MONITORING WELL INSTALLATION & INITIAL GROUNDWATER TESTING EVENT

Former Gas Station Site
4404 South 133rd Street
Tukwila, Washington 98168

BORRELLI REAL ESTATE INVESTMENT

ENVIRONMENTAL
ASSOCIATES, INC.

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December 11, 2017 JN-33076-4

Joey Borrelli
Borrelli Real Estate Investment
13028 Interurban Avenue South, Suite 108
Tukwila, Washington 98168

Subject: **Monitoring Well Installation &**
Initial Groundwater Testing Event
4404 South 133rd Street
Tukwila, Washington 98168

Dear Mr. Borrelli:

In the course of August discussions with Ms. Jing Song of the Washington State Department of Ecology (WDOE) relating to your pursuit of a determination of "no further action" (NFA) for the above referenced property, EAI was informed that installation and sampling of monitoring well would be required to support their decision-making process. Prepared in response to your request and in accordance with our proposal dated September 7, 2017, this report summarizes the results of the well installation and of initial groundwater testing.

The contents of this report are confidential and are intended solely for your use and the use of Borrelli Real Estate Investment (Client), and their appointed representatives. An electronic copy of this report is being distributed to you. No other distribution or discussion of these findings will take place without your prior approval.

BACKGROUND

On May 7, 2013, Environmental Associates, Inc (EAI) presented the findings of a Phase-I Environmental Site Assessment to Borrelli Real Estate Investments, LLC for the subject property. The Phase-I identified the historic operation of a gasoline station on the subject parcel as a "recognized environmental condition" (REC). The Phase-I research found no evidence of any prior environmental assessment of the subject parcel. EAI suggested that a geophysical survey be conducted and that if an underground storage tank (UST) were discovered, that it be properly removed.

On May 15, 2013, Underground Detection Services, Inc., presented the client with a geophysical survey. The survey was conducted between 133rd Street and the now-removed gas station buildings. During the survey, a geophysical "anomaly" indicative

of a UST was detected to the south of the historic station garages. Underground Detections Services had independently contracted with the client and Environmental Associates, Inc., was not involved in this geophysical survey.

On May 31, 2013, EAI observed the excavation of the "geophysical anomaly" which proved to be an out-of-service UST. The tank was accessed through an uncovered fill port and was found to contain approximately 300-gallons of gasoline and water. Global (tank decommissioning contractor) arranged to have a vacuum truck pump remaining product from the UST. Upon receiving the Tukwila Fire Marshal field inspector's permit sign-off, Global proceeded to remove the UST from the ground. The tank was constructed of single-wall steel and had an approximate diameter and length of 42-inches by 92-inches, which would correspond to a tank with a capacity of approximately 550 gallons. The tank was heavily rusted and had several holes due to corrosion in the bottom. The tank was then removed from the site. A moderate to strong petroleum odor was also noted emanating from the open excavation and from select soil samples obtained from the sidewalls of the excavation. Groundwater seepage was noted through the sidewalls of the excavation at a depth of approximately 5 to 6 feet. Discrete soil samples were collected from each sidewall of the excavation at depths of approximately 5 feet, corresponding to the upper fringe of the groundwater seepage zone soil/groundwater interface. A discrete soil sample was also collected from the base of the excavation directly below the former UST at a depth of approximately 7 feet. An additional soil sample was collected at a depth of 3 feet adjacent to the former fuel dispenser pump to the west of the UST. Finally, a field composite sample was collected from three (3) separate areas of the temporarily stockpiled overburden soil. All soil samples were collected following EPA methodology 5035A, which is intended to minimize the potential loss of volatile organic compounds (VOCs).

Laboratory analysis showed three (3) of the samples contained total petroleum hydrocarbons (TPH) at concentrations above the WDOE's 100 parts per million (ppm) target compliance level. Those concentrations ranged between 270 ppm to 1,000 ppm. No benzene, toluene, ethyl benzene, or xylene (BTEX) compounds (common to gasoline) were detected in any of the samples analyzed, a finding often interpreted as an indication of an "older" release in which the residual gasoline has significantly "weathered." Two (2) soil samples with the highest concentrations of gasoline were further analyzed for total lead. Lead was only detected in one (1) sample at a concentration of 8.2 ppm, which is significantly less than the WDOE's target compliance level of 250 ppm.

On June 14, 2013, EAI presented the Client with an Underground Storage Tank Removal and Site Assessment report. That report recommended performing additional site assessment to deduce the lateral extent of the petroleum impacted soil following demolition / clearing and grading. The report further advised that such explorations could be performed by drilling or potentially more cost effectively by excavating numerous shallow "test-pits" with a backhoe.

On May 27, 2016, EAI presented a report entitled Limited Subsurface Sampling and Testing referring to the subject property to Borrelli Real Estate Investments, LLC. EAI observed excavation of six (6) test pits surrounding the former tank and dispenser area (known to be contaminated). Soil

samples were obtained from each pit and groundwater was collected from four (4) of the pits. Soil and groundwater samples were analyzed for gasoline, diesel, and heavy oil petroleum hydrocarbons as well as benzene, toluene, ethylbenzene, and xylenes (BTEX). No contaminates were detected in any of the soil samples. Diesel-range hydrocarbons were detected in all four (4) groundwater samples. That said, diesel concentrations detected in groundwater collected in three samples were below MTCA cleanup levels of 500 parts per billion (ppb) while one sample contained 520 ppb. These samples were all "flagged" in the laboratory report as "samples chromatographic pattern does not resemble the fuel standard used in quantitation", meaning that the detected petroleum may not be refined petroleum and may be due (in part) to the significant presence of naturally occurring organic material. EAI requested that the laboratory re-run the groundwater sample for diesel and heavy oil after it was put through a silica gel column to remove possible naturally occurring hydrocarbons. The results of the follow up analysis were "non detect" for diesel and the concentration of heavy oil was below (i.e. compliant with) the MTCA Cleanup levels.

EAI's May 27, 2016, report outlined steps to pursue acquisition of a "no further action" (NFA) designation. These steps included excavation, groundwater removal, possible addition of remediation product, backfilling, installation of monitoring wells, and eventually entering the WDOE Voluntary Cleanup Program (VCP) to apply for a determination of "no further action"(NFA).

Independent Cleanup Action (Waste Oil UST)

On July 12, 2016, EAI was on site to observe the excavation of contaminated soil by Mitchell Contractors starting at the western end of the suspected impacted area. With excavation then extending to the east. At approximately 10 to 15 feet east of the western edge of the excavation, a separate 1,100 gallon underground storage tank was discovered. Excavation was stopped until July 14, 2016 when the tank was removed by Tank Wise, who had independently contracted with the client.

Upon removal, EAI and Mitchell Contractors continued with the remedial excavation on the morning of July15, 2016. By the end of the day, field observation suggested that the bulk of contaminated soil may have been excavated. During the excavation, the removed soil was divided into three (3) piles tentatively designated suspected "clean", potentially impacted, and "presumed" contaminated depending on field observations and the use of a photo inonazation detector (PID). Upon reaching the apparent lateral and vertical limits of contaminated soil, several samples were taken from each stockpile and tested for contaminates including (gasoline, BTEX, diesel, and heavy oil). Only the "presumed" contaminated pile contained contaminants (gasoline and benzene) exceeding MTCA Cleanup Levels. The other two stockpiles tested non detect for all contaminants except for a trace detection of gasoline in the "potentially" impacted pile. The "potentially" impacted pile contained 17 ppm of gasoline, well below the 30 ppm cleanup level of gasoline when benzene is present. A total of 74.58 tons of soil from the presumed contaminated stockpile was transported off-site Republic Services.

