



SoundEarth Strategies, Inc.
2811 Fairview Avenue East, Suite 2000
Seattle, Washington 98102

March 11, 2020

Mr. John Guenther, LHG
Washington State Department of Ecology
Bellingham Field Office
913 Squalicum Way, Unit 101
Bellingham, Washington 98225

**SUBJECT: WESMAR COMPANY, INC. SITE—YEAR 1 FIRST QUARTERLY GROUNDWATER
MONITORING EVENT: FOURTH QUARTER 2019
Former Wesmar Company, Inc.
(Ballard Blocks II Property)
1401 and 1451 Northwest 46th Street
Seattle, Washington
Project No. 1249-001-06**

Dear Mr. Guenther:

On behalf of Block at Ballard II, LLC, SoundEarth Strategies, Inc. (SoundEarth) prepared this subgrade drainage groundwater monitoring report to provide a summary of the results for the first long-term groundwater monitoring event performed for Year 1 in Fourth Quarter 2019 at the Former Wesmar Company, Inc. Site (the Site), also identified as Ballard Blocks II, in Seattle, Washington.

The report also includes a summary of water quality monitoring results associated with the permanent subgrade drainage water arsenic treatment system efficacy evaluation and maintenance activities during Fourth Quarter 2019.

The Site is located at 1401 and 1451 Northwest 46th Street in Seattle, Washington. Earthwork construction activities began on March 20, 2018, and were completed in December 2019. Remedial excavation activities, within the sheet pile perimeter shoring wall, began at the Site on June 21, 2018, and were completed on January 15, 2019. Operation and monitoring of the permanent subgrade drainage discharge water treatment system began in October 2019.

The work was performed pursuant to the requirements of the October 20, 2017, First Amended Consent Decree (No. DE 10-2-21304-0 SEA; Consent Decree) between Block at Ballard II, LLC and the Washington State Department of Ecology (Ecology).

SUBGRADE DRAINAGE GOUNDWATER MONITORING

The initial arsenic monitoring evaluation period for the subgrade groundwater control system, as outlined in section 6.4.1 of the Revised Cleanup Action Plan (Revised CAP), began on June 17, 2019, and was completed in July 2019. Because average arsenic concentrations in the discharge water from the subgrade water control system were above 5 micrograms per liter (µg/L) during that evaluation period, a permanent arsenic treatment system was installed at the Site for treatment of subgrade drainage

water in accordance with the Revised CAP. The approximate location of the subgrade groundwater collection sump and the arsenic water treatment system located in the basement of the parking garage on the Site are shown on Figure 1. A general design schematic diagram of the permanent arsenic treatment system components and configuration is included in Attachment A. Water monitoring analytical results pertaining to the subgrade discharge water and the permanent arsenic treatment system are summarized in Tables 1 and 2.

SAMPLING METHODOLOGY

The following section describes the sampling methodology employed during the subgrade drainage water quality monitoring activities and the permanent arsenic treatment system maintenance activities performed at the Site in Fourth Quarter 2019.

October 2019 Permanent Arsenic Treatment System Efficacy Evaluation Events and Treatment System Maintenance Water Quality Monitoring Events

Subgrade drainage pipes under the building on the Site drain water to a sump by gravity feed in the basement parking garage in the southeastern portion of the Site (Figure 1).

Prior to November 2019, water collected from the subgrade groundwater control system in the sump was routed through the temporary construction stormwater treatment system and was treated prior to discharge to the municipal stormwater system with monitoring performed by SoundEarth in accordance with the general permit conditions of the Construction Stormwater General Permit WAR305762 and associated Administrative Order Docket No. 15341.

Arsenic treatment system efficacy evaluation period events were performed on October 10, 17, and 30, 2019. Monthly permanent arsenic treatment system maintenance water quality monitoring activities were performed on November 21 and December 26, 2019.

During these monitoring events, water samples were collected from a pre-treatment influent water port (INF), located immediately ahead of the two arsenic-targeting media treatment vessels; a mid-treatment system monitoring port (MID), located between the two arsenic-targeting media treatment vessels; and a post-treatment effluent water monitoring port (EFF), located immediately downstream of the permanent arsenic-treatment system prior to discharge to the municipal stormwater system. The approximate locations of these three water monitoring ports (INF, MID, and EFF) are shown on the general design schematic of the treatment system in Attachment A.

Water samples were collected directly into clean, laboratory-prepared sample containers. Each container was labeled with a unique sample identification number, the date and time sampled and project number; placed on ice in a cooler; and transported to Friedman & Bruya, Inc. (F&B) under standard chain-of-custody protocols for laboratory analysis.

Fourth Quarter 2019 Subgrade Drainage Groundwater Monitoring Event

A subgrade drainage groundwater sample was collected from the Subgrade Groundwater Collection Sump inlet pipes on November 21, 2019. A description of the sampling methodology is provided below.

