



# ATLAS GEOSCIENCES NW

December 24, 2020  
Project No. 2018-001D

Mr. Eric Hoolahan  
Bellevue Rare Coins  
321 Bellevue Way NE  
Bellevue, WA 98004

[eric@bellevuerarecoins.com](mailto:eric@bellevuerarecoins.com)

Subject: Third Quarter Groundwater Monitoring Event Report  
Fred Roberson Building  
2302 Pacific Avenue  
Tacoma, Washington  
Ecology Facility Site No. 55732663

Dear Mr. Hoolahan:

Atlas Geosciences NW (Atlas) is pleased to provide this letter summarizing our groundwater monitoring event at the above-referenced Property. The location of the Property is shown on the attached Figure 1, "Site Vicinity Map." The subject Property consists of a zero-lot-line, approximately 10,500-square-foot, retail warehouse building on approximately 0.14 acre of land (Pierce County parcel no. 2023040010). The site is occupied by a Bellevue Rare Coins retail establishment. The layout of the subject Property is shown on the attached Figure 2, "Site Plan."

## 1.0 PROJECT BACKGROUND

Based on reviewed regulatory records, two 570-gallon gasoline underground storage tanks (USTs) were removed from beneath the covered entry on the eastern portion of the site building in 1998. The former USTs were located at the southeast corner of the site. Approximately 441 tons of petroleum-contaminated soils (PCS) were identified and excavated from the approximate extent of the covered entry area. Groundwater was reportedly not encountered to a maximum depth achieved of 13 to 13.5 feet below ground surface (bgs). However, based on a subsequent Phase II subsurface investigation for the site, recently performed by Atlas within the site building, groundwater (apparently semi-confined) was encountered beneath the central portion of the building at 8 and 12.5 feet bgs.

The approximate vertical extent of the PCS in the vicinity of the former USTs was estimated to be to 13 to 13.5 feet bgs, based on field indications, although some "hot spots" of residual contamination exceeding Model Toxics Control Act (MTCA) Method A soil cleanup levels for unrestricted land use (Method A) may remain at that depth. Confirmation soil sampling indicated that PCS exceeding MTCA Method A cleanup levels

also remains at the western (site building), southern (adjoining building), and eastern (City right-of-way) boundaries of the covered entry area. Specifically, gasoline-range total petroleum hydrocarbons (TPH) and benzene were identified in soils at the excavation extents directly east of the former USTs at concentrations of 16,802 milligrams per kilogram (mg/kg) and 17.4 mg/kg, respectively, above their respective, applicable MTCA Method A soil cleanup levels of 30 and 0.03 mg/kg. The extents of the release to soils in those directions are not known.

Upon completion of the remedial excavations, the excavation was backfilled with crushed rock to grade and repaved. Due to the relative inaccessibility of the remaining PCS at the site and on the adjoining properties, which are effectively capping the contamination, the TPCHD determined in May 1998 that no further action (NFA) was necessary at the site until the overlying structures and/or right-of-way were removed. Ecology subsequently issued a similar NFA determination in August 1998, with the condition that an environmental covenant be added to the property deed restricting activities on the site until remediation of the release is completed. The complete list of restrictions is detailed in the restrictive covenant, which is appended to our Phase I ESA report, provided under separate cover. In summary, the covenant includes restrictions on activities that may compromise the integrity of the remedial action (i.e., the cap over the contamination created by the structures and pavement) and owner notification requirements to site lessees and Ecology.

Ecology is in the process of completing a standard "Periodic Review" of the restrictive covenant for the site. After consulting with Ecology, Atlas installed three groundwater monitoring wells (MW-1 through MW-3) at Ecology-mandated locations consisting of one east-adjacent and immediately downgradient of the 1998 remedial excavation area and two inferred downgradient across the Pacific Avenue right-of-way. The locations of the installed monitoring wells are depicted in Figure 2.

Based on the results of the initial groundwater assessment, groundwater in the immediate vicinity of the 1998 remedial excavation has been impacted by the previously-identified TPH-related release to soil. The exact extent of the release to groundwater could not be accurately delineated, due to access restrictions in the adjoining Pacific Avenue right-of-way. However, based on the analytical results for groundwater collected to date at the two monitoring wells on the east side of the right-of-way, adverse impacts to groundwater were not indicated at those extents.