Soils encountered within the excavation generally consisted of well sorted brown and grey silty sand (fine to medium grain) with some pebbles and cobbles form the surface to approximately 10 to 12 feet below ground surface (bgs). At approximately 10 to 15 feet bgs, a layer of highly organic material was present in fairly non-decomposed form (leaves, sticks, etc.) and included intermittent thin layers of gray silty sands. The lower limit of this naturally occurring organic unit was not reached.

Twenty three (23) soil samples were collected from final limits of the remedial soil excavation and stockpiles. These included four (4) from the base of the excavation, nine (9) from the sidewalls and ten (10) from the stockpiles. Only the presumed contaminated stockpile sample contained contaminants above WDOE compliance levels (gasoline and benzene). One base sample and one sidewall sample contained gasoline, diesel, heavy oil, toluene, ethylbenzene, xylenes, and lead all below cleanup levels. A groundwater sample was collected using a bailor on July 18, 2016 and was analyzed for gasoline, BTEX, diesel, and heavy oil. All contaminants tested for were below laboratory reporting limits (i.e. non-detect). EAI concluded, the limited cleanup action appears to have been successful in achieving Washington State's target compliance levels for unrestricted land use.

MONITORING WELL INSTALLATION & INITIAL GROUNDWATER TESTING

On September 25, 2017, monitoring wells MW-1, MW-2, and MW-3 were drilled and installed on the property at the location depicted on Plate 2, Site Plan. These locations corresponds to the eastern portion of the property which is of interest to the WDOE.

The monitoring wells were completed using a truck mounted auger drill rig operated by ESN of Lacey, Washington. Prior to installing the monitoring well, a continuous soil core was collected in 5-foot sections beginning at the ground surface and extending to a 15 to 20-foot maximum depth of exploration in each of the wells. A soil sample was collected from the highly organic (TOC) layer noted below approximately 13 feet bgs in MW-3 for total organic carbon analysis. Soil samples in MW-1 and MW-2 were also collected at similar depths but the organic layer was not as prevalent at those locations. The soil samples were collected, stored, and submitted to the project laboratory per EPA guideline 5035A.

Following soil sample collection, auger casing was advanced to widen the borehole to facilitate the installation of the monitoring wells. The monitoring wells were installed to a depth of approximately 15 to 20 feet and were constructed of 2-inch diameter PVC with the lower 10-feet consisting of well screen.

Water Table Survey

After allowing the newly installed wells to equilibrate for a few days, on September 28, 2017, EAI returned to the site to survey the relative elevations of tops of the monitoring well casings (MW-1,

MW-2, and MW-3), and measure the depth to groundwater in each monitoring well using those points for reference. Based on Google Earth datum, Table 2 presents the surveyed relative elevations for the tops of each well casing, the measured depths to groundwater, and the corresponding elevations of the shallow water table at the monitoring well locations.

Plate 3, Groundwater Flow, includes an interpretive graphical representation of the shallow water table and deduced localized groundwater flow directions based upon the current geometry of monitoring wells. Examining Plate 2, groundwater flow within the current network of monitoring wells tentatively appears to be east/southeasterly.

Groundwater Sampling

On September 28, 2017, prior to sampling, monitoring well's MW-1, MW-2, and MW-3 were "micro-purged" utilizing a peristaltic pump. Micro-purging continued until the groundwater began to flow "clear." Representative groundwater samples were then transferred directly to laboratory-prepared glassware. Groundwater samples were successfully recovered from all three (3) selected monitoring wells.

Laboratory Analysis & Results

Soil & Groundwater Samples

The three (3) selected soil samples collected during the installation of the wells were analyzed for diesel and oil range petroleum hydrocarbons by test method NWTPH-Dx. The soil sample collected 13 feet bgs from the location of MW-3 was analyzed for total organic carbon (TOC).

Referencing Table 1, diesel range hydrocarbons were detected in the groundwater sample from MW-3 at a concentration of 1600 parts per billion (ppb). The laboratory (Friedman and Bruya) opined that the detection was not indicative of "normal" diesel hydrocarbon chromatogram. That groundwater sample (MW-3) was re-run after a silica gel treatment and the concentration was lowered to 150 ppb of diesel. The re-run sample was also flagged as not being indicative of normal diesel hydrocarbons. In a phone conversation with Mr. Matt Langston, a chemist of Friedman and Bruya, EAI was informed that chromatographs (attached to this report) did not show patterns commonly associated with diesel or petroleum breakdown products. Instead, the chemist opined that the observe chromatograph may be due to the presence of natural organic's in the groundwater. Groundwater samples from MW-1 and MW-2 were non-detect for diesel and all three groundwater samples collected were non-detect for motor oil.

Due to the elevated non-standard "diesel" concentration in the groundwater sample from MW-3, the soil sample collected from that well boring at 15 feet bgs (which exhibited a pronounced organic layer) was analyzed for total organic carbon (TOC). The results show that 7.83 % of the volume of that soil samples was comprised of naturally occurring organic carbon (TOC), a relative high percentage for that for alluvium deposits.

Copies of the laboratory reports are included in Appendix-A.

CONCLUSIONS

The additional exploration and testing as presented in EAI's proposal dated September 7, 2017 has been completed. In regards to the diesel detection in MW-3, considering the opinion of the laboratory chemist (Mr. Langston) that the chromatograph results were not indicative of diesel or petroleum breakdown and the high concentration of total organic carbon (approximately 7%) in the soil excavated in MW-3, it would appear that the "diesel" detection may not be due to a petroleum release, but rather may be an artifact of the highly natural organic environment in which the monitoring well is set. Results of the installation of three (3) monitoring wells along with the associated soil and groundwater testing discussed herein appear to support continuing pursuit of a determination of "no further action" (NFA) from the WDOE.

RECOMMENDATIONS

EAI simply recommends the submission of this report to WDOE for its opinion as to whether continuation of the remaining three (3) quarters of groundwater monitoring would be required, or alternatively, if the data presented would be sufficient for WDOE to issue a determination of "no further action".

LIMITATIONS

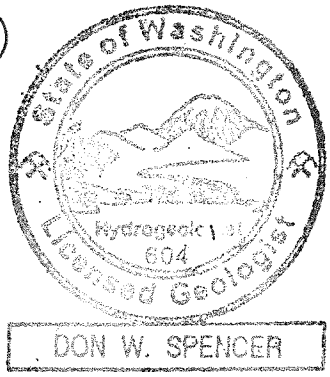
This report has been prepared for the exclusive use of Borrelli Real Estate Investments, and their several representatives for specific application to this site. Our work for this project was conducted in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area, and in accordance with the terms and conditions set forth in our proposal dated September 7, 2017. The opinions expressed in this report are based upon interpretations, observations and testing made at separated locations and conditions may vary between those sampling localities or at other locations, depths, and/or media. EAI makes no warranty as to the accuracy or reliability of data / opinions provided/rendered by other parties. No other warranty, expressed or implied, is made. If new information is developed in future site work which may include excavations, borings, studies, etc., Environmental Associates, Inc., must be retained to reevaluate the conclusions of this interim document and to provide amendments as required.

We appreciate the opportunity to be of service on this assignment. If you have any questions or if we may be of additional service, please do not hesitate to contact us.

Respectfully submitted,
ENVIRONMENTAL ASSOCIATES, INC.

