



SoundEarth Strategies, Inc.  
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March 15, 2022

Mr. Dirk P. D. Mosis III  
USAA Real Estate Company  
118 Kitty Kat Lane  
Boerne, Texas 78006

Mr. Frank Jakus  
Ponte Gadea Seattle LLC  
270 Biscayne Boulevard Way, Suite 201  
Miami, Florida 33131-2123

**SUBJECT: 2021 GROUNDWATER MONITORING REPORT**  
**Troy Laundry Seattle Site**  
**Cleanup Site ID No. 11690**  
**300 Boren Avenue North and 399 Fairview Avenue North, Seattle, Washington**  
**Project Number: 0731-004-08**

Dear Messrs. Mosis and Jakus:

SoundEarth Strategies, Inc. (SoundEarth) has prepared this report to present the results of the 2021 groundwater monitoring events that were conducted at the Troy Laundry Seattle Site (Site). The Site encompasses the property located at 399 Fairview Avenue North and 300 Boren Avenue North in Seattle, Washington (collectively, the Property), as well as the adjacent rights-of-way (ROWs) located north of the Property (Harrison Street), west of the Property (Boren Avenue North), and south of the Property (Thomas Street). The Site also extends onto the adjacent property to the south, known as the Seattle Times Site, located at 1120 John Street (Cleanup Site ID 14494). The Site location is shown on Figure 1.

The groundwater monitoring events summarized below were conducted, and this report has been prepared, pursuant to Exhibit A (Scope of Work and Schedule) to the Prospective Purchaser Consent Decree (PPCD) No. 19-2-07344-6 SEA entered into by and between the Washington State Department of Ecology (Ecology) and Ponte Gadea Seattle LLC. The purpose of this report is to summarize compliance groundwater monitoring work completed during the calendar year 2021, present the results of groundwater elevation measurements and laboratory analytical results, and provide a statistical trend analysis assessment of chlorinated volatile organic compounds (CVOCs) in groundwater at the Site.

### **2021 GROUNDWATER MONITORING EVENTS**

The 2021 groundwater monitoring events were conducted during the second and fourth quarters (June and December, respectively) of 2021, to assess the groundwater quality, flow direction, and gradient of groundwater beneath the Site, and to evaluate the effectiveness of the groundwater treatment program that has been implemented as part of SoundEarth's Interim Action Plan dated August 21, 2013, which was approved by Ecology on October 10, 2013.

The 2021 monitoring events included collecting groundwater data from all monitoring wells in the compliance well network as set forth in Exhibit A of the PPCD, as well as additional Site wells, consisting of the following:

- The Property: MW17 through MW25, IW04, IW06, IW50, IW61, and IW91
- Seattle Times Site: MW29<sup>1</sup>, MW30<sup>1</sup>, ONNI-MW-4<sup>2</sup>, ONNI-MW-5<sup>2</sup>, and ONNI-MW-9<sup>2</sup>. A groundwater sample was collected from ONNI-MW-9 during the fourth quarter monitoring event only.
- Harrison Street ROW: MW01, MW26, MW32<sup>1</sup>, and MW33<sup>1</sup>.
- Boren Avenue ROW: MW04, MW07, MW13, MW27, and MW31<sup>1</sup>
- Thomas Street ROW: MW28
- Terry Avenue North: MW34<sup>3</sup>. A groundwater sample was collected from MW34 during the fourth quarter monitoring event only.

This report presents a description of field activities performed during the 2021 groundwater monitoring events and the associated laboratory analytical results. Current and historical groundwater elevations and sample analytical results are presented in Tables 1 through 3.

## FIELD ACTIVITIES

Upon arrival at the Site for the second and fourth quarter monitoring events, SoundEarth personnel opened all the monitoring wells prior to sampling to collect groundwater level measurements. Water levels were permitted to equilibrate with atmospheric pressure for a minimum of 1 hour before groundwater level measurements were collected. Groundwater levels were measured relative to the top of well casing to an accuracy of 0.01 feet using an electronic water level meter.

During both monitoring events, groundwater level measurements were collected from monitoring wells MW17 through MW25 and injection wells IW91, located on the Property; monitoring well MW34, located in the Terry Avenue North ROW; monitoring wells MW01, MW26, MW32, and MW33, located in the Harrison Street ROW; monitoring wells MW04, MW07, MW13, MW27, and MW31, located in the Boren Avenue North ROW; monitoring well MW28, located in the Thomas Street ROW; and monitoring wells MW29, MW30, ONNI-MW-4, ONNI-MW-5, and ONNI-MW-9, located on the Seattle Times Site.

From June 22 through 25 and December 14 through 17, 2021, groundwater samples were collected from monitoring wells MW01, MW04, MW07, MW13, MW17 through MW34, IW04, IW06, IW50, IW61, IW91, ONNI-MW-4, ONNI-MW-5, and ONNI-MW-9 in accordance with the US Environmental Protection Agency (EPA) *Low-Flow (Minimal Drawdown) Groundwater Sampling Procedures* dated April 1996. Monitoring

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<sup>1</sup> Monitoring wells MW29 through MW33 were installed in September 2019 as part of the Supplemental Remedial Investigation, as described in SoundEarth's Supplemental Remedial Investigation Work Plan, dated March 20, 2019. These wells are not sampled under the PPCD but are now part of the Site monitoring well network, and results will be presented in connection with the Progress Reports to ensure that all data associated with the Site are readily available to Ecology.

<sup>2</sup> Monitoring wells ONNI-MW-4, ONNI-MW-5, and ONNI-MW-9 are not part of the Site monitoring well network but were sampled during the monitoring events as part of the ongoing groundwater monitoring and sampling program at the Site.

<sup>3</sup> MW34 is a replacement for MW15, which was damaged during construction activities in 2021 and was replaced in October 2021. This well is not sampled under the PPCD, but it is part of the Site monitoring well network, and results will be presented in connection with the Progress Reports to ensure that all data associated with the Site are readily available to Ecology.

well MW15, formerly located in the Terry Avenue North ROW, was damaged during construction activities in early 2021 and could not be sampled during the second quarter monitoring event. Replacement monitoring well MW34 was installed in the same location in October 2021 and was sampled during the fourth quarter monitoring event. Monitoring well ONNI-MW-9, located on the Seattle Times Site, was sampled only during the fourth quarter monitoring event.

Additionally, a pilot test was conducted in April 2021 to evaluate the efficacy of using powder activated carbon (PAC) to reduce concentrations of CVOCs in the Thomas Street ROW. Three rounds of supplemental performance groundwater monitoring were subsequently conducted at monitoring well MW28 in May, August, and September 2021 to evaluate CVOC concentrations following the PAC injections.

Purging and sampling of each monitoring well was performed using a bladder pump (monitoring wells MW01, MW04, MW07, MW13, MW25 through MW34, ONNI-MW-4, ONNI-MW-5, and ONNI-MW-9) or a peristaltic pump (monitoring wells MW17 through MW24 and injection wells IW04, IW06, IW50, IW61, and IW91) and dedicated polyethylene tubing at a maximum flow rate of 250 milliliters per minute. The tubing intake was placed approximately 2 to 3 feet below the surface of the groundwater or mid-screen in each sampled monitoring well. During purging, water quality was monitored using a YSI-brand water quality meter equipped with a flow-through cell. The water quality parameters that were monitored and recorded included temperature, pH, specific conductance, dissolved oxygen, turbidity, and oxidation-reduction potential. Each monitoring well was purged until, at a minimum, the subset of pH, specific conductance, and dissolved oxygen or turbidity had stabilized over at least three successive readings. A field duplicate sample was collected from monitoring well MW25 during the second and fourth quarters for quality assurance/quality control (QA/QC) purposes.

Following purging, groundwater samples were collected from the pump outlet tubing located upstream of the flow-through cell and placed directly into clean, laboratory-prepared sample containers. Each container was labeled with a unique sample identification number, placed on ice in a cooler, and transported to one or more of the following testing laboratories under standard chain-of-custody protocols for laboratory analysis: Friedman & Bruya, Inc. of Seattle, Washington; Fremont Analytical of Seattle, Washington; or SiREM of Knoxville, Tennessee.

The groundwater samples were submitted for analysis of one or more of the following:

- CVOCs, including tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), and vinyl chloride (VC) by EPA Method 8260C
- Gasoline-range petroleum hydrocarbons (GRPH) by Northwest Total Petroleum Hydrocarbon (NWTPH) Method NWTPH-Gx
- Diesel-range petroleum hydrocarbons (DRPH) and oil-range petroleum hydrocarbons (ORPH) by Method NWTPH-Dx

Groundwater samples collected from monitoring wells MW04, MW07, MW18, MW19, MW21 through MW26, MW28, IW04, IW50, and IW61 were analyzed for one or more of the following natural attenuation parameters:

- Methane, ethane, and ethene by Method RSK 175
- Sulfate, nitrate, and alkalinity by Method SM1845/SM2320B

- Total iron and manganese by EPA Method 200.8
- Ferrous iron by Method SM3500
- Total organic carbon by EPA Method 415.1
- Volatile fatty acids by EPA Methods 300.0 and 300.0 Modified

All groundwater sampling data, including results of natural attenuation parameters, will be uploaded to and available from Ecology's EIM database.

Purge water generated during the monitoring events was placed in an appropriately labeled 55-gallon steel drum and temporarily stored on the Property pending receipt of analytical data and proper disposal.

Note: As communicated in the PPCD Third Quarter 2020 Progress Report, starting in December 2020, GRPH, DRPH, and ORPH chemical analyses would be performed for groundwater samples collected from monitoring wells MW13, MW21, MW22, and MW28 only. In addition, BTEX chemical analyses would be discontinued for all wells on the Site going forward.

## RESULTS

Groundwater levels and analytical results from the groundwater monitoring and supplemental sampling events are summarized below and presented in Tables 1 through 6. Groundwater elevation contour maps for the second and fourth quarter 2021 sampling events are presented in Figures 2 and 3. Groundwater analytical results for CVOCs are presented on Figure 4.

### May 2021 Supplemental Sampling

A supplemental groundwater sample was collected from monitoring well MW28 on May 21, 2021, to evaluate the performance of the PAC injection pilot test performed in the Thomas Street ROW in April 2021. The groundwater elevation was 11.95 feet North American Vertical Datum of 1988 (NAVD88) at the time of sampling. PCE and cis-1,2-DCE were detected at concentrations exceeding Washington State Model Toxics Control Act (MTCA) cleanup levels.

### Second Quarter 2021

Groundwater elevations measured in June 2021 ranged from 10.62 feet NAVD88 (at monitoring well MW33) to 17.64 feet NAVD88 (at ONNI-MW-5). Groundwater elevations were contoured using the water level measurements collected on June 22, 2021 (Figure 2; Table 1). The groundwater contours for the second quarter 2021 monitoring event indicated that groundwater at the Site flowed generally to the west-northwest with a hydraulic gradient of 0.003 feet per foot, which is a departure from the flow to the south-southeast that has been historically observed at the Property. Construction dewatering efforts to the northwest of the Property appear to have influenced groundwater flow across the Site between the second quarter of 2020 and the second quarter of 2021. According to Ecology records, it appears that the construction dewatering system at Block 38 West was terminated in late March 2021, and the dewatering wells were decommissioned in April 2021. Given that groundwater at the Site did not return to its historical flow direction by June 2021, dewatering at 400 Westlake Avenue or another property to the west of the Site with ongoing construction dewatering may have continued to influence groundwater flow at the Property during the second quarter of 2021.

Laboratory analytical results from the second quarter 2021 monitoring event were compared to MTCA Method A or B cleanup levels, as applicable, for groundwater and are summarized below (Figure 4; Tables 2 and 3):

- Concentrations of PCE exceeding the MTCA Method A cleanup level were detected in the groundwater samples collected from monitoring well MW28, located in the Thomas Street ROW, and monitoring well MW29, located on the northwestern portion of the Seattle Times Site. The concentrations of PCE in the groundwater samples collected from all other Site monitoring wells were below the laboratory reporting limit and/or MTCA Method A cleanup level.
- Concentrations of TCE exceeding the MTCA Method A cleanup level were detected in the groundwater samples collected from monitoring wells MW04, MW07, MW27, and MW31, located in the Boren Avenue North ROW; monitoring well MW26, located in the Harrison Street ROW; and monitoring well MW29, located on the Seattle Times Site. The concentrations of TCE in the remaining groundwater samples were below the laboratory reporting limit and/or MTCA Method A cleanup level.
- Concentrations of cis-1,2-DCE exceeding the MTCA Method B cleanup level were detected in the groundwater samples collected from on-Property monitoring wells MW22 through MW25, on-Property injection well IW61, and monitoring well MW29, located on the Seattle Times Site. Concentrations of cis-1,2-DCE in the remaining groundwater samples were below the laboratory reporting limit and/or MTCA Method B cleanup level.
- Concentrations of VC exceeding the MTCA Method A cleanup level were detected in groundwater samples collected from on-Property monitoring wells MW18, MW19, and MW21 through MW25 and injection wells IW04, IW06, IW50, and IW61. Concentrations of VC in the remaining groundwater samples were below the laboratory reporting limit and/or MTCA Method A cleanup level.
- Concentrations of trans-1,2-DCE in the groundwater samples collected from all sampled wells were below the laboratory reporting limit.
- DRPH and/or ORPH concentrations exceeding MTCA Method A cleanup levels were detected in groundwater samples collected from on-Property monitoring wells MW21 and MW22. These groundwater samples, in addition to samples from monitoring wells MW13 and MW28, were flagged by the laboratory as having a chromatographic pattern that did not match the fuel standard used for quantification. This finding was likely due to the presence of EOS solution in the samples, which originated from the April and May 2016 injection event. The reported concentrations are not considered reflective of actual groundwater conditions at the Property. Concentrations of DPRH and ORPH in the remaining groundwater samples from all monitoring wells at the Site were below the laboratory reporting limit and/or MTCA Method A cleanup level.
- GRPH concentrations were below the laboratory reporting limit and/or MTCA Method A cleanup level in all groundwater samples collected from all wells at the Site except monitoring well MW21. The GRPH detection in the groundwater sample collected from monitoring well MW21 is attributable to the presence of EOS and its polar breakdown products in groundwater.
- Concentrations of BTEX constituents in all groundwater samples collected were below laboratory reporting limits.

### **August and September 2021 Supplemental Sampling**

Additional groundwater samples were collected from monitoring well MW28 on August 17 and September 21, 2021, to further evaluate the performance of the PAC injection pilot test performed in the Thomas Street ROW in April 2021. The groundwater elevations measured on August 17 and September 21, 2021, were 12.53 and 12.62 feet NAVD88, respectively. During the August 2021 supplemental sampling event, PCE and cis-1,2-DCE were detected at concentrations exceeding MTCA cleanup levels. During the September 2021 supplemental sampling event, PCE was detected at a concentration exceeding the MTCA Method A cleanup level, and cis-1,2-DCE was observed to have decreased slightly to a concentration below the cleanup level.

### **Fourth Quarter 2021**

Groundwater elevations measured in December 2021 ranged from 13.50 feet NAVD88 (at monitoring wells MW21, MW27, and ONNI-MW-9) to 18.74 feet NAVD88 (at monitoring well ONNI-MW-5). Groundwater elevations were contoured using the water level measurements collected on December 12, 2021 (Figure 3; Table 1). The groundwater contours indicated that groundwater at the Site flowed generally to the south-southeast with a hydraulic gradient of 0.003 feet per foot. Following the completion of construction dewatering activities at Block 38 West to the northwest of the Property in March 2021, groundwater flow observed at the Property during fourth quarter 2021 was consistent with the historical flow direction prior to the 2020 and 2021 construction dewatering activities upgradient of the Property.

Laboratory analytical results from the monitoring event were compared to MTCA Method A or B cleanup levels for groundwater and are summarized below (Figure 4; Tables 2 and 3):

- Concentrations of PCE exceeding the MTCA Method A cleanup level were detected in the groundwater samples collected from monitoring well MW13, located in the Boren Avenue North ROW; monitoring well MW28, located in the Thomas Street ROW; and monitoring well MW29, located on the Seattle Times Site. The concentrations of PCE in the remaining groundwater samples were below the laboratory reporting limit and/or MTCA Method A cleanup level.
- Concentrations of TCE exceeding the MTCA Method A cleanup level were detected in the groundwater samples collected from monitoring wells MW04, MW07, MW27, and MW31, located in the Boren Avenue North ROW; monitoring well MW26, located in the Harrison Street ROW; monitoring well MW34, located in the Terry Avenue North ROW; and monitoring well MW29, located on the Seattle Times Site. The concentrations of TCE in the remaining groundwater samples were below the laboratory reporting limit and/or MTCA Method A cleanup level.
- Concentrations of cis-1,2-DCE exceeding the MTCA Method B cleanup level were detected in the groundwater samples collected from on-Property monitoring wells MW22 and MW24, on-Property injection well IW61, and monitoring well MW28, located in the Thomas Street ROW. Concentrations of cis-1,2-DCE in the remaining groundwater samples were below the laboratory reporting limit and/or MTCA Method B cleanup level.
- Concentrations of VC exceeding the MTCA Method A cleanup level were detected in groundwater samples collected from on-Property monitoring wells MW18, MW19, and MW21 through MW25, and on-Property injection wells IW04, IW50, and IW61. Concentrations of VC in the remaining groundwater samples were below the laboratory reporting limit and/or MTCA Method A cleanup level.

- Concentrations of trans-1,2-DCE in the groundwater samples collected from all sampled wells were below the laboratory reporting limit.
- DRPH and/or ORPH concentrations exceeding MTCA Method A cleanup levels were detected in groundwater samples collected from on-Property monitoring wells MW21 and MW22. These groundwater samples, in addition to the sample collected from monitoring well MW28, were flagged by the laboratory as having a chromatographic pattern that does not match the fuel standard used for quantification. This was likely due to the presence of EOS PRO solution (a food-grade oil-water emulsion) in the samples, which originated from the April and May 2016 injection event. The reported concentrations are not considered reflective of actual groundwater conditions at the Property. Concentrations of DPRH and ORPH in the remaining groundwater samples were below the laboratory reporting limit and/or MTCA Method A cleanup level.
- GRPH concentrations were below the laboratory reporting limit and/or MTCA Method A cleanup level in all groundwater samples collected.

## DATA QUALITY REVIEW

SoundEarth performed a QA/QC review of the analytical results, which included a review of accuracy and precision of the data supplied by the laboratory. In addition, the relative percent difference (RPD) was calculated for the field duplicate samples collected by SoundEarth from monitoring well MW25.

RPDs for all detected analytes were below the acceptable limit of 25 percent.

Detections of DRPH and/or ORPH in groundwater samples collected from monitoring wells MW13, MW21, MW22, and MW28 during the second and/or fourth quarter sampling events were flagged by the laboratory as having a chromatographic pattern that does not match the fuel standard used for quantification. This result was due to the presence of EOS PRO solution in the samples originating from the April and May 2016 injection event, and the reported concentrations should not be considered accurate. Additionally, the detection of DRPH in the groundwater sample collected from monitoring well MW21 during the second quarter of 2021 was flagged by the laboratory as estimated due to the analyte response exceeding the valid instrument calibration range.

All other quality control criteria are acceptable for the groundwater samples; therefore, no action is required, and analytical results are usable to meet the project objectives. Laboratory analytical reports are provided in Attachment A.

## STATISTICAL TREND ANALYSIS OF PLUME STABILITY

Using Ecology's *Guidance on Remediation of Petroleum-Contaminated Groundwater by Natural Attenuation* dated July 2005 (Module 2), SoundEarth evaluated the stability of the contaminated groundwater plume originating from the Property. Chlorinated solvent results (PCE, TCE, cis-1,2-DCE, and VC) for groundwater samples collected between May 2015 and December 2021 (Table 2) were used to evaluate the stability of the plume. The data results from the plume stability analysis are presented in Attachment B.

The stability of the CVOC groundwater plume beneath and downgradient of the Property was evaluated to assess if the plume is expanding, shrinking, or has reached steady state (stable). A shrinking or stable

plume indicates that the plume is attenuating as a result of the source removal at the Property and intrinsic biodegradation, as well as groundwater treatment implemented at the Property and in the adjacent ROWs. For the purposes of this report, stability of the CVOC plume originating at the Property is evaluated separately with respect to PCE/TCE and cis-1,2-DCE/VC.

### **Plume Stability—PCE and TCE**

Results from the PCE and TCE trend analyses were evaluated in conjunction with the current footprint of the PCE and TCE components of the CVOC plume originating at the Property. The trend analyses were performed on groundwater analytical results gathered from May 2015 to December 2021. Trend analyses were only performed for monitoring wells with CVOC concentrations exceeding cleanup levels in fourth quarter 2021.

PCE concentrations exceeding the cleanup level at the Site remain in the Thomas Street ROW only, while concentrations of TCE exceeding the cleanup level remain in the Thomas Street, Boren Avenue North, and Harrison Street ROWs (Figure 5). Trend analyses show that the concentrations of PCE and TCE are stable off of the Property in the Thomas Street, Boren Avenue North, and Harrison Street ROWs (monitoring wells MW04, MW07, MW13, and MW26 through MW29). These conditions suggest that the extents of PCE and TCE concentrations in the Thomas Street, Boren Avenue North, and Harrison Street ROWs have reached steady state. Steady state indicates that there is currently a balance between the PCE and TCE in groundwater, which have desorbed from soil grains into the dissolved phase, and that mass removal of contaminants from the groundwater has occurred by natural attenuation processes.

### **Plume Stability—cis-1,2-DCE and VC**

Results from the cis-1,2-DCE and VC trend analyses were evaluated in conjunction with the current footprint of the cis-1,2-DCE and VC impacts in groundwater. In general, the concentrations of cis-1,2-DCE and/or VC on the Property north of monitoring well MW22 are increasing as expected, while residual low-level concentrations of PCE and TCE are likely degrading to these daughter products under reducing conditions in groundwater (i.e., via an anaerobic reductive dechlorination pathway). Trend analyses were only performed for monitoring wells with CVOC concentrations exceeding cleanup levels in fourth quarter 2021.

cis-1,2-DCE and/or VC concentrations exceeding cleanup levels remain in groundwater on the Property and in the Thomas Street ROW (Figure 6). At on-Property monitoring wells MW-22 through MW-24 and MW35 and injection wells IW04, IW51, and IW61, concentrations of cis-1,2-DCE and VC are stable or expanding in the groundwater. These results suggest ongoing anerobic degradation of low concentrations of PCE and TCE (below the laboratory reporting limit) is occurring in groundwater on the Property. The results also suggest that TCE migrating onto the Property from within or beyond the Boren Avenue North ROW continues to act as a source for the formation of cis-1,2-DCE and VC on the Property.

Trend analysis for monitoring well MW28, located in the Thomas Street ROW, shows that the concentration of cis-1,2-DCE is declining with time. The concentrations of VC in groundwater samples from this monitoring well have not been reported above the laboratory reporting limit since the second quarter of 2020. The decline in the concentration of cis-1,2-DCE and absence of VC is expected because aerobic conditions are present in groundwater in the vicinity of off-Property monitoring wells MW28 through MW30. This condition is conducive to the degradation (direct oxidation) of cis-1,2-DCE and VC.



VC has not been reported above laboratory reporting limits in groundwater samples collected from monitoring wells MW29 and MW30 since the second quarter of 2020.

## CONCLUSIONS

Results from analysis of plume stability indicate that the footprint of PCE and TCE in on-Property groundwater decreased considerably following implementation of the groundwater treatment in 2015. As of the fourth quarter 2021, concentrations of PCE and TCE are below current cleanup levels in all on-Property monitoring wells. As predicted, and because of groundwater treatment via anaerobic reductive dechlorination of PCE and TCE, the footprint of the cis-1,2-DCE and VC has increased, primarily on the Property. Although concentrations of cis-1,2-DCE and VC continue to exceed current cleanup levels, it is anticipated that concentrations will decrease when PCE and TCE mass has been depleted in groundwater at the Property.

The transport of PCE and its degradation products in the groundwater from the Troy Property to the Thomas Street ROW and to the former Seattle Times Site has been attenuated as a result of groundwater treatment and natural attenuation processes. This attenuation is evidenced by the stable footprint of the CVOC plume in the Thomas Street ROW and on the former Seattle Times Site over time. The stability of the CVOC plume in this area of the Site indicates that additional investigation is not needed to define the southern extent of the CVOC plume, which is defined in the Remedial Investigation Report by the absence of detectable concentrations of CVOCs in the groundwater at monitoring wells ONNI-MW-4 and ONNI-MW-5. Since the addition of monitoring well ONNI-MW-9 to the monitoring well network, the downgradient extent of CVOC plume is now defined by the absence of CVOCs above laboratory reporting limits and/or groundwater cleanup levels at monitoring well ONNI-MW-9 (Figure 6).

Under the approved PPCD sampling schedule for the monitoring well network, monitoring wells will continue to be sampled semiannually in the second and fourth quarters of 2022.

## CLOSING

SoundEarth appreciates the opportunity to work with you on this project. Please contact the undersigned at 206-306-1900 if you have any questions or require additional information.

Respectfully,

**SoundEarth Strategies, Inc.**



Clare Tochilin, LG  
Associate Geologist



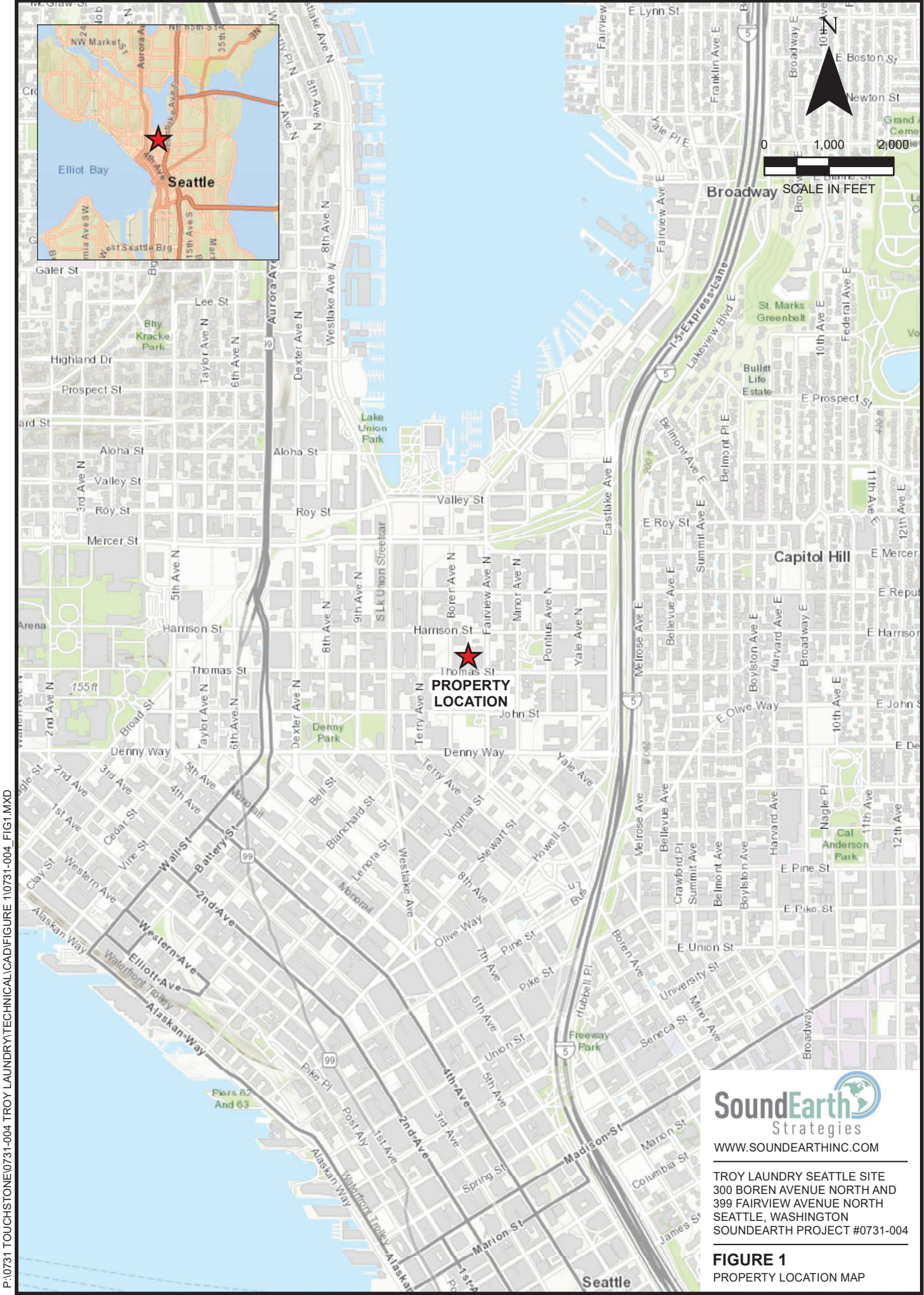
Levi Fernandes, PE  
Senior Environmental Engineer



Thomas Cammarata, LG, LHG  
Principal Geochemist

Attachments: Figure 1, Property Location Map  
Figure 2, Groundwater Contour Map with Rose Diagram (June 22, 2021)  
Figure 3, Groundwater Contour Map with Rose Diagram (December 14, 2021)  
Figure 4, Groundwater Analytical Results for Chlorinated Volatile Organic Compounds  
Figure 5, Extent of Troy Property PCE and TCE Concentrations in Groundwater – Post-Interim Remedial Action (Q4 2021)  
Figure 6, Extent of Troy Property VC/cis-1,2-DCE Concentrations in Groundwater – Post-Interim Remedial Action (Q4 2021)  
Table 1, Summary of Groundwater Elevations  
Table 2, Groundwater Analytical Results for CVOCs  
Table 2A, Summary of Groundwater Analytical Results for CVOCs  
Table 3, Groundwater Analytical Results for Petroleum Hydrocarbons  
Table 4, Natural Attenuation Parameters  
Table 5, Geochemical and Water Quality Parameters  
Table 6, Groundwater Analytical Results for Volatile Fatty Acids  
A, Laboratory Analytical Reports  
    May 2021 Supplemental Sampling  
        *Friedman & Bruya, Inc. #105414*  
    Second Quarter 2021  
        *Friedman & Bruya, Inc. #106462*  
        *Friedman & Bruya, Inc. #106463*  
        *Friedman & Bruya, Inc. #106488*  
        *Friedman & Bruya, Inc. #106489*  
        *Fremont Analytical, #2106475*  
        *Fremont Analytical, #2106490*  
        *Fremont Analytical, #2106491*  
        *SiREM Lab, #S-8169*  
    August 2021 Supplemental Sampling  
        *Friedman & Bruya, Inc. #108261*  
    September 2021 Supplemental Sampling  
        *Friedman & Bruya, Inc. #109355*  
    Fourth Quarter 2021  
        *Friedman & Bruya, Inc. #112310 amended*  
        *Friedman & Bruya, Inc. #112311 amended*  
        *Friedman & Bruya, Inc. #112344*  
        *Friedman & Bruya, Inc. #112373*  
        *Friedman & Bruya, Inc. #112374 amended*  
        *Fremont Analytical, #2112279*  
        *Fremont Analytical, #2112310*  
        *Fremont Analytical, #2112337*  
        *Fremont Analytical, #2112338*  
        *SiREM Lab, #S-8782*  
B, Plume Stability Analysis Results

## FIGURES

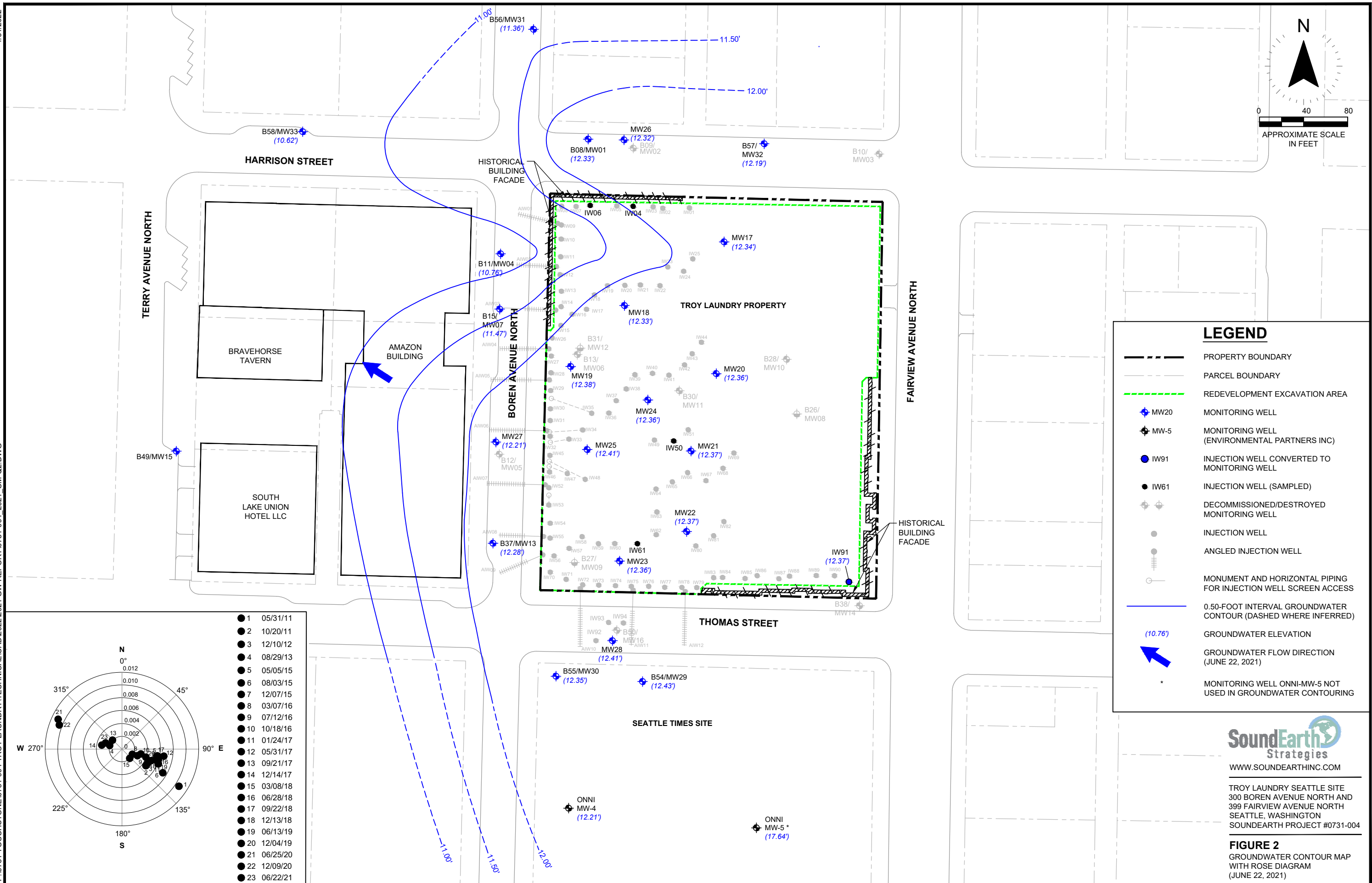


P:\0731 TOUCHSTONE\0731-004 TROY LAUNDRY\TECHNICAL\CAD\FIGURE 1\0731-004\_FIG1.MXD

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TROY LAUNDRY SEATTLE SITE  
300 BOREN AVENUE NORTH AND  
399 FAIRVIEW AVENUE NORTH  
SEATTLE, WASHINGTON  
SOUNDEARTH PROJECT #0731-004

**FIGURE 1**  
PROPERTY LOCATION MAP



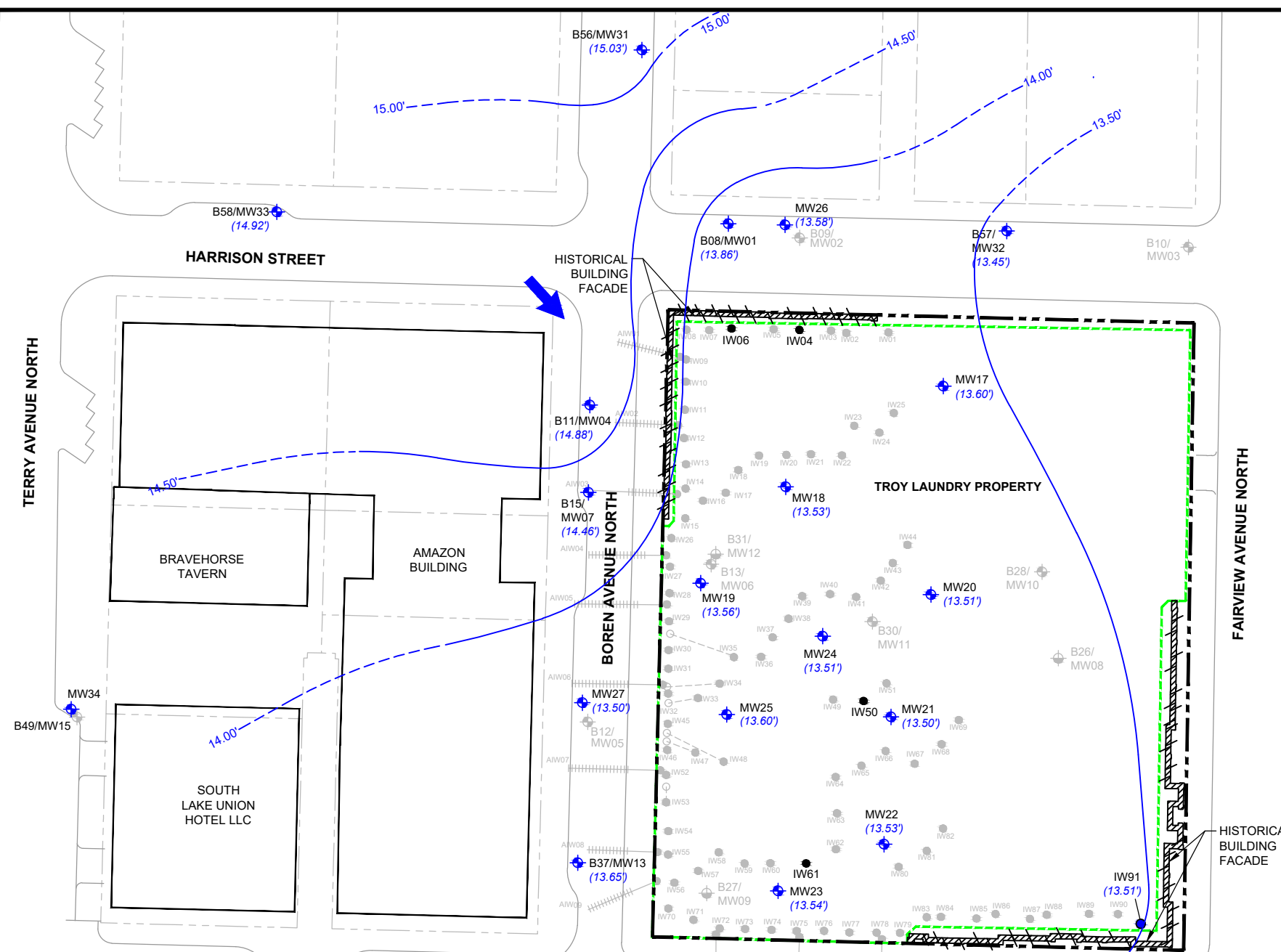
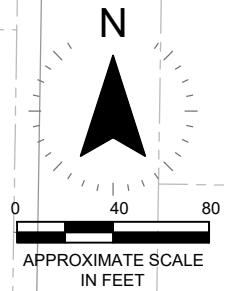
**LEGEND**

- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- REDEVELOPMENT EXCAVATION AREA
- MW20 MONITORING WELL
- MW-5 MONITORING WELL (ENVIRONMENTAL PARTNERS INC)
- IW91 INJECTION WELL CONVERTED TO MONITORING WELL
- IW61 INJECTION WELL (SAMPLED)
- DECOMMISSIONED/DESTROYED MONITORING WELL
- INJECTION WELL
- ANGLED INJECTION WELL
- MONUMENT AND HORIZONTAL PIPING FOR INJECTION WELL SCREEN ACCESS
- 0.50-FOOT INTERVAL GROUNDWATER CONTOUR (DASHED WHERE INFERRED)
- (10.76) GROUNDWATER ELEVATION
- GROUNDWATER FLOW DIRECTION (JUNE 22, 2021)
- MONITORING WELL ONNI-MW-5 NOT USED IN GROUNDWATER CONTOURING

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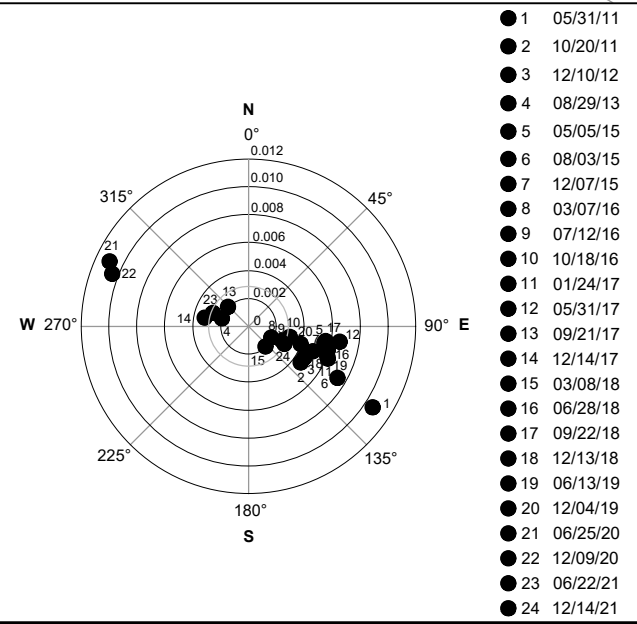
TROY LAUNDRY SEATTLE SITE  
 300 BOREN AVENUE NORTH AND  
 399 FAIRVIEW AVENUE NORTH  
 SEATTLE, WASHINGTON  
 SOUNDEARTH PROJECT #0731-004

**FIGURE 2**  
 GROUNDWATER CONTOUR MAP  
 WITH ROSE DIAGRAM  
 (JUNE 22, 2021)



### LEGEND

- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- REDEVELOPMENT EXCAVATION AREA
- MW20 MONITORING WELL
- MW-5 MONITORING WELL (ENVIRONMENTAL PARTNERS INC)
- IW91 INJECTION WELL CONVERTED TO MONITORING WELL
- IW61 INJECTION WELL (SAMPLED)
- DECOMMISSIONED/DESTROYED MONITORING WELL
- INJECTION WELL
- ANGLED INJECTION WELL
- MONUMENT AND HORIZONTAL PIPING FOR INJECTION WELL SCREEN ACCESS
- 0.50-FOOT INTERVAL GROUNDWATER CONTOUR (DASHED WHERE INFERRED)
- GROUNDWATER ELEVATION
- GROUNDWATER FLOW DIRECTION (DECEMBER 14, 2021)
- MONITORING WELL ONNI-MW-5 NOT USED IN GROUNDWATER CONTOURING

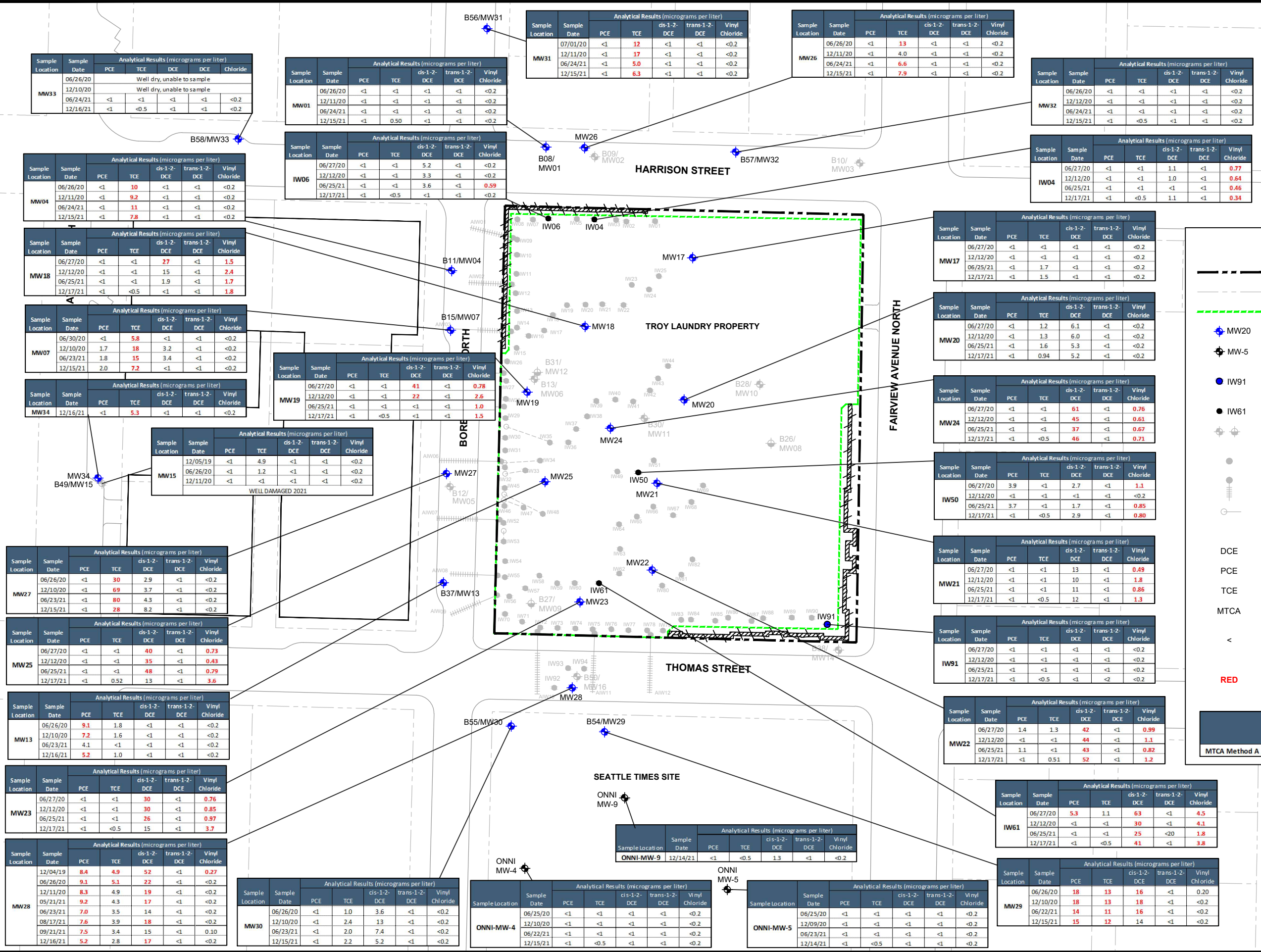
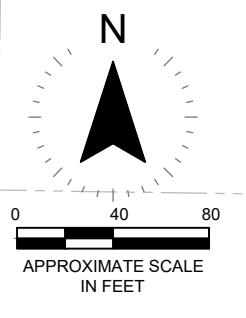


- 1 05/31/11
- 2 10/20/11
- 3 12/10/12
- 4 08/29/13
- 5 05/05/15
- 6 08/03/15
- 7 12/07/15
- 8 03/07/16
- 9 07/12/16
- 10 10/18/16
- 11 01/24/17
- 12 05/31/17
- 13 09/21/17
- 14 12/14/17
- 15 03/08/18
- 16 06/28/18
- 17 09/22/18
- 18 12/13/18
- 19 06/13/19
- 20 12/04/19
- 21 06/25/20
- 22 12/09/20
- 23 06/22/21
- 24 12/14/21

**SoundEarth Strategies**  
 WWW.SOUNDEARTHINC.COM

TROY LAUNDRY SEATTLE SITE  
 300 BOREN AVENUE NORTH AND  
 399 FAIRVIEW AVENUE NORTH  
 SEATTLE, WASHINGTON  
 SOUNDEARTH PROJECT #0731-004

**FIGURE 3**  
 GROUNDWATER CONTOUR MAP  
 WITH ROSE DIAGRAM  
 (DECEMBER 14, 2021)



### LEGEND

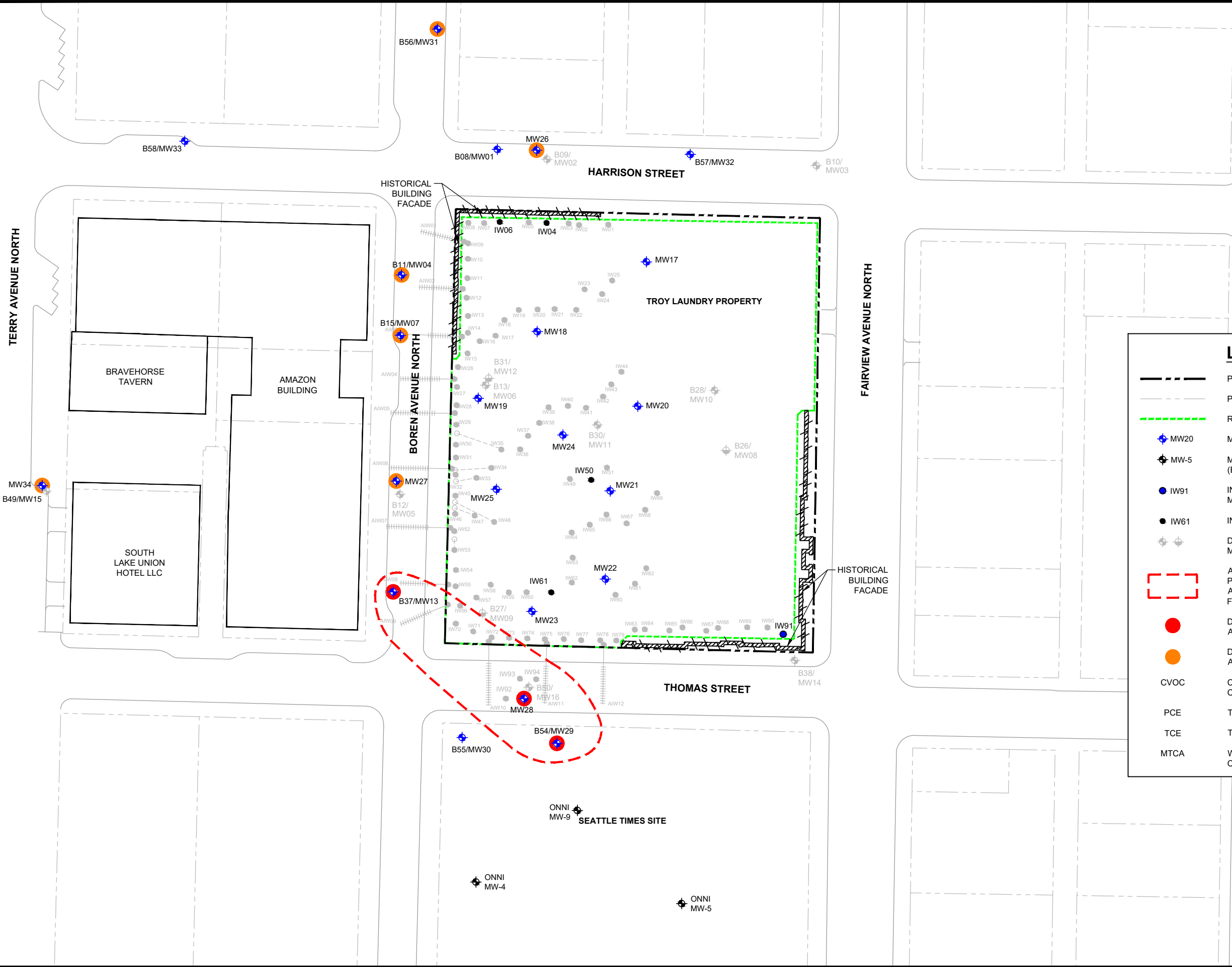
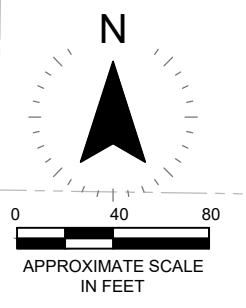
- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- REDEVELOPMENT EXCAVATION AREA
- MW20 MONITORING WELL
- MW-5 MONITORING WELL (ENVIRONMENTAL PARTNERS INC)
- IW91 INJECTION WELL CONVERTED TO MONITORING WELL
- IW61 INJECTION WELL (SAMPLED)
- DECOMMISSIONED/ DESTROYED MONITORING WELL
- INJECTION WELL
- ANGLED INJECTION WELL
- MONUMENT AND HORIZONTAL PIPING FOR INJECTION WELL SCREEN ACCESS
- DCE DICHOROETHENE
- PCE TETRACHOROETHENE
- TCE TRICHLOROETHENE
- MTCA WASHINGTON STATE MODEL TOXICS CONTROL ACT
- < NOT DETECTED AT A CONCENTRATION EXCEEDING LABORATORY REPORTING LIMIT
- RED DENOTES CONCENTRATIONS EXCEEDING THE MTCA METHOD CLEANUP LEVEL FOR GROUNDWATER

MTCA Method A	Analytical Results (micrograms per liter)				
	PCE	TCE	ds-1-2-DCE	trans-1-2-DCE	Vinyl Chloride
	5	5	16	160	0.2



TROY LAUNDRY SEATTLE SITE  
 300 BORE AVENUE NORTH AND  
 399 FAIRVIEW AVENUE NORTH  
 SEATTLE, WASHINGTON  
 SOUNDEARTH PROJECT #0731-004

**FIGURE 4**  
 GROUNDWATER ANALYTICAL RESULTS FOR CHLORINATED VOLATILE ORGANIC COMPOUNDS



**LEGEND**

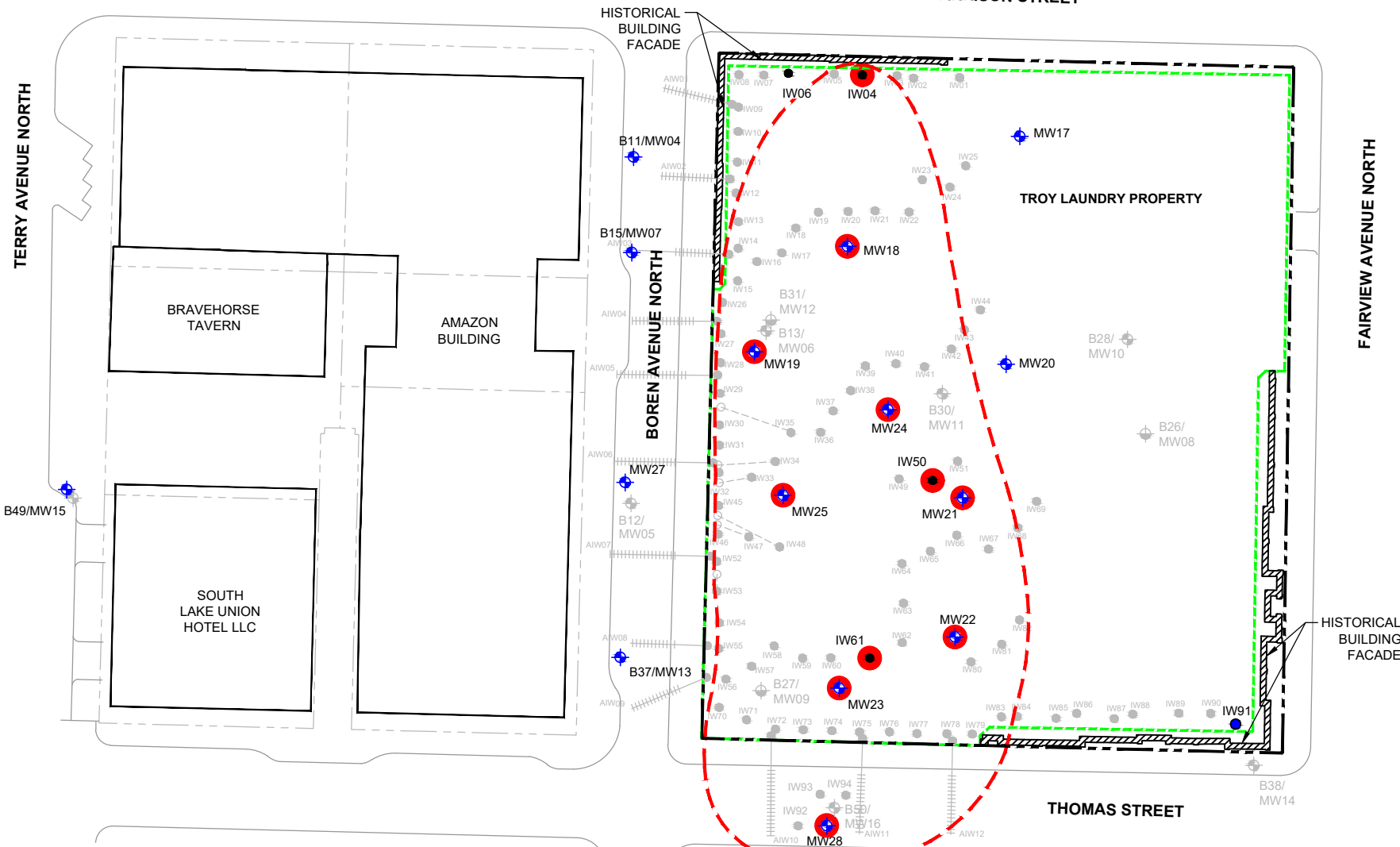
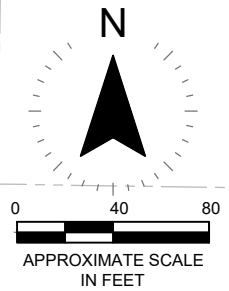
- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- REDEVELOPMENT EXCAVATION AREA
- MW20 MONITORING WELL
- MW-5 MONITORING WELL (NOT SAMPLED) (ENVIRONMENTAL PARTNERS INC)
- IW91 INJECTION WELL CONVERTED TO MONITORING WELL
- IW61 INJECTION WELL (SAMPLED)
- DECOMMISSIONED/DESTROYED MONITORING WELL
- APPROXIMATE EXTENTS OF POST-TREATMENT PCE AND TCE PLUME ABOVE MTCA CLEANUP LEVEL ORIGINATING FROM THE TROY PROPERTY
- DENOTES PCE CONCENTRATION EXCEEDS APPLICABLE MTCA CLEANUP LEVEL
- DENOTES TCE CONCENTRATION EXCEEDS APPLICABLE MTCA CLEANUP LEVEL
- CVOC CHLORINATED VOLATILE ORGANIC COMPOUND
- PCE TETRACHLOROETHENE
- TCE TRICHLOROETHENE
- MTCA WASHINGTON STATE MODEL TOXICS CONTROL ACT