Atlas understands that the Client's goal is to meet the new requirements for the restrictive covenant on the site deed. Pursuant to Client request, Atlas has performed this third quarterly groundwater monitoring event to further assess the nature and extent of the contamination remaining at the site.

## 2.0 GROUNDWATER MONITORING EVENT

For this assessment, Atlas performed groundwater gauging and sampling activities at the three site monitoring wells on September 30, 2020. The groundwater monitoring well covers were opened and the static water level was allowed to equilibrate. Groundwater

level measurements were collected from each of the three wells for the purpose of determining well volumes. Measured depths to groundwater in the monitoring wells ranged from 5.57 to 8.27 feet bgs.

Prior to the collection of each sample, groundwater was purged from the well using a peristaltic pump with dedicated, disposable tubing. Groundwater quality parameters including temperature, electrical conductivity (EC), pH, turbidity, dissolved oxygen (DO), and oxidation-reduction potential (ORP) were measured at regular intervals using a water quality meter in combination with a flow-through cell. Purging was considered complete when a minimum of one well volume was purged and three consecutive readings of EC, pH, turbidity, DO, and ORP were observed within 10% of one-another. Purge water was collected into drums and left at the Property pending laboratory analytical results.

Following the purging activities, the water in the wells was allowed to partially recover and a groundwater sample was collected from the well for laboratory analysis using the peristaltic pump under low-flow conditions.

Each sample container was labeled with the project number, date, time, and sample identification. Groundwater samples were directed from the pump into appropriate glassware provided by a third-party laboratory and immediately placed into a cooler containing ice. Samples were then delivered to Friedman & Bruya, Inc., a Washington State-accredited analytical laboratory, in strict accordance with industry standard chain-of-custody protocols.

### 3.0 GROUNDWATER ANALYSES

The three groundwater samples were submitted for analysis of the following:

- Gasoline-range TPH by Northwest Method NWTPH-Gx.
- Benzene, toluene, ethylbenzene, total xylenes, and naphthalene (BTEXN) using EPA Method 8260c.

The groundwater results are summarized in Table 1, "Groundwater Sample Analytical Results." The laboratory analytical report is included in Appendix A.

#### 3.1 Groundwater Analytical Results

Gasoline-range TPH and benzene were detected in groundwater from MW1 at concentrations of 2,300 and 230 micrograms per liter (mg/L), above their applicable, respective MTCA Method A groundwater cleanup levels of 800 and 5 mg/L. Toluene, ethylbenzene, and xylenes were detected in the groundwater sample from MW-1 but the detected concentrations were below their respective MTCA Method A groundwater cleanup levels. TPH and BTEXN were not detected in groundwater collected from the other two site monitoring wells.

### 3.2 Quality Assurance/Quality Control Results

The analytical results for the current monitoring event were checked for completeness following receipt from the laboratory to ensure that data and QA/QC information requested were present. Data quality was assessed by considering hold times, detection limits, surrogate recovery, method blanks, and laboratory control sample matrix spike (MS) recovery. QA/QC review was completed using guidance described in USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (USEPA, 2017). Our evaluation assumes that the QA/QC is correct as reported by the laboratory, and merely provides an interpretation of the QA/QC results.

- Hold Times: All analyses were performed within specified hold times.
- Laboratory Reporting Limits: Reporting limits for the groundwater analytical results were below applicable MTCA cleanup levels.
- Method Blanks: Analytes were not detected in the laboratory method blanks.
- Surrogate Recoveries: All surrogate recoveries were reported within laboratory limits.
- MS Results: MS recoveries were all reported within laboratory limits.

In our professional opinion, the overall dataset is acceptable for use in this Groundwater Monitoring event, based on our interpretation of the quality control information provided by the analytical laboratory.

### 4.0 WASTE MANAGEMENT

Purge and equipment decontamination water generated during the field activities were placed into an existing Department of Transportation (DOT)-approved, 55-gallon steel drum, which was left on-site for subsequent characterization and disposal. Disposal of drummed material is not included in this scope of work. Based on the analytical results, the drums should be disposed of at a facility approved to handle petroleum-affected waste.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

A groundwater monitoring event was conducted for three monitoring wells at the site (MW1 to MW3) to further assess the nature and extent of groundwater contamination at the site. Based on the groundwater monitoring event results, Atlas concludes the following:

- Groundwater in the immediate vicinity of the 1998 remedial excavation remains impacted by the previously-identified TPH-related release to soil. Groundwater concentrations do not appear to be significantly different from concentrations detected during the previous groundwater monitoring event. The exact extent of the release to groundwater cannot be accurately delineated, due to access restrictions in the adjoining Pacific Avenue right-of-way. However, based on the analytical results for groundwater collected at two locations on the east side of the right-of-way, adverse impacts to groundwater continue to remain undetected at those extents.

