



ROBINSON
NOBLE

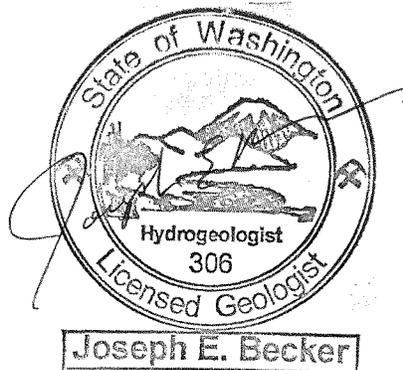
FOUNDER'S CHOICE CABINETS
AND COUNTERTOPS
1517 SOUTH TACOMA WAY
TACOMA WASHINGTON
SITE INVESTIGATION

MARCH 2013

by

Aaron C. Young
Project Geologist

John F. Hildenbrand
Associate Environmental Scientist
Environmental Services Manager



Founder's Choice Cabinets and Countertops
1517 South Tacoma Way, Tacoma, Washington
Site Investigation
March 2013

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Founder's Choice Cabinets and Countertops
1517 South Tacoma Way, Tacoma, Washington
Site Investigation
March 2013

1.0 Introduction

1.1 Purpose and Objectives

This report documents a series of investigative field efforts designed to assess and characterize the presence of petroleum hydrocarbon contaminants in soils and possibly groundwater. Four separate field events are discussed herein.

2.0 Site Description

The site is located at 1517 South Tacoma Way, Tacoma, Washington. It is comprised of three tax parcels which have been assigned parcel numbers 7105000300, 7105000301, and 7105000340 by the Pierce County Assessor-Treasurer's Office. The location and layout of the subject are noted in Figures 1 and 2.

Troost (in review) maps the surface geology of the site as Quaternary Vashon Steilacoom gravel deposits located within the South Tacoma Channel (Qvsst4). These deposits consist of open-work sandy gravels with cobbles. As noted in Section 3.0 and the boring logs located in Appendix B, we observed brown gravelly sand to depths of at least 30 feet. This is inconsistent with the noted geologic map; however, it is similar to our findings on other nearby sites. Based on these site-specific observations and a review of well logs in the immediate area of the subject, we expect the depth to groundwater will be between 40 and 50 feet below ground surface (bgs).

2.1 Background

A 2012 Phase I Environmental Site Assessment prepared by Associated Environmental Services, Inc. (AESI) described the presence of three possible recognized environmental conditions (RECs). These included a property adjacent to the subject that was historically used as a gas station, a former heavy fuel-oil (bunker) tank that was removed from the site in the early 1990s, and a historical 500-gallon heating-oil tank that was also alleged to have been removed around the same time.

Robinson Noble, Inc. was contracted to complete assessment activities to evaluate these RECs. Our evaluation included a review of existing tank closure documents maintained by the Tacoma-Pierce County Health Department (TPCHD) in addition to our on-site investigation activities.

TPCHD records show that a 1,700-gallon bunker-oil tank was removed in October 1992. Post-removal confirmation sampling showed residual levels of soil contamination to be below the cleanup limit in effect at the time (200 mg/kg) except for one side wall sample adjacent to the building foundation. Laboratory analytical reports for the sample show 812 mg/kg of heavy oil. The TPCHD issued a conditional closure in June 1993 with the proviso that, in the event the building is demolished, additional investigation would be needed. Considering the residual concentration is below the current Model Toxics Control Act (MTCA) Method A cleanup limit for

unrestricted land use of 2,000 mg/kg. We concluded that this REC is effectively resolved. The two remaining RECs are the subject of this report.

3.0 Field Activities

3.1 Summary

Field events were completed on September 12, 2012 (Event 1), October 30, 2012 (Event 2), November 14, 2012 (Event 3), and December 18, 2012 (Event 4). Event 1 consisted on four soil borings completed to evaluate the potential for the subject to be impacted by the southeastern adjacent former-gas-station property and to assess the presence or absence of impact from the former 500-gallon heating-oil tank. This event demonstrated that soils along the boundary with the former gas station are not impacted to depths of approximately 30 feet. It also identified heating-oil (diesel-range) petroleum hydrocarbon impacted soils in an area near the suspected former location of the 500-gallon heating-oil tank.

Event 2 consisted of excavating the area formerly occupied by the 500-gallon heating-oil tank in an attempt to identify the boundaries of the impacted soil, and if possible, remove it. Although some impacted soil was removed and disposed of at a permitted off-site disposal facility, the boundaries were not defined and excavation was limited to subsurface soil conditions and the proximity of building structural features.

Event 3 was completed by drilling a series of soil borings using direct-push drilling equipment to better define the contamination from the former heating-oil tank. Ten borings were completed. This event provided substantial definition of the areal and vertical extent of the heating-oil soil contaminant plume.

Event 4 involved completing five additional soil borings to complete the areal definition of the contaminant plume.

3.2 Field Observations

3.2.1 Event 1

Three of the borings were located along the southeastern boundary of the subject adjacent to the former gas station discussed in Section 2.2. Borings B1, B2, and B4 were completed to depths of 25 feet, 30 feet, and 19 feet, respectively. We were unable to accomplish our original scope of drilling to groundwater as drilling refusal was encountered in each of these borings. The locations of these borings are depicted on Figure 3.

The observed texture of the materials encountered consisted of gravelly sand throughout each boring with some silt noted in boring B4. We did not encounter visual or olfactory indications of impact, and photoionization meter (PID) readings were not above background levels.

The soil samples were collected from the terminal depth of each boring and submitted to the on-site mobile laboratory for gasoline-range petroleum hydrocarbons and gasoline-related volatile organic compound analysis using the methods summarized in Section 4.0. These samples were assigned sample numbers B1-25, B2-30, and B4-19, respectively.

The fourth boring in this event was located in the vicinity of the suspected former location of the 500-gallon heating-oil tank. This boring, B3, was completed to a depth of 19 feet in depth. Field observations identified similar subsurface textures noted in the other borings except for a noticeably siltier layer between 13-15 feet in depth. A pronounced petroleum odor consistent

with diesel-range (heating oil) was noted. From a depth of 15 feet to a final depth of 19 feet, we observed brown medium sand with gravel. Little to no hydrocarbon odor was detected at final depth.

Two soil samples from this boring were collected and submitted to the on-site laboratory for analysis for diesel-range petroleum hydrocarbons. The sample identifications are B3-13.5 and B3-19. They were collected from depths of 13.5 feet 19 feet, respectively. Contamination was detected in sample B3-13.5 (see Section 4.0).

After the samples were collected, the borings were decommissioned by backfilling with hydrated bentonite chips.

3.2.2 Event 2

On October 30, 2012, a contractor procured by the property owner attempted to excavate impacted soils in the suspected location of the former heating-oil tank using a rubber-tired backhoe. Robinson Noble staff was on site to provide guidance, document site activities, and collect soil samples.

An area approximately 20 feet by 10 feet was excavated to an average depth of 13 feet bgs. Soils were observed to be unimpacted until about 10 feet in depth, where a moderate petroleum odor was noticed. Beginning at a depth of 12 feet bgs, soil staining and heavy petroleum odor was encountered. Contamination appeared to attenuate beginning at 15 feet in depth. However, due so soil stability and structural concerns, the extents of contamination could not be determined.

A total of sixteen soil samples were collected from the excavation floor and sidewalls and submitted to an on-site mobile laboratory for analysis. Additionally, four stockpile soil characterization samples were also collected and submitted. Figure 4 documents the area excavated and the sample locations. Contamination was detected in ten samples (see Section 4.0).

3.2.3 Event 3

Based on the observations and analytical data obtained from the preceding events, a series of ten soil borings were completed using direct-push drilling techniques on November 14, 2012. Field observations of these borings, as well as subsequent laboratory results, yielded additional delineation of the areal extent of the contamination. Observations of the subsurface geology were consistent with previous investigative events.

3.2.4 Event 4

On December 18, 2012, four additional borings were completed to finalize the definition of the areal extent of the contamination, collect additional data on the vertical extent of contamination, and obtain samples for extractable and volatile petroleum hydrocarbon fractions (EPH/VPH). The EPH/VPH data was collected for future use in evaluating site closure options. The borings completed during this round showed the previously observed geology to be consistent across the site. Groundwater was not encountered.

The four sampling events discussed above have identified the approximate areal boundaries of the impacted soil. Vertically, the contamination extends to at least 24 feet below ground surface in the vicinity of boring B13. The approximate areal extent of the contamination is 2,500 square feet. Figure 5 depicts the horizontal boundaries of the plume.

3.3 Sample Submittal, Storage, and Handling

Samples were collected using methodologies appropriate for diesel-range petroleum hydrocarbons. Stainless-steel spoons were used to place soil into laboratory-supplied four-ounce glass jars except for volatile organic and EPH/VPH extractable and volatile hydrocarbon fraction samples, which were collected using EPA 5035 techniques. The properly labeled samples were submitted directly to the on-site mobile laboratory for analysis. The unused soil samples and EPH/VPH samples were refrigerated by the mobile laboratory for long-term storage after appropriate preservation requirements were applied.

The chain-of-custody form (attached) displays the details of the on-site sample submittal to Libby. Each sample was tracked on the form with the details of the sample's identity, identity of handler's responsible for the samples, and analyses to be performed.

4.0 Sample Analysis

Analysis of samples was completed using NWTPH-GX, NWTPH-DX/DX Extended NWTPH-EPH, NWTPH-VPH, and EPA 8260C by Libby Environmental, Inc. (Libby).

4.1 Analytical Results

The laboratory analytical results are located in Appendix A. The following table identifies sample results exceeding MTCA Method A Unrestricted Land-Use cleanup limits (Method A CULS, or CULa). Samples collected during Event 1 used to evaluate the potential impact of the neighboring historical gas station did not show the presence of any target analytes above laboratory reporting limits.

Analytical data confirms the presence of diesel-range petroleum hydrocarbons in the former area of the removed heating-oil tank. The following tables present the data collected from the heating-oil tank area.

Table 3. Excavation results of target analytes (mg/kg)

Sample Identification	Location	Depth (feet)	Diesel (mg/kg)
N6E3D10	Western side wall	10'	<25
N6E3D13	Western side wall	13'	2,900
N12E4D10	Northern side wall	10'	<25
N12E4D13	Northern side wall	13'	150
N6E9D10	Eastern side wall	10'	42.4
N6E9D13	Eastern side wall	13'	5,600
N2E5.5D10	Southern side wall	10'	150
N2E5.5D13	Southern side wall	13'	16,000
E6N6D11	Bottom (Removed)	11'	4,110
N3E7D8.5	Bottom (Removed)	8.5'	<25
N6.5E5.5D12.5	Bottom (Removed)	12.5'	31,400
N7E6.5D13.5	Bottom (Removed)	13.5'	2,370
N7E6.5D15	Bottom	15'	307
E4S3D4.5	Eastern side wall (shallow excavation near former tank location)	4.5'	<25
E6S6D5	Southern side wall (shallow excavation near former tank location)	4.5'	<25
E8S2D4.5	Western side wall (shallow excavation near former tank location)	5'	<25

Bold above MTCA Method A cleanup level of 2,000 mg/kg

Table 4. Boring results of target analytes (mg/kg)

Sample Depth	Date of work	Depth (feet)	Diesel (mg/kg)
B3-13.5'	9/12/2012	13.5'	4,090
B3-19'	9/12/2012	19'	<25
B5-15.5'	11/14/2012	15.5'	<25
B5-18'	11/14/2012	18'	<25
B6-16'	11/14/2012	16'	<25
B6-19'	11/14/2012	19'	<25
B7-16'	11/14/2012	16'	<25
B7-20'	11/14/2012	20'	<25
B8-14'	11/14/2012	14'	28,000
B8-18.5'	11/14/2012	18.5'	<25
B9-14.5'	11/14/2012	14.5'	<25
B9-17'	11/14/2012	17'	<25
B10-14.5'	11/14/2012	14.5'	231
B10-18'	11/14/2012	18'	<25
B11-15'	11/14/2012	15'	323
B11-18.5'	11/14/2012	18.5'	<25
B12-14'	11/14/2012	14'	6,810
B12-18'	11/14/2012	18'	<25
B13-24'	11/14/2012	24'	7,370
B14-14.5'	11/14/2012	14.5'	6,780
B15-15.5'	12/18/2012	15.5'	6,350*
B15-18'	12/18/2012	18'	<25
B16-25'	12/18/2012	25'	47
B17-20'	12/18/2012	20'	<25
B18-29'	12/18/2012	29'	52
B19-14.5'	12/18/2012	14.5'	18,700*
MTCA Method A Cleanup level			2,000

Bold above MTCA Method A cleanup level of 2,000 mg/kg

*denotes sample also analyzed for EPH/VPH petroleum fraction analysis.

4.2 Laboratory QA/QC

With the exception of matrix interferences caused by high analyte concentrations, the laboratory analyses were within the guidelines and control limits established by the laboratory and the analytical method. Therefore, the analyses were within acceptable QA/QC boundaries.

5.0 Data Reduction, Validation, and Reporting

5.1 Reduction

The raw data from the investigation are digitally stored on file. Reviews of the data show no inconsistencies or concerns.

5.2 Validation

Quality assurance and quality control results reported the laboratory confirm the data is consistent and repeatable. The laboratory indicates that all samples analyzed and recorded fall within acceptable QA/QC limitations.

According to our review, quality control data for the chain-of-custody, sample holding times, laboratory blanks, blind field duplicates, laboratory surrogate recoveries, and field documentation are acceptable.

5.3 Reporting

The laboratory results (attached) include a cover letter report from Libby explaining the details regarding the analysis, the chain-of-custody forms, the sample summary results, and the summary of the laboratory QA/QC.

6.0 Conclusions, Limitations, & Recommendations

6.1 Conclusions

The three borings completed to evaluate the potential impact to the subject from an adjacent former gas station did not reveal evidence of contaminants migrating through soil. The 19 borings completed to evaluate the extent of contamination from a former heating-oil tank have identified impacts covering approximately 2,500 square feet. Soils in this area exhibit a zone of contamination generally between 15-18 feet below the ground surface, except for the area around boring B13 where the maximum vertical extent has not been defined.

Although groundwater was not encountered in the borings, the risk to groundwater has not been established. As noted in Section 2.0, the expected depth to groundwater is approximately 50 feet below ground surface.

Soil excavation activities indicate that excavation of the identified contamination is likely impractical based on the large volume of unimpacted overburden, proximity to building footings, and public right-of-way.

At this time, it appears that the most practical method of achieving site closure is the use of institutional controls and long-term groundwater monitoring.

6.2 Recommendations

In order to move forward with site closure, we recommend completion of the following:

1. Prepare and submit application materials for entry into the Washington Department of Ecology's Voluntary Cleanup Program. This will be accomplished as part of the completion of this report, a copy of which will be submitted to Ecology.
2. Complete additional characterization consisting of the installation of four groundwater monitoring wells and one additional soil boring. The purpose of the soil boring is to evaluate the maximum vertical extent of the contamination in the area of boring B13.

The purpose of the groundwater monitoring wells is to assess whether or not groundwater has been impacted by the contaminants identified on site along with evaluation of groundwater flow direction and gradient across the impacted area. The proposed boring and monitoring well locations are shown in Figure 6.

3. Assuming groundwater impacts are not found, submit a final remedial investigation and feasibility study report, including disproportional cost analysis and cleanup (closure) action plan, to Ecology. If groundwater is impacted, then additional investigation and/or cleanup actions will be developed and presented to Ecology for review.

This additional information will determine whether or not site closure by implementation of an environmental covenant and groundwater monitoring is feasible.

Upon implementation of these recommendations, assuming groundwater impacts are not found, we recommend a final remedial investigation and feasibility study report, including disproportional cost analysis and cleanup (closure) action plan be submitted to Ecology. If groundwater is impacted, then additional investigation and/or cleanup actions will be developed and presented to Ecology for review.

7.0 References

Libby Environmental Services, Inc.

