LIMITED SUBSURFACE SAMPLING AND TESTING

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

MITCHELL CONTRACTORS, INC.

ENVIRONMENTAL
ASSOCIATES, INC.

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May 27, 2016 JN-33076-2

Ron Mitchell
Mitchell Contractors, Inc.
19505 Vashon Highway Southwest
Vashon, Washington 98070

Subject: **LIMITED SUBSURFACE SAMPLING AND TESTING**
Former Gasoline Station Site
4404 South 133rd Street
Tukwila, Washington 98168

Dear Mr. Mitchell:

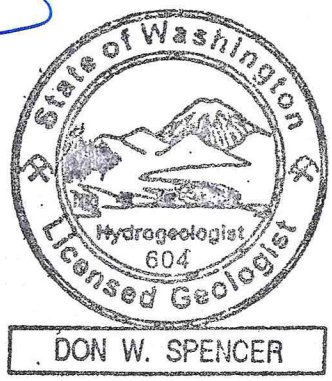
Environmental Associates, Inc. (EAI) has performed limited sampling and testing of subsurface soils and groundwater at selected localities on the subject property. The purpose of this work was to make an assessment as to the extent of known contamination relating to the previously removed fuel tanks and dispensers relating to the historic on-site gas station. This report, prepared in accordance with the terms of our proposal dated April 20, 2016, summarizes our approach to the project along with results and conclusions.

The contents of this report are confidential and are intended solely for your use and the use of your representatives. Two (2) copies of this report are being distributed to you. No other distribution or discussion of this report will take place without your prior approval in writing.

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.

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



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LIMITED SUBSURFACE SAMPLING AND TESTING

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

Prepared for:

Mitchell Contractors, Inc.
19505 Vashon Highway Southwest
Vashon, Washington 98070

Questions regarding this investigation, the conclusions reached and the recommendations given should be addressed to one of the following undersigned.

Ryan D. Opitz
Environmental Geologist / Project Manager

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

License: 604 (Washington)
License: 11464 (Oregon)
License: 876 (California)
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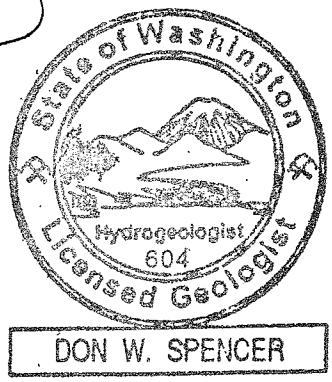


Reference Job Number: JN 33076-2

May 27, 2016

TABLE OF CONTENTS

INTRODUCTION/SCOPE OF WORK

SITE/PROJECT DESCRIPTION

The subject property consists of an irregular-shaped parcel covering approximately 25,480 square feet of land. The property is currently cleared and vacant. The approximate location of the site is shown on the Vicinity Map, Plate 1, appended herewith. The property is located in a commercial area approximately two (2) miles northeast of SeaTac International Airport.

Current Study

Your expressed interests to conduct an evaluation of current subsurface conditions around a known contaminated area as memorialized in our proposal to you dated April 20, 2016, formed the basis for the following scope of work:

- Observe 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 a log of subsurface conditions encountered was prepared for each boring by the EAI project geologist. Additionally, groundwater was collected from four (4) of the pits.
- Laboratory analysis of selected soil and groundwater samples was performed using gas chromatography (GC). Analyses included gasoline, diesel, and heavy oil petroleum hydrocarbons as well as benzene, toluene, ethylbenzene, and xylenes (BTEX).
- Preparation of this summary report documenting the methodology and results of the investigation.

FINDINGS

SUBSURFACE INVESTIGATION

Utility Locate

Prior to excavation, both a public and private underground utility locate were conducted. In both of the private and public locates an underground fiber optics cable was identified to the south of the property line. Additionally, the private locate identified a metallic anomaly resembling a pipe running between TP-1 and TP-2. Locations of these features are shown on Plate 3.

Soil/Groundwater Sampling

Six (6) test pits were excavated on May 9, 2016 at the approximate locations noted as TP-1 through TP-6 on Plate 3. The test pits were excavated with an excavator provided and operated by the client All pits were placed within the southeastern section of the property in the location of the former gas station operation.

Soil/Groundwater Sampling Procedure

Under the observation of the EAI field geologist, the excavator was brought into position near the selected exploration locations TP-1 through TP-6. Following set-up preparations, the excavation/sampling technique consisted of digging down in four foot depth intervals until groundwater was reached. At each interval a soil sample was collected from the center of the backhoe bucket and transferred to laboratory prepared glassware. Once groundwater was reached, the pit was given time to accumulate water in its base (30 to 60 minutes). Accumulated groundwater was only present in 4 of the pits (TP-1 though TP-4) even thought groundwater was reached in all six pits. Groundwater was collected using a hand bailer and transferred into laboratory prepared glassware

Soil and groundwater samples were transferred directly to sterilized laboratory prepared glassware which were then stored in an iced chest maintained at approximately 4 degrees centigrade at the site and taken to the laboratory in this condition in an effort to preserve sample integrity.