A flow-weighted sample from the subgrade groundwater drainage system was collected directly from the sub-slab drainage outlet pipes located within the sump (Figure 1).

Outlet pipes draining into the Subgrade Groundwater Collection Sump from the subgrade drainage system include one pipe on the north side of the sump, a lower pipe on the east side, an upper pipe on the east side, and one pipe on the south side of the sump. During the monitoring event on November 21, 2019, water was observed flowing from the pipe on the north side and the lower pipe on the east side of the Subgrade Groundwater Collection Sump. SoundEarth did not observe any water flowing from the pipe on the south side of the Subgrade Groundwater Collection Sump.

Average flow rates were measured for each outlet pipe producing water from the sub-slab drainage system on November 21, 2019. The water volume collected for analysis was collected for each pipe proportionate to the flow rate of water for the pipe entering the sump. The total water flow rate into the subgrade sump during the monitoring event on November 21, 2019, was approximately 0.7 gallons per minute. The water sample was collected directly into clean, laboratory-prepared sample containers. Each container was labeled with a unique sample identification number, the date and time sampled, and project number; placed on ice in a cooler; and transported to F&B under standard chain-of-custody protocols for laboratory analysis.

ANALYTICAL RESULTS

Water samples submitted for laboratory analysis were analyzed by US Environmental Protection Agency method 200.8 for total arsenic.

Analytical results for the permanent arsenic treatment system performance and maintenance monitoring activities are summarized on Table 1. Analytical results for the groundwater sample collected from the subgrade drainage system are summarized on Table 2. Laboratory analytical reports are in Attachment B.

October 2019 Permanent Arsenic Treatment System Efficacy Evaluation Events and November–December Treatment System Performance Monitoring Events

As summarized on Table 1, results for total arsenic in post-treatment effluent water, following treatment through the permanent arsenic treatment system, were not detected at concentrations above the laboratory reporting limit of 1 µg/L during the treatment system efficacy monitoring events on October 10, 17, and 30, 2019, and during system maintenance monitoring events on November 21 and December 26, 2019. The laboratory reporting limit of 1 µg/L was below the Washington State Model Toxics Control Act (MTCA) Method A cleanup level for groundwater of 5 µg/L.

Fourth Quarter 2019 Subgrade Drainage Groundwater Monitoring Event

As summarized on Table 2, the Fourth Quarter 2019 result for the flow-weighted water sample collected from the subgrade drainage system on November 21, 2019, prior to treatment through the permanent arsenic treatment system, revealed a result of 8.69 µg/L, above the MTCA Method A cleanup level of 5 µg/L.

As summarized on Table 1, the post-treatment effluent water, collected on November 21, 2019, following treatment of the collected subgrade drainage water through the permanent arsenic treatment system, revealed a result of less than 1 µg/L, compliant with MTCA Method A cleanup level for arsenic in groundwater of 5 µg/L for post-treatment effluent discharge water.

SUMMARY OF FINDINGS AND CONCLUSIONS

A raw (pre-treatment) groundwater sample collected from the subgrade groundwater control system during the Fourth Quarter 2019 monitoring event on November 21, 2019, contained a concentration of total arsenic of 8.69 µg/L, which is above the MTCA Method A cleanup level of 5 µg/L for groundwater.

Water collected from the subgrade groundwater control system in the sump is routed through the permanent arsenic treatment system prior to discharge to the municipal stormwater system.

Post-treatment effluent water sampling performed on November 21, 2019, following treatment of subgrade drainage water through the permanent arsenic treatment system, revealed a total arsenic result of less than 1 µg/L in effluent discharge water, compliant with MTCA Method A cleanup level for arsenic in groundwater of 5 µg/L.

Long-term groundwater monitoring is planned to continue as outlined in the Revised CAP. Water discharged from the subgrade groundwater control system (prior to treatment for arsenic) will be sampled for total arsenic quarterly during the first year, semiannually during the second and third years, and annually during the fourth and fifth years. If concentrations of arsenic are not detected above the applicable cleanup level in groundwater after 5 years, then monitoring may be discontinued as outlined in the Revised CAP. During the long-term groundwater monitoring period, the subgrade drainage groundwater will be routed through the permanent arsenic treatment system prior to discharge to the municipal stormwater system. The results of future monitoring events will be submitted to Ecology.

LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, expressed or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report are derived, in part, from data gathered by others, and from conditions evaluated when services were performed, and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We do not warrant and are not responsible for the accuracy or validity of work performed by others, nor from the impacts of changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the use of segregated portions of this report.

Respectfully,
SoundEarth Strategies, Inc.