Tacoma-Pierce County Health Department

Troost, in review, Geologic map of the Tacoma-south 7.5-minute quadrangle, scale 1:24,000

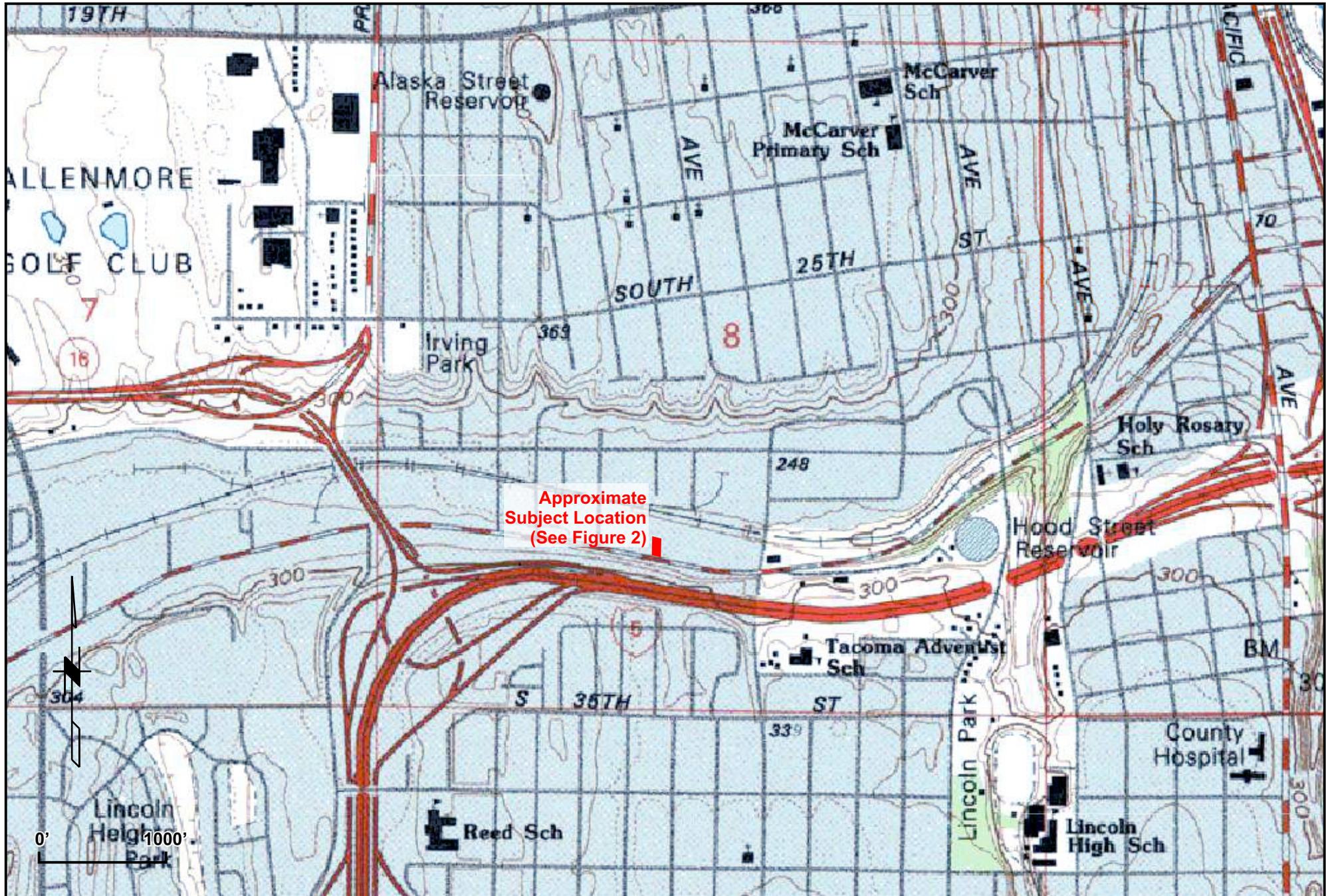
Washington State Department of Ecology, Toxics Cleanup Program, Revised November 2007, The Model Toxics Control Act Statute and Regulation, Chapter 173-340 WAC, publication no. 94-06

Washington State Department of Ecology, Toxics Cleanup Program, February 1996, Cleanup Levels and Risk Calculations (CLARC), Publication No. 94-145

Washington State Department of Ecology, June 1997, Analytical Methods for Petroleum Hydrocarbons, publication no. ECY 97-602

The statements, conclusions, and recommendations provided in this report are to be exclusively used within the context of this document. They are based upon generally accepted hydrogeologic and environmental practices and are the result of analysis by Robinson Noble, Inc. staff. This report, and any attachments to it, is for the exclusive use of Founders Choice Cabinets and Countertops and Commencement Bank. Unless specifically stated in the document, no warranty, expressed or implied, is made.

FIGURES



Approximate
Subject Location
(See Figure 2)



Note: Basemap taken from USGS Tacoma South Quadrangle

PM: JFH
March 2013
2754-001A/B

Pierce County
T 20 N/R 03 E - 08
Scale 1" = 1000'

Figure 1
Vicinity Map



**Heating-oil Tank
Investigation Area**

**Adjacent Former
Gas Station Investigation Area**

South Tacoma Way



Note: Image from
ESRI ArcGIS

PM: JFH
March 2013
2754-001A/B

Pierce County
T 20 N/R 03 E - 08
Scale 1" = 50'

Figure 2
Site Detail Map

Founder's Choice Cabinets: 1517 South Tacoma Way Site Investigation



Note: Image from
ESRI ArcGIS

PM: JFH
March 2013
2754-001A/B

Pierce County
T 20 N/R 03 E - 08
Scale 1" = 50'

Figure 3
Event 1 Boring Location Map

Founder's Choice Cabinets: 1517 South Tacoma Way Site Investigation



Legend:

- B12 - 14' Sample Identification and Depth
- Excavation Boundary
- - - Approximate Contamination Boundary
- ⊗ Boring Location Concentration above MTCA Method A Cleanup Level
- ⊗ Boring Location Concentration below MTCA Method A Cleanup Level

Standard MTCA A Cleanup Levels
Diesel Range Organics | 2,000 mg/kg

Note:
Red indicate concentrations above Standard MTCA Method A cleanup levels.
ND No Detection (< 25 mg/kg)

B12 - 14' = 6,810 mg/kg
B12 - 18' = ND

B8 - 14' = 28,000 mg/kg
B8 - 18.5' = ND

B15 - 15.5' = 6,350 mg/kg
B15 - 18' = ND

B19 - 14' = 18,700 mg/kg

B3 - 13.5' = 4,090 mg/kg
B3 - 19' = ND

B13 - 24' = 7,370 mg/kg

B14 - 14.5' = 6,780 mg/kg

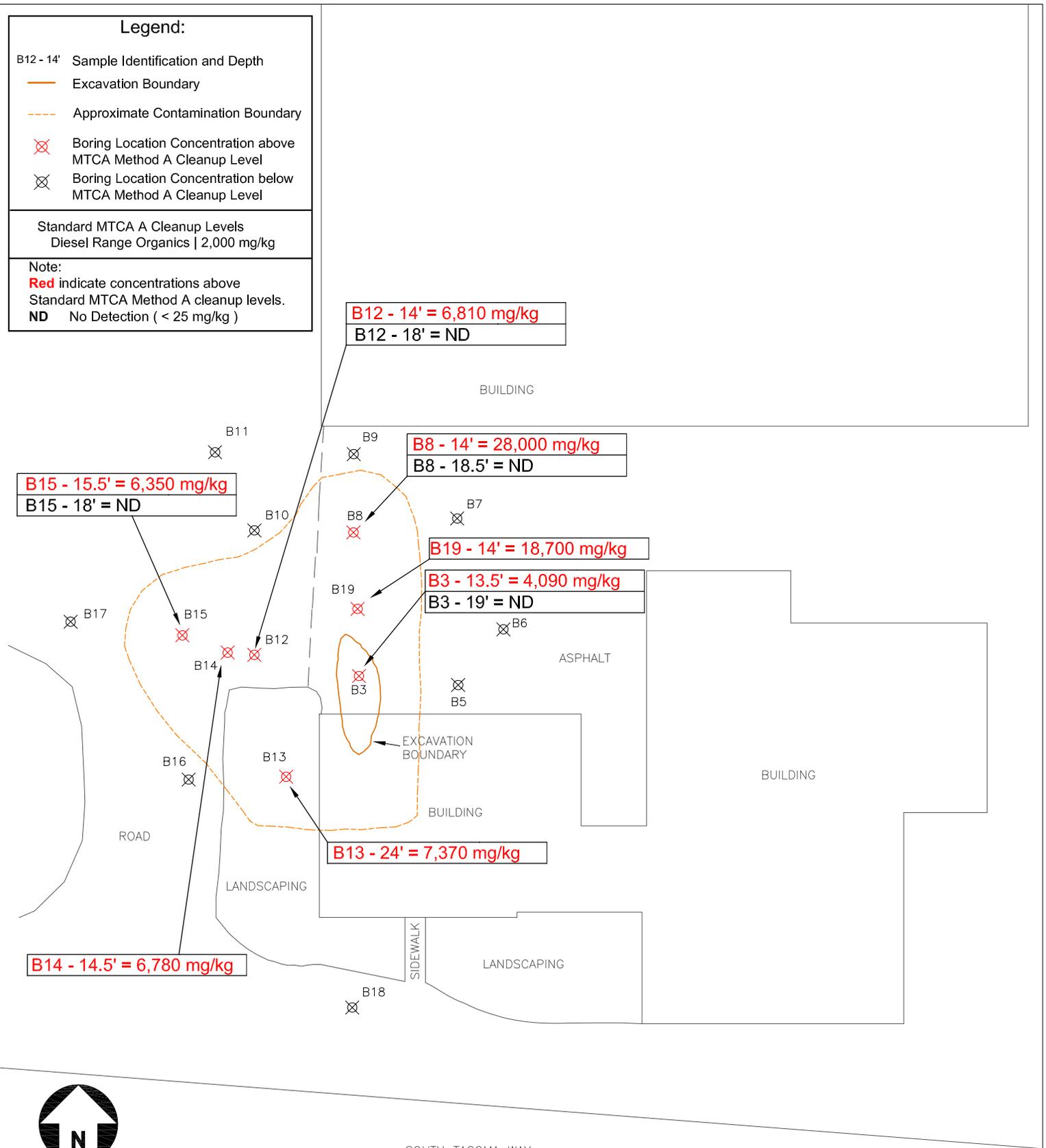


Figure 5

Heating Oil Tank Investigation Boring Location and Contamination Boundary Map

Founder's Choice Cabinets: 1517 South Tacoma Way Site Investigation

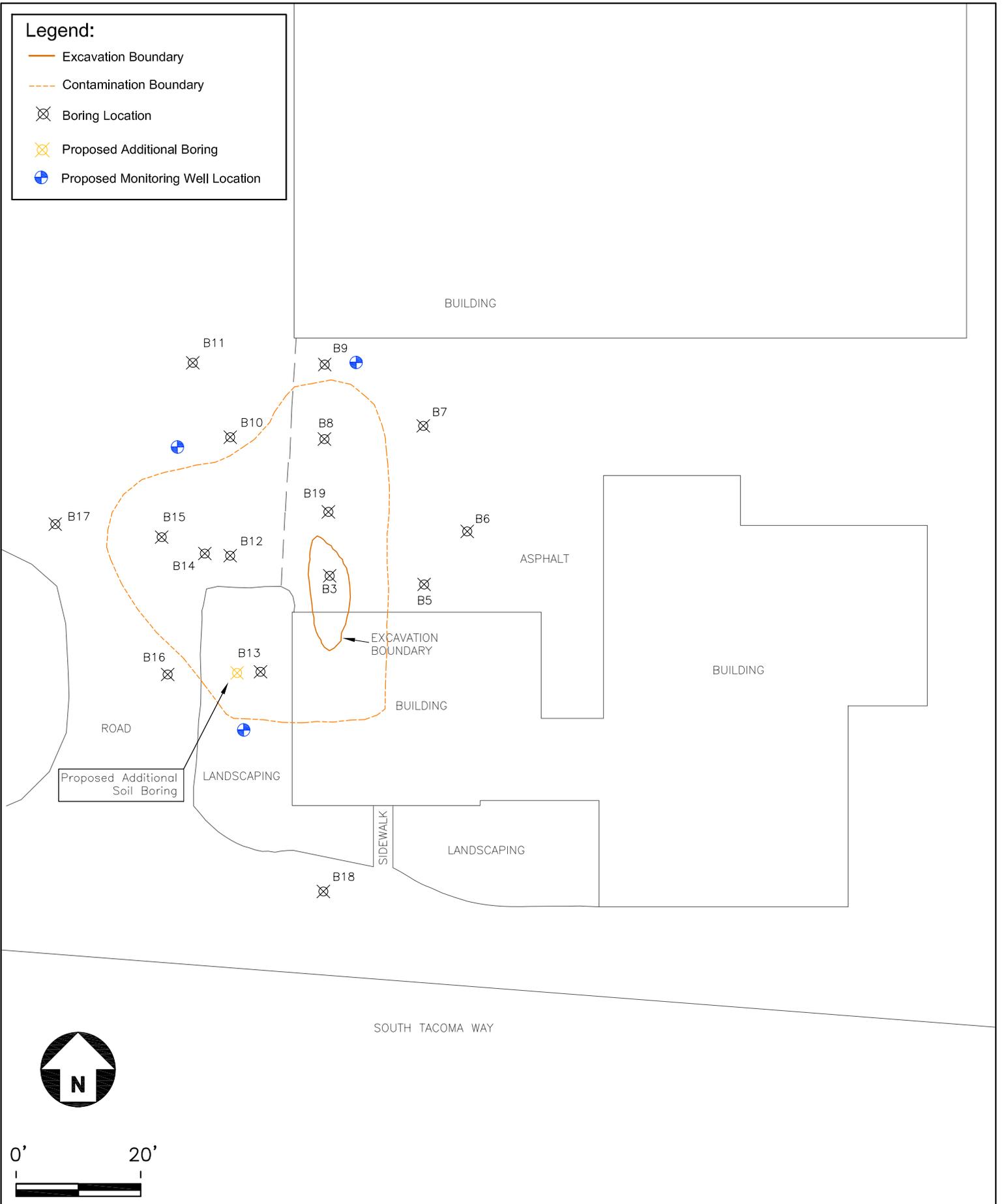


PM: JFH
March 2013
2754-001A/B

Pierce County
T 20 N/R 03 E - 08
Scale 1" = 20'

Legend:

-  Excavation Boundary
-  Contamination Boundary
-  Boring Location
-  Proposed Additional Boring
-  Proposed Monitoring Well Location



PM: JFH
 March 2013
 2754-001A/B

Pierce County
 T 20 N/R 03 E - 08
 Scale 1" = 20'

Figure 6
Proposed Monitoring Well and Boring Location Map
Founder's Choice Cabinets: 1517 South Tacoma Way

APPENDIX A



Libby Environmental, Inc.

4139 Libby Road NE • Olympia, WA 98506-2518

December 31, 2012

John Hildenbrand
Robinson Noble
3011 Huson Street South
Suite A
Tacoma, WA 98409

Dear Mr. Hildenbrand:

Please find enclosed the analytical data report for the Commencement Bank Project located in Tacoma, Washington. Soil samples were analyzed for Diesel by NWTPH-Dx, Volatile Petroleum Hydrocarbons by NWVPH and Extractable Petroleum Hydrocarbons by NWEPH on December 18, 23 & 28, 2012

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. All soil samples are reported on a dry weight basis. An invoice for this analytical work is enclosed.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Jamie L. Deyman
President
Libby Environmental, Inc.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@aol.com

www.LibbyEnvironmental.com

Libby Environmental, Inc.

4139 Libby Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@aol.com

COMMENCEMENT BANK PROJECT

Robinson Noble

Tacoma, Washington

Libby Project # L121218-20

Client Project # 2754-001B

Analyses of Diesel (NWTPH-Dx) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)
Method Blank	12/18/12	97	nd
B15-15.5	12/18/12	int	6350
B15-18	12/18/12	102	nd
B15-18 Dup	12/18/12	104	nd
B16-25	12/18/12	116	47
B16-25 Dup	12/18/12	107	39
B17-20	12/18/12	112	nd
B17-20 Dup	12/18/12	100	nd
B18-29	12/18/12	111	52
B18-29 Dup	12/18/12	105	49
B19-14.5	12/18/12	int	18700
Practical Quantitation Limit			25

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke



1311 N. 35th St.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Libby Environmental
Jamie Deyman
4139 Libby Rd. NE
Olympia, Washington 98506

RE: Commencement Bank
Lab ID: 1212127

January 03, 2013

Attention Jamie Deyman:

Fremont Analytical, Inc. received 2 sample(s) on 12/20/2012 for the analyses presented in the following report.

Extractable Petroleum Hydrocarbons by NWEPH
Sample Moisture (Percent Moisture)
Volatile Petroleum Hydrocarbons by NWVPH

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

A handwritten signature in black ink, appearing to read "M. Dee".

Michael Dee
Sr. Chemist / Principal



Date: 01/03/2013

CLIENT: Libby Environmental
Project: Commencement Bank
Lab Order: 1212127

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1212127-001	B15-15.5	12/18/2012 10:30 AM	12/20/2012 9:45 AM
1212127-002	B19-14.5	12/18/2012 4:40 PM	12/20/2012 9:45 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned



CLIENT: Libby Environmental
Project: Commencement Bank

I. SAMPLE RECEIPT:

All samples were received intact. The internal ice chest temperatures were measured on receipt and are recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.