Each sample container was clearly labeled as to test pit and sample number/depth, date, time, project, etc. EPA-recommended sample-management protocol was observed at each stage of the project. During excavation, a field log was made by EAI for each test pit. Information recorded versus corresponding depth included soil classification (Unified Soil Classification System), color, texture, relative moisture, odors (if present), etc.

While digging TP-1, soils were encountered that appeared very oily and exuded a distinctive petroleum odor at approximately 4 feet bgs. When a photoionization detector (PID) was used on-site to analyzed the soil there were hydrocarbon vapor concentrations on the order of 1,800 parts per million (ppm). Given the goal of this investigation was to attempt to define the approximate extent of the contamination, we moved the pit to the west approximately 5 feet and took the samples form that area.

Subsurface Conditions

Soils encountered within TP-1 through TP-6 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 feet below ground surface (bgs). At approximately 10 to 15 feet bgs in TP-5 and TP-6, a layer of highly organic material was present in fairly non-decomposed form (leafs, sticks, etc.) was noted with intermittent small layers of gray silty sands. The lower limit of this naturally occurring organic unit was not reached.

LABORATORY ANALYSIS

Laboratory analysis of soil and groundwater samples was conducted by Friedman & Bruya, Inc., Seattle, Washington, a WDOE-accredited analytical laboratory. In accordance with Washington Department of Ecology (WDOE) site assessment protocol, laboratory analysis was performed on selected samples. Soil samples from depths of approximately 4 to 8 feet below ground surface (bgs) from all test pits were selected for lab analysis. Groundwater was present between 4 and 8 feet bgs and collected from TP-1 through TP-4. All soil and groundwater samples were analyzed for gasoline, BTEX (benzene, toluene, ethylbenzene, and xylenes), diesel, and heavy oil.

As summarized in Table 1 attached to this report, all soil results for gasoline, BTEX, diesel, and heavy oil were "non detect" (below the range of detection by the laboratory equipment).

As summarized in Table 2, diesel range hydrocarbons were detected in all four groundwater samples (TP-1 though TP-4). Diesel concentrations detected in groundwater collected from TP-1 through TP-3 were below MTCA cleanup levels of 500 parts per billion (ppb) while the sample from TP-4 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 from TP-4 for diesel and heavy oil after it was put through a silica gel column to remove possible naturally occurring hydrocarbons. The results of the fallow up analysis were "non detect" for diesel and the concentration of heavy oil was below the MTCA Cleanup levels.

CONCLUSIONS AND RECOMMENDATIONS

The stated goals for this study as presented in EAI's proposal, dated April 20, 2016, have been fulfilled. All soil samples analyzed as part of this current study were in compliance with the Washington State Department of Ecology's levels for unrestricted land. Using this information an approximate lateral extent of contamination has been projected and is shown on Plate 3. The lower limit of the contamination has not been defined. Acknowledging the clients stated goal to eventually qualify for a letter of "no further action" from the WDOE, the fallowing tasks are offered for consideration:

TASK 1: Excavation

Excavation of the area of possible contamination shown on Plate 3 could be conducted to the extent of contamination as defined by field observation and laboratory testing or to the extent practicable. The excavated soils should be separated into piles of suspected clean and suspected contaminated soil. These pile should be tested to confirm their environmental status. The suspected contaminated soil should be covered and placed on plastic sheeting. For preliminary estimation purposes, if the area depicted on Plate 3 were excavated to an average depth of 10 feet an estimated 530 yd^3 (840 tons) of soil may be excavated. Of this volume, perhaps 50% may be contaminated, requiring off-site disposal. Cost estimates listed below for this task are based on $80 per ton to excavate, transport and dispose of contaminated soil, and replace with "clean" backfill.

TASK 2: Groundwater Removal

Once the contaminated soil has been removed, contaminated groundwater may accumulate in the base of the excavation. After 6 to 12 inches of water has collected it could be removed and disposed of properly using a vac-truck or similar method. This could be repeated several time. An estimated 10,000 to 15,000 gallons of groundwater could be removed. Laboratory testing of the excavation water, between dewatering events should be performed to monitor the progress of groundwater improvement. Cost estimates listed below for this task are based on $0.25 per gallon to dispose contaminated water plus vac-truck and operator rates.

TASK 3: Possible Addition of Remediation Product

After dewatering the open excavation multiple times, if groundwater remains contaminated, remedation product could be added to the open excavation to further stimulate remediation. Cost estimates for this task in the table below area very preliminary considering exact amount of product needed will be based on contaminated levels of groundwater and the size of the excavation.

TASK 4: Backfilling

The excavations should be filled in with confirmed clean soil and properly compacted in a manner considerate of future uses or structural/foundation requirements. Installation of perforated piping could be installed for later used for monitoring or follow-up remediation product application.