TROY LAUNDRY SEATTLE SITE  
 300 BOREN AVENUE NORTH AND  
 399 FAIRVIEW AVENUE NORTH  
 SEATTLE, WASHINGTON  
 SOUNDEARTH PROJECT #0731-004

**FIGURE 5**  
 EXTENT OF TROY PROPERTY PCE AND TCE  
 GROUNDWATER PLUME - POST-INTERIM  
 REMEDIAL ACTION (Q4 2021)





### LEGEND

- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- REDEVELOPMENT EXCAVATION AREA
- + MW20 MONITORING WELL
- + MW-5 MONITORING WELL (NOT SAMPLED) (ENVIRONMENTAL PARTNERS INC)
- IW91 INJECTION WELL CONVERTED TO MONITORING WELL
- IW61 INJECTION WELL (SAMPLED)
- + DECOMMISSIONED/DESTROYED MONITORING WELL
- APPROXIMATE EXTENTS OF POST-TREATMENT VC/cis-1,2-DCE PLUME ABOVE MTCA CLEANUP LEVEL ORIGINATING FROM THE TROY PROPERTY
- DENOTES VC/cis-1,2-DCE CONCENTRATIONS EXCEED APPLICABLE MTCA CLEANUP LEVEL
- CVOC CHLORINATED VOLATILE ORGANIC COMPOUND
- DCE DICHLOROETHENE
- VC VINYL CHLORIDE
- MTCA WASHINGTON STATE MODEL TOXICS CONTROL ACT



TROY LAUNDRY SEATTLE SITE  
 300 BOREN AVENUE NORTH AND  
 399 FAIRVIEW AVENUE NORTH  
 SEATTLE, WASHINGTON  
 SOUNDEARTH PROJECT #0731-004

**FIGURE 6**  
 EXTENT OF TROY PROPERTY VC/cis-1,2-DCE GROUNDWATER PLUME - POST-INTERIM REMEDIAL ACTION (Q4 2021)

## **TABLES**



**Table 1**  
**Summary of Groundwater Elevations**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Well	TOC Elevation <sup>(1)</sup> (feet)	Depth to Top of Well Screen (feet approximate)	Depth to Bottom of Well Screen (feet approximate)	Top of Well Screen Elevation (feet NAVD88 approximate)	Bottom of Well Screen Elevation (feet NAVD88 approximate)	Date	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet NAVD88)
<b>Troy Laundry Property</b>								
MW06	74.78	60	75	15	0	05/31/11	58.70	16.08
						10/20/11	58.91	15.87
						12/13/12	58.71	16.07
						08/29/13	60.30	14.48
DECOMMISSIONED 2013								
MW08	92.88	105	110	-12	-17	10/20/11	77.18	15.70
						08/29/13	78.10	14.78
DECOMMISSIONED 2013								
MW09	92.92	105	110	-12	-17	10/20/11	77.24	15.68
						08/29/13	78.51	14.41
DECOMMISSIONED 2013								
MW10	92.73	75	90	18	3	10/20/11	77.14	15.59
						12/13/12	77.01	15.72
						08/29/13	78.28	14.45
DECOMMISSIONED 2013								
MW11	88.23	68	83	20	5	10/20/11	72.43	15.80
						12/13/12	72.29	15.94
						08/29/13	73.78	14.45
DECOMMISSIONED 2013								
MW12	74.44	95	100	-21	-26	10/20/11	58.71	15.73
						08/29/13	59.99	14.45
DECOMMISSIONED 2013								
MW17	35.72	22	37	14	-1	05/05/15	25.26	10.46
						08/03/15	24.82	10.90
						12/07/15	25.49	10.23
						03/07/16	24.98	10.74
						07/12/16	24.61	11.11
						10/18/16	23.14	12.58
						01/24/17	20.84	14.88
						05/31/17	22.75	12.97
						09/21/17	25.73	9.99
						12/14/17	25.14	10.58
						03/08/18	23.04	12.68
						06/28/18	22.00	13.72
						09/19/18	21.64	14.08
						12/13/18	21.42	14.30
						06/13/19	20.93	14.79
						10/09/19	21.30	14.42
						12/04/19	22.04	13.68
06/25/20	24.13	11.59						
12/09/20	24.74	10.98						
06/22/21	23.38	12.34						
12/14/21	21.12	14.60						



**Table 1**  
**Summary of Groundwater Elevations**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Well	TOC Elevation <sup>(1)</sup> (feet)	Depth to Top of Well Screen (feet approximate)	Depth to Bottom of Well Screen (feet approximate)	Top of Well Screen Elevation (feet NAVD88 approximate)	Bottom of Well Screen Elevation (feet NAVD88 approximate)	Date	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet NAVD88)
MW18	35.34	35	55	0	-20	05/05/15	24.92	10.42
						08/03/15	24.49	10.85
						12/07/15	25.21	10.13
						03/07/16	24.64	10.70
						07/12/16	24.23	11.11
						10/18/16	22.81	12.53
						01/24/17	20.98	14.36
						05/31/17	22.49	12.85
						09/21/17	25.36	9.98
						12/14/17	24.70	10.64
						03/08/18	22.60	12.74
						06/28/18	21.70	13.64
						09/19/18	21.34	14.00
						12/13/18	21.12	14.22
						06/13/19	20.62	14.72
						10/09/19	20.50	14.84
						12/04/19	22.15	13.19
06/25/20	23.81	11.53						
12/09/20	24.42	10.92						
06/22/21	23.01	12.33						
12/14/21	21.81	13.53						
MW19	37.69	35	55	3	-17	05/05/15	27.24	10.45
						08/03/15	26.82	10.87
						12/07/15	27.51	10.18
						03/07/16	26.97	10.72
						07/12/16	26.57	11.12
						10/18/16	25.12	12.57
						01/24/17	22.97	14.72
						05/31/17	24.74	12.95
						09/21/17	27.60	10.09
						12/14/17	26.97	10.72
						03/08/18	24.89	12.80
						06/28/18	24.00	13.69
						09/19/18	23.65	14.04
						12/13/18	25.41	12.28
						06/13/19	22.95	14.74
						10/09/19	27.60	10.09
						12/04/19	23.33	14.36
06/25/20	26.16	11.53						
12/09/20	26.76	10.93						
06/22/20	25.31	12.38						
12/14/21	24.13	13.56						



**Table 1**  
**Summary of Groundwater Elevations**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Well	TOC Elevation <sup>(1)</sup> (feet)	Depth to Top of Well Screen (feet approximate)	Depth to Bottom of Well Screen (feet approximate)	Top of Well Screen Elevation (feet NAVD88 approximate)	Bottom of Well Screen Elevation (feet NAVD88 approximate)	Date	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet NAVD88)
MW20	35.63	35	55	1	-19	05/05/15	25.24	10.39
						08/03/15	24.44	11.19
						12/07/15	25.50	10.13
						03/07/16	24.94	10.69
						07/12/16	24.62	11.01
						10/18/16	23.13	12.50
						01/24/17	21.32	14.31
						05/31/17	22.70	12.93
						09/21/17	25.53	10.10
						12/14/17	24.91	10.72
						03/08/18	22.89	12.74
						06/28/18	22.01	13.62
						09/19/18	21.67	13.96
						12/13/18	21.43	14.20
						06/13/19	20.95	14.68
						10/09/19	24.25	11.38
						12/04/19	21.45	14.18
06/25/20	23.99	11.64						
12/09/20	24.63	11.00						
06/22/21	23.27	12.36						
12/14/21	22.12	13.51						
MW21	35.58	35	55	1	-19	05/05/15	25.21	10.37
						08/03/15	24.82	10.76
						12/07/15	25.49	10.09
						03/07/16	24.90	10.68
						07/12/16	24.56	11.02
						10/18/16	23.00	12.58
						01/24/17	21.54	14.04
						05/31/17	23.37	12.21
						09/21/17	25.96	9.62
						12/14/17	25.20	10.38
						03/08/18	24.10	11.48
						06/28/18	22.89	12.69
						09/19/18	INACCESSIBLE	
						12/13/18	22.59	12.99
						06/13/19	23.70	11.88
						10/09/19	26.52	9.06
						12/04/19	20.50	15.08
06/25/20	23.83	11.75						
12/09/20	24.60	10.98						
06/22/21	23.21	12.37						
12/14/21	22.08	13.50						



**Table 1**  
**Summary of Groundwater Elevations**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Well	TOC Elevation <sup>(1)</sup> (feet)	Depth to Top of Well Screen (feet approximate)	Depth to Bottom of Well Screen (feet approximate)	Top of Well Screen Elevation (feet NAVD88 approximate)	Bottom of Well Screen Elevation (feet NAVD88 approximate)	Date	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet NAVD88)
MW22	35.47	35	55	0	-20	05/05/15	25.14	10.33
						08/03/15	24.75	10.72
						12/07/15	25.41	10.06
						03/07/16	24.86	10.61
						07/12/16	24.52	10.95
						10/18/16	23.05	12.42
						01/24/17	21.68	13.79
						05/31/17	23.45	12.02
						09/21/17	26.20	9.27
						12/14/17	25.60	9.87
						03/08/18	23.65	11.82
						06/28/18	23.30	12.17
						09/19/18	INACCESSIBLE	
						12/13/18	21.62	13.85
						06/13/19	--	--
						10/09/19	20.73	14.74
						12/04/19	20.18	15.29
						06/25/20	23.75	11.72
12/09/20	24.39	11.08						
06/22/21	23.10	12.37						
12/14/21	21.94	13.53						
MW23	35.43	36	56	-1	-21	05/05/15	25.08	10.35
						08/03/15	24.72	10.71
						12/07/15	25.34	10.09
						03/07/16	24.77	10.66
						07/12/16	24.54	10.89
						10/18/16	22.98	12.45
						01/24/17	21.06	14.37
						05/31/17	22.41	13.02
						09/21/17	25.11	10.32
						12/14/17	24.65	10.78
						03/08/18	22.69	12.74
						06/28/18	21.03	14.40
						09/19/18	21.50	13.93
						12/13/18	21.22	14.21
						06/13/19	20.80	14.63
						10/09/19	22.03	13.40
						12/04/19	21.22	14.21
						06/25/20	23.75	11.68
12/09/20	24.40	11.03						
06/22/21	23.07	12.36						
12/14/21	21.89	13.54						



**Table 1**  
**Summary of Groundwater Elevations**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Well	TOC Elevation <sup>(1)</sup> (feet)	Depth to Top of Well Screen (feet approximate)	Depth to Bottom of Well Screen (feet approximate)	Top of Well Screen Elevation (feet NAVD88 approximate)	Bottom of Well Screen Elevation (feet NAVD88 approximate)	Date	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet NAVD88)
MW24	34.88	35	55	0	-20	05/05/15	24.47	10.41
						08/03/15	24.06	10.82
						12/07/15	24.72	10.16
						03/07/16	24.12	10.76
						07/12/16	23.76	11.12
						10/18/16	22.19	12.69
						01/24/17	19.95	14.93
						05/31/17	23.29	11.59
						09/21/17	INACCESSIBLE	
						12/14/17	24.22	10.66
						03/08/18	22.10	12.78
						06/28/18	21.98	12.90
						09/19/18	20.81	14.07
						12/13/18	20.65	14.23
						06/13/19	20.18	14.70
						10/09/19	21.65	13.23
						12/04/19	21.40	13.48
						06/25/20	23.27	11.61
12/09/20	23.91	10.97						
06/22/21	22.52	12.36						
12/14/21	21.37	13.51						
MW25	41.38	35.5	55.5	6	-14	05/05/15	30.85	10.53
						08/03/15	30.60	10.78
						12/07/15	31.30	10.08
						03/07/16	30.71	10.67
						07/12/16	30.44	10.94
						10/18/16	28.95	12.43
						01/24/17	27.07	14.31
						05/31/17	28.24	13.14
						09/21/17	31.09	10.29
						12/14/17	30.52	10.86
						03/08/18	28.54	12.84
						06/28/18	27.69	13.69
						09/19/18	27.32	14.06
						12/13/18	27.12	14.26
						06/13/19	26.64	14.74
						10/09/19	27.79	13.59
						12/04/19	26.63	14.75
						06/25/20	29.70	11.68
12/09/20	30.33	11.05						
06/22/21	28.97	12.41						
12/14/21	27.78	13.60						



**Table 1**  
**Summary of Groundwater Elevations**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Well	TOC Elevation <sup>(1)</sup> (feet)	Depth to Top of Well Screen (feet approximate)	Depth to Bottom of Well Screen (feet approximate)	Top of Well Screen Elevation (feet NAVD88 approximate)	Bottom of Well Screen Elevation (feet NAVD88 approximate)	Date	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet NAVD88)
IW91	35.82	20	55	16	-19	05/05/15	25.56	10.26
						08/03/15	25.19	10.63
						12/07/15	25.84	9.98
						03/07/16	25.24	10.58
						07/12/16	24.90	10.92
						10/18/16	23.41	12.41
						01/24/17	21.61	14.21
						05/31/17	22.79	13.03
						09/21/17	25.42	10.40
						12/14/17	24.96	10.86
						03/08/18	23.08	12.74
						06/28/18	22.30	13.52
						09/19/18	21.95	13.87
						12/13/18	21.69	14.13
						06/13/19	21.23	14.59
						10/09/19	23.90	11.92
						12/04/19	21.11	14.71
06/25/20	23.98	11.84						
12/09/20	24.63	11.19						
06/22/21	23.45	12.37						
12/14/21	22.31	13.51						
<b>Boren Avenue North</b>								
MW04	70.69	50	65	21	6	05/27/11	52.22	18.47
						10/20/11	52.82	17.87
						12/10/12	52.88	17.81
						08/29/13	57.25	13.44
						05/05/15	58.22	12.60
						08/03/15	56.87	13.95
						12/07/15	58.82	12.00
						03/07/16	59.25	11.57
						07/12/16	58.49	12.33
						10/18/16	57.02	13.80
	01/24/17					54.06	16.76	
	05/31/17					55.59	15.23	
	09/21/17					62.08	8.74	
	12/14/17					62.03	8.79	
	03/08/18					57.70	13.12	
	06/28/18					54.94	15.88	
	09/19/18					54.38	16.44	
	12/13/18					54.26	16.56	
	06/13/19					53.61	17.21	
	10/09/19					55.40	15.42	
12/04/19	54.04	16.78						
06/25/20	62.05	8.77						
12/09/20	62.18	8.64						
06/22/21	60.06	10.76						
12/14/21	55.94	14.88						
	70.82							





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**Seattle, Washington**

Well	TOC Elevation <sup>(1)</sup> (feet)	Depth to Top of Well Screen (feet approximate)	Depth to Bottom of Well Screen (feet approximate)	Top of Well Screen Elevation (feet NAVD88 approximate)	Bottom of Well Screen Elevation (feet NAVD88 approximate)	Date	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet NAVD88)
MW05	84.04	65	80	19	4	05/27/11	67.40	16.64
						10/20/11	67.91	16.13
						12/10/12	68.54	15.50
						08/29/13	69.72	14.32
						05/05/15	INACCESSIBLE	
						08/03/15	INACCESSIBLE	
DECOMMISSIONED 2015								
MW07	74.55	55	70	20	5	05/31/11	56.33	18.22
						10/20/11	56.87	17.68
						12/10/12	56.96	17.59
						08/29/13	60.95	13.60
						05/05/15	62.69	11.99
						08/03/15	61.67	13.01
						12/07/15	63.19	11.49
						03/07/16	63.22	11.46
						07/12/16	62.82	11.86
						10/18/16	61.26	13.42
	74.68					01/24/17	58.41	16.27
						05/31/17	59.90	14.78
						09/21/17	65.17	9.51
						12/14/17	INACCESSIBLE	
						03/08/18	61.76	12.92
						06/28/18	59.45	15.23
						09/19/18	59.07	15.61
						12/13/18	58.87	15.81
						06/13/19	57.93	16.75
						10/09/19	61.02	13.66
12/04/19	58.38	16.30						
06/30/20	64.92	9.76						
12/09/20	65.28	9.40						
06/22/21	63.21	11.47						
12/14/21	60.22	14.46						



**Table 1**  
**Summary of Groundwater Elevations**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Well	TOC Elevation <sup>(1)</sup> (feet)	Depth to Top of Well Screen (feet approximate)	Depth to Bottom of Well Screen (feet approximate)	Top of Well Screen Elevation (feet NAVD88 approximate)	Bottom of Well Screen Elevation (feet NAVD88 approximate)	Date	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet NAVD88)
MW13	90.66	70	85	21	-15	10/20/11	74.69	15.97
						12/10/12	75.38	15.28
						08/29/13	76.23	14.43
	05/05/15					INACCESSIBLE		
	08/03/15					80.07	10.79	
	12/07/15					80.73	10.13	
	03/07/16					80.07	10.79	
	07/12/16					80.03	10.83	
	10/18/16					78.16	12.70	
	01/24/17					75.56	15.30	
	05/31/17					77.40	13.46	
	09/21/17					80.46	10.40	
	12/14/17					80.19	10.67	
	03/08/18					78.13	12.73	
	06/28/18					77.01	13.85	
	09/19/18					76.68	14.18	
	12/13/18					76.52	14.34	
	06/13/19					76.00	14.86	
	10/09/19					81.45	9.41	
	12/04/19					76.00	14.86	
06/25/20	79.24	11.62						
12/09/20	79.98	10.88						
06/22/21	78.58	12.28						
12/14/21	77.21	13.65						
MW27	83.82	90	105	-6	-21	12/07/15	73.86	9.96
						03/07/16	73.23	10.59
						07/12/16	73.01	10.81
						10/18/16	71.38	12.44
						01/24/17	69.57	14.25
						05/31/17	70.89	12.93
						09/21/17	73.87	9.95
						12/14/17	73.25	10.57
						03/08/18	71.10	12.72
						06/28/18	70.20	13.62
						09/19/18	69.85	13.97
						12/13/18	69.69	14.13
						06/13/19	69.19	14.63
						10/09/19	70.30	13.52
						12/04/19	69.11	14.71
06/30/20	72.38	11.44						
12/09/20	73.10	10.72						
06/22/21	71.61	12.21						
12/14/21	70.32	13.50						
MW31	60.75	40	60	21	1	10/09/19	46.49	14.26
						12/04/19	44.16	16.59
						06/30/20	55.35	5.40
						12/09/20	55.66	5.09
						06/22/21	49.39	11.36
						12/14/21	45.72	15.03



**Table 1**  
**Summary of Groundwater Elevations**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Well	TOC Elevation <sup>(1)</sup> (feet)	Depth to Top of Well Screen (feet approximate)	Depth to Bottom of Well Screen (feet approximate)	Top of Well Screen Elevation (feet NAVD88 approximate)	Bottom of Well Screen Elevation (feet NAVD88 approximate)	Date	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet NAVD88)
<b>Terry Avenue North</b>								
MW15	58.79	41	56	18	3	12/10/12	40.78	18.01
	58.89					08/29/13	45.37	13.42
						05/05/15	45.86	13.03
						08/03/15	44.81	14.08
						12/07/15	47.08	11.81
						03/07/16	47.58	11.31
						07/12/16	46.73	12.16
						10/18/16	44.97	13.92
						01/24/17	42.05	16.84
						05/31/17	43.08	15.81
						09/21/17	49.62	9.27
						12/14/17	49.92	8.97
						03/08/18	45.80	13.09
						06/28/18	42.95	15.94
						09/19/18	42.35	16.54
						12/13/18	42.26	16.63
						06/13/19	41.65	17.24
						10/09/19	41.80	17.09
						12/04/19	42.00	16.89
06/25/20	51.75	7.14						
12/09/20	52.94	5.95						
06/22/21	NM	NM						
WELL DAMAGED 2021								
MW34	TBD	40	55	TBD	TBD	12/14/21	NM	NM
<b>Thomas Street</b>								
MW14	104.4	90	105	14	-1	10/20/11	88.81	15.59
						12/13/12	88.66	15.74
						08/29/13	89.99	14.41
DECOMMISSIONED 2013								
MW16	99.02	91	106	8	-7	12/10/12	83.47	15.55
	99.18					08/29/13	84.59	14.43
						05/05/15	88.87	10.31
						08/03/15	88.53	10.65
						12/07/15	89.15	10.03
						03/07/16	88.54	10.64
						07/12/16	88.41	10.77
						10/18/16	86.74	12.44
						01/24/17	84.71	14.47
						05/31/17	86.04	13.14
						09/21/17	88.85	10.33
						12/14/17	88.43	10.75
03/08/18	86.51	12.67						
WELL DAMAGED 2018								
MW28	99.18	90	105	9.18	-5.82	06/13/19	84.54	14.64
						10/08/19	84.75	14.43
						12/04/19	84.48	14.70
						06/25/20	87.38	11.80
						12/09/20	88.1	11.08
						05/21/21	87.23	11.95
						06/22/21	86.77	12.41
						08/17/21	86.65	12.53
						09/21/21	86.56	12.62
12/14/21	85.49	13.69						



**Table 1**  
**Summary of Groundwater Elevations**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Well	TOC Elevation <sup>(1)</sup> (feet)	Depth to Top of Well Screen (feet approximate)	Depth to Bottom of Well Screen (feet approximate)	Top of Well Screen Elevation (feet NAVD88 approximate)	Bottom of Well Screen Elevation (feet NAVD88 approximate)	Date	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet NAVD88)
<b>Fairview Avenue North</b>								
MW-C	107.75	85	100	23	8	08/29/13	93.32	14.43
						05/05/15	97.64	10.11
<b>Harrison Street</b>								
MW01	68.68	45	60	24	9	05/25/11	50.59	18.09
						10/20/11	51.03	17.65
						12/10/12	51.24	17.44
						08/29/13	54.35	14.33
	68.82					05/05/15	58.11	10.71
						08/03/15	INACCESSIBLE	
	68.65					12/07/15	58.60	10.22
						03/07/16	57.69	11.13
						07/12/16	57.42	11.23
						10/18/16	55.65	13.00
						01/24/17	52.27	16.38
						05/31/17	54.69	13.96
						09/21/17	58.91	9.74
						12/14/17	58.14	10.51
						03/08/18	55.84	12.81
						06/28/18	54.20	14.45
						09/19/18	53.93	14.72
						12/13/18	53.05	15.60
						06/13/19	52.34	16.31
						10/09/19	56.65	12.00
12/04/19	52.76	15.89						
06/25/20	57.08	11.57						
12/09/20	57.84	10.81						
06/22/21	56.32	12.33						
12/14/21	54.79	13.86						
MW02	70.92	55	70	16	1	05/25/11	54.84	16.08
						10/20/11	55.08	15.84
						12/10/12	55.27	15.65
						08/29/13	56.48	14.44
						05/05/15	INACCESSIBLE	
						08/03/15	INACCESSIBLE	
DECOMMISSIONED 2015								



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**Summary of Groundwater Elevations**  
**Troy Laundry Seattle Site**  
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**Seattle, Washington**

Well	TOC Elevation <sup>(1)</sup> (feet)	Depth to Top of Well Screen (feet approximate)	Depth to Bottom of Well Screen (feet approximate)	Top of Well Screen Elevation (feet NAVD88 approximate)	Bottom of Well Screen Elevation (feet NAVD88 approximate)	Date	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet NAVD88)
MW03	84.65	65	80	20	5	05/27/11	68.75	15.90
						10/20/11	68.97	15.68
						12/10/12	69.21	15.44
						08/29/13	70.21	14.44
						05/05/15	INACCESSIBLE	
						08/03/15	INACCESSIBLE	
DECOMMISSIONED 2015								
MW26	70.57	75	90	-4	-19	12/07/15	60.42	10.15
						03/07/16	59.82	10.75
						07/12/16	59.52	11.05
						10/18/16	58.10	12.47
						01/24/17	56.10	14.47
						05/31/17	57.79	12.78
						09/21/17	60.94	9.63
						12/14/17	60.11	10.46
						03/08/18	57.79	12.78
						06/28/18	56.83	13.74
						09/19/18	56.50	14.07
						12/13/18	56.34	14.23
						06/13/19	55.82	14.75
						10/09/19	57.28	13.29
						12/04/19	55.80	14.77
						06/25/20	59.19	11.38
12/09/20	59.85	10.72						
06/22/21	58.25	12.32						
12/14/21	56.99	13.58						
MW32	78.38	60	75	18	3	10/09/19	65.80	12.58
						12/04/19	62.63	15.75
						06/25/20	66.88	11.50
						12/09/20	67.40	10.98
						06/22/21	66.19	12.19
						12/14/21	64.93	13.45
MW33	56.62	31	51	26	6	10/09/19	40.30	16.32
						12/04/19	39.93	16.69
						06/30/20	50.69	5.93
						12/09/20	WELL DRY	
						06/22/21	46.00	10.62
						12/14/21	41.70	14.92
SMW01	49.45	30	40	19	9	08/29/13	36.78	12.67
SMW02	49.26	30	40	19	9	08/29/13	36.67	12.59
SMW06	48.63	30	40	19	9	08/29/13	36.39	12.24
SMW08	49.30	30	40	19	9	08/29/13	36.69	12.61



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**Summary of Groundwater Elevations**  
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**Seattle, Washington**

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<b>Westlake Avenue North</b>								
SMW09	48.25	30	40	18	8	08/29/13	35.84	12.41
<b>South-Adjoining Property</b>								
MW29	101.72	82	102	20	0	10/09/19	86.91	14.81
						12/04/19	87.03	14.69
						06/25/20	89.84	11.88
						12/09/20	90.57	11.15
						06/22/21	89.29	12.43
MW30	101.97	84	104	18	-2	10/09/19	87.95	14.02
						12/04/19	87.25	14.72
						06/25/20	90.12	11.85
						12/09/20	91.10	10.87
						06/22/21	89.62	12.35
ONNI-MW-4	108.84	93	105	16	4	06/25/20	97.13	11.71
						12/09/20	97.83	11.01
						06/22/21	96.63	12.21
						12/14/21	95.43	13.41
ONNI-MW-5	112.78	93	105	20	8	02/06/20	93.10	19.68
						06/25/20	95.65	17.13
						12/09/20	96.30	16.48
						06/22/21	95.14	17.64
						12/14/21	94.04	18.74
ONNI-MW-9	107.10	95	110	12	-3	12/14/21	93.60	13.50
<b>North-Adjoining Property</b>								
SLU-MW01 <sup>(2)</sup>	53.43	35	45	18	8	08/29/13	40.00	13.43
DECOMMISSIONED 2013								
SLU-MW02 <sup>(2)</sup>	52.76	30	40	23	13	08/29/13	WELL DRY	--
DECOMMISSIONED 2013								

**NOTES:**

<sup>(1)</sup>TOC elevations surveyed relative to NAVD88.

<sup>(2)</sup>Groundwater elevation data compiled from reports on file at the Washington State Department of Ecology.

-- = not analyzed, measured, or calculated

NAVD88 = North American Vertical Datum of 1988

TBD = to be determined

TOC = top of casing



**Table 2**  
**Groundwater Analytical Results for CVOCs**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Sample Location	Sample Identification	Sample Date	Sampled By	PCE <sup>(1)</sup> (µg/L)	TCE <sup>(1)</sup> (µg/L)	cis-1-2-DCE <sup>(1)</sup> (µg/L)	trans-1-2-DCE <sup>(1)</sup> (µg/L)	Vinyl Chloride <sup>(1)</sup> (µg/L)
<b>Troy Laundry Property</b>								
MW06	MW06-20110531	05/31/11	SoundEarth	3.1	<b>8.2</b>	<b>150<sup>ve</sup></b>	<1	<b>0.76</b>
	MW06-20111012	10/12/11	SoundEarth	3.6	<b>11</b>	<b>120</b>	<1	<b>0.76</b>
	MW06-20130909	09/09/13	SoundEarth	3.8	4.5	<b>150</b>	<1	<b>0.93</b>
DECOMMISSIONED 2013								
MW08	MW08-20111013	10/13/11	SoundEarth	<1	<1	<1	<1	<0.2
	MW08-20130910	09/10/13	SoundEarth	<1	<1	<1	<1	<0.2
DECOMMISSIONED 2013								
MW09	MW09-20111013	10/13/11	SoundEarth	<1	<b>16</b>	<b>22</b>	<1	<0.2
	MW09-20130910	09/10/13	SoundEarth	1.6	<b>15</b>	2.0	<1	<0.2
DECOMMISSIONED 2013								
MW10	MW10-20111012	10/12/11	SoundEarth	<1	<1	<1	<1	<0.2
	MW10-20130909	09/09/13	SoundEarth	<1	<1	<1	<1	<0.2
DECOMMISSIONED 2013								
MW11	MW11-20111013	10/13/11	SoundEarth	<b>21</b>	2.6	5.6	<1	<0.2
	MW11-20130909	09/09/13	SoundEarth	<b>39</b>	3.8	3.6	<1	<0.2
DECOMMISSIONED 2013								
MW12	MW12-20111017	10/17/11	SoundEarth	<1	<b>19</b>	1.3	<1	<0.2
	MW12-20130909	09/09/13	SoundEarth	<1	<b>20</b>	<1	<1	<0.2
DECOMMISSIONED 2013								
MW17	MW17-20150506	05/06/15	SoundEarth	<1	2.2	<1	<1	<0.2
	MW17-20150804	08/07/15	SoundEarth	<1	1.5	<1	<1	<0.2
	MW17-20151207	12/07/15	SoundEarth	<1	1.5	<1	<1	<0.2
	MW17-20160308	03/08/16	SoundEarth	<1	<1	<1	<1	<0.2
	MW17-20160714	07/14/16	SoundEarth	<1	1.2	<1	<1	<0.2
	MW17-20161020	10/20/16	SoundEarth	<1	2.1	<1	<1	<0.2
	MW17-20170126	01/26/17	SoundEarth	<1	1.9	<1	<1	<0.2
	MW17-20170601	06/01/17	SoundEarth	<1	2.5	<1	<1	<0.2
	MW17-20170923	09/23/17	SoundEarth	<1	2.1	1.2	<1	<0.2
	MW17-20171216	12/16/17	SoundEarth	<1	2.5	1.7	<1	<0.2
	MW17-20180310	03/10/18	SoundEarth	<1	2.6	1.5	<1	<0.2
	MW17-20180630	06/30/18	SoundEarth	<1	2.8	2.2	<1	<0.2
	MW17-20180922	09/22/18	SoundEarth	<1	2.7	2.0	<1	<0.2
	MW17-20181215	12/15/18	SoundEarth	<1	2.9	2.2	<1	<0.2
	MW17-20190615	06/15/19	SoundEarth	<1	3.4	2.2	<1	<0.2
	MW17-20191207	12/07/19	SoundEarth	<1	3.9	2.2	<1	<0.2
	MW17-20200627	06/27/20	SoundEarth	<1	<1	<1	<1	<0.2
MW17-20201212	12/12/20	SoundEarth	<1	<1	<1	<1	<0.2	
MW17-20210625	06/25/21	SoundEarth	<1	1.7	<1	<1	<0.2	
MW17-20211217	12/17/21	SoundEarth	<1	1.5	<1	<1	<0.2	
MW18	MW18-20150506	05/06/15	SoundEarth	<1	<b>46</b>	5.2	<1	<0.2
	MW18-20150803	08/03/15	SoundEarth	<1	<b>51</b>	4.6	<1	<0.2
	MW18-20151208	12/08/15	SoundEarth	<1	<b>51</b>	9.9	<1	<0.2
	MW18-20160308	03/08/16	SoundEarth	<1	<b>44</b>	8.1	<1	<0.2
	MW18-20160714	07/14/16	SoundEarth	<1	3.3	1.7	<1	<0.2
	MW18-20161020	10/20/16	SoundEarth	<1	<b>6.5</b>	4.0	<1	<0.2
	MW18-20170126	01/26/17	SoundEarth	<1	<b>7.7</b>	14	<1	<b>0.25</b>
	MW18-20170601	06/01/17	SoundEarth	<1	3.3	14	<1	<b>0.31</b>
	MW18-20170923	09/23/17	SoundEarth	<1	<1	<b>22</b>	<1	<b>0.38</b>
	MW18-20171216	12/16/17	SoundEarth	<1	<1	<b>22</b>	<1	<b>0.24</b>
	MW18-20180310	03/10/18	SoundEarth	<1	<1	<b>27</b>	<1	<b>0.40</b>
	MW18-20180630	06/30/18	SoundEarth	<1	<1	<b>27</b>	<1	<b>0.43</b>
	MW18-20180922	09/22/18	SoundEarth	<1	<1	<b>21</b>	<1	<b>0.42</b>
	MW18-20181215	12/15/18	SoundEarth	<1	<1	<b>24</b>	<1	<b>0.49</b>
	MW18-20190615	06/15/19	SoundEarth	<1	<1	<b>28</b>	<1	<b>0.44</b>
	MW18-20191207	12/07/19	SoundEarth	<1	<1	<b>28</b>	<1	<b>0.55</b>
	MW18-20200627	06/27/20	SoundEarth	<1	<1	<b>27</b>	<1	<b>1.5</b>
MW18-20201212	12/12/20	SoundEarth	<1	<1	15	<1	<b>2.4</b>	
MW18-20210625	06/25/21	SoundEarth	<1	<1	1.9	<1	<b>1.7</b>	
MW18-20211217	12/17/21	SoundEarth	<1	<0.5	<1	<1	<b>1.8</b>	
<b>MTCA Cleanup Level</b>				<b>5<sup>(2)</sup></b>	<b>5<sup>(2)</sup></b>	<b>16<sup>(3)</sup></b>	<b>160<sup>(3)</sup></b>	<b>0.2<sup>(2)</sup></b>

**Table 2**  
**Groundwater Analytical Results for CVOCs**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Sample Location	Sample Identification	Sample Date	Sampled By	PCE <sup>(1)</sup> (µg/L)	TCE <sup>(1)</sup> (µg/L)	cis-1-2-DCE <sup>(1)</sup> (µg/L)	trans-1-2-DCE <sup>(1)</sup> (µg/L)	Vinyl Chloride <sup>(1)</sup> (µg/L)
MW19	MW19-20150507	05/07/15	SoundEarth	<1	69	15	<1	<0.2
	MW19-20150803	08/03/15	SoundEarth	<1	61	20	<1	<0.2
	MW19-20151207	12/07/15	SoundEarth	<1	65	23	<1	<0.2
	MW19-20160308	03/08/16	SoundEarth	<1	52	26	<1	<0.2
	MW19-20160713	07/13/16	SoundEarth	<1	4.6	10	<1	<0.2
	MW19-20161021	10/21/16	SoundEarth	<1	10	4.4	<1	0.40
	MW19-20170125	01/25/17	SoundEarth	<1	5.5	3.9	<1	0.30
	MW19-20170601	06/01/17	SoundEarth	<1	5.7	3.5	<1	0.44
	MW19-20170923	09/23/17	SoundEarth	<1	1.7	3.4	<1	0.97
	MW19-20171216	12/16/17	SoundEarth	<1	1.1	13	<1	0.97
	MW19-20180310	03/10/18	SoundEarth	<1	<1	12	<1	0.78
	MW19-20180630	06/30/18	SoundEarth	<1	<1	12	<1	0.96
	MW19-20180922	09/22/18	SoundEarth	<1	<1	16	<1	0.86
	MW19-20190615	06/15/19	SoundEarth	<1	<1	27	<1	0.79
	MW19-20191207	12/07/19	SoundEarth	<1	<1	35	<1	0.98
	MW19-20200627	06/27/20	SoundEarth	<1	<1	41	<1	0.78
	MW19-20201212	12/12/20	SoundEarth	<1	<1	22	<1	2.6
MW19-20210625	06/25/21	SoundEarth	<1	<1	<1	<1	1.0	
MW19-20211217	12/17/21	SoundEarth	<1	<0.5	<1	<1	1.5	
MW20	MW20-20150506	05/06/15	SoundEarth	<1	<1	1.5	<1	<0.2
	MW20-20150803	08/03/15	SoundEarth	<1	<1	1.2	<1	<0.2
	MW20-20151207	12/07/15	SoundEarth	<1	<1	<1	<1	<0.2
	MW20-20160309	03/09/16	SoundEarth	<1	<1	<1	<1	<0.2
	MW20-20160715	07/15/16	SoundEarth	<1	<1	<1	<1	<0.2
	MW20-20161020	10/20/16	SoundEarth	<1	<1	<1	<1	<0.2
	MW20-20170125	01/25/17	SoundEarth	<1	<1	4.1	<1	<0.2
	MW20-20170601	06/01/17	SoundEarth	<1	<1	1.2	<1	<0.2
	MW20-20170924	09/24/17	SoundEarth	<1	<1	9.5	<1	<0.2
	MW20-20171216	12/16/17	SoundEarth	<1	1.3	15	<1	0.35
	MW20-20180310	03/10/18	SoundEarth	<1	<1	11	<1	<0.2
	MW20-20180630	06/30/18	SoundEarth	<1	<1	7	<1	<0.2
	MW20-20180922	09/22/18	SoundEarth	<1	<1	5.3	<1	<0.2
	MW20-20181215	12/15/18	SoundEarth	<1	<1	4.4	<1	<0.2
	MW20-20190615	06/15/19	SoundEarth	<1	<1	3.8	<1	<0.2
	MW20-20191207	12/07/19	SoundEarth	<1	<1	3.0	<1	<0.2
	MW20-20200627	06/27/20	SoundEarth	<1	1.2	6.1	<1	<0.2
MW20-20201212	12/12/20	SoundEarth	<1	1.3	6.0	<1	<0.2	
MW20-20210625	06/25/21	SoundEarth	<1	1.6	5.3	<1	<0.2	
MW20-20211217	12/17/21	SoundEarth	<1	0.94	5.2	<1	<0.2	
MW21	MW21-20150506	05/06/15	SoundEarth	5.1	1.6	7.2	<1	<0.2
	MW21-20150804	08/04/15	SoundEarth	4.9	1.4	4.5	<1	<0.2
	MW21-20151208	12/08/15	SoundEarth	7.3	2.0	6.7	<1	<0.2
	MW21-20160309	03/09/16	SoundEarth	5.3	1.4	7.9	<1	<0.2
	MW21-20160713	07/13/16	SoundEarth	<1	<1	1.2	<1	<0.2
	MW21-20161020	10/20/16	SoundEarth	<1	<1	1.7	<1	<0.2
	MW21-20170126	01/26/17	SoundEarth	<1	<1	2.4	<1	<0.2
	MW21-20170601	06/01/17	SoundEarth	<1	<1	2.4	<1	<0.2
	MW21-20170923	09/23/17	SoundEarth	<1	<1	3.7	<1	<0.2
	MW21-20171216	12/16/17	SoundEarth	<1	<1	14	<1	0.49
	MW21-20180310	03/10/18	SoundEarth	<1	<1	14	<1	0.43
	MW21-20180630	06/30/18	SoundEarth	<1	<1	6.0	<1	0.29
	MW21-20180922	09/22/18	SoundEarth	<1	<1	6.9	<1	0.30
	MW21-20181215	12/15/18	SoundEarth	<1	<1	16	<1	0.96
	MW21-20190615	06/15/19	SoundEarth	<1	<1	29	<1	1.1
	MW21-20191207	12/07/19	SoundEarth	<1	<1	34	<1	1.3
	MW21-20200627	06/27/20	SoundEarth	<1	<1	13	<1	0.49
MW21-20201212	12/12/20	SoundEarth	<1	<1	10	<1	1.8	
MW21-20210625	06/25/21	SoundEarth	<1	<1	11	<1	0.86	
MW21-20211217	12/17/21	SoundEarth	<1	<0.5	12	<1	1.3	
<b>MTCA Cleanup Level</b>				<b>5<sup>(2)</sup></b>	<b>5<sup>(2)</sup></b>	<b>16<sup>(3)</sup></b>	<b>160<sup>(3)</sup></b>	<b>0.2<sup>(2)</sup></b>



**Table 2**  
**Groundwater Analytical Results for CVOCs**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Sample Location	Sample Identification	Sample Date	Sampled By	PCE <sup>(1)</sup> (µg/L)	TCE <sup>(1)</sup> (µg/L)	cis-1-2-DCE <sup>(1)</sup> (µg/L)	trans-1-2-DCE <sup>(1)</sup> (µg/L)	Vinyl Chloride <sup>(1)</sup> (µg/L)
MW22	MW22-20150506	05/06/15	SoundEarth	11	2.2	27	<1	<0.2
	MW22-20150804	08/04/15	SoundEarth	17	3.0	34	<1	<0.2
	MW22-20151208	12/08/15	SoundEarth	19	3.7	42	<1	<0.2
	MW22-20160308	03/08/16	SoundEarth	28	4.5	52	<1	0.35
	MW22-20160713	07/13/16	SoundEarth	<1	<1	5.5	<1	<0.2
	MW22-20161020	10/20/16	SoundEarth	<1	<1	6.7	<1	0.65
	MW22-20170126	01/26/17	SoundEarth	<1	<1	8.5	<1	0.51
	MW22-20170601	06/01/17	SoundEarth	<1	<1	10	<1	1.5
	MW22-20170923	09/23/17	SoundEarth	<1	<1	18	<1	1.4
	MW22-20171216	12/16/17	SoundEarth	<1	<1	22	<1	1.2
	MW22-20180310	03/10/18	SoundEarth	<1	<1	22	<1	1.3
	MW22-20180630	06/30/18	SoundEarth	<1	<1	28	<1	1.2
	MW22-20180922	09/22/18	SoundEarth	<1	<1	33	<1	0.90
	MW22-20181215	12/15/18	SoundEarth	<1	<1	37	<1	1.2
	MW22-20190615	06/15/19	SoundEarth	1.1	1.1	49	<1	1.0
	MW22-20191207	12/07/19	SoundEarth	1.3	1.3	48	<1	1.0
	MW22-20200627	06/27/20	SoundEarth	1.4	1.3	42	<1	0.99
	MW22-20201212	12/12/20	SoundEarth	<1	<1	44	<1	1.1
MW22-20210625	06/25/21	SoundEarth	1.1	<1	43	<1	0.82	
MW22-20211217	12/17/21	SoundEarth	<1	0.51	52	<1	1.2	
MW23	MW23-20150507	05/07/15	SoundEarth	6.1	18	13	<1	<0.2
	MW23-20150804	08/04/15	SoundEarth	6.1	24	20	<1	0.20
	MW23-20151208	12/08/15	SoundEarth	3.8	16	120	<1	0.57
	MW23-20160308	03/08/16	SoundEarth	4.1	14	95	<1	0.64
	MW23-20160714	07/14/16	SoundEarth	<1	1.6	14	<1	2.2
	MW23-20161020	10/20/16	SoundEarth	<1	2.1	9.9	<1	0.48
	MW23-20170126	01/26/17	SoundEarth	<1	2.9	41	<1	1.4
	MW23-20170601	06/01/17	SoundEarth	<1	2.7	23	<1	0.74
	MW23-20170923	09/23/17	SoundEarth	<1	1.7	16	<1	0.50
	MW23-20171216	12/16/17	SoundEarth	<1	1.3	14	<1	0.51
	MW23-20180310	03/10/18	SoundEarth	<1	<1	20	<1	0.52
	MW23-20180630	06/30/18	SoundEarth	<1	<1	14	<1	0.53
	MW23-20180922	09/22/18	SoundEarth	<1	<1	16	<1	0.53
	MW23-20181215	12/15/18	SoundEarth	<1	<1	17	<1	<0.2
	MW23-20190615	06/15/19	SoundEarth	<1	<1	25	<1	0.72
	MW23-20191207	12/07/19	SoundEarth	<1	<1	38	<1	0.89
	MW23-20200627	06/27/20	SoundEarth	<1	<1	30	<1	0.76
	MW23-20201212	12/12/20	SoundEarth	<1	<1	30	<1	0.85
MW23-20210625	06/25/21	SoundEarth	<1	<1	26	<1	0.97	
MW23-20211217	12/17/21	SoundEarth	<1	<0.5	15	<1	3.7	
MW24	MW24-20150506	05/06/15	SoundEarth	2.5	31	72	<1	0.26
	MW24-20150804	08/04/15	SoundEarth	5.5	28	75	<1	<0.2
	MW24-20151208	12/08/15	SoundEarth	11	28	54	<1	<0.2
	MW24-20160309	03/09/16	SoundEarth	11	23	45	<1	<0.2
	MW24-20160715	07/15/16	SoundEarth	<1	1.7	12	<1	<0.2
	MW98-20160715 (DUP)		<1	1.8	12	<1	<0.2	
	MW24-20161020	10/20/16	SoundEarth	<1	2.7	12	<1	0.26
	MW24-20170125	01/25/17	SoundEarth	<1	3.5	20	<1	0.81
	MW24-20170601	06/01/17	SoundEarth	1.1	4.8	35	<1	1.0
	MW24-20170924	09/24/17	SoundEarth	<1	1.8	33	<1	0.36
	MW24-20171216	12/16/17	SoundEarth	<1	1.3	30	<1	0.38
	MW24-20180310	03/10/18	SoundEarth	<1	<1	25	<1	0.36
	MW24-20180630	06/30/18	SoundEarth	1.5	1.9	41	<1	2.1
	MW24-20180922	09/22/18	SoundEarth	<1	<1	35	<1	0.37
	MW24-20181215	12/15/18	SoundEarth	<1	<1	43	<1	0.51
	MW24-20190615	06/15/19	SoundEarth	<1	<1	84	<1	1.0
	MW24-20191207	12/07/19	SoundEarth	<1	<1	83	<1	0.94
	MW24-20200627	06/27/20	SoundEarth	<1	<1	61	<1	0.76
MW24-20201212	12/12/20	SoundEarth	<1	<1	45	<1	0.61	
MW24-20210625	06/25/21	SoundEarth	<1	<1	37	<1	0.67	
MW24-20211217	12/17/21	SoundEarth	<1	<0.5	46	<1	0.71	
<b>MTCA Cleanup Level</b>				<b>5<sup>(2)</sup></b>	<b>5<sup>(2)</sup></b>	<b>16<sup>(3)</sup></b>	<b>160<sup>(3)</sup></b>	<b>0.2<sup>(2)</sup></b>

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**Groundwater Analytical Results for CVOCs**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Sample Location	Sample Identification	Sample Date	Sampled By	PCE <sup>(1)</sup> (µg/L)	TCE <sup>(1)</sup> (µg/L)	cis-1-2-DCE <sup>(1)</sup> (µg/L)	trans-1-2-DCE <sup>(1)</sup> (µg/L)	Vinyl Chloride <sup>(1)</sup> (µg/L)
MW25	MW25-20150507	05/07/15	SoundEarth	<1	68	5.2	<1	<0.2
	MW99-20150507 (DUP)			<1	69	5.3	<1	<0.2
	MW25-20150805	08/05/15	SoundEarth	3.0	75	7.9	<1	<0.2
	MW99-20150805 (DUP)			2.9	73	7.8	<1	<0.2
	MW25-20151209	12/09/15	SoundEarth	11	71	8.4	<1	<0.2
	MW99-20151209 (DUP)			11	72	8.3	<1	<0.2
	MW25-20160308	03/08/16	SoundEarth	24	50	12	<1	<0.2
	MW99-20160308(DUP)			25	50	12	<1	<0.2
	MW25-20160713	07/13/16	SoundEarth	6.1	4.8	23	<1	0.70
	MW25-20161019	10/19/16	SoundEarth	1.8	5.1	15	<1	0.96
	MW99-20161019 (DUP)			1.7	5.0	16	<1	1.0
	MW25-20170125	01/25/17	SoundEarth	1.0	3.6	44	<1	0.89
	MW99-20170125 (DUP)			1.1	3.7	44	<1	0.92
	MW25-20170601	06/01/17	SoundEarth	<1	1.2	15	<1	0.31
	MW99-20170601 (DUP)			<1	1.3	15	<1	0.41
	MW25-20170923	09/23/17	SoundEarth	<1	<1	15	<1	0.40
	MW99-20170923 (DUP)			<1	<1	15	<1	0.34
	MW25-20171216	12/16/17	SoundEarth	<1	<1	23	<1	0.41
	MW99-20171216 (DUP)			<1	<1	23	<1	0.40
	MW25-20180310	03/10/18	SoundEarth	<1	<1	25	<1	0.32
	MW99-20180310 (DUP)			<1	<1	25	<1	0.30
	MW25-20180630	06/30/18	SoundEarth	<1	<1	31	<1	0.52
	MW99-20180630 (DUP)			<1	<1	32	<1	0.49
	MW25-20180922	09/22/18	SoundEarth	<1	<1	37	<1	0.46
	MW99-20180922 (DUP)			<1	<1	36	<1	0.51
	MW25-20181215	12/15/18	SoundEarth	<1	<1	40	<1	0.60
	MW99-20181215 (DUP)			<1	<1	39	<1	0.57
	MW25-20190615	06/15/19	SoundEarth	<1	<1	45	<1	0.54
	MW99-20190615 (DUP)			<1	<1	43	<1	0.50
	MW25-20191207	12/07/19	SoundEarth	<1	<1	40	<1	0.63
	MW99-20191207 (DUP)			<1	<1	36	<1	0.58
	MW25-20200627	6/27/2020	SoundEarth	<1	<1	40	<1	0.73
MW99-20200627 (DUP)	<1			<1	37	<1	0.67	
MW25-20201212	12/12/20	SoundEarth	<1	<1	35	<1	0.43	
MW99-20201212 (DUP)			<1	<1	34	<1	0.43	
MW25-20210625	06/25/21	SoundEarth	<1	<1	48	<1	0.79	
MW99-20210625 (DUP)			<1	<1	47	<1	0.90	
MW25-20211217	12/17/21	SoundEarth	<1	0.52	13	<1	3.6	
MW99-20211217 (DUP)			<1	0.53	13	<1	3.7	
IW04	IW04-20150508	05/08/15	SoundEarth	<1	15	1.9	<1	<0.2
	IW04-20160309	03/09/16	SoundEarth	<1	2.5	11	<1	<0.2
	IW04-20160714	07/14/16	SoundEarth	<1	<1	<1	<1	<0.2
	IW04-20161021	10/21/16	SoundEarth	<1	<1	1.8	<1	<0.2
	IW04-20170126	01/26/17	SoundEarth	<1	1.1	4.8	<1	<0.2
	IW04-20170601	06/01/17	SoundEarth	<1	1.2	12	<1	0.21
	IW04-20170923	09/23/17	SoundEarth	<1	<1	14	<1	0.22
	IW04-20171216	12/16/17	SoundEarth	<1	<1	19	<1	0.54
	IW04-20180310	03/10/18	SoundEarth	<1	<1	9.0	<1	0.65
	IW04-20180630	06/30/18	SoundEarth	<1	<1	5.3	<1	0.68
	IW04-20180922	09/22/18	SoundEarth	<1	<1	<1	<1	<0.2
	IW04-20181215	12/15/18	SoundEarth	<1	<1	1.9	<1	1.6
	IW04-20190615	06/15/19	SoundEarth	<1	<1	1.7	<1	1.0
	IW04-20191207	12/07/19	SoundEarth	<1	<1	1.4	<1	1.1
	IW04-20200627	06/27/20	SoundEarth	<1	<1	1.1	<1	0.77
	IW04-20201212	12/12/20	SoundEarth	<1	<1	1.0	<1	0.64
IW04-20210625	06/25/21	SoundEarth	<1	<1	<1	<1	0.46	
IW04-20211217	12/17/21	SoundEarth	<1	<0.5	1.1	<1	0.34	
IW06	IW06-20150507	05/07/15	SoundEarth	6.3	13	<1	<1	<0.2
	IW06-20180310	03/10/18	SoundEarth	<1	<1	1.6	<1	<0.2
	IW06-20180630	06/30/18	SoundEarth	<1	<1	<1	<1	<0.2
	IW06-20181215	12/15/18	SoundEarth	1.0	<1	<1	<1	<0.2
	IW06-20190615	06/15/19	SoundEarth	1.7	<1	<1	<1	<0.2
	IW06-20191207	12/07/19	SoundEarth	1.4	<1	<1	<1	<0.2
	IW06-20200627	06/27/20	SoundEarth	<1	<1	5.2	<1	<0.2
	IW06-20201212	12/12/20	SoundEarth	<1	<1	3.3	<1	<0.2
IW06-20210625	06/25/21	SoundEarth	<1	<1	3.6	<1	0.59	
IW06-20211217	12/17/21	SoundEarth	<1	<0.5	<1	<1	<0.2	
<b>MTCA Cleanup Level</b>				<b>5<sup>(2)</sup></b>	<b>5<sup>(2)</sup></b>	<b>16<sup>(3)</sup></b>	<b>160<sup>(3)</sup></b>	<b>0.2<sup>(2)</sup></b>