Analytical Report

WO#: 1212127

Date Reported: 1/3/2013

Client: Libby Environmental
Project: Commencement Bank
Lab ID: 1212127-001
Client Sample ID: B15-15.5

Collection Date: 12/18/2012 10:30:00 AM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Extractable Petroleum Hydrocarbons by NWEPH

Batch ID: 3840

Analyst: BR

Aliphatic Hydrocarbon (C8-C10)	10.5	5.70		mg/Kg-dry	1	12/28/2012 2:32:00 AM
Aliphatic Hydrocarbon (C10-C12)	108	5.70		mg/Kg-dry	1	12/28/2012 2:32:00 AM
Aliphatic Hydrocarbon (C12-C16)	1,160	57.0	D	mg/Kg-dry	10	12/28/2012 2:51:00 PM
Aliphatic Hydrocarbon (C16-C21)	1,380	57.0	D	mg/Kg-dry	10	12/28/2012 2:51:00 PM
Aliphatic Hydrocarbon (C21-C34)	201	57.0	D	mg/Kg-dry	10	12/28/2012 2:51:00 PM
Aromatic Hydrocarbon (C8-C10)	ND	5.70		mg/Kg-dry	1	12/28/2012 11:57:00 AM
Aromatic Hydrocarbon (C10-C12)	6.22	5.70		mg/Kg-dry	1	12/28/2012 11:57:00 AM
Aromatic Hydrocarbon (C12-C16)	95.3	5.70		mg/Kg-dry	1	12/28/2012 11:57:00 AM
Aromatic Hydrocarbon (C16-C21)	677	57.0	D	mg/Kg-dry	10	12/28/2012 5:03:00 PM
Aromatic Hydrocarbon (C21-C34)	94.6	5.70		mg/Kg-dry	1	12/28/2012 11:57:00 AM
Surr: 1-Chlorooctadecane	117	65-140		%REC	1	12/28/2012 2:32:00 AM
Surr: o-Terphenyl	91.3	65-140		%REC	1	12/28/2012 11:57:00 AM

Volatile Petroleum Hydrocarbons by NWVPH

Batch ID: 3866

Analyst: EM

Aliphatic Hydrocarbon (C5-C6)	ND	0.532		mg/Kg-dry	1	12/23/2012 3:09:00 AM
Aliphatic Hydrocarbon (C6-C8)	1.06	0.532		mg/Kg-dry	1	12/23/2012 3:09:00 AM
Aliphatic Hydrocarbon (C8-C10)	1.97	0.532		mg/Kg-dry	1	12/23/2012 3:09:00 AM
Aliphatic Hydrocarbon (C10-C12)	9.73	0.532		mg/Kg-dry	1	12/23/2012 3:09:00 AM
Aromatic Hydrocarbon (C8-C10)	1.51	0.532		mg/Kg-dry	1	12/23/2012 3:09:00 AM
Aromatic Hydrocarbon (C10-C12)	29.1	0.532		mg/Kg-dry	1	12/23/2012 3:09:00 AM
Aromatic Hydrocarbon (C12-C13)	150	5.32	D	mg/Kg-dry	10	12/24/2012 6:10:00 PM
Benzene	ND	0.532		mg/Kg-dry	1	12/23/2012 3:09:00 AM
Toluene	ND	0.532		mg/Kg-dry	1	12/23/2012 3:09:00 AM
Ethylbenzene	ND	0.532		mg/Kg-dry	1	12/23/2012 3:09:00 AM
m,p-Xylene	ND	0.532		mg/Kg-dry	1	12/23/2012 3:09:00 AM
o-Xylene	ND	0.532		mg/Kg-dry	1	12/23/2012 3:09:00 AM
Naphthalene	ND	0.532		mg/Kg-dry	1	12/23/2012 3:09:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.532		mg/Kg-dry	1	12/23/2012 3:09:00 AM
Surr: Bromofluorobenzene	139	65-140		%REC	1	12/23/2012 3:09:00 AM
Surr: Trifluorotoluene	80.5	65-140		%REC	1	12/23/2012 3:09:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R6965

Analyst: JY

Percent Moisture	12.5			wt%	1	12/20/2012 9:41:46 AM
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Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1212127

Date Reported: 1/3/2013

Client: Libby Environmental
Project: Commencement Bank
Lab ID: 1212127-002
Client Sample ID: B19-14.5

Collection Date: 12/18/2012 4:40:00 PM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Extractable Petroleum Hydrocarbons by NWEPH

Batch ID: 3840

Analyst: BR

Aliphatic Hydrocarbon (C8-C10)	52.9	5.72		mg/Kg-dry	1	12/28/2012 3:16:00 AM
Aliphatic Hydrocarbon (C10-C12)	227	57.2	D	mg/Kg-dry	10	12/28/2012 3:35:00 PM
Aliphatic Hydrocarbon (C12-C16)	1,290	57.2	D	mg/Kg-dry	10	12/28/2012 3:35:00 PM
Aliphatic Hydrocarbon (C16-C21)	1,310	57.2	D	mg/Kg-dry	10	12/28/2012 3:35:00 PM
Aliphatic Hydrocarbon (C21-C34)	226	57.2	D	mg/Kg-dry	10	12/28/2012 3:35:00 PM
Aromatic Hydrocarbon (C8-C10)	5.96	5.72		mg/Kg-dry	1	12/28/2012 12:41:00 PM
Aromatic Hydrocarbon (C10-C12)	37.8	5.72		mg/Kg-dry	1	12/28/2012 12:41:00 PM
Aromatic Hydrocarbon (C12-C16)	294	57.2	D	mg/Kg-dry	10	12/28/2012 5:47:00 PM
Aromatic Hydrocarbon (C16-C21)	865	57.2	D	mg/Kg-dry	10	12/28/2012 5:47:00 PM
Aromatic Hydrocarbon (C21-C34)	94.2	5.72		mg/Kg-dry	1	12/28/2012 12:41:00 PM
Surr: 1-Chlorooctadecane	106	65-140		%REC	1	12/28/2012 3:16:00 AM
Surr: o-Terphenyl	75.9	65-140		%REC	1	12/28/2012 12:41:00 PM

Volatile Petroleum Hydrocarbons by NWVPH

Batch ID: 3866

Analyst: EM

Aliphatic Hydrocarbon (C5-C6)	ND	0.540		mg/Kg-dry	1	12/23/2012 4:54:00 AM
Aliphatic Hydrocarbon (C6-C8)	10.5	0.540		mg/Kg-dry	1	12/23/2012 4:54:00 AM
Aliphatic Hydrocarbon (C8-C10)	52.7	5.40	D	mg/Kg-dry	10	12/24/2012 6:45:00 PM
Aliphatic Hydrocarbon (C10-C12)	169	5.40	D	mg/Kg-dry	10	12/24/2012 6:45:00 PM
Aromatic Hydrocarbon (C8-C10)	41.0	0.540		mg/Kg-dry	1	12/23/2012 4:54:00 AM
Aromatic Hydrocarbon (C10-C12)	400	54.0	D	mg/Kg-dry	100	12/28/2012 7:42:00 PM
Aromatic Hydrocarbon (C12-C13)	3.59	0.540		mg/Kg-dry	1	12/23/2012 4:54:00 AM
Benzene	ND	0.540		mg/Kg-dry	1	12/23/2012 4:54:00 AM
Toluene	ND	0.540		mg/Kg-dry	1	12/23/2012 4:54:00 AM
Ethylbenzene	ND	0.540		mg/Kg-dry	1	12/23/2012 4:54:00 AM
m,p-Xylene	ND	0.540		mg/Kg-dry	1	12/23/2012 4:54:00 AM
o-Xylene	ND	0.540		mg/Kg-dry	1	12/23/2012 4:54:00 AM
Naphthalene	0.565	0.540		mg/Kg-dry	1	12/23/2012 4:54:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.540		mg/Kg-dry	1	12/23/2012 4:54:00 AM
Surr: Bromofluorobenzene	136	65-140		%REC	1	12/23/2012 4:54:00 AM
Surr: Trifluorotoluene	97.0	65-140		%REC	1	12/23/2012 4:54:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R6965

Analyst: JY

Percent Moisture	13.8			wt%	1	12/20/2012 9:41:46 AM
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Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 1/3/2013

Work Order: 1212127
 CLIENT: Libby Environmental
 Project: Commencement Bank

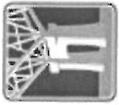
QC SUMMARY REPORT
Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: LCS-3840	SampType: LCS	Units: mg/Kg	Prep Date: 12/18/2012	RunNo: 7023							
Client ID: LCSS	Batch ID: 3840		Analysis Date: 12/24/2012	SeqNo: 139244							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	14.3	5.00	20.00	0	71.6	70	130				
Aliphatic Hydrocarbon (C10-C12)	7.16	5.00	10.00	0	71.6	70	130				
Aliphatic Hydrocarbon (C12-C16)	7.42	5.00	10.00	0	74.2	70	130				
Aliphatic Hydrocarbon (C16-C21)	7.67	5.00	10.00	0	76.7	70	130				
Aliphatic Hydrocarbon (C21-C34)	7.68	5.00	10.00	0	76.8	70	130				
Surr: 1-Chlorooctadecane	3.89		4.000		97.2	65	140				

Sample ID: 1212105-001BREP	SampType: REP	Units: mg/Kg-dry	Prep Date: 12/18/2012	RunNo: 7023							
Client ID: BATCH	Batch ID: 3840		Analysis Date: 12/24/2012	SeqNo: 139248							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	73.9	56.7			80.3	65	140	80.12	8.11	30	
Aliphatic Hydrocarbon (C10-C12)	290	56.7						262.6	9.77	30	
Aliphatic Hydrocarbon (C12-C16)	1,480	56.7						1,490	0.684	30	E
Aliphatic Hydrocarbon (C16-C21)	1,670	56.7						1,672	0.224	30	E
Aliphatic Hydrocarbon (C21-C34)	2,530	56.7						2,396	5.25	30	E
Surr: 1-Chlorooctadecane	36.4		45.37		80.3	65	140		0		

Sample ID: 1212105-001BREP	SampType: REP	Units: mg/Kg-dry	Prep Date: 12/18/2012	RunNo: 7023							
Client ID: BATCH	Batch ID: 3840		Analysis Date: 12/24/2012	SeqNo: 139249							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	56.7						0	0	30	
Aromatic Hydrocarbon (C10-C12)	ND	56.7						0	0	30	
Aromatic Hydrocarbon (C12-C16)	251	56.7						236.6	5.81	30	
Aromatic Hydrocarbon (C16-C21)	1,880	56.7						1,750	7.29	30	E
Aromatic Hydrocarbon (C21-C34)	3,280	56.7						3,156	3.74	30	E
Surr: o-Terphenyl	40.2		45.37		88.5	65	140		0		

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits
 D Dilution was required
 J Analyte detected below quantitation limits
 RL Reporting Limit
 E Value above quantitation range
 ND Not detected at the Reporting Limit
 S Spike recovery outside accepted recovery limits



Fremont
Analytical

Date: 1/3/2013

Work Order: 1212127

CLIENT: Libby Environmental

Project: Commencement Bank

QC SUMMARY REPORT
Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: 1212105-001BREP	SampType: REP	Units: mg/Kg-dry	Prep Date: 12/18/2012	RunNo: 7023							
Client ID: BATCH	Batch ID: 3840		Analysis Date: 12/24/2012	SeqNo: 139249							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: LCS-3840	SampType: LCS	Units: mg/Kg	Prep Date: 12/18/2012	RunNo: 7023							
Client ID: LCSS	Batch ID: 3840		Analysis Date: 12/24/2012	SeqNo: 139257							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aromatic Hydrocarbon (C8-C10)	15.4	5.00	20.00	0	76.9	70	130				
Aromatic Hydrocarbon (C10-C12)	7.47	5.00	10.00	0	74.7	70	130				
Aromatic Hydrocarbon (C12-C16)	8.10	5.00	10.00	0	81.0	70	130				
Aromatic Hydrocarbon (C16-C21)	8.58	5.00	10.00	0	85.8	70	130				
Aromatic Hydrocarbon (C21-C34)	8.58	5.00	10.00	0	85.8	70	130				
Surr: o-Terphenyl	3.70		4.000		92.5	65	140				

Sample ID: LCSD-3840	SampType: LCSD	Units: mg/Kg	Prep Date: 12/18/2012	RunNo: 7023							
Client ID: LCSS02	Batch ID: 3840		Analysis Date: 12/24/2012	SeqNo: 139258							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aliphatic Hydrocarbon (C8-C10)	14.1	5.00	20.00	0	70.4	70	130	14.33	1.73	20	
Aliphatic Hydrocarbon (C10-C12)	7.26	5.00	10.00	0	72.6	70	130	7.165	1.33	20	
Aliphatic Hydrocarbon (C12-C16)	7.78	5.00	10.00	0	77.8	70	130	7.416	4.74	20	
Aliphatic Hydrocarbon (C16-C21)	8.20	5.00	10.00	0	82.0	70	130	7.675	6.62	20	
Aliphatic Hydrocarbon (C21-C34)	8.20	5.00	10.00	0	82.0	70	130	7.678	6.56	20	
Surr: 1-Chlorooctadecane	4.16		4.000		104	65	140		0		

Qualifiers:

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
D Dilution was required
J Analyte detected below quantitation limits
RL Reporting Limit
E Value above quantitation range
ND Not detected at the Reporting Limit
S Spike recovery outside accepted recovery limits



Date: 1/3/2013

Work Order: 1212127

CLIENT: Libby Environmental

Project: Commencement Bank

QC SUMMARY REPORT
Extractable Petroleum Hydrocarbons by NWEPH

Sample ID:	LCSD-3840	SampType:	LCSD	Units:	mg/Kg	Prep Date:	12/18/2012	RunNo:	7023		
Client ID:	LCSS02	Batch ID:	3840	Analysis Date:	12/24/2012	SeqNo:	139259				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	14.4	5.00	20.00	0	72.0	70	130	15.37	6.53	20	
Aromatic Hydrocarbon (C10-C12)	7.94	5.00	10.00	0	79.4	70	130	7.474	6.02	20	
Aromatic Hydrocarbon (C12-C16)	8.30	5.00	10.00	0	83.0	70	130	8.096	2.50	20	
Aromatic Hydrocarbon (C16-C21)	9.08	5.00	10.00	0	90.8	70	130	8.576	5.68	20	
Aromatic Hydrocarbon (C21-C34)	9.14	5.00	10.00	0	91.4	70	130	8.577	6.32	20	
Surr: o-Terphenyl	3.84		4.000		96.0	65	140		0		

Sample ID:	MB-3840	SampType:	MBLK	Units:	mg/Kg	Prep Date:	12/18/2012	RunNo:	7023		
Client ID:	MBLKS	Batch ID:	3840	Analysis Date:	12/24/2012	SeqNo:	139260				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	ND	5.00									
Aliphatic Hydrocarbon (C10-C12)	ND	5.00									
Aliphatic Hydrocarbon (C12-C16)	ND	5.00									
Aliphatic Hydrocarbon (C16-C21)	ND	5.00									
Aliphatic Hydrocarbon (C21-C34)	ND	5.00									
Surr: 1-Chlorooctadecane	3.35		4.000		83.9	65	140				

Sample ID:	MB-3840	SampType:	MBLK	Units:	mg/Kg	Prep Date:	12/18/2012	RunNo:	7023		
Client ID:	MBLKS	Batch ID:	3840	Analysis Date:	12/24/2012	SeqNo:	139261				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	5.00									
Aromatic Hydrocarbon (C10-C12)	ND	5.00									
Aromatic Hydrocarbon (C12-C16)	ND	5.00									
Aromatic Hydrocarbon (C16-C21)	ND	5.00									
Aromatic Hydrocarbon (C21-C34)	ND	5.00									
Surr: o-Terphenyl	3.68		4.000		92.0	65	140				

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Fremont
Analytical

Date: 1/3/2013

Work Order: 1212127

CLIENT: Libby Environmental

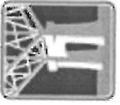
Project: Commencement Bank

QC SUMMARY REPORT
Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: MB-3840	SampType: MBLK	Units: mg/Kg	Prep Date: 12/18/2012	RunNo: 7023
Client ID: MBLKS	Batch ID: 3840	RL	Analysis Date: 12/24/2012	SeqNo: 139261
Analyte	Result	SPK value	LowLimit	HighLimit
		SPK Ref Val	RPD Ref Val	RPDLimit
		%REC		%RPD
				RPDLimit
				Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 1/3/2013

Work Order: 1212127

CLIENT: Libby Environmental

Project: Commencement Bank

QC SUMMARY REPORT Volatile Petroleum Hydrocarbons by NWVPH

Sample ID:	1212109-002AMS	SampType:	MS	Units:	mg/Kg-dry	Prep Date:	12/21/2012	RunNo:	7024		
Client ID:	BATCH	Batch ID:	3866	Analysis Date:	12/22/2012	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	72.4	0.551	66.14	0	110	70	130				
Aliphatic Hydrocarbon (C6-C8)	23.4	0.551	22.05	0	106	70	130				
Aliphatic Hydrocarbon (C8-C10)	23.7	0.551	22.05	0	108	70	130				
Aliphatic Hydrocarbon (C10-C12)	26.3	0.551	22.05	0	119	70	130				
Aromatic Hydrocarbon (C8-C10)	109	0.551	110.2	0	98.6	70	130				
Aromatic Hydrocarbon (C10-C12)	22.5	0.551	22.05	0	102	70	130				
Aromatic Hydrocarbon (C12-C13)	27.0	0.551	22.05	0	122	70	130				
Benzene	21.4	0.551	22.05	0	97.1	70	130				
Toluene	23.2	0.551	22.05	0	105	70	130				
Ethylbenzene	23.1	0.551	22.05	0	105	70	130				
m,p-Xylene	45.0	0.551	44.09	0	102	70	130				
o-Xylene	22.4	0.551	22.05	0	101	70	130				
Naphthalene	16.9	0.551	22.05	0	76.6	70	130				
Methyl tert-butyl ether (MTBE)	23.6	0.551	22.05	0	107	70	130				
Surr: Bromofluorobenzene	1.08		1.102		98.0	65	140				
Surr: Trifluorotoluene	1.19		1.102		108	65	140				

Sample ID:	LCS-3866	SampType:	LCS	Units:	mg/Kg	Prep Date:	12/21/2012	RunNo:	7024		
Client ID:	LCSS	Batch ID:	3866	Analysis Date:	12/21/2012	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	55.8	0.500	60.00	0	93.0	70	130				
Aliphatic Hydrocarbon (C6-C8)	18.2	0.500	20.00	0	91.1	70	130				
Aliphatic Hydrocarbon (C8-C10)	17.4	0.500	20.00	0	87.1	70	130				
Aliphatic Hydrocarbon (C10-C12)	17.4	0.500	20.00	0	87.2	70	130				
Aromatic Hydrocarbon (C8-C10)	89.6	0.500	100.0	0	89.6	70	130				
Aromatic Hydrocarbon (C10-C12)	21.4	0.500	20.00	0	107	70	130				
Aromatic Hydrocarbon (C12-C13)	17.2	0.500	20.00	0	86.1	70	130				

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
D Dilution was required
J Analyte detected below quantitation limits
RL Reporting Limit
E Value above quantitation range
ND Not detected at the Reporting Limit
S Spike recovery outside accepted recovery limits



Date: 1/3/2013

Work Order: 1212127
CLIENT: Libby Environmental
Project: Commencement Bank

QC SUMMARY REPORT
Volatile Petroleum Hydrocarbons by NWVPH

Sample ID:	LCS-3866	SampType:	LCS	Units:	mg/Kg	Prep Date:	12/21/2012	RunNo:	7024		
Client ID:	LCSS	Batch ID:	3866			Analysis Date:	12/21/2012	SeqNo:	139271		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	17.4	0.500	20.00	0	87.1	70	130				
Toluene	18.8	0.500	20.00	0	93.8	70	130				
Ethylbenzene	19.3	0.500	20.00	0	96.6	70	130				
m,p-Xylene	40.4	0.500	40.00	0	101	70	130				
o-Xylene	20.8	0.500	20.00	0	104	70	130				
Naphthalene	19.5	0.500	20.00	0	97.5	70	130				
Methyl tert-butyl ether (MTBE)	20.3	0.500	20.00	0	102	70	130				
Surr: Bromofluorobenzene	0.907		1.000		90.7	65	140				
Surr: Trifluorotoluene	1.27		1.000		127	65	140				