TASK 5: Installation of Monitoring Wells

In anticipation for contamination cleanup progress monitoring and eventual NFA application (which will require four quarters of groundwater compliance), three to four monitoring wells will likely need to be installed throughout the property. At least one of the wells should be placed in the area of the excavation and all well locations should take into consideration of the location of any future buildings on-site. Once wells are installed quarterly monitoring should take place until four (4) consecutive quarters of compliant groundwater is recorded. Cost estimates are based on common costs for installation of wells along with up to two years of monitoring.

TASK 6: Apply for NFA

Provided that the completion of all previous tasks were successful in achieving compliance in both soil, groundwater, and soil vapors, submit an application to the WDOE for a letter of "no further action" (NFA).

Below is a cost estimate table for the above noted tasks.

ACTIVITY	ESTIMATED COST FOR MAPPED AREA WITH 50% CONTAMINATION FOUND IN SOIL
TASK 1 EXCAVATION & 4, BACKFILLING	$30,000 to $35,000
TASK 2 GROUNDWATER REMOVAL	$6,000 to $10,000
TASK 3 REMEDIATION PRODUCT	$10,000
TASK 5 MONITORING WELLS	$19,000 to $22,400
TASK 6 NFA APPLICATION	$2,500
ENVIRONMENTAL CONSULTING SUPPORT SERVICES	$10,000 to $12,000
TOTAL	$80,000 to 95,000

These costs are estimated based on the excavation area as identified on Plate 3 and presume that 50% of the removed soil may be contaminated. These are very approximate preliminary estimates and may change significantly based on actual conditions found during excavation. In addition to the above tasks, the client should be aware that if residual concentrations of gasoline remain in soil or groundwater at the time of new building construction, vapor intrusion mitigation measures may need to be integrated into the building (such as vapor barriers).

LIMITATIONS

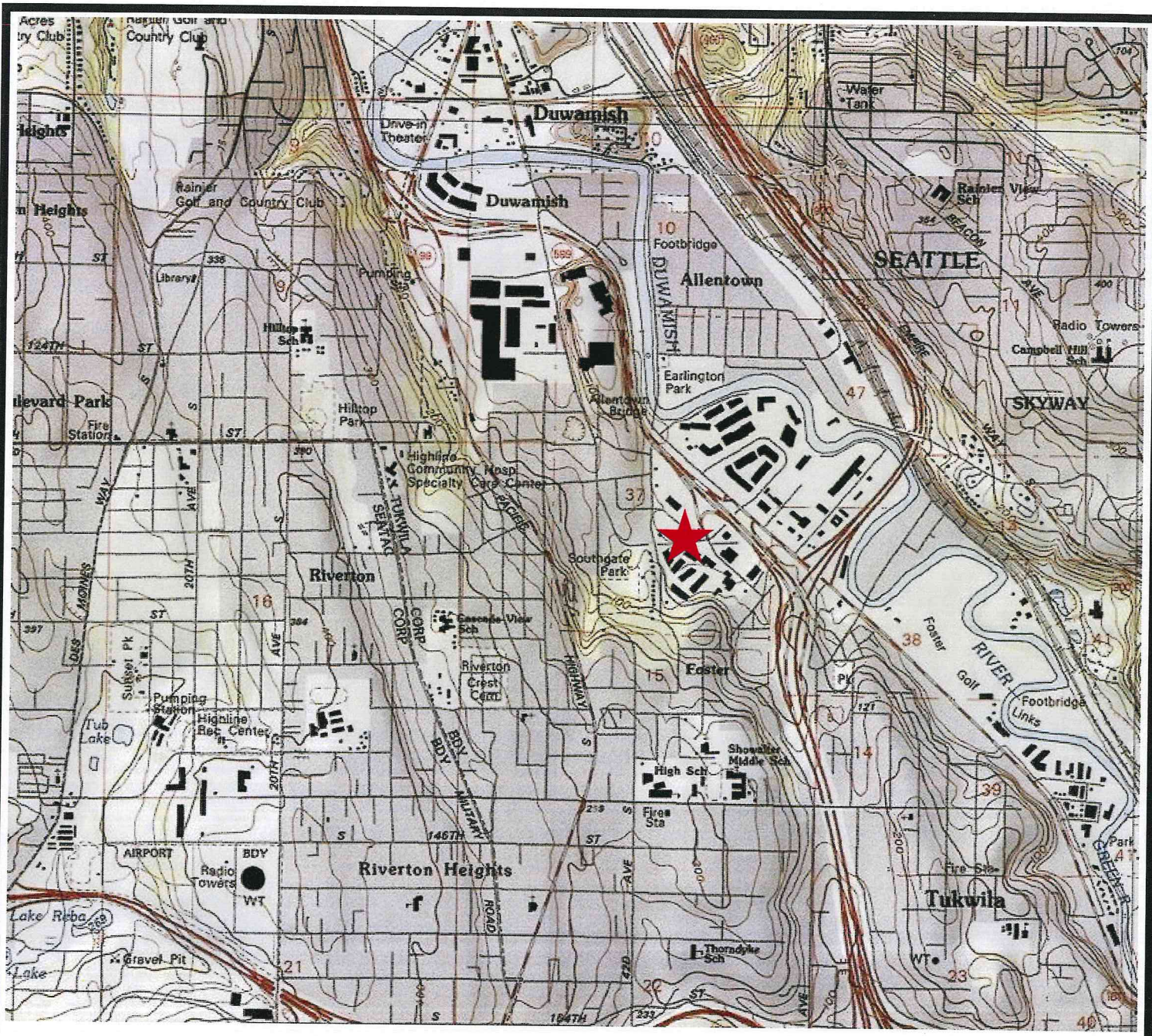
This report has been prepared for the exclusive use of Mitchell Contractors, Inc., along with their several representatives for specific application to this site. Our work for this project was conducted in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area, and in accordance with the terms and conditions set forth in our proposal dated April 20, 2016. The findings and conclusions of this study are based upon the results of laboratory testing of selected samples obtained from separated boring localities and conditions may vary between those locations or at other locations, media, or depths. Discussions or remediation costs have been provided for conceptual planning purposes only and do not constitute a bid for services by EAI. No warranties are made in regard to achievement of a particular regulatory outcome. 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 report and to provide amendments as required. As groundwater was not encountered during this sampling event, no conclusion pertaining to groundwater are offered here.