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**Troy Laundry Seattle Site**  
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Sample Location	Sample Identification	Sample Date	Sampled By	PCE <sup>(1)</sup> (µg/L)	TCE <sup>(1)</sup> (µg/L)	cis-1-2-DCE <sup>(1)</sup> (µg/L)	trans-1-2-DCE <sup>(1)</sup> (µg/L)	Vinyl Chloride <sup>(1)</sup> (µg/L)
IW50	IW50-20150803	08/03/15	SoundEarth	4.1	8.1	44	<1	<0.2
	IW50-20151208	12/08/15	SoundEarth	<1	<1	140	<1	1.8
	IW50-20160309	03/09/16	SoundEarth	<1	<1	110	<1	1.9
	IW50-20160715	07/15/16	SoundEarth	3.7	<1	38	<1	2.5
	IW50-20161021	10/21/16	SoundEarth	3.7	<1	23	<1	1.0
	IW50-20170126	01/26/17	SoundEarth	13	2.1	34	<1	0.74
	IW50-20170602	06/02/17	SoundEarth	<1	<1	81	<1	0.95
	IW50-20170924	09/24/17	SoundEarth	<1	<1	26	<1	2.6
	IW50-20171216	12/16/17	SoundEarth	<1	<1	15	<1	2.2
	IW50-20180310	03/10/18	SoundEarth	<1	<1	8.0	<1	3.6
	IW50-20180630	06/30/18	SoundEarth	<1	<1	4.5	<1	2.5
	IW50-20180922	09/22/18	SoundEarth	<1	<1	5.1	<1	2.9
	IW50-20181215	12/15/18	SoundEarth	1.6	<1	15	<1	4.5
	IW50-20190615	06/15/19	SoundEarth	5.2	2.0	54	<1	7.1
	IW50-20191207	12/07/19	SoundEarth	4.5	1.6	55	<1	7.4
	IW50-20200627	06/27/20	SoundEarth	3.9	<1	2.7	<1	1.1
IW50-20201212	12/12/20	SoundEarth	<1	<1	<1	<1	<0.2	
IW50-20210625	06/25/21	SoundEarth	3.7	<1	1.7	<1	0.85	
IW50-20211217	12/17/21	SoundEarth	<1	<0.5	2.9	<1	0.80	
IW61	IW61-20151208	12/08/15	SoundEarth	10	2.8	120	<1	0.86
	IW61-20160309	03/09/16	SoundEarth	23	4.2	140	<1	1.7
	IW61-20160714	07/14/16	SoundEarth	8.3	1.6	24	<1	1.6
	IW61-20161021	10/21/16	SoundEarth	9.5	2.8	34	<1	0.96
	IW61-20170126	01/26/17	SoundEarth	8.3	2.9	32	<1	0.96
	IW61-20170602	06/02/17	SoundEarth	9.9	3.4	41	<1	1.3
	IW61-20170923	09/23/17	SoundEarth	12	3.2	45	<1	1.2
	IW61-20171216	12/16/17	SoundEarth	15	3.2	65	<1	1.2
	IW61-20180310	03/10/18	SoundEarth	15	2.7	71	<1	1.1
	IW61-20180323*	03/23/18	SoundEarth	15	2.9	82	<1	1.3
	IW61-20180630	06/30/18	SoundEarth	16	2.5	67	<1	1.7
	IW61-20180922	09/22/18	SoundEarth	13	2.1	63	<1	1.8
	IW61-20181215	12/15/18	SoundEarth	15	2.1	58	<1	2.0
	IW61-20190615	06/15/19	SoundEarth	13	2.4	71	<1	2.9
	IW61-20191207	12/07/19	SoundEarth	6.8	1.7	65	<1	4.0
	IW61-20200627	06/27/20	SoundEarth	5.3	1.1	63	<1	4.5
IW61-20201212	12/12/20	SoundEarth	<1	<1	30	<1	4.1 <sup>ca</sup>	
IW61-20210625	06/25/21	SoundEarth	<1	<1	25	<20	1.8	
IW61-20211217	12/17/21	SoundEarth	<1	<0.5	41	<1	3.8	
IW91	IW91-20150506	05/06/15	SoundEarth	<1	<1	<1	<1	<0.2
	IW91-20150804	08/04/15	SoundEarth	<1	<1	<1	<1	<0.2
	IW91-20151208	12/08/15	SoundEarth	<1	<1	<1	<1	<0.2
	IW91-20160309	03/09/16	SoundEarth	<1	<1	<1	<1	<0.2
	IW91-20160714	07/14/16	SoundEarth	<1	<1	<1	<1	<0.2
	IW91-20161020	10/20/16	SoundEarth	<1	<1	<1	<1	<0.2
	IW91-20170126	01/26/17	SoundEarth	<1	<1	<1	<1	<0.2
	IW91-20170601	06/01/17	SoundEarth	<1	<1	<1	<1	<0.2
	IW91-20170923	09/23/17	SoundEarth	<1	<1	<1	<1	<0.2
	IW91-20171216	12/16/17	SoundEarth	<1	<1	<1	<1	<0.2
	IW91-20180310	03/10/18	SoundEarth	<1	<1	<1	<1	<0.2
	IW91-20180630	06/30/18	SoundEarth	<1	<1	<1	<1	<0.2
	IW91-20180922	09/22/18	SoundEarth	<1	<1	<1	<1	<0.2
	IW91-20181215	12/15/18	SoundEarth	<1	<1	<1	<1	<0.2
	IW91-20190615	06/15/19	SoundEarth	<1	<1	<1	<1	<0.2
	IW91-20191207	12/07/19	SoundEarth	<1	<1	<1	<1	<0.2
IW91-20200627	06/27/20	SoundEarth	<1	<1	<1	<1	<0.2	
IW91-20201212	12/12/20	SoundEarth	<1	<1	<1	<1	<0.2	
IW91-20210625	06/25/21	SoundEarth	<1	<1	<1	<1	<0.2	
IW91-20211217	12/17/21	SoundEarth	<1	<0.5	<1	<2	<0.2	
<b>MTCA Cleanup Level</b>				<b>5<sup>(2)</sup></b>	<b>5<sup>(2)</sup></b>	<b>16<sup>(3)</sup></b>	<b>160<sup>(3)</sup></b>	<b>0.2<sup>(2)</sup></b>

**Table 2**  
**Groundwater Analytical Results for CVOCs**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Sample Location	Sample Identification	Sample Date	Sampled By	PCE <sup>(1)</sup> (µg/L)	TCE <sup>(1)</sup> (µg/L)	cis-1-2-DCE <sup>(1)</sup> (µg/L)	trans-1-2-DCE <sup>(1)</sup> (µg/L)	Vinyl Chloride <sup>(1)</sup> (µg/L)
<b>Boren Avenue North</b>								
MW04	MW04-20110527	05/27/11	SoundEarth	<1	15	<1	<1	<0.2
	MW04-20111012	10/12/11	SoundEarth	<1	15	<1	<1	<0.2
	MW04-20130909	09/09/13	SoundEarth	<1	22	15	<1	<0.2
	MW04-20150508	05/08/15	SoundEarth	1.4	13	4.2	<1	<0.2
	MW04-20150806	08/06/15	SoundEarth	<1	6.9	1.0	<1	<0.2
	MW04-20151209	12/09/15	SoundEarth	<1	9.2	<1	<1	<0.2
	MW04-20160308	03/08/16	SoundEarth	<1	9.6	1.1	<1	<0.2
	MW04-20160713	07/13/16	SoundEarth	1.0	8.9	1.3	<1	<0.2
	MW04-20161019	10/19/16	SoundEarth	<1	5.5	<1	<1	<0.2
	MW04-20170124	01/24/17	SoundEarth	<1	9.4	<1	<1	<0.2
	MW04-20170531	05/31/17	SoundEarth	<1	9.3	<1	<1	<0.2
	MW04-20170921	09/21/17	SoundEarth	<1	5.7	3.2	<1	<0.2
	MW04-20171214	12/14/17	SoundEarth	<1	8.0	2.4	<1	<0.2
	MW04-20180309	03/09/18	SoundEarth	<1	8.6	<1	<1	<0.2
	MW04-20180629	06/29/18	SoundEarth	<1	9.4	<1	<1	<0.2
	MW04-20180920	09/20/18	SoundEarth	<1	9.4	<1	<1	<0.2
	MW04-20181214	12/14/18	SoundEarth	<1	10	<1	<1	<0.2
	MW04-20190614	06/14/19	SoundEarth	<1	11	<1	<1	<0.2
	MW04-20191205	12/05/19	SoundEarth	<1	11	<1	<1	<0.2
	MW04-20200626	06/26/20	SoundEarth	<1	10	<1	<1	<0.2
MW04-20201211	12/11/20	SoundEarth	<1	9.2	<1	<1	<0.2	
MW04-20210624	06/24/21	SoundEarth	<1	11	<1	<1	<0.2	
MW04-20211215	12/15/21	SoundEarth	<1	7.8	<1	<1	<0.2	
MW05	MW05-20110527	05/27/11	SoundEarth	39	16	1.8	<1	<0.2
	MW05-20111012	10/12/11	SoundEarth	29	14	1.5	<1	<0.2
	MW05-20130910	09/10/13	SoundEarth	21	13	1.9	<1	<0.2
<b>DECOMMISSIONED 2015</b>								
MW07	MW07-20110531	05/31/11	SoundEarth	1.4	12	2.3	<1	<0.2
	MW07-20111012	10/12/11	SoundEarth	2.2	11	1.8	<1	<0.2
	MW07-20130909	09/09/13	SoundEarth	1.5	33	5.4	<1	<0.2
	MW07-20150508	05/08/15	SoundEarth	2.5	15	4.8	<1	<0.2
	MW07-20150805	08/05/15	SoundEarth	1.8	12	3.2	<1	<0.2
	MW07-20151209	12/09/15	SoundEarth	2.3	14	4.1	<1	<0.2
	MW07-20160308	03/08/16	SoundEarth	2.6	13	3.8	<1	<0.2
	MW07-20160713	07/13/16	SoundEarth	3.0	18	5.7	<1	<0.2
	MW07-20161019	10/19/16	SoundEarth	3.5	13	2.3	<1	<0.2
	MW07-20170124	01/24/17	SoundEarth	4.8	8.1	<1	<1	<0.2
	MW07-20170531	05/31/17	SoundEarth	4.7	8.6	<1	<1	<0.2
	MW07-20180308	03/08/18	SoundEarth	2.6	11	1.1	<1	<0.2
	MW07-20180629	06/29/18	SoundEarth	3.3	7.3	<1	<1	<0.2
	MW07-20180920	09/20/18	SoundEarth	2.8	6.0	<1	<1	<0.2
	MW07-20181214	12/14/18	SoundEarth	3.3	6.7	<1	<1	<0.2
	MW07-20190614	06/14/19	SoundEarth	3.9	5.9	<1	<1	<0.2
	MW07-20191205	12/05/19	SoundEarth	3.3	5.9	<1	<1	<0.2
	MW07-20200630	06/30/20	SoundEarth	<1	5.8	<1	<1	<0.2
MW07-20201210	12/10/20	SoundEarth	1.7	18	3.2	<1	<0.2	
MW07-20210623	06/23/21	SoundEarth	1.8	15	3.4	<1	<0.2	
MW07-20211215	12/15/21	SoundEarth	2.0	7.2	<1	<1	<0.2	
<b>MTCA Cleanup Level</b>				<b>5<sup>(2)</sup></b>	<b>5<sup>(2)</sup></b>	<b>16<sup>(3)</sup></b>	<b>160<sup>(3)</sup></b>	<b>0.2<sup>(2)</sup></b>



**Table 2**  
**Groundwater Analytical Results for CVOCs**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Sample Location	Sample Identification	Sample Date	Sampled By	PCE <sup>(1)</sup> (µg/L)	TCE <sup>(1)</sup> (µg/L)	cis-1-2-DCE <sup>(1)</sup> (µg/L)	trans-1-2-DCE <sup>(1)</sup> (µg/L)	Vinyl Chloride <sup>(1)</sup> (µg/L)
MW13	MW13-20111020	10/20/11	SoundEarth	5.1	1.2	<1	<1	<0.2
	MW13-20130910	09/10/13	SoundEarth	11	1.4	<1	<1	<0.2
	MW13-20150511	05/11/15	SoundEarth	4.6 <sup>cf</sup>	1.7 <sup>cf</sup>	<1 <sup>cf</sup>	<1 <sup>cf</sup>	<0.2 <sup>cf</sup>
	MW13-20150805	08/05/15	SoundEarth	5.4	2.3	<1	<1	<0.2
	MW13-20151215	12/15/15	SoundEarth	5.6	1.6	<1	<1	<0.2
	MW13-20160307	03/07/16	SoundEarth	6.6	1.6	<1	<1	<0.2
	MW13-20160712	07/12/16	SoundEarth	6.5	1.6	<1	<1	<0.2
	MW13-20161019	10/19/16	SoundEarth	10	2.2	<1	<1	<0.2
	MW13-20170124	01/24/17	SoundEarth	6.4	1.0	<1	<1	<0.2
	MW13-20170531	05/31/17	SoundEarth	10	1.5	<1	<1	<0.2
	MW13-20170921	09/21/17	SoundEarth	8.4	1.8	<1	<1	<0.2
	MW13-20171214	12/14/17	SoundEarth	5.2	1.4	<1	<1	<0.2
	MW13-20180308	03/08/18	SoundEarth	8.0	1.4	<1	<1	<0.2
	MW13-20180629	06/29/18	SoundEarth	4.4	<1	<1	<1	<0.2
	MW13-20180920	09/20/18	SoundEarth	6.5	1.3	<1	<1	<0.2
	MW13-20181214	12/14/18	SoundEarth	7.8	1.4	<1	<1	<0.2
	MW13-20190614	06/14/19	SoundEarth	7.0	1.1	<1	<1	<0.2
	MW13-20191205	12/05/19	SoundEarth	7.7	1.1	<1	<1	<0.2
MW13-20200626	06/26/20	SoundEarth	9.1	1.8	<1	<1	<0.2	
MW13-20201210	12/10/20	SoundEarth	7.2	1.6	<1	<1	<0.2	
MW13-20210623	06/23/21	SoundEarth	4.1	<1	<1	<1	<0.2	
MW13-20211216	12/16/21	SoundEarth	5.2	1.0	<1	<1	<0.2	
MW27	MW27-20151210	12/10/15	SoundEarth	<1	21	2.5	<1	<0.2
	MW27-20160307	03/07/16	SoundEarth	<1	21	3.8	<1	<0.2
	MW27-20160713	07/13/16	SoundEarth	<1	18	4.5	<1	<0.2
	MW27-20161019	10/19/16	SoundEarth	<1	23	4.8	<1	<0.2
	MW27-20170124	01/24/17	SoundEarth	<1	33	13	<1	<0.2
	MW27-20170531	05/31/17	SoundEarth	<1	18	5.5	<1	<0.2
	MW27-20170921	09/21/17	SoundEarth	<1	16	4.0	<1	<0.2
	MW27-20171214	12/14/17	SoundEarth	<1	81	4.4	<1	<0.2
	MW27-20171229	12/29/17	SoundEarth	<1	60	3.5	<1	<0.2
	MW27-20180308	03/08/18	SoundEarth	<1	13	<1	<1	<0.2
	MW27-20180628	06/28/18	SoundEarth	<1	37	3.4	<1	<0.2
	MW27-20180920	09/20/18	SoundEarth	<1	21	3.7	<1	<0.2
	MW27-20181214	12/14/18	SoundEarth	<1	17	4.3	<1	<0.2
	MW27-20190614	06/14/19	SoundEarth	<1	14	2.3	<1	<0.2
	MW27-20191205	12/05/19	SoundEarth	<1	15	2.2	<1	<0.2
MW27-20200626	06/26/20	SoundEarth	<1	30	2.9	<1	<0.2	
MW27-20201210	12/10/20	SoundEarth	<1	69	3.7	<1	<0.2	
MW27-20210623	06/23/21	SoundEarth	<1	80	4.3	<1	<0.2	
MW27-20211215	12/15/21	SoundEarth	<1	28	8.2	<1	<0.2	
MW31	MW31-20191009	10/09/19	SoundEarth	<1	1.8	<1	<1	<0.2
	MW31-20191205	12/05/19	SoundEarth	<1	3.3	<1	<1	<0.2
	MW31-20200701	07/01/20	SoundEarth	<1	12	<1	<1	<0.2
	MW31-20201211	12/11/20	SoundEarth	<1	17	<1	<1	<0.2
	MW31-20210624	06/24/21	SoundEarth	<1	5.0	<1	<1	<0.2
MW31-20211215	12/15/21	SoundEarth	<1	6.3	<1	<1	<0.2	
<b>Terry Avenue North</b>								
MW15	MW15-20121211	12/11/12	SoundEarth	<1	8.2	<1	<1	<0.2
	MW15-20121221	12/21/12	SoundEarth	<1	7.2	<1	<1	<0.2
	MW15-20130910	09/10/13	SoundEarth	<1	8.6	<1	<1	<0.2
	MW15-20150508	05/08/15	SoundEarth	<1	6.5	<1	<1	<0.2
	MW15-20150805	08/05/15	SoundEarth	<1	5.3	<1	<1	<0.2
	MW15-20151209	12/09/15	SoundEarth	<1	6.8	<1	<1	<0.2
	MW15-20160308	03/08/16	SoundEarth	<1	6.7	<1	<1	<0.2
	MW15-20160713	07/13/16	SoundEarth	<1	5.8	<1	<1	<0.2
	MW15-20161018	10/18/16	SoundEarth	<1	5.3	<1	<1	<0.2
	MW15-20170125	01/25/17	SoundEarth	<1	7.4	<1	<1	<0.2
	MW15-20170531	05/31/17	SoundEarth	<1	7.9	<1	<1	<0.2
	MW15-20170922	09/22/17	SoundEarth	<1	3.9	<1	<1	<0.2
	MW15-20171215	12/15/17	SoundEarth	<1	3.0	<1	<1	<0.2
	MW15-20180309	03/09/18	SoundEarth	<1	3.3	<1	<1	<0.2
	MW15-20180629	06/29/18	SoundEarth	<1	5.1	<1	<1	<0.2
	MW15-20180920	09/20/18	SoundEarth	<1	6.9	<1	<1	<0.2
	MW15-20181214	12/14/18	SoundEarth	<1	7.0	<1	<1	<0.2
	MW15-20190613	06/13/19	SoundEarth	<1	6.8	<1	<1	<0.2
MW15-20191205	12/05/19	SoundEarth	<1	4.9	<1	<1	<0.2	
MW15-20200626	06/26/20	SoundEarth	<1	1.2	<1	<1	<0.2	
MW15-20201211	12/11/20	SoundEarth	<1	<1	<1	<1	<0.2	
<b>WELL DAMAGED 2021</b>								
MW34	MW34-20211216	12/16/21	SoundEarth	<1	5.3	<1	<1	<0.2
<b>MTCA Cleanup Level</b>				<b>5<sup>(2)</sup></b>	<b>5<sup>(2)</sup></b>	<b>16<sup>(3)</sup></b>	<b>160<sup>(3)</sup></b>	<b>0.2<sup>(2)</sup></b>



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**Groundwater Analytical Results for CVOCs**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Sample Location	Sample Identification	Sample Date	Sampled By	PCE <sup>(1)</sup> (µg/L)	TCE <sup>(1)</sup> (µg/L)	cis-1-2-DCE <sup>(1)</sup> (µg/L)	trans-1-2-DCE <sup>(1)</sup> (µg/L)	Vinyl Chloride <sup>(1)</sup> (µg/L)
<b>Thomas Street</b>								
MW14	MW14-20111020	10/20/11	SoundEarth	<1	<1	<1	<1	<0.2
	MW14-20130911	09/11/13	SoundEarth	<1	<1	<1	<1	<0.2
	DECOMMISSIONED 2013							
MW16	MW16-20121211	12/11/12	SoundEarth	16	12	220	<1	0.69
	MW16-20130911	09/11/13	SoundEarth	6.4	5.0	610	<1	1.9
	MW16-20150508	05/08/15	SoundEarth	7.5	7.6	640	<1	2.8
	MW16-20150805	08/05/15	SoundEarth	7.8	7.3	550	<1	2.4
	MW16-20151210	12/10/15	SoundEarth	5.3	4.5	510	<1	3.2
	MW16-20160308	03/08/16	SoundEarth	3.7	2.0	190	<1	1.3
	MW16-20160712	07/12/16	SoundEarth	<1	<1	160	<1	2.0
	MW16-20161019	10/19/16	SoundEarth	5.0	5.4	170	<1	1.2
	MW16-20170125	01/25/17	SoundEarth	6.4	6.8	220	<1	0.98
	MW16-20170531	05/31/17	SoundEarth	5.7	4.4	100	<1	0.49
	MW16-20170922	09/22/17	SoundEarth	5.4	5.2	78	<1	0.40
	MW16-20171229	12/29/17	SoundEarth	7.2	6.4	150	<1	0.89
MW16-20180309	03/09/18	SoundEarth	7.3	5.5	80	<1	0.35	
WELL DAMAGED 2018								
MW28	MW28-20190315	03/15/19	SoundEarth	7.7	4.7	67	<1	0.47
	MW28-20190613	06/13/19	SoundEarth	9.0	5.7	80	<1	0.35
	MW28-20191009	10/09/19	SoundEarth	8.7	6.1	72	<1	0.31
	MW28-20191204	12/04/19	SoundEarth	8.4	4.9	52	<1	0.27
	MW28-20200626	06/26/20	SoundEarth	9.1	5.1	22	<1	<0.2
	MW28-20201211	12/11/20	SoundEarth	8.3	4.9	19	<1	<0.2
	MW28-20210521	05/21/21	SoundEarth	9.2	4.3	17	<1	<0.2
	MW28-20210623	06/23/21	SoundEarth	7.0	3.5	14	<1	<0.2
	MW28-20210817	08/17/21	SoundEarth	7.6	3.9	18	<1	<0.2
	MW28-20210921	09/21/21	SoundEarth	7.5	3.4	15	<1	0.10
MW28-20211216	12/16/21	SoundEarth	5.2	2.8	17	<1	<0.2	
<b>Fairview Avenue North</b>								
MW-C	MW-C-20130911	09/11/13	SoundEarth	<1	<1	<1	<1	<0.2
<b>Harrison Street</b>								
MW01	MW01-20110525	05/25/11	SoundEarth	<1	<1	<1	<1	<0.2
	MW01-20111011	10/11/11	SoundEarth	<1	<1	<1	<1	<0.2
	MW01-20130910	09/10/13	SoundEarth	<1	1.4	<1	<1	<0.2
	MW01-20150806	08/06/15	SoundEarth	<1	<1	<1	<1	<0.2
	MW01-20160308	03/08/16	SoundEarth	<1	<1	<1	<1	<0.2
	MW01-20160712	07/12/16	SoundEarth	<1	<1	<1	<1	<0.2
	MW01-20161018	10/18/16	SoundEarth	<1	<1	<1	<1	<0.2
	MW01-20170124	01/24/17	SoundEarth	<1	<1	<1	<1	<0.2
	MW01-20170531	05/31/17	SoundEarth	<1	<1	<1	<1	<0.2
	MW01-20171214	12/14/17	SoundEarth	<1	<1	<1	<1	<0.2
	MW01-20180309	03/09/18	SoundEarth	<1	<1	<1	<1	<0.2
	MW01-20180628	06/28/18	SoundEarth	<1	1.1	<1	<1	<0.2
	MW01-20180920	09/20/18	SoundEarth	<1	<1	<1	<1	<0.2
	MW01-20181214	12/14/18	SoundEarth	<1	1.1	<1	<1	<0.2
	MW01-20190614	06/14/19	SoundEarth	<1	<1	<1	<1	<0.2
	MW01-20191205	12/05/19	SoundEarth	<1	<1	<1	<1	<0.2
	MW01-20200626	06/26/20	SoundEarth	<1	<1	<1	<1	<0.2
	MW01-20201211	12/11/20	SoundEarth	<1	<1	<1	<1	<0.2
MW01-20210624	06/24/21	SoundEarth	<1	<1	<1	<1	<0.2	
MW01-20211215	12/15/21	SoundEarth	<1	0.50	<1	<1	<0.2	
MW02	MW02-20110525	05/25/11	SoundEarth	<1	5.2	<1	<1	<0.2
	MW02-20111011	10/11/11	SoundEarth	<1	3.0	<1	<1	<0.2
	MW02-20130911	09/11/13	SoundEarth	<1	3.6	<1	<1	<0.2
DECOMMISSIONED 2015								
MW03	MW03-20110527	05/27/11	SoundEarth	<1	<1	<1	<1	<0.2
	MW03-20111011	10/11/11	SoundEarth	<1	<1	<1	<1	<0.2
	MW03-20130911	09/11/13	SoundEarth	<1	<1	<1	<1	<0.2
DECOMMISSIONED 2015								
<b>MTCA Cleanup Level</b>				<b>5<sup>(2)</sup></b>	<b>5<sup>(2)</sup></b>	<b>16<sup>(3)</sup></b>	<b>160<sup>(3)</sup></b>	<b>0.2<sup>(2)</sup></b>



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**Groundwater Analytical Results for CVOCs**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Sample Location	Sample Identification	Sample Date	Sampled By	PCE <sup>(1)</sup> (µg/L)	TCE <sup>(1)</sup> (µg/L)	cis-1-2-DCE <sup>(1)</sup> (µg/L)	trans-1-2-DCE <sup>(1)</sup> (µg/L)	Vinyl Chloride <sup>(1)</sup> (µg/L)
MW26	MW26-20151210	12/10/15	SoundEarth	<1	11	<1	<1	<0.2
	MW26-20160307	03/07/16	SoundEarth	<1	10	<1	<1	<0.2
	MW26-20160712	07/12/16	SoundEarth	<1	12	<1	<1	<0.2
	MW26-20161018	10/18/16	SoundEarth	<1	12	<1	<1	<0.2
	MW26-20170124	01/24/17	SoundEarth	<1	13	<1	<1	<0.2
	MW26-20170531	05/31/17	SoundEarth	<1	7.9	<1	<1	<0.2
	MW26-20170921	09/21/17	SoundEarth	<1	7.1	<1	<1	<0.2
	MW26-20171214	12/14/17	SoundEarth	<1	15	1.4	<1	<0.2
	MW26-20180309	03/09/18	SoundEarth	<1	6.0	<1	<1	<0.2
	MW26-20180628	06/28/18	SoundEarth	<1	18	<1	<1	<0.2
	MW26-20180920	09/20/18	SoundEarth	<1	18	<1	<1	<0.2
	MW26-20181214	12/14/18	SoundEarth	<1	20	<1	<1	<0.2
	MW26-20190614	06/14/19	SoundEarth	<1	20	<1	<1	<0.2
	MW26-20191205	12/05/19	SoundEarth	<1	13	<1	<1	<0.2
	MW26-20200626	06/26/20	SoundEarth	<1	13	<1	<1	<0.2
MW26-20201211	12/11/20	SoundEarth	<1	4.0	<1	<1	<0.2	
MW26-20210624	06/24/21	SoundEarth	<1	6.6	<1	<1	<0.2	
MW26-20211215	12/15/21	SoundEarth	<1	7.9	<1	<1	<0.2	
MW32	MW32-20191009	10/09/19	SoundEarth	<1	<1	<1	<1	<0.2
	MW32-20191205	12/05/19	SoundEarth	<1	<1	<1	<1	<0.2
	MW32-20200626	06/26/20	SoundEarth	<1	<1	<1	<1	<0.2
	MW32-20201212	12/12/20	SoundEarth	<1	<1	<1	<1	<0.2
	MW32-20210624	06/24/21	SoundEarth	<1	<1	<1	<1	<0.2
	MW32-20211215	12/15/21	SoundEarth	<1	<0.5	<1	<1	<0.2
MW33	MW33-20191009	10/09/19	SoundEarth	<1	<1	<1	<1	<0.2
	MW33-20191205	12/05/19	SoundEarth	<1	<1	<1	<1	<0.2
	--	06/26/20	SoundEarth	WELL DRY, UNABLE TO SAMPLE				
	--	12/10/20	SoundEarth	WELL DRY, UNABLE TO SAMPLE				
	MW33-20210624	06/24/21	SoundEarth	<1	<1	<1	<1	<0.2
	MW33-20211216	12/16/21	SoundEarth	<1	<0.5	<1	<1	<0.2
SMW06	SMW06-20130910	09/10/13	SoundEarth	<1	<1	<1	<1	<0.2
<b>Westlake Avenue North</b>								
SMW09	SMW09-20130910	09/10/13	SoundEarth	<1	<1	<1	<1	<0.2
<b>South-Adjoining Property</b>								
MW29	MW29-20191008	10/08/19	SoundEarth	8.6	9.4	52	<1	0.64
	MW29-20191204	12/04/19	SoundEarth	16	12	26	<1	0.40
	MW29-20200626	06/26/20	SoundEarth	18	13	16	<1	0.20
	MW29-20201210	12/10/20	SoundEarth	18	13	18	<1	<0.2
	MW29-20210622	06/22/21	SoundEarth	14	11	16	<1	<0.2
	MW29-20211215	12/15/21	SoundEarth	15	12	14	<1	<0.2
MW30	MW30-20191008	10/08/19	SoundEarth	<1	3.6	24	<1	<0.2
	MW30-20191204	12/04/19	SoundEarth	<1	2.0	11	<1	<0.2
	MW30-20200626	06/26/20	SoundEarth	<1	1.0	3.6	<1	<0.2
	MW30-20201210	12/10/20	SoundEarth	<1	2.4	13	<1	<0.2
	MW30-20210623	06/23/21	SoundEarth	<1	2.0	7.4	<1	<0.2
	MW30-20211215	12/15/21	SoundEarth	<1	2.2	5.2	<1	<0.2
ONNI-MW-4	ONNI-MW-4-20191208	12/08/19	SoundEarth	<1	<1	<1	<1	<0.2
	ONNI-MW-4-20200625	06/25/20	SoundEarth	<1	<1	<1	<1	<0.2
	ONNI-MW-4-20201210	12/10/20	SoundEarth	<1	<1	<1	<1	<0.2
	ONNI-MW-4-20210622	06/22/21	SoundEarth	<1	<1	<1	<1	<0.2
	ONNI-MW-4-20211215	12/15/21	SoundEarth	<1	<0.5	<1	<1	<0.2
ONNI-MW-5	ONNI-MW-5-20191208	12/08/19	SoundEarth	<1	<1	<1	<1	0.28
	ONNI-MW-5-20200206	02/06/20	SoundEarth	<1	<1	<1	<1	<0.2
	ONNI-MW-5-20200625	06/25/20	SoundEarth	<1	<1	<1	<1	<0.2
	ONNI-MW-5-20201209	12/09/20	SoundEarth	<1	<1	<1	<1	<0.2
	ONNI-MW-5-20210623	06/23/21	SoundEarth	<1	<1	<1	<1	<0.2
	ONNI-MW-5-20211214	12/14/21	SoundEarth	<1	<0.5	<1	<1	<0.2
ONNI-MW-9	ONNI-MW-9-20211214	12/14/21	SoundEarth	<1	<0.5	1.3	<1	<0.2
<b>North-Adjoining Property</b>								
SLU-MW01	MW01-20120229	02/29/12 <sup>(4)</sup>	SoundEarth	<1	<1	<1	<1	<0.2
	DECOMMISSIONED 2013							
SLU-MW02	MW02-20120229	02/29/12 <sup>(4)</sup>	SoundEarth	<1	<1	<1	<1	<0.2
	DECOMMISSIONED 2013							
<b>MTCA Cleanup Level</b>				<b>5<sup>(2)</sup></b>	<b>5<sup>(2)</sup></b>	<b>16<sup>(3)</sup></b>	<b>160<sup>(3)</sup></b>	<b>0.2<sup>(2)</sup></b>

**NOTES:**

Red denotes concentrations exceeding the MTCA Method cleanup level for groundwater.

<sup>(1)</sup>Analyzed by EPA Method 8260C, 8021B, or 8240.

<sup>(2)</sup>MTCA Method A Cleanup Levels, Table 720-1 of Section 900 of Chapter 173-340 of WAC, revised November 2007.

<sup>(3)</sup>MTCA Cleanup Regulation, Chapter 173-340 of WAC, CLARC, Groundwater, Method B, Non-Carcinogen, Standard Formula Value, CLARC Website <<https://fortress.wa.gov/ecy/clarc/CLARHome.aspx>>.

<sup>(4)</sup>Sample data compiled from reports on file at the Washington State Department of Ecology.

**Laboratory Notes:**

<sup>(5)</sup>The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

<sup>(6)</sup>The sample was centrifuged prior to analysis.

<sup>(7)</sup>Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

<sup>(8)</sup>The sample was collected with a passive diffusion bag.

< = not detected at a concentration exceeding laboratory reporting limit

µg/L = micrograms per liter

CLARC = Cleanup Levels and Risk Calculations

CVOC = chlorinated volatile organic compound

DCE = dichloroethene

EPA = US Environmental Protection Agency

MTCA = Washington State Model Toxics Control Act

PCE = tetrachloroethene

SoundEarth = SoundEarth Strategies, Inc.

TCE = trichloroethene

WAC = Washington Administrative Code







**Table 3**  
**Groundwater Analytical Results for Petroleum Hydrocarbons**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Sample Location	Sample Identification	Sample Date	Sampled By	DRPH <sup>(1)</sup> (µg/L)	ORPH <sup>(1)</sup> (µg/L)	GRPH <sup>(2)</sup> (µg/L)	Benzene <sup>(3)</sup> (µg/L)	Toluene <sup>(3)</sup> (µg/L)	Ethylbenzene <sup>(3)</sup> (µg/L)	Total Xylenes <sup>(3)</sup> (µg/L)
<b>Troy Laundry Property</b>										
MW06	MW06-20110531	05/31/11	SoundEarth	330 <sup>x</sup>	<250	<100	<1	<1	<1	<3
	MW06-20111011	10/10/11	SoundEarth	83 <sup>x</sup>	<250	<100	<1	<1	<1	<3
	MW06-20130909	09/09/13	SoundEarth	150 <sup>x</sup>	<250	<100	<1	<1	<1	<3
DECOMMISSIONED 2013										
MW08	MW08-20111013	10/13/11	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW08-20130910	09/10/13	SoundEarth	120 <sup>x</sup>	<250	<100	<1	<1	<1	<3
DECOMMISSIONED 2013										
MW09	MW09-20111013	10/13/11	SoundEarth	240 <sup>x</sup>	<250	1,400	<1	<1	2.7	10
	MW09-20130910	09/10/13	SoundEarth	<50	<250	<100	<1	<1	<1	<3
DECOMMISSIONED 2013										
MW10	MW10-20111012	10/12/11	SoundEarth	68 <sup>x</sup>	<250	<100	<1	<1	<1	<3
	MW10-20130909	09/09/13	SoundEarth	<50	<250	<100	<1	<1	<1	<3
DECOMMISSIONED 2013										
MW11	MW11-20111013	10/13/11	SoundEarth	110 <sup>x</sup>	<250	<100	<1	<1	<1	<3
	MW11-20130909	09/09/13	SoundEarth	97 <sup>x</sup>	<250	<100	<1	<1	<1	<3
DECOMMISSIONED 2013										
MW12	MW12-20111017	10/17/11	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW12-20130909	09/09/13	SoundEarth	<50	<250	<100	<1	<1	<1	<3
DECOMMISSIONED 2013										
MW17	MW17-20150506	05/06/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW17-20150804	08/04/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW17-20151207	12/07/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW17-20160308	03/08/16	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW17-20160714	07/14/16	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW17-20161020	10/20/16	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW17-20170126	01/26/17	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW17-20170601	06/01/17	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW17-20170923	09/23/17	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW17-20171216	12/16/17	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW17-20180310	03/10/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW17-20180630	06/30/18	SoundEarth	<60	<300	<100	<1	<1	<1	<3
	MW17-20180922	09/22/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW17-20181215	12/15/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW17-20190615	06/15/19	SoundEarth	<50	<250	<100	<1	<1	<1	<3
MW17-20191207	12/07/19	SoundEarth	<50	<250	<100	<1	<1	<1	<3	
MW17-20200627	06/27/20	SoundEarth	<50	<250	<100	<1	<1	<1	<3	
<b>MTCA Cleanup Level</b>				<b>500<sup>(4)</sup></b>	<b>500<sup>(4)</sup></b>	<b>1,000/800<sup>(4) (5)</sup></b>	<b>5<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>	<b>700<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>



**Table 3**  
**Groundwater Analytical Results for Petroleum Hydrocarbons**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Sample Location	Sample Identification	Sample Date	Sampled By	DRPH <sup>(1)</sup> (µg/L)	ORPH <sup>(1)</sup> (µg/L)	GRPH <sup>(2)</sup> (µg/L)	Benzene <sup>(3)</sup> (µg/L)	Toluene <sup>(3)</sup> (µg/L)	Ethylbenzene <sup>(3)</sup> (µg/L)	Total Xylenes <sup>(3)</sup> (µg/L)
MW18	MW18-20150506	05/06/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW18-20150803	08/03/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW18-20151208	12/08/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW18-20160308	03/08/16	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW18-20160714	07/14/16	SoundEarth	31,000 <sup>x, ip</sup>	5,100 <sup>x, ip</sup>	<100	<0.35	<1	<1	<3
	MW18-20161020	10/20/16	SoundEarth	61,000 <sup>x, ip</sup>	<8,400 <sup>x, ip</sup>	1,100 <sup>x</sup>	<0.35	<1	<1	<3
	MW18-20170126	01/26/17	SoundEarth	22,000 <sup>x, ip</sup>	3,500 <sup>x, ip</sup>	840	<0.35	<1	<1	<3
	MW18-20170601	06/01/17	SoundEarth	77,000 <sup>x, ip</sup>	1,600 <sup>x, ip</sup>	470	<0.35	<1	<1	<3
	MW18-20170923	09/23/17	SoundEarth	34,000 <sup>x</sup>	<3,500	210	<0.35	<1	<1	<3
	MW18-20171216	12/16/17	SoundEarth	18,000 <sup>x, ip</sup>	<2,500 <sup>ip</sup>	380	<0.35	<1	<1	<3
	MW18-20180310	03/10/18	SoundEarth	6,000 <sup>x</sup>	<2,500	390	<1	1.3	<1	<3
	MW18-20180630	06/30/18	SoundEarth	12,000 <sup>x</sup>	1,600 <sup>x</sup>	230	<1	1.3	<1	12
	MW18-20180922	09/22/18	SoundEarth	1,400 <sup>x, ip</sup>	<2,500 <sup>ip</sup>	290	<1	<1	<1	6.9
	MW18-20181215	12/15/18	SoundEarth	1,600 <sup>x</sup>	490 <sup>x</sup>	<100	<1	<1	<1	<3
	MW18-20190615	06/15/19	SoundEarth	1,100 <sup>x</sup>	830 <sup>x</sup>	<100	<1	<1	<1	<3
MW18-20191207	12/07/19	SoundEarth	830 <sup>x</sup>	480 <sup>x</sup>	<100	<1	<1	<1	<3	
MW18-20200627	06/27/20	SoundEarth	260 <sup>x</sup>	<250	<100	<1	<1	<1	<3	
MW19	MW19-20150507	05/07/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW19-20150803	08/03/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW19-20151207	12/07/15	SoundEarth	85 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW19-20160308	03/08/16	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW19-20160713	07/13/16	SoundEarth	21,000 <sup>x, ip</sup>	4,100 <sup>x, ip</sup>	<100	<0.35	<1	<1	<3
	MW19-20161021	10/21/16	SoundEarth	18,000 <sup>x, ip</sup>	2,300 <sup>x, ip</sup>	<100	<0.35	<1	<1	<3
	MW19-20170125	01/25/17	SoundEarth	29,000 <sup>x</sup>	4,400 <sup>x</sup>	210 <sup>x</sup>	<0.35	<1	<1	<3
	MW19-20170601	06/01/17	SoundEarth	31,000 <sup>x, ip</sup>	3,400 <sup>x, ip</sup>	180	<0.35	<1	<1	<3
	MW19-20170923	09/23/17	SoundEarth	27,000 <sup>x, ip</sup>	<3,000 <sup>ip</sup>	150	<0.35	<1	<1	<3
	MW19-20171216	12/16/17	SoundEarth	9,700 <sup>x, ip</sup>	<2,500 <sup>ip</sup>	470	<0.35	<1	<1	<3
	MW19-20180310	03/10/18	SoundEarth	1,600 <sup>x</sup>	<2,500	250	<1	<1	<1	<3
	MW19-20180630	06/30/18	SoundEarth	13,000 <sup>x</sup>	820 <sup>x</sup>	310	<1	<1	<1	9.6
	MW19-20180922	09/22/18	SoundEarth	3,300 <sup>x, ip</sup>	<2,500 <sup>ip</sup>	300	<1	<1	<1	5.0
	MW19-20190615	06/15/19	SoundEarth	650 <sup>x</sup>	430 <sup>x</sup>	<100	<1	<1	<1	<3
	MW19-20191207	12/07/19	SoundEarth	610 <sup>x</sup>	690 <sup>x</sup>	<100	<1	<1	<1	<3
MW19-20200627	06/27/20	SoundEarth	150 <sup>x</sup>	380 <sup>x</sup>	<100	<1	<1	<1	<3	
<b>MTCA Cleanup Level</b>				<b>500<sup>(4)</sup></b>	<b>500<sup>(4)</sup></b>	<b>1,000/800<sup>(4) (5)</sup></b>	<b>5<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>	<b>700<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>



**Table 3**  
**Groundwater Analytical Results for Petroleum Hydrocarbons**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Sample Location	Sample Identification	Sample Date	Sampled By	DRPH <sup>(1)</sup> (µg/L)	ORPH <sup>(1)</sup> (µg/L)	GRPH <sup>(2)</sup> (µg/L)	Benzene <sup>(3)</sup> (µg/L)	Toluene <sup>(3)</sup> (µg/L)	Ethylbenzene <sup>(3)</sup> (µg/L)	Total Xylenes <sup>(3)</sup> (µg/L)
MW20	MW20-20150506	05/06/15	SoundEarth	120 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW20-20150803	08/03/15	SoundEarth	140 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW20-20151207	12/07/15	SoundEarth	84 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW20-20160309	03/09/16	SoundEarth	130 <sup>x</sup>	<300	<100	<0.35	<1	<1	<3
	MW20-20160715	07/15/16	SoundEarth	150 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW20-20161020	10/20/16	SoundEarth	110 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW20-20170125	01/25/17	SoundEarth	64 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW20-20170601	06/01/17	SoundEarth	94 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW20-20170924	09/24/17	SoundEarth	130 <sup>x</sup>	<300	<100	<0.35	<1	<1	<3
	MW20-20171216	12/16/17	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW20-20180310	03/10/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW20-20180630	06/30/18	SoundEarth	120 <sup>x</sup>	<250	<100	<1	<1	<1	<3
	MW20-20180922	09/22/18	SoundEarth	100 <sup>x</sup>	<250	<100	<1	<1	<1	<3
	MW20-20181215	12/15/18	SoundEarth	72 <sup>x</sup>	<250	<100	<1	<1	<1	<3
	MW20-20190615	06/15/19	SoundEarth	140 <sup>x</sup>	<250	<100	<1	<1	<1	<3
MW20-20191207	12/07/19	SoundEarth	80 <sup>x</sup>	<250	<100	<1	<1	<1	<3	
MW20-20200627	06/27/20	SoundEarth	91 <sup>x</sup>	<250	<100	<1	<1	<1	<3	
MW21	MW21-20150506	05/06/15	SoundEarth	160 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW21-20150804	08/04/15	SoundEarth	150 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW21-20151208	12/08/15	SoundEarth	110 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW21-20160309	03/09/16	SoundEarth	120 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW21-20160713	07/13/16	SoundEarth	12,000 <sup>x</sup>	2,700 <sup>x</sup>	<100	<0.35	<1	<1	<3
	MW21-20161020	10/20/16	SoundEarth	77,000 <sup>x,ip</sup>	8,600 <sup>x,ip</sup>	<100	<0.35	<1	<1	<3
	MW21-20170126	01/26/17	SoundEarth	16,000 <sup>x,ip</sup>	10,000 <sup>x,ip</sup>	<100	<0.35	<1	<1	<3
	MW21-20170601	06/01/17	SoundEarth	48,000 <sup>x,ip</sup>	18,000 <sup>x,ip</sup>	130	<0.35	<1	<1	<3
	MW21-20170923	09/23/17	SoundEarth	67,000 <sup>x,ip</sup>	7,700 <sup>x,ip</sup>	220	<0.35	<1	<1	<3
	MW21-20171216	12/16/17	SoundEarth	27,000 <sup>x</sup>	<2,500	390	<0.35	<1	<1	<3
	MW21-20180310	03/10/18	SoundEarth	23,000 <sup>x</sup>	<2,500	130	<1	<1	<1	<3
	MW21-2018630	06/30/18	SoundEarth	65,000 <sup>x,ip</sup>	5,200 <sup>x,ip</sup>	670	<1	3.0	11	11
	MW21-20180922	09/22/18	SoundEarth	53,000 <sup>x,ip</sup>	8,600 <sup>x,ip</sup>	400	<1	<1	<1	3.4
	MW21-20181215	12/15/18	SoundEarth	47,000 <sup>x</sup>	2,100 <sup>x</sup>	180	<1	<1	<1	6.5
	MW21-20190615	06/15/19	SoundEarth	6,400 <sup>x</sup>	<2,500	<100	<1	<1	<1	3.8
	MW21-20191207	12/07/19	SoundEarth	21,000 <sup>x</sup>	2,100 <sup>x</sup>	300	<1	<1	<1	4.8
	MW21-20200627	06/27/20	SoundEarth	120,000 <sup>x</sup>	3,500 <sup>x,ip</sup>	1,100	1.8	5.9	<1	19
	MW21-20201212	12/12/20	SoundEarth	36,000 <sup>x</sup>	6,500 <sup>x</sup>	460	--	--	--	--
MW21-20210625	06/25/21	SoundEarth	74,000 <sup>x,ve</sup>	5,400 <sup>x</sup>	1,000	--	--	--	--	
MW21-20211217	12/17/21	SoundEarth	48,000 <sup>x</sup>	5,800 <sup>x</sup>	<1,000	--	--	--	--	
<b>MTCA Cleanup Level</b>				<b>500<sup>(4)</sup></b>	<b>500<sup>(4)</sup></b>	<b>1,000/800<sup>(4) (5)</sup></b>	<b>5<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>	<b>700<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>



**Table 3**  
**Groundwater Analytical Results for Petroleum Hydrocarbons**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Sample Location	Sample Identification	Sample Date	Sampled By	DRPH <sup>(1)</sup> (µg/L)	ORPH <sup>(1)</sup> (µg/L)	GRPH <sup>(2)</sup> (µg/L)	Benzene <sup>(3)</sup> (µg/L)	Toluene <sup>(3)</sup> (µg/L)	Ethylbenzene <sup>(3)</sup> (µg/L)	Total Xylenes <sup>(3)</sup> (µg/L)
MW22	MW22-20150506	05/06/15	SoundEarth	97 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW22-20150804	08/05/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW22-20151208	12/08/15	SoundEarth	69 <sup>x</sup>	<300	<100	<0.35	<1	<1	<3
	MW22-20160308	03/08/16	SoundEarth	110 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW22-20160713	07/13/16	SoundEarth	8,000 <sup>x, ip</sup>	2,100 <sup>x, ip</sup>	140	<0.35	<1	<1	<3
	MW22-20161020	10/20/16	SoundEarth	29,000 <sup>x, ip</sup>	7,500 <sup>x, ip</sup>	130	<0.35	<1	<1	<3
	MW22-20170126	01/26/17	SoundEarth	13,000 <sup>x, ip</sup>	13,000 <sup>x, ip</sup>	730	<0.35	<1	<1	<3
	MW22-20170601	06/01/17	SoundEarth	59,000 <sup>x</sup>	8,700 <sup>x</sup>	660	<0.35	<1	<1	<3
	MW22-20170923	09/23/17	SoundEarth	85,000 <sup>x, ip</sup>	<2,500 <sup>ip</sup>	390	<0.35	<1	<1	<3
	MW22-20171216	12/16/17	SoundEarth	58,000 <sup>x, ip</sup>	<3,000 <sup>ip</sup>	1,800	<0.35	<1	<1	<3
	MW22-20180310	03/10/18	SoundEarth	50,000 <sup>x</sup>	<2,500	530	<0.35	<1	<1	10
	MW22-20180630	06/30/18	SoundEarth	86,000 <sup>x, ip</sup>	4,500 <sup>x, ip</sup>	620	<1	<1	<1	34
	MW22-20180922	09/22/18	SoundEarth	73,000 <sup>x, ip</sup>	6,800 <sup>x, ip</sup>	320	<1	<1	<1	21
	MW22-20181215	12/15/18	SoundEarth	49,000 <sup>x</sup>	7,700 <sup>x</sup>	180	<1	<1	<1	14
	MW22-20190615	06/15/19	SoundEarth	24,000 <sup>x</sup>	4,600 <sup>x</sup>	170	<1	<1	<1	21
	MW22-20191207	12/07/19	SoundEarth	40,000 <sup>x</sup>	3,400 <sup>x</sup>	810	<1	<1	<1	74
	MW22-20200627	06/27/20	SoundEarth	25,000 <sup>x</sup>	1,100 <sup>x</sup>	340	<1	<1	<1	4.3
	MW22-20201212	12/12/20	SoundEarth	12,000 <sup>x</sup>	4,100 <sup>x</sup>	570	--	--	--	--
MW22-20210625	06/25/21	SoundEarth	20,000 <sup>x</sup>	1,800 <sup>x</sup>	540	--	--	--	--	
MW22-20211217	12/17/21	SoundEarth	47,000 <sup>x</sup>	5,700 <sup>x</sup>	<1,000	--	--	--	--	
MW23	MW23-20150507	05/07/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW23-20150804	08/04/15	SoundEarth	520 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW23-20151208	12/08/15	SoundEarth	190 <sup>x</sup>	<300	<100	<0.35	<1	<1	<3
	MW23-20160308	03/08/16	SoundEarth	410 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW23-20160714	07/14/16	SoundEarth	26,000 <sup>x, ip</sup>	1,500 <sup>x, ip</sup>	190	<0.35	<1	<1	<3
	MW23-20161020	10/20/16	SoundEarth	80,000 <sup>x, ip</sup>	<5,000 <sup>ip</sup>	350	<0.35	<1	<1	<3
	MW23-20170126	01/26/17	SoundEarth	14,000 <sup>x, ip</sup>	5,600 <sup>x, ip</sup>	240	<0.35	<1	<1	<3
	MW23-20170601	06/01/17	SoundEarth	140,000 <sup>x, ip</sup>	4,000 <sup>x, ip</sup>	210	<0.35	<1	<1	<3
	MW23-20170923	09/23/17	SoundEarth	140,000 <sup>x</sup>	<2,500	170	<0.35	<1	<1	<3
	MW23-20171216	12/16/17	SoundEarth	110,000 <sup>x, ip</sup>	<2,500 <sup>ip</sup>	2,200	<0.35	<1	<1	<3
	MW23-20180310	03/10/18	SoundEarth	11,000 <sup>x</sup>	<2,500	600	<1	<1	<1	4.6
	MW23-20180630	06/30/18	SoundEarth	30,000 <sup>x</sup>	1,000 <sup>x</sup>	540	<1	<1	<1	31
	MW23-20180922	09/22/18	SoundEarth	19,000 <sup>x, ip</sup>	<2,600 <sup>ip</sup>	150	<1	<1	<1	11
	MW23-20181215	12/15/18	SoundEarth	14,000 <sup>x</sup>	500 <sup>x</sup>	180	<1	<1	<1	7.1
	MW23-20190615	06/15/19	SoundEarth	3,400 <sup>x</sup>	<2,500	260	<1	<1	<1	7.1
MW23-20191207	12/07/19	SoundEarth	1,400 <sup>x</sup>	790 <sup>x</sup>	<100	<1	<1	<1	<3	
MW23-20200627	06/27/20	SoundEarth	360 <sup>x</sup>	<250	<100	<1	<1	<1	<3	
<b>MTCA Cleanup Level</b>				<b>500<sup>(4)</sup></b>	<b>500<sup>(4)</sup></b>	<b>1,000/800<sup>(4) (5)</sup></b>	<b>5<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>	<b>700<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>



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**Seattle, Washington**

Sample Location	Sample Identification	Sample Date	Sampled By	DRPH <sup>(1)</sup> (µg/L)	ORPH <sup>(1)</sup> (µg/L)	GRPH <sup>(2)</sup> (µg/L)	Benzene <sup>(3)</sup> (µg/L)	Toluene <sup>(3)</sup> (µg/L)	Ethylbenzene <sup>(3)</sup> (µg/L)	Total Xylenes <sup>(3)</sup> (µg/L)
MW24	MW24-20150506	05/06/15	SoundEarth	93 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW24-20150804	08/04/15	SoundEarth	94 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW24-20151208	12/08/15	SoundEarth	240 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW24-20160309	03/09/16	SoundEarth	130 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW24-20160715	07/15/16	SoundEarth	13,000 <sup>x, ip</sup>	1,400 <sup>x, ip</sup>	<100	<0.35	<1	<1	<3
	MW98-20160715 (DUP)		SoundEarth	11,000 <sup>x, ip</sup>	1,900 <sup>x, ip</sup>	<100	<0.35	<1	<1	<3
	MW24-20161020	10/20/16	SoundEarth	3,200 <sup>x, ip</sup>	1,900 <sup>x, ip</sup>	<100	<0.35	<1	<1	<3
	MW24-20170125	01/25/17	SoundEarth	12,000 <sup>x</sup>	2,000 <sup>x</sup>	<100	<0.35	<1	<1	<3
	MW24-20170601	06/01/17	SoundEarth	510,000 <sup>x, ip</sup>	27,000 <sup>x, ip</sup>	<100	<0.35	<1	<1	<3
	MW24-20170601	09/24/17	SoundEarth	39,000 <sup>x, ip</sup>	<3,000 <sup>ip</sup>	250	<0.35	<1	<1	<3
	MW24-20171216	12/16/17	SoundEarth	10,000 <sup>x</sup>	<3,000	990	<0.35	<1	<1	<3
	MW24-20180310	03/10/18	SoundEarth	990 <sup>x</sup>	<2,500	460	<1	<1	<1	3.7
	MW24-20180630	06/30/18	SoundEarth	75,000 <sup>x, ip</sup>	7,700 <sup>x, ip</sup>	2,700	<1	3.6	6.5	110
	MW24-20180922	09/22/18	SoundEarth	7,800 <sup>x, ip</sup>	<2,500 <sup>ip</sup>	190	<1	<1	<1	7.5
	MW24-20181215	12/15/18	SoundEarth	20,000 <sup>x</sup>	2,700 <sup>x</sup>	<100	<1	<1	<1	<3
	MW24-20190615	06/15/19	SoundEarth	6,400 <sup>x</sup>	<2,500	<100	<1	<1	<1	<3
MW24-20191207	12/07/19	SoundEarth	7,100 <sup>x</sup>	1,400 <sup>x</sup>	<100	<1	<1	<1	<3	
MW24-20200627	06/27/20	SoundEarth	700 <sup>x, ip</sup>	570 <sup>x, ip</sup>	<100	<1	<1	<1	<3	
<b>MTCA Cleanup Level</b>				<b>500<sup>(4)</sup></b>	<b>500<sup>(4)</sup></b>	<b>1,000/800<sup>(4) (5)</sup></b>	<b>5<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>	<b>700<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>



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Sample Location	Sample Identification	Sample Date	Sampled By	DRPH <sup>(1)</sup> (µg/L)	ORPH <sup>(1)</sup> (µg/L)	GRPH <sup>(2)</sup> (µg/L)	Benzene <sup>(3)</sup> (µg/L)	Toluene <sup>(3)</sup> (µg/L)	Ethylbenzene <sup>(3)</sup> (µg/L)	Total Xylenes <sup>(3)</sup> (µg/L)
MW25	MW25-20150507	05/07/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW99-20150507 (DUP)			<50	<250	<100	<0.35	<1	<1	<3
	MW25-20150805	08/05/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW99-20150805 (DUP)			<50	<250	<100	<0.35	<1	<1	<3
	MW25-20151209	12/09/15	SoundEarth	86 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW99-20151209 (DUP)			100 <sup>x</sup>	<300	<100	<0.35	<1	<1	<3
	MW25-20160308	03/08/16	SoundEarth	190 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW99-20160308(DUP)			160 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW25-20160713	07/13/16	SoundEarth	43,000 <sup>x</sup>	5,000 <sup>x</sup>	110	<0.35	<1	<1	<3
	MW25-20161019	10/19/16	SoundEarth	26,000 <sup>x</sup>	1,500 <sup>x</sup>	160	--	--	--	--
	MW99-20161019(DUP)			29,000 <sup>x</sup>	1,600 <sup>x</sup>	160	--	--	--	--
	MW25-20170125	01/25/17	SoundEarth	8,200 <sup>x</sup>	340 <sup>x</sup>	120 <sup>x</sup>	<0.35	<1	<1	<3
	MW99-20170125(DUP)			6,900 <sup>x</sup>	350 <sup>x</sup>	150 <sup>x</sup>	<0.35	<1	<1	<3
	MW25-20170601	06/01/17	SoundEarth	50,000 <sup>x, ip</sup>	<1,000 <sup>ip</sup>	370	<0.35	<1	<1	<3
	MW99-20170601(DUP)			46,000 <sup>x, ip</sup>	<1,000 <sup>ip</sup>	410	<0.35	<1	<1	<3
	MW25-20170923	09/23/17	SoundEarth	12,000 <sup>x, ip</sup>	<2,500 <sup>ip</sup>	270	<0.35	<1	<1	<3
	MW99-20170923(DUP)			13,000 <sup>x, ip</sup>	<2,500 <sup>ip</sup>	220	<0.35	<1	<1	<3
	MW25-20171216	12/16/17	SoundEarth	4,000 <sup>x, ip</sup>	<3,000 <sup>ip</sup>	580	<0.35	<1	<1	<3
	MW99-20171216 (DUP)			4,000 <sup>x, ip</sup>	<3,000 <sup>ip</sup>	700	<0.35	<1	<1	<3
	MW25-20180310	03/10/18	SoundEarth	3,300 <sup>x</sup>	<2,500	490	<1	<1	<1	4.7
	MW99-20180310 (DUP)			3,800 <sup>x</sup>	<2,500	510	<1	<1	<1	4.5
	MW25-20180630	06/30/18	SoundEarth	5,300 <sup>x, ip</sup>	630 <sup>x, ip</sup>	490	<1	<1	<1	31
	MW99-20180630 (DUP)			5,500 <sup>x, ip</sup>	410 <sup>x, ip</sup>	340	<1	<1	<1	26
	MW25-20180922	09/22/18	SoundEarth	1,500 <sup>x, ip</sup>	<2,500 <sup>ip</sup>	300	<1	<1	<1	17
	MW99-20180922 (DUP)			1,900 <sup>x, ip</sup>	<2,500 <sup>ip</sup>	160	<1	<1	<1	13
	MW25-20181215	12/15/18	SoundEarth	1,100 <sup>x</sup>	<250	<100	<1	<1	<1	<3
	MW99-20181215 (DUP)			960 <sup>x</sup>	<250	<100	<1	<1	<1	<3
	MW25-20190615	06/15/19	SoundEarth	1,000 <sup>x</sup>	<2,500	<100	<1	<1	<1	<3
	MW99-20190615 (DUP)			1,100 <sup>x</sup>	<2,500	<100	<1	<1	<1	<3
	MW25-20191207	12/07/19	SoundEarth	240 <sup>x</sup>	<250	<100	<1	<1	<1	<3
MW99-20191207 (DUP)	300 <sup>x</sup>			<250	<100	<1	<1	<1	<3	
MW25-20200627	06/27/20	SoundEarth	130 <sup>x</sup>	<250	<100	<1	<1	<1	<3	
MW99-20200627 (DUP)			190 <sup>x</sup>	<250	<100	<1	<1	<1	<3	
<b>MTCA Cleanup Level</b>				<b>500<sup>(4)</sup></b>	<b>500<sup>(4)</sup></b>	<b>1,000/800<sup>(4)(5)</sup></b>	<b>5<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>	<b>700<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>