Sample ID:	LCSD-3866	SampType:	LCSD	Units:	mg/Kg	Prep Date:	12/21/2012	RunNo:	7024		
Client ID:	LCSS02	Batch ID:	3866			Analysis Date:	12/21/2012	SeqNo:	139272		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	58.2	0.500	60.00	0	97.0	70	130	55.83	4.18	20	
Aliphatic Hydrocarbon (C6-C8)	18.8	0.500	20.00	0	93.9	70	130	18.22	3.00	20	
Aliphatic Hydrocarbon (C8-C10)	18.5	0.500	20.00	0	92.5	70	130	17.42	5.99	20	
Aliphatic Hydrocarbon (C10-C12)	20.0	0.500	20.00	0	100	70	130	17.45	13.7	20	
Aromatic Hydrocarbon (C8-C10)	94.3	0.500	100.0	0	94.3	70	130	89.60	5.06	20	
Aromatic Hydrocarbon (C10-C12)	24.3	0.500	20.00	0	121	70	130	21.40	12.6	20	
Aromatic Hydrocarbon (C12-C13)	19.0	0.500	20.00	0	95.2	70	130	17.21	10.1	20	
Benzene	17.7	0.500	20.00	0	88.7	70	130	17.42	1.84	20	
Toluene	19.0	0.500	20.00	0	94.8	70	130	18.75	1.04	20	
Ethylbenzene	19.6	0.500	20.00	0	97.9	70	130	19.33	1.26	20	
m,p-Xylene	40.9	0.500	40.00	0	102	70	130	40.36	1.32	20	
o-Xylene	21.0	0.500	20.00	0	105	70	130	20.81	1.02	20	
Naphthalene	17.2	0.500	20.00	0	85.9	70	130	19.51	12.7	20	
Methyl tert-butyl ether (MTBE)	22.4	0.500	20.00	0	112	70	130	20.35	9.40	20	

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Fremont
Analytical

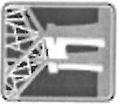
Date: 1/3/2013

Work Order: 1212127
CLIENT: Libby Environmental
Project: Commencement Bank
QC SUMMARY REPORT
Volatle Petroleum Hydrocarbons by NWVPH

Sample ID: LCSD-3866	SampType: LCSD	Units: mg/Kg	Prep Date: 12/21/2012	RunNo: 7024							
Client ID: LCSS02	Batch ID: 3866		Analysis Date: 12/21/2012	SeqNo: 139272							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Bromofluorobenzene	1.12		1.000		112	65	140			0	
Surr: Trifluorotoluene	1.21		1.000		121	65	140			0	

Sample ID: MB-3866	SampType: MBLK	Units: mg/Kg	Prep Date: 12/21/2012	RunNo: 7024							
Client ID: MBLKS	Batch ID: 3866		Analysis Date: 12/21/2012	SeqNo: 139273							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	ND	0.500			0						
Aliphatic Hydrocarbon (C6-C8)	ND	0.500			0						
Aliphatic Hydrocarbon (C8-C10)	ND	0.500			0						
Aliphatic Hydrocarbon (C10-C12)	ND	0.500			0						
Aromatic Hydrocarbon (C8-C10)	ND	0.500			0						
Aromatic Hydrocarbon (C10-C12)	ND	0.500			0						
Aromatic Hydrocarbon (C12-C13)	ND	0.500			0						
Benzene	ND	0.500			0						
Toluene	ND	0.500			0						
Ethylbenzene	ND	0.500			0						
m,p-Xylene	ND	0.500			0						
o-Xylene	ND	0.500			0						
Naphthalene	ND	0.500			0						
Methyl tert-butyl ether (MTBE)	ND	0.500			0						
Surr: Bromofluorobenzene	1.26		1.000		126	65	140				
Surr: Trifluorotoluene	1.02		1.000		102	65	140				

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Fremont
Analytical

Date: 1/3/2013

Work Order: 1212127

CLIENT: Libby Environmental

Project: Commencement Bank

QC SUMMARY REPORT
Volatile Petroleum Hydrocarbons by NWWPH

Sample ID:	1212127-002ADUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	12/21/2012	RunNo:	7024		
Client ID:	B19-14.5	Batch ID:	3866	Analysis Date:	12/23/2012	SeqNo:	139958				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	ND	0.540	0	0	0	0	0	0	0	25	
Aliphatic Hydrocarbon (C6-C8)	11.1	0.540	0	0	0	0	10.47	10.47	5.83	25	
Aliphatic Hydrocarbon (C8-C10)	41.1	0.540	0	0	0	0	39.23	39.23	4.71	25	E
Aliphatic Hydrocarbon (C10-C12)	41.3	0.540	0	0	0	0	37.66	37.66	9.26	25	E
Aromatic Hydrocarbon (C8-C10)	46.4	0.540	0	0	0	0	40.96	40.96	12.4	25	
Aromatic Hydrocarbon (C10-C12)	112	0.540	0	0	0	0	104.9	104.9	6.27	25	E
Aromatic Hydrocarbon (C12-C13)	3.68	0.540	0	0	0	0	3.589	3.589	2.53	25	
Benzene	ND	0.540	0	0	0	0	0	0	0	25	
Toluene	ND	0.540	0	0	0	0	0	0	0	25	
Ethylbenzene	ND	0.540	0	0	0	0	0	0	0	25	
m,p-Xylene	ND	0.540	0	0	0	0	0	0	0	25	
o-Xylene	ND	0.540	0	0	0	0	0	0	0	25	
Naphthalene	0.592	0.540	0	0	0	0	0	0	0	25	
Methyl tert-butyl ether (MTBE)	ND	0.540	0	0	0	0	0.5650	0.5650	4.62	25	
Surr: Bromofluorobenzene	1.46		1.080		135	65	140		0	0	
Surr: Trifluorotoluene	1.14		1.080		105	65	140		0	0	

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Sample Log-In Check List

Client Name: LIBBY	Work Order Number: 1212127
Logged by: Clare Griggs	Date Received: 12/20/2012 9:45:00 AM

Chain of Custody

1. Were custodial seals present? Yes No Not Required
2. Is Chain of Custody complete? Yes No Not Present
3. How was the sample delivered? UPS

Log In

4. Coolers are present? Yes No NA
5. Was an attempt made to cool the samples? Yes No NA
6. Were all coolers received at a temperature of >0° C to 10.0°C Yes No NA
7. Sample(s) in proper container(s)? Yes No
8. Sufficient sample volume for indicated test(s)? Yes No
9. Are samples properly preserved? Yes No
10. Was preservative added to bottles? Yes No NA
11. Is there headspace present in VOA vials? Yes No NA
12. Did all sample containers arrive in good condition?(unbroken) Yes No
13. Does paperwork match bottle labels? Yes No
14. Are matrices correctly identified on Chain of Custody? Yes No
15. Is it clear what analyses were requested? Yes No
16. Were all holding times able to be met? Yes No

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

18. Additional remarks/Discrepancies

Item Information

Item #	Temp °C	Condition
Cooler	8.8	Good

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Chain of Custody Record

12/12/12

Date: 12/19/12 Page: 1 of 1

www.LibbyEnvironmental.com

Client: Libby Environmental, Inc.
Address: 4139 Libby Rd NE
City: Olympia State: WA Zip: 98506
Phone: 360 352-2110 Fax:
Client Project #: L121218-20

Project Manager: Jamie Reymann
Project Name: Commencement Bank
Location: Tacoma City, State: WA
Collector: libbyenv@col.com Date of Collection: 12/18/12

Sample Number	Depth	Time	Sample Type	Container Type	Field Notes
1	15.5	1030	Soil	Voc/Soil	XX VPH XX EPH MTCAs 8082 PAH 8270 NMTPH-DX EXL NMTPH-DX NMTPH-GX NMTPH-HGD NMTPH-VOL 8270 SEM VOL 8280 VQA 8021B BTEX ONLY VQA 8021B
2	14.5	1640	Soil	Voc/Soil	XX VPH XX EPH
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					

Requisitioned by: Jamie Reymann Date / Time: 12/19/12 1105 Received by: [Signature] Date / Time: 12-20-12 9:45
 Requisitioned by: [Signature] Date / Time: 12-20-12 9:45 Received by: [Signature] Date / Time: 12-20-12 9:45
 Requisitioned by: [Signature] Date / Time: 12-20-12 9:45 Received by: [Signature] Date / Time: 12-20-12 9:45

Remarks: Stod

Sample Receipt:
 Good Condition?
 Color?
 Seals intact?
 Total Number of Containers:

TAT: 24HR 48HR 5-DAY
 Distributor: White - Lab, Yellow - File, Pink - Original





Libby Environmental, Inc.

4139 Libby Road NE • Olympia, WA 98506-2518

November 15, 2012

John Hildenbrand
Robinson Noble
3011 Huson Street South
Suite A
Tacoma, WA 98409

Dear Mr. Hildenbrand:

Please find enclosed the analytical data report for the Commencement Bank 1517 South Tacoma Way Project located in Tacoma, Washington. Soil samples were analyzed for Diesel by NWTPH-Dx on November 14, 2012.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. All soil samples are reported on a dry weight basis. An invoice for this analytical work is enclosed.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Jamie L. Deyman
President
Libby Environmental, Inc.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@aol.com

www.LibbyEnvironmental.com

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

COMMENCEMENT BANK 1517 SOUTH TACOMA WAY PROJECT
Robinson Noble
Tacoma, Washington
Libby Project # L121114-20
Client Project # 2754-001B

Analyses of Diesel (NWTPH-Dx) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)
Method Blank	11/14/12	85	nd
B5-15.5'	11/14/12	89	nd
B5-18'	11/14/12	84	nd
B6-16'	11/14/12	91	nd
B6-19'	11/14/12	86	nd
B7-16'	11/14/12	98	nd
B7-20'	11/14/12	80	nd
B8-14'	11/14/12	int	28000
B8-18.5'	11/14/12	82	nd
B8-18.5' Dup	11/14/12	79	nd
B9-14.5'	11/14/12	92	nd
B9-17'	11/14/12	79	nd
B10-14.5'	11/14/12	int	231
B10-18'	11/14/12	87	nd
B11-15'	11/14/12	int	323
B11-18.5'	11/14/12	84	nd
B11-18.5' Dup	11/14/12	83	nd
B12-14'	11/14/12	int	6810
B12-18'	11/14/12	114	nd
B13-24'	11/14/12	int	7370
B14-14.5'	11/14/12	int	6780
Practical Quantitation Limit			25

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%
ANALYSES PERFORMED BY: Jamie Deyman

Libby Environmental, Inc.

4139 Libby Road NE
 Olympia, WA 98506
 Ph: 360-352-2110
 Fax: 360-352-4154

Client: Robinson Noble

Address: 3011 South Hudson St Suite A Tac WA

Phone: 253-475-7711 Fax: _____

Client Project # 2754-001B

Chain of Custody Record

Date: 11-14-12 Page: 1 of 1

Project Manager: JFH

Project Name: Commencement Bank 1517 South Tacoma Way

Location: Tacoma WA

Collector: ACY Date of Collection: 11-14-12

Sample Number	Depth	Time	Sample Type	Container Type	VOA 8021B BTEX Only	VOA 8021B VOL 8270	SEM VOL 8260	NWTPH-HCID	NWTPH-GX	NWTPH-DX	NWTPH-DX Ext.	PAH 8270	PCBS 8082	MTCA 5 Metals	Field Note/# Containers
1 B5-15.5	15.5	9:49	soil	402											
2 B5-18'	18	9:50													
3 B6-16'	16	10:43													
4 B6-19'	19	10:45													
5 B7-16'	16	10:37													
6 B7-20'	20	11:38													
7 B8-14'	14	12:17													
8 B8-18.5	18.5	12:24													
9 B9-14.5	14.5	13:34													
10 B9-17	17	13:35													
11 B10-14.5	14.5	14:10													
12 B10-18'	18	14:11													
13 B11-15	15	14:45													
14 B11-18.5	18.5	14:46													
15 B12-14	14	15:55													
16 B12-18	18	15:58													
17 B13-24	24	16:51													
18 B14-14.5	14.5	17:30													

Relinquished by: Anon Young 11-14-12 am 307 Date / Time: 11-14-12 17:38 Received by: James Deyman 11/14/12 Date / Time: 11/14/12

Remarks: _____

Sample Receipt:

Good Condition? _____

Cold? _____

Seals Intact? _____

Total Number of Containers: _____

TAT 24HR 48HR 5-Day



Libby Environmental, Inc.

4139 Libby Road NE • Olympia, WA 98506-2518

November 6, 2012

John Hildenbrand
Robinson Noble
3011 Huson Street South
Suite A
Tacoma, WA 98409

Dear Mr. Hildenbrand:

Please find enclosed the analytical data report for the Commencement Bank 1517 South Tacoma Way Project located in Tacoma, Washington. Soil samples were analyzed for Diesel by NWTPH-Dx and Gasoline by NWTPH-Gx and BTEX by EPA Method 8021B on October 30, 2012.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. All soil samples are reported on a dry weight basis. An invoice for this analytical work is enclosed.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Jamie L. Deyman
President
Libby Environmental, Inc.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@aol.com

www.LibbyEnvironmental.com

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

COMMENCEMENT BANK 1517 SOUTH TACOMA WAY PROJECT
Robinson Noble
Tacoma, Washington
Libby Project # L121030-20
Client Project # 2754-001B

Analyses of Diesel (NWTPH-Dx) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)
Method Blank	10/30/12	90	nd
Method Blank	10/30/12	91	nd
E4S3D4.5	10/30/12	100	nd
E6S6D5	10/30/12	80	nd
E8S2D4.5	10/30/12	94	nd
Stockpile North	10/30/12	92	133
Stockpile W	10/30/12	92	97
Stockpile S	10/30/12	100	nd
Stockpile East	10/30/12	94	nd
E6N6D11	10/30/12	int	4110
N3E7D8.5	10/30/12	103	nd
N6.5E5.5D12.5	10/30/12	int	31400
N7E6.5D13.5	10/30/12	int	2370
N7E6.5D15	10/30/12	int	307
N6E9D10	10/30/12	int	42.4
N6E9D10 Dup	10/30/12	int	40.6
N6E3D10	10/30/12	105	nd
N12E4D10	10/30/12	105	nd
N6E9D13	10/30/12	int	5600
N6E3D13	10/30/12	int	2900
N2E5.5D10	10/30/12	123	150
N2E5.5D10 Dup	10/30/12	117	150
N2E5.5D13	10/30/12	int	16000
N12E4D13	10/30/12	133	150
Practical Quantitation Limit			25

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Jamie Deyman

Libby Environmental, Inc.

4139 Libby Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@aol.com

COMMENCEMENT BANK 1517 SOUTH TACOMA WAY PROJECT

Robinson Noble

Tacoma, Washington

Libby Project # L121030-20

Client Project # 2754-001B

Analyses of BTEX by EPA Method 8021B in Soil

Sample Number	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Surrogate Recovery (%)
Method Blank	10/30/12	nd	nd	nd	nd	81
LCS	10/30/12	81%	93%			89
N6.5E5.5D12.5	10/30/12	nd	nd	nd	nd	103
N6.5E5.5D12.5 Dup	10/30/12	nd	nd	nd	nd	107
N7E6.5D13.5	10/30/12	nd	nd	nd	nd	83
N6.5E5.5D12.5 MS	10/30/12	94%	85%			107
Practical Quantitation Limit		0.02	0.10	0.05	0.15	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

ANALYSES PERFORMED BY: Jamie Deyman

Libby Environmental, Inc.

4139 Libby Road NE
 Olympia, WA 98506
 Ph: 360-352-2110
 Fax: 360-352-4154

Client: Robinson Noble

Address: 3011 South Hanson Street, Site A Tacoma WA

Phone: 253-475-7711 Fax: _____

Client Project # 2754-001B

Chain of Custody Record

Date: 10-30-12 Page: 1 of 2

Project Manager: JFH

Project Name: Commencement Bank 1517 South Tacoma WA

Location: Tacoma WA

Collector: ACY Date of Collection: 10-30-12

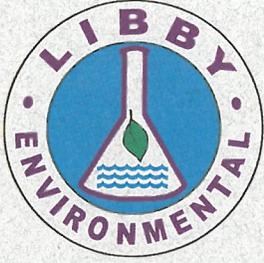
Sample Number	Depth	Time	Sample Type	Container Type	VOA 8021B BTEX Only	VOA 821B BTEX Only	SEM VOL 8270	NWTPH-HCID	NWTPH-GX	NWTPH-DX	NWTPH-DX EXL	PAH 8270	PCBS 8082	MTCAs 5 Metals	Field Note/# Containers
1 E453D4.5	4.5	9:19	Soil	402											
2 E656D5	5	9:26													
3 E853D4.5	4.5	9:31													
4 Stockpile North		10:08													
5 Stockpile W		10:09													
6 Stockpile S		10:10													
7 Stockpile East		10:11													
8 E6N6D11	11	10:25													
9 N3E7D8.5	8.5	10:29													
10 N6E5D12.5	12.5	10:38													
11 N7E6.5D13.5	13.5	11:02													
12 NTE6.5D15	15	11:54													
13 N6E9D10	10	12:32													
14 N6E3D10	10	12:44													
15 N12F4D10	10	12:46													
16 N6E9D13	13	12:46													
17 N6E3D13	13	12:57													
18 N2E5.5D10	10	13:03													

Sample Receipt: SM

Remarks:

Relinquished by: Arnon Young Date / Time: 10-30-12
 Received by: James L. Deyman Date / Time: 10/30/12
 Relinquished by: _____ Date / Time: _____
 Received by: _____ Date / Time: _____

TAT 24HR 48HR 5-Day



Libby Environmental, Inc.