Ryan D. Opitz
Project Manager

Don W. Spencer, M.Sc., P.G., R.E.A.
Principal



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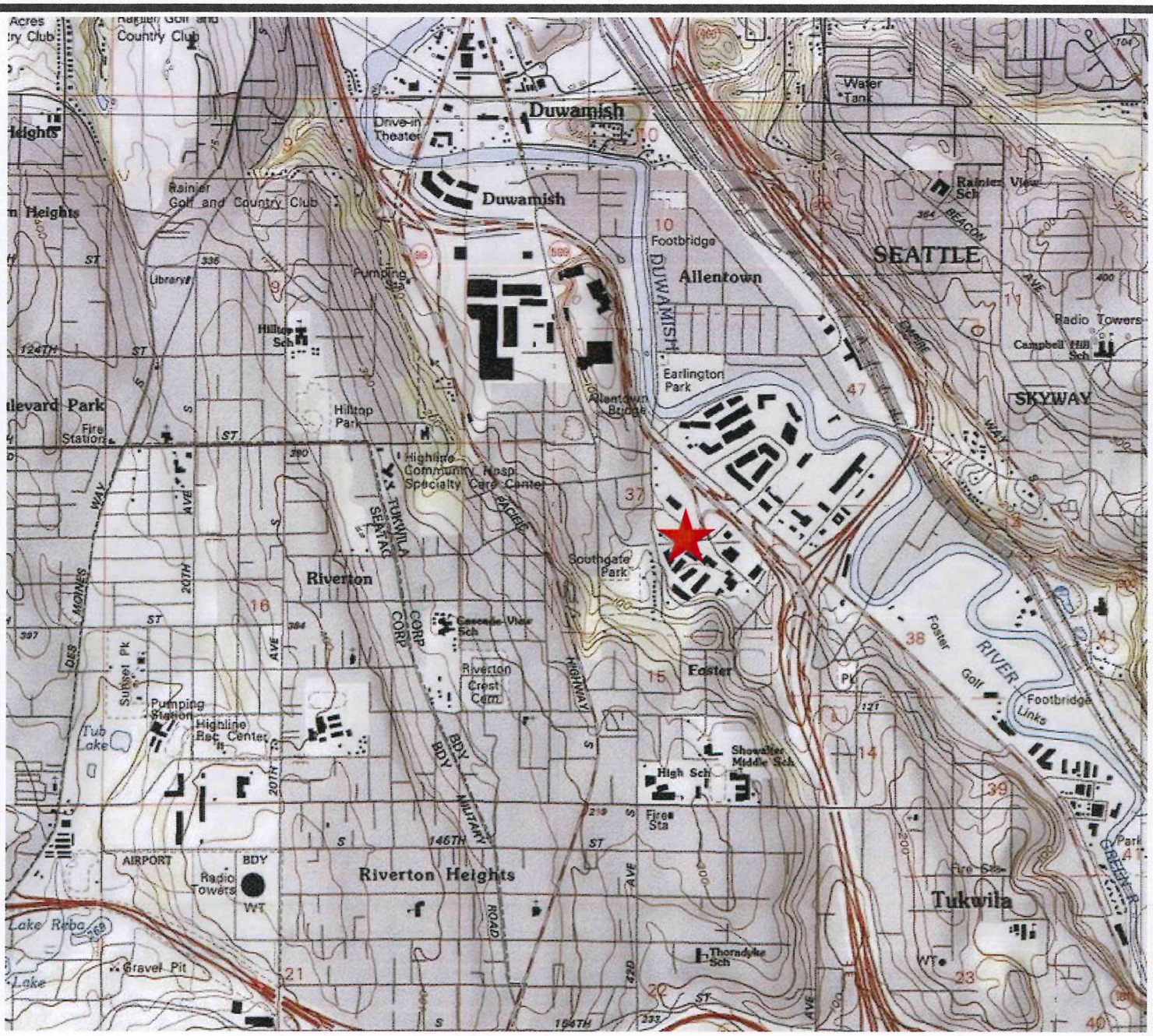

Approximate Property Location

Inferred Approximate Direction of Regional Groundwater Flow

N

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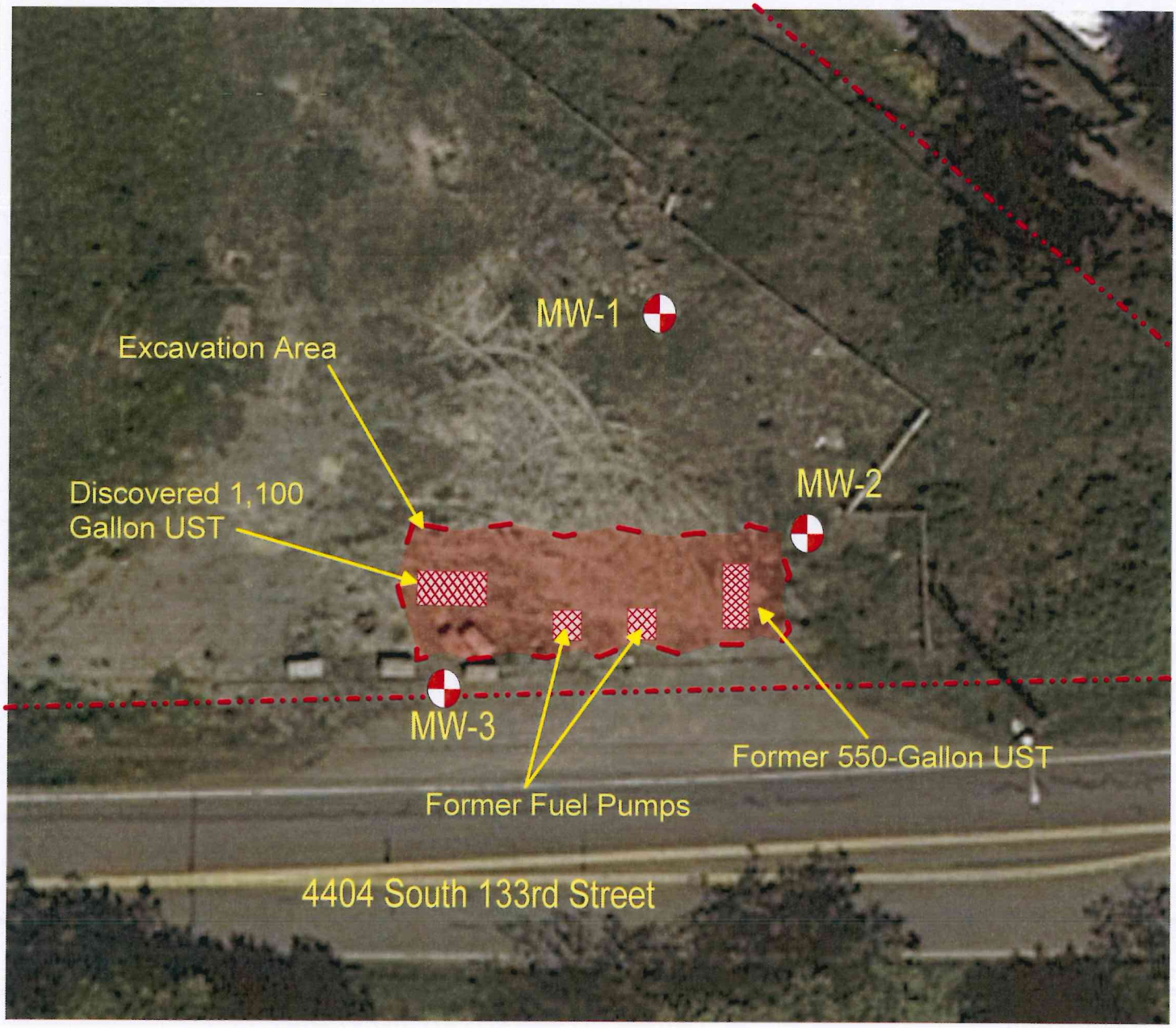
1380 - 112th Avenue N.E., Ste. 300
Bellevue, Washington 98004