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Sample Location	Sample Identification	Sample Date	Sampled By	DRPH <sup>(1)</sup> (µg/L)	ORPH <sup>(1)</sup> (µg/L)	GRPH <sup>(2)</sup> (µg/L)	Benzene <sup>(3)</sup> (µg/L)	Toluene <sup>(3)</sup> (µg/L)	Ethylbenzene <sup>(3)</sup> (µg/L)	Total Xylenes <sup>(3)</sup> (µg/L)
IW04	IW04-20150508	05/08/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	IW04-20170601	06/01/17	SoundEarth	--	--	--	<0.35	<1	<1	<3
IW06	IW06-20150507	05/07/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
IW50	IW50-20150803	08/03/15	SoundEarth	5,000 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	IW50-20160715	07/15/16	SoundEarth	39,000 <sup>x</sup>	1,900 <sup>x</sup>	640	<0.35	<1	<1	<3
IW91	IW91-20150506	05/06/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	IW91-20150804	08/04/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	IW91-20151208	12/08/15	SoundEarth	<60	<300	<100	<0.35	<1	<1	<3
	IW91-20160309	03/09/16	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	IW91-20160714	07/14/16	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	IW91-20161020	10/20/16	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	IW91-20170126	01/26/17	SoundEarth	200 <sup>x</sup>	<300	<100	<0.35	<1	<1	<3
	IW91-20170601	06/01/17	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	IW91-20170923	09/23/17	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	IW91-20171216	12/16/17	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	IW91-20180310	03/10/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	IW91-20180630	06/30/18	SoundEarth	<60	<300	<100	<1	<1	<1	<3
	IW91-20180922	09/22/18	SoundEarth	<60	<300	<100	<1	<1	<1	<3
	IW91-20181215	12/15/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	IW91-20190615	06/15/19	SoundEarth	<50	<250	<100	<1	<1	<1	<3
IW91-20191207	12/07/19	SoundEarth	<50	<250	<100	<1	<1	<1	<3	
IW91-20200627	06/27/20	SoundEarth	60 <sup>x</sup>	<250	<100	<1	<1	<1	<1	<3
<b>MTCA Cleanup Level</b>				<b>500<sup>(4)</sup></b>	<b>500<sup>(4)</sup></b>	<b>1,000/800<sup>(4)(5)</sup></b>	<b>5<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>	<b>700<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>



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Sample Location	Sample Identification	Sample Date	Sampled By	DRPH <sup>(1)</sup> (µg/L)	ORPH <sup>(1)</sup> (µg/L)	GRPH <sup>(2)</sup> (µg/L)	Benzene <sup>(3)</sup> (µg/L)	Toluene <sup>(3)</sup> (µg/L)	Ethylbenzene <sup>(3)</sup> (µg/L)	Total Xylenes <sup>(3)</sup> (µg/L)
<b>Boren Avenue North</b>										
MW04	MW04-20110527	05/27/11	SoundEarth	<50	<250	<100	<1	1.3	<1	<3
	MW04-20111012	10/12/11	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW04-20130909	09/09/13	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW04-20150508	05/08/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW04-20150806	08/06/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW04-20151209	12/09/15	SoundEarth	<60	<300	<100	<0.35	<1	<1	<3
	MW04-20160308	03/08/16	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW04-20160713	07/13/16	SoundEarth	<56	<280	<100	<0.35	<1	<1	<3
	MW04-20161019	10/19/16	SoundEarth	<50	<250	<100	--	--	--	--
	MW04-20170124	01/24/17	SoundEarth	150 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW04-20170531	05/31/17	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW04-20170921	09/21/17	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW04-20171214	12/14/17	SoundEarth	<60	<300	<100	<0.35	<1	<1	<3
	MW04-20180309	03/09/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW04-20180629	06/29/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW04-20180920	09/20/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW04-20181214	12/14/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
MW04-20190614	06/14/19	SoundEarth	<50	<250	<100	<1	<1	<1	<3	
MW04-20191205	12/05/19	SoundEarth	<50	<250	<100	<1	<1	<1	<3	
MW04-20200626	06/26/20	SoundEarth	130 <sup>x</sup>	<250	<100	<1	<1	<1	<3	
<b>MTCA Cleanup Level</b>				<b>500<sup>(4)</sup></b>	<b>500<sup>(4)</sup></b>	<b>1,000/800<sup>(4)(5)</sup></b>	<b>5<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>	<b>700<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>
MW05	MW05-20110527	05/27/11	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW05-20111012	10/12/11	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW05-20130910	09/10/13	SoundEarth	<50	<250	<100	<1	<1	<1	<3
<b>DECOMMISSIONED 2015</b>										
<b>MTCA Cleanup Level</b>				<b>500<sup>(4)</sup></b>	<b>500<sup>(4)</sup></b>	<b>1,000/800<sup>(4)(5)</sup></b>	<b>5<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>	<b>700<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>





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**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Sample Location	Sample Identification	Sample Date	Sampled By	DRPH <sup>(1)</sup> (µg/L)	ORPH <sup>(1)</sup> (µg/L)	GRPH <sup>(2)</sup> (µg/L)	Benzene <sup>(3)</sup> (µg/L)	Toluene <sup>(3)</sup> (µg/L)	Ethylbenzene <sup>(3)</sup> (µg/L)	Total Xylenes <sup>(3)</sup> (µg/L)
MW07	MW07-20110531	05/31/11	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW07-20111012	10/12/11	SoundEarth	240 <sup>x</sup>	<250	<100	<1	<1	<1	<3
	MW07-20130909	09/09/13	SoundEarth	120 <sup>x</sup>	<250	<100	<1	<1	<1	<3
	MW07-20150508	05/08/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW07-20150805	08/05/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW07-20151209	12/09/15	SoundEarth	<60	<300	<100	<0.35	<1	<1	<3
	MW07-20160308	03/08/16	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW07-20160713	07/13/16	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW07-20161019	10/19/16	SoundEarth	76 <sup>x</sup>	<250	<100	--	--	--	--
	MW07-20170124	01/24/17	SoundEarth	120 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW07-20170531	05/31/17	SoundEarth	54 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW07-20180308	03/08/18	SoundEarth	<50	<250	<100	<1	<1	<1	<1
	MW07-20180629	06/29/18	SoundEarth	<60	<300	<100	<1	<1	<1	<3
	MW07-20180920	09/20/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW07-20181214	12/14/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW07-20190614	06/14/19	SoundEarth	<50	<250	<100	<1	<1	<1	<3
MW07-20191205	12/05/19	SoundEarth	<50	<250	<100	<1	<1	<1	<3	
MW07-20200630	06/30/20	SoundEarth	<50	<250	<100	<1	<1	<1	<3	
MW13	MW13-20111020	10/20/11	SoundEarth	150 <sup>x</sup>	<250	<100	<1	<1	<1	<3
	MW13-20130910	09/10/13	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW13-20150511	05/11/15	SoundEarth	<70	<350	<100	<0.35 <sup>cf</sup>	<1 <sup>cf</sup>	<1 <sup>cf</sup>	<3 <sup>cf</sup>
	MW13-20150805	08/05/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW13-20151215	12/15/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW13-20160307	03/07/16	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW13-20160712	07/12/16	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW13-20161019	10/19/16	SoundEarth	<50	<250	<100	--	--	--	--
	MW13-20170124	01/24/17	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW13-20170531	05/31/17	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW13-20170921	09/21/17	SoundEarth	120 <sup>x</sup>	<300	<100	<0.35	<1	<1	<3
	MW13-20171214	12/14/17	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW13-20180308	03/08/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW13-20180629	06/29/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW13-20180920	09/20/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW13-20181214	12/14/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW13-20190614	06/14/19	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW13-20191205	12/05/19	SoundEarth	<50	<250	<100	<1	<1	<1	<3
MW13-20200626	06/26/20	SoundEarth	<50	<250	<100	<1	<1	<1	<3	
MW13-20201210	12/10/20	SoundEarth	80 <sup>x</sup>	<250	<100	<1	<1	<1	<3	
MW13-20210623	06/23/21	SoundEarth	100 <sup>x</sup>	<300	<100	<1	<1	<1	<3	
MW13-20211216	12/16/21	SoundEarth	<50	<250	<100	--	--	--	--	
<b>MTCA Cleanup Level</b>				<b>500<sup>(4)</sup></b>	<b>500<sup>(4)</sup></b>	<b>1,000/800<sup>(4) (5)</sup></b>	<b>5<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>	<b>700<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>



**Table 3**  
**Groundwater Analytical Results for Petroleum Hydrocarbons**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Sample Location	Sample Identification	Sample Date	Sampled By	DRPH <sup>(1)</sup> (µg/L)	ORPH <sup>(1)</sup> (µg/L)	GRPH <sup>(2)</sup> (µg/L)	Benzene <sup>(3)</sup> (µg/L)	Toluene <sup>(3)</sup> (µg/L)	Ethylbenzene <sup>(3)</sup> (µg/L)	Total Xylenes <sup>(3)</sup> (µg/L)
MW27	MW27-20151210	12/10/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW27-20160307	03/07/16	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW27-20160713	07/13/16	SoundEarth	<52	<260	<100	<0.35	<1	<1	<3
	MW27-20161019	10/19/16	SoundEarth	<50	<250	<100	--	--	--	--
	MW27-20170124	01/24/17	SoundEarth	<60	<300	<100	<0.35	<1	<1	<3
	MW27-20170531	05/31/17	SoundEarth	<60	<300	<100	<0.35	<1	<1	<3
	MW27-20170921	09/21/17	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW27-20171214	12/14/17	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW27-20180308	03/08/18	SoundEarth	540 <sup>x</sup>	<250	<100	<1	<1	<1	<3
	MW27-20180628	06/28/18	SoundEarth	<60	<300	<100	<1	<1	<1	<3
	MW27-20180920	09/20/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW27-20181214	12/14/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW27-20190614	06/14/19	SoundEarth	<50	<250	<100	<1	<1	<1	<3
MW27-20191205	12/05/19	SoundEarth	<50	<250	<100	<1	<1	<1	<3	
MW27-20200626	06/26/20	SoundEarth	<50	<250	<100	<1	<1	<1	<3	
<b>Terry Avenue North</b>										
MW15	MW15-20121211	12/11/12	SoundEarth	--	--	<100	<0.35	<1	<1	<3
	MW15-20130910	09/10/13	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW15-20150508	05/08/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW15-20150805	08/05/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW15-20151209	12/09/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW15-20160308	03/08/16	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW15-20160713	07/13/16	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW15-20161018	10/18/16	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW15-20170125	01/25/17	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW15-20170531	05/31/17	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW15-20170922	09/22/17	SoundEarth	<60	<300	<100	<0.35	<1	<1	<3
	MW15-20171215	12/15/17	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW15-20180309	03/09/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW15-20180629	06/29/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW15-20180920	09/20/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW15-20181214	12/14/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW15-20190613	06/13/19	SoundEarth	<50	<250	<100	<1	<1	<1	<3
MW15-20191205	12/05/19	SoundEarth	78 <sup>x</sup>	<250	<100	<1	<1	<1	<3	
MW15-20200626	06/26/20	SoundEarth	<52	<250	<100	<1	<1	<1	<3	
Well Damaged 2021										
<b>MTCA Cleanup Level</b>				<b>500<sup>(4)</sup></b>	<b>500<sup>(4)</sup></b>	<b>1,000/800<sup>(4) (5)</sup></b>	<b>5<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>	<b>700<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>



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**Groundwater Analytical Results for Petroleum Hydrocarbons**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Sample Location	Sample Identification	Sample Date	Sampled By	DRPH <sup>(1)</sup> (µg/L)	ORPH <sup>(1)</sup> (µg/L)	GRPH <sup>(2)</sup> (µg/L)	Benzene <sup>(3)</sup> (µg/L)	Toluene <sup>(3)</sup> (µg/L)	Ethylbenzene <sup>(3)</sup> (µg/L)	Total Xylenes <sup>(3)</sup> (µg/L)
<b>Thomas Street</b>										
MW14	MW14-20111020	10/20/11	SoundEarth	160 <sup>x</sup>	<250	<100	<1	<1	<1	<3
	MW14-20130911	09/11/13	SoundEarth	<50	<250	<100	<1	<1	<1	<3
DECOMMISSIONED										
MW16	MW16-20121211	12/11/12	SoundEarth	420 <sup>x</sup>	<250	640	<0.35	<1	<1	1.1
	MW16-20130911	09/11/13	SoundEarth	170 <sup>x</sup>	<250	110	<1	<1	<1	<3
	MW16-20150508	05/08/15	SoundEarth	150 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW16-20150805	08/05/15	SoundEarth	210 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW16-20151210	12/10/15	SoundEarth	420 <sup>x</sup>	<250	110	<0.35	<1	<1	<3
	MW16-20160308	03/08/16	SoundEarth	410 <sup>x</sup>	<250	140	<0.35	<1	<1	<3
	MW16-20160712	07/12/16	SoundEarth	510 <sup>x</sup>	<250	130	<0.35	<1	<1	<3
	MW16-20161019	10/19/16	SoundEarth	310 <sup>x</sup>	<250	<100	--	--	--	--
	MW16-20170125	01/25/17	SoundEarth	140 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW16-20170531	05/31/17	SoundEarth	740 <sup>x</sup>	<250	140	<0.35	<1	<1	<3
	MW16-20170922	09/22/17	SoundEarth	570	<250	130	<0.35	<1	<1	<3
	MW16-20171229	12/29/17	SoundEarth	160 <sup>x</sup>	<250	120	<0.35	<1	<1	<3
MW16-20180309	03/09/18	SoundEarth	260 <sup>x</sup>	<250	120	<1	<1	<1	<3	
WELL DAMAGED 2018										
MW28	MW28-20190613	06/13/19	SoundEarth	140 <sup>x</sup>	<250	160	<1	<1	<1	<3
	MW28-20191205	12/05/19	SoundEarth	98 <sup>x</sup>	<250	150	<1	<1	<1	<3
	MW28-20200626	06/26/20	SoundEarth	120 <sup>x</sup>	<250	140	<1	<1	<1	<3
	MW28-20201211	12/11/20	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW28-20210623	06/23/21	SoundEarth	120 <sup>x</sup>	<250	<100	<1	<1	<1	<3
	MW28-20211216	12/16/21	SoundEarth	190 <sup>x</sup>	600	<100	--	--	--	--
<b>Fairview Avenue North</b>										
MW-C	MW-C-20130911	09/11/13	SoundEarth	<50	<250	<100	<1	<1	<1	<3
<b>MTCA Cleanup Level</b>				<b>500<sup>(4)</sup></b>	<b>500<sup>(4)</sup></b>	<b>1,000/800<sup>(4) (5)</sup></b>	<b>5<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>	<b>700<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>



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**Groundwater Analytical Results for Petroleum Hydrocarbons**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Sample Location	Sample Identification	Sample Date	Sampled By	DRPH <sup>(1)</sup> (µg/L)	ORPH <sup>(1)</sup> (µg/L)	GRPH <sup>(2)</sup> (µg/L)	Benzene <sup>(3)</sup> (µg/L)	Toluene <sup>(3)</sup> (µg/L)	Ethylbenzene <sup>(3)</sup> (µg/L)	Total Xylenes <sup>(3)</sup> (µg/L)
<b>Harrison Street</b>										
MW01	MW01-20110525	05/25/11	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW01-20111011	10/11/11	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW01-20130910	09/10/13	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW01-20150806	08/06/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW01-20160308	03/08/16	SoundEarth	<65	<330	<100	<0.35	<1	<1	<3
	MW01-20160712	07/12/16	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW01-20161018	10/18/16	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW01-20170124	01/24/17	SoundEarth	<25	<125	<100	<0.35	<1	<1	<3
	MW01-20170531	05/31/17	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW01-20171214	12/14/17	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW01-20180309	03/09/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW01-20180628	06/28/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW01-20180920	09/20/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW01-20181214	12/14/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW01-20190614	06/14/19	SoundEarth	<50	<250	<100	<1	<1	<1	<3
MW01-20191205	12/05/19	SoundEarth	<50	<250	<100	<1	<1	<1	<3	
MW01-20200626	06/26/20	SoundEarth	57 <sup>x</sup>	<250	<100	<1	<1	<1	<3	
MW02	MW02-20110525	05/25/11	SoundEarth	100 <sup>x</sup>	<250	<100	<1	<1	<1	<3
	MW02-20111011	10/11/11	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW02-20130911	09/11/13	SoundEarth	<50	<250	<100	<1	<1	<1	<3
DECOMMISSIONED 2015										
<b>MTCA Cleanup Level</b>				<b>500<sup>(4)</sup></b>	<b>500<sup>(4)</sup></b>	<b>1,000/800<sup>(4) (5)</sup></b>	<b>5<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>	<b>700<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>
MW03	MW03-20110527	05/27/11	SoundEarth	130 <sup>x</sup>	<250	<100	<1	<1	<1	<3
	MW03-20111011	10/11/11	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW03-20130911	09/11/13	SoundEarth	<50	<250	<100	<1	<1	<1	<3
DECOMMISSIONED 2015										
<b>MTCA Cleanup Level</b>				<b>500<sup>(4)</sup></b>	<b>500<sup>(4)</sup></b>	<b>1,000/800<sup>(4) (5)</sup></b>	<b>5<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>	<b>700<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>



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**Groundwater Analytical Results for Petroleum Hydrocarbons**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Sample Location	Sample Identification	Sample Date	Sampled By	DRPH <sup>(1)</sup> (µg/L)	ORPH <sup>(1)</sup> (µg/L)	GRPH <sup>(2)</sup> (µg/L)	Benzene <sup>(3)</sup> (µg/L)	Toluene <sup>(3)</sup> (µg/L)	Ethylbenzene <sup>(3)</sup> (µg/L)	Total Xylenes <sup>(3)</sup> (µg/L)
MW26	MW26-20151210	12/10/15	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW26-20160307	03/07/16	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW26-20160712	07/12/16	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW26-20161018	10/18/16	SoundEarth	59 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW26-20170124	01/24/17	SoundEarth	<60	<300	<100	<0.35	<1	<1	<3
	MW26-20170531	05/31/17	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW26-20170921	09/21/17	SoundEarth	130 <sup>x</sup>	<250	<100	<0.35	<1	<1	<3
	MW26-20171214	12/14/17	SoundEarth	<50	<250	<100	<0.35	<1	<1	<3
	MW26-20180309	03/09/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW26-20180628	06/28/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW26-20180920	09/20/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW26-20181214	12/14/18	SoundEarth	<50	<250	<100	<1	<1	<1	<3
	MW26-20190614	06/14/19	SoundEarth	<50	<250	<100	<1	<1	<1	<3
MW26-20191205	12/05/19	SoundEarth	680 <sup>x</sup>	<250	<100	<1	<1	<1	<3	
MW26-20200626	06/26/20	SoundEarth	<50	<250	<100	<1	<1	<1	<3	
SMW06	SMW06-20130910	09/10/13	SoundEarth	130 <sup>x</sup>	<250	400	<1	<1	3.5	3.7
<b>Westlake Avenue North</b>										
SMW09	SMW09-20130910	09/10/13	SoundEarth	79 <sup>x</sup>	<250	<100	<1	<1	<1	<3
<b>MTCA Cleanup Level</b>				<b>500<sup>(4)</sup></b>	<b>500<sup>(4)</sup></b>	<b>1,000/800<sup>(4)(5)</sup></b>	<b>5<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>	<b>700<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>
<b>North-Adjoining Property</b>										
SLU-MW01	MW01-20120229	02/29/12 <sup>(6)</sup>	SoundEarth	150	<250	--	--	--	--	--
	DECOMMISSIONED 2013									
SLU-MW02	MW02-20120229	02/29/12 <sup>(6)</sup>	SoundEarth	<50	<250	--	--	--	--	--
	DECOMMISSIONED 2013									
<b>MTCA Cleanup Level</b>				<b>500<sup>(4)</sup></b>	<b>500<sup>(4)</sup></b>	<b>1,000/800<sup>(4)(5)</sup></b>	<b>5<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>	<b>700<sup>(4)</sup></b>	<b>1,000<sup>(4)</sup></b>

**NOTES:**

**Red** denotes concentrations exceeding the MTCA Method cleanup level for groundwater.

<sup>(1)</sup>Analyzed by Method NWTPH-Dx. The supply well samples collected in August 2010 were passed through a silica gel column prior to analysis to remove organic interference.

<sup>(2)</sup>Analyzed by EPA Method 418.1 or Method NWTPH-Gx.

<sup>(3)</sup>Analyzed by EPA Method 8260C, 8021B or 8240.

<sup>(4)</sup>MTCA Method A Cleanup Levels, Table 720-1 of Section 900 of Chapter 173-340 of WAC, revised November 2007.

<sup>(5)</sup>1,000 µg/L when benzene is not present and 800 µg/L when benzene is present.

<sup>(6)</sup>Sample data compiled from reports on file at the Washington State Department of Ecology.

**Laboratory Notes:**

<sup>c</sup>The sample was centrifuged prior to analysis.

<sup>i</sup>Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

<sup>v</sup>The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

<sup>x</sup>The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

-- = not analyzed, measured, or calculated

< = not detected at a concentration exceeding laboratory reporting limit

µg/L = micrograms per liter

DRPH = diesel-range petroleum hydrocarbons

EPA = US Environmental Protection Agency

GRPH = gasoline-range petroleum hydrocarbons

MTCA = Washington State Model Toxics Control Act

NWTPH = Northwest Total Petroleum Hydrocarbon

ORPH = heavy oil-range petroleum hydrocarbons

SoundEarth = SoundEarth Strategies, Inc.

WAC = Washington Administrative Code



**Table 4**  
**Natural Attenuation Parameters**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Well Identification	Sample Identification	Sample Date	Analytical Results										
			Dissolved Oxygen <sup>(1)</sup> (mg/L)	Chloride <sup>(2)</sup> (mg/L)	Nitrate <sup>(2)</sup> (mg/L)	Total Manganese <sup>(3)</sup> (µg/L)	Total Iron <sup>(3)</sup> (mg/L)	Ferrous Iron <sup>(4)</sup> (mg/L)	Ferric Iron <sup>(5)</sup> (mg/L)	Sulfate <sup>(2)</sup> (mg/L)	Methane <sup>(6)</sup> (µg/L)	Ethane <sup>(6)</sup> (µg/L)	Ethene <sup>(6)</sup> (µg/L)
<b>Troy Laundry Property</b>													
MW18	MW18-20150506	05/06/15	1.99	16.2	5.44	83.7	0.0919	0.0400	0.0519	47.0	<5	<10	<10
	MW18-20150803	08/03/15	2.66	--	--	--	--	--	--	--	--	--	--
	MW18-20151208	12/08/15	1.64	--	--	--	--	--	--	43.6	<5	<10	<10
	MW18-20160714	07/14/16	0.47	--	--	--	--	--	--	1.54	170	<10	<10
	MW18-20170126	01/26/17	1.50	--	--	--	--	--	--	--	2,200	<10	<10
	MW18-20170601	06/01/17	0.58	19.2 <sup>D</sup>	--	--	--	--	--	--	3,500	<10	<10
	MW18-20170923	09/23/17	0.48	15.4 <sup>D</sup>	--	--	--	--	--	--	3,900	<10	<10
	MW18-20171216	12/16/17	0.77	21.5 <sup>D</sup>	--	--	--	--	--	--	2,400	<10	<10
	MW18-20180310	03/10/18	0.38	19.0 <sup>D</sup>	--	--	--	--	--	--	4,700	<10	<10
	MW18-20180630	06/30/18	0.68	17.0 <sup>D</sup>	--	--	--	--	--	--	6,300	<10	<10
	MW18-20180922	09/22/18	0.19	17.4 <sup>D</sup>	--	--	--	--	--	--	4,200 <sup>ve</sup>	<10	<10
	MW18-20181215	12/15/18	0.62	--	<1.00 <sup>D,H</sup>	10,800	12.300	<0.0500 <sup>H</sup>	--	<3.00 <sup>D</sup>	6,400	<10	<10
	MW18-20190615	06/15/19	0.30	--	<0.100 <sup>H</sup>	10,100	13.500	8.35 <sup>DH</sup>	--	0.422 <sup>H</sup>	5,290 <sup>D</sup>	<809 <sup>D</sup>	<757 <sup>D</sup>
	MW18-20191207	12/07/19	0.69	--	<0.100 <sup>H</sup>	9,660	13.800	15.6 <sup>DH</sup>	--	<0.300	2,230 <sup>D</sup>	<16.2	<15.1
	MW18-20200627	06/27/20	0.18	--	<0.100 <sup>H</sup>	8,960	14.300	19.9 <sup>DH</sup>	--	0.479	5,520 <sup>D</sup>	<16.2	<15.1
MW18-20201212	12/12/20	2.98	--	<0.100 <sup>H</sup>	7,980	12.900	17.6 <sup>DH</sup>	--	6.23	8,780 <sup>D</sup>	<16.2	<15.1	
MW18-20210625	06/25/21	0.91	--	--	8,900	13.900	16.3 <sup>DH</sup>	--	<3.00 <sup>D</sup>	5,190 <sup>D</sup>	<15.1	<14.6	
MW18-20211217	12/17/21	0.13	--	<0.100 <sup>H</sup>	9,610	15.700	11.0 <sup>DH</sup>	--	<0.600	8,110 <sup>D</sup>	<15.1	<14.6	
MW19	MW19-20150507	05/07/15	1.75	15.9	4.98	71.6	0.156	<0.0300	0.156	50.3	<5	<10	<10
	MW19-20150803	08/03/15	2.33	--	--	--	--	--	--	--	--	--	--
	MW19-20190615	06/15/19	0.28	--	<0.100 <sup>H</sup>	11,400	10.000	7.81 <sup>DH</sup>	--	0.380 <sup>H</sup>	2,530 <sup>D</sup>	<324 <sup>D</sup>	<303 <sup>D</sup>
	MW19-20191207	12/07/19	0.54	--	<0.100 <sup>H</sup>	9,030	13.300	12.6 <sup>DH</sup>	--	<0.300	6,520 <sup>D</sup>	<16.2	<15.1
	MW19-20200627	06/27/20	0.27	--	<0.100 <sup>H</sup>	14,000	18.100	24.3 <sup>DH</sup>	--	0.550	3,410 <sup>D</sup>	<16.2	<15.1
	MW19-20201212	12/12/20	11.88*	--	<0.100 <sup>H</sup>	14,400	16.700	22.3 <sup>DH</sup>	--	1.15	9,010 <sup>D</sup>	<16.2	<15.1
	MW19-20210625	06/25/21	0.81	--	--	15,200	18.200	14.5 <sup>DH</sup>	--	<2.40 <sup>D</sup>	5,840 <sup>D</sup>	<15.1	<14.6
	MW19-20211217	12/17/21	0.08	--	<0.200 <sup>D,H</sup>	12,600	15.900	14.1 <sup>DH</sup>	--	<1.20 <sup>D</sup>	6,600 <sup>D</sup>	<15.1	<14.6
MW21	MW21-20170601	06/01/17	0.54	26.2 <sup>D</sup>	--	--	--	--	--	--	3,500	<10	<10
	MW21-20170923	09/23/17	0.69	33.5 <sup>D</sup>	--	--	--	--	--	--	4,000	<10	<10
	MW21-20171216	12/16/17	2.67	85.7 <sup>D</sup>	--	--	--	--	--	--	4,800	<10	<10
	MW21-20180310	03/10/18	0.71	89.2 <sup>D</sup>	--	--	--	--	--	--	5,400	<10	<10
	MW21-20180630	06/30/18	0.34	124 <sup>D</sup>	--	--	--	--	--	--	4,400	<10	<10
	MW21-20180922	09/22/18	0.33	97.8 <sup>D</sup>	--	--	--	--	--	--	2,800 <sup>ve</sup>	<10	<10
	MW21-20181215	12/15/18	1.57	--	--	--	--	--	--	--	4,800	<10	<10
	MW21-20190615	06/15/19	0.19	--	--	--	--	--	--	--	2,460 <sup>D</sup>	<809 <sup>D</sup>	<757 <sup>D</sup>
	MW21-20191207	12/07/19	0.77	--	--	--	--	--	--	--	3,980 <sup>D</sup>	<16.2	<15.1
	MW21-20200627	06/27/20	0.17	--	--	--	--	--	--	--	1,790 <sup>D</sup>	<16.2	<15.1
	MW21-20201212	12/12/20	0.20	--	--	--	--	--	--	--	7,520 <sup>D</sup>	<16.2	<15.1
	MW21-20210625	06/25/21	0.49	--	--	--	--	--	--	--	4,970 <sup>D</sup>	<15.1	<14.6
MW21-20211217	12/17/21	0.68	--	--	--	--	--	--	--	5,020 <sup>D</sup>	<15.1	<14.6	



**Table 4**  
**Natural Attenuation Parameters**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Well Identification	Sample Identification	Sample Date	Analytical Results										
			Dissolved Oxygen <sup>(1)</sup> (mg/L)	Chloride <sup>(2)</sup> (mg/L)	Nitrate <sup>(2)</sup> (mg/L)	Total Manganese <sup>(3)</sup> (µg/L)	Total Iron <sup>(3)</sup> (mg/L)	Ferrous Iron <sup>(4)</sup> (mg/L)	Ferric Iron <sup>(5)</sup> (mg/L)	Sulfate <sup>(2)</sup> (mg/L)	Methane <sup>(6)</sup> (µg/L)	Ethane <sup>(6)</sup> (µg/L)	Ethene <sup>(6)</sup> (µg/L)
MW22	MW22-20181215	12/15/18	0.67	--	1.09 <sup>D,H</sup>	13,000	6.010	4.06 <sup>D,H</sup>	--	<3.00 <sup>D</sup>	4,900	<10	<10
	MW22-20190615	06/15/19	0.38	--	<1.00 <sup>H</sup>	11,400	11.200	11.6 <sup>D,H</sup>	--	<0.300 <sup>H</sup>	3,090 <sup>D</sup>	<809 <sup>D</sup>	<757 <sup>D</sup>
	MW22-20191207	12/07/19	2.02	--	<0.200 <sup>DH</sup>	10,900	8.010	7.41	--	0.762 <sup>D</sup>	5,370 <sup>D</sup>	<16.2	<15.1
	MW22-20200627	06/27/20	0.40	--	<0.200 <sup>DH</sup>	9,810	8.000	11.0 <sup>DH</sup>	--	<0.600 <sup>D</sup>	1,780 <sup>D</sup>	<16.2	<15.1
	MW22-20201212	12/12/20	0.31	--	<0.200 <sup>DH</sup>	10,800	15.000	22.0 <sup>DH</sup>	--	<0.600 <sup>D</sup>	6,290 <sup>D</sup>	<16.2	<15.1
	MW22-20210625	06/25/21	0.55	--	--	11,000	11.700	14.9 <sup>DH</sup>	--	<6.00 <sup>D</sup>	2,560 <sup>D</sup>	<15.1	<14.6
MW22-20211217	12/17/21	0.68	--	<0.500 <sup>DH</sup>	10,600	11.800	16.4 <sup>DH</sup>	--	<3.00 <sup>D</sup>	4,510 <sup>D</sup>	<15.1	<14.6	
MW23	MW23-20150507	05/07/15	2.19	30.9	8.84	173	0.262	0.0800	0.182	49.2	<5	<10	<10
	MW23-20150804	08/04/15	0.73	--	--	--	--	--	--	--	--	--	--
	MW23-20170601	06/01/17	0.49	25.8 <sup>D</sup>	--	--	--	--	--	--	2,600	<10	<10
	MW23-20170923	09/23/17	0.46	10.5 <sup>D</sup>	--	--	--	--	--	--	1,700	<10	<10
	MW23-20171216	12/16/17	0.84	30.9 <sup>D</sup>	--	--	--	--	--	--	3,700	<10	<10
	MW23-20180310	03/10/18	2.25	26.1 <sup>D</sup>	--	--	--	--	--	--	3,900	<10	<10
	MW23-20180630	06/30/18	0.70	21.1 <sup>D</sup>	--	--	--	--	--	--	3,400	<10	<10
	MW23-20180922	09/22/18	0.31	20.3 <sup>D</sup>	--	--	--	--	--	--	4,600 <sup>ve</sup>	<10	<10
	MW23-20181215	12/15/18	0.79	--	<1.00 <sup>D,H</sup>	32,300	14.300	3.95 <sup>D,H</sup>	--	<3.00 <sup>D</sup>	3,800	<10	<10
	MW23-20190615	06/15/19	0.50	--	<0.100 <sup>H</sup>	26,700	12.300	13.0 <sup>DH</sup>	--	0.378 <sup>H</sup>	2,900 <sup>D</sup>	<809 <sup>D</sup>	<757 <sup>D</sup>
	MW23-20191207	12/07/19	2.12	--	<0.200 <sup>DH</sup>	22,100	14.600	7.41 <sup>DH</sup>	--	0.762 <sup>D</sup>	5,370 <sup>D</sup>	<16.2	<15.1
	MW23-20200627	06/27/20	0.18	--	<0.100 <sup>H</sup>	16,500	9.070	12.6 <sup>DH</sup>	--	0.508	4,590 <sup>D</sup>	<16.2	<15.1
	MW23-20201212	12/12/20	0.29	--	<0.200 <sup>DH</sup>	15,200	12.700	16.8 <sup>DH</sup>	--	0.634 <sup>D</sup>	10,100 <sup>D</sup>	<16.2	<15.1
MW23-20210625	06/25/21	0.29	--	--	14,600	10.400	13.6 <sup>DH</sup>	--	<3.00 <sup>D</sup>	3,840 <sup>D</sup>	<15.1	<14.6	
MW23-20211217	12/17/21	0.39	--	<0.200 <sup>DH</sup>	11,700	11.500	15.2 <sup>DH</sup>	--	<1.20 <sup>D</sup>	4,990 <sup>D</sup>	<15.1	<14.6	
MW24	MW24-20150506	05/06/15	1.04	16.7	1.93	18.2	0.0714	0.0300	0.0414	16.3	<5	<10	<10
	MW24-20150804	08/04/15	0.45	--	--	--	--	--	--	--	--	--	--
	MW24-20151208	12/08/15	1.00	--	--	--	--	--	--	15.8	<5	<10	<10
	MW24-20160715	07/15/16	0.29	--	--	--	--	--	--	1.56	13 <sup>jl</sup>	<10	<10
	MW24-20170125	01/25/17	1.10	--	--	--	--	--	--	<1.50	2,100	<10	<10
	MW24-20170601	06/01/17	0.38	16.0 <sup>D</sup>	--	--	--	--	--	--	4,500	<10	<10
	MW24-20170924	09/24/17	0.27	19.4 <sup>D</sup>	--	--	--	--	--	--	2,800	<10	<10
	MW24-20171216	12/16/17	2.69	22.4 <sup>D</sup>	--	--	--	--	--	--	3,600	<10	<10
	MW24-20180310	03/10/18	0.70	20.2 <sup>D</sup>	--	--	--	--	--	--	3,900 <sup>ve</sup>	<10	<10
	MW24-20180630	06/30/18	0.44	13.6 <sup>D</sup>	--	--	--	--	--	--	1,800	<10	<10
	MW24-20180630	06/30/18	3.20	30.4 <sup>D</sup>	--	--	--	--	--	--	1,300	<10	<10
	MW24-20181215	12/15/18	0.44	--	<1.00 <sup>D,H</sup>	17,400	11.300	1.53 <sup>H</sup>	--	<3.00 <sup>D</sup>	3,600	<10	<10
	MW24-20190615	06/15/19	0.29	--	<0.100 <sup>H</sup>	21,900	11.600	11.1 <sup>DH</sup>	--	0.348 <sup>H</sup>	2,660 <sup>D</sup>	<809 <sup>D</sup>	<757 <sup>D</sup>
	MW24-20191207	12/07/19	0.66	--	<0.100 <sup>H</sup>	20,700	10.700	10.6 <sup>DH</sup>	--	<0.300	3,960 <sup>D</sup>	<16.2	<15.1
	MW24-20200627	06/27/20	0.26	--	<0.100 <sup>H</sup>	21,900	9.830	15.9 <sup>DH</sup>	--	0.309	5,460 <sup>D</sup>	<16.2	<15.1
	MW24-20201212	12/12/20	2.03	--	<0.100 <sup>H</sup>	20,900	13.500	17.8 <sup>DH</sup>	--	0.300	4,170 <sup>D</sup>	<16.2	<15.1
MW24-20210625	06/25/21	0.93	--	--	24,500	18.300	21.9 <sup>DH</sup>	--	<3.00 <sup>D</sup>	6,190 <sup>D</sup>	<15.1	<14.6	
MW24-20211217	12/17/21	0.12	--	<0.200 <sup>DH</sup>	26,500	14.800	18.7 <sup>DH</sup>	--	<1.20 <sup>D</sup>	7,660 <sup>D</sup>	<15.1	<14.6	



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Well Identification	Sample Identification	Sample Date	Analytical Results										
			Dissolved Oxygen <sup>(1)</sup> (mg/L)	Chloride <sup>(2)</sup> (mg/L)	Nitrate <sup>(2)</sup> (mg/L)	Total Manganese <sup>(3)</sup> (µg/L)	Total Iron <sup>(3)</sup> (mg/L)	Ferrous Iron <sup>(4)</sup> (mg/L)	Ferric Iron <sup>(5)</sup> (mg/L)	Sulfate <sup>(2)</sup> (mg/L)	Methane <sup>(6)</sup> (µg/L)	Ethane <sup>(6)</sup> (µg/L)	Ethene <sup>(6)</sup> (µg/L)
MW25	MW25-20150507	05/07/15	2.87	21.8	8.32	190	1.850	0.190 <sup>RA</sup>	1.66	56.7	<5	<10	<10
	MW25-20150805	08/06/15	1.47	--	--	--	--	--	--	--	--	--	--
	MW25-20181215	12/15/18	0.69	--	<1.00 <sup>D,H</sup>	14,600	9.970	<0.0500 <sup>H</sup>	--	<3.00 <sup>D</sup>	8,900	<10	<10
	MW25-20190615	06/15/19	0.59	--	<0.100 <sup>H</sup>	9,560	12.300	7.60 <sup>DH</sup>	--	0.380 <sup>H</sup>	9,670 <sup>DE</sup>	<324 <sup>D</sup>	<303 <sup>D</sup>
	MW25-20191207	12/07/19	0.63	--	<0.100 <sup>H</sup>	6,850	13.500	13.8 <sup>DH</sup>	--	<0.300	7,480 <sup>D</sup>	<16.2	<15.1
	MW25-20200627	06/27/20	0.23	--	<0.100 <sup>H</sup>	5,290	15.100	20.1 <sup>DH</sup>	--	0.473	10,200 <sup>D</sup>	<16.2	<15.1
	MW25-20201212	12/12/20	23.36*	--	<0.100 <sup>H</sup>	7,390	16.200	21.6 <sup>DH</sup>	--	0.342	5,690 <sup>D</sup>	<16.2	<15.1
	MW25-20210625	06/25/21	0.82	--	--	8,010	19.300	25.6 <sup>DH</sup>	--	<3.00 <sup>D</sup>	7,390 <sup>D</sup>	<15.1	<14.6
MW25-20211217	12/17/21	0.24	--	<0.200 <sup>D,H</sup>	8,390	15.500	18.8 <sup>DH</sup>	--	4.71 <sup>D</sup>	3,960 <sup>D</sup>	<15.1	<14.6	
IW04	IW04-20150508	05/08/15	6.28*	10.8	3.75	12.0	0.230	<0.0300	0.230	34.1	<5	<10	<10
	IW04-20181215	12/15/18	0.64	--	1.03 <sup>D,H</sup>	11,800	19.700	0.169 <sup>H</sup>	--	8.89 <sup>D</sup>	--	--	--
	IW04-20190615	06/15/19	0.24	--	<0.100 <sup>H</sup>	12,900	17.900	0.0865 <sup>H</sup>	--	0.759	--	--	--
	IW04-20191207	12/07/19	0.98	--	<0.200 <sup>DH</sup>	11,700	15.600	<0.0500	--	0.912 <sup>D</sup>	--	--	--
	IW04-20200627	06/27/20	5.31*	--	<0.100 <sup>H</sup>	10,600	16.400	25.3 <sup>DH</sup>	--	0.492	--	--	--
	IW04-20201212	12/12/20	2.00	--	<0.100 <sup>H</sup>	11,100	16.500	18.5 <sup>DH</sup>	--	0.347	--	--	--
	IW04-20210625	06/25/21	0.76	--	--	11,200	16.800	23.3 <sup>DH</sup>	--	<3.00 <sup>D</sup>	--	--	--
	IW04-20211217	12/17/21	0.19	--	<0.100 <sup>H</sup>	11,500	15.800	23.1 <sup>DH</sup>	--	<0.600	--	--	--
IW50	IW50-20170602	06/02/17	0.60	29.9 <sup>D</sup>	--	--	--	--	--	--	3,700	<10	<10
	IW50-20170924	09/24/17	0.24	16.1 <sup>D</sup>	--	--	--	--	--	--	3,200	<10	<10
	IW50-20171216	12/16/17	2.71	20.5 <sup>D</sup>	--	--	--	--	--	--	5,900	<10	<10
	IW50-20180310	03/10/18	0.40	20.5 <sup>D</sup>	--	--	--	--	--	--	5,100	<10	<10
	IW50-20180630	06/30/18	0.31	23.8 <sup>D</sup>	--	--	--	--	--	--	2,700	<10	<10
	IW50-20180922	09/22/18	0.66	22.3 <sup>D</sup>	--	--	--	--	--	--	4,000 <sup>ve</sup>	<10	<10
	IW50-20181215	12/15/18	1.28	--	<1.00 <sup>D,H</sup>	11,900	10.300	1.88 <sup>H</sup>	--	12.1 <sup>D</sup>	6,100	<10	<10
	IW50-20190615	06/15/19	0.38	--	<0.100 <sup>H</sup>	9,670	7.550	7.08 <sup>DH</sup>	--	11.0	3,110 <sup>D</sup>	<324 <sup>D</sup>	<303 <sup>D</sup>
	IW50-20191207	12/07/19	1.02	--	<0.100 <sup>H</sup>	8,090	7.170	7.46 <sup>DH</sup>	--	11.0	4,120 <sup>D</sup>	<16.2	<15.1
	IW50-20200627	06/27/20	8.61*	--	0.232 <sup>H</sup>	15,800	16.900	25.0 <sup>DH</sup>	--	2.47	3,690 <sup>D</sup>	<16.2	<15.1
	IW50-20201212	12/12/20	0.24	--	<0.400 <sup>DH</sup>	13,200	18.000	24.2 <sup>DH</sup>	--	1.34 <sup>D</sup>	13,500 <sup>D</sup>	<16.2	<15.1
	IW50-20210625	06/25/21	0.17	--	--	13,400	16.400	24.8 <sup>DH</sup>	--	<3.00 <sup>D</sup>	3,920 <sup>D</sup>	<15.1	<14.6
IW50-20211217	12/17/21	0.05	--	<0.200	15,500	17.000	22.4 <sup>DH</sup>	--	<1.20 <sup>D</sup>	6,890 <sup>D</sup>	<15.1	<14.6	
IW61	IW61-20170602	06/02/17	0.49	7.18 <sup>D</sup>	--	--	--	--	--	--	4,900	<10	<10
	IW61-20170923	09/23/17	0.79	9.25 <sup>D</sup>	--	--	--	--	--	--	4,400	<10	<10
	IW61-20171216	12/16/17	0.79	11.0 <sup>D</sup>	--	--	--	--	--	--	3,000	<10	<10
	IW61-20180310	03/10/18	1.28	17.8 <sup>D</sup>	--	--	--	--	--	--	3,400	<10	<10
	IW61-20180630	06/30/18	0.39	15.3 <sup>D</sup>	--	--	--	--	--	--	2,900	<10	<10
	IW61-20180922	09/22/18	0.17	11.4 <sup>D</sup>	--	--	--	--	--	--	5,400 <sup>ve</sup>	<10	<10
	IW61-20181215	12/15/18	0.73	--	<1.00 <sup>D,H</sup>	20,100	50.500	8.83 <sup>D,H</sup>	--	<3.00 <sup>D</sup>	5,500	<10	<10
	IW61-20190615	06/15/19	0.32	--	<0.100 <sup>H</sup>	11,800	25.500	30.5 <sup>D,H</sup>	--	0.338	2,440 <sup>D</sup>	<324 <sup>D</sup>	<303 <sup>D</sup>
	IW61-20191207	12/07/19	0.82	--	<0.100 <sup>H</sup>	11,000	22.300	24.8 <sup>D,H</sup>	--	<0.300	3,860 <sup>D</sup>	<16.2	<15.1
	IW61-20200627	06/27/20	0.23	--	<0.100 <sup>H</sup>	10,300	24.400	38.1 <sup>D,H</sup>	--	0.615	3,100 <sup>D</sup>	<16.2	<15.1
	IW61-20201212	12/12/20	0.34	--	<0.100 <sup>H</sup>	12,600	25.700	32.8 <sup>D,H</sup>	--	<0.300	4,580 <sup>D</sup>	<16.2	<15.1
	IW61-20210625	06/25/21	0.25	--	--	13,000	24.500	31.5 <sup>D,H</sup>	--	<3.00 <sup>D</sup>	2,430 <sup>D</sup>	<15.1	<14.6
IW61-20211217	12/17/21	0.43	--	0.248 <sup>D,H</sup>	12,300	20.600	30.4 <sup>D,H</sup>	--	<1.20 <sup>D</sup>	5,040 <sup>D</sup>	<15.1	<14.6	





**Table 4**  
**Natural Attenuation Parameters**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Well Identification	Sample Identification	Sample Date	Analytical Results										
			Dissolved Oxygen <sup>(1)</sup> (mg/L)	Chloride <sup>(2)</sup> (mg/L)	Nitrate <sup>(2)</sup> (mg/L)	Total Manganese <sup>(3)</sup> (µg/L)	Total Iron <sup>(3)</sup> (mg/L)	Ferrous Iron <sup>(4)</sup> (mg/L)	Ferric Iron <sup>(5)</sup> (mg/L)	Sulfate <sup>(2)</sup> (mg/L)	Methane <sup>(6)</sup> (µg/L)	Ethane <sup>(6)</sup> (µg/L)	Ethene <sup>(6)</sup> (µg/L)
<b>Boren Avenue North</b>													
MW04	MW04-20110527	05/27/11	6.24	--	--	--	--	--	--	--	--	--	--
	MW04-20111012	10/12/11	6.17	--	--	--	--	--	--	--	--	--	--
	MW04-20130909	09/09/13	5.49	--	--	--	--	--	--	--	--	--	--
	MW04-20150508	05/08/15	0.433	29.9	16.7	3.32	0.0667	<0.0300	0.0667	45.6	<5	<10	<10
	MW04-20150806	08/06/15	6.09	--	--	--	--	--	--	--	--	--	--
	MW04-20181214	12/14/18	4.83	--	17.9 <sup>D,H</sup>	22.9	0.506	0.0677 <sup>H</sup>	--	43.2 <sup>D</sup>	<5	<10	<10
	MW04-20190614	06/14/19	4.15	--	14.8 <sup>D,H</sup>	15.9	0.327	0.129	--	46.7 <sup>D</sup>	<8.63	<16.2	<15.1
	MW04-20191205	12/05/19	7.97	--	24.4 <sup>D,H</sup>	7.59	0.254	<0.0500	--	41.4 <sup>D</sup>	<8.63	<16.2	<15.1
	MW04-20200626	06/26/20	7.78	--	6.32 <sup>D,H</sup>	3.63	0.158	<0.0500 <sup>H</sup>	--	40.7 <sup>D</sup>	107	<16.2	<15.1
	MW04-20201211	12/11/20	6.63	--	7.14 <sup>D,H</sup>	11.6	0.388	<0.0500 <sup>H</sup>	--	40.0 <sup>D</sup>	<8.63	<16.2	<15.1
	MW04-20210623	06/23/21	2.23	--	4.86 <sup>D</sup>	24.1	1.630	<0.100 <sup>H</sup>	--	41.9 <sup>D</sup>	<6.75	<15.1	<14.6
MW04-20211215	12/15/21	1.07	--	9.95 <sup>D,H</sup>	2.26	0.104	<0.100	--	33.1 <sup>D</sup>	<6.75	<15.1	<14.6	
MW07	MW07-20110531	05/31/11	5.70	--	--	--	--	--	--	--	--	--	--
	MW07-20111012	10/12/11	2.92	--	--	--	--	--	--	--	--	--	--
	MW07-20130909	09/09/13	2.71	--	--	--	--	--	--	--	--	--	--
	MW07-20150508	05/08/15	4.79	34.5	30.1	18.2	0.0825	<0.0300	0.0825	41.1	<5	<10	<10
	MW07-20150805	08/05/15	4.65	--	--	--	--	--	--	--	--	--	--
	MW07-20170531	05/31/17	4.45	27.9 <sup>D</sup>	--	--	--	--	--	--	<5	<10	<10
	MW07-20180308	03/08/18	7.75	23.3 <sup>D</sup>	--	--	--	--	--	--	<5	<10	<10
	MW07-20180629	06/29/18	7.38	32.5 <sup>D</sup>	--	--	--	--	--	--	<5	<10	<10
	MW07-20180920	09/20/18	8.76	28.7 <sup>D</sup>	--	--	--	--	--	--	<5	<10	<10
	MW07-20181214	12/14/18	7.57	--	26.5 <sup>D,H</sup>	13.5	0.117	0.0959 <sup>H</sup>	--	56.1 <sup>D</sup>	<5	<10	<10
	MW07-20190614	06/14/19	7.91	--	29.1 <sup>D,H</sup>	9.26	0.225	0.0818	--	51.0 <sup>D</sup>	<8.63	<16.2	<15.1
	MW07-20191205	12/05/19	6.85	--	34.9 <sup>D,H</sup>	5.89	203	0.0654 <sup>H</sup>	--	49.6 <sup>D</sup>	<8.63	<16.2	<15.1
	MW07-20200630	06/30/20	4.95	--	--	6.24	0.111	<0.0500 <sup>H</sup>	--	41.7 <sup>D</sup>	<8.63	<16.2	<15.1
	MW07-20201210	12/10/20	1.39	--	13.4 <sup>D,H</sup>	3.91	0.0926	<0.0500 <sup>H</sup>	--	30.7 <sup>D</sup>	328 <sup>D</sup>	<16.2	<15.1
MW07-20210623	06/23/21	4.91	--	14.0 <sup>D,H</sup>	15.2	0.166	<0.100 <sup>H</sup>	--	32.0 <sup>D</sup>	317 <sup>D</sup>	<15.1	<14.6	
MW07-20211215	12/15/21	1.12	--	9.72 <sup>D,H</sup>	8.50	0.133	<0.100	--	17.4 <sup>D</sup>	<6.75	<15.1	<14.6	
MW13	MW13-20111020	10/20/11	2.12	--	--	--	--	--	--	--	--	--	--
	MW13-20130910	09/10/13	3.67	--	--	--	--	--	--	--	--	--	--
	MW13-20150511	05/11/15	4.71	32.9	5.07	2.770	73.200	4.60	68.60	44.5	<5	<10	<10
	MW13-20150805	08/05/15	3.91	--	--	--	--	--	--	--	--	--	--
	MW13-20211216	12/16/21	4.30	--	--	--	--	--	--	--	--	--	--



**Table 4**  
**Natural Attenuation Parameters**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Well Identification	Sample Identification	Sample Date	Analytical Results										
			Dissolved Oxygen <sup>(1)</sup> (mg/L)	Chloride <sup>(2)</sup> (mg/L)	Nitrate <sup>(2)</sup> (mg/L)	Total Manganese <sup>(3)</sup> (µg/L)	Total Iron <sup>(3)</sup> (mg/L)	Ferrous Iron <sup>(4)</sup> (mg/L)	Ferric Iron <sup>(5)</sup> (mg/L)	Sulfate <sup>(2)</sup> (mg/L)	Methane <sup>(6)</sup> (µg/L)	Ethane <sup>(6)</sup> (µg/L)	Ethene <sup>(6)</sup> (µg/L)
<b>Thomas Street</b>													
MW16	MW16-20130911	09/11/13	3.64	--	--	--	--	--	--	--	--	--	--
	MW16-20150508	05/08/15	0.68	27.6	0.694	484	0.488	0.0700	0.4180	7.28	<5	<10	<10
	MW16-20150805	08/05/15	0.40	--	--	--	--	--	--	--	--	--	--
	MW16-20151210	12/10/15	0.73	--	--	--	--	--	--	8.09	<5	<10	<10
	MW16-20160712	07/12/16	0.47	--	--	--	--	--	--	4.57	2,500 <sup>ve</sup>	<10	<10
	MW16-20170125	01/25/17	0.46	--	--	--	--	--	--	14.2	530	<10	<10
	MW16-20170531	05/31/17	0.65	11.6 <sup>D</sup>	--	--	--	--	--	--	25	<10	<10
	MW16-20170922	09/22/17	0.72	10.2 <sup>D</sup>	--	--	--	--	--	--	8	<10	<10
	MW16-20171229	12/29/17	2.13	15.2 <sup>D</sup>	--	--	--	--	--	--	340	<10	<10
MW16-20180309	03/09/18	0.23	11.8 <sup>D</sup>	--	--	--	--	--	--	6.5	<10	<10	
<b>WELL DAMAGED 2018</b>													
MW28	MW28-20190613	06/13/19	1.08	--	<0.500 <sup>D,H</sup>	1,140	1.100	1.02 <sup>H</sup>	--	2.10 <sup>D</sup>	15.3	<16.2	<15.1
	MW28-20191204	12/04/19	0.24	--	<0.200 <sup>D,H</sup>	651	1.550	1.26 <sup>H</sup>	--	<0.600 <sup>D</sup>	59	<16.2	<15.1
	MW28-20200626	06/26/20	0.55	--	<0.200 <sup>D,H</sup>	452	1.450	1.48 <sup>H</sup>	--	0.391	43.8	<16.2	<15.1
	MW28-20201211	12/11/20	1.47	--	<0.200 <sup>D,H</sup>	470	0.576	0.359 <sup>H</sup>	--	0.748 <sup>D</sup>	72.3	<16.2	<15.1
	MW28-20210623	06/23/21	3.67	--	<0.100 <sup>H</sup>	617	1.340	1.28 <sup>H</sup>	--	9.58	53.2	<15.1	<14.6
	MW28-20211216	12/16/21	0.44	--	0.110 <sup>J,D,H</sup>	744	7.380	1.17 <sup>H</sup>	--	8.39 <sup>D</sup>	143	<15.1	<14.6
<b>Harrison Street</b>													
MW26	MW26-20181214	12/14/18	0.62	--	5.06 <sup>D,H</sup>	35.4	0.134	0.133 <sup>H</sup>	--	34.2 <sup>D</sup>	1,500	<10	<10
	MW26-20190614	06/14/19	0.59	--	7.10 <sup>D,H</sup>	62.1	0.29	0.136	--	45.0 <sup>D</sup>	4,120 <sup>D</sup>	<324 <sup>D</sup>	<303 <sup>D</sup>
	MW26-20191205	12/05/19	0.7	--	1.74 <sup>D</sup>	906	4.830	6.12 <sup>D,H</sup>	--	27.8 <sup>D</sup>	3.80 <sup>D</sup>	<16.2	<15.1
	MW26-20200626	06/26/20	0.19	--	0.208 <sup>H</sup>	806	0.656	0.595 <sup>H</sup>	--	37.4 <sup>D</sup>	1,340 <sup>D</sup>	<16.2	<15.1
	MW26-20201211	12/11/20	0.64	--	<0.100 <sup>H</sup>	605	0.230	0.195 <sup>H</sup>	--	19.5 <sup>D</sup>	263 <sup>D</sup>	<16.2	<15.1
	MW26-20210623	06/23/21	0.33	--	<0.400 <sup>D,H</sup>	579	0.497	0.382 <sup>H</sup>	--	32.5 <sup>D</sup>	12.9	<15.1	<14.6
	MW26-20211215	12/15/21	0.55	--	<0.100 <sup>H</sup>	496	0.371	0.126 <sup>H</sup>	--	29.3 <sup>D</sup>	83.7	<15.1	<14.6

**NOTES:**

Analyses performed by Friedman & Bruya, Inc. or Fremont Analytical Inc. of Seattle, Washington.