## 6.0 LIMITATIONS AND EXCEPTIONS

The findings, conclusions, and/or recommendations of this groundwater monitoring event are based strictly on information available and conditions observed at the time of this assessment. Subsequent changes to site conditions, such as site redevelopment or changes to ground cover, or changes in applicable regulatory requirements have the potential to materially affect the conclusions and/or recommendations of this report. If any such changes are apparent, the client should contact Atlas about reevaluating the findings of this investigation to incorporate the new information. The conclusions and/or recommendations are not to be construed as legal interpretation or advice. No warranties, express or implied, are intended or made herein.

## 7.0 CLOSURE

This report was prepared for the exclusive use of the Client, and its agents for specific application to the subject site. Atlas personnel performed this groundwater monitoring event in accordance with generally accepted standards of care that existed in the State of Washington at the time of this study. Our findings and conclusions have been prepared in accordance with generally accepted professional practice in the area at this time.

We appreciate this opportunity to provide these services. Please do not hesitate to contact us if you have any questions.

Sincerely,  
**ATLAS GEOSCIENCES NW**



Dincer Kayhan, G.I.T.  
Project Geologist



Lannie Smith, CHMM  
Principal Environmental Scientist



Elizabeth Ann Rachman

Elizabeth Rachman, L.G., L.Hg.  
Principal Hydrogeologist

Attachments:

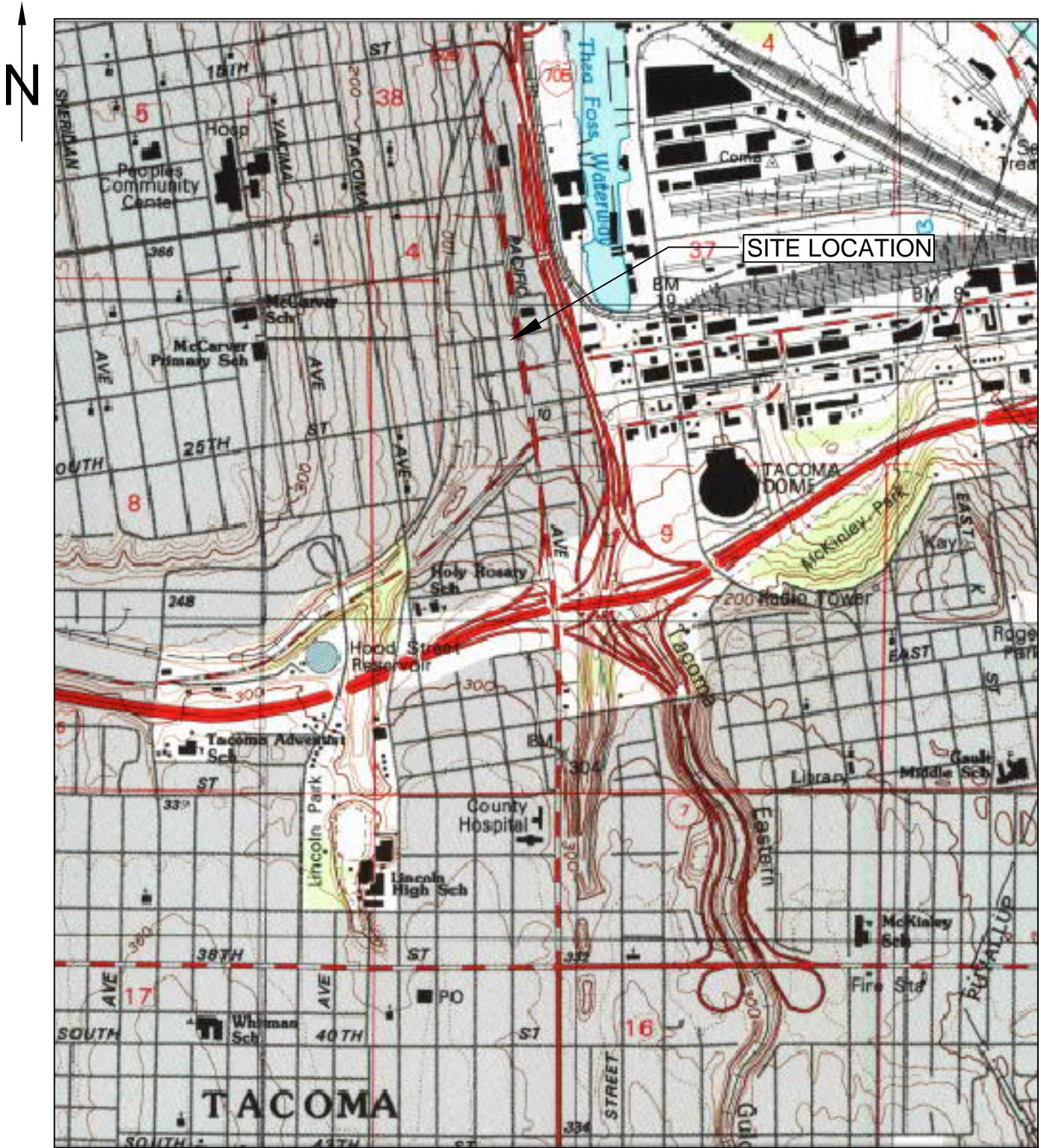
Figure 1:	Site Vicinity Map
Figure 2:	Site and Exploration Plan
Figure 3:	Groundwater Elevation Contour Map – 09/30/20
Table 1:	Groundwater Sample Analytical Results
Appendix A:	Laboratory Analytical Reports and Sample Chain-of-Custody Forms