Vicinity/Topographic Map

Former Gas Station Site
4404 South 133rd Street
Tukwila, Washington 98168

Job Number:	*Date:*		*Plate:*
JN 33076-4	December 2017		1



Approximate Site Boundary

Approximate Location of Monitoring Well

Inferred Approximate Direction of Groundwater Flow

N

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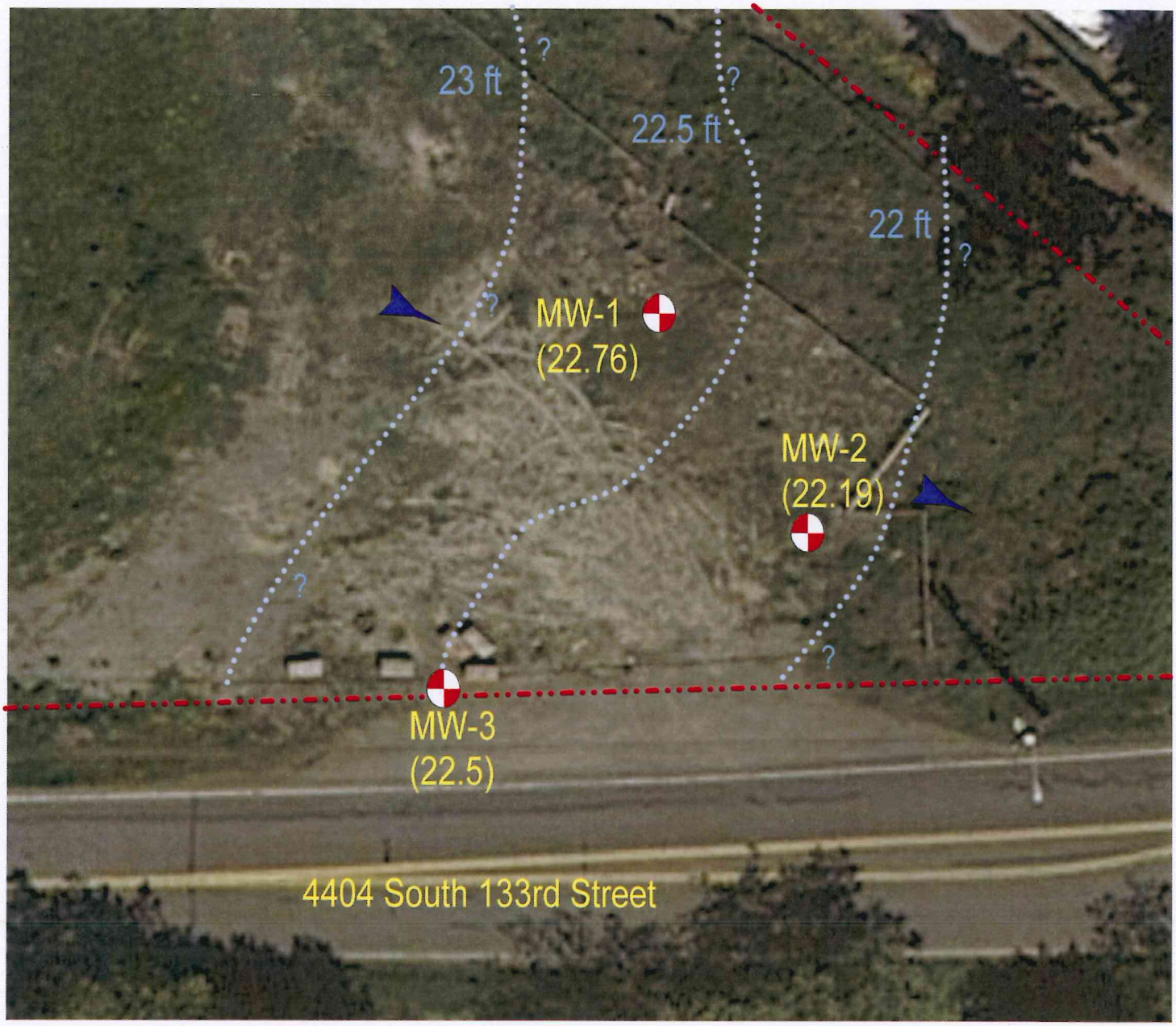
SITE PLAN

Former Gas Station Site
4404 South 133rd Street
Tukwila, Washington 98168

Job Number:	Date:		Plate:
JN 33076-4	December 2017		2



Approximate Site Boundary

Approximate Location of Monitoring Well With Groundwater Depth

Inferred Approximate Direction of Groundwater Flow

N

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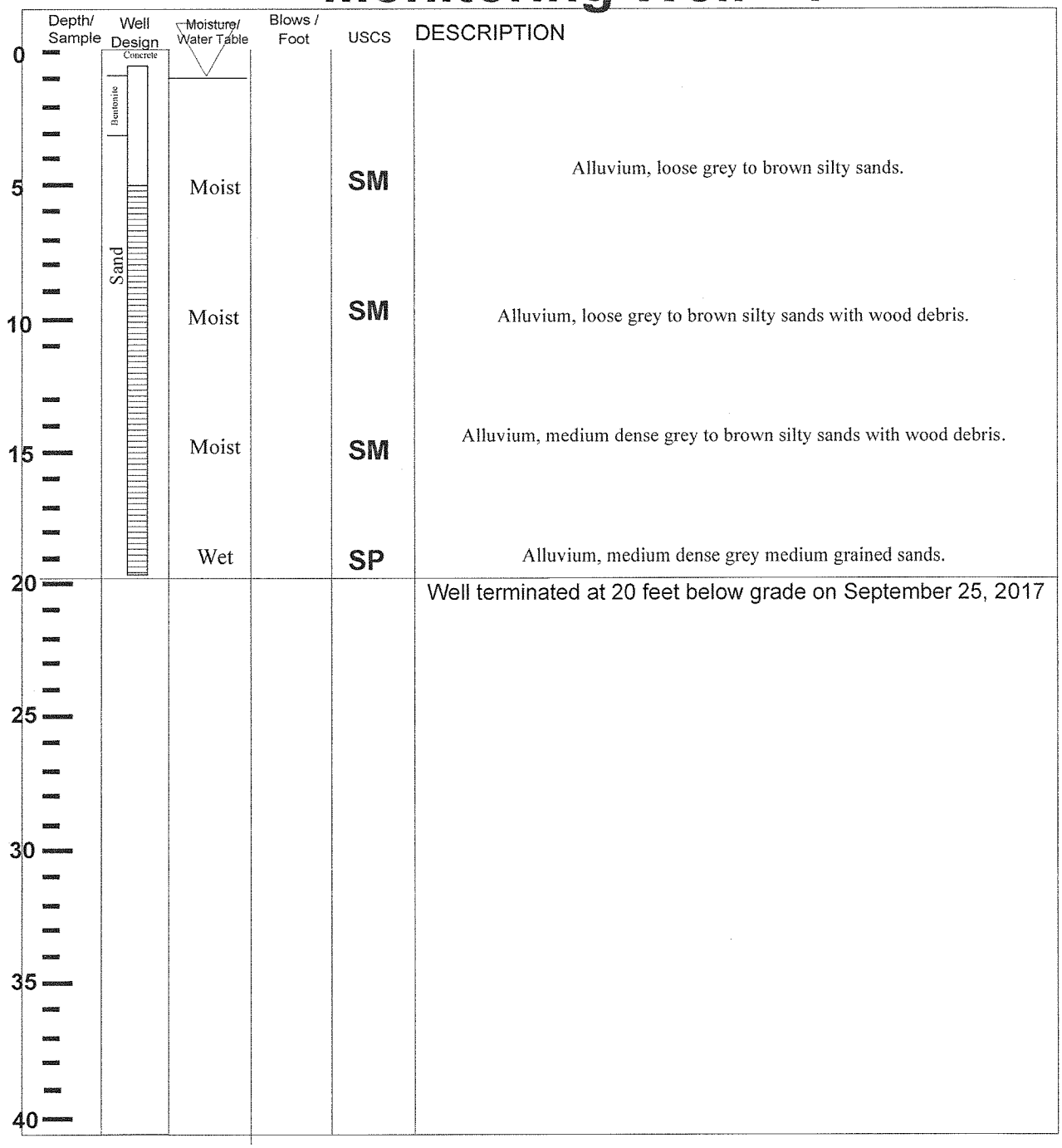
GROUNDWATER FLOW