<sup>(1)</sup> Parameter is measured in the field using water quality meter with flow-through cell. The reported value is the last reading prior to sampling groundwater.

<sup>(2)</sup> Analyzed by EPA Method 300.0.

<sup>(3)</sup> Analyzed by EPA Method 200.8.

<sup>(4)</sup> Analyzed by Standard Method 3500-Fe B.

<sup>(5)</sup> Ferric iron concentration = total iron concentration – ferrous iron concentration.

<sup>(6)</sup> Analyzed by Method RSK-175.

**Laboratory Notes:**

<sup>D</sup> Dilution was required.

<sup>H</sup> Holding times for preparation or analysis exceeded.

<sup>J</sup> Analyte detected below Reporting Limit.

<sup>jl</sup> The analyte result in the laboratory control sample is out of control limits. The reported concentrations is an estimate.

<sup>RA</sup> Indicates reanalysis with background correction for turbidity.

<sup>ve</sup> They analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

\* Anomalous reading, attributed to meter error.

-- = not measured/ not applicable

< = not detected at a concentration exceeding the laboratory reporting limit

µg/L = micrograms per liter

EPA = US Environmental Protection Agency

mg/L = milligrams per liter



**Table 5**  
**Geochemical and Water Quality Parameters**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Well Identification	Sample Identification	Sample Date	pH <sup>(1)</sup>	ORP <sup>(1)</sup> (mV)	Dissolved Oxygen <sup>(1)</sup> (mg/L)	Specific Conductivity <sup>(1)</sup> (mS/cm)	Turbidity <sup>(1)</sup> (NTU)	Temperature <sup>(1)</sup> (°C)	Alkalinity <sup>(2)</sup> (mg/L CaCO <sub>3</sub> )	Total Organic Carbon <sup>(3)</sup> (mg/L)
<b>Troy Laundry Property</b>										
MW17	MW17-20150506	05/06/15	6.87	169.0	3.30	0.387	1.01	14.53	--	--
	MW17-20150804	08/04/15	6.17	129.0	4.45	0.477	2.61	15.52	--	--
	MW17-20151207	12/07/15	6.89	221.5	4.12	0.398	3.3	14.60	--	--
	MW17-20160308	03/08/16	6.67	160	1.39	0.365	0.8	14.30	--	--
	MW17-20160714	07/14/16	6.62	51.1	3.59	0.355	1.19	14.36	--	--
	MW17-20161020	10/20/16	6.75	203.3	0.84	0.384	2.72	14.44	--	--
	MW17-20170126	01/26/17	6.66	-40.7	0.57	0.386	2.24	14.14	--	--
	MW17-20170601	06/01/17	6.50	-147.6	0.54	0.375	12.61	14.48	--	--
	MW17-20170923	09/23/17	6.34	170.4	0.31	0.509	3.96	15.13	--	--
	MW17-20171216	12/16/17	6.82	22.3	0.26	0.501	3.37	12.60	--	--
	MW17-20180310	03/10/18	6.82	22.3	0.26	0.501	3.37	12.60	--	--
	MW17-20180630	06/30/18	6.85	14.8	1.07	0.723	8.60	14.87	--	--
	MW17-20180922	09/22/18	6.79	16.9	0.17	0.71	9.38	15.20	--	--
	MW17-20181215	12/15/18	6.58	18.8	0.41	0.677	6.70	14.77	--	--
	MW17-20190615	06/15/19	6.67	83.8	0.36	0.634	3.81	14.90	--	--
	MW17-20191207	12/07/19	6.62	-9.8	1.34	0.581	2.12	11.32	--	--
	MW17-20200627	06/27/20	6.68	-82.3	3.82	0.537	9.64	15.00	--	--
MW17-20201212	12/12/20	6.58	-19.6	1.09	0.526	9.28	14.38	--	--	
MW17-20210625	06/25/21	6.67	-110.6	0.94	0.507	1.42	14.71	--	--	
MW17-20211217	12/17/21	6.74	-41.9	0.12	0.67	--	14.50	--	--	



**Table 5**  
**Geochemical and Water Quality Parameters**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Well Identification	Sample Identification	Sample Date	pH <sup>(1)</sup>	ORP <sup>(1)</sup> (mV)	Dissolved Oxygen <sup>(1)</sup> (mg/L)	Specific Conductivity <sup>(1)</sup> (mS/cm)	Turbidity <sup>(1)</sup> (NTU)	Temperature <sup>(1)</sup> (°C)	Alkalinity <sup>(2)</sup> (mg/L CaCO <sub>3</sub> )	Total Organic Carbon <sup>(3)</sup> (mg/L)
MW18	MW18-20150506	05/06/15	6.52	172.5	1.99	0.480	0.88	14.34	142	<0.500
	MW18-20150803	08/03/15	5.75	82.2	2.66	0.598	2.74	15.70	--	--
	MW18-20151208	12/08/15	7.74	115.6	1.64	0.594	1.85	14.08	--	--
	MW18-20160308	03/08/16	6.41	156.7	1.30	0.469	1.3	14.26	--	1.01
	MW18-20160608	06/08/16	6.66	8.8	1.5	--	--	--	--	--
	MW18-20160616	06/16/16	6.2	0.8	1.4	--	--	--	--	--
	MW18-20160623	06/23/16	5.87	-57.9	0.43	--	--	--	--	--
	MW18-20160629	06/29/16	5.43	-33	1.08	--	--	--	--	--
	MW18-20160706	07/06/16	5.29	-33.7	1.8	--	--	--	--	--
	MW18-20160714	07/14/16	5.43	8.7	0.47	0.883	9.3	14.89	--	2,300
	MW18-20160825	08/25/16	4.97	38.9	0.55	--	--	--	--	--
	MW18-20161020	10/20/16	5.46	65.5	0.79	1.220	7.69	14.83	--	1,900
	MW18-20170126	01/26/17	5.65	7.2	1.50	0.956	8.1	13.85	--	823
	MW18-20170601	06/01/17	6.19	-167.3	0.58	1.284	6.02	15.21	--	1,090 <sup>D</sup>
	MW18-20170923	09/23/17	6.13	48.1	0.48	1.014	55.7	16.37	--	253 <sup>D</sup>
	MW18-20171216	12/16/17	6.52	-21.2	0.77	0.911	40.9	12.04	--	173 <sup>D</sup>
	MW18-20180310	03/10/18	6.18	-8.0	0.38	0.833	27.1	14.73	--	108 <sup>D</sup>
	MW18-20180630	06/30/18	6.30	-31.9	0.68	1.008	12.4	15.49	--	47.2 <sup>D</sup>
	MW18-20180922	09/22/18	6.31	-18.7	0.19	1.000	20.8	16.10	--	37.8 <sup>D</sup>
	MW18-20181215	12/15/18	6.6	-4.0	0.62	0.980	9.34	15.39	533	16.9
MW18-20190615	06/15/19	6.23	69.2	0.30	1.043	10.98	15.71	531	10.6	
MW18-20191207	12/07/19	5.82	-137.4	0.69	0.870	15.0	15.00	497	9.61 <sup>B</sup>	
MW18-20200627	06/27/20	6.41	-85.1	0.18	0.950	9.46	15.70	536	5.95	
MW18-20201212	12/12/20	6.21	-88.1	2.98	0.889	4.65	14.98	451	4.30	
MW18-20210625	06/25/21	6.29	-86.0	0.91	0.873	7.91	15.35	454 <sup>H</sup>	6.85	
MW18-20211217	12/17/21	6.20	-52.8	0.13	1.08	--	14.9	503	11.9	



**Table 5**  
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Well Identification	Sample Identification	Sample Date	pH <sup>(1)</sup>	ORP <sup>(1)</sup> (mV)	Dissolved Oxygen <sup>(1)</sup> (mg/L)	Specific Conductivity <sup>(1)</sup> (mS/cm)	Turbidity <sup>(1)</sup> (NTU)	Temperature <sup>(1)</sup> (°C)	Alkalinity <sup>(2)</sup> (mg/L CaCO <sub>3</sub> )	Total Organic Carbon <sup>(3)</sup> (mg/L)
MW19	MW19-20150507	05/07/15	6.68	156.1	1.75	0.502	1.27	14.44	144	<0.500
	MW19-20150803	08/03/15	5.67	222.2	2.33	0.523	5.8	15.47	--	--
	MW19-20151207	12/07/15	7.08	95.6	0.99	0.685	4.29	14.64	--	--
	MW19-20160308	03/08/16	6.27	154.7	1.29	0.613	0.84	14.73	--	--
	MW19-20160713	07/13/16	5.62	5.7	0.32	0.821	1017	15.59	--	--
	MW19-20160825	08/25/16	4.82	31.4	0.73	--	--	--	--	--
	MW19-20161021	10/21/16	5.62	27.0	0.15	1.404	3.00	15.59	--	--
	MW19-20170125	01/25/17	5.40	-10.4	0.40	1.120	7.98	14.40	--	--
	MW19-20170601	06/01/17	5.34	-148.6	0.53	0.963	4.02	15.99	--	--
	MW19-20170923	09/23/17	5.47	169.2	0.77	0.816	17.8	18.07	--	--
	MW19-20171216	12/16/17	6.39	-30.9	0.58	0.602	4.92	13.43	--	--
	MW19-20180310	03/10/18	6.06	-14.3	0.26	0.542	14.0	15.36	--	--
	MW19-20180630	06/30/18	6.15	-22.7	0.86	0.744	9.95	16.54	--	--
	MW19-20180922	09/22/18	6.23	-26.7	0.16	0.800	37.30	16.90	--	--
	MW19-20190615	06/15/19	6.24	40.6	0.28	1.060	11.4	16.41	556	--
	MW19-20191207	12/07/19	5.57	-134.0	0.54	0.785	--	15.75	473	--
	MW19-20200627	06/27/20	6.40	-70.4	0.27	1.000	39.1	16.60	570	--
MW19-20201212	12/12/20	9.26	-275.8	11.88*	0.100	4.9	15.79	412	--	
MW19-20210625	06/25/21	6.33	-67.2	0.81	0.964	26.2	16.19	520 <sup>H</sup>	--	
MW19-20211217	12/17/21	6.20	-25.4	0.08	1.07	--	15.7	488	--	
MW20	MW20-20150506	05/06/15	6.91	287.1	0.59	0.678	0.00	13.68	--	--
	MW20-20150803	08/03/15	6.11	175.6	1.11	0.784	9.4	14.45	--	--
	MW20-20151207	12/07/15	6.86	228.5	0.85	0.716	9.0	13.81	--	--
	MW20-20160309	03/09/16	6.72	66.1	0.41	0.711	1.2	13.81	--	--
	MW20-20160715	07/15/16	6.71	201.4	0.64	0.726	2.14	14.28	--	--
	MW20-20161020	10/20/16	6.96	92.0	0.92	0.731	1.90	14.30	--	--
	MW20-20170125	01/25/17	6.82	-0.1	0.67	0.732	0.56	0.67	--	--
	MW20-20170601	06/01/17	6.68	-175.7	0.85	0.735	3.07	14.38	--	--
	MW20-20170924	09/24/17	6.63	177.6	0.57	0.779	2.12	15.25	--	--
	MW20-20171216	12/16/17	6.36	47.0	0.27	0.895	2.14	12.31	--	--
	MW20-20180310	03/10/18	6.71	61.4	0.26	0.855	6.07	14.16	--	--
	MW20-20180630	06/30/18	6.71	21.7	1.64	0.884	3.18	15.06	--	--
	MW20-20180922	09/22/18	6.80	13.9	0.19	0.85	3.18	15.10	--	--
	MW20-20181215	12/15/18	6.61	28.0	0.37	0.827	0.73	14.56	--	--
	MW20-20190615	06/15/19	6.72	95.1	0.50	0.928	1.70	14.94	--	--
	MW20-20191207	12/07/19	6.66	-14.9	1.23	0.883	0.99	11.37	--	--
	MW20-20200627	06/27/20	6.66	-58.2	1.60	0.97	2.15	14.90	--	--
MW20-20201212	12/12/20	6.79	135.9	0.42	1.131	1.63	14.39	--	--	
MW20-20210625	06/25/21	6.54	-46.0	1.20	0.984	1.07	14.71	--	--	
MW20-20211217	12/17/21	6.58	-9.0	0.18	1.15	--	14.40	--	--	



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**Geochemical and Water Quality Parameters**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Well Identification	Sample Identification	Sample Date	pH <sup>(1)</sup>	ORP <sup>(1)</sup> (mV)	Dissolved Oxygen <sup>(1)</sup> (mg/L)	Specific Conductivity <sup>(1)</sup> (mS/cm)	Turbidity <sup>(1)</sup> (NTU)	Temperature <sup>(1)</sup> (°C)	Alkalinity <sup>(2)</sup> (mg/L CaCO <sub>3</sub> )	Total Organic Carbon <sup>(3)</sup> (mg/L)
MW21	MW21-20150506	05/06/15	6.58	295.0	0.45	0.675	0.00	14.06	--	--
	MW21-20150804	08/04/15	6.09	77.5	0.68	0.98	2.61	15.13	--	--
	MW21-20151208	12/08/15	7.91	96.8	0.78	1.486	0.83	14.03	--	--
	MW21-20160309	03/09/16	5.03	137.3	1.84	0.879	1.28	14.19	--	2.29
	MW21-20160608	06/08/16	6.28	-0.5	2.46	--	--	--	--	--
	MW21-20160616	06/16/16	--	--	--	--	--	--	--	--
	MW21-20160623	06/23/16	--	--	--	--	--	--	--	--
	MW21-20160629	06/29/16	5.5	52.6	1.95	--	--	--	--	--
	MW21-20160706	07/06/16	5.27	47.1	2.16	--	--	--	--	--
	MW21-20160713	07/13/16	5.41	61.2	0.45	1.104	10.3	14.73	--	1,800
	MW21-20160825	08/25/16	4.97	67.9	0.48	--	--	--	--	--
	MW21-20161020	10/20/16	5.64	71.7	1.26	1.268	>2000	14.61	--	1,800
	MW21-20170126	01/26/17	5.78	-22.0	0.50	0.846	3.59	13.78	--	884
	MW21-20170601	06/01/17	5.69	246.8	0.54	0.920	5.90	14.94	--	755 <sup>D</sup>
	MW21-20170923	09/23/17	5.36	14.9	0.69	1.180	4.42	14.67	--	871 <sup>D</sup>
	MW21-20171216	12/16/17	5.54	26.3	2.67	1.146	6.00	14.81	--	722 <sup>D</sup>
	MW21-20180310	03/10/18	5.27	58.1	0.71	1.102	4.29	14.43	--	466 <sup>D</sup>
	MW21-20180630	06/30/18	5.18	49.5	0.34	1.546	4.05	14.94	--	718 <sup>D</sup>
	MW21-20180922	09/22/18	5.72	97.2	0.33	1.090	6.84	16.00	--	549 <sup>D</sup>
	MW21-20181215	12/15/18	5.67	-20.1	1.57	1.041	6.10	15.41	--	124 <sup>D</sup>
MW21-20190615	06/15/19	5.84	1.0	0.19	1.023	2.81	15.27	--	163 <sup>D</sup>	
MW21-20191207	12/07/19	5.55	-142.2	0.77	0.913	7.64	14.81	--	110 <sup>BE</sup>	
MW21-20200627	06/27/20	5.26	83.0	0.17	0.930	61.80	15.80	--	--	
MW21-20201212	12/12/20	5.8	157.2	0.20	0.934	15.30	14.84	--	191 <sup>D</sup>	
MW21-20210625	06/25/21	5.57	12.9	0.49	0.836	4.84	15.20	--	349 <sup>D</sup>	
MW21-20211217	12/17/21	8.69	-25.8	0.68	0.963	--	14.44	--	330	



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Well Identification	Sample Identification	Sample Date	pH <sup>(1)</sup>	ORP <sup>(1)</sup> (mV)	Dissolved Oxygen <sup>(1)</sup> (mg/L)	Specific Conductivity <sup>(1)</sup> (mS/cm)	Turbidity <sup>(1)</sup> (NTU)	Temperature <sup>(1)</sup> (°C)	Alkalinity <sup>(2)</sup> (mg/L CaCO <sub>3</sub> )	Total Organic Carbon <sup>(3)</sup> (mg/L)
MW22	MW22-20150506	05/06/15	6.34	280.6	0.30	0.707	0.00	14.4	--	--
	MW22-20150804	08/04/15	6.29	103.9	0.96	0.794	6.8	15.05	--	--
	MW22-20151208	12/08/15	5.91	212.8	2.18	0.702	0.4	14.49	--	--
	MW22-20160308	03/08/16	6.34	153.8	0.54	0.579	0.81	14.46	--	--
	MW22-20160608	06/08/16	6	-3.2	1.55	--	--	--	--	--
	MW22-20160616	06/16/16	4.99	95.2	1.65	--	--	--	--	--
	MW22-20160623	06/23/16	5.1	64	0.68	--	--	--	--	--
	MW22-20160629	06/29/16	5.22	84.8	1.85	--	--	--	--	--
	MW22-20160706	07/06/16	5.17	26.1	1.88	--	--	--	--	--
	MW22-20160713	07/13/16	5.55	88.1	0.42	1.276	7.26	14.85	--	--
	MW22-20160825	08/25/16	5.06	21.2	0.42	--	--	--	--	--
	MW22-20161020	10/20/16	5.48	108.8	0.24	1.408	8.66	14.86	--	--
	MW22-20170126	1/26/2017	5.55	21.2	0.27	1.19	4.83	14.23	--	--
	MW22-20170601	06/01/17	5.67	239.2	0.62	1.118	5.32	15.32	--	--
	MW22-20170923	09/23/17	5.38	104.1	0.27	1.29	3.52	15.12	--	--
	MW22-20171216	12/16/17	5.44	84.2	0.64	1.186	7.21	14.83	--	--
	MW22-20180310	03/10/18	5.32	82	6.61	0.868	4.57	14.44	--	--
	MW22-20180630	06/30/18	5.47	41.9	0.23	1.128	5.12	15.74	--	--
	MW22-20180922	09/22/18	5.94	73.1	0.38	0.82	5.67	17.00	--	--
	MW22-20181215	12/15/18	5.67	18.4	0.67	0.817	8.6	15.50	269	388 <sup>D</sup>
MW22-20190615	06/15/19	5.68	106.8	0.38	0.858	7.40	15.63	273	286 <sup>D</sup>	
MW22-20191207	12/07/19	5.69	-76.4	2.02	0.803	71.20	12.14	283	255 <sup>BE</sup>	
MW22-20200627	06/27/20	5.82	3.4	0.40	0.72	83.30	15.90	182	206 <sup>D</sup>	
MW22-20201212	12/12/20	6.01	154.5	0.31	0.817	25.80	14.97	500	95.5 <sup>D</sup>	
MW22-20210625	06/25/21	5.91	-4.9	0.55	0.679	8.34	15.30	243 <sup>H</sup>	150 <sup>D</sup>	
MW22-20211217	12/17/21	9.01	-48.1	0.68	0.749	--	14.33	287	133 <sup>D</sup>	



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Well Identification	Sample Identification	Sample Date	pH <sup>(1)</sup>	ORP <sup>(1)</sup> (mV)	Dissolved Oxygen <sup>(1)</sup> (mg/L)	Specific Conductivity <sup>(1)</sup> (mS/cm)	Turbidity <sup>(1)</sup> (NTU)	Temperature <sup>(1)</sup> (°C)	Alkalinity <sup>(2)</sup> (mg/L CaCO <sub>3</sub> )	Total Organic Carbon <sup>(3)</sup> (mg/L)
MW23	MW23-20150507	05/07/15	6.09	223.7	2.19	0.452	0.00	14.65	106	<0.500
	MW23-20150804	08/04/15	6.40	105.5	0.73	0.582	6.8	15.42	--	--
	MW23-20151208	12/08/15	5.80	197	2.12	0.548	12.6	15.10	--	--
	MW23-20160308	03/08/16	6.30	92.5	0.49	0.575	1.2	14.78	--	3.14
	MW23-20160608	06/08/16	5.14	66.9	3.15	--	--	--	--	--
	MW23-20160616	06/16/16	4.77	109.5	2.00	--	--	--	--	--
	MW23-20160623	06/23/16	4.75	58.8	0.94	--	--	--	--	--
	MW23-20160629	06/29/16	4.73	92.3	2.40	--	--	--	--	--
	MW23-20160706	07/06/16	4.74	42	2.04	--	--	--	--	--
	MW23-20160714	07/14/16	5.26	38	0.23	1.339	8.0	15.06	--	2,300
	MW23-20160825	08/25/16	4.68	64.2	0.69	--	--	--	--	--
	MW23-20161020	10/20/16	5.38	45.5	0.20	1.637	2.53	15.12	--	2,300
	MW23-20170126	01/26/17	5.71	-43.40	14.39	0.88	8.03	14.39	--	520.00
	MW23-20170601	06/01/17	5.80	232.1	0.49	1.542	5.60	15.60	--	1,620 <sup>D</sup>
	MW23-20170923	09/23/17	5.69	-4.4	0.46	1.362	7.30	15.45	--	1,160 <sup>D</sup>
	MW23-20171216	12/16/17	5.96	-6.3	0.84	0.973	18.0	15.23	--	865 <sup>D</sup>
	MW23-20180310	03/10/18	5.85	-1.4	2.25	0.802	34.1	14.92	--	127 <sup>D</sup>
	MW23-20180630	06/30/18	6.15	-82.6	0.70	1.228	178.0	15.80	--	198 <sup>D</sup>
	MW23-20180922	09/22/18	6.52	11.1	0.31	0.950	17.5	17.00	--	159 <sup>D</sup>
	MW23-20181215	12/15/18	6.30	-72.9	0.79	1.118	40.8	15.89	600	148 <sup>D</sup>
MW23-20190615	06/15/19	6.20	89.0	0.50	1.219	20.0	15.96	639	60.7 <sup>D</sup>	
MW23-20191207	12/07/19	6.24	-42.8	2.12	1.070	33.3	12.50	614	17.4 <sup>B</sup>	
MW23-20200627	06/27/20	6.13	-21.8	0.18	0.950	7.24	16.00	481	6.41	
MW23-20201212	12/12/20	6.33	136.3	0.29	0.885	12.60	15.16	436	7.90	
MW23-20210625	06/25/21	6.29	-43.7	0.29	0.763	6.04	15.80	382 <sup>H</sup>	6.65	
MW23-20211217	12/17/21	9.28	-129.2	0.39	0.787	--	14.47	374	6.10	





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MW24	MW24-20150506	05/06/15	6.03	182.9	1.04	0.454	1.81	14.91	172	1.12
	MW24-20150804	08/04/15	5.80	83.7	0.45	0.563	2.89	16.05	--	--
	MW24-20151208	12/08/15	7.62	120.8	1.00	0.685	1.29	15.10	--	--
	MW24-20160309	03/09/16	6.27	113.7	0.38	0.589	1	15.07	--	2.19
	MW24-20160608	06/08/16	6.73	-69.2	2.34	--	--	--	--	--
	MW24-20160616	06/16/16	5.92	-3	1.59	--	--	--	--	--
	MW24-20160623	06/23/16	5.83	-20	0.87	--	--	--	--	--
	MW24-20160629	06/29/16	5.83	36.1	1.54	--	--	--	--	--
	MW24-20160706	07/06/16	5.67	19.7	1.54	--	--	--	--	--
	MW24-20160715	07/15/16	6.00	31.9	0.29	1.142	8	15.39	--	1,000
	MW24-20160825	08/25/16	5.30	30.5	0.24	--	--	--	--	--
	MW24-20161020	10/20/16	5.93	27.5	0.94	1.440	3.56	15.22	--	640
	MW24-20170125	01/25/17	5.49	-33.5	1.10	0.917	589	14.56	--	375
	MW24-20170601	06/01/17	5.75	240.7	0.38	0.998	3034	15.38	--	1,470 <sup>D</sup>
	MW24-20170924	09/24/17	5.54	76.3	0.27	0.641	122	16.06	--	390 <sup>D</sup>
	MW24-20171216	12/16/17	5.93	-33.4	2.69	0.579	50.2	14.83	--	233 <sup>D</sup>
	MW24-20180310	03/10/18	5.73	17.4	0.70	0.614	72.4	14.77	--	22.1 <sup>D</sup>
	MW24-20180630	06/30/18	5.60	-43.1	0.44	1.393	15.1	15.81	--	770 <sup>D</sup>
	MW24-20180922	09/22/18	6.08	18.9	3.20	0.760	92.4	17.10	--	45.5 <sup>D</sup>
	MW24-20181215	12/15/18	6.08	-0.7	0.44	0.735	72.8	15.44	358	52.2 <sup>D</sup>
MW24-20190615	06/15/19	5.93	-2.8	0.29	0.798	7.68	16.00	414	20.5	
MW24-20191207	12/07/19	5.66	-139.0	0.66	0.779	20.4	15.21	434	12.6 <sup>B</sup>	
MW24-20200627	06/27/20	6.24	-47.0	0.26	0.86	15.9	15.90	468	8.44	
MW24-20201212	12/12/20	6.08	-26.1	2.03	0.809	4.85	15.09	436	6.95	
MW24-20210625	06/25/21	6.16	-56.4	0.93	0.862	6.98	15.50	401 <sup>H</sup>	7.52	
MW24-20211217	12/17/21	6.16	-36.0	0.12	1.11	--	15.00	488	<0.500	



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MW25	MW25-20150507	05/07/15	6.31	140.5	2.87	0.498	76.5	14.54	112	<0.500
	MW25-20150805	08/05/15	5.67	158.1	1.47	0.667	2.3	15.16	--	--
	MW25-20151209	12/09/15	7.94	114.9	1.55	0.881	7.6	15.12	--	--
	MW25-20160308	03/08/16	6.25	171.8	0.79	0.524	1.2	15.05	--	--
	MW25-20160713	07/13/16	5.60	-13.5	0.29	0.933	>2,000	15.39	--	--
	MW25-20161019	10/19/16	5.40	22.2	0.18	1.304	9.14	15.48	--	--
	MW25-20170125	01/25/17	5.77	-134.5	0.37	0.712	4.18	14.68	--	--
	MW25-20170601	06/01/17	5.81	-136.3	0.31	1.140	4.82	15.67	--	--
	MW25-20170923	09/23/17	6.17	66.3	0.37	1.103	14.6	16.86	--	--
	MW25-20171216	12/16/17	6.61	-35.3	0.50	1.052	8.68	13.67	--	--
	MW25-20180310	03/10/18	6.22	-19.9	0.32	0.890	9.10	15.52	--	--
	MW25-20180630	06/30/18	6.48	-55.4	0.67	1.381	13.10	16.15	--	--
	MW25-20180922	09/22/18	6.48	-51.4	0.09	1.380	17.50	16.20	--	--
	MW25-20181215	12/15/18	6.42	-2.4	0.69	1.306	5.21	15.84	745	18.4
	MW25-20190615	06/15/19	6.22	-48.1	0.59	1.067	3.92	16.27	575	25.8
	MW25-20191207	12/07/19	6.16	-16.5	0.63	0.810	7.61	17.58	424	6.87 <sup>B</sup>
	MW25-20200627	06/27/20	6.2	-37.5	0.23	0.657	14.6	16.20	322	5.21
MW25-20201212	12/12/20	6.25	-52.3	23.36*	0.806	15.0	15.50	412	9.57	
MW25-20210625	06/25/21	6.19	-113.2	0.82	0.799	7.0	15.90	377 <sup>H</sup>	7.50	
MW25-20211217	12/17/21	6.35	-56.5	0.24	1.020	--	15.80	431	4.18	
IW04	IW04-20150508	05/08/15	6.58	160.2	6.28*	0.322	15.1	14.80	88.0	<0.500
	IW04-20160309	03/09/16	6.08	-18.6	0.55	0.579	3.5	14.18	--	--
	IW04-20160714	07/14/16	5.17	58.2	0.43	1.401	19.8	14.76	--	--
	IW04-20161021	10/21/16	5.30	27.5	0.10	1.575	7.71	15.01	--	--
	IW04-20170126	01/26/17	5.40	-18.0	0.71	1.288	17.7	14.11	--	--
	IW04-20170601	06/01/17	5.78	-151.8	0.62	0.809	12.7	14.99	--	--
	IW04-20170923	09/23/17	5.99	2.7	0.84	1.189	21.7	18.00	--	--
	IW04-20171216	12/16/17	6.37	-47.8	0.37	0.940	18.8	13.01	--	--
	IW04-20180310	03/10/18	6.22	-40.3	0.82	0.792	56.3	14.77	--	--
	IW04-20180630	06/30/18	6.29	-59.3	0.89	0.914	18	15.59	--	--
	IW04-20180922	09/22/18	6.13	26.1	0.21	0.318	5.1	16.20	--	--
	IW04-20181215	12/15/18	6.32	-26.6	0.64	0.969	14.7	15.27	478	157 <sup>D</sup>
	IW04-20190615	06/15/19	6.32	-60.8	0.24	1.112	13.2	15.48	611	148 <sup>D</sup>
	IW04-20191207	12/07/19	6.41	-24.1	0.98	1.059	22.6	11.91	595	94.8 <sup>BE</sup>
	IW04-20200627	06/27/20	6.12	-0.8	5.31*	0.960	9.17	15.40	517	88.7 <sup>D</sup>
IW04-20201212	12/12/20	9.08	-194.2	2.00	0.910	11.48	15.07	500	90.3 <sup>D</sup>	
IW04-20210625	06/25/21	6.39	-93	0.76	0.865	24.4	15.23	450 <sup>H</sup>	93.1 <sup>D</sup>	
IW04-20211217	12/17/21	6.30	-68.3	0.19	1.040	--	15.00	458	101 <sup>D</sup>	



**Table 5**  
**Geochemical and Water Quality Parameters**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Well Identification	Sample Identification	Sample Date	pH <sup>(1)</sup>	ORP <sup>(1)</sup> (mV)	Dissolved Oxygen <sup>(1)</sup> (mg/L)	Specific Conductivity <sup>(1)</sup> (mS/cm)	Turbidity <sup>(1)</sup> (NTU)	Temperature <sup>(1)</sup> (°C)	Alkalinity <sup>(2)</sup> (mg/L CaCO <sub>3</sub> )	Total Organic Carbon <sup>(3)</sup> (mg/L)
IW06	IW06-20150507	05/07/15	6.70	262.1	7.55*	0.224	17.83	15.02	--	--
	IW06-20180310	03/10/18	5.97	-162.5	0.34	0.284	8.41	14.84	--	--
	IW06-20180630	06/30/18	6.25	-95.9	0.67	0.312	6.99	15.87	--	--
	IW06-20180922	09/22/18	6.35	-55.9	0.17	0.92	43.3	16.20	--	--
	IW06-20181215	12/15/18	6.20	-9.7	0.43	0.297	5.60	15.51	--	--
	IW06-20190615	06/15/19	5.96	67.7	0.58	0.471	11.50	15.81	--	--
	IW06-20191207	12/07/19	6.45	-4.5	0.88	0.446	0.21	12.05	--	--
	IW06-20200627	06/27/20	6.07	-41.9	5.72*	0.749	12.1	15.50	--	--
	IW06-20201212	12/12/20	8.35	-201.9	1.95	0.541	3.66	15.24	--	--
	IW06-20210625	06/25/21	6.09	-98.5	1.16	0.656	11.90	15.38	--	--
IW06-20211217	12/17/21	6.15	58.2	0.60	0.605	--	15.10	--	--	
IW07	IW07-20160825	08/25/16	5.15	-11.4	0.61	--	--	--	--	--
IW15	IW15-20160608	06/08/16	5.19	86.6	2.75	--	--	--	--	--
	IW15-20160616	06/16/16	7.59	70.1	1.95	--	--	--	--	--
	IW15-20160623	06/23/16	5.07	16.6	1.05	--	--	--	--	--
	IW15-20160629	06/29/16	5.11	47.3	1.38	--	--	--	--	--
	IW15-20160706	07/06/16	5.09	28.6	1.55	--	--	--	--	--
	IW15-20160825	08/25/16	4.96	35.9	0.58	--	--	--	--	--
	IW15-20161021	10/21/16	5.42	-16.6	0.12	2.065	3.75	15.46	--	--
	IW15-20170602	06/02/17	5.65	-217.5	0.49	1.00	9.42	15.68	--	--
IW38	IW38-20160608	06/08/16	5.53	57.9	2.4	--	--	--	--	--
	IW38-20160616	06/16/16	5.05	91.4	2	--	--	--	--	--
	IW38-20160623	06/23/16	5.1	39	0.73	--	--	--	--	--
	IW38-20160629	06/29/16	5.13	80.6	1.45	--	--	--	--	--
	IW38-20160706	07/06/16	5.06	49.1	1.65	--	--	--	--	--
	IW38-20160825	08/25/16	4.8	73.4	0.29	--	--	--	--	--
	IW38-20161021	10/21/16	5.06	77.7	0.59	2.07	2.19	15.40	--	--
IW38-20170602	06/02/17	5.72	-234.3	0.46	0.838	2.80	15.69	--	--	



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Well Identification	Sample Identification	Sample Date	pH <sup>(1)</sup>	ORP <sup>(1)</sup> (mV)	Dissolved Oxygen <sup>(1)</sup> (mg/L)	Specific Conductivity <sup>(1)</sup> (mS/cm)	Turbidity <sup>(1)</sup> (NTU)	Temperature <sup>(1)</sup> (°C)	Alkalinity <sup>(2)</sup> (mg/L CaCO <sub>3</sub> )	Total Organic Carbon <sup>(3)</sup> (mg/L)
IW50	IW50-20151208	12/08/15	7.44	122.1	0.56	0.984	2.68	14.71	--	--
	IW50-20160309	03/09/16	3.46	149.7	0.70	0.726	3.01	14.52	--	115
	IW50-20160715	07/15/16	5.45	40.6	0.44	1.35	4.77	14.80	--	1,100
	IW50-20161021	10/21/16	5.69	43.7	0.83	2.055	11.8	14.79	--	1,600
	IW50-20170126	01/26/17	6.43	-59.5	0.80	1.058	43.2	14.46	--	391
	IW50-20170602	06/02/17	6.34	198.5	0.60	0.688	17.4	14.98	--	85.2 <sup>D</sup>
	IW50-20170923	09/23/17	6.29	-103.0	0.24	1.004	24.1	15.29	--	214 <sup>D</sup>
	IW50-20171216	12/16/17	6.30	-72.4	2.71	1.048	106	14.99	--	224 <sup>D</sup>
	IW50-20180310	03/10/18	6.34	-43.1	0.40	1.038	76.8	14.81	--	55.0 <sup>D</sup>
	IW50-20180630	06/30/18	6.41	-115.4	0.31	1.204	11.35	15.21	--	41.9 <sup>D</sup>
	IW50-20180922	09/22/18	6.65	-37.4	0.66	0.76	5.81	17.40	--	29.6 <sup>D</sup>
	IW50-20181215	12/15/18	6.35	-120.3	1.28	0.681	4.74	15.50	338	12.2
	IW50-20190615	06/15/19	6.26	65.8	0.38	0.670	5.18	15.86	299	7.56
	IW50-20191207	12/07/19	6.24	-30.3	1.02	0.618	5.33	12.31	288	6.72 <sup>B</sup>
	IW50-20200627	06/27/20	6.08	-13.8	8.61*	0.939	4.91	15.70	497	18.2
	IW50-20201212	12/12/20	6.43	91.8	0.24	1.071	14.1	15.24	544	13.7
IW50-20210625	06/25/21	6.5	-92.6	0.17	1.016	9.79	15.40	449 <sup>H</sup>	16.1	
IW50-20211217	12/17/21	6.29	-61.9	0.05	1.06	--	15.20	468	38.1	
IW57	IW57-20160608	06/08/16	4.46	138.7	5.59	--	--	--	--	--
	IW57-20160616	06/16/16	4.51	109.9	2.28	--	--	--	--	--
	IW57-20160623	06/23/16	4.48	56.2	1.88	--	--	--	--	--
	IW57-20160629	06/29/16	4.45	105.5	2.41	--	--	--	--	--
	IW57-20160706	07/06/16	4.56	41.7	2.68	--	--	--	--	--
	IW57-20160825	08/25/16	4.52	38.0	1.01	--	--	--	--	--
	IW57-20161021	10/21/16	5.44	28.9	0.81	2.085	4.16	14.85	--	--
IW57-20170602	06/02/17	5.76	-242.1	0.33	0.808	22.5	15.25	--	--	



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IW61	IW61-20151208	12/08/16	4.27	200.3	3.34	0.655	24.2	14.25	--	--
	IW61-20160309	03/09/16	6.12	-17.9	1.40	0.65	30.1	14.35	--	114
	IW61-20160714	07/14/16	5.31	39.7	0.56	1.624	52.4	15.38	--	2,900
	IW61-20161021	10/21/16	5.63	48.5	0.81	2.283	4.53	15.09	--	3,000
	IW61-20170126	01/26/17	5.89	-47.9	0.41	1.326	1.96	14.27	--	1,300
	IW61-20170602	06/02/17	6.00	219.6	0.49	0.812	7.57	15.42	--	908 <sup>D</sup>
	IW61-20170923	09/23/17	5.28	-9.6	0.79	2.264	7.67	15.55	--	1,490 <sup>D</sup>
	IW61-20171216	12/16/17	6.07	-66.1	0.79	1.158	510	15.28	--	765 <sup>D</sup>
	IW61-20180310	03/10/18	5.80	-1.5	1.28	0.911	185	14.39	--	432 <sup>D</sup>
	IW61-20180630	06/30/18	6.02	-92.1	0.39	1.127	22.0	15.72	--	406 <sup>D</sup>
	IW61-20180922	09/22/18	6.38	-3.8	0.17	0.75	13.5	16.50	--	228 <sup>D</sup>
	IW61-20181215	12/15/18	6.82	-45.1	0.73	1.171	22.0	15.96	494	628 <sup>D</sup>
	IW61-20190615	06/15/19	5.94	-21.1	0.32	0.913	12.60	15.97	429	140 <sup>D</sup>
	IW61-20191207	12/07/19	5.61	-131.0	0.82	0.819	37.2	15.39	444	103 <sup>BE</sup>
	IW61-20200627	06/27/20	6.09	-45.1	0.23	0.859	13.2	16.20	419	55.4 <sup>D</sup>
	IW61-20201212	12/12/20	6.22	115.9	0.34	0.960	60.0	15.01	471	60.6 <sup>D</sup>
IW61-20210625	06/25/21	6.32	-72.2	0.25	0.866	64.0	15.80	423 <sup>H</sup>	66.2 <sup>D</sup>	
IW61-20211217	12/17/21	9.21	-99.4	0.43	0.941	--	14.69	460 <sup>H</sup>	72.6 <sup>D</sup>	
IW64	IW64-20160608	06/08/16	5.22	69.8	3.25	--	--	--	--	--
	IW64-20160616	06/16/16	4.97	94.3	2.27	--	--	--	--	--
	IW64-20160623	06/23/16	5.04	41.5	1.15	--	--	--	--	--
	IW64-20160629	06/29/16	5.09	80.3	2.25	--	--	--	--	--
	IW64-20160706	07/06/16	5.03	36.4	2.05	--	--	--	--	--
	IW64-20160825	08/25/16	5.03	37.0	0.87	--	--	--	--	--
	IW64-20161021	10/21/16	5.70	33.2	0.99	1.980	32.0	15.22	--	--
IW64-20170602	06/02/17	5.86	-242.4	0.34	0.981	12.6	15.10	--	--	



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Well Identification	Sample Identification	Sample Date	pH <sup>(1)</sup>	ORP <sup>(1)</sup> (mV)	Dissolved Oxygen <sup>(1)</sup> (mg/L)	Specific Conductivity <sup>(1)</sup> (mS/cm)	Turbidity <sup>(1)</sup> (NTU)	Temperature <sup>(1)</sup> (°C)	Alkalinity <sup>(2)</sup> (mg/L CaCO <sub>3</sub> )	Total Organic Carbon <sup>(3)</sup> (mg/L)
IW91	IW91-20150506	05/06/15	6.54	171.4	1.57	0.300	0.19	14.35	--	--
	IW91-20150804	08/04/15	6.11	143.7	2.26	0.363	1.91	14.66	--	--
	IW91-20151208	12/08/15	5.88	218.9	5.23	0.342	8.2	14.18	--	--
	IW91-20160309	03/09/16	6.87	209.2	3.99	0.325	2.98	14.15	--	--
	IW91-20160714	07/14/16	6.79	118	5.51	0.299	0.81	14.60	--	--
	IW91-20161020	10/20/16	6.62	143.2	0.25	0.509	6.69	14.68	--	--
	IW91-20170126	01/26/17	6.93	-65.2	0.35	0.461	3.99	14.17	--	--
	IW91-20170601	06/01/17	6.92	192.4	1.90	0.442	3.57	14.54	--	--
	IW91-20170923	09/23/17	6.92	173.0	2.21	0.433	5.16	14.64	--	--
	IW91-20171216	12/16/17	7.09	223.6	2.10	0.337	23.0	14.49	--	--
	IW91-20180310	03/10/18	6.68	196.6	5.81	0.385	20.1	14.55	--	--
	IW91-20180630	06/30/18	6.67	22.4	12.00	0.563	2.52	14.34	--	--
	IW91-20180922	09/22/18	7.00	199.8	5.59	0.462	2.17	15.70	--	--
	IW91-20181215	12/15/18	6.94	12.5	6.43	0.524	0.97	14.99	--	--
	IW91-20190615	06/15/19	6.51	25.1	9.86	0.557	2.27	15.30	--	--
	IW91-20191207	12/07/19	6.63	-131.6	4.45	0.585	1.98	14.62	--	--
	IW91-20200627	06/27/20	6.72	11.7	22.14*	0.457	4.02	15.30	--	--
IW91-20201212	12/12/20	7.39	177.9	10.84*	0.553	12.70	15.02	--	--	
IW91-20210625	06/25/21	7.35	99.0	17.23	0.433	4.13	14.90	--	--	
IW91-20211217	12/17/21	9.44	6.5	6.05	0.546	--	14.39	--	--	
AIW02	AIW02-20160825	08/25/16	4.88	15.3	0.77	--	--	--	--	--
AIW05	AIW05-20160825	08/25/16	4.89	31.5	1.77	--	--	--	--	--
MW31	MW31-20191009	10/09/19	9.75	100.2	4.02	0.2	16.2	15.02	--	--
	MW31-20191205	12/05/19	6.45	4.1	6.75	0.2	13.6	11.29	--	--
	MW31-20200630	6/30/2020	6.12	232.7	4.32	0.311	2,491 <sup>(4)</sup>	16.06	--	--
	MW31-20201211	12/11/20	6.77	146.9	3.77	0.343	2,950 <sup>(4)</sup>	12.14	--	--
	MW31-20210624	06/24/21	6.39	-13.1	8.62	0.286	24.1	16.59	--	--
	MW31-20211215	12/15/21	6.5	-6.4	4.73	0.381	9.3	14.38	--	--



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<b>Boren Avenue North</b>										
MW04	MW04-20110527	05/27/11	6.93	11	6.24	0.330	122	15.09	--	--
	MW04-20111012	10/12/11	6.46	201.6	6.17	0.252	25.1	15.0	--	--
	MW04-20130909	09/09/13	6.15	-136.0	5.49	0.305	>200	17.6	--	--
	MW04-20150508	05/08/15	6.76	287.3	0.433	0.433	0.00	17.03	54.0	<0.500
	MW04-20150806	08/06/15	6.39	111.2	6.09	0.350	0.9	18.01	--	--
	MW04-20151209	12/09/15	6.49	221.3	7.48	0.344	1.1	16.74	--	--
	MW04-20160308	03/08/16	6.60	136.4	3.56	0.292	1.46	16.11	--	--
	MW04-20160713	07/13/16	6.48	-1.3	0.99	0.392	1.06	16.78	--	--
	MW04-20161019	10/19/16	7.18	190.7	3.15	0.300	4.06	15.98	--	--
	MW04-20170124	01/24/17	6.91	-1.1	2.95	0.237	3.22	14.74	--	--
	MW04-20170531	05/31/17	6.93	219.6	7.11	0.453	6.06	15.70	--	--
	MW04-20170921	09/21/17	6.71	120.3	8.65	0.460	6.82	15.49	--	--
	MW04-20171214	12/14/17	7.13	237.0	8.36	0.465	3.01	13.12	--	--
	MW04-20180309	03/09/18	6.60	159.4	1.80	0.290	3.01	14.96	--	--
	MW04-20180629	06/29/18	6.61	132.9	4.55	0.351	1.50	15.78	--	--
	MW04-20180920	09/20/18	6.55	189.1	7.07	0.387	1.27	15.80	--	--
	MW04-20181214	12/14/18	6.47	38.2	4.83	0.388	0.73	14.58	41.0	--
	MW04-20190614	06/14/19	6.58	100.0	4.15	0.386	3.98	16.50	66.3	--
MW04-20191205	12/05/19	6.68	-64.1	7.97	0.463	2.67	14.07	45.8	--	
MW04-20200626	06/26/20	6.37	185.2	7.78	0.391	7.72	16.70	115	--	
MW04-20201211	12/11/20	9.57	-11.2	6.63	0.409	4.75	12.10	103	--	
MW04-20210623	06/23/21	6.35	-16.3	2.23	0.48	6.14	15.96	137	--	
MW04-20211215	12/15/21	6.95	126.9	1.07	0.495	2.55	14.90	74.0	0.965	



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MW07	MW07-20110531	05/31/11	6.63	26	5.70	0.281	--	14.71	--	--
	MW07-20111012	10/12/11	6.36	166.4	2.92	0.181	14.9	15.2	--	--
	MW07-20130909	09/09/13	6.48	124.5	2.71	0.373	17.1	18.0	--	--
	MW07-20150508	05/08/15	5.94	304.5	4.79	0.491	5.34	17.19	39.0	<0.500
	MW07-20150805	08/05/15	6.22	84.4	4.65	0.597	0.96	18.43	--	--
	MW07-20151209	12/09/15	6.59	210.8	3.10	0.446	4.4	16.86	--	--
	MW07-20160308	03/08/16	6.42	252.3	3.78	0.375	8.12	15.00	--	0.862
	MW07-20160713	07/13/16	6.44	222.8	0.77	0.330	1.01	16.82	--	0.83
	MW07-20161019	10/19/16	6.79	120.8	2.96	0.328	4.00	16.24	--	1.70
	MW07-20170124	01/24/17	6.68	-36.8	4.92	0.275	12.21	13.47	--	4.25
	MW07-20170531	05/31/17	6.32	-76.4	4.45	0.474	7.21	15.95	--	4.58
	MW07-20180308	03/08/18	6.47	124.4	7.75	0.374	2.75	14.33	--	0.877
	MW07-20180629	06/29/18	6.32	176.2	7.38	0.509	1.43	16.31	--	1.80
	MW07-20180920	09/20/18	6.42	198.7	8.76	0.486	6.50	16.30	--	0.963
	MW07-20181214	12/14/18	6.32	55.0	7.57	0.465	3.86	15.59	25.5	0.942
	MW07-20190614	06/14/19	6.12	115.9	7.91	0.469	5.23	15.86	23.4	0.869
	MW07-20191205	12/05/19	6.41	-71.1	6.85	0.531	6.35	14.45	20.5	0.736
	MW07-20200630	06/30/20	6.41	125.4	4.95	0.414	4.14	15.88	--	0.789
MW07-20201210	12/10/20	6.41	131.6	1.39	0.439	3.36	15.00	83.3	0.969	
MW07-20210623	06/23/21	6.39	-40.6	4.91	0.504	3.48	16.11	99.4	0.949	
MW07-20211215	12/15/21	6.89	130.1	1.12	0.483	1.12	14.80	60.5	0.884	
MW13	MW13-20111020	10/20/11	7.10	138.0	2.12	1.04	21.8	15.9	--	--
	MW13-20130910	09/10/13	6.50	34.9	3.67	0.256	>200	18.4	--	--
	MW13-20150511	05/11/15	6.83	107.0	4.71	0.367	131.0	17.13	40.0	<0.500
	MW13-20150805	08/05/15	6.50	97.7	3.91	0.400	>200	17.82	--	--
	MW13-20151215	12/15/15	8.72	91.8	3.61	0.384	51.2	15.53	--	--
	MW13-20160307	03/07/16	6.80	190.3	2.94	0.348	4.06	15.83	--	--
	MW13-20160712	07/12/16	6.67	82.4	4.29	0.386	6.65	17.75	--	--
	MW13-20161019	10/19/16	6.50	161.4	4.95	0.339	33.4	16.74	--	--
	MW13-20170124	01/24/17	6.78	-58.5	4.44	0.359	8.68	14.96	--	--
	MW13-20170531	05/31/17	6.59	-84.5	2.38	0.353	8.31	16.32	--	--
	MW13-20170921	09/21/17	6.27	351.8	6.20	0.337	89.7	15.74	--	--
	MW13-20171214	12/14/17	6.83	122.5	3.81	0.363	overrange	12.39	--	--
	MW13-20180308	03/08/18	6.57	186.2	5.98	0.331	40.5	15.22	--	--
	MW13-20180629	06/29/18	6.68	76.4	3.66	0.396	18.2	16.34	--	--
	MW13-20180920	09/20/18	6.64	157.6	4.38	312.500	26.7	16.20	--	--
	MW13-20181214	12/14/18	6.49	22.2	3.30	0.320	38.0	14.93	--	--
	MW13-20190614	06/14/19	6.41	106.2	4.31	0.315	9.63	15.83	--	--
	MW13-20191205	12/05/19	6.28	-0.2	7.31	0.214	18.60	11.38	--	--
MW13-20200626	06/26/20	6.57	211.1	7.12	0.334	26.40	15.70	--	--	
MW13-20201210	12/10/20	6.65	194.4	5.39	0.354	9.24	14.63	--	--	
MW13-20210623	06/23/21	6.73	203.9	2.82	0.294	9.16	16.50	--	--	
MW13-20211216	12/16/21	7.02	92.2	4.30	0.310	6.09	13.95	--	1.17	





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**Geochemical and Water Quality Parameters**  
**Troy Laundry Seattle Site**  
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**Seattle, Washington**

Well Identification	Sample Identification	Sample Date	pH <sup>(1)</sup>	ORP <sup>(1)</sup> (mV)	Dissolved Oxygen <sup>(1)</sup> (mg/L)	Specific Conductivity <sup>(1)</sup> (mS/cm)	Turbidity <sup>(1)</sup> (NTU)	Temperature <sup>(1)</sup> (°C)	Alkalinity <sup>(2)</sup> (mg/L CaCO <sub>3</sub> )	Total Organic Carbon <sup>(3)</sup> (mg/L)
MW27	MW27-20151210	12/10/15	6.75	217.6	5.56	0.417	4.5	16.74	--	--
	MW27-20160309	03/07/16	6.51	214.9	3.31	0.406	3.12	16.09	--	114
	MW27-20160713	07/13/16	6.47	78.8	2.60	0.414	5.17	17.36	--	--
	MW27-20161019	10/19/16	6.66	97.6	0.89	0.420	0.77	16.82	--	--
	MW27-20170124	01/24/17	6.55	113.9	0.68	0.617	4.01	0.68	--	--
	MW27-20170531	05/31/17	6.89	195.9	1.96	0.377	1.98	16.42	--	--
	MW27-20170921	09/21/17	6.51	126.3	2.39	0.365	2.27	15.64	--	--
	MW27-20171214	12/14/17	6.42	92.3	0.32	0.532	0.41	15.82	--	--
	MW27-20180308	03/08/18	6.46	-24.8	0.54	0.289	12.4	14.35	--	--
	MW27-20180628	06/28/18	6.32	-12.8	0.77	0.455	1.30	16.40	--	--
	MW27-20180920	09/20/18	6.42	40.9	0.21	0.388	1.34	16.80	--	--
	MW27-20181214	12/14/18	6.32	39.7	1.58	0.359	0.85	15.52	--	--
	MW27-20190614	06/14/19	6.44	49.6	3.22	0.360	1.47	15.92	--	--
	MW27-20191205	12/05/19	6.75	-69.3	5.25	0.372	1.68	14.20	--	--
	MW27-20200626	6/26/2020	6.20	197.9	0.32	0.442	3.42	16.10	--	--
	MW27-20201210	12/10/20	6.37	163.2	2.04	0.475	4.18	15.13	--	--
MW27-20210623	06/23/21	6.55	12.7	0.22	0.535	6.11	16.70	--	--	
MW27-20211215	12/15/21	6.94	-62.8	0.06	0.567	5.31	15.30	--	--	
<b>Terry Avenue North</b>										
MW15	MW15-20150508	05/08/15	6.09	167.7	8.25	0.135	4.07	15.35	--	--
	MW15-20150805	08/05/15	6.16	134.1	8.64	0.163	0.5	15.90	--	--
	MW15-20151209	12/09/15	7.33	164.8	7.53	0.169	2.57	14.58	--	--
	MW15-20160308	03/08/16	6.19	181.1	7.26	0.197	2.63	14.44	--	--
	MW15-20160713	07/13/16	6.28	196.9	4.62	0.341	1.28	15.40	--	--
	MW15-20161018	10/18/16	6.41	192.6	4.75	0.289	6.48	15.35	--	--
	MW15-20170125	01/25/17	6.14	70.2	4.21	0.159	1.78	1.88	--	--
	MW15-20170531	05/31/17	5.67	-48.0	9.71	0.126	7.01	15.22	--	--
	MW15-20170922	09/22/17	5.81	382.3	7.69	0.156	1.72	15.06	--	--
	MW15-20171215	12/15/17	6.50	117.0	5.31	0.251	4.84	12.66	--	--
	MW15-20171215	12/15/17	6.50	117.0	5.31	0.251	4.84	12.66	--	--
	MW15-20180309	03/09/18	6.30	44.5	0.36	0.359	6.01	14.13	--	--
	MW15-20180629	06/29/18	6.14	36.2	4.13	0.228	11.55	14.39	--	--
	MW15-20180920	09/20/18	5.88	169.7	7.66	0.273	14.3	15.70	--	--
	MW15-20181214	12/14/18	6.00	46.7	6.24	0.238	5.61	14.60	--	--
	MW15-20190613	06/13/19	5.97	128.9	5.70	0.154	5.95	16.27	--	--
	MW15-20191205	12/05/19	6.84	-85.7	4.43	0.235	29.20	13.62	--	--
	MW15-20200626	6/26/2020	6.17	134.0	3.24	0.433	3.86	15.90	--	--
MW15-20201211	12/11/20	6.35	102.6	4.9	0.599	3.13	14.02	--	--	
<b>WELL DAMAGED 2021</b>										
MW34	MW34-20211216	12/16/21	7.15	195.3	1.51	0.432	18.5	16.6	--	--