ATLAS GEOSCIENCES NW

## FIGURES





BASEMAP TAKEN FROM THE TACOMA SOUTH, WASHINGTON 7.5-MINUTE QUADRANGE, 1997



ATLAS  
GEOSCIENCES  
NW  
P.O. BOX 1009  
SUMNER, WA 98390

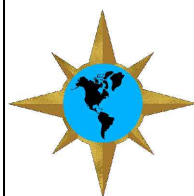
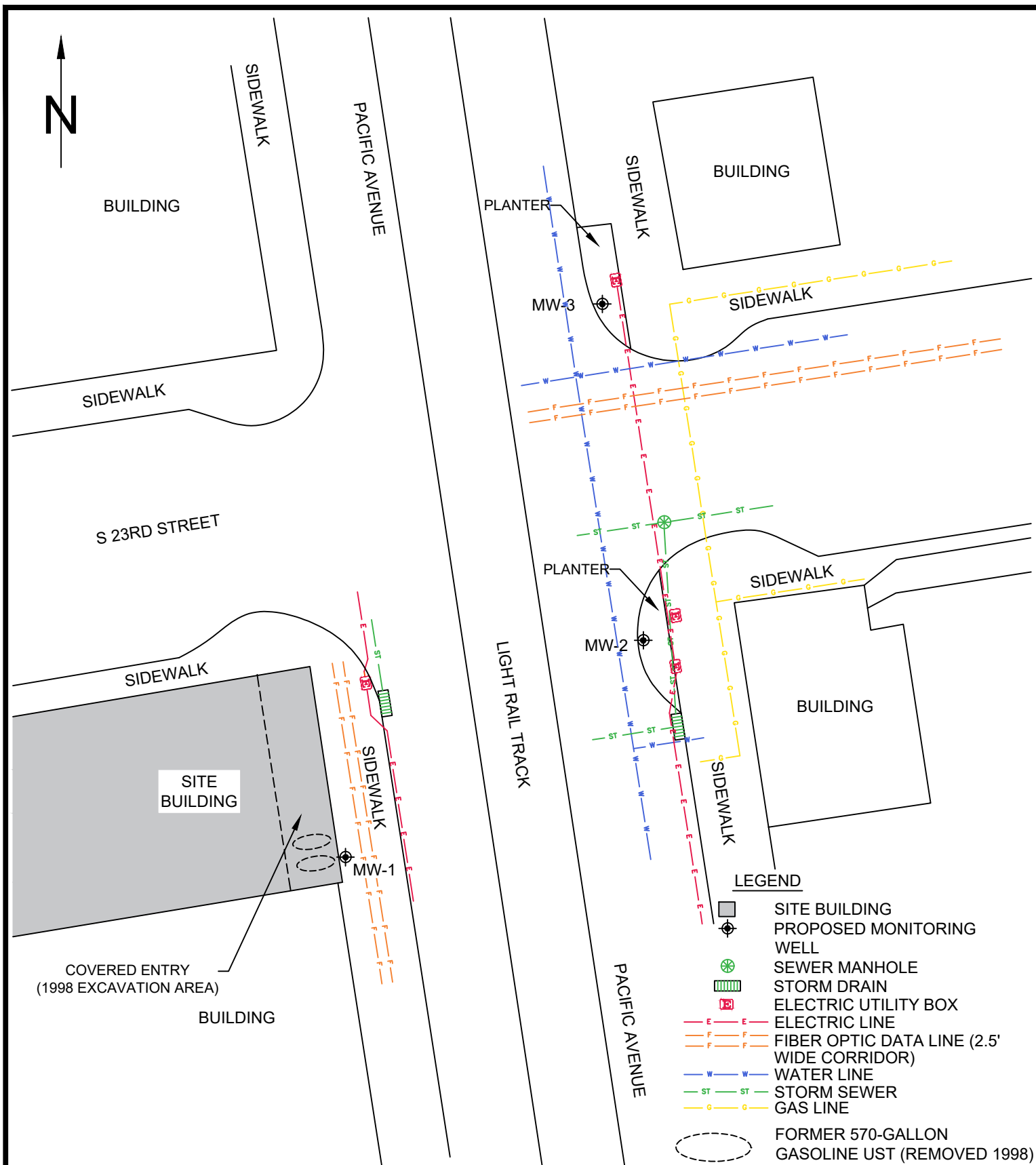
DRAWN BY: CH  
PROJ. NO: 2018-001D  
DATE: MARCH 2020  
SCALE: 1 : 24,000  
PRJ MGR: LRS