Former Gas Station Site
4404 South 133rd Street
Tukwila, Washington 98168

Job Number:	Date:		Plate:
JN 33076-4	December 2017		3

Monitoring Well - 1



Hammer Weight: N/A
Driller: Environmental Services Network, Inc.

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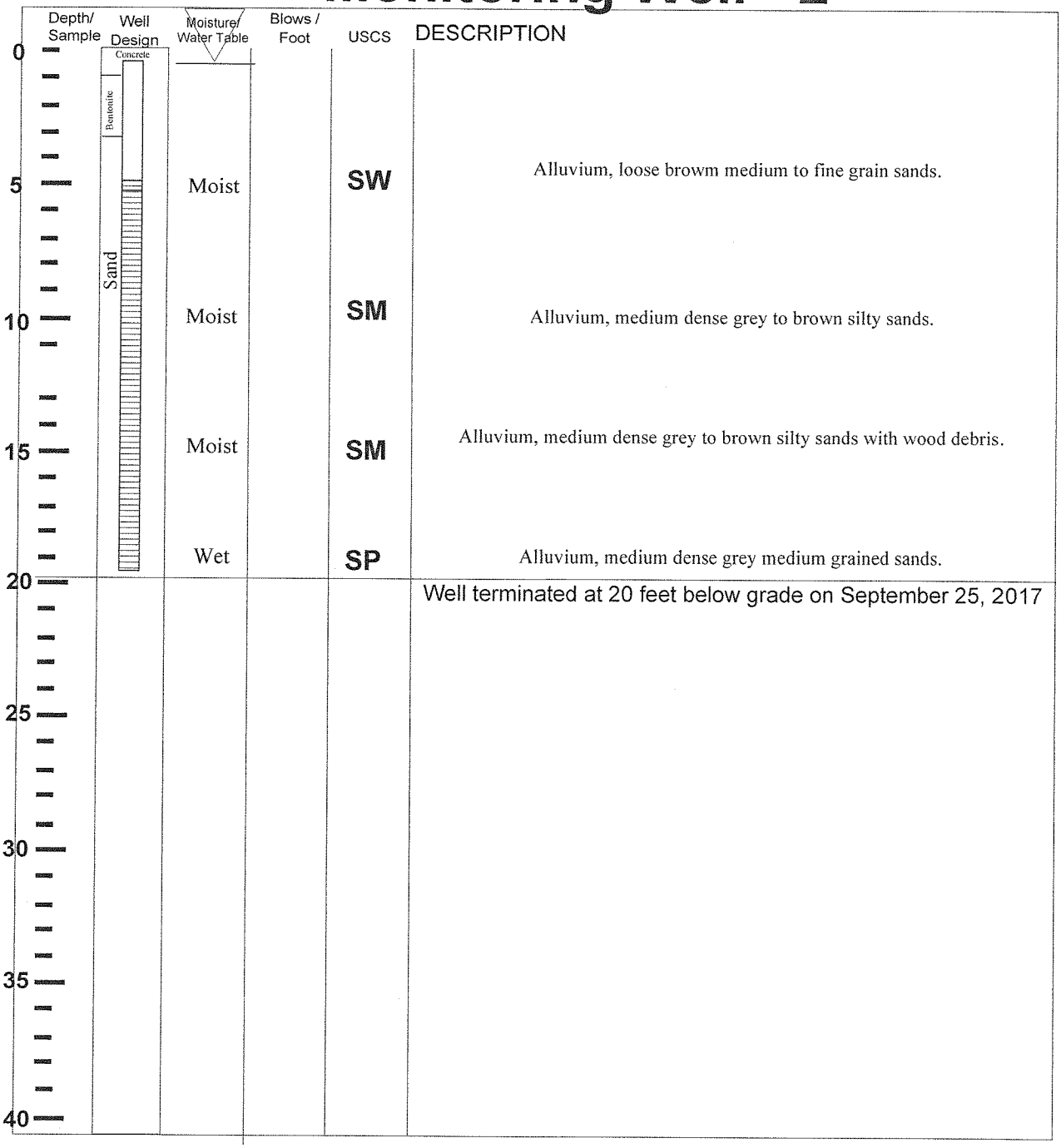
Monitoring Well 1

Former Gas Station Site
4404 South 133rd Street
Tukwila, Washington 98168

Job Number:	Date:	Logged by:	Plate:
JN 33076-4	December 2017	RDO	4

Monitoring Well - 2



Hammer Weight: N/A
Driller: Environmental Services Network, Inc.

ENVIRONMENTAL ASSOCIATES, INC.

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Bellevue, Washington 98004

Monitoring Well 2

Former Gas Station Site
4404 South 133rd Street
Tukwila, Washington 98168

Job Number:	Date:	Logged by:	Plate:
JN 33076-4	December 2017	RDO	5

Monitoring Well - 3

Depth/ Sample	Well Design	Moisture/ Water Table	Blows / Foot	USCS	DESCRIPTION
0	Concrete; Bentonite				
5	Sand	Moist		SM	Alluvium, medium dense grey to brown silty sands with wood debris.
10		Moist		SM	Alluvium, medium dense grey to brown silty sands with large amount of orgenic debris (wood, leafs, etc.).
15		Wet		SM	Alluvium, medium dense grey to brown silty sands with large amount of orgenic debris (wood, leaves, etc.).
					Well terminated at 15 feet below grade on September 25, 2017
20					
25					
30					
35					
40					

Hammer Weight: N/A
Driller: Environmental Services Network, Inc.

ENVIRONMENTAL ASSOCIATES, INC.

1380 - 112th Avenue N.E., Ste. 300
Bellevue, Washington 98004

Monitoring Well 3

Former Gas Station Site
4404 South 133rd Street
Tukwila, Washington 98168

Job Number:	Date:	Logged by:	Plate:
JN 33076-4	December 2017	RDO	6

TABLE 1 - Petroleum Hydrocarbons - Groundwater Sampling Results

Sample ID	Diesel (TPH)	Heavy Oil (TPH)
MW-1	ND	ND
MW-2	ND	ND
MW-3	**1600***	ND
MW-3 Silica Gel	160*	ND
Reporting Limit [3]	50	250
MTCA-Method-A Cleanup Levels[4]	**500**	**500**

Notes:
1 - "ND" denotes analyte not detected at or above listed Reporting Limit.
2- "NA" denotes sample not analyzed for specific analyte.
3- "Reporting Limit" represents the laboratory lower quantitation limit.
4- Method A groundwater cleanup levels as published in the Model Toxics Control Act (MTCA) 173-340-WAC.
5- The MTCA gasoline TPH cleanup level is 800 ppb for groundwater with benzene. Otherwise, the cleanup level is 1000 ppb.
* - Tha Laboratory noted that the sample analyte was not indicative of a petroleum product.