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**Seattle, Washington**

Well Identification	Sample Identification	Sample Date	pH <sup>(1)</sup>	ORP <sup>(1)</sup> (mV)	Dissolved Oxygen <sup>(1)</sup> (mg/L)	Specific Conductivity <sup>(1)</sup> (mS/cm)	Turbidity <sup>(1)</sup> (NTU)	Temperature <sup>(1)</sup> (°C)	Alkalinity <sup>(2)</sup> (mg/L CaCO <sub>3</sub> )	Total Organic Carbon <sup>(3)</sup> (mg/L)
<b>Thomas Street</b>										
MW16	MW16-20130911	09/11/13	7.22	48.0	3.64	0.686	162.0	19.04	--	--
	MW16-20150508	05/08/15	6.40	145.4	0.68	0.676	22.1	15.59	266	0.961
	MW16-20150805	08/05/15	6.10	34.4	0.40	0.771	1.45	16.37	--	--
	MW16-20151210	12/10/15	7.80	114.5	0.73	0.789	1.34	14.90	--	--
	MW16-20160308	03/08/16	6.60	15.7	0.89	0.753	0.72	14.65	--	--
	MW16-20160712	07/12/16	6.68	-90.8	0.47	0.928	0.47	17.38	--	--
	MW16-20161019	10/19/16	6.49	-56.3	0.41	0.788	8.32	15.66	--	9.4
	MW16-20170125	01/25/17	6.57	112.90	0.46	0.70	1.98	14.20	--	13.50
	MW16-20170531	05/31/17	6.71	-106.2	0.65	0.985	3.81	16.63	--	46.0 <sup>D</sup>
	MW16-20170922	09/22/17	6.62	189.4	0.72	0.995	1.35	16.96	--	92.1 <sup>D</sup>
	MW16-20171229	12/29/17	6.87	96.9	2.13	0.830	1.95	14.11	--	93.5 <sup>D</sup>
MW16-20180309	03/09/18	6.70	68.4	0.23	0.941	7.98	15.28	--	1.87	
<b>WELL DAMAGED 2018</b>										
MW28	MW28-20190613	6/13/2019	6.62	81.3	1.08	0.867	4.22	18.72	424	--
	MW28-20191009	10/9/2019	8.1	87.4	1.58	0.789	5.72	16.13	--	--
	MW28-20191204	12/4/2019	6.68	161.5	0.24	0.79	7.72	15.49	391	--
	MW28-20200626	6/26/2020	6.70	-71.0	0.55	0.734	6.51	16.60	351	--
	MW28-20201211	12/11/2020	6.89	158.9	1.47	0.634	18.9	14.37	304	--
	MW28-20210623	6/23/2021	6.69	-48.1	3.67	0.723	7.71	19.66	292	--
	MW28-20211216	12/16/2021	7.34	85.3	0.44	0.532	--	14.40	223	--
<b>Harrison Street</b>										
MW01	MW01-20150806	08/06/15	5.71	126.9	9.20	0.308	3.41	21.37	--	--
	MW01-20160308	03/08/16	6.63	157.2	7.20	0.215	--	13.07	--	--
	MW01-20160712	07/12/16	6.69	157.7	7.48	0.225	24.9	17.28	--	--
	MW01-20161018	10/18/16	6.73	125.0	8.01	0.228	3.90	15.31	--	--
	MW01-20170124	01/24/17	6.72	144.0	8.00	0.222	2.27	13.25	--	--
	MW01-20170531	05/31/17	6.15	-30.9	8.24	0.262	8.66	15.17	--	--
	MW01-20171214	12/14/17	6.23	73.1	4.89	0.253	26.8	11.21	--	--
	MW01-20180309	03/09/18	6.34	185.7	5.40	0.219	5.27	12.87	--	--
	MW01-20180628	06/28/18	6.37	112.2	3.85	0.255	2.32	15.93	--	--
	MW01-20180920	09/20/18	6.35	179.8	5.91	0.260	2.82	16.10	--	--
	MW01-20181214	12/14/18	6.45	114.3	6.46	0.244	2.90	14.44	--	--
	MW01-20190614	06/14/19	6.30	111.2	8.19	0.288	1.73	15.45	--	--
	MW01-20191205	12/05/19	6.65	-80.8	7.20	0.325	2.61	13.81	--	--
	MW01-20200626	06/26/20	6.29	170.2	6.86	0.381	23.7	16.60	--	--
	MW01-20201211	12/11/20	6.36	187.7	11.11	0.442	4.37	14.11	--	--
MW01-20210624	06/24/21	6.12	12.8	7.96	0.467	7.13	16.94	--	--	
MW01-20211215	12/15/21	6.41	5.4	7.07	0.536	3.30	14.01	--	--	



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Well Identification	Sample Identification	Sample Date	pH <sup>(1)</sup>	ORP <sup>(1)</sup> (mV)	Dissolved Oxygen <sup>(1)</sup> (mg/L)	Specific Conductivity <sup>(1)</sup> (mS/cm)	Turbidity <sup>(1)</sup> (NTU)	Temperature <sup>(1)</sup> (°C)	Alkalinity <sup>(2)</sup> (mg/L CaCO <sub>3</sub> )	Total Organic Carbon <sup>(3)</sup> (mg/L)
MW26	MW26-20151210	12/10/15	8.26	142.3	4.58	0.359	34.8	14.39	--	--
	MW26-20160307	03/07/16	6.54	108.6	0.93	0.234	3.21	14.20	--	--
	MW26-20160712	07/12/16	6.28	101.8	5.39	0.313	1.30	16.08	--	--
	MW26-20161018	10/18/16	6.39	181.0	5.55	0.312	7.52	14.69	--	--
	MW26-20170124	01/24/17	6.49	75.0	0.88	0.316	2.67	13.80	--	--
	MW26-20170531	05/31/17	6.50	213.1	0.86	0.23	2.97	14.82	--	--
	MW26-20170921	09/21/17	6.15	182.7	0.35	0.268	5.98	14.91	--	--
	MW26-20171214	12/14/17	6.06	163.4	0.32	0.354	2.66	12.65	--	--
	MW26-20180309	03/09/18	6.39	166.2	0.28	0.281	8.47	13.37	--	--
	MW26-20180628	06/28/18	6.21	68.0	0.28	0.379	8.52	15.44	--	--
	MW26-20180920	09/20/18	6.23	174.5	0.28	0.359	3.98	15.90	--	--
	MW26-20181214	12/14/18	6.23	23.8	0.62	0.196	5.96	13.96	103	1.23
	MW26-20190614	06/14/19	6.27	83.0	0.59	0.370	6.41	15.73	78.0	1.13
	MW26-20191205	12/05/19	6.58	-107.00	0.70	0.279	7.07	14.04	103	21.2 <sup>B</sup>
	MW26-20200626	06/26/20	6.17	10.50	0.19	0.369	7.84	15.50	124	1.39
	MW26-20201211	12/11/20	6.46	184.90	0.64	0.196	4.67	13.27	93.1	1.02
MW26-20210623	06/23/21	6.6	14.90	0.33	0.303	7.36	16.10	114	1.30	
MW26-20211215	12/15/21	6.87	-23.60	0.55	0.356	5.80	13.71	127	0.900	
MW32	MW32-20191009	10/09/19	6.16	-39.9	2.22	0.208	9.71	13.35	--	--
	MW32-20191205	12/05/19	5.92	-9.0	2.26	0.167	23.6	10.44	--	--
	MW32-20200626	06/26/20	5.98	118.9	3.54	0.251	6.92	15.20	--	--
	MW32-20201212	12/12/20	6.48	169.0	5.04	0.334	36.6	14.48	--	--
	MW32-20210624	06/24/21	6.37	156.4	2.79	0.271	14.9	15.80	--	--
	MW32-20211215	12/15/21	6.36	-36.9	0.86	0.280	11.0	14.16	--	--
MW33	MW33-20191009	10/09/19	8.03	97.2	4.32	0.257	7.3	15.85	--	--
	MW33-20191205	12/05/19	6.38	-25.6	5.79	0.170	3.43	11.28	--	--
	--	06/26/20	WELL DRY, UNABLE TO SAMPLE							
	--	12/10/20	WELL DRY, UNABLE TO SAMPLE							
	MW33-20110624	06/24/21	6.91	181.6	7.75	0.387	22.8	16.7	--	--
MW33-20111216	12/16/21	7.26	213.1	1.38	0.371	35.9	14.7	--	--	



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Well Identification	Sample Identification	Sample Date	pH <sup>(1)</sup>	ORP <sup>(1)</sup> (mV)	Dissolved Oxygen <sup>(1)</sup> (mg/L)	Specific Conductivity <sup>(1)</sup> (mS/cm)	Turbidity <sup>(1)</sup> (NTU)	Temperature <sup>(1)</sup> (°C)	Alkalinity <sup>(2)</sup> (mg/L CaCO <sub>3</sub> )	Total Organic Carbon <sup>(3)</sup> (mg/L)
<b>South-Adjoining Property</b>										
MW29	MW29-20191008	10/08/19	6.55	-146.2	1.67	0.777	32	14.09	--	--
	MW29-20191204	12/04/19	6.28	155.3	0.56	0.937	9.23	15.10	--	--
	MW29-20200625	06/25/20	6.59	33.2	0.70	0.960	9.70	16.70	--	--
	MW29-20201210	12/10/20	6.69	81.3	1.58	0.872	5.87	15.03	--	--
	MW29-20210622	06/22/21	6.59	45.5	4.96	0.870	3.10	17.99	--	--
	MW29-20211215	12/15/21	7.15	110.8	0.36	0.860	7.79	14.60	--	--
MW30	MW30-20191008	10/08/19	2.98	133.8	2.30	0.495	158	15.29	--	--
	MW30-20191204	12/04/19	5.88	173.1	0.4	0.440	13.9	14.30	--	--
	MW30-20200625	06/25/20	6.12	61.9	5.92	0.488	22.7	20.10	--	--
	MW30-20201210	12/10/20	6.17	125	2.18	0.475	38.0	14.36	--	--
	MW30-20210623	06/23/21	6.30	136.3	1.29	0.419	113.0	17.90	--	--
	MW30-20211215	12/15/21	6.63	72.8	0.70	0.471	26.4	14.90	--	--
ONNI-MW-4	ONNI-MW-4-20191208	12/08/19	6.46	-157.2	1.40	0.469	49.0	13.69	--	--
	ONNI-MW-4-20200625	06/25/20	6.97	-12.1	4.20	0.507	91.0	16.70	--	--
	ONNI-MW-4-20201210	12/10/20	7.06	182	1.99	0.472	245.0	13.15	--	--
	ONNI-MW-4-20210622	06/22/21	7.18	180.9	1.84	0.53	3713.0	23.30	--	--
	ONNI-MW-4-20211215	12/15/21	7.54	118.4	0.60	0.54	51.7	14.40	--	--
ONNI-MW-5	ONNI-MW-5-20191208	12/08/19	6.92	-176.5	1.7	0.423	45.0	12.75	--	--
	ONNI-MW-5-20200206	02/06/20	7.11	-38.1	1.17	0.368	20.5	14.79	--	--
	ONNI-MW-5-20200625	06/25/20	7.24	33.1	2.12	0.436	39.3	15.70	--	--
	ONNI-MW-5-20201209	12/09/20	7.21	131.6	0.38	0.405	15.0	14.81	--	--
	ONNI-MW-5-20210623	06/23/21	7.43	27.9	1.74	0.412	overrange	17.53	--	--
	ONNI-MW-5-20211214	12/14/21	7.41	-155.7	0.25	0.343	125	14.10	--	--
ONNI-MW-9	ONNI-MW-9-20211214	12/14/21	6.37	20.5	0.4	0.379	115	13.2	--	--

**NOTES:**

Analyses performed by Friedman & Bruya, Inc., Fremont Analytical Inc., or Aquatic Research Inc., of Seattle, Washington; or Amtest Inc. of Kirkland, Washington.

<sup>(1)</sup>Parameter is measured in the field using water quality meter with flow-through cell. The reported value is the last reading prior to sampling groundwater.

<sup>(2)</sup>Analyzed by SM 2320B.

<sup>(3)</sup>Analyzed by SM 5310C.

<sup>(4)</sup>Elevated turbidity measurement as groundwater was purged from the base of the well.

**Laboratory Notes:**

<sup>D</sup>Dilution was required.

<sup>B</sup>Analyte detected in the associated Method Blank.

\*Anomalous reading, attributed to meter error.

-- = not measured/ not applicable

< = not detected at a concentration exceeding the laboratory reporting limit

°C = degrees Celsius

CaCO<sub>3</sub> = calcium carbonate

mg/L = milligrams per liter

mV = millivolts

NTU = nephelometric turbidity unit

ORP = oxidation-reduction potential

SM = Standard Method



**Table 6**  
**Groundwater Analytical Results for Volatile Fatty Acids**  
**Troy Laundry Seattle Site**  
**300 Boren Avenue North and 399 Fairview Avenue North**  
**Seattle, Washington**

Well Identification	Sample Identification Number	Sample Date	Lactate <sup>(1)</sup> (mg/L)	Acetate <sup>(1)</sup> (mg/L)	Propionate <sup>(1)</sup> (mg/L)	Formate <sup>(1)</sup> (mg/L)	Butyrate <sup>(1)</sup> (mg/L)	Pyruvate <sup>(1)</sup> (mg/L)	Lactic <sup>(2)</sup> (mg/L)	Acetic <sup>(3)</sup> (mg/L)	Total Organic Carbon <sup>(4)</sup> (mg/L)
MW07	MW07-20160308	03/08/16	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	0.862
	MW07-20160713	07/16/16	--	--	--	--	--	--	<20	<20 <sup>X,D</sup>	0.83
	MW07-20161019	10/19/16	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	1.7
	MW07-20170124	01/24/17	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	4.25
	MW07-20170531	05/31/17	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	4.58
	MW07-20180308	03/08/18	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	0.877
	MW07-20180629	06/29/18	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	1.80
MW07-20180920	09/20/18	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	0.963	
MW16	MW16-20161019	10/19/16	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	9.4
	MW16-20170125	01/25/17	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	13.5
	MW16-20170531	05/31/17	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	46.0 <sup>D</sup>
	MW16-20170922	09/22/17	<0.39	1.1	<0.31	2	<0.41	<0.69	--	--	92.1 <sup>D</sup>
	MW16-20171229	12/29/17	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	93.5 <sup>D</sup>
	MW16-20180309	03/09/18	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	1.87
WELL DAMAGED 2018											
MW18	MW18-20150506	05/06/15	--	--	--	--	--	--	--	--	<0.500
	MW18-20160308	03/08/16	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	1.01
	MW18-20160714	07/14/16	--	--	--	--	--	--	<100	64 <sup>X,D</sup>	2,300
	MW18-20161020	10/20/16	<7.8	959	494	<4.4	131	<14	--	--	1,900
	MW18-20170126	01/26/17	<7.8	830	200	<4.4	121	<14	--	--	823
	MW18-20170601	06/01/17	<7.8	512	300	<4.4	115	<14	--	--	1,090 <sup>D</sup>
	MW18-20170923	09/23/17	<0.39	25	232	<0.22	<0.41	2	--	--	253 <sup>D</sup>
	MW18-20171216	12/16/17	<0.39	<0.54	81	0.79	<0.41	<0.69	--	--	173 <sup>D</sup>
	MW18-20180310	03/10/18	<0.39	193	79	0.55	1.6	1.7	--	--	108 <sup>D</sup>
	MW18-20180630	06/30/18	<0.39	28	53	<0.22	<0.41	<0.69	--	--	47.2 <sup>D</sup>
	MW18-20180922	09/22/18	<0.39	26	5.4	<0.22	<0.41	<0.69	--	--	37.8 <sup>D</sup>
	MW18-20190615	06/15/19	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	11
	MW18-20191207	12/07/19	<0.39	10	<0.31	<0.22	<0.41	<0.69	--	--	--
	MW18-20200627	06/27/20	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	5.95
	MW18-20201212	12/12/20	<0.69	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	4.30
MW18-20210625	06/25/21	<0.39	1.8	<0.31	<0.22	<0.41	<0.69	--	--	6.85	
MW18-20211217	12/17/21	<0.39	<0.54	<0.31	<0.22	<0.47	<0.69	--	--	11.9	



**Table 6**  
**Groundwater Analytical Results for Volatile Fatty Acids**  
**Troy Laundry Seattle Site**  
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**Seattle, Washington**

Well Identification	Sample Identification Number	Sample Date	Lactate <sup>(1)</sup> (mg/L)	Acetate <sup>(1)</sup> (mg/L)	Propionate <sup>(1)</sup> (mg/L)	Formate <sup>(1)</sup> (mg/L)	Butyrate <sup>(1)</sup> (mg/L)	Pyruvate <sup>(1)</sup> (mg/L)	Lactic <sup>(2)</sup> (mg/L)	Acetic <sup>(3)</sup> (mg/L)	Total Organic Carbon <sup>(4)</sup> (mg/L)
MW21	MW21-20160309	03/09/16	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	2.29
	MW21-20160713	07/13/16	--	--	--	--	--	--	<100	<100 <sup>X,D</sup>	1,800
	MW21-20161020	10/20/16	<7.8	509	1,032	<4.4	43	<14	--	--	1,800
	MW21-20170126	01/26/17	<0.39	201	311	1.1	31	0.91	--	--	884
	MW21-20170601	06/01/17	<7.8	682	393	<4.4	88	<14	--	--	755 <sup>D</sup>
	MW21-20170924	09/24/17	<7.8	880	507	<4.4	148	<14	--	--	871 <sup>D</sup>
	MW21-20171216	12/16/17	<7.8	630	151	45	148	13	--	--	722 <sup>D</sup>
	MW21-20180310	03/10/18	<0.39	490	124	1.0	73	16	--	--	466 <sup>D</sup>
	MW21-20180630	06/30/18	<7.8	811	278	<4.4	151	28	--	--	718 <sup>D</sup>
	MW21-20180922	09/22/18	<0.39	460	173	<0.22	114	<0.69	--	--	549 <sup>D</sup>
	MW21-20190615	06/15/19	<0.39	140	66	<0.22	12	4	--	--	163 <sup>D</sup>
	MW21-20191207	12/07/19	<0.39	116	7.2	<0.22	13	12	--	--	--
	MW21-20200627	06/27/20	<0.39	249	144	20	79	19	--	--	--
	MW21-20201212	12/12/20	<0.69	157	89	0.72	36	9.1	--	--	191 <sup>D</sup>
MW21-20210625	6/25/21	<0.39	189	85	<0.22	50	15	--	--	349 <sup>D</sup>	
MW21-20211217	12/17/21	<0.39	174	62	1.5	31	16	--	--	330	
MW22	MW22-20190615	06/15/19	<0.39	270	150	<0.22	39	13	--	--	286 <sup>D</sup>
	MW22-20191207	12/07/19	<0.39	418	134	<0.22	42	13	--	--	--
	MW22-20200627	06/27/20	<0.39	283	56	<0.22	21	7.3	--	--	206 <sup>D</sup>
	MW22-20201212	12/12/20	<0.69	142	22	<0.22	8.8	1.2	--	--	95.5 <sup>D</sup>
	MW22-20210625	06/25/21	<0.39	254	14	<0.22	36	2.4	--	--	349 <sup>D</sup>
MW22-20211217	12/17/21	<0.39	169	16	<0.22	14	1.9	--	--	133 <sup>D</sup>	



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Well Identification	Sample Identification Number	Sample Date	Lactate <sup>(1)</sup> (mg/L)	Acetate <sup>(1)</sup> (mg/L)	Propionate <sup>(1)</sup> (mg/L)	Formate <sup>(1)</sup> (mg/L)	Butyrate <sup>(1)</sup> (mg/L)	Pyruvate <sup>(1)</sup> (mg/L)	Lactic <sup>(2)</sup> (mg/L)	Acetic <sup>(3)</sup> (mg/L)	Total Organic Carbon <sup>(4)</sup> (mg/L)
MW23	MW23-20150507	05/07/15	--	--	--	--	--	--	--	--	<0.500
	MW23-20160308	03/08/16	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	3.14
	MW23-20160714	07/14/16	--	--	--	--	--	--	<100	<100 <sup>X</sup>	2,300
	MW23-20161020	10/20/16	<7.8	986	1,229	<4.4	144	<14	--	--	2,300
	MW23-20170126	01/26/17	<7.8	613	256	<4.4	57	<14	--	--	520
	MW23-20170601	06/01/17	<7.8	1,300	656	<4.4	280	<14	--	--	1,620 <sup>D</sup>
	MW23-20170923	09/23/17	<7.8	705	388	<4.4	295	59	--	--	1,160 <sup>D</sup>
	MW23-20171216	12/16/17	<0.39	131	176	8.0	106	31	--	--	865 <sup>D</sup>
	MW23-20180310	03/10/18	<0.39	25	151	2.8	<0.41	7.2	--	--	127 <sup>D</sup>
	MW23-20180630	06/30/18	<0.39	52	213	<0.22	<0.41	8.5	--	--	198 <sup>D</sup>
	MW23-20180922	09/22/18	<0.39	26	230	<0.22	<0.41	<0.69	--	--	159 <sup>D</sup>
	MW23-20190615	06/15/19	<0.39	19	86	<0.22	0.42	1.8	--	--	60.7 <sup>D</sup>
	MW23-20191207	12/07/19	<0.39	24	<0.31	2.7	<0.41	<0.69	--	--	--
	MW23-20200627	06/27/20	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	6.41
	MW23-20201212	12/12/20	<0.69	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	7.90
MW23-20210625	06/25/21	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	6.65	
MW23-20211217	12/17/21	<0.39	<0.54	<0.31	<0.22	<0.47	<0.69	--	--	6.10	
MW24	MW24-20150506	05/06/15	--	--	--	--	--	--	--	--	1.12
	MW24-20160309	03/09/16	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	2.19
	MW24-20160715	07/15/16	--	--	--	--	--	--	<100	56.7 <sup>X,D</sup>	1,000
	MW24-20161020	10/20/16	<7.8	1,431	143	<4.4	20	<14	--	--	640
	MW24-20170126	01/26/17	<7.8	901	133	<4.4	34	<14	--	--	375
	MW24-20170601	06/01/17	<7.8	1,036	204	78	251	<14	--	--	1,470 <sup>D</sup>
	MW24-20170924	09/24/17	<0.39	28	140	4.2	38	7.9	--	--	390 <sup>D</sup>
	MW24-20171216	12/16/17	<0.39	12	70	1.2	2.0	0.80	--	--	233 <sup>D</sup>
	MW24-20180310	03/10/18	<0.39	8.0	10	<0.22	<0.41	<0.69	--	--	22.1 <sup>D</sup>
	MW24-20180630	06/30/18	<7.8	681	164	<4.4	123	<13.8	--	--	770 <sup>D</sup>
	MW24-20180922	09/22/18	<0.39	26	10	<0.22	1	<0.69	--	--	45.5 <sup>D</sup>
	MW24-20190615	06/15/19	<0.39	39	5.6	<0.22	0.46	<0.69	--	--	20.5
	MW24-20191207	12/07/19	5.7	29	<0.31	3.0	<0.41	<0.69	--	--	--
	MW24-20200627	06/27/20	<0.39	<0.54	0.60	<0.22	<0.41	<0.69	--	--	8.44
	MW24-20201212	12/12/20	<0.69	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	6.95
MW24-20210625	06/25/21	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	7.52	
MW24-20211217	12/17/21	<0.39	<0.54	<0.31	1.7	<0.47	<0.69	--	--	<0.500	



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**Groundwater Analytical Results for Volatile Fatty Acids**  
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Well Identification	Sample Identification Number	Sample Date	Lactate <sup>(1)</sup> (mg/L)	Acetate <sup>(1)</sup> (mg/L)	Propionate <sup>(1)</sup> (mg/L)	Formate <sup>(1)</sup> (mg/L)	Butyrate <sup>(1)</sup> (mg/L)	Pyruvate <sup>(1)</sup> (mg/L)	Lactic <sup>(2)</sup> (mg/L)	Acetic <sup>(3)</sup> (mg/L)	Total Organic Carbon <sup>(4)</sup> (mg/L)
MW25	MW25-20150507	05/07/15	--	--	--	--	--	--	--	--	<0.500
	MW25-20190615	06/15/19	<0.39	45	1.3	<0.22	1.3	<0.69	--	--	25.80
	MW25-20191207	12/07/19	<0.39	21	<0.31	2.9	<0.41	<0.69	--	--	--
	MW25-20200627	06/27/20	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	5.21
	MW25-20201212	12/12/20	<0.69	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	9.57
	MW25-20210625	06/25/21	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	7.50
	MW25-20211217	12/17/21	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	4.18
IW04	IW04-20150508	05/08/15	--	--	--	--	--	--	--	--	<0.500
	IW04-20190615	06/15/19	<0.39	31	6.1	<0.22	3.2	0.42	--	--	148 <sup>D</sup>
	IW04-20191207	12/07/19	<0.39	25	<0.31	3.3	<0.41	<0.69	--	--	--
	IW04-20200627	06/27/20	<0.39	8.2	1.5	<0.22	1.5	<0.69	--	--	88.7 <sup>D</sup>
	IW04-20201212	12/12/20	<0.69	6.2	3.1	<0.22	2.1	<0.69	--	--	90.3 <sup>D</sup>
	IW04-20210625	06/25/21	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	93.1 <sup>D</sup>
	IW04-20211217	12/17/21	<0.39	2.4	1.2	<0.22	<0.47	<0.69	--	--	101 <sup>D</sup>
IW50	IW50-20160309	03/09/16	<0.39	358	82	1.1	22	<0.69	--	--	115
	IW50-20160715	07/15/16	--	--	--	--	--	--	<100	<100 <sup>x,D</sup>	1,100
	IW50-20161021	10/21/16	<7.8	1,492	683	8.2	476	<14	--	--	1,600
	IW50-20170126	01/26/17	<0.39	73	102	4.0	61	9.4	--	--	391
	IW50-20170602	06/02/17	<0.39	39	5.2	<0.22	1.3	<0.69	--	--	85.2 <sup>D</sup>
	IW50-20170924	09/24/17	<0.39	87	108	<0.22	4.2	2.5	--	--	214 <sup>D</sup>
	IW50-20171216	12/16/17	'	43	8.0	<0.22	<0.41	<0.69	--	--	224 <sup>D</sup>
	IW50-20180310	03/10/18	<0.39	41	3.1	<0.22	0.79	<0.69	--	--	55.0 <sup>D</sup>
	IW50-20180630	06/30/18	<0.39	4.9	<0.31	<0.22	<0.41	<0.69	--	--	41.9 <sup>D</sup>
	IW50-20180922	09/22/18	<0.39	2.3	<0.31	<0.22	<0.41	<0.69	--	--	29.6 <sup>D</sup>
	IW50-20190615	06/15/19	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	7.56
	IW50-20191207	12/07/19	<0.39	18	<0.31	3.3	<0.41	<0.69	--	--	--
	IW50-20200627	06/27/20	<0.39	2.8	<0.31	<0.22	<0.41	<0.69	--	--	18.2
	IW50-20201212	12/12/20	<0.69	1.6	<0.31	<0.22	<0.41	<0.69	--	--	13.7
	IW50-20210625	06/25/21	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	16.1
IW50-20211217	12/17/21	<0.39	9.2	1.3	<0.22	<0.47	<0.69	--	--	38.1	



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Well Identification	Sample Identification Number	Sample Date	Lactate <sup>(1)</sup> (mg/L)	Acetate <sup>(1)</sup> (mg/L)	Propionate <sup>(1)</sup> (mg/L)	Formate <sup>(1)</sup> (mg/L)	Butyrate <sup>(1)</sup> (mg/L)	Pyruvate <sup>(1)</sup> (mg/L)	Lactic <sup>(2)</sup> (mg/L)	Acetic <sup>(3)</sup> (mg/L)	Total Organic Carbon <sup>(4)</sup> (mg/L)
IW61	IW61-20160309	03/09/16	<0.39	368	51	0.69	28	<0.69	--	--	114
	IW61-20160713	07/13/16	--	--	--	--	--	--	<100	217 <sup>X,D</sup>	2,900
	IW61-20161021	10/21/16	<7.8	1,543	538	122	837	<14	--	--	3,000
	IW61-20170126	01/26/17	<7.8	612	253	38	363	<14	--	--	1,300
	IW61-20170602	06/02/17	<0.39	171	118	<0.22	189	<0.69	--	--	908 <sup>D</sup>
	IW61-20170923	09/23/17	<7.8	2,589	231	37	705	19	--	--	1,490 <sup>D</sup>
	IW61-20171216	12/16/17	<0.39	235	151	45	148	13	--	--	765 <sup>D</sup>
	IW61-20180310	03/10/18	<0.39	184	176	31	92	16	--	--	432 <sup>D</sup>
	IW61-20180630	06/30/18	<0.39	111	200	<0.22	44	14	--	--	406 <sup>D</sup>
	IW61-20180922	09/22/18	<0.39	71	170	14	21	<0.69	--	--	228 <sup>D</sup>
	IW61-20190615	06/15/19	<0.39	88	72	<0.22	4.4	0.58	--	--	140 <sup>D</sup>
	IW61-20191207	12/07/19	<0.39	98	7.2	1.8	5	<0.69	--	--	--
	IW61-20200627	06/27/20	<0.39	13	0.62	<0.22	<0.41	<0.69	--	--	55.4 <sup>D</sup>
	IW61-20201212	12/12/20	<0.69	5.1	<0.31	0.60	<0.41	<0.69	--	--	60.6 <sup>D</sup>
	IW61-20210625	06/25/21	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	--	--	66.2 <sup>D</sup>
IW61-20211217	12/17/21	<0.39	4.5	<0.31	<0.22	<0.47	<0.69	--	--	72.6 <sup>D</sup>	

**NOTES:**

Analyses performed by SIREM in Guelph, ON or AmTEST Laboratories in Kirkland, Washington.

<sup>(1)</sup>Analyzed by Ion Chromatography.

<sup>(2)</sup>Analyzed by EPA Method 300.0.

<sup>(3)</sup>Analyzed by EPA Method 300.0 modified.

<sup>(4)</sup>Analyzed by SM 5310C or EPA Method 300.0 modified.

**Laboratory Notes:**

<sup>D</sup>The reported value is from a dilution.

<sup>X</sup>Acetic and propionic acids co-eluted. Results are quantitated at acetic acid.

-- = not measured/ not applicable

< = not detected at a concentration exceeding the laboratory reporting limit

EPA = US Environmental Protection Agency

mg/L = milligrams per liter

SM = Standard Method

**ATTACHMENT A**  
**LABORATORY ANALYTICAL REPORTS**

***May 2021 Supplemental Sampling***

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

May 28, 2021

Levi Fernandes, Project Manager  
SoundEarth Strategies  
2811 Fairview Ave. East, Suite 2000  
Seattle, WA 98102

Dear Mr Fernandes:

Included are the results from the testing of material submitted on May 21, 2021 from the SOU\_0731-004-08\_20210521, F&BI 105414 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: Sarah Welter  
SOU0528R.DOC

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 21, 2020 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_ 0731-004-08\_ 20210521, F&BI 105414 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID

105414 -01

SoundEarth Strategies

MW28-20210521

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW28-20210521	Client:	SoundEarth Strategies
Date Received:	05/21/21	Project:	SOU_0731-004-08_20210521
Date Extracted:	05/24/21	Lab ID:	105414-01
Date Analyzed:	05/24/21	Data File:	052425.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	86	113
Toluene-d8	96	88	114
4-Bromofluorobenzene	104	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	17
Trichloroethene	4.3
Tetrachloroethene	9.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0731-004-08_20210521
Date Extracted:	05/24/21	Lab ID:	01-1157 mb
Date Analyzed:	05/24/21	Data File:	052430.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	86	113
Toluene-d8	97	88	114
4-Bromofluorobenzene	102	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/28/21

Date Received: 05/21/21

Project: SOU\_ 0731-004-08\_ 20210521, F&BI 105414

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

Laboratory Code: 105361-06 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance
				Recovery MS	Criteria
Vinyl chloride	ug/L (ppb)	10	<0.2	85	36-166
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	91	61-136
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	88	63-134
Trichloroethene	ug/L (ppb)	10	<1	91	66-135
Tetrachloroethene	ug/L (ppb)	10	<1	96	10-226

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Percent	Acceptance Criteria	RPD (Limit 20)
			Recovery LCS	Recovery LCSD		
Vinyl chloride	ug/L (ppb)	10	85	87	50-154	2
trans-1,2-Dichloroethene	ug/L (ppb)	10	93	96	68-128	3
cis-1,2-Dichloroethene	ug/L (ppb)	10	93	94	74-136	1
Trichloroethene	ug/L (ppb)	10	94	96	67-133	2
Tetrachloroethene	ug/L (ppb)	10	103	106	76-121	3



# 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.

105414

Report to: Levi Fernandes, cc Sarah Weller

Company: SoundEarth Strategies

Address: 2811 Fairview Ave E, Suite 2000

City, State, ZIP: Seattle, WA 98102

**SAMPLE CHAIN OF CUSTODY** ME 5/21/21 WU

SAMPLERS (signature) <u>Sarah Weller</u>	
PROJECT NAME/NO. <u>Troy Laundry Property</u>	PO # <u>0731-004-08</u>
REMARKS *cVOCs = PCE, TCE, Cls/Trans-DCE, and VC	EIM Y

Page # 1 of 1

TURNAROUND TIME Standard (2 weeks)  
RUSH \_\_\_\_\_  
Rush charges authorized by: \_\_\_\_\_

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	GRPH by NWTPH-Gx	BTEX by EPA 8021B	DRPH/ORPH by NWTPH-Dx	cVOCs* by EPA 8260C	Methane, Ethane, Ethene by RSK175	Sulfate, Nitrate, Alkalinity by SM1845/SM2320B	Total Fe and Mn by EPA 200.8	Fe 2+ by SM 3500	TOC By EPA 415.1	Notes	
<del>MWA 8-2010521</del>	<del>MWA 8</del>	<del>-</del>	<del>01K6/2/21</del>	<del></del>	<del></del>	<del>W</del>	<del>3</del>	<del></del>	<del></del>	<del></del>	<del>X</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>
Samples received at <u>4:00</u>																		

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

SIGNATURE		PRINT NAME		COMPANY		DATE	TIME
<u>Sarah Weller</u>	<u>Sarah Weller</u>	<u>Sarah Weller</u>	<u>SES</u>	<u>5/21/21</u>	<u>15:24</u>		
<u>HONG DEWEN</u>	<u>HONG DEWEN</u>	<u>HONG DEWEN</u>	<u>FBI</u>	<u>✓</u>	<u>✓</u>		
Received by:		Received by:					

***Second Quarter 2021***

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

July 7, 2021

Levi Fernandes, Project Manager  
SoundEarth Strategies  
2811 Fairview Ave. East, Suite 2000  
Seattle, WA 98102

Dear Mr Fernandes:

Included are the results from the testing of material submitted on June 24, 2021 from the SOU\_0731-004-05\_ 20210624, F&BI 106462 project. There are 28 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: Kyle Lowery  
SOU0707R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on June 24, 2021 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0731-004-05\_ 20210624, F&BI 106462 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
106462 -01	MW29-20210622
106462 -02	MW30-20210623
106462 -03	MW28-20210623
106462 -04	MW13-20210623
106462 -05	MW07-20210623
106462 -06	MW27-20210623
106462 -07	MW26-20210624
106462 -08	MW01-20210624
106462 -09	MW32-20210624
106462 -10	MW04-20210624
106462 -11	MW31-20210624
106462 -12	MW33-20210624

Samples MW28-20210623, MW07-20210623, MW26-20210624, and MW04-20210624 were sent to Fremont Analytical for dissolved gasses, sulfate, nitrate, alkalinity, and ferrous iron analysis. In addition, samples MW07-20210623 and MW26-20210624 were sent for TOC analysis. The report is enclosed.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/07/21

Date Received: 06/24/21

Project: SOU\_0731-004-05\_ 20210624, F&BI 106462

Date Extracted: 06/25/21

Date Analyzed: 06/28/21

**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)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
MW28-20210623 106462-03	<1	<1	<1	<3	<100	110
MW13-20210623 106462-04	<1	<1	<1	<3	<100	111
Method Blank 01-1417 MB	<1	<1	<1	<3	<100	106

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/07/21

Date Received: 06/24/21

Project: SOU\_0731-004-05\_ 20210624, F&BI 106462

Date Extracted: 06/25/21

Date Analyzed: 06/25/21

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL AND MOTOR OIL  
USING METHOD NWTPH-D<sub>x</sub>**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> (% Recovery) (Limit 41-152)
MW28-20210623 106462-03	120 x	<250	92
MW13-20210623 106462-04	100 x	<300	108
Method Blank 01-1496 MB	<50	<250	89

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW28-20210623	Client:	SoundEarth Strategies
Date Received:	06/24/21	Project:	SOU_0731-004-05_20210624
Date Extracted:	06/28/21	Lab ID:	106462-03 x10
Date Analyzed:	06/29/21	Data File:	106462-03 x10.067
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	1,340
Manganese	617



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW07-20210623	Client:	SoundEarth Strategies
Date Received:	06/24/21	Project:	SOU_0731-004-05_20210624
Date Extracted:	06/28/21	Lab ID:	106462-05
Date Analyzed:	06/28/21	Data File:	106462-05.044
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	166
Manganese	15.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW26-20210624	Client:	SoundEarth Strategies
Date Received:	06/24/21	Project:	SOU_0731-004-05_20210624
Date Extracted:	06/28/21	Lab ID:	106462-07
Date Analyzed:	06/28/21	Data File:	106462-07.045
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Iron	497
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW26-20210624	Client:	SoundEarth Strategies
Date Received:	06/24/21	Project:	SOU_0731-004-05_20210624
Date Extracted:	06/28/21	Lab ID:	106462-07 x10
Date Analyzed:	06/29/21	Data File:	106462-07 x10.070
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Manganese	579
-----------	-----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW04-20210624	Client:	SoundEarth Strategies
Date Received:	06/24/21	Project:	SOU_0731-004-05_20210624
Date Extracted:	06/28/21	Lab ID:	106462-10
Date Analyzed:	06/28/21	Data File:	106462-10.046
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Manganese	24.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW04-20210624	Client:	SoundEarth Strategies
Date Received:	06/24/21	Project:	SOU_0731-004-05_20210624
Date Extracted:	06/28/21	Lab ID:	106462-10 x10
Date Analyzed:	06/29/21	Data File:	106462-10 x10.071
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	1,630

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	SOU_0731-004-05_20210624
Date Extracted:	06/28/21	Lab ID:	I1-402 mb
Date Analyzed:	06/28/21	Data File:	I1-402 mb.039
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	<50
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW29-20210622	Client:	SoundEarth Strategies
Date Received:	06/24/21	Project:	SOU_0731-004-05_20210624
Date Extracted:	06/28/21	Lab ID:	106462-01
Date Analyzed:	06/28/21	Data File:	062807.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	86	113
Toluene-d8	99	88	114
4-Bromofluorobenzene	110	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	16
Trichloroethene	11
Tetrachloroethene	14

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW30-20210623	Client:	SoundEarth Strategies
Date Received:	06/24/21	Project:	SOU_0731-004-05_20210624
Date Extracted:	06/28/21	Lab ID:	106462-02
Date Analyzed:	06/28/21	Data File:	062808.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	86	113
Toluene-d8	100	88	114
4-Bromofluorobenzene	108	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	7.4
Trichloroethene	2.0
Tetrachloroethene	<1



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW28-20210623	Client:	SoundEarth Strategies
Date Received:	06/24/21	Project:	SOU_0731-004-05_20210624
Date Extracted:	06/28/21	Lab ID:	106462-03
Date Analyzed:	06/28/21	Data File:	062809.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	86	113
Toluene-d8	98	88	114
4-Bromofluorobenzene	118	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	14
Trichloroethene	3.5
Tetrachloroethene	7.0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW13-20210623	Client:	SoundEarth Strategies
Date Received:	06/24/21	Project:	SOU_0731-004-05_20210624
Date Extracted:	06/28/21	Lab ID:	106462-04
Date Analyzed:	06/28/21	Data File:	062810.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	86	113
Toluene-d8	98	88	114
4-Bromofluorobenzene	103	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Tetrachloroethene	4.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW07-20210623	Client:	SoundEarth Strategies
Date Received:	06/24/21	Project:	SOU_0731-004-05_20210624
Date Extracted:	06/28/21	Lab ID:	106462-05
Date Analyzed:	06/28/21	Data File:	062811.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	86	113
Toluene-d8	97	88	114
4-Bromofluorobenzene	100	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	3.4
Trichloroethene	15
Tetrachloroethene	1.8

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW27-20210623	Client:	SoundEarth Strategies
Date Received:	06/24/21	Project:	SOU_0731-004-05_20210624
Date Extracted:	06/28/21	Lab ID:	106462-06
Date Analyzed:	06/28/21	Data File:	062812.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	86	113
Toluene-d8	98	88	114
4-Bromofluorobenzene	101	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	4.3
Trichloroethene	80
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW26-20210624	Client:	SoundEarth Strategies
Date Received:	06/24/21	Project:	SOU_0731-004-05_20210624
Date Extracted:	06/28/21	Lab ID:	106462-07
Date Analyzed:	06/28/21	Data File:	062813.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	86	113
Toluene-d8	99	88	114
4-Bromofluorobenzene	102	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	6.6
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW01-20210624	Client:	SoundEarth Strategies
Date Received:	06/24/21	Project:	SOU_0731-004-05_20210624
Date Extracted:	06/28/21	Lab ID:	106462-08
Date Analyzed:	06/28/21	Data File:	062814.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	86	113
Toluene-d8	97	88	114
4-Bromofluorobenzene	103	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW32-20210624	Client:	SoundEarth Strategies
Date Received:	06/24/21	Project:	SOU_0731-004-05_20210624
Date Extracted:	06/28/21	Lab ID:	106462-09
Date Analyzed:	06/29/21	Data File:	062928.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	86	113
Toluene-d8	101	88	114
4-Bromofluorobenzene	102	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW04-20210624	Client:	SoundEarth Strategies
Date Received:	06/24/21	Project:	SOU_0731-004-05_20210624
Date Extracted:	06/28/21	Lab ID:	106462-10
Date Analyzed:	06/28/21	Data File:	062823.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	86	113
Toluene-d8	98	88	114
4-Bromofluorobenzene	100	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	11
Tetrachloroethene	<1



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW31-20210624	Client:	SoundEarth Strategies
Date Received:	06/24/21	Project:	SOU_0731-004-05_20210624
Date Extracted:	06/28/21	Lab ID:	106462-11
Date Analyzed:	06/28/21	Data File:	062824.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	86	113
Toluene-d8	99	88	114
4-Bromofluorobenzene	104	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	5.0
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW33-20210624	Client:	SoundEarth Strategies
Date Received:	06/24/21	Project:	SOU_0731-004-05_20210624
Date Extracted:	06/28/21	Lab ID:	106462-12
Date Analyzed:	06/28/21	Data File:	062825.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	86	113
Toluene-d8	101	88	114
4-Bromofluorobenzene	100	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0731-004-05_20210624
Date Extracted:	06/28/21	Lab ID:	01-1241 mb
Date Analyzed:	06/28/21	Data File:	062806.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	86	113
Toluene-d8	98	88	114
4-Bromofluorobenzene	103	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/07/21

Date Received: 06/24/21

Project: SOU\_0731-004-05\_ 20210624, F&BI 106462

**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: 106423-01 (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	102	65-118
Toluene	ug/L (ppb)	50	102	72-122
Ethylbenzene	ug/L (ppb)	50	104	73-126
Xylenes	ug/L (ppb)	150	101	74-118
Gasoline	ug/L (ppb)	1,000	99	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/07/21

Date Received: 06/24/21

Project: SOU\_0731-004-05\_ 20210624, F&BI 106462

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL EXTENDED USING METHOD NWTPH-D<sub>x</sub>**

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	104	108	63-142	4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/07/21

Date Received: 06/24/21

Project: SOU\_0731-004-05\_ 20210624, F&BI 106462

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

Laboratory Code: 106462-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Iron	ug/L (ppb)	100	1,390	84 b	69 b	70-130	20 b
Manganese	ug/L (ppb)	20	586	74	81	70-130	9

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Iron	ug/L (ppb)	100	100	85-115
Manganese	ug/L (ppb)	20	102	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/07/21

Date Received: 06/24/21

Project: SOU\_0731-004-05\_ 20210624, F&BI 106462

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

Laboratory Code: 106462-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	10	<0.2	86	36-166
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	85	61-136
cis-1,2-Dichloroethene	ug/L (ppb)	10	16	107 b	63-134
Trichloroethene	ug/L (ppb)	10	11	108 b	66-135
Tetrachloroethene	ug/L (ppb)	10	14	113 b	10-226

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	10	77	91	50-154	17
trans-1,2-Dichloroethene	ug/L (ppb)	10	85	84	68-128	1
cis-1,2-Dichloroethene	ug/L (ppb)	10	94	89	74-136	5
Trichloroethene	ug/L (ppb)	10	94	95	67-133	1
Tetrachloroethene	ug/L (ppb)	10	96	95	76-121	1

# 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.



10646L  
 Levi Fernandez, Kyle Lowrey

SAMPLE CHAIR OF CUSTODY

06-24-21

Page # 1 of 1

YWB/DO: H11

Send Report To: Levi Fernandez  
 Company: SoundEarth Strategies  
 Address: 2811 Fairview Ave E, Suite 2000  
 City, State, ZIP: Seattle, WA 98102

SAMPLERS (signature): [Signature]  
 PROJECT NAME/NO.: Troy Laundry Property  
 PO #: 0731-004-05  
 REMARKS: EIM Y  
 \*cVOCs = PCE, TCE, Cis/trans-DCE, and VC

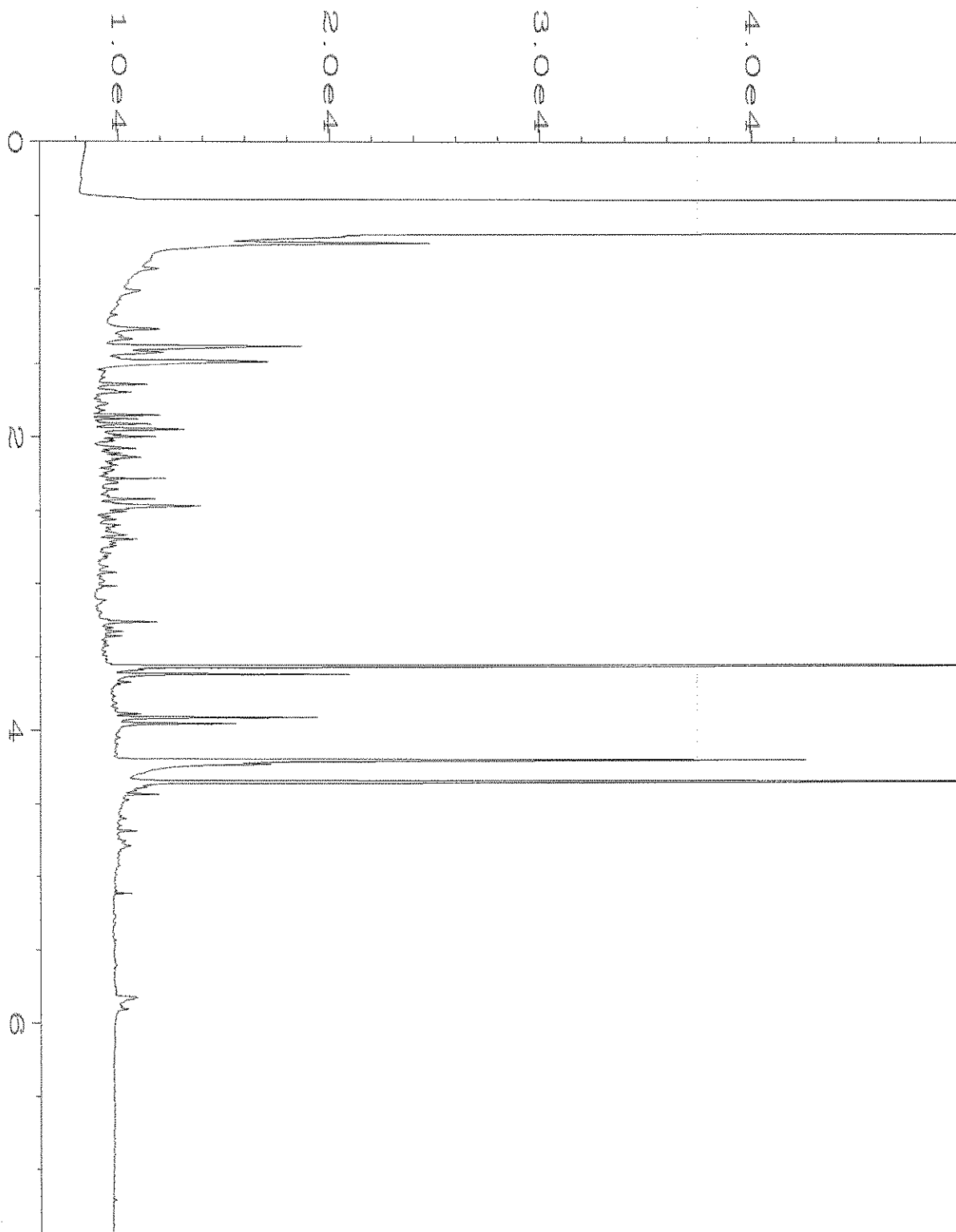
TURNAROUND TIME: Standard (2 weeks)  
 RUSH: Standard (2 weeks)  
 Rush charges authorized by: \_\_\_\_\_  
 SAMPLE DISPOSAL:  Dispose after 30 days  
 Return samples  
 Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	GRPH by NWTPH-Gx	BTEX by EPA 8021B	DRPH/ORPH by NWTPH-Dx	cVOCs* by EPA 8260C Total F <sub>3</sub> /Mn FC by 1664	TOC By EPA 415.1	Methane, Ethane, and Ethene by RSK175	Sulfate by EPA 300.0 Nitrate/ Alkalinity	Notes
MW29-20210622	MW29	-	01A-C/0622N1	06/22/21	1626	H2O	3			X					Fe 2+
MW30-20210623	MW30	-	021/0623N1	06/23/21	1219		3			X					
MW28-20210623	MW28	-	03A-K		1238		15	X	X	X					
MW13-20210623	MW13	-	04A-E		1325		10	X	X	X					
MW07-20210623	MW07	-	05A-F		1435		3			X					
MW27-20210623	MW27	-	06A-C		1436		3			X					
MW26-20210624	MW26	-	07A-F/024N1		0922		10			X					
MW01-20210624	MW01	-	08A-C		0935		3			X					
MW32-20210624	MW32	-	09A		1059		3			X					
MW04-20210624	MW04	-	10A-F		1106		3			X					
MW31-20210624	MW31	-	11A-D		1226		3			X					
MW33-20210624	MW33	-	12A		1344		3			X					

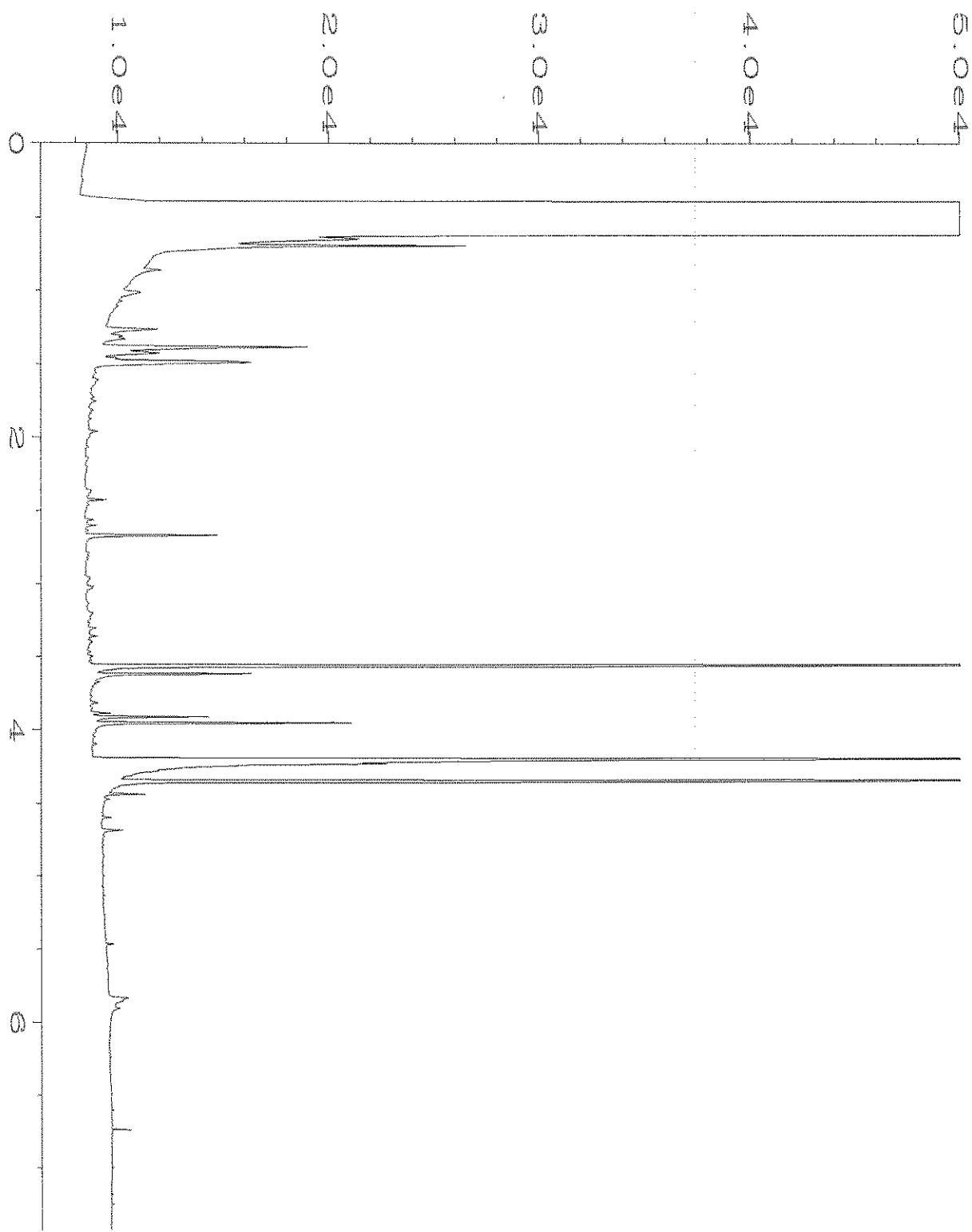
Friedman & Bruya, Inc.  
 3012 16th Avenue West  
 Seattle, WA 98119-2029  
 Ph. (206) 285-8282  
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>Kyle Lowrey</u>	<u>SES</u>	<u>06/24/21</u>	<u>1805</u>
Received by: <u>[Signature]</u>	<u>JOE MATHIAS</u>	<u>FBST</u>	<u>06/24/21</u>	<u>1805</u>
Relinquished by: _____	_____	_____	_____	_____
Received by: _____	_____	_____	_____	_____

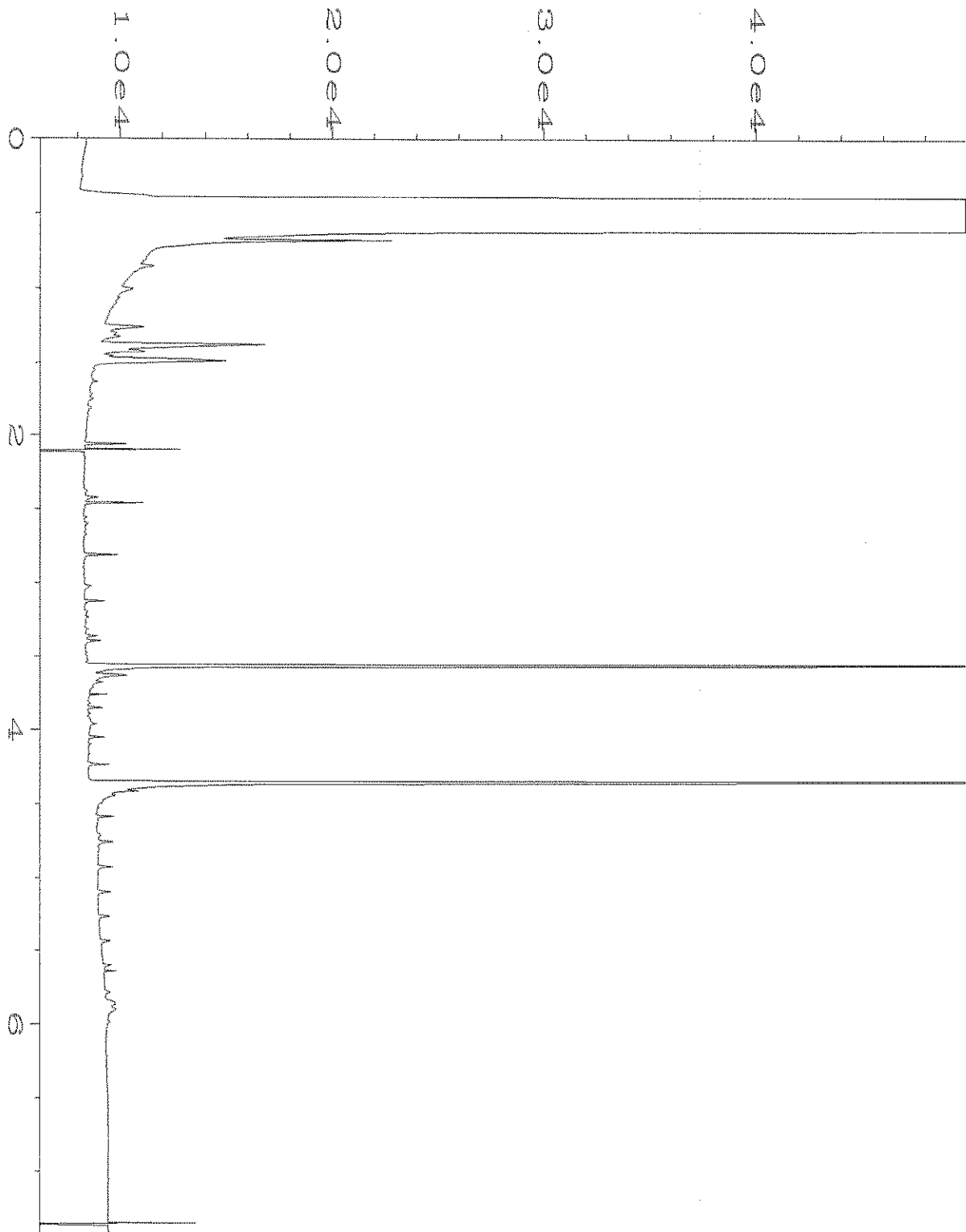
Samples received at 4 of \_\_\_\_\_



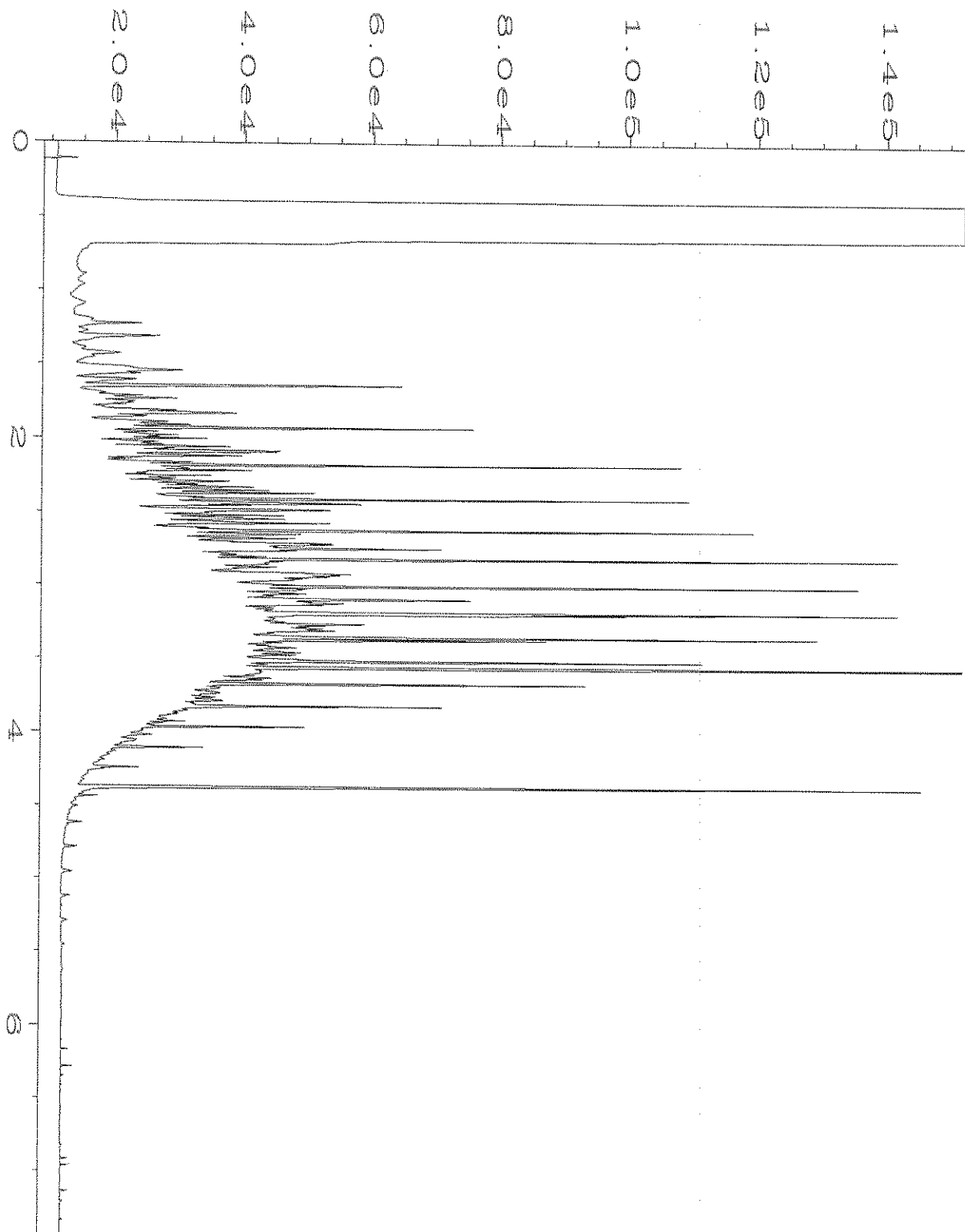
Data File Name	: C:\HPCHEM\1\DATA\06-25-21\052F1401.D	Page Number	: 1
Operator	: TL	Vial Number	: 52
Instrument	: GC1	Injection Number	: 1
Sample Name	: 106462-03	Sequence Line	: 14
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 25 Jun 21 09:09 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	28 Jun 21 09:08 AM		



Data File Name	: C:\HPCHEM\1\DATA\06-25-21\053F1401.D	Page Number	: 1
Operator	: TL	Vial Number	: 53
Instrument	: GC1	Injection Number	: 1
Sample Name	: 106462-04	Sequence Line	: 14
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 25 Jun 21 09:21 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	28 Jun 21 09:08 AM		



Data File Name	: C:\HPCHEM\1\DATA\06-25-21\043F1401.D	Page Number	: 1
Operator	: TL	Vial Number	: 43
Instrument	: GC1	Injection Number	: 1
Sample Name	: 01-1496 mb	Sequence Line	: 14
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 25 Jun 21 07:21 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	28 Jun 21 09:08 AM		



Data File Name	: C:\HPCHEM\1\DATA\06-25-21\003F0201.D	Page Number	: 1
Operator	: TL	Vial Number	: 3
Instrument	: GC1	Injection Number	: 1
Sample Name	: 500 Dx 63-79C	Sequence Line	: 2
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 25 Jun 21 06:56 AM	Analysis Method	: DEFAULT.MTH
Report Created on:	28 Jun 21 09:06 AM		



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

**RE: 106462**  
**Work Order Number: 2106475**

July 02, 2021

**Attention Michael Erdahl:**

Fremont Analytical, Inc. received 4 sample(s) on 6/25/2021 for the analyses presented in the following report.