Chris G. Cass, LG
Associate Geologist



CHRIS G. CASS

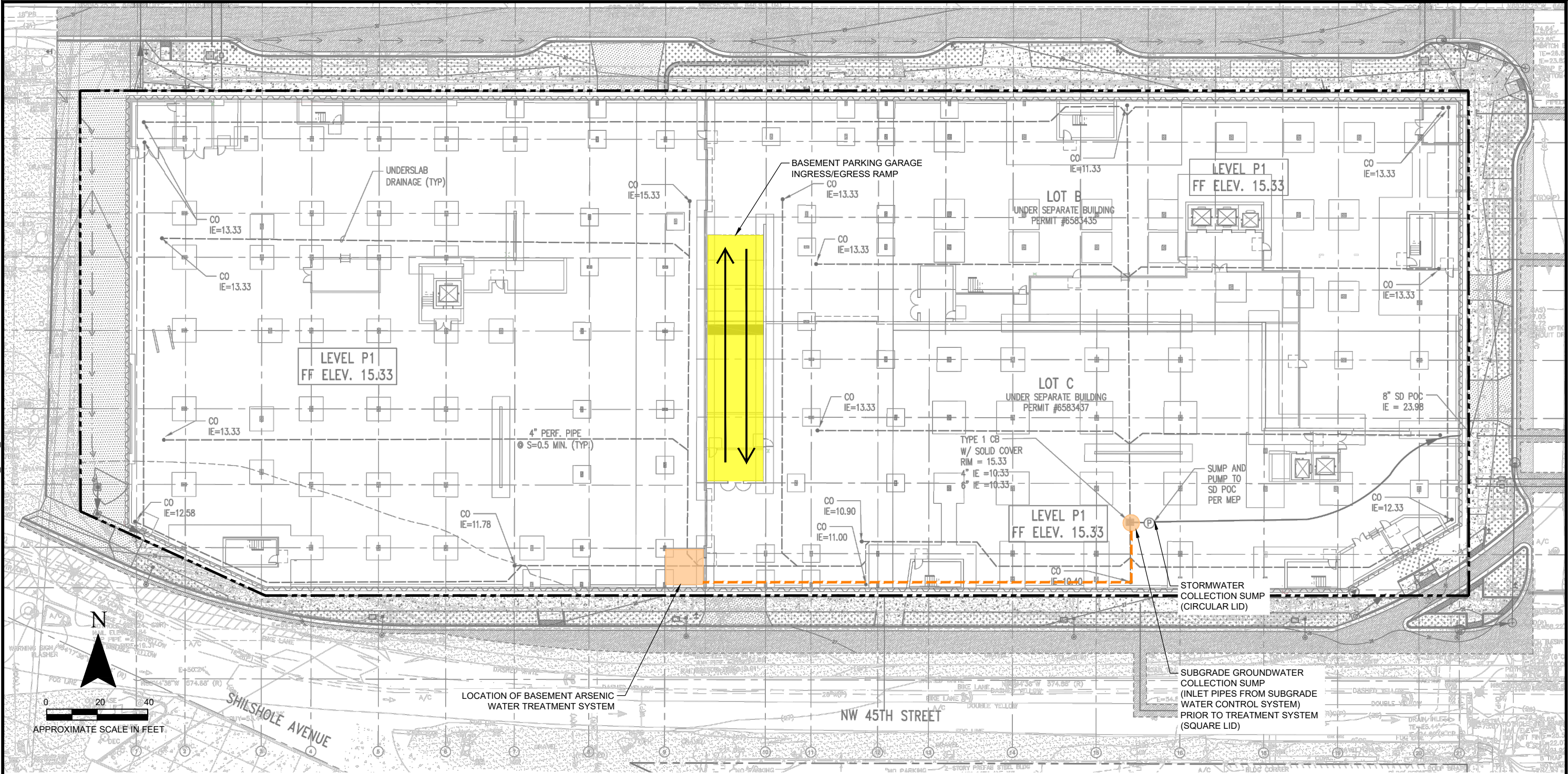

Chris M. Carter
Managing Principal

Attachments: Figure 1, Arsenic Treatment System Basement Location Map
Table 1, Summary of Influent, Mid-Treatment, and Effluent Water Analytical Results for Total Arsenic
Table 2, Summary of Groundwater Analytical Results for Raw Pre-Treatment Subgrade Water Control System Water
A, Basic Conceptual Drawing of Permanent Arsenic Treatment System
B, Laboratory Analytical Reports
Friedman & Bruya, Inc. #910216
Friedman & Bruya, Inc. #910359
Friedman & Bruya, Inc. #910599
Friedman & Bruya, Inc. #911339
Friedman & Bruya, Inc. #911340
Friedman & Bruya, Inc. #912437

cc: Eric Silvers, Regency Centers Corporation

CGC/CMC:rt/hsb

FIGURE



LEGEND

--- PROPERTY BOUNDARY

NOTES:

BASEMAP PROVIDED BY
WEBER THOMPSON/KPFF, 2018.