Bold and Italics denotes concentrations above existing or proposed MTCA Method A groundwater cleanup

TABLE 2 - GROUNDWATER SURVEY DATA IN FEET

Sample ID	Elevation of Well	Depth to Water	Groundwater Elevation
MW-1	23.11	0.97	22.76
MW-2	22.79	0.5	22.19
MW-3	25	2.5	22.5

APPENDIX-A

Laboratory Reports

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 5, 2017

Ryan Opitz, Project Manager
Environmental Associates, Inc.
1380 112th Ave. NE, 300
Bellevue, WA 98004

Dear Mr Opitz:

Included are the results from the testing of material submitted on October 2, 2017 from the Borrelli Site, PO 33076-4, F&BI 710007 project. There are 4 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
EAI1005R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 2, 2017 by Friedman & Bruya, Inc. from the Environmental Associates Borrelli Site, PO 33076-4, F&BI 710007 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Associates
710007 -01	MW-1-17
710007 -02	MW-2-15
710007 -03	MW-3-10
710007 -04	MW-3-15
710007 -05	B-MW-1
710007 -06	B-MW-2
710007 -07	B-MW-3

All quality control requirements were acceptable.

Date of Report: 10/05/17
Date Received: 10/02/17
Project: Borrelli Site, PO 33076-4, F&BI 710007
Date Extracted: 10/03/17
Date Analyzed: 10/03/17

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 47-140)
B-MW-1 710007-05	<50	<250	111
B-MW-2 710007-06	<50	<250	114
B-MW-3 710007-07	1,600 x	<250	107
Method Blank 07-2177 MB2	<50	<250	125

Date of Report: 10/05/17
Date Received: 10/02/17
Project: Borrelli Site, PO 33076-4, F&BI 710007

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	84	96	61-133	13

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

710007

SAMPLE CHAIN OF CUSTODY

ME 10-02-17

302 / 581 / NW1

Page # 1 of 1

Send Report To Environmental Associates Inc

~~Company~~ Client Joe Borrelli, Borrelli Real Estate Inv.

Address 13028 Interurban Ave S, Suite 108

City, State, ZIP Tukwila WA 98168

Phone # 206-431-1234 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Borrelli Site

PO# 3306-4

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
MW-1-17	01A-L	9/25	9:30	Soil	2 voa 1 Jar													
MW-2-15	02		10:20															
MW-3-10	03		11:20															
MW-3-15	04		11:25		1 Jar													
B-MW-1	05	9/28	11:00	water	2 voa 1 Amb	X												
B-MW-2	06		11:35			X												
B-MW-3	07		12:15			X												
																		Samples received at 2 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Ryan Opatz	EAI	10/2/17	11:30
Received by:	Nelson Cano	Fedex	10/2/17	11:30
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 19, 2017

Ryan Opitz, Project Manager
Environmental Associates, Inc.
1380 112th Ave. NE, 300
Bellevue, WA 98004

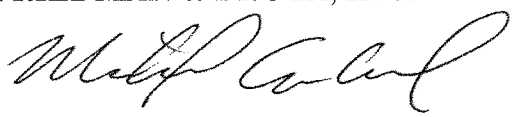
Dear Mr Opitz:

Included are the additional results from the testing of material submitted on October 2, 2017 from the Borrelli Site, PO 33076-4, F&BI 710007 project. There are 4 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
EAI1019R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 2, 2017 by Friedman & Bruya, Inc. from the Environmental Associates Borrelli Site, PO 33076-4, F&BI 710007 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Associates
710007 -01	MW-1-17
710007 -02	MW-2-15
710007 -03	MW-3-10
710007 -04	MW-3-15
710007 -05	B-MW-1
710007 -06	B-MW-2
710007 -07	B-MW-3

Sample MW-3-15 was sent to Fremont Analytical for TOC analysis. Review of the enclosed report indicates that all quality assurance were acceptable.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/19/17
Date Received: 10/02/17
Project: Borrelli Site, PO 33076-4, F&BI 710007
Date Extracted: 10/03/17
Date Analyzed: 10/12/17

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx
Sample Extracts Passed Through a Silica Gel Column Prior to Analysis
Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 47-140)
B-MW-3 710007-07	150 x	<250	122
Method Blank	<50	<250	86

Date of Report: 10/19/17
Date Received: 10/02/17
Project: Borrelli Site, PO 33076-4, F&BI 710007

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	76	84	63-142	10

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 710007
Work Order Number: 1710146

October 18, 2017

Attention Michael Erdahl:

Fremont Analytical, Inc. received 1 sample(s) on 10/11/2017 for the analyses presented in the following report.

Total Organic Carbon by EPA 9060

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,

Mike Ridgeway
Laboratory Director

Fremont Analytical

Date: *10/18/2017*

CLIENT: Friedman & Bruya
Project: 710007
Work Order: 1710146

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1710146-001	MW-3-15	09/25/2017 11:25 AM	10/11/2017 1:47 PM

Fremont Analytical

Case Narrative

WO#: **1710146**
Date: **10/18/2017**

CLIENT: Friedman & Bruya
Project: 710007

I. SAMPLE RECEIPT:
Samples receipt information is 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.

Qualifiers:

* - Flagged value is not within established control limits
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
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **1710146**
Date Reported: **10/18/2017**

Client: Friedman & Bruya
Project: 710007
Lab ID: 1710146-001
Client Sample ID: **MW-3-15**

Collection Date: 9/25/2017 11:25:00 AM
Matrix: Soil

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Total Organic Carbon by EPA 9060				Batch ID: 18545		Analyst: KT
Total Organic Carbon	7.38	0.0750		%-dry	1	10/17/2017 1:56:00 PM

Work Order: 1710146
CLIENT: Friedman & Bruya
Project: 710007

QC SUMMARY REPORT

Total Organic Carbon by EPA 9060

Sample ID MB-18545	SampType: MBLK			Units: %-dry		Prep Date: 10/17/2017		RunNo: 39304		
Client ID: MBLKS	Batch ID: 18545					Analysis Date: 10/17/2017		SeqNo: 756307		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	ND	0.0750									

Sample ID LCS-18545	SampType: LCS			Units: %-dry		Prep Date: 10/17/2017		RunNo: 39304		
Client ID: LCSS	Batch ID: 18545					Analysis Date: 10/17/2017		SeqNo: 756308		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	0.721	0.0750	0.6040	0	119	59.1	139				

Sample ID 1710146-001ADUP	SampType: DUP			Units: %-dry		Prep Date: 10/17/2017		RunNo: 39304		
Client ID: MW-3-15	Batch ID: 18545					Analysis Date: 10/17/2017		SeqNo: 756310		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	6.53	0.0750						7.376	12.1	30	

Sample ID 1710146-001AMS	SampType: MS			Units: %-dry		Prep Date: 10/17/2017		RunNo: 39304		
Client ID: MW-3-15	Batch ID: 18545					Analysis Date: 10/17/2017		SeqNo: 756311		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	9.26	0.0750	1.954	7.376	96.5	38.5	146				

Sample ID 1710146-001AMSD	SampType: MSD			Units: %-dry		Prep Date: 10/17/2017		RunNo: 39304		
Client ID: MW-3-15	Batch ID: 18545					Analysis Date: 10/17/2017		SeqNo: 756312		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	8.72	0.0750	1.940	7.376	69.2	38.5	146	9.261	6.03	20	

Sample Log-In Check List

Client Name:	**FB**	Work Order Number:	**1710146**
Logged by:	**Brianna Barnes**	Date Received:	**10/11/2017 1:47:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	FedEx		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☑	Not Required ☐
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☐	No ☑	NA ☐
	Sample received at appropriate temperature			
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	12.5
Sample	7.4

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SUBCONTRACT SAMPLE CHAIN OF CUSTODY 1710146

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER Fremont

PROJECT NAME/NO.	PO #
710007	F-118

REMARKS

Please Email Results

TURNAROUND TIME

~~Standard (2 Weeks)~~ 1 week.