REFERENCES

Environmental Associates, Inc., May 7, 2013, JN 33076, Phase I Environmental Site Assessment, 4404 South 133rd Street, Tukwila, Washington.

Environmental Associates, Inc., June 14, 2013, JN 33076-1, Underground Storage Tank Removal and Site Assessment, 4404 South 133rd Street, Tukwila, Washington.

Washington State Department of Ecology, Draft Revisions, MTCA Method A Groundwater Cleanup Levels, June 2010, pages 75.



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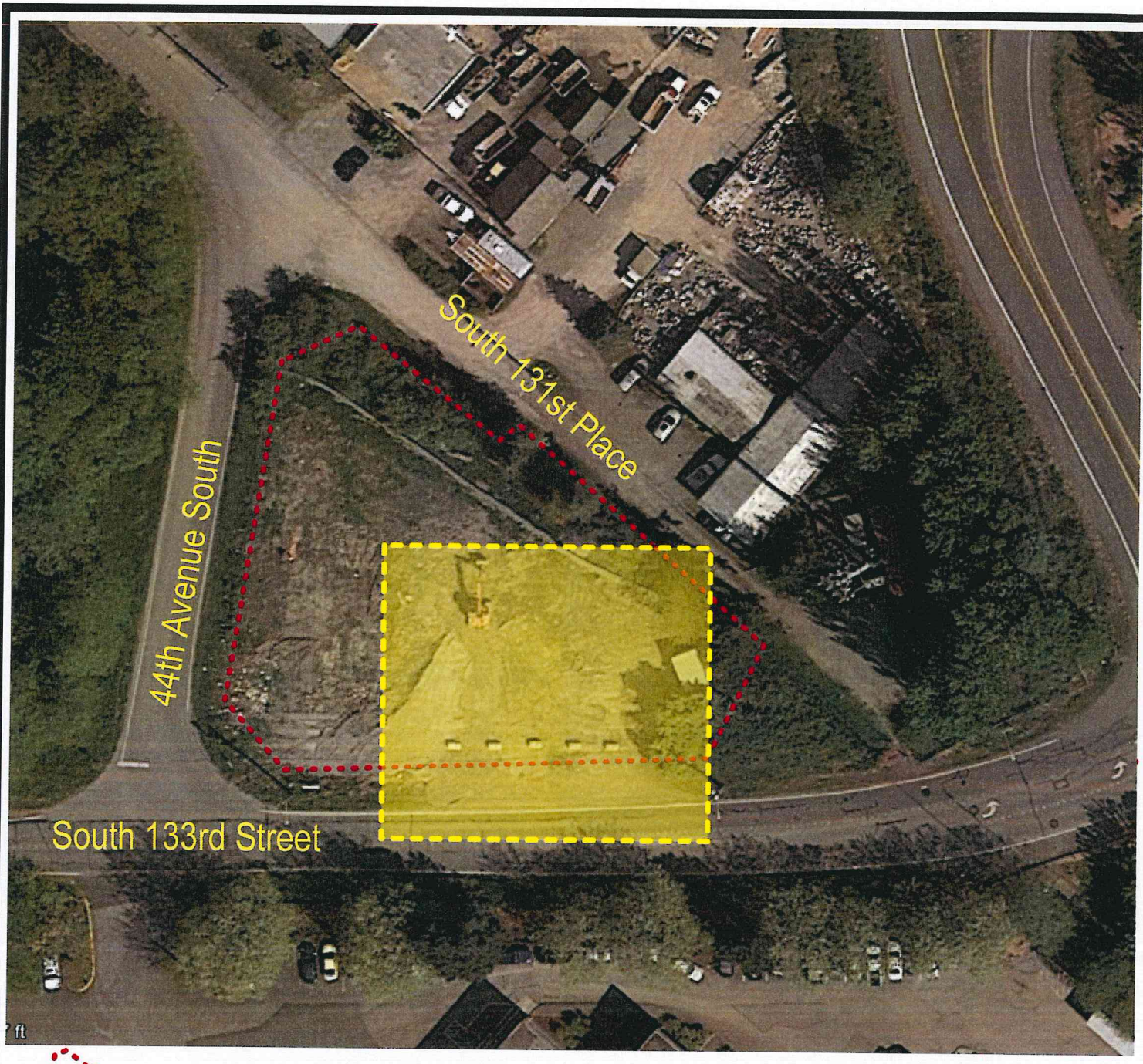
Bellevue, Washington 98004