SoundEarth
Strategies
WWW.SOUNDEARTHINC.COM

FORMER WESMAR COMPANY, INC.
(BALLARD BLOCKS II PROPERTY)
1401 AND 1451
NORTHWEST 46TH STREET
SEATTLE, WASHINGTON
SOUNDEARTH PROJECT #1249-001

FIGURE 1
ARSENIC TREATMENT SYSTEM
BASEMENT LOCATION MAP

TABLES



Table 1
Summary of Influent, Mid-Treatment, and Effluent Water Analytical Results for Total Arsenic
Former Wesmar Company, Inc. (Ballard Blocks II Property)
1401 and 1451 Northwest 46th Street
Seattle, Washington

Sample IDs	Date Sampled	Pre-Treatment Influent Water Total Arsenic Analytical Results ⁽¹⁾ (micrograms per liter)	Mid-Treatment System Total Arsenic Analytical Results ⁽¹⁾ (micrograms per liter)	Treated Effluent Water Total Arsenic Analytical Results ⁽¹⁾ (micrograms per liter)
Treatment System Efficacy Evaluation Period				
1249-GW_INF/MID/EFF_2091010	10/10/19	17.0	1.25	<1
1249-GW_INF/MID/EFF_2091017	10/17/19	13.4	1.05	<1
1249-GW_INF/MID/EFF_2091030	10/30/19	9.85	3.00	<1
Permanent Arsenic Treatment System Maintenance Water Quality Monitoring Results				
1249_GW_INF/MID/EFF_20191121	11/21/19	9.58	2.43	<1
1249_GW_INF/MID/EFF_20191226	12/26/19	9.25	3.31	<1
MTCA Cleanup Level for Groundwater		--	--	5⁽²⁾

NOTES:

Sample analyses conducted by Friedman & Bruya, Inc. of Seattle, Washington.

⁽¹⁾Samples analyzed by EPA Method 200.8.

⁽²⁾MTCA Cleanup Regulation, Chapter 173-340-900 of WAC, Table 720-1 Method A Cleanup Levels for Groundwater, revised November 2007.

-- = not applicable

EPA = US Environmental Protection Agency

MTCA = Washington State Model Toxics Control Act

WAC = Washington Administrative Code



Table 2
Summary of Groundwater Analytical Results for Raw Pre-Treatment Subgrade Water Control System Water
Former Wesmar Company, Inc. (Ballard Blocks II Property)
1401 and 1451 Northwest 46th Street
Seattle, Washington

Sample ID	Date Sampled	Average Estimated Total Water Flow Rate Into Subgrade Sump (GPM)	Total Arsenic Analytical Results for Raw Subgrade Drainage Groundwater ⁽¹⁾ (micrograms per liter)
1249_SSGW_20191121	11/21/19	0.7	8.69
MTCA Cleanup Level for Groundwater			5⁽²⁾

NOTES:

Red denotes concentration exceeds MTCA cleanup level for groundwater.

Sample analyses conducted by Friedman & Bruya, Inc. of Seattle, Washington.

⁽¹⁾Samples analyzed by EPA Method 200.8.

⁽²⁾MTCA Cleanup Regulation, Chapter 173-340-900 of WAC, Table 720-1 Method A Cleanup Levels for Groundwater, revised November 2007.

-- = no data

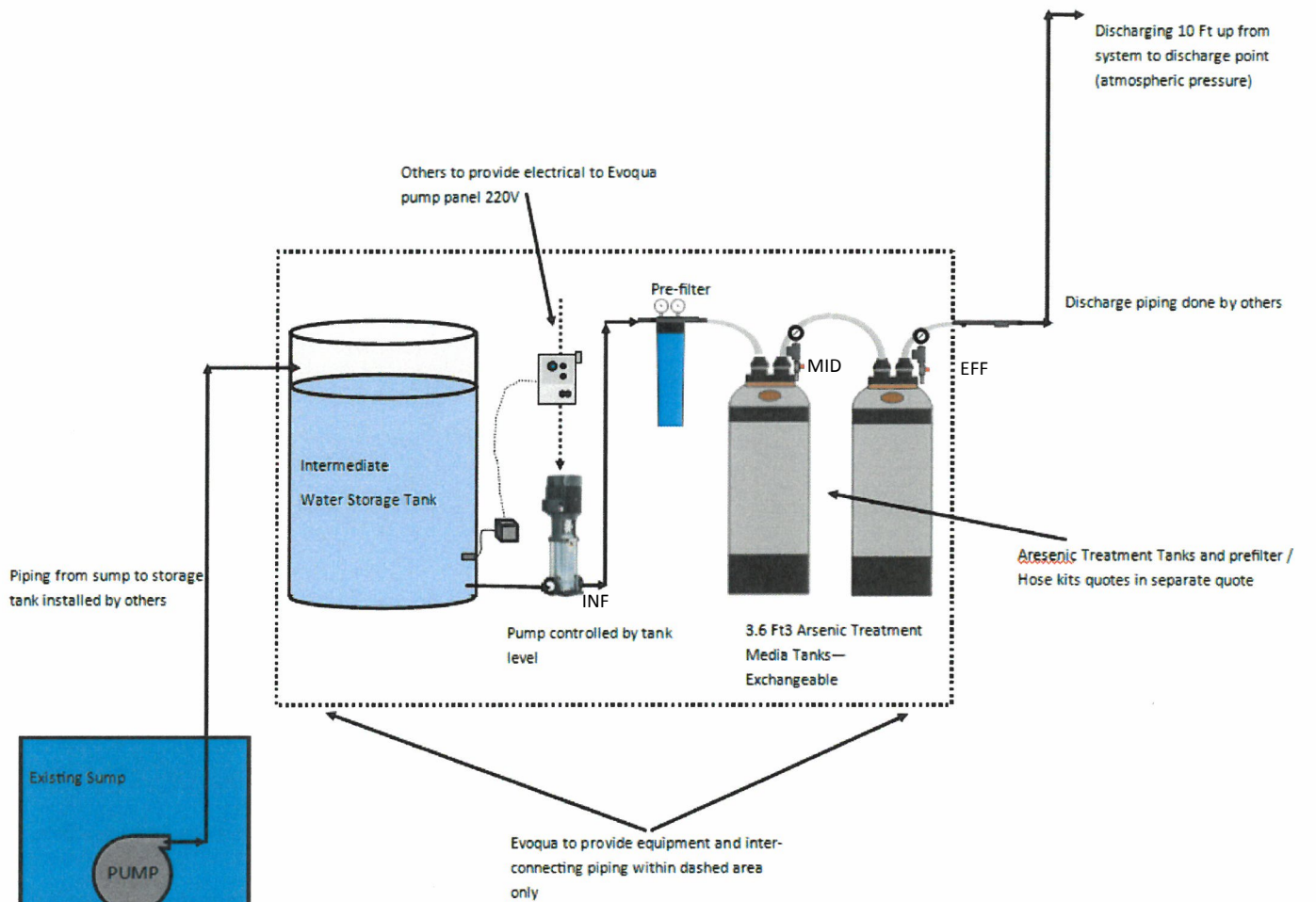
EPA = US Environmental Protection Agency