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Dispose after 30 days

☐ Return samples

☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: Dioxins/Furans	EPH	VPH	Nitrate	Sulfate	Alkalinity	TOC ~~8260M~~				Notes
MW-3-15		9/25	1125	soil	1							X				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman and Bruya	10/11/17	1247
Received by:		Clare Griggs	FAI	10/11/17	1347
Relinquished by:					
Received by:					

710007

SAMPLE CHAIN OF CUSTODY

ME 10-02-17

302/VB1/NW1

Page # 1 of 1

Send Report To: Environmental Associates Inc

Client Company: Joe Borelli, Borelli Real Estate Inv.

Address: 13028 Interurban Ave S, Suite 108

City, State, ZIP: Tukwila WA 98168

Phone #: 206-431-1234 Fax #:

SAMPLERS (signature):

PROJECT NAME/NO.: Borelli Site

PO#: 3306-4

REMARKS:

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

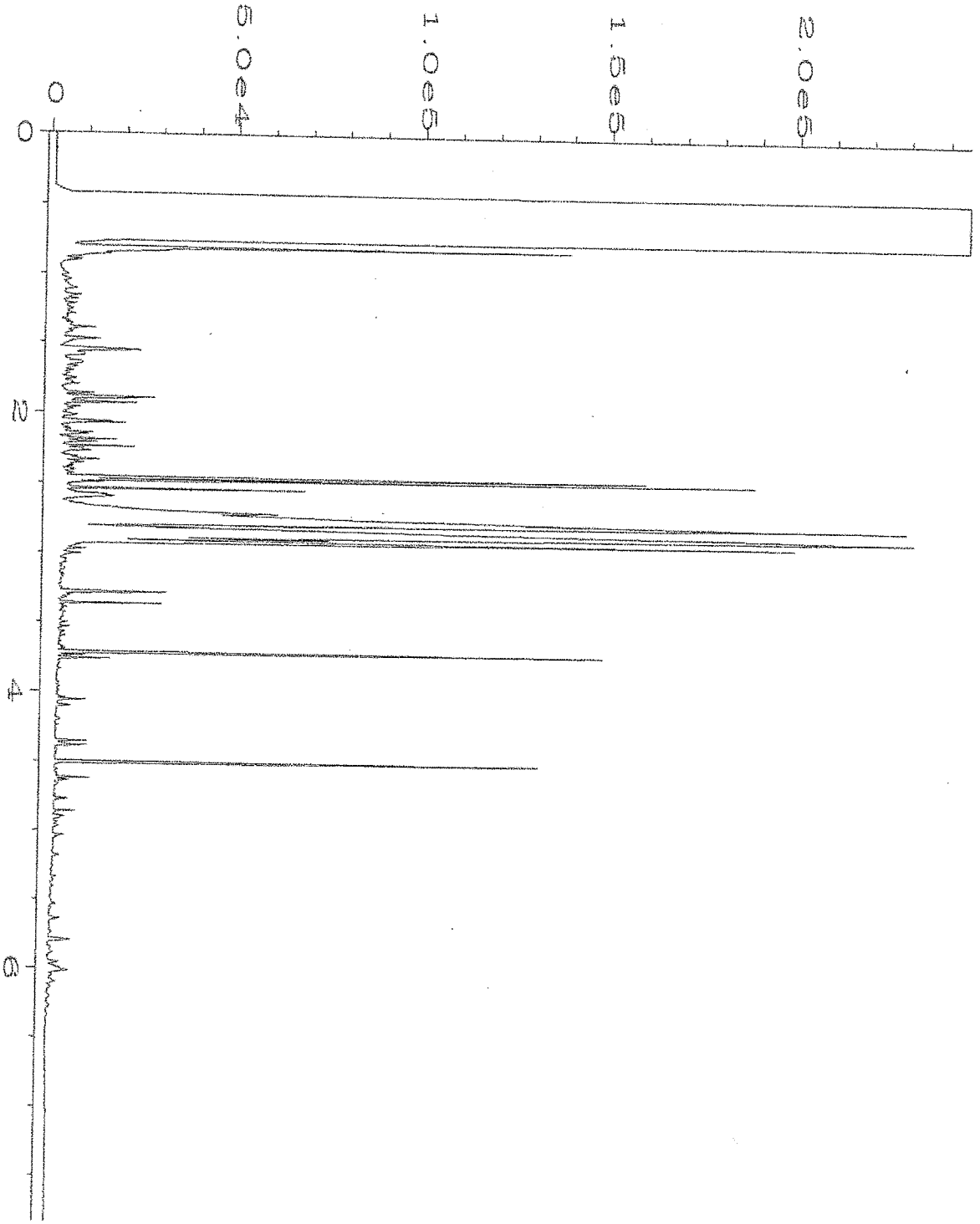
SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	SILICA GEL	TOC					Notes
																		0-pac RD
MW-1-17	01A-C	9/25	9:30	Soil	2 voa 1 Jar													10/10/17
MW-2-15	02	↓	10:20	↓	↓													
MW-3-10	03		11:20															
MW-3-15	04		11:25		1 Jar								✓					
B-MW-1	05	9/28	11:00	water	2 voa 1 Amb	X												
B-MW-2	06		11:35			X												
B-MW-3	07	↓	12:15	↓	↓	X						✓						
																		Samples received at 2 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Ryan Applez	EAI	10/2/17	11:30
Received by:	Nelson Cuevas	FedEx	10/2/17	11:30
Relinquished by:				
Received by:				