***Dissolved Gases by RSK-175***  
***Ferrous Iron by SM3500-Fe B***  
***Ion Chromatography by EPA Method 300.0***  
***Total Alkalinity by SM 2320B***  
***Total Organic Carbon by SM 5310C***

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes  
Project Manager



---

**CLIENT:** Friedman & Bruya  
**Project:** 106462  
**Work Order:** 2106475

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**Work Order Sample Summary**

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<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Date/Time Collected</b>	<b>Date/Time Received</b>
2106475-001	MW28-20210623	06/23/2021 12:38 PM	06/25/2021 10:41 AM
2106475-002	MW07-20210623	06/23/2021 2:35 PM	06/25/2021 10:41 AM
2106475-003	MW26-20210623	06/24/2021 9:22 AM	06/25/2021 10:41 AM
2106475-004	MW04-20210623	06/24/2021 11:06 AM	06/25/2021 10:41 AM

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

---

**CLIENT:** Friedman & Bruya  
**Project:** 106462

---

**I. SAMPLE RECEIPT:**

Samples receipt information is recorded on the attached Sample Receipt Checklist.

**II. GENERAL REPORTING COMMENTS:**

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

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

**III. ANALYSES AND EXCEPTIONS:**

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



### Qualifiers:

- \* - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

### Acronyms:

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



**Client:** Friedman & Bruya

**Collection Date:** 6/23/2021 12:38:00 PM

**Project:** 106462

**Lab ID:** 2106475-001

**Matrix:** Water

**Client Sample ID:** MW28-20210623

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Dissolved Gases by RSK-175**

Batch ID: R68347      Analyst: MS

Methane	0.0532	0.00675		mg/L	1	7/1/2021 5:09:00 PM
Ethene	ND	0.0146		mg/L	1	7/1/2021 5:09:00 PM
Ethane	ND	0.0151		mg/L	1	7/1/2021 5:09:00 PM

**Ion Chromatography by EPA Method 300.0**

Batch ID: 32801      Analyst: TN

Nitrate (as N)	ND	0.100	H	mg/L	1	6/28/2021 2:29:00 PM
Sulfate	9.58	0.600		mg/L	1	6/28/2021 2:29:00 PM

**Total Alkalinity by SM 2320B**

Batch ID: R68276      Analyst: TN

Alkalinity, Total (As CaCO3)	292	2.50		mg/L	1	6/29/2021 11:58:36 AM
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R68295      Analyst: SS

Ferrous Iron	1.28	0.100	H	mg/L	1	6/25/2021 11:30:00 AM
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**Client:** Friedman & Bruya

**Collection Date:** 6/23/2021 2:35:00 PM

**Project:** 106462

**Lab ID:** 2106475-002

**Matrix:** Water

**Client Sample ID:** MW07-20210623

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Dissolved Gases by RSK-175**

Batch ID: R68347 Analyst: MS

Methane	0.317	0.0135	D	mg/L	2	7/1/2021 5:22:00 PM
Ethene	ND	0.0146		mg/L	1	7/1/2021 5:12:00 PM
Ethane	ND	0.0151		mg/L	1	7/1/2021 5:12:00 PM

**Ion Chromatography by EPA Method 300.0**

Batch ID: 32801 Analyst: TN

Nitrate (as N)	14.0	1.00	DH	mg/L	10	6/25/2021 8:17:00 PM
Sulfate	32.0	6.00	D	mg/L	10	6/25/2021 8:17:00 PM

**Total Organic Carbon by SM 5310C**

Batch ID: R68335 Analyst: SS

Total Organic Carbon	0.949	0.500		mg/L	1	6/29/2021 7:07:00 PM
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**Total Alkalinity by SM 2320B**

Batch ID: R68276 Analyst: TN

Alkalinity, Total (As CaCO3)	99.4	2.50		mg/L	1	6/29/2021 11:58:36 AM
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R68295 Analyst: SS

Ferrous Iron	ND	0.100	H	mg/L	1	6/25/2021 11:30:00 AM
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**Client:** Friedman & Bruya

**Collection Date:** 6/24/2021 9:22:00 AM

**Project:** 106462

**Lab ID:** 2106475-003

**Matrix:** Water

**Client Sample ID:** MW26-20210623

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Dissolved Gases by RSK-175**

Batch ID: R68347 Analyst: MS

Methane	0.0129	0.00675		mg/L	1	7/1/2021 5:14:00 PM
Ethene	ND	0.0146		mg/L	1	7/1/2021 5:14:00 PM
Ethane	ND	0.0151		mg/L	1	7/1/2021 5:14:00 PM

**Ion Chromatography by EPA Method 300.0**

Batch ID: 32801 Analyst: TN

Nitrate (as N)	ND	0.400	DH	mg/L	4	6/28/2021 2:53:00 PM
Nitrate (as N)	ND	1.00	D	mg/L	10	6/25/2021 8:40:00 PM
Sulfate	32.5	6.00	D	mg/L	10	6/25/2021 8:40:00 PM

**Total Organic Carbon by SM 5310C**

Batch ID: R68335 Analyst: SS

Total Organic Carbon	1.30	0.500		mg/L	1	6/29/2021 7:29:00 PM
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**Total Alkalinity by SM 2320B**

Batch ID: R68276 Analyst: TN

Alkalinity, Total (As CaCO3)	114	2.50		mg/L	1	6/29/2021 11:58:36 AM
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R68295 Analyst: SS

Ferrous Iron	0.382	0.100	H	mg/L	1	6/25/2021 11:30:00 AM
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**Client:** Friedman & Bruya

**Collection Date:** 6/24/2021 11:06:00 AM

**Project:** 106462

**Lab ID:** 2106475-004

**Matrix:** Water

**Client Sample ID:** MW04-20210623

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Dissolved Gases by RSK-175**

Batch ID: R68347      Analyst: MS

Methane	ND	0.00675		mg/L	1	7/1/2021 5:16:00 PM
Ethene	ND	0.0146		mg/L	1	7/1/2021 5:16:00 PM
Ethane	ND	0.0151		mg/L	1	7/1/2021 5:16:00 PM

**Ion Chromatography by EPA Method 300.0**

Batch ID: 32801      Analyst: TN

Nitrate (as N)	4.86	1.00	D	mg/L	10	6/25/2021 9:03:00 PM
Sulfate	41.9	6.00	D	mg/L	10	6/25/2021 9:03:00 PM

**Total Alkalinity by SM 2320B**

Batch ID: R68276      Analyst: TN

Alkalinity, Total (As CaCO3)	137	2.50		mg/L	1	6/29/2021 11:58:36 AM
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R68295      Analyst: SS

Ferrous Iron	ND	0.100	H	mg/L	1	6/25/2021 11:30:00 AM
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**Work Order:** 2106475  
**CLIENT:** Friedman & Bruya  
**Project:** 106462

**QC SUMMARY REPORT**  
**Total Alkalinity by SM 2320B**

Sample ID: <b>MB-R68276</b>		SampType: <b>MBLK</b>		Units: <b>mg/L</b>		Prep Date: <b>6/29/2021</b>		RunNo: <b>68276</b>			
Client ID: <b>MBLKW</b>		Batch ID: <b>R68276</b>				Analysis Date: <b>6/29/2021</b>		SeqNo: <b>1378749</b>			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	ND	2.50									

Sample ID: <b>LCS-R68276</b>		SampType: <b>LCS</b>		Units: <b>mg/L</b>		Prep Date: <b>6/29/2021</b>		RunNo: <b>68276</b>			
Client ID: <b>LCSW</b>		Batch ID: <b>R68276</b>				Analysis Date: <b>6/29/2021</b>		SeqNo: <b>1378750</b>			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	90.6	2.50	100.0	0	90.6	90.5	114				

Sample ID: <b>2106466-001ADUP</b>		SampType: <b>DUP</b>		Units: <b>mg/L</b>		Prep Date: <b>6/29/2021</b>		RunNo: <b>68276</b>			
Client ID: <b>BATCH</b>		Batch ID: <b>R68276</b>				Analysis Date: <b>6/29/2021</b>		SeqNo: <b>1378755</b>			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	57.0	2.50						56.08	1.66	20	

Work Order: 2106475  
 CLIENT: Friedman & Bruya  
 Project: 106462

**QC SUMMARY REPORT**  
**Ferrous Iron by SM3500-Fe B**

Sample ID: <b>MB-R68295</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>			Prep Date: <b>6/25/2021</b>	RunNo: <b>68295</b>					
Client ID: <b>MBLKW</b>	Batch ID: <b>R68295</b>				Analysis Date: <b>6/25/2021</b>	SeqNo: <b>1379361</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron ND 0.100

Sample ID: <b>LCS-R68295</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>			Prep Date: <b>6/25/2021</b>	RunNo: <b>68295</b>					
Client ID: <b>LCSW</b>	Batch ID: <b>R68295</b>				Analysis Date: <b>6/25/2021</b>	SeqNo: <b>1379362</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 0.434 0.100 0.4000 0 109 85 115

Sample ID: <b>2106475-001BDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>			Prep Date: <b>6/25/2021</b>	RunNo: <b>68295</b>					
Client ID: <b>MW28-20210623</b>	Batch ID: <b>R68295</b>				Analysis Date: <b>6/25/2021</b>	SeqNo: <b>1379364</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 1.30 0.100 1.283 1.52 20 H

Sample ID: <b>2106475-001BMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>			Prep Date: <b>6/25/2021</b>	RunNo: <b>68295</b>					
Client ID: <b>MW28-20210623</b>	Batch ID: <b>R68295</b>				Analysis Date: <b>6/25/2021</b>	SeqNo: <b>1379365</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 1.84 0.100 0.4000 1.283 139 70 130 SH

**NOTES:**

S - Analyte concentration was too high for accurate spike recovery(ies).

Sample ID: <b>2106475-001BMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>			Prep Date: <b>6/25/2021</b>	RunNo: <b>68295</b>					
Client ID: <b>MW28-20210623</b>	Batch ID: <b>R68295</b>				Analysis Date: <b>6/25/2021</b>	SeqNo: <b>1379366</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 1.89 0.100 0.4000 1.283 152 70 130 1.837 2.99 20 SH

**NOTES:**

S - Analyte concentration was too high for accurate spike recovery(ies).

Work Order: 2106475  
 CLIENT: Friedman & Bruya  
 Project: 106462

**QC SUMMARY REPORT**  
**Ion Chromatography by EPA Method 300.0**

Sample ID: <b>MB-32801</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>			Prep Date: <b>6/25/2021</b>	RunNo: <b>68249</b>					
Client ID: <b>MBLKW</b>	Batch ID: <b>32801</b>				Analysis Date: <b>6/25/2021</b>	SeqNo: <b>1378153</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	ND	0.100									
Sulfate	ND	0.600									

Sample ID: <b>LCS-32801</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>			Prep Date: <b>6/25/2021</b>	RunNo: <b>68249</b>					
Client ID: <b>LCSW</b>	Batch ID: <b>32801</b>				Analysis Date: <b>6/25/2021</b>	SeqNo: <b>1378154</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	0.766	0.100	0.7500	0	102	90	110				
Sulfate	3.89	0.600	3.750	0	104	90	110				

Sample ID: <b>2106467-004ADUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>			Prep Date: <b>6/25/2021</b>	RunNo: <b>68249</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>32801</b>				Analysis Date: <b>6/25/2021</b>	SeqNo: <b>1378156</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	ND	10.0						0		20	D
Sulfate	ND	60.0						0		20	D

Sample ID: <b>2106467-004AMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>			Prep Date: <b>6/25/2021</b>	RunNo: <b>68249</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>32801</b>				Analysis Date: <b>6/25/2021</b>	SeqNo: <b>1378157</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	77.0	10.0	75.00	0	103	80	120				D
Sulfate	396	60.0	375.0	37.20	95.7	80	120				D



Work Order: 2106475  
 CLIENT: Friedman & Bruya  
 Project: 106462

**QC SUMMARY REPORT**  
**Ion Chromatography by EPA Method 300.0**

Sample ID: <b>2106467-004AMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>				Prep Date: <b>6/25/2021</b>	RunNo: <b>68249</b>				
Client ID: <b>BATCH</b>	Batch ID: <b>32801</b>					Analysis Date: <b>6/25/2021</b>	SeqNo: <b>1378158</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	76.9	10.0	75.00	0	103	80	120	77.00	0.130	20	D
Sulfate	398	60.0	375.0	37.20	96.3	80	120	395.9	0.604	20	D

Sample ID: <b>2106476-004ADUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>				Prep Date: <b>6/25/2021</b>	RunNo: <b>68249</b>				
Client ID: <b>BATCH</b>	Batch ID: <b>32801</b>					Analysis Date: <b>6/25/2021</b>	SeqNo: <b>1378170</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	ND	1.00						0		20	D
Sulfate	9.03	6.00						9.200	1.87	20	D

Sample ID: <b>2106476-004AMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>				Prep Date: <b>6/25/2021</b>	RunNo: <b>68249</b>				
Client ID: <b>BATCH</b>	Batch ID: <b>32801</b>					Analysis Date: <b>6/26/2021</b>	SeqNo: <b>1378171</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	7.99	1.00	7.500	0.6800	97.5	80	120				D
Sulfate	47.2	6.00	37.50	9.200	101	80	120				D

**Work Order:** 2106475  
**CLIENT:** Friedman & Bruya  
**Project:** 106462

**QC SUMMARY REPORT**  
**Total Organic Carbon by SM 5310C**

Sample ID: <b>MB-R68335</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2021</b>	RunNo: <b>68335</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>R68335</b>	Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1380532</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	ND	0.500									

Sample ID: <b>LCS-R68335</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2021</b>	RunNo: <b>68335</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R68335</b>	Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1380533</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	4.79	0.500	5.000	0	95.8	90.6	113				

Sample ID: <b>2106475-003DDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2021</b>	RunNo: <b>68335</b>							
Client ID: <b>MW26-20210623</b>	Batch ID: <b>R68335</b>	Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1380536</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.27	0.500						1.296	1.71	20	

Sample ID: <b>2106475-003DMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2021</b>	RunNo: <b>68335</b>							
Client ID: <b>MW26-20210623</b>	Batch ID: <b>R68335</b>	Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1380537</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	6.23	0.500	5.000	1.296	98.6	69.1	124				

Sample ID: <b>2106475-003DMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2021</b>	RunNo: <b>68335</b>							
Client ID: <b>MW26-20210623</b>	Batch ID: <b>R68335</b>	Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1380538</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	5.93	0.500	5.000	1.296	92.8	69.1	124	6.226	4.80	30	

**Work Order:** 2106475  
**CLIENT:** Friedman & Bruya  
**Project:** 106462

**QC SUMMARY REPORT**  
**Total Organic Carbon by SM 5310C**

Sample ID: <b>2106490-002ADUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>6/30/2021</b>	RunNo: <b>68335</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>R68335</b>		Analysis Date: <b>6/30/2021</b>	SeqNo: <b>1380548</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	97.0	0.500						97.86	0.852	20	E

Sample ID: <b>2106490-002AMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/30/2021</b>	RunNo: <b>68335</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>R68335</b>		Analysis Date: <b>6/30/2021</b>	SeqNo: <b>1380549</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	101	0.500	5.000	97.86	67.4	69.1	124				ES

**NOTES:**

S - Analyte concentration was too high for accurate spike recovery(ies).

Work Order: 2106475  
 CLIENT: Friedman & Bruya  
 Project: 106462

**QC SUMMARY REPORT**  
**Dissolved Gases by RSK-175**

Sample ID: <b>LCS-R68347</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>				Prep Date: <b>7/1/2021</b>	RunNo: <b>68347</b>				
Client ID: <b>LCSW</b>	Batch ID: <b>R68347</b>					Analysis Date: <b>7/1/2021</b>	SeqNo: <b>1380778</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	1,130	0.00675	1,000	0	113	66.7	141				
Ethene	1,120	0.0146	1,000	0	112	68.6	139				
Ethane	1,120	0.0151	1,000	0	112	69.3	136				

Sample ID: <b>MB-R68347</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>				Prep Date: <b>7/1/2021</b>	RunNo: <b>68347</b>				
Client ID: <b>MBLKW</b>	Batch ID: <b>R68347</b>					Analysis Date: <b>7/1/2021</b>	SeqNo: <b>1380779</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00675									
Ethene	ND	0.0146									
Ethane	ND	0.0151									

Sample ID: <b>2106467-008CREP</b>	SampType: <b>REP</b>	Units: <b>mg/L</b>				Prep Date: <b>7/1/2021</b>	RunNo: <b>68347</b>				
Client ID: <b>BATCH</b>	Batch ID: <b>R68347</b>					Analysis Date: <b>7/1/2021</b>	SeqNo: <b>1380759</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00675						0		30	
Ethene	ND	0.0146						0		30	
Ethane	ND	0.0151						0		30	

Client Name: <b>FB</b>	Work Order Number: <b>2106475</b>
Logged by: <b>Carissa True</b>	Date Received: <b>6/25/2021 10:41:00 AM</b>

### Chain of Custody

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

### Log In

3. Coolers are present?      Yes       No       NA
4. Shipping container/cooler in good condition?      Yes       No
5. Custody Seals present on shipping container/cooler?  
(Refer to comments for Custody Seals not intact)      Yes       No       Not Present
6. Was an attempt made to cool the samples?      Yes       No       NA
7. Were all items received at a temperature of >2°C to 6°C \*      Yes       No       NA
8. Sample(s) in proper container(s)?      Yes       No
9. Sufficient sample volume for indicated test(s)?      Yes       No
10. Are samples properly preserved?      Yes       No
11. Was preservative added to bottles?      Yes       No       NA
12. Is there headspace in the VOA vials?      Yes       No       NA
13. Did all samples containers arrive in good condition(unbroken)?      Yes       No
14. Does paperwork match bottle labels?      Yes       No
15. Are matrices correctly identified on Chain of Custody?      Yes       No
16. Is it clear what analyses were requested?      Yes       No
17. Were all holding times able to be met?      Yes       No

### Special Handling (if applicable)

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

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

19. Additional remarks:

### Item Information

Item #	Temp °C
Sample 1	2.3

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

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fbi@isomedia.com  
www.friedmanandbruya.com

June 29, 2021

Levi Fernandes, Project Manager  
SoundEarth Strategies  
2811 Fairview Ave. East, Suite 2000  
Seattle, WA 98102

Dear Mr Fernandes:

Included are the results from the testing of material submitted on June 24, 2021 from the SOU\_0731-004-08\_20210624, F&BI 106463 project. There are 6 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: Kyle Lowery  
SOU0629R.DOC

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on June 24, 2021 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0731-004-08\_ 20210624, F&BI 106463 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
106463 -01	ONNI-MW-4-06210622
106463 -02	ONNI-MW-5-06210623

All quality control requirements were acceptable.



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	ONNI-MW-4-06210622	Client:	SoundEarth Strategies
Date Received:	06/24/21	Project:	SOU_0731-004-08_20210624
Date Extracted:	06/25/21	Lab ID:	106463-01
Date Analyzed:	06/25/21	Data File:	062538.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	86	113
Toluene-d8	99	88	114
4-Bromofluorobenzene	103	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	ONNI-MW-5-06210623	Client:	SoundEarth Strategies
Date Received:	06/24/21	Project:	SOU_0731-004-08_20210624
Date Extracted:	06/25/21	Lab ID:	106463-02
Date Analyzed:	06/25/21	Data File:	062539.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	86	113
Toluene-d8	98	88	114
4-Bromofluorobenzene	103	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0731-004-08_20210624
Date Extracted:	06/25/21	Lab ID:	01-1237 mb
Date Analyzed:	06/25/21	Data File:	062508.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	86	113
Toluene-d8	95	88	114
4-Bromofluorobenzene	100	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/29/21

Date Received: 06/24/21

Project: SOU\_0731-004-08\_ 20210624, F&BI 106463

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

Laboratory Code: 106454-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance
				Recovery MS	Criteria
Vinyl chloride	ug/L (ppb)	10	<0.2	87	36-166
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	93	61-136
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	96	63-134
Trichloroethene	ug/L (ppb)	10	<1	98	66-135
Tetrachloroethene	ug/L (ppb)	10	<1	100	10-226

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Percent	Acceptance Criteria	RPD (Limit 20)
			Recovery LCS	Recovery LCSD		
Vinyl chloride	ug/L (ppb)	10	83	83	50-154	0
trans-1,2-Dichloroethene	ug/L (ppb)	10	92	93	68-128	1
cis-1,2-Dichloroethene	ug/L (ppb)	10	93	93	74-136	0
Trichloroethene	ug/L (ppb)	10	94	93	67-133	1
Tetrachloroethene	ug/L (ppb)	10	100	100	76-121	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.

1064683 Sam Clark  
 Levi Fernandez, KYVALCOUNTRY

**SAMPLE CHAIR OF CUSTODY**

06-24/21 W2 1 1

Send Report To Levi Fernandez, KYVALCOUNTRY

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature) <i>Levi Fernandez</i>	PROJECT NAME/NO. Troy Laundry Property	PO # 0731-004-08
REMARKS *cVOCs = PCE, TCE, Cis/Trans-DCE, and VC	EIM Y	

Page # 1 of 1

TURNAROUND TIME  
 Standard (2 weeks)  
 RUSH  
 Rush charges authorized by: \_\_\_\_\_

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	GRPH by NWTPH-Gx	BTEX by EPA 8021B	DRPH/ORPH by NWTPH-Dx	cVOCs* by EPA 8260C	Methane, Ethane, Ethene by RSK175	Sulfate, Nitrate, Alkalinity by SM1845/SM2320B	Total Fe and Mn by EPA 200.8	Fe 2+ by SM 3500	TOC By EPA 415.1	Notes
0001-MW-4-20210622	0001-4	-	0114	06/22/21	1620	H <sub>2</sub> O	3				X						
0001-MW-5-20210623	0001-5	-	021	06/23/21	1105	H <sub>2</sub> O	3				X						
<i>KN 06-24/21</i>																	
Samples received at <u>4</u> °C																	

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

SIGNATURE		PRINT NAME		COMPANY		DATE	TIME
Relinquished by: <i>[Signature]</i>		<i>Levi Fernandez</i>		<i>SEI</i>		<i>06/24/21</i>	<i>1805</i>
Received by: <i>[Signature]</i>		<i>Joe Mathew</i>		<i>SEI</i>		<i>06/24/21</i>	<i>1805</i>
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

July 12, 2021

Levi Fernandes, Project Manager  
SoundEarth Strategies  
2811 Fairview Ave. East, Suite 2000  
Seattle, WA 98102

Dear Mr Fernandes:

Included are the results from the testing of material submitted on June 25, 2021 from the SOU\_0731-004-05\_ 20210625, F&BI 106488 project. There are 29 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: Kyle Lowery  
SOU0712R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on June 25, 2021 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0731-004-05\_ 20210625, F&BI 106488 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
106488 -01	MW23-20210625
106488 -02	MW25-20210625
106488 -03	MW19-20210625
106488 -04	MW22-20210625
106488 -05	MW17-20210625
106488 -06	IW91-20210625
106488 -07	MW18-20210625
106488 -08	MW21-20210625
106488 -09	MW20-20210625
106488 -10	MW24-20210625
106488 -11	MW99-20210625

Samples MW23-20210625, MW25-20210625, MW22-20210625, MW18-20210625, and MW24-20210625 were sent to Fremont Analytical for dissolved gasses, sulfate, nitrate, alkalinity, TOC, and ferrous iron analyses. Sample MW19-20210625 was sent to Fremont for dissolved gasses, sulfate, nitrate, alkalinity, and ferrous iron analyses. Sample MW21-20210625 was sent to Fremont for TOC and dissolved gasses analyses. The report is enclosed with the exception of the alkalinity results. Those will be issued when received.

All quality control requirements were acceptable.



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/12/21

Date Received: 06/25/21

Project: SOU\_0731-004-05\_ 20210625, F&BI 106488

Date Extracted: 06/30/21

Date Analyzed: 06/30/21

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

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 51-134)
MW22-20210625 106488-04	540	124
MW21-20210625 106488-08	1,000	119
Method Blank 01-1424 MB	<100	96

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/12/21

Date Received: 06/25/21

Project: SOU\_0731-004-05\_ 20210625, F&BI 106488

Date Extracted: 06/28/21

Date Analyzed: 06/28/21

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL AND MOTOR OIL  
USING METHOD NWTPH-D<sub>x</sub>**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> (% Recovery) (Limit 41-152)
MW22-20210625 106488-04	20,000 x	1,800 x	116
MW21-20210625 106488-08	74,000 x ve	5,400 x	96
Method Blank 01-1504 MB	<50	<250	130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW23-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/30/21	Lab ID:	106488-01 x100
Date Analyzed:	07/01/21	Data File:	106488-01 x100.079
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	10,400
Manganese	14,600

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW25-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/30/21	Lab ID:	106488-02 x100
Date Analyzed:	07/01/21	Data File:	106488-02 x100.080
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	19,300
Manganese	8,010

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW19-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/30/21	Lab ID:	106488-03 x100
Date Analyzed:	07/01/21	Data File:	106488-03 x100.099
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	18,200

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW19-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/30/21	Lab ID:	106488-03 x500
Date Analyzed:	07/03/21	Data File:	106488-03 x500.209
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Manganese	15,200

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW22-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/30/21	Lab ID:	106488-04 x100
Date Analyzed:	07/01/21	Data File:	106488-04 x100.106
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	11,700
Manganese	11,000

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW18-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/30/21	Lab ID:	106488-07 x100
Date Analyzed:	07/01/21	Data File:	106488-07 x100.107
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	13,900
Manganese	8,900



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW24-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/30/21	Lab ID:	106488-10 x100
Date Analyzed:	07/01/21	Data File:	106488-10 x100.108
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	18,300

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW24-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/30/21	Lab ID:	106488-10 x500
Date Analyzed:	07/03/21	Data File:	106488-10 x500.210
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Manganese	24,500

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/30/21	Lab ID:	I1-407 mb
Date Analyzed:	06/30/21	Data File:	I1-407 mb.095
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	<50
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW23-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/29/21	Lab ID:	106488-01
Date Analyzed:	06/29/21	Data File:	062913.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	86	113
Toluene-d8	99	88	114
4-Bromofluorobenzene	105	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	0.97
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	26
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW25-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/29/21	Lab ID:	106488-02
Date Analyzed:	06/29/21	Data File:	062914.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	86	113
Toluene-d8	100	88	114
4-Bromofluorobenzene	102	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	0.79
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	48
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW19-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/29/21	Lab ID:	106488-03
Date Analyzed:	06/29/21	Data File:	062915.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	86	113
Toluene-d8	100	88	114
4-Bromofluorobenzene	105	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	1.0
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW22-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/29/21	Lab ID:	106488-04
Date Analyzed:	06/29/21	Data File:	062916.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	93	86	113
Toluene-d8	101	88	114
4-Bromofluorobenzene	101	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	0.82
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	43
Trichloroethene	<1
Tetrachloroethene	1.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW17-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/29/21	Lab ID:	106488-05
Date Analyzed:	06/29/21	Data File:	062917.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	86	113
Toluene-d8	97	88	114
4-Bromofluorobenzene	101	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	1.7
Tetrachloroethene	<1



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	IW91-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/29/21	Lab ID:	106488-06
Date Analyzed:	06/29/21	Data File:	062918.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	86	113
Toluene-d8	101	88	114
4-Bromofluorobenzene	103	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW18-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/29/21	Lab ID:	106488-07
Date Analyzed:	06/29/21	Data File:	062919.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	86	113
Toluene-d8	101	88	114
4-Bromofluorobenzene	102	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	1.7
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	1.9
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW21-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/29/21	Lab ID:	106488-08
Date Analyzed:	06/29/21	Data File:	062920.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	86	113
Toluene-d8	99	88	114
4-Bromofluorobenzene	99	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	0.86
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	11
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW20-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/29/21	Lab ID:	106488-09
Date Analyzed:	06/29/21	Data File:	062921.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	86	113
Toluene-d8	97	88	114
4-Bromofluorobenzene	101	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	5.3
Trichloroethene	1.6
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW24-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/29/21	Lab ID:	106488-10
Date Analyzed:	06/29/21	Data File:	062906.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	110	78	126
Toluene-d8	105	87	115
4-Bromofluorobenzene	99	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	0.67
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	37
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW99-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/29/21	Lab ID:	106488-11
Date Analyzed:	06/29/21	Data File:	062923.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	86	113
Toluene-d8	100	88	114
4-Bromofluorobenzene	102	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	0.90
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	47
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/29/21	Lab ID:	01-1244 mb
Date Analyzed:	06/29/21	Data File:	062908.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	86	113
Toluene-d8	98	88	114
4-Bromofluorobenzene	100	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/12/21

Date Received: 06/25/21

Project: SOU\_0731-004-05\_ 20210625, F&BI 106488

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

Laboratory Code: 106494-01 (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	94	69-134



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/12/21

Date Received: 06/25/21

Project: SOU\_0731-004-05\_ 20210625, F&BI 106488

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL EXTENDED USING METHOD NWTPH-D<sub>x</sub>**

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	132	140	63-142	6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/12/21

Date Received: 06/25/21

Project: SOU\_0731-004-05\_ 20210625, F&BI 106488

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

Laboratory Code: 106488-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Iron	ug/L (ppb)	100	16,000	248 b	0 b	70-130	200 b
Manganese	ug/L (ppb)	20	6,210	117 b	0 b	70-130	200 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Iron	ug/L (ppb)	100	99	85-115
Manganese	ug/L (ppb)	20	96	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/12/21

Date Received: 06/25/21

Project: SOU\_0731-004-05\_ 20210625, F&BI 106488

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

Laboratory Code: 106488-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance
				Recovery MS	Criteria
Vinyl chloride	ug/L (ppb)	10	0.97	84	36-166
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	84	61-136
cis-1,2-Dichloroethene	ug/L (ppb)	10	26	84 b	63-134
Trichloroethene	ug/L (ppb)	10	<1	95	66-135
Tetrachloroethene	ug/L (ppb)	10	<1	96	10-226

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Percent	Acceptance Criteria	RPD (Limit 20)
			Recovery LCS	Recovery LCSD		
Vinyl chloride	ug/L (ppb)	10	90	92	50-154	2
trans-1,2-Dichloroethene	ug/L (ppb)	10	95	93	68-128	2
cis-1,2-Dichloroethene	ug/L (ppb)	10	97	95	74-136	2
Trichloroethene	ug/L (ppb)	10	98	97	67-133	1
Tetrachloroethene	ug/L (ppb)	10	98	99	76-121	1

# 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.

106488  
 Lewi Fernandes  
 Send Report To Lewi Fernandes  
Leopold Schumacher

Company SoundEarth Strategies  
 Address 2811 Fairview Ave E, Suite 2000  
 City, State, ZIP Seattle, WA 98102

**SAMPLE CHAIN OF CUSTODY**

SAMPLERS (signature) [Signature]  
 PROJECT NAME/NO: Troy Laundry Property  
 PO # 0731-004-05  
 REMARKS  
 \*cVOCs = PCE, TCE, Cis/Trans-DCE, and VC  
 EIM Y

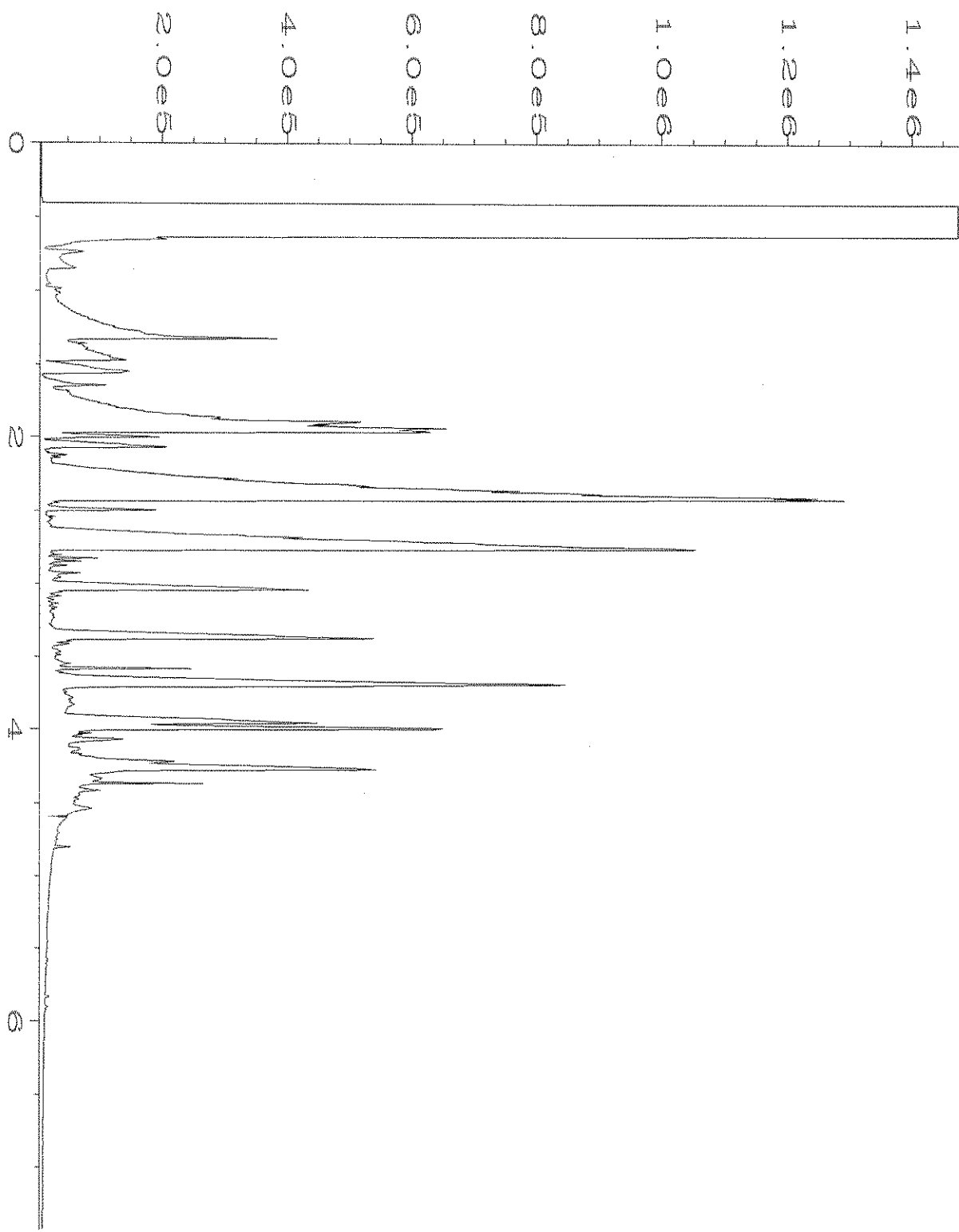
Page # 1 of 1  
 TURNAROUND TIME 42 d  
 Standard (2 Weeks)  
 RUSH 50%  
 Rush charges authorized by: [Signature]  
 SAMPLE DISPOSAL  
 Dispose after 30 days  
 Return samples  
 Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	GRPH by NWTPH-Gx	BTEX by EPA 8021B	DRPH/ORPH by NWTPH-Dx	cVOCs* by EPA 8260C Total Fe + Mn FOG by 1664	TOC By EPA 415.1	Methane, Ethane, and Ethene by RSK175	Sulfate by EPA 300.0/nitrate/ alkalinity	Notes
MW23 - 20210625	MW23	—	01 J	6/25/21	0910	H <sub>2</sub> O	10				X	X	X	X	
MW25 - 20210625	MW25	—	02 J		0915	H <sub>2</sub> O	10				X	X	X	X	
MW18 - 20210625	MW18	—	03 J		1003	H <sub>2</sub> O	9				X	X	X	X	
MW22 - 20210625	MW22	—	04 J		1150	H <sub>2</sub> O	12	X			X	X	X	X	
MW17 - 20210625	MW17	—	05 J		1234	H <sub>2</sub> O	3				X	X	X	X	
MW91 - 20210625	MW91	—	06 J		1255	H <sub>2</sub> O	3				X	X	X	X	
MW18 - 20210625	MW18	—	07 J		1315	H <sub>2</sub> O	10				X	X	X	X	
MW21 - 20210625	MW21	—	08 J		1340	H <sub>2</sub> O	9	X			X	X	X	X	
MW20 - 20210625	MW20	—	09 J		1405	H <sub>2</sub> O	3				X	X	X	X	
MW24 - 20210625	MW24	—	10 J		1443	H <sub>2</sub> O	10				X	X	X	X	
MW99 - 20210625	MW99	—	11 AC		0920	H <sub>2</sub> O	3				X	X	X	X	

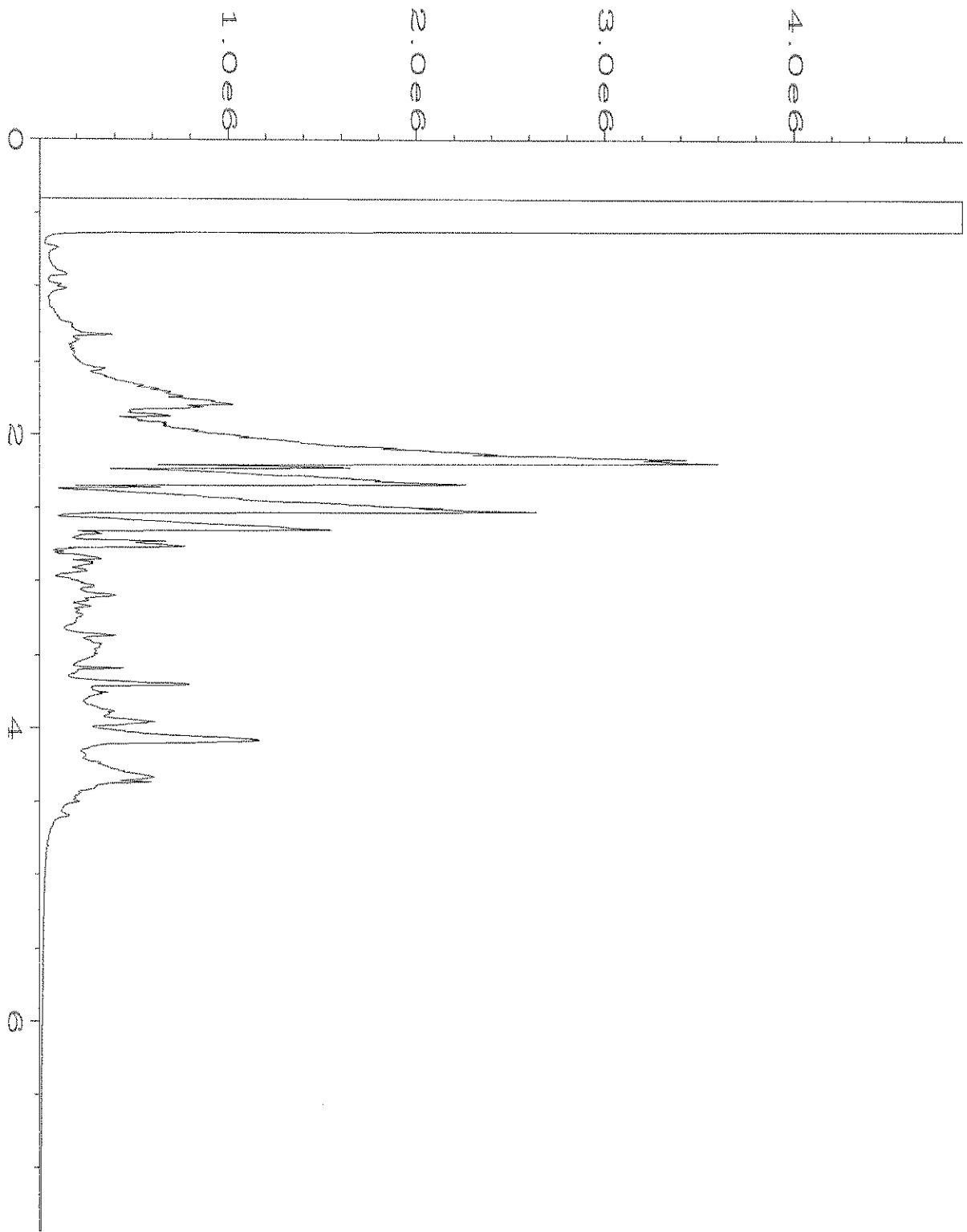
Friedman & Bruya, Inc.  
 3012 16th Avenue West  
 Seattle, WA 98119-2029  
 Ph. (206) 285-8282  
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
<u>[Signature]</u>	<u>Clare Schumacher</u>	<u>SoundEarth</u>	<u>6/25/21</u>	<u>1715</u>
<u>[Signature]</u>	<u>TOC Manager</u>	<u>ES&amp;E</u>	<u>6/25/21</u>	<u>1715</u>
<u>[Signature]</u>	<u>Received by:</u>	<u>SoundEarth</u>	<u>6/25/21</u>	<u>1715</u>
<u>[Signature]</u>	<u>Relinquished by:</u>	<u>ES&amp;E</u>	<u>6/25/21</u>	<u>1715</u>

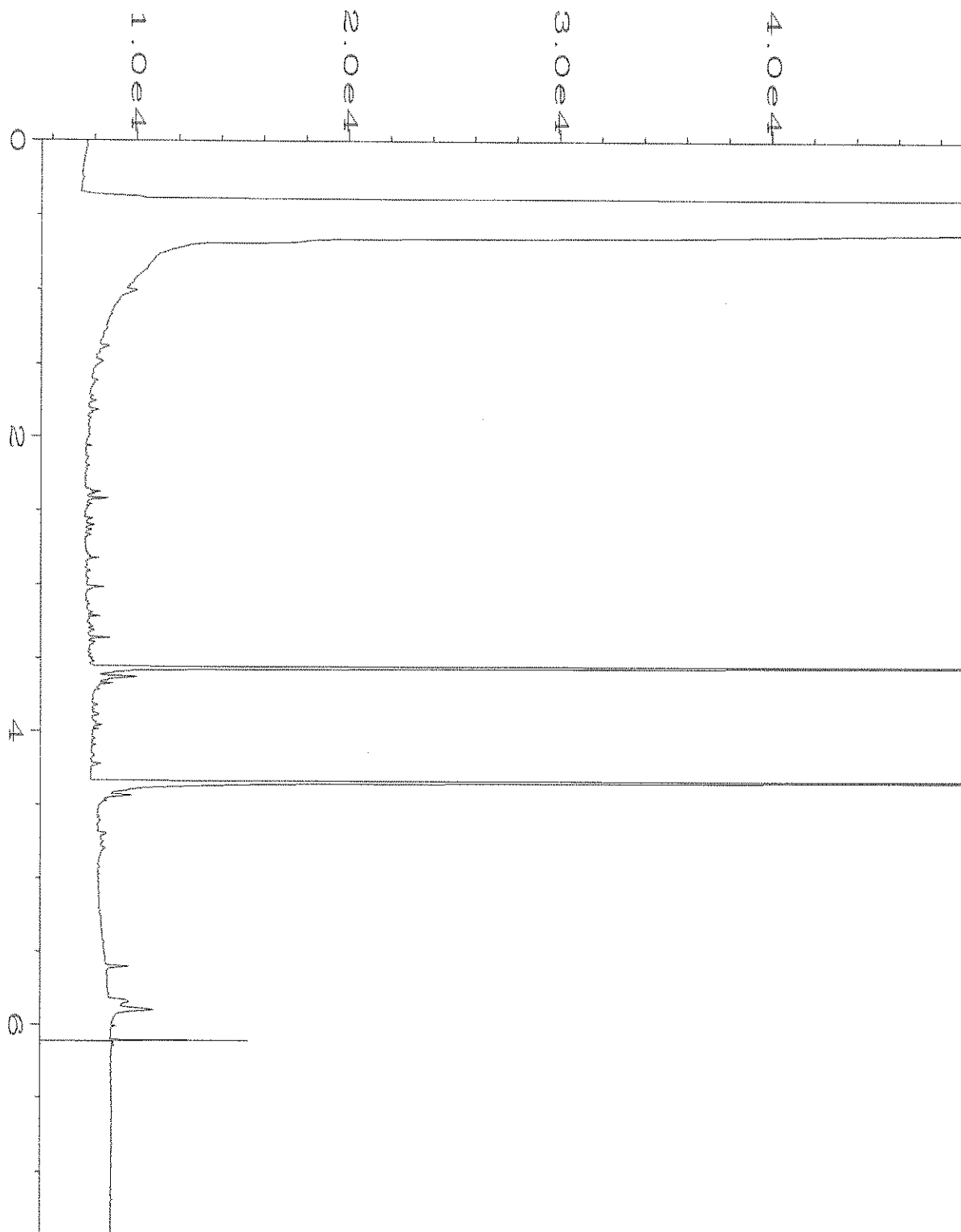
Received by: [Signature]  
 Samples received at 5:00



Data File Name	: C:\HPCHEM\1\DATA\06-28-21\028F0901.D	Page Number	: 1
Operator	: TL	Vial Number	: 28
Instrument	: GC1	Injection Number	: 1
Sample Name	: 106488-04	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 28 Jun 21 04:33 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	29 Jun 21 10:18 AM		

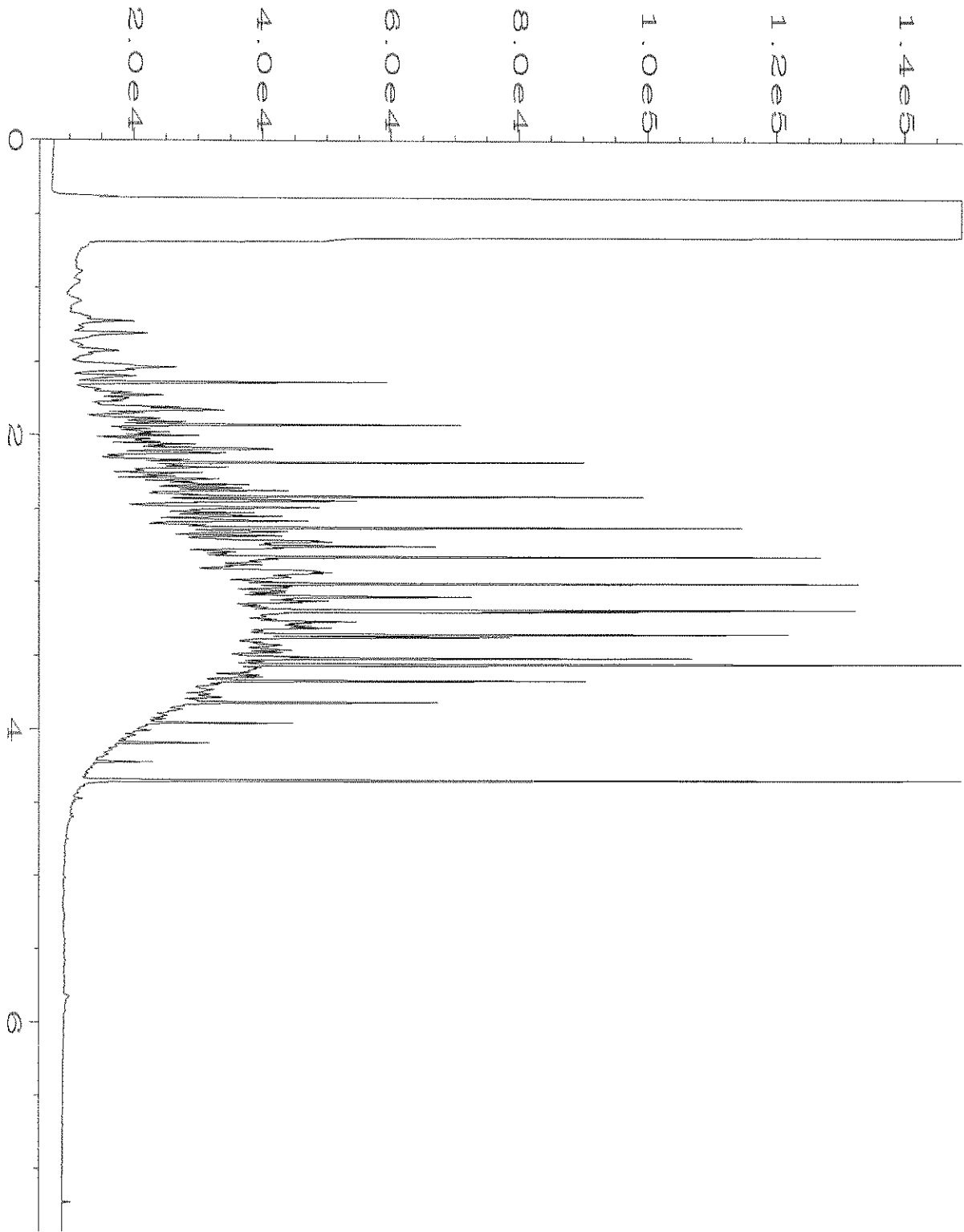


Data File Name	: C:\HPCHEM\1\DATA\06-28-21\029F0901.D	Page Number	: 1
Operator	: TL	Vial Number	: 29
Instrument	: GC1	Injection Number	: 1
Sample Name	: 106488-08	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 28 Jun 21 04:45 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	29 Jun 21 10:19 AM		



Data File Name	: C:\HPCHEM\1\DATA\06-28-21\024F0701.D	Page Number	: 1
Operator	: TL	Vial Number	: 24
Instrument	: GC1	Injection Number	: 1
Sample Name	: 01-1504 mb	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 28 Jun 21 03:19 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	29 Jun 21 10:19 AM		





Data File Name	: C:\HPCHEM\1\DATA\06-28-21\003F0801.D	Page Number	: 1
Operator	: TL	Vial Number	: 3
Instrument	: GC1	Injection Number	: 1
Sample Name	: 500 Dx 63-79C	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 28 Jun 21 04:20 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	29 Jun 21 10:19 AM		



**Friedman & Bruya**

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

**RE: 106488**

**Work Order Number: 2106491**

July 13, 2021

**Attention Michael Erdahl:**

Fremont Analytical, Inc. received 7 sample(s) on 6/28/2021 for the analyses presented in the following report.

***Dissolved Gases by RSK-175***

***Ferrous Iron by SM3500-Fe B***

***Ion Chromatography by EPA Method 300.0***

***Total Alkalinity by SM 2320B***

***Total Organic Carbon by SM 5310C***

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes  
Project Manager

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**CLIENT:** Friedman & Bruya  
**Project:** 106488  
**Work Order:** 2106491

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**Work Order Sample Summary**

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Date/Time Collected</b>	<b>Date/Time Received</b>
2106491-001	MW23-20210625	06/25/2021 9:10 AM	06/28/2021 9:38 AM
2106491-002	MW25-20210625	06/25/2021 9:15 AM	06/28/2021 9:38 AM
2106491-003	MW19-20210625	06/25/2021 10:03 AM	06/28/2021 9:38 AM
2106491-004	MW22-20210625	06/25/2021 11:50 AM	06/28/2021 9:38 AM
2106491-005	MW18-20210625	06/25/2021 1:15 PM	06/28/2021 9:38 AM
2106491-006	MW21-20210625	06/25/2021 1:40 PM	06/28/2021 9:38 AM
2106491-007	MW24-20210625	06/25/2021 2:43 PM	06/28/2021 9:38 AM

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

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**CLIENT:** Friedman & Bruya  
**Project:** 106488

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**I. SAMPLE RECEIPT:**

Samples receipt information is recorded on the attached Sample Receipt Checklist.