4139 Libby Road NE • Olympia, WA 98506-2518

September 18, 2012

John Hildenbrand
Robinson Noble
3011 Huson Street South
Suite A
Tacoma, WA 98409

Dear Mr. Hildenbrand:

Please find enclosed the analytical data report for the 1517 South Tacoma Way Project located in Tacoma, Washington. Soil samples were analyzed for Gasoline by NWTPH-Gx, Diesel by NWTPH-Dx and Volatile Organic Compounds by EPA Method 8260C on September 14, 2012.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. All soil samples are reported on a dry weight basis. An invoice for this analytical work is enclosed.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
Lab Manager
Libby Environmental, Inc.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@aol.com

www.LibbyEnvironmental.com

Libby Environmental, Inc.

1517 SOUTH TACOMA WAY PROJECT
 Robinson Noble, Inc.
 Tacoma, Washington
 Libby Project # L120912-2
 Client Project # 2754-001A

4139 Libby Road NE
 Olympia, WA 98506
 Phone: (360) 352-2110
 FAX: (360) 352-4154
 Email: libbyenv@aol.com

Volatile Organic Compounds by EPA Method 8260C in Soil

Sample Description	Method	B1-25'	B2-30'	B4-19'	
	Blank				
Date Sampled	Reporting	N/A	9/12/12	9/12/12	9/12/12
Date Analyzed	Limits	9/14/12	9/14/12	9/14/12	9/18/12
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Dichlorodifluoromethane	0.06	nd	nd	nd	nd
Chloromethane	0.06	nd	nd	nd	nd
Vinyl chloride	0.02	nd	nd	nd	nd
Bromomethane	0.09	nd	nd	nd	nd
Chloroethane	0.06	nd	nd	nd	nd
Trichlorofluoromethane	0.05	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd	nd
Methylene chloride	0.02	nd	nd	nd	nd
Methyl <i>tert</i> - Butyl Ether (MTBE)	0.02	nd	nd	nd	nd
<i>trans</i> -1,2-Dichloroethene	0.02	nd	nd	nd	nd
1,1-Dichloroethane	0.02	nd	nd	nd	nd
2,2-Dichloropropane	0.05	nd	nd	nd	nd
<i>cis</i> -1,2-Dichloroethene	0.02	nd	nd	nd	nd
Chloroform	0.02	nd	nd	nd	nd
1,1,1-Trichloroethane (TCA)	0.02	nd	nd	nd	nd
Carbon tetrachloride	0.02	nd	nd	nd	nd
1,1-Dichloropropene	0.02	nd	nd	nd	nd
Benzene	0.02	nd	nd	nd	nd
1,2-Dichloroethane (EDC)	0.03	nd	nd	nd	nd
Trichloroethene (TCE)	0.03	nd	nd	nd	nd
1,2-Dichloropropane	0.02	nd	nd	nd	nd
Dibromomethane	0.04	nd	nd	nd	nd
Bromodichloromethane	0.02	nd	nd	nd	nd
<i>cis</i> -1,3-Dichloropropene	0.02	nd	nd	nd	nd
Toluene	0.02	nd	nd	nd	nd
Trans-1,3-Dichloropropene	0.03	nd	nd	nd	nd
1,1,2-Trichloroethane	0.03	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.02	nd	nd	nd	nd
1,3-Dichloropropane	0.05	nd	nd	nd	nd
Dibromochloromethane	0.03	nd	nd	nd	nd
1,2-Dibromoethane (EDB) *	0.005	nd	nd	nd	nd
Chlorobenzene	0.02	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.03	nd	nd	nd	nd
Ethylbenzene	0.03	nd	nd	nd	nd
Total Xylenes	0.03	nd	nd	nd	nd
Styrenes	0.02	nd	nd	nd	nd

Libby Environmental, Inc.

4139 Libby Road NE
 Olympia, WA 98506
 Phone: (360) 352-2110
 FAX: (360) 352-4154
 Email: libbyenv@aol.com

1517 SOUTH TACOMA WAY PROJECT
 Robinson Noble, Inc.
 Tacoma, Washington
 Libby Project # L120912-2
 Client Project # 2754-001A

Volatile Organic Compounds by EPA Method 8260C in Soil

Sample Description	Method	B1-25'	B2-30'	B4-19'	
	Blank				
Date Sampled	Reporting	N/A	9/12/12	9/12/12	9/12/12
Date Analyzed	Limits	9/14/12	9/14/12	9/14/12	9/18/12
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Bromoform	0.02	nd	nd	nd	nd
Isopropylbenzene	0.08	nd	nd	nd	nd
1,2,3-Trichloropropane	0.02	nd	nd	nd	nd
Bromobenzene	0.03	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.02	nd	nd	nd	nd
n-Propylbenzene	0.02	nd	nd	nd	nd
2-Chlorotoluene	0.02	nd	nd	nd	nd
4-Chlorotoluene	0.02	nd	nd	nd	nd
1,3,5-Trimethylbenzene	0.02	nd	nd	nd	nd
tert-Butylbenzene	0.02	nd	nd	nd	nd
1,2,4-Trimethylbenzene	0.02	nd	nd	nd	nd
sec-Butylbenzene	0.02	nd	nd	nd	nd
1,3-Dichlorobenzene	0.02	nd	nd	nd	nd
Isopropyltoluene	0.02	nd	nd	nd	nd
1,4-Dichlorobenzene	0.02	nd	nd	nd	nd
1,2-Dichlorobenzene	0.02	nd	nd	nd	nd
n-Butylbenzene	0.02	nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	0.03	nd	nd	nd	nd
1,2,4-Trichlorobenzene	0.05	nd	nd	nd	nd
Hexachloro-1,3-butadiene	0.10	nd	nd	nd	nd
Naphthalene	0.03	nd	nd	nd	nd
1,2,3-Trichlorobenzene	1.0	nd	nd	nd	nd
Surrogate Recovery					
Dibromofluoromethane	105	88	101	91	
1,2-Dichloroethane-d4	127	113	114	105	
Toluene-d8	87	73	81	87	
4-Bromofluorobenzene	84	80	82	84	

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

* INSTRUMENT DETECTION LIMIT

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

1517 SOUTH TACOMA WAY PROJECT
 Robinson Noble, Inc.
 Tacoma, Washington
 Libby Project # L120912-2
 Client Project # 2754-001A

4139 Libby Road NE
 Olympia, WA 98506
 Phone: (360) 352-2110
 FAX: (360) 352-4154
 Email: libbyenv@aol.com

QA/QC Data - EPA 8260C Analyses

Sample Identification: L120914-10							
	Matrix Spike			Matrix Spike Duplicate			RPD
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	
1,1-Dichloroethene	0.50	0.33	66	0.50	0.35	70	5.9
Benzene	0.50	0.67	134	0.50	0.61	122	9.4
Toluene	0.50	0.62	124	0.50	0.65	130	4.7
Chlorobenzene	0.50	0.55	110	0.50	0.63	126	13.6
Trichloroethene (TCE)	0.50	0.60	120	0.50	0.62	124	3.3
Surrogate Recovery							
Dibromofluoromethane			89			84	
1,2-Dichloroethane-d4			132			92	
Toluene-d8			84			94	
4-Bromofluorobenzene			90			75	

Laboratory Control Sample			
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)
1,1-Dichloroethene	0.50	0.35	70
Benzene	0.50	0.61	122
Toluene	0.50	0.59	118
Chlorobenzene	0.50	0.61	122
Trichloroethene (TCE)	0.50	0.60	120
Surrogate Recovery			
Dibromofluoromethane			100
1,2-Dichloroethane-d4			110
Toluene-d8			87
4-Bromofluorobenzene			88

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135%
 ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Sherry Chilcutt

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Email: libbyenv@aol.com

1517 SOUTH TACOMA WAY PROJECT
Robinson Noble, Inc.
Tacoma, Washington
Libby Project # L120912-2
Client Project # 2754-001A

Analyses of Gasoline (NWTPH-Gx) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Gasoline (mg/kg)
Method Blank	9/14/12	87	nd
Method Blank	9/18/12	93	nd
B1-25'	9/14/12	73	nd
B2-30'	9/14/12	81	nd
B4-19'	9/18/12	87	nd
Practical Quantitation Limit			10

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Toluene-d8): 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

1517 SOUTH TACOMA WAY PROJECT
Robinson Noble, Inc.
Tacoma, Washington
Libby Project # L120912-2
Client Project # 2754-001A

Analyses of Diesel (NWTPH-Dx) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)
Method Blank	9/14/12	84	nd
B3-13.5'	9/14/12	int	4090
B3-19'	9/14/12	82	nd
B3-19' Dup	9/14/12	89	nd
Practical Quantitation Limit			25

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

4139 Libby Road NE
 Olympia, WA 98506
 Ph: 360-352-2110
 Fax: 360-352-4154

Chain of Custody Record

Date: 9-12-12 Page: 1 of 1

Client: Robinson Noble
 Project Manager: JFH
 Address: 3011 South Hudson St, Suite A Tac WA
 Project Name: 1517 South Tacoma Way
 Phone: 253-475-7711 Fax:
 Location: Tacoma WA
 Collector: ACY
 Date of Collection: 9-12-12

Sample Number	Depth	Time	Sample Type	Container Type	VOA 802/B VOA 802/B BTEX-Only	SEM VOL 8270	NWTPH-HCID	NWTPH-GX	NWTPH-DX	NWTPH-DX EXL	PAH 8270	PCBS 8082	MTCAs Metals	Field Note# Containers
1	25'		Soil	402	NA		X							
2	30'		Soil	402	NA		X							
3	13.5'		Soil	402	NA		X							
4	19'		Soil	402	NA		X							
5	19'		Soil	402	NA		X							
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														

Relinquished by: Clare Jones Date / Time: 9-12-12

Received by: James Deyman Date / Time: 9/12/12 2:31 PM

Relinquished by: _____ Date / Time: _____

Received by: _____ Date / Time: _____

Relinquished by: _____ Date / Time: _____

Received by: _____ Date / Time: _____

Remarks:

Good Condition? _____

Cold? _____

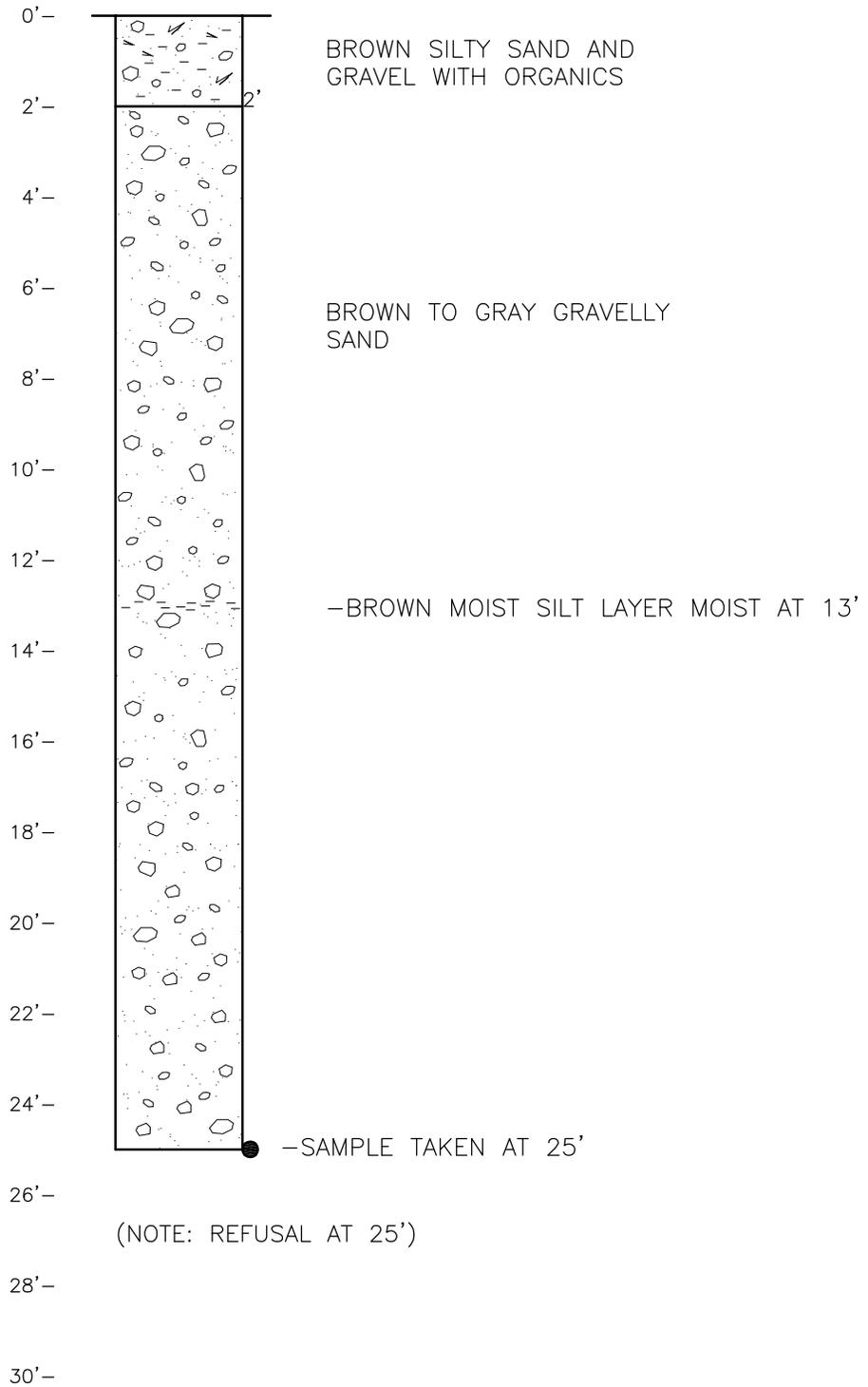
Seals Intact? _____

Total Number of Containers: _____

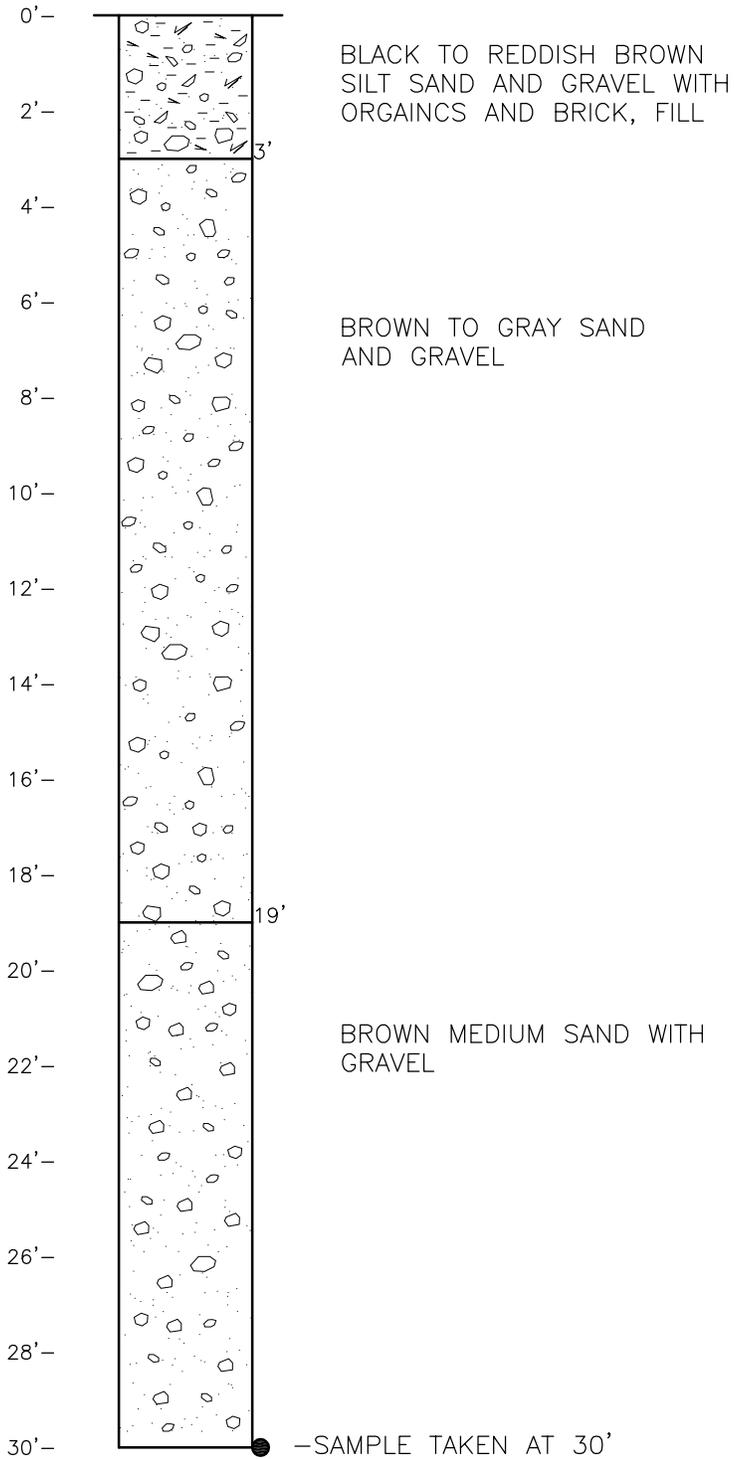
TAT 24HR 48HR 5-Day

APPENDIX B

GEOLOGIC LOG
B1

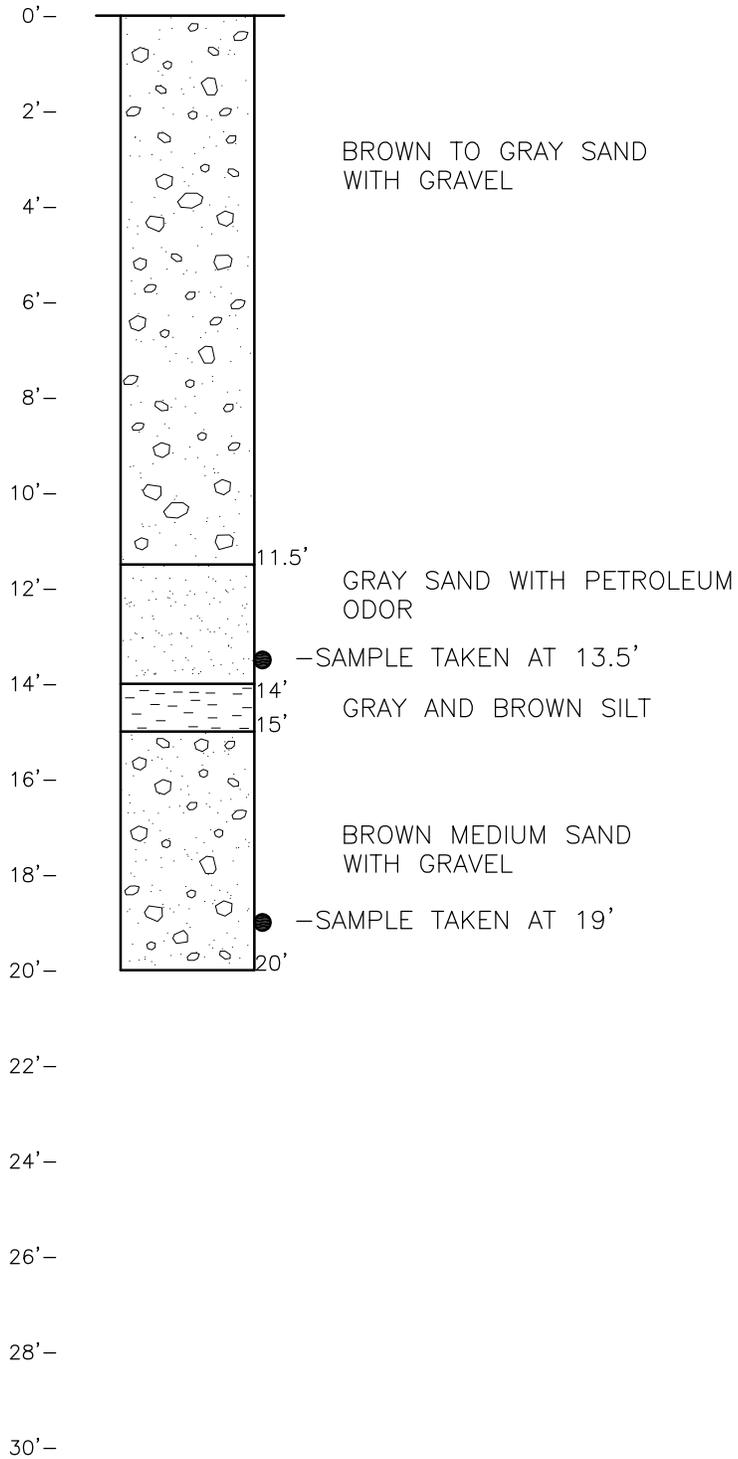


GEOLOGIC LOG
B2

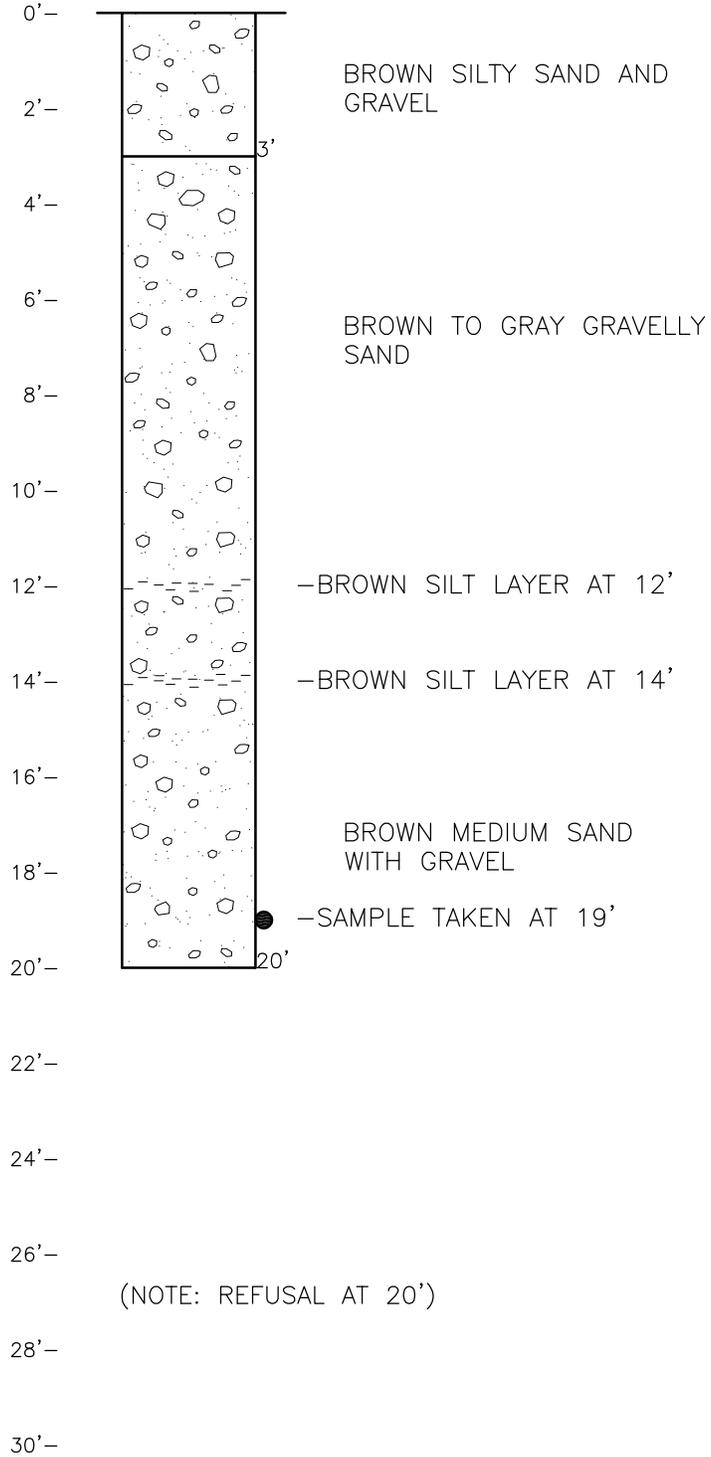


(NOTE: REFUSAL AT 30')

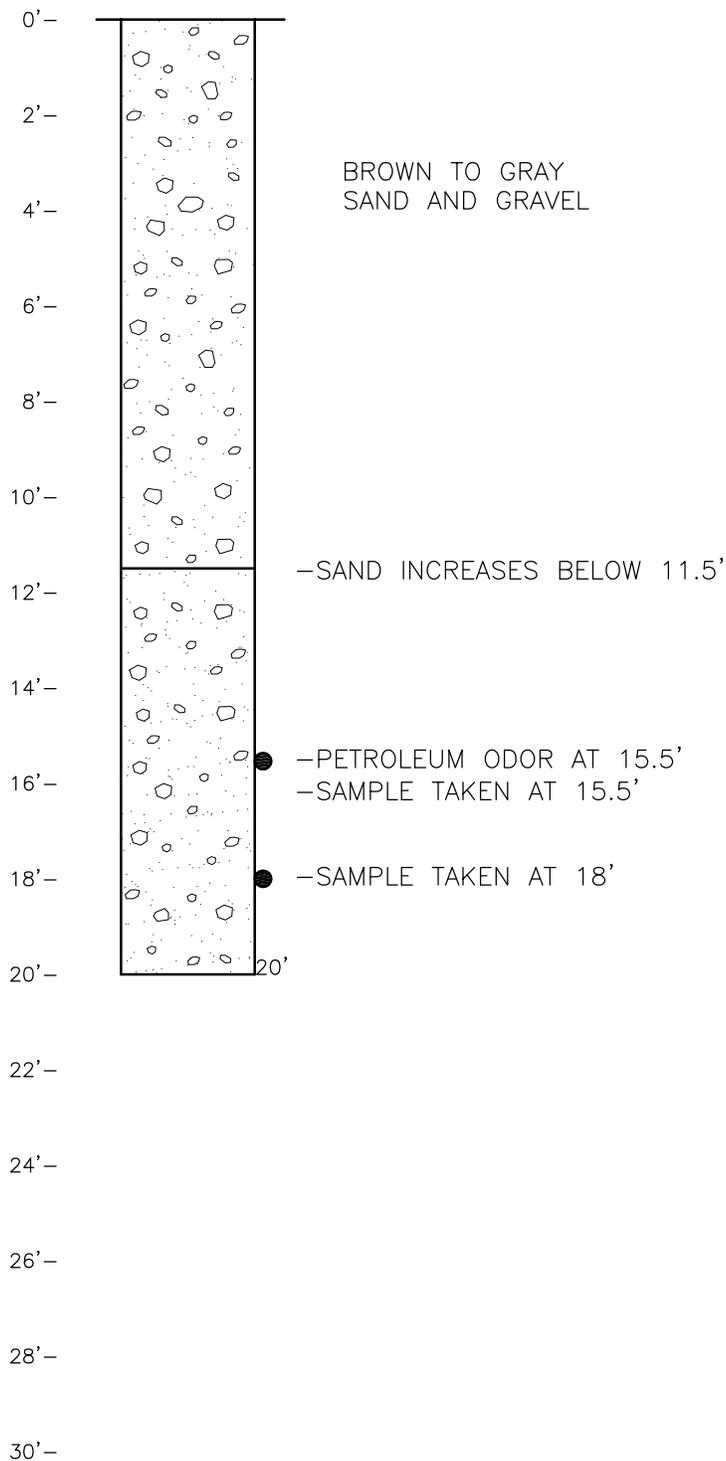
GEOLOGIC LOG B3



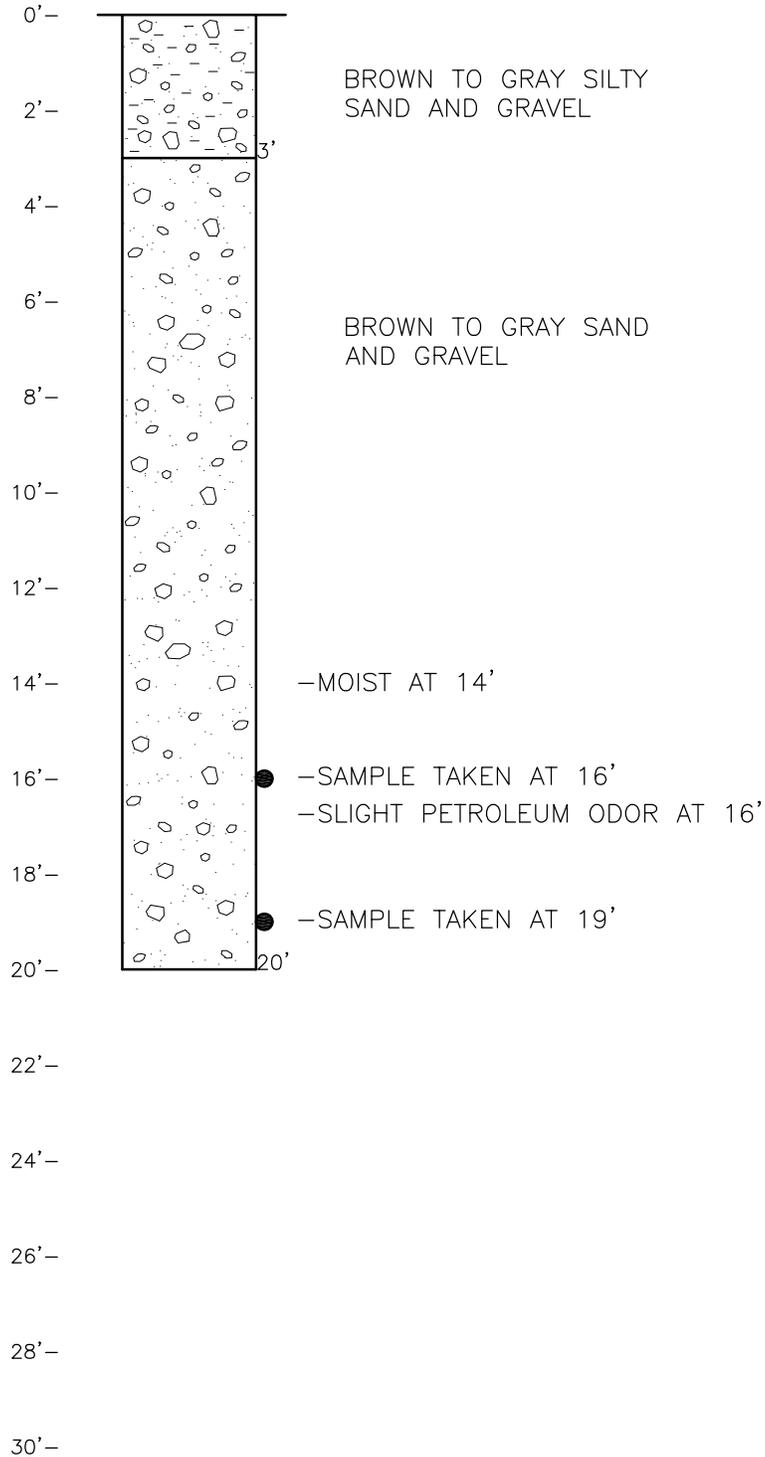
GEOLOGIC LOG B4



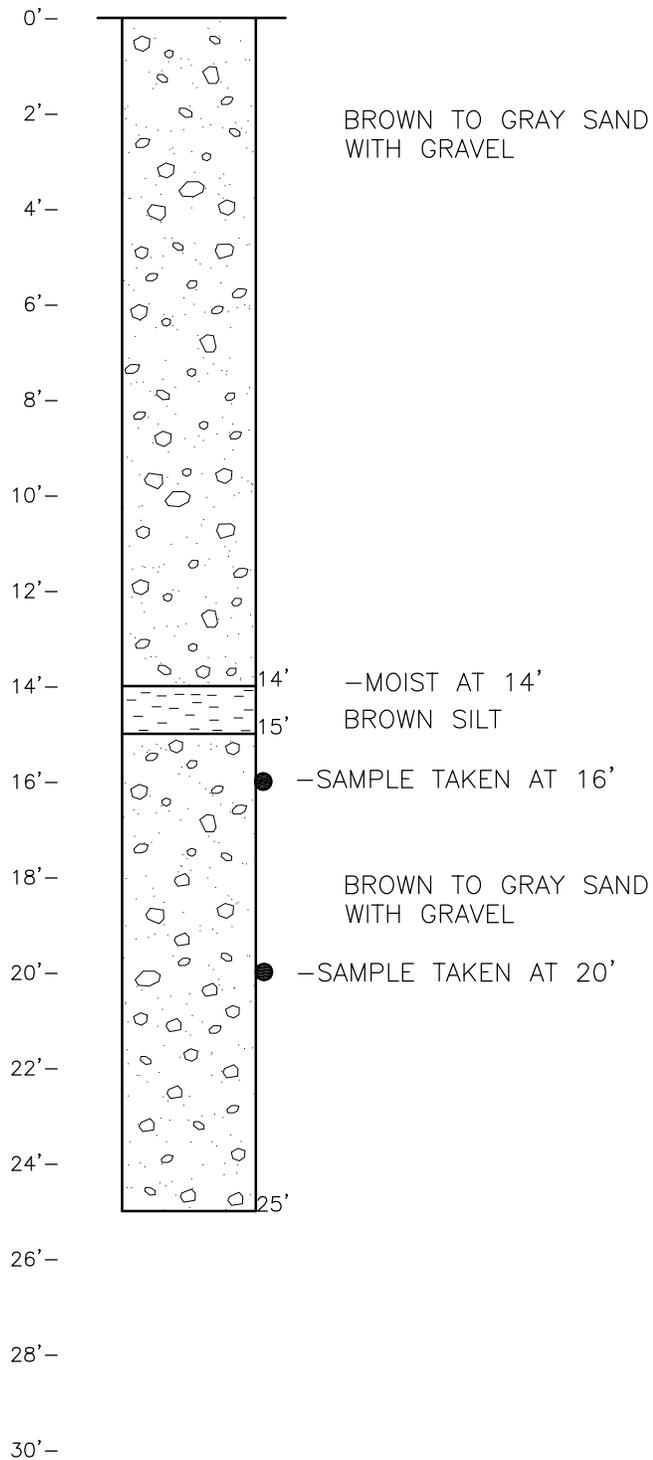
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B5