GPM = gallons per minute

MTCA = Washington State Model Toxics Control Act

WAC = Washington Administrative Code

ATTACHMENT A
BASIC CONCEPTUAL DRAWING OF PERMANENT ARSENIC TREATMENT
SYSTEM



LEGEND

INF - Pre-treatment System Monitoring Port
MID - Mid-treatment System Monitoring Port
EFF - Post-treatment Effluent Water Monitoring Port

ATTACHMENT B
LABORATORY ANALYTICAL 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 17, 2019

Chris Cass, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Cass:

Included are the results from the testing of material submitted on October 10, 2019 from the SOU_1249-001-06_ 20191010, F&BI 910216 project. There are 7 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
c: Chris Carter
SOU1017R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 10, 2019 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_1249-001-06_20191010, F&BI 910216 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
910216 -01	1249_GW_INF_20191010
910216 -02	1249_GW_MID_20191010
910216 -03	1249_GW_EFF_20191010

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	1249_GW_INF_20191010	Client:	SoundEarth Strategies
Date Received:	10/10/19	Project:	SOU_1249-001-06_20191010
Date Extracted:	10/11/19	Lab ID:	910216-01
Date Analyzed:	10/11/19	Data File:	910216-01.256
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Arsenic	17.0
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	1249_GW_MID_20191010	Client:	SoundEarth Strategies
Date Received:	10/10/19	Project:	SOU_1249-001-06_20191010
Date Extracted:	10/11/19	Lab ID:	910216-02
Date Analyzed:	10/11/19	Data File:	910216-02.257
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Arsenic	1.25
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	1249_GW_EFF_20191010	Client:	SoundEarth Strategies
Date Received:	10/10/19	Project:	SOU_1249-001-06_20191010
Date Extracted:	10/11/19	Lab ID:	910216-03
Date Analyzed:	10/11/19	Data File:	910216-03.258
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Arsenic	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_1249-001-06_ 20191010
Date Extracted:	10/11/19	Lab ID:	I9-644 mb
Date Analyzed:	10/11/19	Data File:	I9-644 mb.225
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Arsenic	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/17/19

Date Received: 10/10/19

Project: SOU_1249-001-06_ 20191010, F&BI 910216

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 910227-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	1.78 ca	86	86	70-130	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	95	85-115

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.

910216

SAMPLE CHAIN OF CUSTODY

ME 10/10/19

AD2

Send Report to Chris Cass; Chris Carter;Company SoundEarth Strategies, Inc.Address 2811 Fairview Avenue E, Suite 2000City, State, ZIP Seattle, Washington 98102Phone # 206-306-1900 Fax # 206-306-1907

SAMPLERS (signature)

PROJECT NAME/NO.