## SITE VICINITY MAP

FIGURE 1

ROBERSON BUILDING  
2302 PACIFIC AVENUE  
TACOMA, WASHINGTON





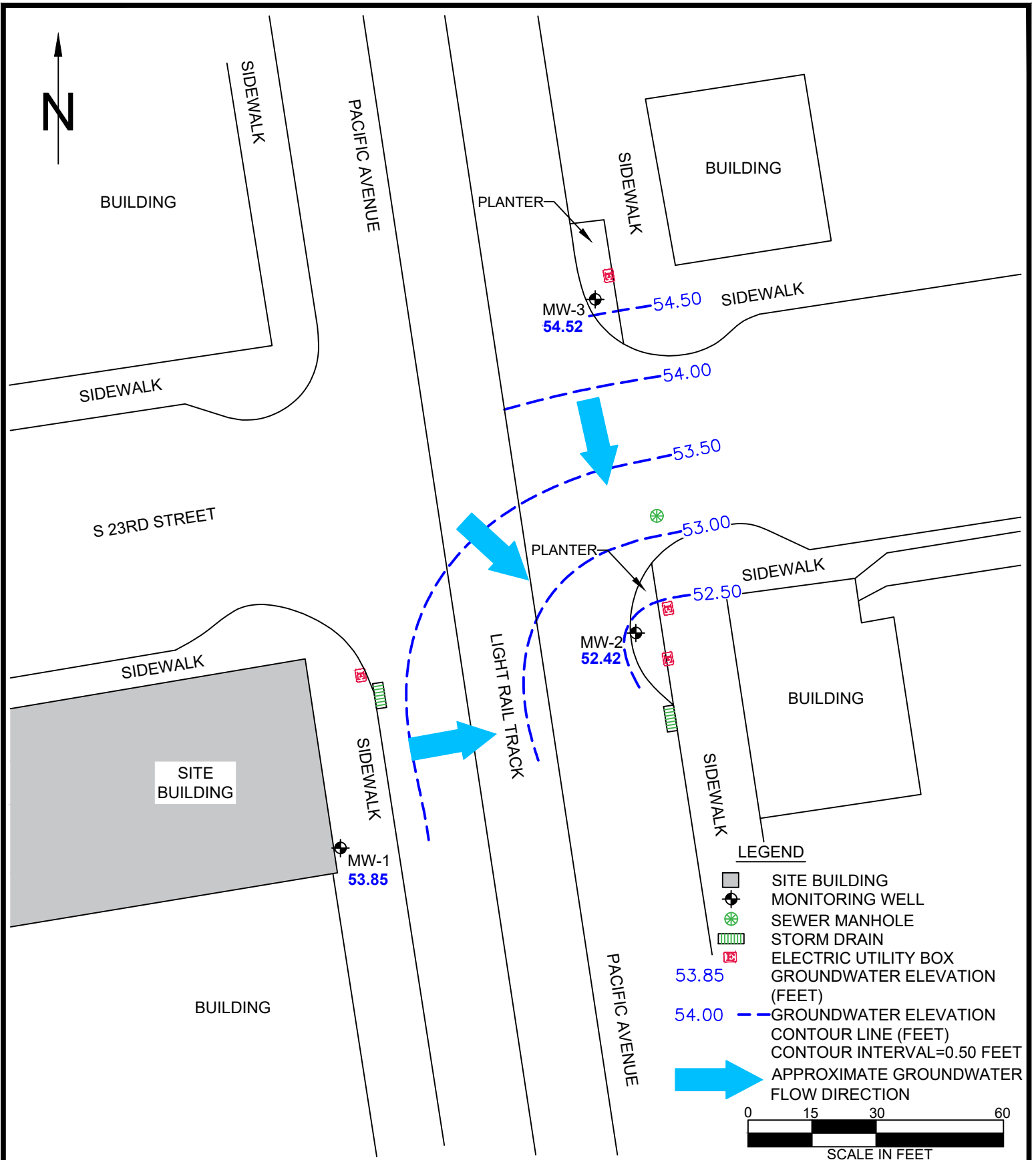
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NW**  
P.O. BOX 1009  
SUMNER, WA 98390