Vicinity/Topographic Map

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

Job Number:	*Date:*		*Plate:*
JN 33076-2	May 2016		1



Approximate Site Boundary

Location Detailed on Plate 3

Inferred Approximate Direction of Groundwater Flow

N

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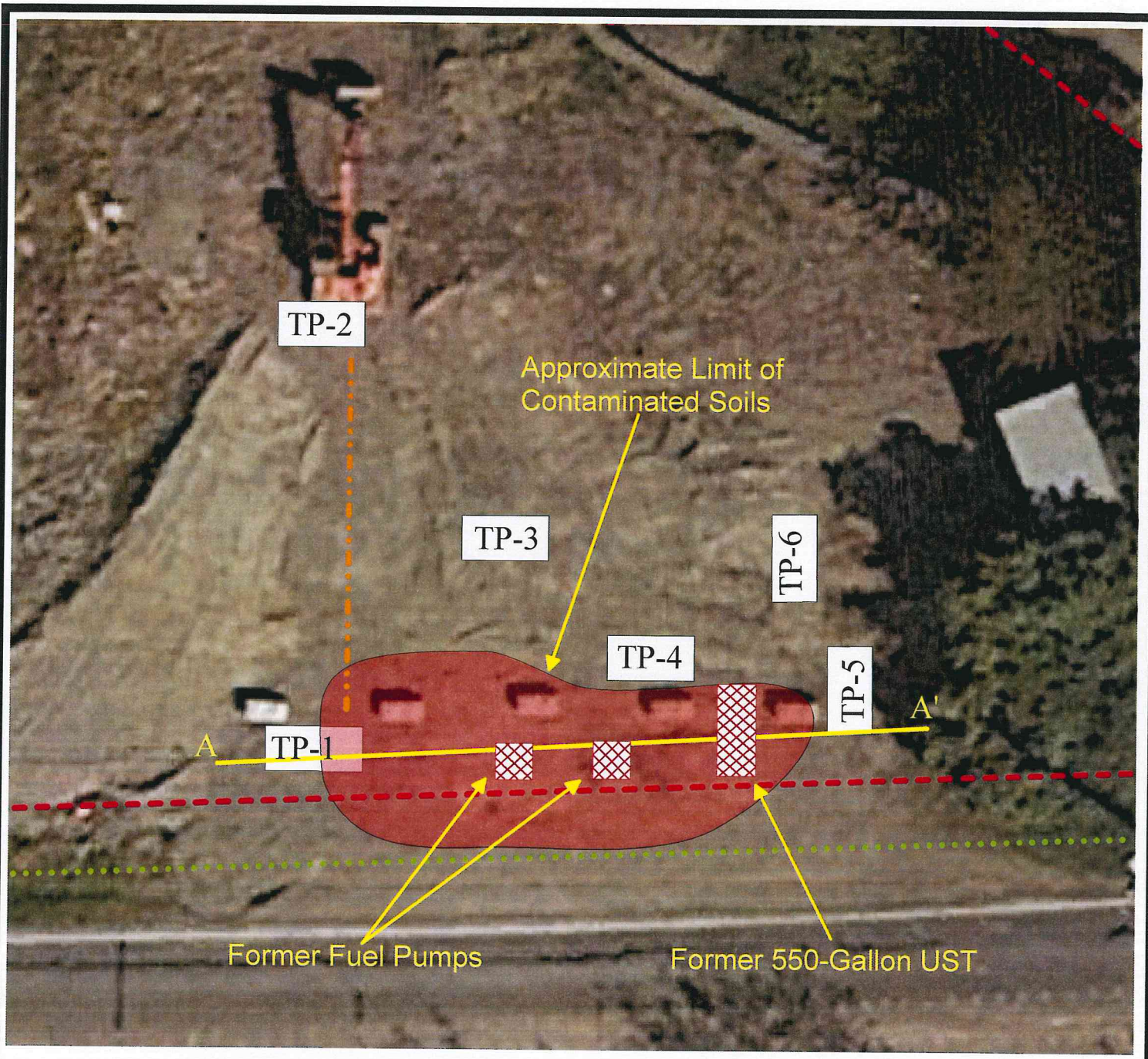
SITE PLAN