Ballard Blocks II Property; Subgrade
Water Quality Monitoring

PO #

1249-001-06

REMARKS

24 hr TAT

Page # 1 of 1

TURNAROUND TIME

Standard (2 Weeks)

~~X~~RUSH ~~X~~24 hr TATRush charges authorized by:
Chris Cass

SAMPLE DISPOSAL

Dispose after 30 days

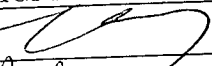
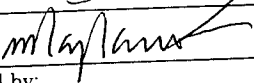
Return samples

Will call with instructions

ANALYSES REQUESTED

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	Total Arsenic (200.8)						Notes
1249_GW_INF_20191010	Influent	N/A	01	10/10/19	1402	H ₂ O	2	X						HNO ₃ preserved
1249_GW_MID_20191010	Mid-Treatment	N/A	02	↓	1404	↓	↓	X						HNO ₃ preserved
1249_GW_EFF_20191010	Effluent	N/A	03	↓	1406	↓	↓	X						HNO ₃ preserved
SRM 10/10/19														



SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Glenn McKenney	SES	10/10/19	1445
Received by: 	Nhan Phan	FEBI	10/10/19	1445
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
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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 22, 2019

Chris Cass, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Cass:

Included are the results from the testing of material submitted on October 17, 2019 from the SOU_1249-001-06_ 20191017, F&BI 910359 project. There are 7 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
c: Chris Carter
SOU1022R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 17, 2019 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_1249-001-06_20191017, F&BI 910359 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
910359 -01	1249_GW_INF_20191017
910359 -02	1249_GW_MID_20191017
910359 -03	1249_GW_EFF_20191017

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	1249_GW_INF_20191017	Client:	SoundEarth Strategies
Date Received:	10/17/19	Project:	SOU_1249-001-06_20191017
Date Extracted:	10/18/19	Lab ID:	910359-01
Date Analyzed:	10/18/19	Data File:	910359-01.048
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Arsenic	13.4
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	1249_GW_MID_20191017	Client:	SoundEarth Strategies
Date Received:	10/17/19	Project:	SOU_1249-001-06_20191017
Date Extracted:	10/18/19	Lab ID:	910359-02
Date Analyzed:	10/18/19	Data File:	910359-02.051
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Arsenic	1.05
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	1249_GW_EFF_20191017	Client:	SoundEarth Strategies
Date Received:	10/17/19	Project:	SOU_1249-001-06_20191017
Date Extracted:	10/18/19	Lab ID:	910359-03
Date Analyzed:	10/18/19	Data File:	910359-03.052
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Arsenic	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_1249-001-06_ 20191017
Date Extracted:	10/18/19	Lab ID:	I9-666 mb
Date Analyzed:	10/18/19	Data File:	I9-666 mb.044
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Arsenic	<1
---------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/22/19

Date Received: 10/17/19

Project: SOU_1249-001-06_ 20191017, F&BI 910359

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 910359-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	13.4	99	94	70-130	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	95	85-115

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.

910359

SAMPLE CHAIN OF CUSTODY

ME 10-17-19

AI2

Send Report to Chris Cass; Chris Carter;

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Avenue E, Suite 2000

City, State, ZIP Seattle, Washington 98102

Phone # 206-306-1900 Fax # 206-306-1907

SAMPLERS (signature)

PROJECT NAME/NO.

Ballard Blocks II Property; Subgrade
Water Quality Monitoring

PO #

1249-001-06

REMARKS

Page # 1 of 1

TURNAROUND TIME

Standard (2 Weeks)

RUSH 24 hr TAT

Rush charges authorized by:

Chris Cass

SAMPLE DISPOSAL

Dispose after 30 days

Return samples

Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	ANALYSES REQUESTED					Notes
								Total Arsenic (200.8)					
1249_GW_INF_20191017	Influent	N/A	01	10/17/19	1245	WATER	1	X					HNO ₃ preserved
1249_GW_MID_20191017	Mid-Treatment	N/A	02	1	1248	1	1	X					HNO ₃ preserved
1249_GW_EFF_20191017	Effluent	N/A	03	1	1250	1	1	X					HNO ₃ preserved

Samples received at 2°C



SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <i>[Signature]</i>	JONATHAN LOEFFLER	SOUNDEARTH	10/17/19	1410
Received by: <i>[Signature]</i>	Morgan Schimelfenig	FBI	10-17-19	1415
Relinquished by:				
Received by:				

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

November 4, 2019

Chris Cass, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Cass:

Included are the results from the testing of material submitted on October 30, 2019 from the SOU_1249-001-06_ 20191030, F&BI 910599 project. There are 7 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
c: Chris Carter
SOU1104R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 30, 2019 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_1249-001-06_ 20191030, F&BI 910599 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
910599 -01	1249_GW_INF_20191030
910599 -02	1249_GW_MID_20191030
910599 -03	1249_GW_EFF_20191030