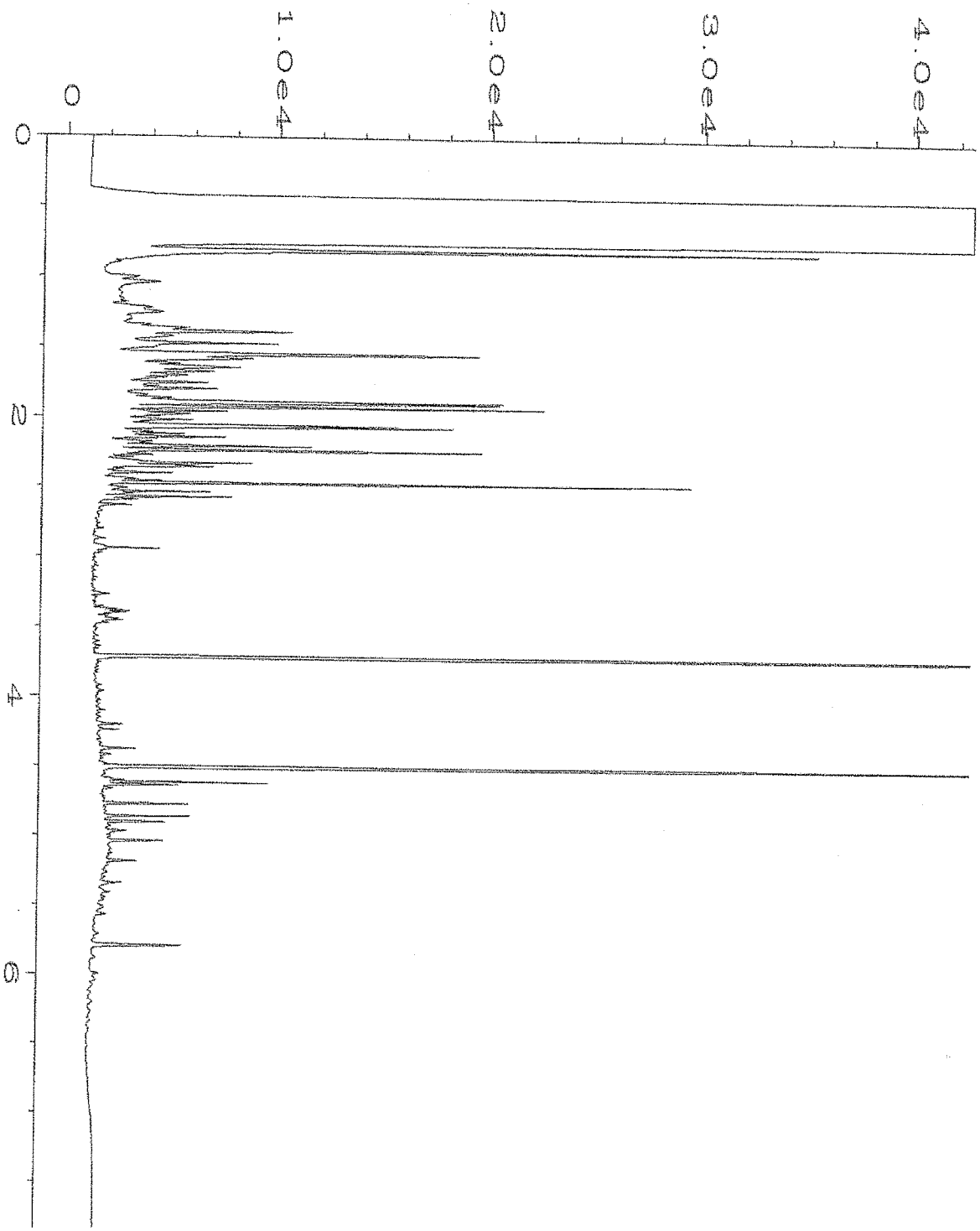
Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC



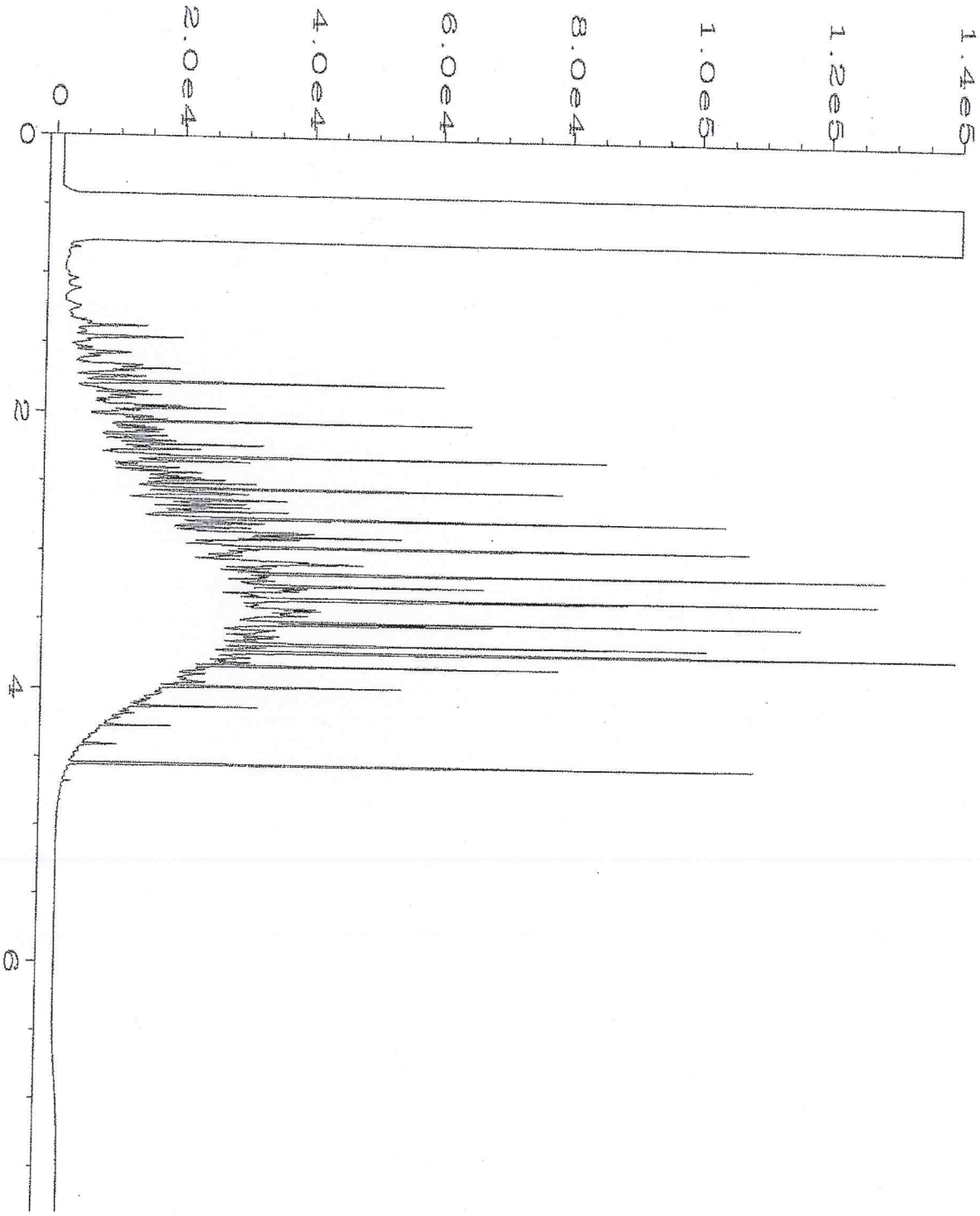
Data File Name : C:\HPCHEM\4\DATA\10-03-17\038F0501.D
Operator : mwdl
Instrument : GC#4
Sample Name : 710007-07 mw-3
Run Time Bar Code:
Acquired on : 03 Oct 17 05:31 PM
Report Created on: 27 Nov 17 02:40 PM

Page Number : 1
Vial Number : 38
Injection Number : 1
Sequence Line : 5
Instrument Method: DX.MTH
Analysis Method : DX.MTH



Data File Name : C:\HPCHEM\4\DATA\10-11-17\037F0701.D
Operator : mwdl
Instrument : GC#4
Sample Name : 710007-07 sg mw-3, silica gel
Run Time Bar Code:
Acquired on : 11 Oct 17 07:10 PM
Report Created on: 27 Nov 17 02:38 PM

Page Number : 1
Vial Number : 37
Injection Number : 1
Sequence Line : 7
Instrument Method: DX.MTH
Analysis Method : DX.MTH



Data File Name : C:\HPCHEM\4\DATA\10-03-17\003F0201.D
Operator : mwdl
Instrument : GC#4
Sample Name : 500 Dx 49-188E
Run Time Bar Code:
Acquired on : 03 Oct 17 06:32 AM
Report Created on: 27 Nov 17 02:38 PM

Page Number : 1
Vial Number : 3
Injection Number : 1
Sequence Line : 2
Instrument Method: DX.MTH
Analysis Method : DX.MTH

Standard Diesel Pattern
provided by Lab