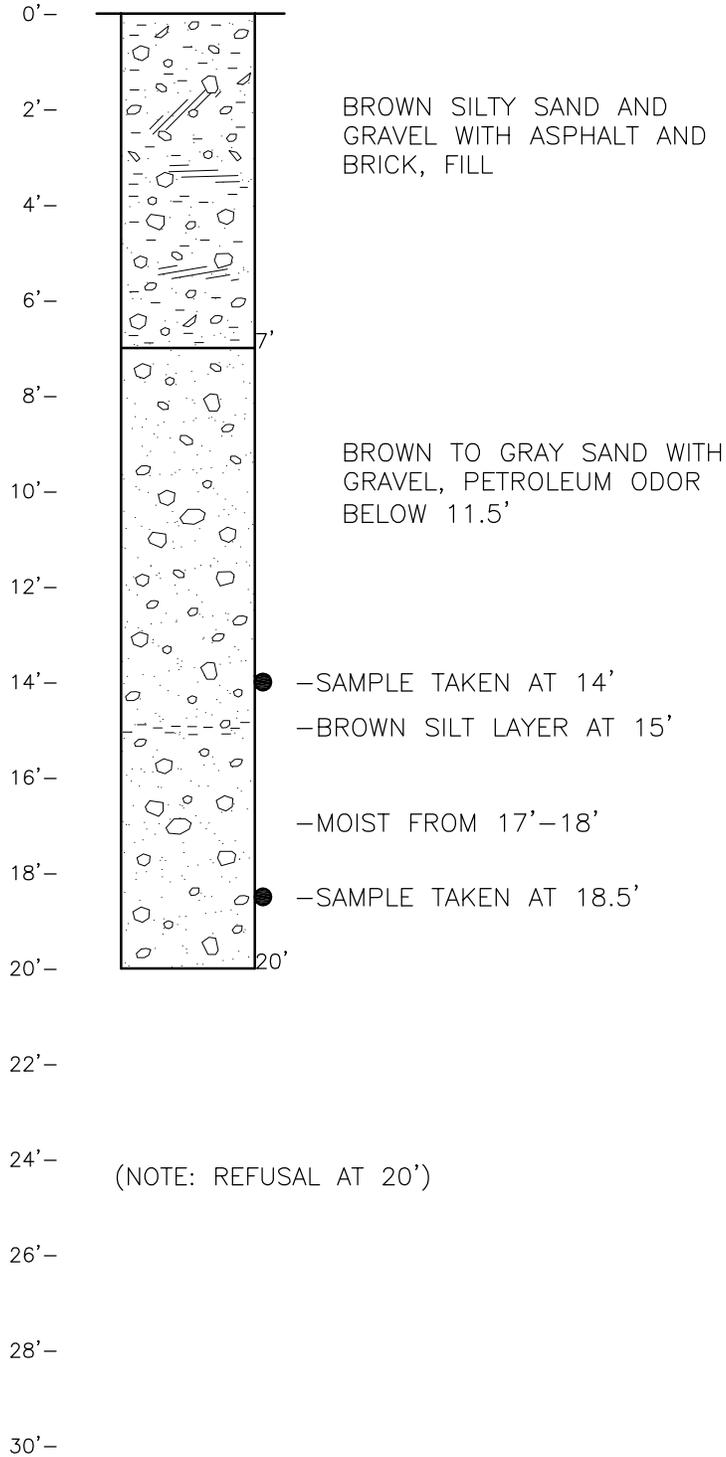
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B6



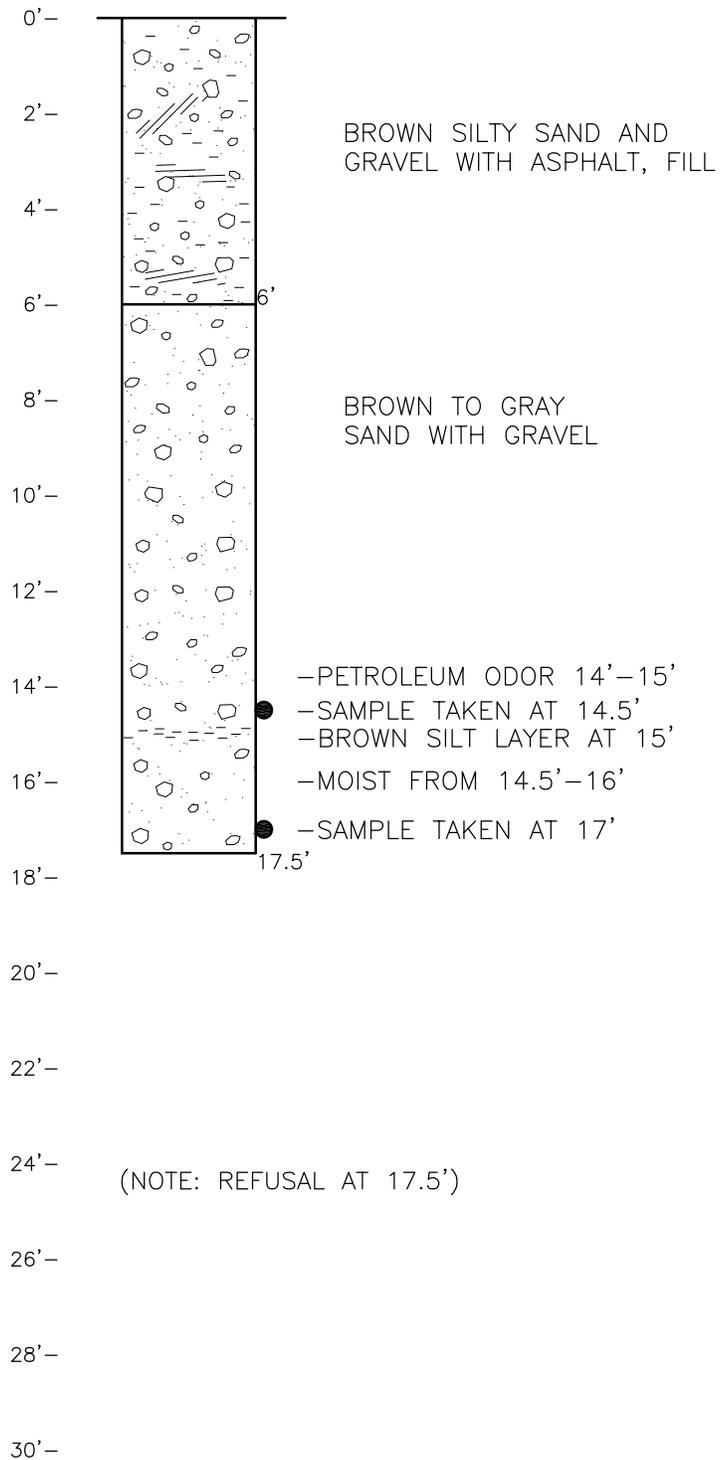
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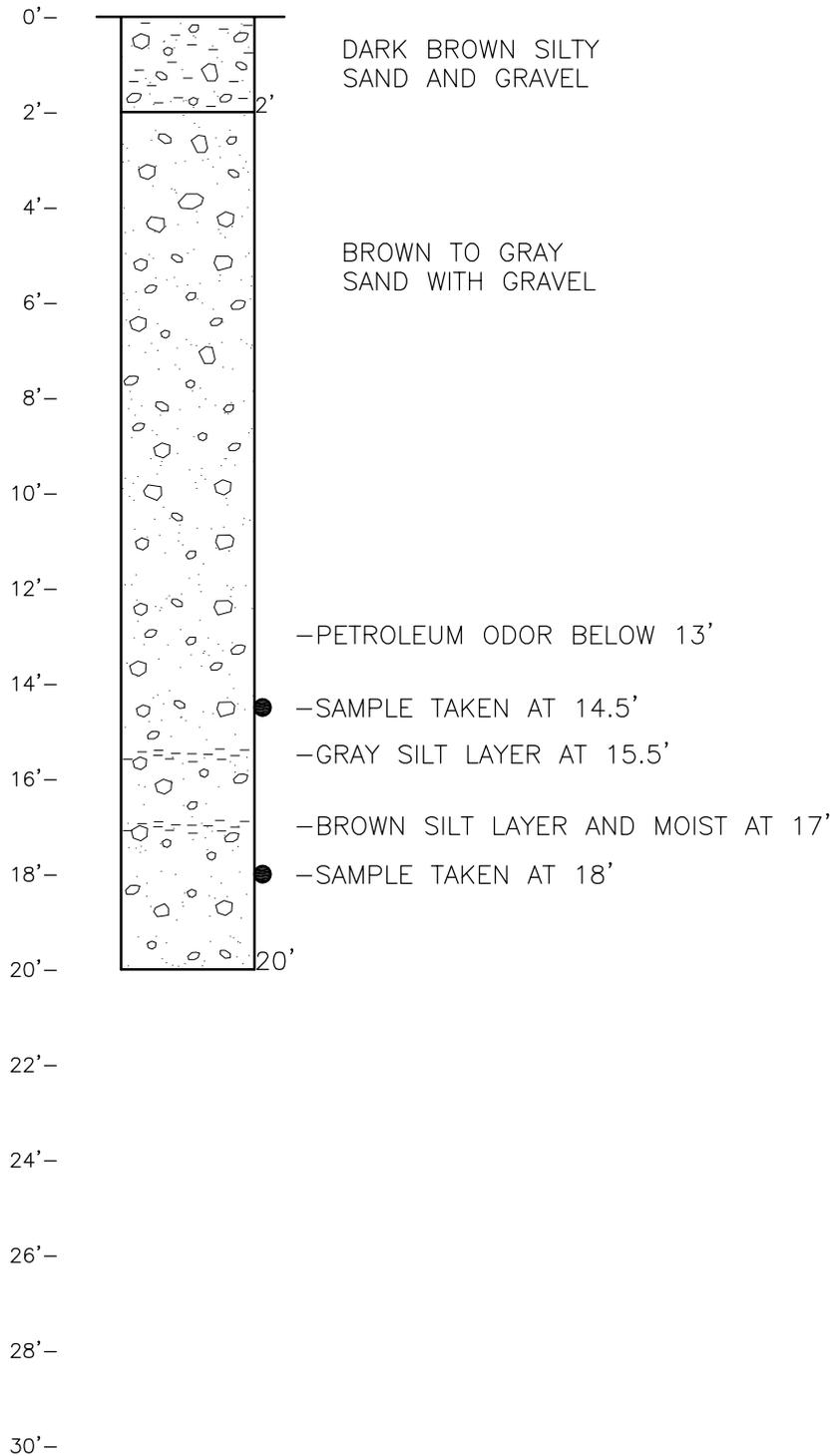
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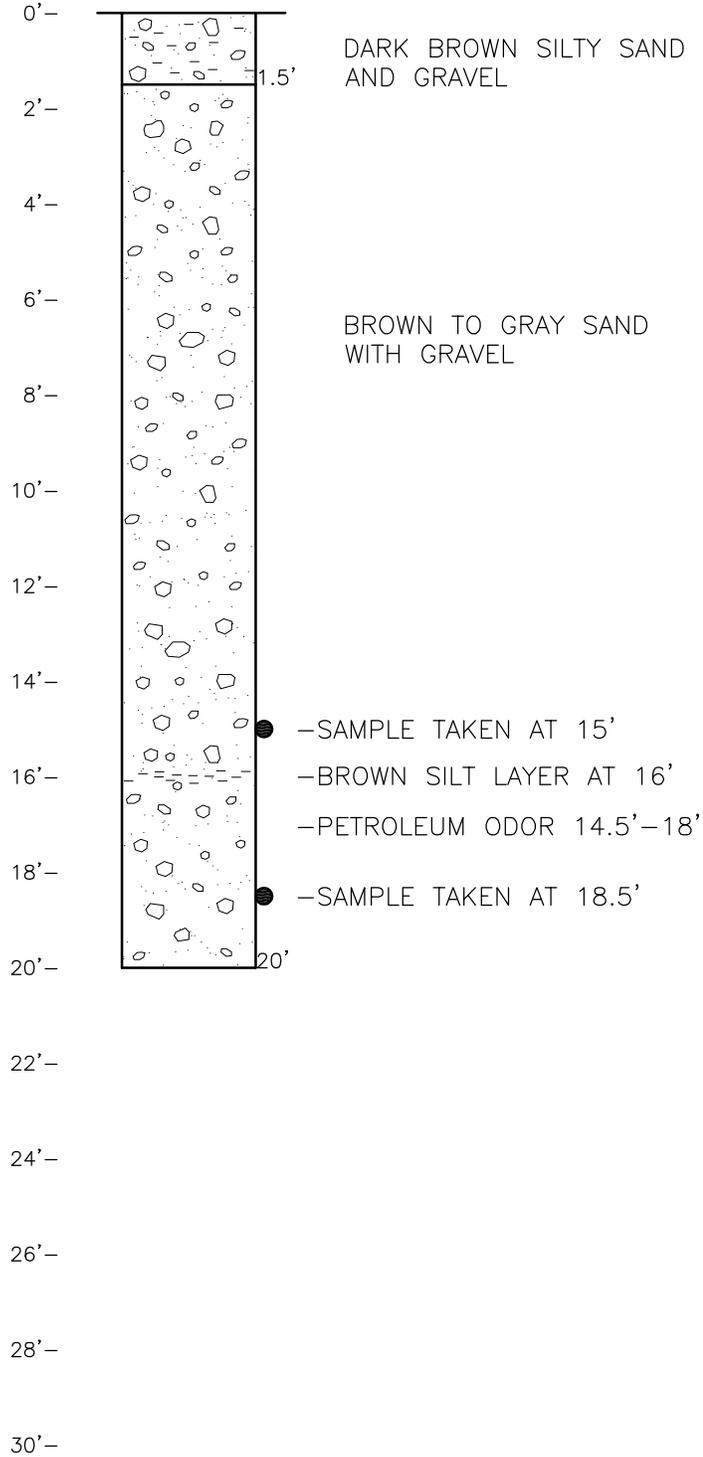
GEOLOGIC LOG
B9



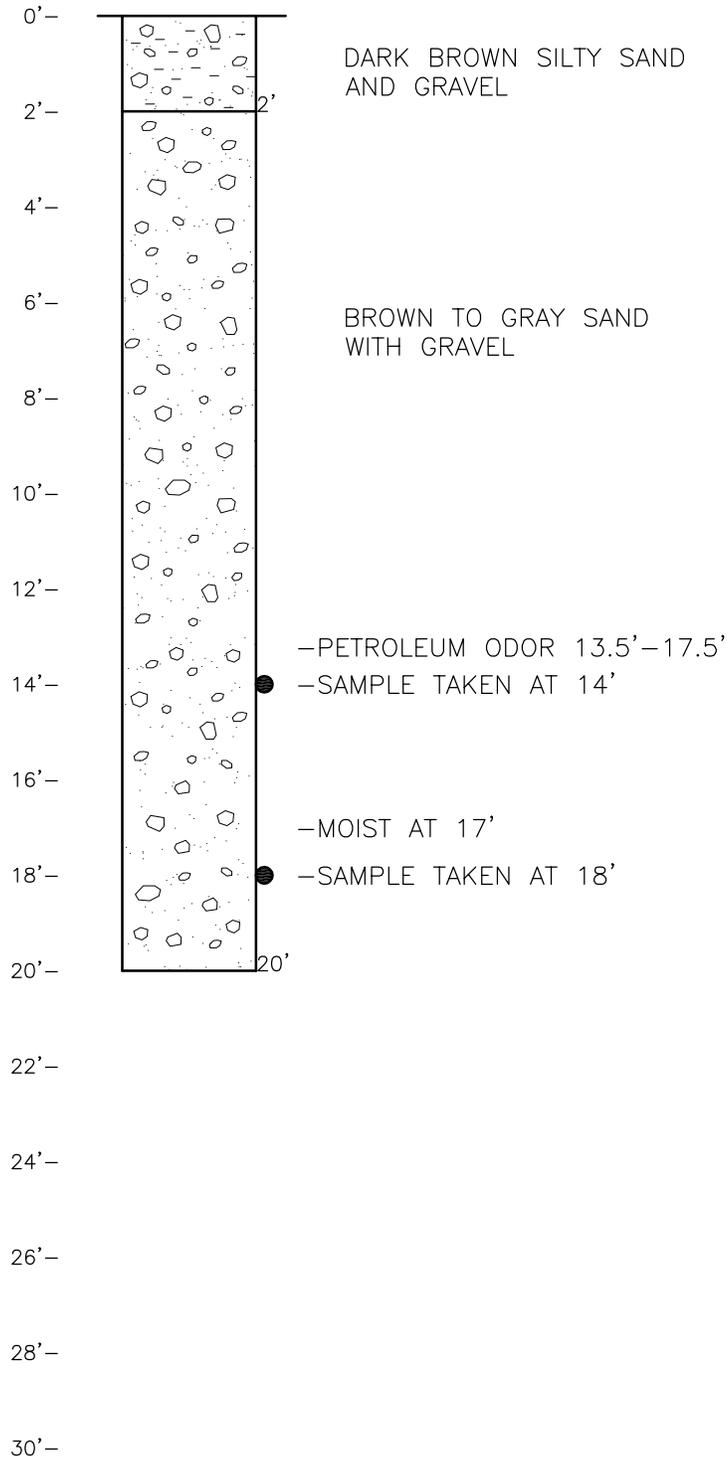
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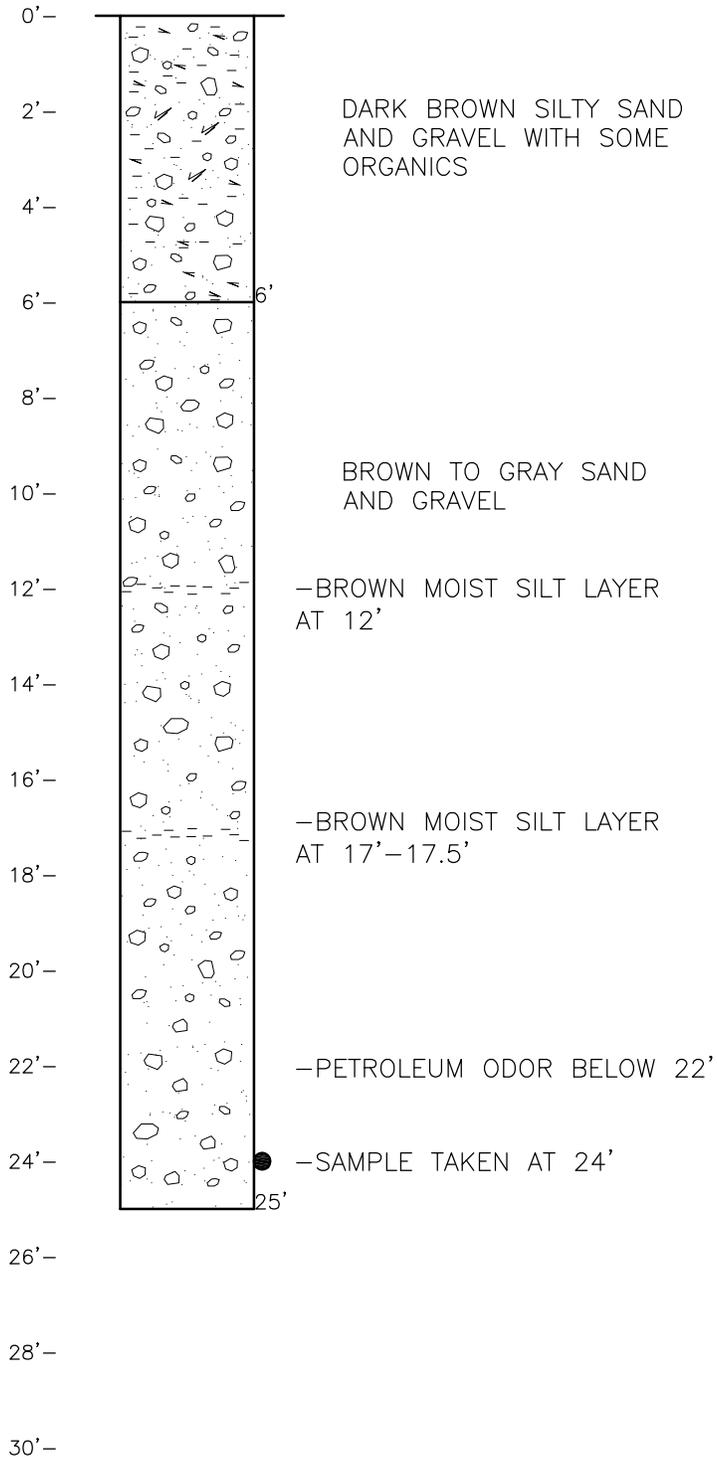
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B11