DRAWN BY: ICD  
PROJ. NO:  
2018-001D  
DATE:  
MARCH 2020  
APPROX SCALE:  
1:360  
PRJ MGR: LS

## SITE AND EXPLORATION PLAN

## FIGURE 2

**ROBERSON BUILDING**  
**2302 PACIFIC AVENUE**  
**TACOMA, WASHINGTON**



	<b>ATLAS GEOSCIENCES NW</b> P.O. BOX 1009 SUMNER, WA 98390	DRAWN BY: ICD	<b>GROUNDWATER ELEVATION CONTOUR MAP - 09/30/2020</b>	<b>FIGURE 3</b>
		PROJ. NO: 2018-001E		
		DATE: 26/02/2020	<b>ROBERSON BUILDING</b>  <b>2302 PACIFIC AVENUE</b> <b>TACOMA, WASHINGTON</b>	
		APPROX SCALE: 1:360		
		PRJ MGR: LS		



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## TABLES

Table 1: Groundwater Sample Analytical Results

Sample Location	Sample Date	Depth to Water	Groundwater Elevation	Gasoline-range TPH	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalenes
<i>First Quarter</i>									
MW1-GW	2/6/2020	4.75	56.41	4,100	340	490	55	243	14
MW2-GW	2/6/2020	5.99	54.70	ND (<100)	ND (<.35)	ND (<1)	ND (<1)	ND (<3)	ND (<1)
MW3-GW	2/6/2020	4.00	56.09	ND (<100)	ND (<.35)	ND (<1)	ND (<1)	ND (<3)	ND (<1)
<i>Second Quarter</i>									
MW1-GW	6/26/2020	6.09	55.07	3,400	460	650	96	310	22
MW2-GW	6/26/2020	7.22	53.47	ND (<100)	ND (<.35)	ND (<1)	ND (<1)	ND (<3)	ND (<1)
MW3-GW	6/26/2020	5.43	54.66	ND (<100)	ND (<.35)	ND (<1)	ND (<1)	ND (<3)	ND (<1)
<i>Third Quarter</i>									
MW1-GW	9/30/2020	7.31	53.85	2300	230	340	57	192	12
MW2-GW	9/30/2020	8.27	52.42	ND (<100)	ND (<.35)	ND (<1)	ND (<1)	ND (<3)	ND (<1)
MW3-GW	9/30/2020	5.57	54.52	ND (<100)	ND (<.35)	ND (<1)	ND (<1)	ND (<3)	ND (<1)
<i>MTCA Method A Groundwater Cleanup Levels</i>				800/1,000 <sup>1</sup>	5	1,000	700	1,000	160

Notes:

All results reported in micrograms per liter (µg/L)

Results above MTCA Method A Cleanup Levels, if any, in bold.