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

Job Number:	Date:		Plate:
JN 33076-2	May 2016		2



Approximate Site Boundary

Approximate Location of Fiber Optic Line

Approximate Location of Underground Pipe Detection

Cross Section Location

Inferred Approximate Direction of Groundwater Flow

N

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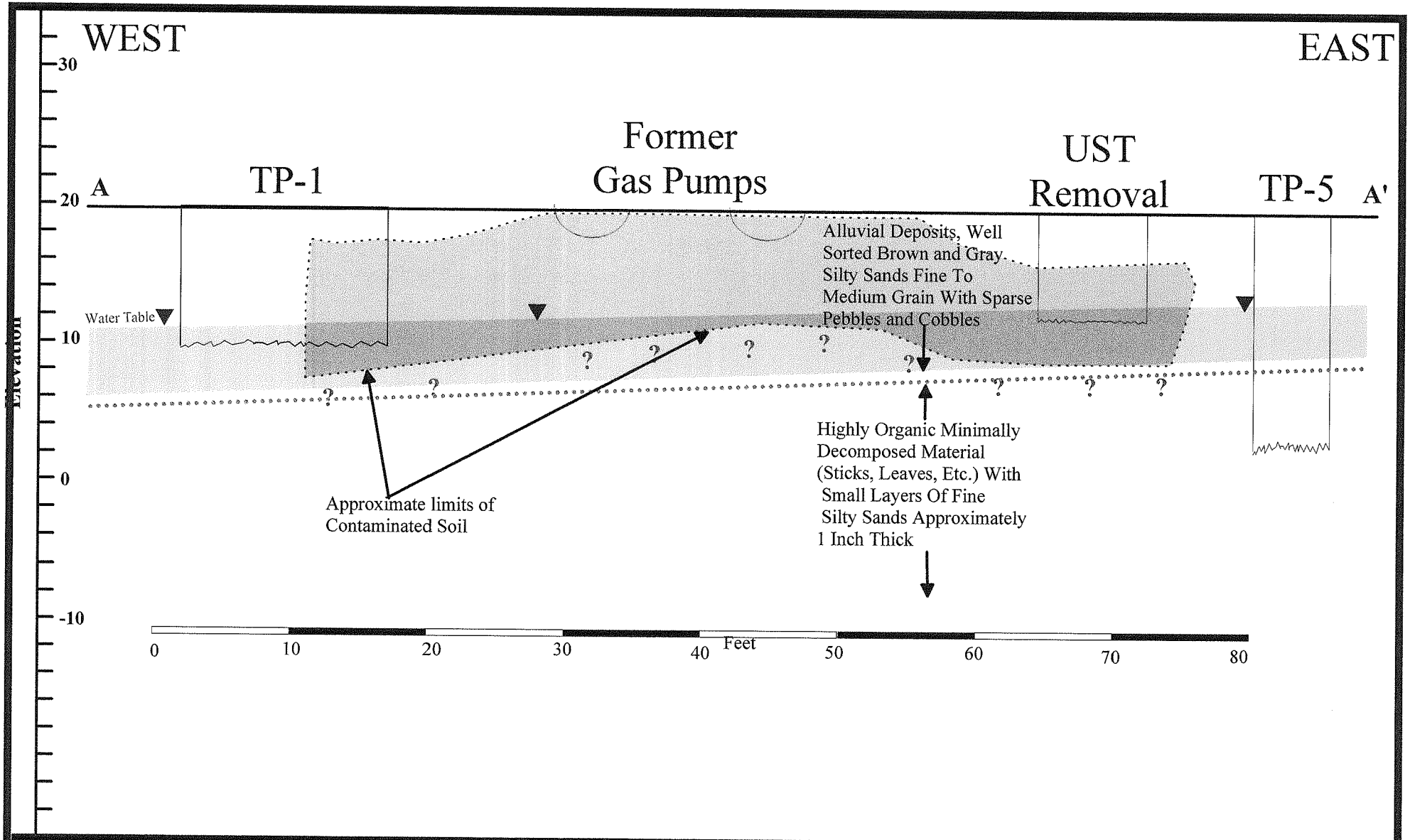
Bellevue, Washington 98004

TEST PIT LOCATIONS

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

Job Number:	Date:	Scale	Plate:
JN 33076-2	May 2016	1"= 20'	3



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Bellevue, Washington 98004

WEST-EAST CROSS-SECTION

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

Job Number:	*Date:*	*Scale:*	*Plate:*
JN-33076-2	May 2016	Horizontal: 1"=10' Vertical: 1"= 5'	4