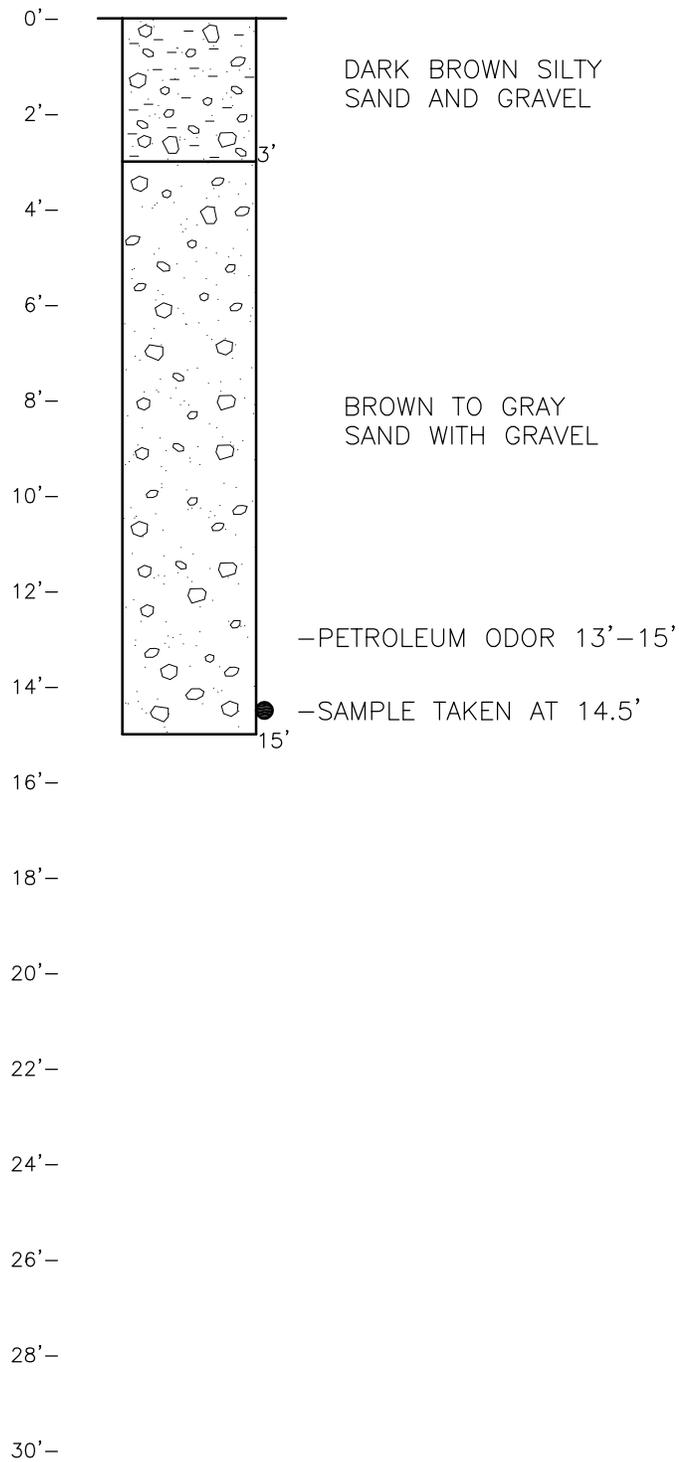
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B12



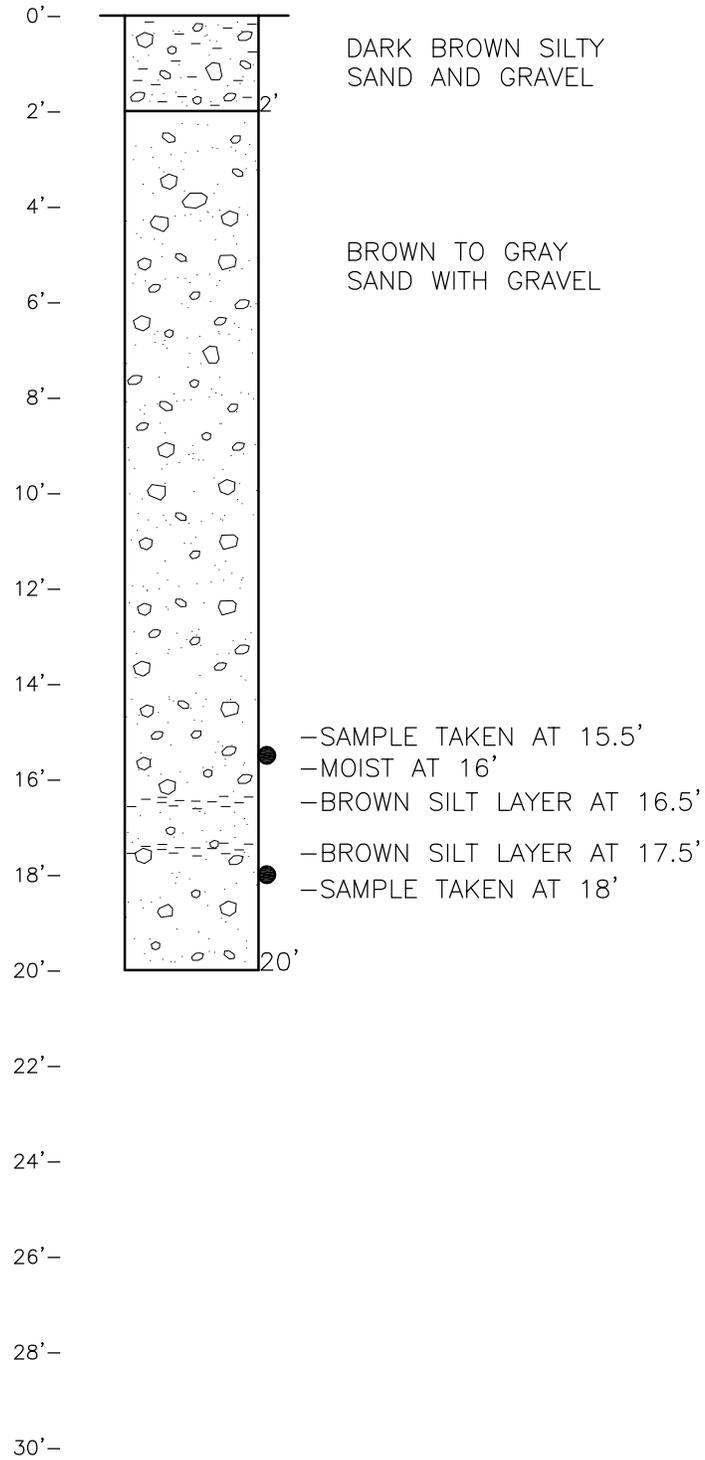
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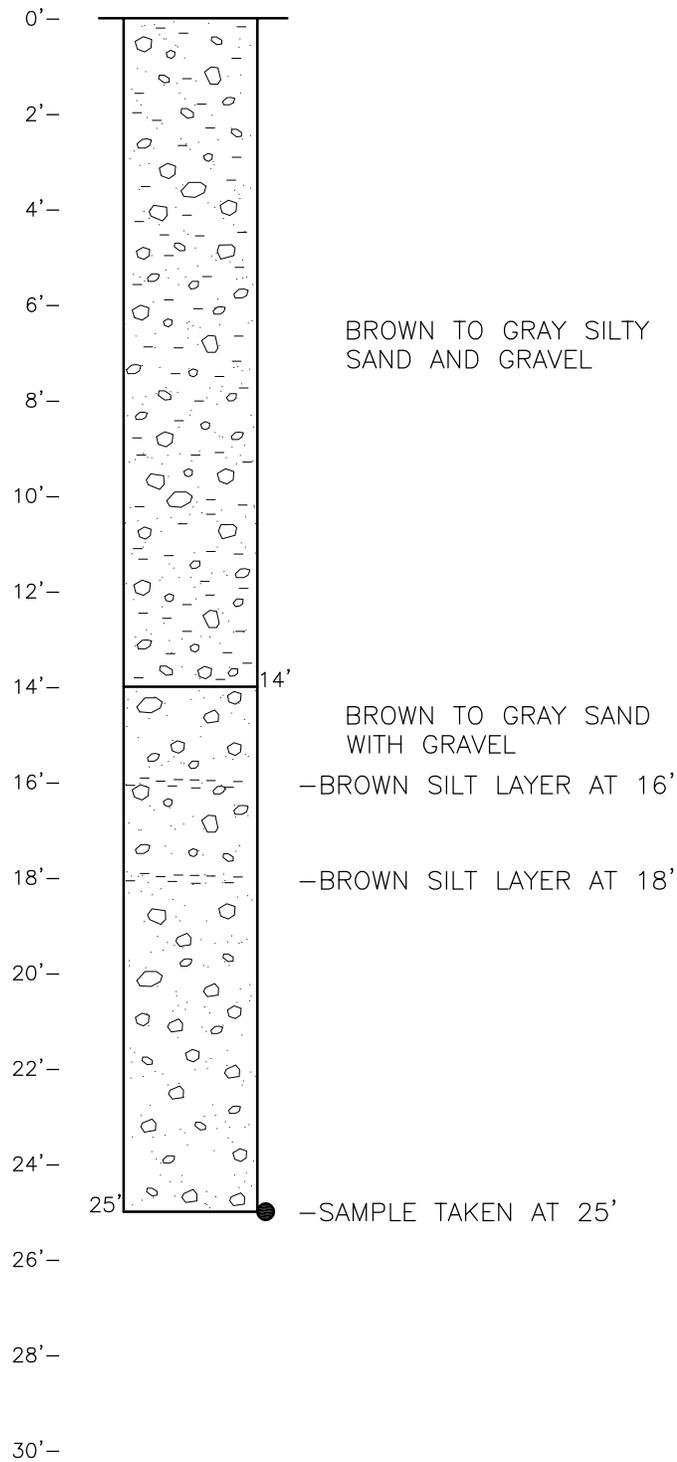
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B14



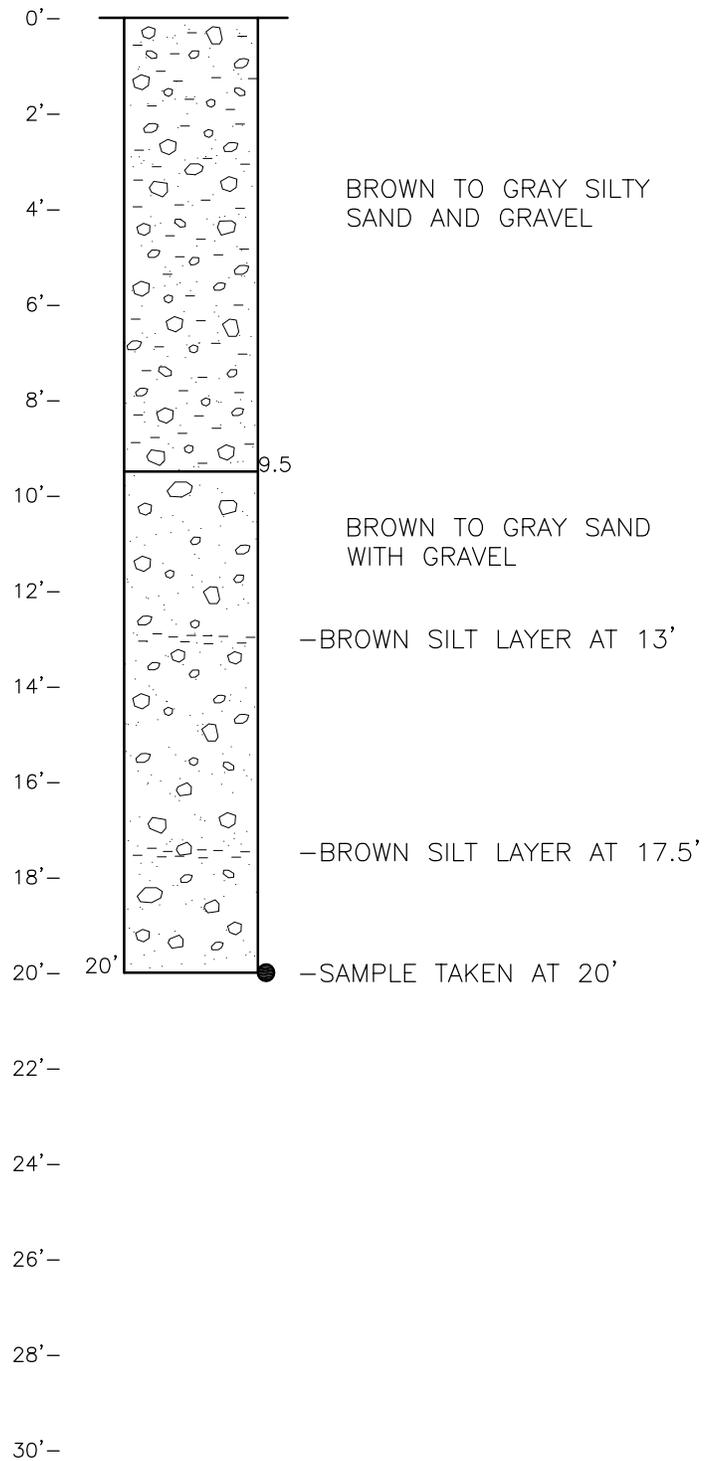
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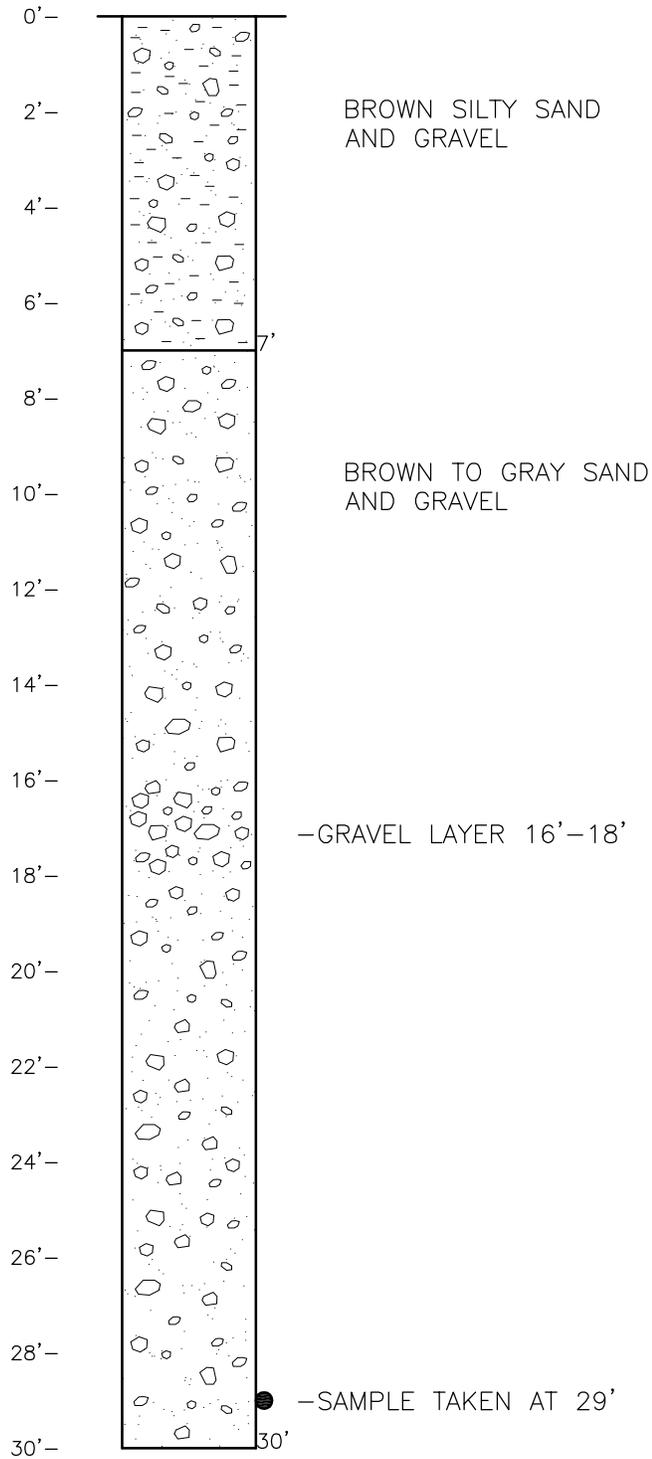
GEOLOGIC LOG
B16



GEOLOGIC LOG B17



GEOLOGIC LOG
B18



GEOLOGIC LOG
B19