TPH = Total Petroleum Hydrocarbons

<sup>1</sup> The higher cleanup level applies if no benzene is present in the groundwater sample

Depth to Water and Groundwater Elevation presented in feet below top of casing



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## APPENDIX A

# Laboratory Analytical Reports and Sample Chain-of-Custody Forms

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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Seattle, WA 98119-2029  
(206) 285-8282  
fbi@isomedia.com  
www.friedmanandbruya.com

October 19, 2020

Lannie Smith, Project Manager  
Atlas Geosciences NW  
PO Box 1009  
Sumner, WA 98390

Dear Mr Smith:

Included are the results from the testing of material submitted on October 12, 2020 from the Roberson PO 2015-001D, F&BI 010192 project. There are 9 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. 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 should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl  
Project Manager

Enclosures  
ATG1019R.DOC



FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 12, 2020 by Friedman & Bruya, Inc. from the Atlas Geosciences NW Roberson PO 2015-001D, F&BI 010192 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Atlas Geosciences NW</u>
010192 -01	MW3-GW
010192 -02	MW2-GW
010192 -03	MW1-GW

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/19/20

Date Received: 10/12/20

Project: Roberson PO 2015-001D, F&BI 010192

Date Extracted: 10/13/20

Date Analyzed: 10/14/20

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE  
USING METHOD NWTPH-G<sub>x</sub>**  
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 51-134)
MW3-GW 010192-01	<100	89
MW2-GW 010192-02	<100	91
MW1-GW 010192-03	2,300	108
Method Blank 00-2289 MB	<100	86

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW3-GW	Client:	Atlas Geosciences NW
Date Received:	10/12/20	Project:	Roberson PO 2015-001D
Date Extracted:	10/12/20	Lab ID:	010192-01
Date Analyzed:	10/12/20	Data File:	101228.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	103	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW2-GW	Client:	Atlas Geosciences NW
Date Received:	10/12/20	Project:	Roberson PO 2015-001D
Date Extracted:	10/12/20	Lab ID:	010192-02
Date Analyzed:	10/12/20	Data File:	101229.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	102	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW1-GW	Client:	Atlas Geosciences NW
Date Received:	10/12/20	Project:	Roberson PO 2015-001D
Date Extracted:	10/12/20	Lab ID:	010192-03 1/10
Date Analyzed:	10/12/20	Data File:	101230.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	230
Toluene	340
Ethylbenzene	57
m,p-Xylene	120
o-Xylene	72
Naphthalene	12

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Atlas Geosciences NW
Date Received:	Not Applicable	Project:	Roberson PO 2015-001D
Date Extracted:	10/12/20	Lab ID:	00-2253 mb
Date Analyzed:	10/12/20	Data File:	101208.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/19/20

Date Received: 10/12/20

Project: Roberson PO 2015-001D, F&BI 010192

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR TPH AS GASOLINE  
USING METHOD NWTPH-G<sub>x</sub>**

Laboratory Code: 010175-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	101	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/19/20

Date Received: 10/12/20

Project: Roberson PO 2015-001D, F&BI 010192

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR VOLATILES BY EPA METHOD 8260D**

Laboratory Code: 010156-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Benzene	ug/L (ppb)	50	<0.35	99	76-125
Toluene	ug/L (ppb)	50	<1	98	76-122
Ethylbenzene	ug/L (ppb)	50	<1	100	69-135
m,p-Xylene	ug/L (ppb)	100	<2	98	69-135
o-Xylene	ug/L (ppb)	50	<1	98	60-140
Naphthalene	ug/L (ppb)	50	<1	90	44-164

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benzene	ug/L (ppb)	50	101	102	69-134	1
Toluene	ug/L (ppb)	50	100	101	72-122	1
Ethylbenzene	ug/L (ppb)	50	102	102	77-124	0
m,p-Xylene	ug/L (ppb)	100	98	99	81-112	1
o-Xylene	ug/L (ppb)	50	99	99	81-121	0
Naphthalene	ug/L (ppb)	50	86	86	64-133	0

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### **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 analyte 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 due to sample matrix effects.

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.

