, some gravel/cobbles
B-1	10 - 12	M	17.8	Light green sandy clay, some gravel/cobbles
B-1	12 - 15	M	11.3	Light green sandy clay, some gravel/cobbles
B-1	15 - 16	M	14.1	Light green sandy clay, some gravel/cobbles
B-1	16 - 25	--	--	No recovery due to switching to hollow stem auger
Bottom of Boring at 25' (Equipment refusal), no groundwater encountered				
B-2	0 - 2.5	M	10.5	Light green sandy clay, some gravel/cobbles
B-2	2.5 - 5	M	13.4	Light green sandy clay, some gravel/cobbles
B-2	5 - 7.5	M	6.3	Light brown sandy clay, some gravel/cobbles
B-2	7.5 - 10	M	7.5	Light green sandy clay, some gravel/cobbles
Bottom of Boring at 10' (Equipment refusal), no groundwater encountered				
B-3	0 - 3	M	10.0	Light green sandy clay, some gravel/cobbles
B-3	3 - 5	M	18.2	Light green sandy clay, some gravel/cobbles
B-3	5 - 6	M	--	No recovery
B-3	6 - 6.5	M	16.5	Light green sandy clay, some gravel/cobbles
Bottom of Boring at 6.5' (Equipment refusal), no groundwater encountered				
B-4	0 - 3	M	15.4	Light green sandy clay, some gravel/cobbles
B-4	3 - 5	M	22.6	Light green sandy clay, some gravel/cobbles
B-4	5 - 6	M	--	No recovery
B-4	6 - 9	M	16.1	Light green sandy clay, some gravel/cobbles
B-4	9 - 11	M	17.2	Light green sandy clay, some gravel/cobbles
Bottom of Boring at 11' (Equipment refusal), no groundwater encountered				
B-5	0 - 3	M	20.0	Light green sandy clay, some gravel/cobbles
B-5	3 - 5	M	14.5	Light green sandy clay, some gravel/cobbles
B-5	5 - 6	M	--	No recovery
B-5	6 - 9	M	16.5	Light green sandy clay, some gravel/cobbles
Bottom of Boring at 9' (Equipment refusal), no groundwater encountered				