TABLE 1 - Petroleum Hydrocarbons - Soil Sampling Results
All results and limits in parts per million (ppm)

Strataprobe Boring	Gasoline (TPH)	Diesel	Heavy Oil	Benzene	Toluene	Ethylbenzene	Total Xylenes
TP1 @ 5'	ND	ND	ND	ND	ND	ND	ND
TP1 @ 8'	ND	ND	ND	ND	ND	ND	ND
TP3 @4'	ND	ND	ND	ND	ND	ND	ND
TP4 @ 4'	ND	ND	ND	ND	ND	ND	ND
TP4 @ 7'	ND	ND	ND	ND	ND	ND	ND
TP5 @ 4'	ND	ND	ND	ND	ND	ND	ND
TP5 @ 7'	ND	ND	ND	ND	ND	ND	ND
TP6 @ 4'	ND	ND	ND	ND	ND	ND	ND
Reporting Limit [3]	10	50	100	0.02	0.05	0.05	0.15
WDOE Target Compliance Level[4]	**30 or 100 [5]**	***2000***	***2000***	***0.03***	***7***	***6***	***9***

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 soil cleanup levels as published in the Model Toxics Control Act (MTCA) 173-340-WAC.
5- The MTCA gasoline TPH cleanup level is 30 ppm for soils with benzene otherwise it is 100 ppm.
6- Soil samples were field screened using a GasTech combustible gas meter to measure the concentration of combustible gas, such as petroleum VOCs. Headspace VOC concentrations were measured after placing the soil sample in a sealed plastic bag and allowing soil and air inside the bag to equilibrate.

Bold and Italics denotes concentrations above MTCA Method A soil cleanup levels.

BGS - Below ground surface.

TABLE 2- Petroleum Hydrocarbons and BTEX- Groundwater Sampling Results
All results and limits in parts per billion (ppb)

Test Pit	Gasoline (TPH)	Diesel (TPH)	Heavy Oil (TPH)	Benzene	Toluene	Ethylbenzene	Total Xylenes
TP1	ND	67*	ND	ND	ND	ND	ND
TP2	ND	74*	ND	ND	ND	ND	ND
TP3	ND	130*	ND	ND	ND	ND	ND
TP4	ND	***520****	450	ND	ND	ND	ND
TP4 With Silica Gel	ND	ND	ND	ND	ND	ND	ND
Reporting Limit [3]	100	250	500	1	1	1	3
MTCA-Method-A Cleanup Levels[4]	**800 or 1000[5]**	**500**	**500**	**5**	**1000**	**700**	**1000**

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.
* - The sammples chromatigraphic pattern does not resemble fuel standards used for quantitation.

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

APPENDIX A

Laboratory Results

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.

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www.friedmanandbruya.com

May 17, 2016

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 May 9, 2016 from the 33076-2, F&BI 605132 project. There are 10 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
EAI0517R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 9, 2016 by Friedman & Bruya, Inc. from the Environmental Associates 33076-2, F&BI 605132 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Environmental Associates
605132 -01	TP1-5
605132 -02	TP1-8
605132 -03	TP1-W
605132 -04	TP2-5
605132 -05	TP2-W
605132 -06	TP3-4
605132 -07	TP3-W
605132 -08	TP4-4
605132 -09	TP4-7
605132 -10	TP4-W
605132 -11	TP5-4
605132 -12	TP5-7
605132 -13	TP6-4

All quality control requirements were acceptable.

Date of Report: 05/17/16
Date Received: 05/09/16
Project: 33076-2, F&BI 605132
Date Extracted: 05/10/16
Date Analyzed: 05/10/16

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
TP1-5 605132-01	<0.02	<0.02	<0.02	<0.06	<2	81
TP1-8 605132-02	<0.02	<0.02	<0.02	<0.06	<2	82
TP3-4 605132-06	<0.02	<0.02	<0.02	<0.06	<2	80
TP4-4 605132-08	<0.02	<0.02	<0.02	<0.06	<2	80
TP4-7 605132-09	<0.02	<0.02	<0.02	<0.06	<2	81
TP5-4 605132-11	<0.02	<0.02	<0.02	<0.06	<2	83
TP5-7 605132-12	<0.02	<0.02	<0.02	<0.06	<2	82
TP6-4 605132-13	<0.02	<0.02	<0.02	<0.06	<2	82
Method Blank 06-895 MB	<0.02	<0.02	<0.02	<0.06	<2	81

Date of Report: 05/17/16
Date Received: 05/09/16
Project: 33076-2, F&BI 605132
Date Extracted: 05/10/16
Date Analyzed: 05/10/16

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
TP1-W 605132-03	<1	<1	<1	<3	<100	86
TP2-W 605132-05	<1	<1	<1	<3	<100	86
TP3-W 605132-07	<1	<1	<1	<3	<100	86
TP4-W cf 605132-10	<1	<1	<1	<3	<100	86
Method Blank 06-894 MB	<1	<1	<1	<3	<100	80