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	1249_GW_INF_20191030	Client:	SoundEarth Strategies
Date Received:	10/30/19	Project:	SOU_1249-001-06_20191030
Date Extracted:	10/30/19	Lab ID:	910599-01
Date Analyzed:	10/30/19	Data File:	910599-01.134
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Arsenic	9.85
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	1249_GW_MID_20191030	Client:	SoundEarth Strategies
Date Received:	10/30/19	Project:	SOU_1249-001-06_20191030
Date Extracted:	10/30/19	Lab ID:	910599-02
Date Analyzed:	10/30/19	Data File:	910599-02.135
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Arsenic	3.00
---------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	1249_GW_EFF_20191030	Client:	SoundEarth Strategies
Date Received:	10/30/19	Project:	SOU_1249-001-06_20191030
Date Extracted:	10/30/19	Lab ID:	910599-03
Date Analyzed:	10/30/19	Data File:	910599-03.136
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Arsenic	<1
---------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_1249-001-06_ 20191030
Date Extracted:	10/30/19	Lab ID:	I9-691 mb2
Date Analyzed:	10/30/19	Data File:	I9-691 mb2.059
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Arsenic	<1
---------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/04/19

Date Received: 10/30/19

Project: SOU_1249-001-06_ 20191030, F&BI 910599

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 910527-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	13.4	81	84	70-130	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	98	85-115

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.

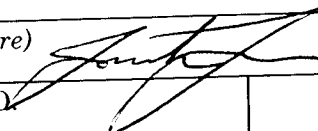
vo - The value reported fell outside the control limits established for this analyte.

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

910599

SAMPLE CHAIN OF CUSTODY

ME 10/30/19 A-2

Send Report to Chris Cass; Chris Carter:Company SoundEarth Strategies, Inc.Address 2811 Fairview Avenue E, Suite 2000City, State, ZIP Seattle, Washington 98102Phone # 206-306-1900 Fax # 206-306-1907SAMPLERS (signature) 

PROJECT NAME/NO.

PO #

Ballard Blocks II Property; Subgrade
Water Quality Monitoring

1249-001-06

REMARKS

Page # 1 of 1

TURNAROUND TIME

Standard (2 Weeks)

RUSH 24 hr TATRush charges authorized by:
Chris Cass

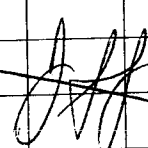
SAMPLE DISPOSAL

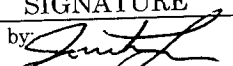
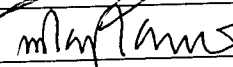
Dispose after 30 days

Return samples

Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	ANALYSES REQUESTED					Notes
								Total Arsenic (200.8)					
1249_GW_INF_20191030	Influent	N/A	01	10/30/19	1055	WATER	1	X					HNO ₃ preserved
1249_GW_MID_20191030	Mid-Treatment	N/A	02	10/30/19	1058	WATER	1	X					HNO ₃ preserved
1249_GW_EFF_20191030	Effluent	N/A	03	10/30/19	1100	WATER	1	X					HNO ₃ preserved



SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	JONATHAN LOEFFLER	SOUNDEARTH	10/30/19	1310
Received by: 	Nhan Phan	FeBI	10/30/19	1311
Relinquished by:				
Received by:		Samples received at	4°C	

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

December 2, 2019

Chris Cass, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Cass:

Included are the results from the testing of material submitted on November 21, 2019 from the SOU_1249-001-06_ 20191121, F&BI 911339 project. There are 5 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

c: Chris Carter, Erika Vossbeck
SOU1202R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 21, 2019 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_1249-001-06_ 20191121, F&BI 911339 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
911339 -01	1249_SSGW_20191121

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	1249_SSGW_20191121	Client:	SoundEarth Strategies
Date Received:	11/21/19	Project:	SOU_1249-001-06_20191121, F&BI 911339
Date Extracted:	11/25/19	Lab ID:	911339-01
Date Analyzed:	11/25/19	Data File:	911339-01.133
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Arsenic	8.69
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_1249-001-06_ 20191121, F&BI 911339
Date Extracted:	11/25/19	Lab ID:	I9-752 mb
Date Analyzed:	11/26/19	Data File:	I9-752 mb.034
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Arsenic	<1
---------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/02/19

Date Received: 11/21/19

Project: SOU_1249-001-06_ 20191121, F&BI 911339

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 911376-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	11.8	88	89	70-130	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	87	85-115

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.

AT

Phone # 206-306-1900 Fax # 206-306-1907

Will call with instructions



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

December 2, 2019

Chris Cass, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Cass:

Included are the results from the testing of material submitted on November 21, 2019 from the SOU_1249-001-06_ 20191121, F&BI 911340 project. There are 7 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
c: Chris Carter
SOU1202R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 21, 2019 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_1249-001-06_ 20191121, F&BI 911340 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
911340 -01	1249_GW_INF_20191121
911340 -02	1249_GW_MID_20191121
911340 -03	1249_GW_EFF_20191121