Date of Report: 05/17/16
Date Received: 05/09/16
Project: 33076-2, F&BI 605132
Date Extracted: 05/10/16
Date Analyzed: 05/10/16

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)
TP1-W 605132-03 1/1.2	67 x	<300	94
TP2-W 605132-05	74 x	<250	107
TP3-W 605132-07	130 x	<250	112
TP4-W 605132-10	520 x	450 x	104
Method Blank 06-924 MB2	<50	<250	87

Date of Report: 05/17/16
Date Received: 05/09/16
Project: 33076-2, F&BI 605132
Date Extracted: 05/10/16
Date Analyzed: 05/10/16

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
TP1-5 605132-01	<50	<250	108
TP1-8 605132-02	<50	<250	101
TP3-4 605132-06	<50	<250	97
TP4-4 605132-08	<50	<250	99
TP4-7 605132-09	<50	<250	104
TP5-4 605132-11	<50	<250	108
TP5-7 605132-12	<50	<250	108
TP6-4 605132-13	<50	<250	107
Method Blank 06-932 MB	<50	<250	107

Date of Report: 05/17/16
Date Received: 05/09/16
Project: 33076-2, F&BI 605132

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 605100-07 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	84	69-120
Toluene	mg/kg (ppm)	0.5	90	70-117
Ethylbenzene	mg/kg (ppm)	0.5	91	65-123
Xylenes	mg/kg (ppm)	1.5	90	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

Date of Report: 05/17/16
Date Received: 05/09/16
Project: 33076-2, F&BI 605132

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 605145-08 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	94	65-118
Toluene	ug/L (ppb)	50	85	72-122
Ethylbenzene	ug/L (ppb)	50	88	73-126
Xylenes	ug/L (ppb)	150	86	74-118
Gasoline	ug/L (ppb)	1,000	95	69-134

Date of Report: 05/17/16
Date Received: 05/09/16
Project: 33076-2, F&BI 605132

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	106	120	63-142	12

Date of Report: 05/17/16
Date Received: 05/09/16
Project: 33076-2, F&BI 605132

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

Laboratory Code: 605132-06 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	123	113	63-146	8

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	123	79-144

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.

605132

SAMPLE CHAIN OF CUSTODY

ME 05-09-16 VSI/VI/CO4

Send Report To Ron Mitchell
Company Mitchell Contractors
Address 19505 Vashon Hwy SW
City, State, ZIP Vashon, Wa 98070
Phone # 425-455-9025 Fax #

SAMPLERS (signature)
PROJECT NAME/NO. 33076-2
PO# 33076-2
REMARKS send results to Ryan Gatz at Environmental Resources

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	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
TP1-5	01A-C	5/9	9:30	Soil	2 voa 1 Jar	X	X	X										
TP1-8	02		9:40	↓	↓	X	X	X										
TP1-W	03		11:55	Water	2 VOC 1 Amber	X	X	X										
TP2-5	04		10:00	Soil	2 voa 1 Jar													
TP2-W	05		11:25	water	2 voa 1 Amber	X	X	X										
TP3-4	06		10:15	Soil	2 voa 1 Jar	X	X	X										
TP3-W	07		11:35	Water	2 voa 1 amber	X	X	X										
TP4-4	08		11:30	Soil	2 voa 1 Jar	X	X	X										
TP4-7	09		10:45	↓	↓	X	X	X										
TP4-W	10	↓	1:15	water	2 voa 1 Amber	X	X	X										

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Ryan Gatz	EAI	5/9/16	2:30
Received by:	Elizabeth Radford	F&B	5/9/16	2:30
Relinquished by:				
Received by:				

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

605132

SAMPLE CHAIN OF CUSTODY

ME 05-09-16 VS1/V1/CO4

Send Report To _____

Company _____

Address _____

City, State, ZIP _____

Phone #_____ Fax #_____

SAMPLERS *(signature)* Ryan Cpatz

PROJECT NAME/NO. 330162 | PO# 330162

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
TP5-4	01A-C	5/9	11:00	Soil	2 voa 1 Tar	X	X	X										
TP5-7	2	↓	11:10	↓	↓	X	X	X										
TP6-4	3	↓	12:25	↓	↓	X	X	X										

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

FORMS\COC\COC.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Ryan Cpatz	Ryan Cpatz	FAI	5/9/16	2:30
Received by: Elizabeth Radford	Elizabeth Radford	FBB	5/9/16	2:30
Relinquished by:				
Received by:				

DRAFT

Date of Report: 05/23/16
Date Received: 05/09/16
Project: 33076-2, F&BI 605132
Date Extracted: 05/10/16
Date Analyzed: 05/19/16

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 41-152)
TP4-W 605132-10 1/1.8	<90	<450	117
Method Blank 06-924 MB	<50	<250	90