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	1249_GW_INF_20191121	Client:	SoundEarth Strategies
Date Received:	11/21/19	Project:	SOU_1249-001-06_20191121, F&BI 911340
Date Extracted:	11/25/19	Lab ID:	911340-01
Date Analyzed:	11/25/19	Data File:	911340-01.134
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Arsenic	9.58
---------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	1249_GW_MID_20191121	Client:	SoundEarth Strategies
Date Received:	11/21/19	Project:	SOU_1249-001-06_20191121, F&BI 911340
Date Extracted:	11/25/19	Lab ID:	911340-02
Date Analyzed:	11/25/19	Data File:	911340-02.135
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Arsenic	2.43
---------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	1249_GW_EFF_20191121	Client:	SoundEarth Strategies
Date Received:	11/21/19	Project:	SOU_1249-001-06_20191121, F&BI 911340
Date Extracted:	11/25/19	Lab ID:	911340-03
Date Analyzed:	11/25/19	Data File:	911340-03.136
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Arsenic	<1
---------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_1249-001-06_ 20191121, F&BI 911340
Date Extracted:	11/25/19	Lab ID:	I9-752 mb
Date Analyzed:	11/26/19	Data File:	I9-752 mb.034
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Arsenic	<1
---------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/02/19

Date Received: 11/21/19

Project: SOU_1249-001-06_ 20191121, F&BI 911340

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 911376-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	11.8	88	89	70-130	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	87	85-115

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.

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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.

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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.

911340

SAMPLE CHAIN OF CUSTODY

ME 11-21-19

A13

Send Report to Chris Cass; Chris Carter;Company SoundEarth Strategies, Inc.Address 2811 Fairview Avenue E, Suite 2000City, State, ZIP Seattle, Washington 98102Phone # 206-306-1900 Fax # 206-306-1907SAMPLERS (signature) [Signature]Page # 1 of 1

PROJECT NAME/NO.

PO #

Ballard Blocks II Property; Subgrade
Water Quality Monitoring

1249-001-06

REMARKS

TURNAROUND TIME

Standard (2 Weeks)

RUSH 24 hr TAT

Rush charges authorized by:

Chris Cass

SAMPLE DISPOSAL

Dispose after 30 days

Return samples

Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	ANALYSES REQUESTED					Notes
								Total Arsenic (200.8)					
1249_GW_INF_20191121	Influent	N/A	01	11/21/19	1135	WATER	1	X					HNO ₃ preserved
1249_GW_MID_20191121	Mid-Treatment	N/A	02	11/21/19	1133	WATER	1	X					HNO ₃ preserved
1249_GW_EFF_20191121	Effluent	N/A	03	11/21/19	1130	WATER	1	X					HNO ₃ preserved

Samples received at 3 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	JONATHAN LOEFFLER	SOUNDEARTH	11/21/19	1430
Received by: <u>[Signature]</u>	Liz Webber-Bray	FBI	11/21/19	1430
Relinquished by:				
Received by:				

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

January 7, 2020

Chris Cass, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Cass:

Included are the results from the testing of material submitted on December 26, 2019 from the SOU_1249-001-06_ 20191226, F&BI 912437 project. There are 7 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
c: Chris Carter
SOU0107R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 26, 2019 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_1249-001-06_ 20191226, F&BI 912437 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
912437 -01	1249_GW_INF_20191226
912437 -02	1249_GW_MID_20191226
912437 -03	1249_GW_EFF_20191226

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	1249_GW_INF_20191226	Client:	SoundEarth Strategies
Date Received:	12/26/19	Project:	SOU_1249-001-06_20191226
Date Extracted:	01/02/20	Lab ID:	912437-01
Date Analyzed:	01/02/20	Data File:	912437-01.064
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Arsenic	9.25
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	1249_GW_MID_20191226	Client:	SoundEarth Strategies
Date Received:	12/26/19	Project:	SOU_1249-001-06_20191226
Date Extracted:	01/02/20	Lab ID:	912437-02
Date Analyzed:	01/02/20	Data File:	912437-02.067
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Arsenic	3.31
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	1249_GW_EFF_20191226	Client:	SoundEarth Strategies
Date Received:	12/26/19	Project:	SOU_1249-001-06_20191226
Date Extracted:	01/02/20	Lab ID:	912437-03
Date Analyzed:	01/02/20	Data File:	912437-03.068
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Arsenic	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_1249-001-06_ 20191226
Date Extracted:	01/02/20	Lab ID:	I0-01 mb
Date Analyzed:	01/02/20	Data File:	I0-01 mb.060
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Arsenic	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/07/20

Date Received: 12/26/19

Project: SOU_1249-001-06_ 20191226, F&BI 912437

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 912437-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	9.25	122	124	70-130	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	102	85-115

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.

$$A\bar{I}_2$$

Phone # 206-306-1900 Fax # 206-306-1907

REMARKS

Rush charges authorized by:
CHRIS CASS

Will call with instructions

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	JONATHAN LOEFFLER	SOUNDEARTH	12/26/19	1740
Received by: 	BISKAT TADESSE	PBS	↓	↓
Relinquished by:				
Received by:				