**II. GENERAL REPORTING COMMENTS:**

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

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

**III. ANALYSES AND EXCEPTIONS:**

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

7/13/2021: Revision 1 includes additional analysis requested by client.



**CLIENT:** Friedman & Bruya  
**Project:** 106488

**Lab ID:** 2106491-001

**Collection Date:** 6/25/2021 9:10:00 AM

**Client Sample ID:** MW23-20210625

**Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Dissolved Gases by RSK-175</u></b>				Batch ID: R68449		Analyst: MS
Methane	3.84	0.338	D	mg/L	50	7/9/2021 10:38:00 AM
Ethene	ND	0.0146		mg/L	1	7/9/2021 11:34:00 AM
Ethane	ND	0.0151		mg/L	1	7/9/2021 11:34:00 AM
<b><u>Ion Chromatography by EPA Method 300.0</u></b>				Batch ID: 32859		Analyst: SS
Sulfate	ND	3.00	D	mg/L	5	7/1/2021 11:55:00 AM
<b>NOTES:</b> Diluted due to matrix.						
<b><u>Total Organic Carbon by SM 5310C</u></b>				Batch ID: R68335		Analyst: SS
Total Organic Carbon	6.65	0.500		mg/L	1	6/30/2021 2:30:00 AM
<b><u>Total Alkalinity by SM 2320B</u></b>				Batch ID: R68478		Analyst: TN
Alkalinity, Total (As CaCO3)	382	2.50	H	mg/L	1	7/12/2021 2:16:46 PM
<b><u>Ferrous Iron by SM3500-Fe B</u></b>				Batch ID: R68268		Analyst: SS
Ferrous Iron	13.6	2.50	DH	mg/L	25	6/29/2021 9:40:58 AM



**CLIENT:** Friedman & Bruya  
**Project:** 106488

**Lab ID:** 2106491-002

**Collection Date:** 6/25/2021 9:15:00 AM

**Client Sample ID:** MW25-20210625

**Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Dissolved Gases by RSK-175**

Batch ID: R68449 Analyst: MS

Methane	7.39	0.338	D	mg/L	50	7/9/2021 10:41:00 AM
Ethene	ND	0.0146		mg/L	1	7/9/2021 11:37:00 AM
Ethane	ND	0.0151		mg/L	1	7/9/2021 11:37:00 AM

**Ion Chromatography by EPA Method 300.0**

Batch ID: 32859 Analyst: SS

Sulfate	ND	3.00	D	mg/L	5	7/1/2021 12:19:00 PM
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**NOTES:**

Diluted due to matrix.

**Total Organic Carbon by SM 5310C**

Batch ID: R68335 Analyst: SS

Total Organic Carbon	7.50	0.500		mg/L	1	6/30/2021 3:04:00 AM
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**Total Alkalinity by SM 2320B**

Batch ID: R68478 Analyst: TN

Alkalinity, Total (As CaCO3)	377	2.50	H	mg/L	1	7/12/2021 2:16:46 PM
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R68268 Analyst: SS

Ferrous Iron	25.6	2.50	DH	mg/L	25	6/29/2021 9:40:58 AM
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**CLIENT:** Friedman & Bruya  
**Project:** 106488

**Lab ID:** 2106491-003

**Collection Date:** 6/25/2021 10:03:00 AM

**Client Sample ID:** MW19-20210625

**Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Dissolved Gases by RSK-175**

Batch ID: R68449 Analyst: MS

Methane	5.84	0.338	D	mg/L	50	7/9/2021 10:43:00 AM
Ethene	ND	0.0146		mg/L	1	7/9/2021 11:39:00 AM
Ethane	ND	0.0151		mg/L	1	7/9/2021 11:39:00 AM

**Ion Chromatography by EPA Method 300.0**

Batch ID: 32859 Analyst: SS

Sulfate	ND	2.40	D	mg/L	4	7/1/2021 12:42:00 PM
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**NOTES:**  
Diluted due to matrix.

**Total Alkalinity by SM 2320B**

Batch ID: R68510 Analyst: TN

Alkalinity, Total (As CaCO <sub>3</sub> )	520	2.50	H	mg/L	1	7/13/2021 2:00:00 PM
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R68268 Analyst: SS

Ferrous Iron	14.5	2.50	DH	mg/L	25	6/29/2021 9:40:58 AM
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**CLIENT:** Friedman & Bruya  
**Project:** 106488

**Lab ID:** 2106491-004

**Collection Date:** 6/25/2021 11:50:00 AM

**Client Sample ID:** MW22-20210625

**Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Dissolved Gases by RSK-175</u></b>				Batch ID: R68449		Analyst: MS
Methane	2.56	0.338	D	mg/L	50	7/9/2021 10:49:00 AM
Ethene	ND	0.0146		mg/L	1	7/9/2021 11:41:00 AM
Ethane	ND	0.0151		mg/L	1	7/9/2021 11:41:00 AM
<b><u>Ion Chromatography by EPA Method 300.0</u></b>				Batch ID: 32859		Analyst: SS
Sulfate	ND	6.00	D	mg/L	10	6/30/2021 9:31:00 PM
<b>NOTES:</b> Diluted due to matrix.						
<b><u>Total Organic Carbon by SM 5310C</u></b>				Batch ID: R68335		Analyst: SS
Total Organic Carbon	150	5.00	D	mg/L	10	6/30/2021 10:23:00 AM
<b><u>Total Alkalinity by SM 2320B</u></b>				Batch ID: R68510		Analyst: TN
Alkalinity, Total (As CaCO <sub>3</sub> )	243	2.50	H	mg/L	1	7/13/2021 2:00:00 PM
<b><u>Ferrous Iron by SM3500-Fe B</u></b>				Batch ID: R68268		Analyst: SS
Ferrous Iron	14.9	2.50	DH	mg/L	25	6/29/2021 9:40:58 AM





**CLIENT:** Friedman & Bruya  
**Project:** 106488

**Lab ID:** 2106491-005

**Collection Date:** 6/25/2021 1:15:00 PM

**Client Sample ID:** MW18-20210625

**Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Dissolved Gases by RSK-175**

Batch ID: R68449 Analyst: MS

Methane	5.19	0.338	D	mg/L	50	7/9/2021 10:52:00 AM
Ethene	ND	0.0146		mg/L	1	7/9/2021 11:43:00 AM
Ethane	ND	0.0151		mg/L	1	7/9/2021 11:43:00 AM

**Ion Chromatography by EPA Method 300.0**

Batch ID: 32859 Analyst: SS

Sulfate	ND	3.00	D	mg/L	5	7/1/2021 1:05:00 PM
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**NOTES:**  
Diluted due to matrix.

**Total Organic Carbon by SM 5310C**

Batch ID: R68335 Analyst: SS

Total Organic Carbon	6.85	0.500		mg/L	1	6/30/2021 3:47:00 AM
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**Total Alkalinity by SM 2320B**

Batch ID: R68510 Analyst: TN

Alkalinity, Total (As CaCO3)	454	2.50	H	mg/L	1	7/13/2021 2:00:00 PM
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R68268 Analyst: SS

Ferrous Iron	16.3	2.50	DH	mg/L	25	6/29/2021 9:40:58 AM
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**Lab ID:** 2106491-006

**Collection Date:** 6/25/2021 1:40:00 PM

**Client Sample ID:** MW21-20210625

**Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Dissolved Gases by RSK-175**

Batch ID: R68449 Analyst: MS

Methane	4.97	0.338	D	mg/L	50	7/9/2021 10:54:00 AM
Ethene	ND	0.0146		mg/L	1	7/9/2021 11:45:00 AM
Ethane	ND	0.0151		mg/L	1	7/9/2021 11:45:00 AM

**Total Organic Carbon by SM 5310C**

Batch ID: R68335 Analyst: SS

Total Organic Carbon	349	10.0	D	mg/L	20	6/30/2021 10:45:00 AM
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**CLIENT:** Friedman & Bruya  
**Project:** 106488

**Lab ID:** 2106491-007

**Collection Date:** 6/25/2021 2:43:00 PM

**Client Sample ID:** MW24-20210625

**Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Dissolved Gases by RSK-175</u></b>					Batch ID: R68449	Analyst: MS
Methane	6.19	0.338	D	mg/L	50	7/9/2021 10:56:00 AM
Ethene	ND	0.0146		mg/L	1	7/9/2021 11:47:00 AM
Ethane	ND	0.0151		mg/L	1	7/9/2021 11:47:00 AM
<b><u>Ion Chromatography by EPA Method 300.0</u></b>					Batch ID: 32859	Analyst: SS
Sulfate	ND	3.00	D	mg/L	5	7/1/2021 1:28:00 PM
<b>NOTES:</b> Diluted due to matrix.						
<b><u>Total Organic Carbon by SM 5310C</u></b>					Batch ID: R68335	Analyst: SS
Total Organic Carbon	7.52	0.500		mg/L	1	6/30/2021 4:53:00 AM
<b><u>Total Alkalinity by SM 2320B</u></b>					Batch ID: R68510	Analyst: TN
Alkalinity, Total (As CaCO3)	401	2.50	H	mg/L	1	7/13/2021 2:00:00 PM
<b><u>Ferrous Iron by SM3500-Fe B</u></b>					Batch ID: R68268	Analyst: SS
Ferrous Iron	21.9	2.50	DH	mg/L	25	6/29/2021 9:40:58 AM

Work Order: 2106491  
 CLIENT: Friedman & Bruya  
 Project: 106488

**QC SUMMARY REPORT**  
**Total Alkalinity by SM 2320B**

Sample ID: <b>MB-R68478</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>7/12/2021</b>	RunNo: <b>68478</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>R68478</b>		Analysis Date: <b>7/12/2021</b>	SeqNo: <b>1383903</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO3) ND 2.50

Sample ID: <b>LCS-R68478</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>7/12/2021</b>	RunNo: <b>68478</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R68478</b>		Analysis Date: <b>7/12/2021</b>	SeqNo: <b>1383904</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO3) 89.3 2.50 100.0 0 89.3 88.3 113

Sample ID: <b>2106490-002CDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>7/12/2021</b>	RunNo: <b>68478</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>R68478</b>		Analysis Date: <b>7/12/2021</b>	SeqNo: <b>1383907</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO3) 450 2.50 450.1 0 20 H

Sample ID: <b>MB-R68510</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>7/13/2021</b>	RunNo: <b>68510</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>R68510</b>		Analysis Date: <b>7/13/2021</b>	SeqNo: <b>1384529</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO3) ND 2.50

Sample ID: <b>LCS-R68510</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>7/13/2021</b>	RunNo: <b>68510</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R68510</b>		Analysis Date: <b>7/13/2021</b>	SeqNo: <b>1384530</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO3) 97.6 2.50 100.0 0 97.6 88.3 113

**Work Order:** 2106491  
**CLIENT:** Friedman & Bruya  
**Project:** 106488

**QC SUMMARY REPORT**  
**Total Alkalinity by SM 2320B**

Sample ID: <b>2106491-004DDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>7/13/2021</b>	RunNo: <b>68510</b>							
Client ID: <b>MW22-20210625</b>	Batch ID: <b>R68510</b>	Analysis Date: <b>7/13/2021</b>	SeqNo: <b>1384533</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	241	2.50						243.3	0.765	20	H

Work Order: 2106491  
 CLIENT: Friedman & Bruya  
 Project: 106488

**QC SUMMARY REPORT**  
**Ferrous Iron by SM3500-Fe B**

Sample ID: <b>MB-R68268</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>			Prep Date: <b>6/29/2021</b>	RunNo: <b>68268</b>					
Client ID: <b>MBLKW</b>	Batch ID: <b>R68268</b>				Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1378636</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron ND 0.100

Sample ID: <b>LCS-R68268</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>			Prep Date: <b>6/29/2021</b>	RunNo: <b>68268</b>					
Client ID: <b>LCSW</b>	Batch ID: <b>R68268</b>				Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1378637</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 0.441 0.100 0.4000 0 110 85 115

Sample ID: <b>2106490-001BDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>			Prep Date: <b>6/29/2021</b>	RunNo: <b>68268</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>R68268</b>				Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1378639</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 32.0 5.00 31.54 1.55 20 DH

Sample ID: <b>2106490-001BMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>			Prep Date: <b>6/29/2021</b>	RunNo: <b>68268</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>R68268</b>				Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1378640</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 56.6 5.00 20.00 31.54 125 70 130 DH

Sample ID: <b>2106490-001BMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>			Prep Date: <b>6/29/2021</b>	RunNo: <b>68268</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>R68268</b>				Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1378641</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 58.8 5.00 20.00 31.54 136 70 130 56.62 3.69 20 SDH

**NOTES:**

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

Work Order: 2106491  
 CLIENT: Friedman & Bruya  
 Project: 106488

**QC SUMMARY REPORT**  
**Ion Chromatography by EPA Method 300.0**

Sample ID: <b>MB-32859</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>6/30/2021</b>	RunNo: <b>68333</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>32859</b>	Analysis Date: <b>6/30/2021</b>	SeqNo: <b>1380471</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate ND 0.600

Sample ID: <b>LCS-32859</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/30/2021</b>	RunNo: <b>68333</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>32859</b>	Analysis Date: <b>6/30/2021</b>	SeqNo: <b>1380472</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 3.91 0.600 3.750 0 104 90 110

Sample ID: <b>2106491-001DDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>6/30/2021</b>	RunNo: <b>68333</b>							
Client ID: <b>MW23-20210625</b>	Batch ID: <b>32859</b>	Analysis Date: <b>6/30/2021</b>	SeqNo: <b>1380477</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate ND 6.00 0 20 D

Sample ID: <b>2106491-001DMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/30/2021</b>	RunNo: <b>68333</b>							
Client ID: <b>MW23-20210625</b>	Batch ID: <b>32859</b>	Analysis Date: <b>6/30/2021</b>	SeqNo: <b>1380478</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 37.6 6.00 37.50 0 100 80 120 D

Sample ID: <b>2106491-001DMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>	Prep Date: <b>6/30/2021</b>	RunNo: <b>68333</b>							
Client ID: <b>MW23-20210625</b>	Batch ID: <b>32859</b>	Analysis Date: <b>6/30/2021</b>	SeqNo: <b>1380479</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 38.7 6.00 37.50 0 103 80 120 37.56 2.89 20 D

Work Order: 2106491  
 CLIENT: Friedman & Bruya  
 Project: 106488

**QC SUMMARY REPORT**  
**Ion Chromatography by EPA Method 300.0**

Sample ID: <b>2106524-001ADUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>			Prep Date: <b>6/30/2021</b>	RunNo: <b>68333</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>32859</b>				Analysis Date: <b>6/30/2021</b>	SeqNo: <b>1380488</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	14.3	6.00						14.28	0.140	20	D

Sample ID: <b>2106524-001AMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>			Prep Date: <b>6/30/2021</b>	RunNo: <b>68333</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>32859</b>				Analysis Date: <b>6/30/2021</b>	SeqNo: <b>1380489</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	52.8	6.00	37.50	14.28	103	80	120				D

**Work Order:** 2106491  
**CLIENT:** Friedman & Bruya  
**Project:** 106488

**QC SUMMARY REPORT**  
**Total Organic Carbon by SM 5310C**

Sample ID: <b>MB-R68335</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2021</b>	RunNo: <b>68335</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>R68335</b>		Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1380532</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	ND	0.500									

Sample ID: <b>LCS-R68335</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2021</b>	RunNo: <b>68335</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R68335</b>		Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1380533</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	4.79	0.500	5.000	0	95.8	90.6	113				

Sample ID: <b>2106475-003DDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2021</b>	RunNo: <b>68335</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>R68335</b>		Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1380536</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.27	0.500						1.296	1.71	20	

Sample ID: <b>2106475-003DMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2021</b>	RunNo: <b>68335</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>R68335</b>		Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1380537</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	6.23	0.500	5.000	1.296	98.6	69.1	124				

Sample ID: <b>2106475-003DMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2021</b>	RunNo: <b>68335</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>R68335</b>		Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1380538</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	5.93	0.500	5.000	1.296	92.8	69.1	124	6.226	4.80	30	



**Work Order:** 2106491  
**CLIENT:** Friedman & Bruya  
**Project:** 106488

**QC SUMMARY REPORT**  
**Total Organic Carbon by SM 5310C**

Sample ID: <b>2106490-002ADUP</b>		SampType: <b>DUP</b>		Units: <b>mg/L</b>		Prep Date: <b>6/30/2021</b>		RunNo: <b>68335</b>			
Client ID: <b>BATCH</b>		Batch ID: <b>R68335</b>				Analysis Date: <b>6/30/2021</b>		SeqNo: <b>1380548</b>			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	97.0	0.500						97.86	0.852	20	E

Sample ID: <b>2106490-002AMS</b>		SampType: <b>MS</b>		Units: <b>mg/L</b>		Prep Date: <b>6/30/2021</b>		RunNo: <b>68335</b>			
Client ID: <b>BATCH</b>		Batch ID: <b>R68335</b>				Analysis Date: <b>6/30/2021</b>		SeqNo: <b>1380549</b>			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	101	0.500	5.000	97.86	67.4	69.1	124				ES

**NOTES:**

S - Analyte concentration was too high for accurate spike recovery(ies).

Work Order: 2106491  
 CLIENT: Friedman & Bruya  
 Project: 106488

**QC SUMMARY REPORT**  
**Dissolved Gases by RSK-175**

Sample ID: <b>LCS-R68449</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>			Prep Date: <b>7/9/2021</b>	RunNo: <b>68449</b>					
Client ID: <b>LCSW</b>	Batch ID: <b>R68449</b>				Analysis Date: <b>7/9/2021</b>	SeqNo: <b>1383088</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	930	0.00675	1,000	0	93.0	66.7	141				
Ethene	962	0.0146	1,000	0	96.2	68.6	139				
Ethane	1,020	0.0151	1,000	0	102	69.3	136				

Sample ID: <b>MB-R68449</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>			Prep Date: <b>7/9/2021</b>	RunNo: <b>68449</b>					
Client ID: <b>MBLKW</b>	Batch ID: <b>R68449</b>				Analysis Date: <b>7/9/2021</b>	SeqNo: <b>1383089</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00675									
Ethene	ND	0.0146									
Ethane	ND	0.0151									

Sample ID: <b>2107038-006AREP</b>	SampType: <b>REP</b>	Units: <b>mg/L</b>			Prep Date: <b>7/9/2021</b>	RunNo: <b>68449</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>R68449</b>				Analysis Date: <b>7/9/2021</b>	SeqNo: <b>1383081</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00675						0		30	
Ethene	ND	0.0146						0		30	
Ethane	ND	0.0151						0		30	

Client Name: **FB**  
 Logged by: **Carissa True**

Work Order Number: **2106491**  
 Date Received: **6/28/2021 9:38:00 AM**

### Chain of Custody

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

### Log In

3. Coolers are present? Yes  No  NA   
 4. Shipping container/cooler in good condition? Yes  No   
 5. Custody Seals present on shipping container/cooler?  
 (Refer to comments for Custody Seals not intact) Yes  No  Not Present   
 6. Was an attempt made to cool the samples? Yes  No  NA   
 7. Were all items received at a temperature of >2°C to 6°C \* Yes  No  NA   
 8. Sample(s) in proper container(s)? Yes  No   
 9. Sufficient sample volume for indicated test(s)? Yes  No   
 10. Are samples properly preserved? Yes  No   
 11. Was preservative added to bottles? Yes  No  NA   
 12. Is there headspace in the VOA vials? Yes  No  NA   
 13. Did all samples containers arrive in good condition(unbroken)? Yes  No   
 14. Does paperwork match bottle labels? Yes  No   
 15. Are matrices correctly identified on Chain of Custody? Yes  No   
 16. Is it clear what analyses were requested? Yes  No   
 17. Were all holding times able to be met? Yes  No

### Special Handling (if applicable)

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

Person Notified:	<input type="text" value="Mike Erdahl"/>	Date:	<input type="text" value="7/12/2021"/>
By Whom:	<input type="text" value="Brianna Barnes"/>	Via:	<input checked="" type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text" value="Hold time has expired for alkalinity add ons requested on 7/12. OK to proceed?"/>		
Client Instructions:	<input type="text" value="Proceed out of hold."/>		

19. Additional remarks:

### Item Information

Item #	Temp °C
Sample 1	11.4

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

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Seattle, WA 98119-2029  
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www.friedmanandbruya.com

July 12, 2021

Levi Fernandes, Project Manager  
SoundEarth Strategies  
2811 Fairview Ave. East, Suite 2000  
Seattle, WA 98102

Dear Mr Fernandes:

Included are the results from the testing of material submitted on June 25, 2021 from the SOU\_0731-004-05\_ 20210625, F&BI 106489 project. There are 13 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: Kyle Lowery  
SOU0712R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on June 25, 2021 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0731-004-05\_ 20210625, F&BI 106489 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
106489 -01	IW61-20210625
106489 -02	IW06-20210625
106489 -03	IW04-20210625
106489 -04	IW50-20210625

Samples IW61-20210625 and IW50-20210625 were sent to Fremont Analytical for dissolved gasses, sulfate, nitrate, alkalinity, TOC, and ferrous iron analyses. Sample IW04-20210625 was sent to Fremont Analytical for sulfate, nitrate, alkalinity, TOC, and ferrous iron analyses. The report is enclosed with the exception of the alkalinity results. Those results will be issued when received.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	IW61-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/30/21	Lab ID:	106489-01 x100
Date Analyzed:	07/01/21	Data File:	106489-01 x100.109
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	24,500
Manganese	13,000



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	IW04-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/30/21	Lab ID:	106489-03 x100
Date Analyzed:	07/01/21	Data File:	106489-03 x100.110
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	16,800
Manganese	11,200

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	IW50-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	06/30/21	Lab ID:	106489-04 x100
Date Analyzed:	07/01/21	Data File:	106489-04 x100.111
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	16,400
Manganese	13,400

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_0731-004-05_20210625
Date Extracted:	06/30/21	Lab ID:	I1-407 mb
Date Analyzed:	06/30/21	Data File:	I1-407 mb.095
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	<50
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	IW61-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	07/01/21	Lab ID:	106489-01 1/20
Date Analyzed:	07/02/21	Data File:	070220.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	78	126
Toluene-d8	99	87	115
4-Bromofluorobenzene	106	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	1.8
trans-1,2-Dichloroethene	<20
cis-1,2-Dichloroethene	25
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	IW06-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	07/01/21	Lab ID:	106489-02
Date Analyzed:	07/01/21	Data File:	070139.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	86	113
Toluene-d8	94	88	114
4-Bromofluorobenzene	101	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	0.59
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	3.6
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	IW04-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	07/01/21	Lab ID:	106489-03
Date Analyzed:	07/01/21	Data File:	070140.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	86	113
Toluene-d8	94	88	114
4-Bromofluorobenzene	104	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	0.46
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	IW50-20210625	Client:	SoundEarth Strategies
Date Received:	06/25/21	Project:	SOU_0731-004-05_20210625
Date Extracted:	07/01/21	Lab ID:	106489-04
Date Analyzed:	07/01/21	Data File:	070141.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	93	86	113
Toluene-d8	94	88	114
4-Bromofluorobenzene	106	88	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	0.85
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	1.7
Trichloroethene	<1
Tetrachloroethene	3.7

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0731-004-05_20210625
Date Extracted:	07/01/21	Lab ID:	01-1510 mb
Date Analyzed:	07/02/21	Data File:	070206.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	78	126
Toluene-d8	103	87	115
4-Bromofluorobenzene	102	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.01 j
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<0.05
Tetrachloroethene	<0.05



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/12/21

Date Received: 06/25/21

Project: SOU\_0731-004-05\_ 20210625, F&BI 106489

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

Laboratory Code: 106488-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Iron	ug/L (ppb)	100	16,000	248 b	0 b	70-130	200 b
Manganese	ug/L (ppb)	20	6,210	117 b	0 b	70-130	200 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Iron	ug/L (ppb)	100	99	85-115
Manganese	ug/L (ppb)	20	96	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/12/21

Date Received: 06/25/21

Project: SOU\_0731-004-05\_ 20210625, F&BI 106489

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

Laboratory Code: 107001-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance
				Recovery MS	Criteria
Vinyl chloride	ug/L (ppb)	10	<0.2	74	36-166
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	79	61-136
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	86	63-134
Trichloroethene	ug/L (ppb)	10	<1	87	66-135
Tetrachloroethene	ug/L (ppb)	10	2.1	99 b	10-226

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Percent	Acceptance Criteria	RPD (Limit 20)
			Recovery LCS	Recovery LCSD		
Vinyl chloride	ug/L (ppb)	10	90	97	50-154	7
trans-1,2-Dichloroethene	ug/L (ppb)	10	91	100	68-128	9
cis-1,2-Dichloroethene	ug/L (ppb)	10	99	100	74-136	1
Trichloroethene	ug/L (ppb)	10	100	102	67-133	2
Tetrachloroethene	ug/L (ppb)	10	99	96	76-121	3

# 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.





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

**RE: 106489**  
**Work Order Number: 2106490**

July 13, 2021

**Attention Michael Erdahl:**

Fremont Analytical, Inc. received 3 sample(s) on 6/28/2021 for the analyses presented in the following report.

***Dissolved Gases by RSK-175***  
***Ferrous Iron by SM3500-Fe B***  
***Ion Chromatography by EPA Method 300.0***  
***Total Alkalinity by SM 2320B***  
***Total Organic Carbon by SM 5310C***

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes  
Project Manager

*DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing*  
*ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing*  
*Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910*

Revision v1

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**CLIENT:** Friedman & Bruya  
**Project:** 106489  
**Work Order:** 2106490

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**Work Order Sample Summary**

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Date/Time Collected</b>	<b>Date/Time Received</b>
2106490-001	IW61-20210625	06/25/2021 10:30 AM	06/28/2021 9:38 AM
2106490-002	IW04-20210625	06/25/2021 11:41 AM	06/28/2021 9:38 AM
2106490-003	IW50-20210625	06/25/2021 2:40 PM	06/28/2021 9:38 AM

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

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**CLIENT:** Friedman & Bruya  
**Project:** 106489

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**I. SAMPLE RECEIPT:**

Samples receipt information is recorded on the attached Sample Receipt Checklist.

**II. GENERAL REPORTING COMMENTS:**

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

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

**III. ANALYSES AND EXCEPTIONS:**

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

7/13/2021: Revision 1 includes additional analysis requested by client.

### Qualifiers:

- \* - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

### Acronyms:

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





**Client:** Friedman & Bruya

**Collection Date:** 6/25/2021 10:30:00 AM

**Project:** 106489

**Lab ID:** 2106490-001

**Matrix:** Water

**Client Sample ID:** IW61-20210625

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Dissolved Gases by RSK-175</u></b>						
				Batch ID: R68449	Analyst: MS	
Methane	2.43	0.135	D	mg/L	20	7/9/2021 10:24:00 AM
Ethene	ND	0.0146		mg/L	1	7/9/2021 11:30:00 AM
Ethane	ND	0.0151		mg/L	1	7/9/2021 11:30:00 AM
<b><u>Ion Chromatography by EPA Method 300.0</u></b>						
				Batch ID: 32859	Analyst: SS	
Sulfate	ND	3.00	D	mg/L	5	7/1/2021 10:46:00 AM
<b>NOTES:</b> Diluted due to matrix.						
<b><u>Total Organic Carbon by SM 5310C</u></b>						
				Batch ID: R68335	Analyst: SS	
Total Organic Carbon	66.2	1.00	D	mg/L	2	6/30/2021 9:39:00 AM
<b><u>Total Alkalinity by SM 2320B</u></b>						
				Batch ID: R68478	Analyst: TN	
Alkalinity, Total (As CaCO <sub>3</sub> )	423	2.50	H	mg/L	1	7/12/2021 2:16:46 PM
<b><u>Ferrous Iron by SM3500-Fe B</u></b>						
				Batch ID: R68268	Analyst: SS	
Ferrous Iron	31.5	5.00	DH	mg/L	50	6/29/2021 9:40:58 AM



**Client:** Friedman & Bruya

**Collection Date:** 6/25/2021 11:41:00 AM

**Project:** 106489

**Lab ID:** 2106490-002

**Matrix:** Water

**Client Sample ID:** IW04-20210625

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Ion Chromatography by EPA Method 300.0**

Batch ID: 32859 Analyst: SS

Sulfate	ND	3.00	D	mg/L	5	7/1/2021 11:09:00 AM
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**NOTES:**

Diluted due to matrix.

**Total Organic Carbon by SM 5310C**

Batch ID: R68335 Analyst: SS

Total Organic Carbon	93.1	2.00	D	mg/L	4	6/30/2021 9:59:00 AM
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**Total Alkalinity by SM 2320B**

Batch ID: R68478 Analyst: TN

Alkalinity, Total (As CaCO <sub>3</sub> )	450	2.50	H	mg/L	1	7/12/2021 2:16:46 PM
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R68268 Analyst: SS

Ferrous Iron	23.3	5.00	DH	mg/L	50	6/29/2021 9:40:58 AM
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**Client:** Friedman & Bruya

**Collection Date:** 6/25/2021 2:40:00 PM

**Project:** 106489

**Lab ID:** 2106490-003

**Matrix:** Water

**Client Sample ID:** IW50-20210625

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Dissolved Gases by RSK-175**

Batch ID: R68449 Analyst: MS

Methane	3.92	0.135	D	mg/L	20	7/9/2021 10:36:00 AM
Ethene	ND	0.0146		mg/L	1	7/9/2021 11:32:00 AM
Ethane	ND	0.0151		mg/L	1	7/9/2021 11:32:00 AM

**Ion Chromatography by EPA Method 300.0**

Batch ID: 32859 Analyst: SS

Sulfate	ND	3.00	D	mg/L	5	7/1/2021 11:32:00 AM
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**NOTES:**

Diluted due to matrix.

**Total Organic Carbon by SM 5310C**

Batch ID: R68335 Analyst: SS

Total Organic Carbon	16.1	0.500		mg/L	1	6/30/2021 2:09:00 AM
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**Total Alkalinity by SM 2320B**

Batch ID: R68478 Analyst: TN

Alkalinity, Total (As CaCO3)	449	2.50	H	mg/L	1	7/12/2021 2:16:46 PM
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R68268 Analyst: SS

Ferrous Iron	24.8	5.00	DH	mg/L	50	6/29/2021 9:40:58 AM
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Work Order: 2106490  
 CLIENT: Friedman & Bruya  
 Project: 106489

**QC SUMMARY REPORT**  
**Total Alkalinity by SM 2320B**

Sample ID: <b>MB-R68478</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>7/12/2021</b>	RunNo: <b>68478</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>R68478</b>	Analysis Date: <b>7/12/2021</b>	SeqNo: <b>1383903</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	ND	2.50									

Sample ID: <b>LCS-R68478</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>7/12/2021</b>	RunNo: <b>68478</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R68478</b>	Analysis Date: <b>7/12/2021</b>	SeqNo: <b>1383904</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	89.3	2.50	100.0	0	89.3	88.3	113				

Sample ID: <b>2106490-002CDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>7/12/2021</b>	RunNo: <b>68478</b>							
Client ID: <b>IW04-20210625</b>	Batch ID: <b>R68478</b>	Analysis Date: <b>7/12/2021</b>	SeqNo: <b>1383907</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	450	2.50						450.1	0	20	H

Work Order: 2106490  
 CLIENT: Friedman & Bruya  
 Project: 106489

**QC SUMMARY REPORT**  
**Ferrous Iron by SM3500-Fe B**

Sample ID: <b>MB-R68268</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2021</b>	RunNo: <b>68268</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>R68268</b>	Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1378636</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron ND 0.100

Sample ID: <b>LCS-R68268</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2021</b>	RunNo: <b>68268</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R68268</b>	Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1378637</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 0.441 0.100 0.4000 0 110 85 115

Sample ID: <b>2106490-001BDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2021</b>	RunNo: <b>68268</b>							
Client ID: <b>IW61-20210625</b>	Batch ID: <b>R68268</b>	Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1378639</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 32.0 5.00 31.54 1.55 20 DH

Sample ID: <b>2106490-001BMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2021</b>	RunNo: <b>68268</b>							
Client ID: <b>IW61-20210625</b>	Batch ID: <b>R68268</b>	Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1378640</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 56.6 5.00 20.00 31.54 125 70 130 DH

Sample ID: <b>2106490-001BMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2021</b>	RunNo: <b>68268</b>							
Client ID: <b>IW61-20210625</b>	Batch ID: <b>R68268</b>	Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1378641</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 58.8 5.00 20.00 31.54 136 70 130 56.62 3.69 20 DSH

**NOTES:**

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

Work Order: 2106490  
 CLIENT: Friedman & Bruya  
 Project: 106489

**QC SUMMARY REPORT**  
**Ion Chromatography by EPA Method 300.0**

Sample ID: <b>MB-32859</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>6/30/2021</b>	RunNo: <b>68333</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>32859</b>	Analysis Date: <b>6/30/2021</b>	SeqNo: <b>1380471</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate ND 0.600

Sample ID: <b>LCS-32859</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/30/2021</b>	RunNo: <b>68333</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>32859</b>	Analysis Date: <b>6/30/2021</b>	SeqNo: <b>1380472</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 3.91 0.600 3.750 0 104 90 110

Sample ID: <b>2106491-001DDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>6/30/2021</b>	RunNo: <b>68333</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>32859</b>	Analysis Date: <b>6/30/2021</b>	SeqNo: <b>1380477</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate ND 6.00 0 20 D

Sample ID: <b>2106491-001DMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/30/2021</b>	RunNo: <b>68333</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>32859</b>	Analysis Date: <b>6/30/2021</b>	SeqNo: <b>1380478</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 37.6 6.00 37.50 0 100 80 120 D

Sample ID: <b>2106491-001DMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>	Prep Date: <b>6/30/2021</b>	RunNo: <b>68333</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>32859</b>	Analysis Date: <b>6/30/2021</b>	SeqNo: <b>1380479</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 38.7 6.00 37.50 0 103 80 120 37.56 2.89 20 D

**Work Order:** 2106490  
**CLIENT:** Friedman & Bruya  
**Project:** 106489

**QC SUMMARY REPORT**  
**Ion Chromatography by EPA Method 300.0**

Sample ID: <b>2106524-001ADUP</b>		SampType: <b>DUP</b>		Units: <b>mg/L</b>		Prep Date: <b>6/30/2021</b>		RunNo: <b>68333</b>			
Client ID: <b>BATCH</b>		Batch ID: <b>32859</b>				Analysis Date: <b>6/30/2021</b>		SeqNo: <b>1380488</b>			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	14.3	6.00						14.28	0.140	20	D

Sample ID: <b>2106524-001AMS</b>		SampType: <b>MS</b>		Units: <b>mg/L</b>		Prep Date: <b>6/30/2021</b>		RunNo: <b>68333</b>			
Client ID: <b>BATCH</b>		Batch ID: <b>32859</b>				Analysis Date: <b>6/30/2021</b>		SeqNo: <b>1380489</b>			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	52.8	6.00	37.50	14.28	103	80	120				D

Work Order: 2106490  
 CLIENT: Friedman & Bruya  
 Project: 106489

**QC SUMMARY REPORT**  
**Total Organic Carbon by SM 5310C**

Sample ID: <b>MB-R68335</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2021</b>	RunNo: <b>68335</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>R68335</b>	Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1380532</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	ND	0.500									

Sample ID: <b>LCS-R68335</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2021</b>	RunNo: <b>68335</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R68335</b>	Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1380533</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	4.79	0.500	5.000	0	95.8	90.6	113				

Sample ID: <b>2106475-003DDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2021</b>	RunNo: <b>68335</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>R68335</b>	Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1380536</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.27	0.500						1.296	1.71	20	

Sample ID: <b>2106475-003DMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2021</b>	RunNo: <b>68335</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>R68335</b>	Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1380537</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	6.23	0.500	5.000	1.296	98.6	69.1	124				

Sample ID: <b>2106475-003DMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2021</b>	RunNo: <b>68335</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>R68335</b>	Analysis Date: <b>6/29/2021</b>	SeqNo: <b>1380538</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	5.93	0.500	5.000	1.296	92.8	69.1	124	6.226	4.80	30	



**Work Order:** 2106490  
**CLIENT:** Friedman & Bruya  
**Project:** 106489

**QC SUMMARY REPORT**  
**Total Organic Carbon by SM 5310C**

Sample ID: <b>2106490-002ADUP</b>		SampType: <b>DUP</b>		Units: <b>mg/L</b>		Prep Date: <b>6/30/2021</b>		RunNo: <b>68335</b>			
Client ID: <b>IW04-20210625</b>		Batch ID: <b>R68335</b>				Analysis Date: <b>6/30/2021</b>		SeqNo: <b>1380548</b>			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	97.0	0.500						97.86	0.852	20	E

Sample ID: <b>2106490-002AMS</b>		SampType: <b>MS</b>		Units: <b>mg/L</b>		Prep Date: <b>6/30/2021</b>		RunNo: <b>68335</b>			
Client ID: <b>IW04-20210625</b>		Batch ID: <b>R68335</b>				Analysis Date: <b>6/30/2021</b>		SeqNo: <b>1380549</b>			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	101	0.500	5.000	97.86	67.4	69.1	124				ES

**NOTES:**

S - Analyte concentration was too high for accurate spike recovery(ies).

Work Order: 2106490  
 CLIENT: Friedman & Bruya  
 Project: 106489

**QC SUMMARY REPORT**  
**Dissolved Gases by RSK-175**

Sample ID: <b>LCS-R68449</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>			Prep Date: <b>7/9/2021</b>	RunNo: <b>68449</b>					
Client ID: <b>LCSW</b>	Batch ID: <b>R68449</b>				Analysis Date: <b>7/9/2021</b>	SeqNo: <b>1383088</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	930	0.00675	1,000	0	93.0	66.7	141				
Ethene	962	0.0146	1,000	0	96.2	68.6	139				
Ethane	1,020	0.0151	1,000	0	102	69.3	136				

Sample ID: <b>MB-R68449</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>			Prep Date: <b>7/9/2021</b>	RunNo: <b>68449</b>					
Client ID: <b>MBLKW</b>	Batch ID: <b>R68449</b>				Analysis Date: <b>7/9/2021</b>	SeqNo: <b>1383089</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00675									
Ethene	ND	0.0146									
Ethane	ND	0.0151									

Sample ID: <b>2107038-006AREP</b>	SampType: <b>REP</b>	Units: <b>mg/L</b>			Prep Date: <b>7/9/2021</b>	RunNo: <b>68449</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>R68449</b>				Analysis Date: <b>7/9/2021</b>	SeqNo: <b>1383081</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00675						0		30	
Ethene	ND	0.0146						0		30	
Ethane	ND	0.0151						0		30	

Client Name: <b>FB</b>	Work Order Number: <b>2106490</b>
Logged by: <b>Carissa True</b>	Date Received: <b>6/28/2021 9:38:00 AM</b>

### Chain of Custody

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

### Log In

3. Coolers are present? Yes  No  NA
4. Shipping container/cooler in good condition? Yes  No
5. Custody Seals present on shipping container/cooler?  
(Refer to comments for Custody Seals not intact) Yes  No  Not Present
6. Was an attempt made to cool the samples? Yes  No  NA
7. Were all items received at a temperature of >2°C to 6°C \* Yes  No  NA
8. Sample(s) in proper container(s)? Yes  No
9. Sufficient sample volume for indicated test(s)? Yes  No
10. Are samples properly preserved? Yes  No
11. Was preservative added to bottles? Yes  No  NA
12. Is there headspace in the VOA vials? Yes  No  NA
13. Did all samples containers arrive in good condition(unbroken)? Yes  No
14. Does paperwork match bottle labels? Yes  No
15. Are matrices correctly identified on Chain of Custody? Yes  No
16. Is it clear what analyses were requested? Yes  No
17. Were all holding times able to be met? Yes  No

### Special Handling (if applicable)

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

Person Notified:	<input type="text" value="Mike Erdahl"/>	Date:	<input type="text" value="7/12/2021"/>
By Whom:	<input type="text" value="Brianna Barnes"/>	Via:	<input checked="" type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text" value="Hold time has expired for alkalinity add ons requested on 7/12. OK to proceed?"/>		
Client Instructions:	<input type="text" value="Proceed out of hold."/>		

19. Additional remarks:

### Item Information

Item #	Temp °C
Sample 1	11.4

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





**Analytical Results**

Client: SoundEarth Strategies, Inc.  
Client Project Number: 0731-004-08  
Date Samples Received: June 29, 2021  
Date Samples Analyzed: July 13, 2021

**SiREM File Reference: S-8169**

Client Sample ID	SiREM Reference ID	Client Sample Date	Sample Dilution Factor	Lactate	Acetate	Propionate	Formate	Butyrate	Pyruvate	
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
MW23-20210625	21-5389	25-Jun-21	50	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	
MW25-20210625	21-5390	25-Jun-21	50	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	
IW61-20210625	21-5391	25-Jun-21	50	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	
IW04-20210625	21-5392	25-Jun-21	50	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	
MW22-20210625	21-5393	25-Jun-21	50	<0.39	254	14	<0.22	36	2.4	
MW18-20210625	21-5394	25-Jun-21	50	<0.39	1.8	<0.31	<0.22	<0.41	<0.69	
MW21-20210625	21-5395	25-Jun-21	50	<0.39	189	85	<0.22	50	15	
IW50-20210625	21-5396	25-Jun-21	50	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	
MW24-20210625	21-5397	25-Jun-21	50	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69	
QL				50	0.39	0.54	0.31	0.22	0.41	0.69

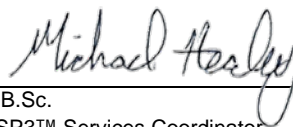
**Comments:**  
QL = Quantitation limit  
< = compound analysed for but not detected, associated value is QL. Sample QL is corrected for dilution.

Analyst:



Rachel Hallman  
Laboratory Technician

Results approved:



Michael Healey, B.Sc.  
Treatability and SP3™ Services Coordinator

Date:

15-Jul-21



# Chain-of-Custody Form

siremlab.com

130 Research Lane, Ste 2  
Guelph ON, Canada N1G 5G3  
(519) 822-2265

Lab #  
**S-8169**

Project Name: <b>Troy Laundry Property</b>		Project #: <b>0731-004-08</b>		Preservative		Analysis	
Project Manager: <b>Tom Cammarata</b>				<b>VFA (Volatile Fatty Acids)</b>		<b>Preservative Key</b> 0. None 1. HCL 2. Other _____ 3. Other _____ 4. Other _____ 5. Other _____ 6. Other _____	
Email: <b>TCammarata@SoundEarthInc.com</b>							
Company: <b>Sound Earth Strategies, INC.</b>							
Address: <b>2811 Fairview Avenue E, Suite 2000</b>							
City: <b>Seattle, WA 98102</b>							
Phone #: <b>(206)-306-1400</b>	Fax #:	Sampler's Printed Name: <b>Kyle Lowery</b>					
Sampler's Signature: <i>[Signature]</i>							
Client Sample ID	Lab ID	Sampling		Matrix	# of Containers		Other Information
		Date	Time				
MW23-20210625		6/29/21	0910	WATER	2	X	
MW25-20210625			0915				
IW61-20210625			1030				
IW04-20210625			1141				
MW22-20210625			1150				
MW18-20210625			1315				
MW21-20210625			1340				
IW50-20210625			1440				
MW24-20210625			1443				
<b>KJC 06/28/21</b>							

<b>Sample Receipt</b> Cooler Condition: <b>Good - wet ice</b> Cooler Temperature: <b>6.0°C</b> Custody Seals: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		<b>Invoice Information</b> P.O. #: <b>0731-004-08</b> Bill To:		<b>For Lab Use Only</b>	
--	--	--	--	-------------------------	--

<b>Relinquished By:</b> Signature: <i>[Signature]</i> Printed Name: <b>Kyle Lowery</b> Firm: <b>Sound Earth</b> Date/Time: <b>06/28/21</b>		<b>Received By:</b> Signature: <i>[Signature]</i> Printed Name: <b>Susan Thomas</b> Firm: <b>SIREM</b> Date/Time: <b>6-29-2021 1130</b>		<b>Relinquished By:</b> Signature: _____ Printed Name: _____ Firm: _____ Date/Time: _____		<b>Received By:</b> Signature: _____ Printed Name: _____ Firm: _____ Date/Time: _____	
--	--	---	--	---	--	---	--

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

In the absence of an executed agreement, submission of samples to SIREM implies consent for performance of analyses specified on this Chain-of-Custody form and agreement with the terms and conditions of the SIREM Laboratory Services Agreement. The entity submitting samples shall be responsible for payment in full for said analyses.







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Chain-of-Custody Form  
siremlab.com

COPY

130 Research Lane, Ste 2  
Guelph ON, Canada N1G 5G3  
(519) 822-2265

Lab #  
S-8169

Project Name <i>Troy Laundry Property</i>		Project # <i>0731-004-08</i>		Preservative		Analysis	
Project Manager <i>Tom Cammara</i>				<i>VFA (on-line for by order)</i>			
Email <i>TCammara@SoundEarthInc.com</i>							
Company <i>Sound Earth Strategies, INC.</i>							
Address <i>2811 Fairview Avenue E, Suite 2000 Seattle, WA 98102</i>							
Phone # <i>(206)-306-1400</i>		Fax #					
Sampler's Signature <i>[Signature]</i>		Sampler's Printed Name <i>Kyle Lowery</i>				Preservative Key 0. None 1. HCL 2. Other _____ 3. Other _____ 4. Other _____ 5. Other _____ 6. Other _____	
Client Sample ID	Lab ID	Sampling			# of Containers		Other Information
		Date	Time	Matrix			
<i>MW23-20210625</i>		<i>06/28/21</i>	<i>0910</i>	<i>WATER</i>	<i>2</i>	<i>X</i>	
<i>MW25-20210625</i>			<i>0915</i>				
<i>IW61-20210625</i>			<i>1030</i>				
<i>IW04-20210625</i>			<i>1141</i>				
<i>MW22-20210625</i>			<i>1150</i>				
<i>MW18-20210625</i>			<i>1315</i>				
<i>MW21-20210625</i>			<i>1340</i>				
<i>IW50-20210625</i>			<i>1440</i>				
<i>MW24-20210625</i>			<i>1443</i>				

*KJC 06/28/21*

Cooler Condition: <b>Sample Receipt</b> <i>Good - wet ice</i>		P.O. # <i>0731-004-08</i>		For Lab Use Only	
Cooler Temperature: <i>Ky 0050 6.0°C</i>		Bill To:			
Custody Seals: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					

Relinquished By: Signature <i>[Signature]</i>		Received By: Signature <i>[Signature]</i>		Relinquished By: Signature		Received By: Signature		Relinquished By: Signature		Received By: Signature	
Printed Name <i>Kyle Lowery</i>		Printed Name <i>Susan Thomas</i>		Printed Name		Printed Name		Printed Name		Printed Name	
Firm <i>Sound Earth</i>		Firm <i>SIREM</i>		Firm		Firm		Firm		Firm	
Date/Time <i>06/28/21</i>		Date/Time <i>6-29-2021 1130</i>		Date/Time		Date/Time		Date/Time		Date/Time	

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

In the absence of an executed agreement, submission of samples to SIREM implies consent for performance of analyses specified on this Chain-of-Custody form and agreement with the terms and conditions of the SIREM standard Service Agreement. The entity submitting samples shall be responsible for payment in full for said analyses.

***August 2021 Supplemental Sampling***

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

August 23, 2021

Levi Fernandes, Project Manager  
SoundEarth Strategies  
2811 Fairview Ave. East, Suite 2000  
Seattle, WA 98102

Dear Mr Fernandes:

Included are the results from the testing of material submitted on August 17, 2021 from the SOU\_0731-004-05\_ 20210817, F&BI 108261 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: Kyle Lowrey  
SOU0823R.DOC

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on August 17, 2021 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0731-004-05\_ 20210817, F&BI 108261 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
108261 -01	MW28-20210817

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW28-20210817	Client:	SoundEarth Strategies
Date Received:	08/17/21	Project:	SOU_0731-004-05_20210817, F&BI 108261
Date Extracted:	08/18/21	Lab ID:	108261-01
Date Analyzed:	08/18/21	Data File:	081807.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	85	117
Toluene-d8	99	88	112
4-Bromofluorobenzene	102	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	18
Trichloroethene	3.9
Tetrachloroethene	7.6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0731-004-05_20210817, F&BI 108261
Date Extracted:	08/18/21	Lab ID:	01-1850 mb
Date Analyzed:	08/18/21	Data File:	081806.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	110	85	117
Toluene-d8	110	88	112
4-Bromofluorobenzene	102	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/23/21

Date Received: 08/17/21

Project: SOU\_ 0731-004-05\_ 20210817, F&BI 108261

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

Laboratory Code: 108240-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	10	<0.2	101	36-166
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	98	61-136
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	100	63-134
Trichloroethene	ug/L (ppb)	10	<1	93	66-135
Tetrachloroethene	ug/L (ppb)	10	<1	100	10-226

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	10	102	99	50-154	3
trans-1,2-Dichloroethene	ug/L (ppb)	10	97	94	68-128	3
cis-1,2-Dichloroethene	ug/L (ppb)	10	102	98	74-136	4
Trichloroethene	ug/L (ppb)	10	91	90	67-133	1
Tetrachloroethene	ug/L (ppb)	10	99	97	76-121	2

# 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.



108261

SAMPLE CHAIR OF CUSTODY

ME 8/17/21

VWA

Page # 1 of 1

TURNAROUND TIME

Standard (2 Weeks)

RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

Dispose after 30 days

Return samples

Will call with instructions

SAMPLERS (signature)	<i>[Signature]</i>
PROJECT NAME/NO.	Troy Laundry Property
PO #	0731-004-05
REMARKS	*cVOCs = PCE, TCE, Cis/Trans-DCE, and VC
	EIM Y

Send Report To Lori Fernandez  
 Company SoundEarth Strategies  
 Address 2811 Fairview Ave E, Suite 2000  
 City, State, ZIP Seattle, WA 98102

Sample ID	Sample Location	Sample Depth	Lab ID	Date sampled	Time sampled	Matrix	# of Jars	GRPH by NWTPH-Gx	BTEX by EPA 8021B	DRPH/ORPH by NWTPH-Dx	cVOCs* by EPA 8260C	FOG by 1664	TOC By EPA 415.1	Methane, Ethane, and Ethene by RSK175	Sulfate by EPA 300.0	Notes
MW28-20210817	MW28	-	01A200817201	08/17/21	1:55	H <sub>2</sub> O	3				X					
<i>[Handwritten: HP 08/17/21]</i>																
<i>[Handwritten: Samples received at 8°C]</i>																

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

SIGNATURE		PRINT NAME		COMPANY		DATE	TIME
Relinquished by:	<i>[Signature]</i>	<i>[Signature]</i>	VWA	SES	FBI	08/17/21	12:55
Received by:	<i>[Signature]</i>	<i>[Signature]</i>	VWA	SES	FBI	8/17/21	12:55
Relinquished by:							
Received by:							

***September 2021 Supplemental Sampling***

DRAFT

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW28-20210921	Client:	SoundEarth Strategies
Date Received:	09/21/21	Project:	SOU_0731-004-05_20210921
Date Extracted:	09/22/21	Lab ID:	109355-01
Date Analyzed:	09/22/21 14:13	Data File:	092223.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	78	126
Toluene-d8	94	87	115
4-Bromofluorobenzene	103	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	0.10
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	15
Trichloroethene	3.4
Tetrachloroethene	7.5

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

Client Sample ID: Method Blank  
Date Received: Not Applicable  
Date Extracted: 09/22/21  
Date Analyzed: 09/22/21  
Matrix: Water  
Units: ug/L (ppb)

Client: SoundEarth Strategies  
Project: SOU\_0731-004-05\_20210921  
Lab ID: 01-2128 mb  
Data File: 092207.D  
Instrument: GCMS11  
Operator: JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	78	126
Toluene-d8	102	87	115
4-Bromofluorobenzene	105	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<0.5
Tetrachloroethene	<1

109355

Send Report To ~~XXXXXXXXXX~~ Lowell Ekstrand

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLE CHAIN OF CUSTODY

ME 09/21/21

Page # 1 of 1

TURNAROUND TIME

Standard (2 weeks)  
RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

Dispose after 30 days  
Return samples  
Will call with instructions

SAMPLERS (signature) <i>John Murray</i>	PROJECT NAME/NO. Troy Laundry Property	PO # 0731-004-05
REMARKS *CVOCS = PCE, TCE, Cis/Trans-DCE, and VC	EIM Y	

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	GRPH by NWTPH-Gx	BTEX by EPA 8021B	DRPH/ORPH by NWTPH-Dx	cVOCs* by EPA 8260C	FOG by 1664	TOC By EPA 415.1	Methane, Ethane, and Ethene by RSK175	Sulfate by EPA 300.0	Notes
<del>MM28-20710921</del>	<del>MM28</del>	<del>—</del>	<del>A-C</del>	<del>09/21/21</del>	<del>1025</del>	<del>W.D.</del>	<del>3</del>	<del>X</del>								

Samples received at 406

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

SIGNATURE		PRINT NAME		COMPANY		DATE	TIME
Relinquished by: <i>John Murray</i>		<i>John Murray</i>		SEI		09/21/21	12:05
Received by: <i>W</i>		<i>Khoi Trang</i>		FBI		9/21/21	12:05
Relinquished by:							
Received by:							

***Fourth Quarter 2021***

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 10, 2022

Levi Fernandes, Project Manager  
SoundEarth Strategies  
2811 Fairview Ave. East, Suite 2000  
Seattle, WA 98102

Dear Mr Fernandes:

Included is the amended report from the testing of material submitted on December 15, 2021 from the SOU\_0731-004-08\_ 20211215, F&BI 112310 project. The results for MW32-20211215 are included.

We apologize for the inconvenience and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl  
Project Manager

Enclosures  
c: Clare Tochilin  
SOU0104R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

January 4, 2022

Levi Fernandes, Project Manager  
SoundEarth Strategies  
2811 Fairview Ave. East, Suite 2000  
Seattle, WA 98102

Dear Mr Fernandes:

Included are the results from the testing of material submitted on December 15, 2021 from the SOU\_0731-004-08\_ 20211215, F&BI 112310 project. There are 18 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: Clare Tochilin  
SOU0104R.DOC



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 15, 2021 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0731-004-08\_ 20211215, F&BI 112310 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
112310 -01	MW26-20211215
112310 -02	MW29-20211215
112310 -03	MW01-20211215
112310 -04	MW30-20211215
112310 -05	MW04-20211215
112310 -06	MW07-20211215
112310 -07	MW31-20211215
112310 -08	MW27-20211215
112310 -09	MW32-20211215

Samples MW26-20211215, MW04-20211215, and MW07-20211215 were sent to Fremont Analytical for dissolved gasses, nitrate, sulfate, alkalinity, and ferrous iron. In addition, samples MW26-20211215 and MW07-20211215 were sent to Fremont for total organic carbon analysis. The report is enclosed.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW26-20211215	Client:	SoundEarth Strategies
Date Received:	12/15/21	Project:	SOU_0731-004-08_20211215
Date Extracted:	12/16/21	Lab ID:	112310-01
Date Analyzed:	12/17/21	Data File:	112310-01.088
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	371
Manganese	496

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW04-20211215	Client:	SoundEarth Strategies
Date Received:	12/15/21	Project:	SOU_0731-004-08_20211215
Date Extracted:	12/16/21	Lab ID:	112310-05
Date Analyzed:	12/17/21	Data File:	112310-05.089
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	104
Manganese	2.26

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW07-20211215	Client:	SoundEarth Strategies
Date Received:	12/15/21	Project:	SOU_0731-004-08_20211215
Date Extracted:	12/16/21	Lab ID:	112310-06
Date Analyzed:	12/17/21	Data File:	112310-06.090
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	133
Manganese	8.50

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_0731-004-08_20211215
Date Extracted:	12/16/21	Lab ID:	I1-838 mb
Date Analyzed:	12/16/21	Data File:	I1-838 mb.115
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	<50
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW26-20211215	Client:	SoundEarth Strategies
Date Received:	12/15/21	Project:	SOU_0731-004-08_20211215
Date Extracted:	12/20/21	Lab ID:	112310-01
Date Analyzed:	12/21/21	Data File:	122133.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	85	117
Toluene-d8	99	88	112
4-Bromofluorobenzene	103	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	7.9
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW29-20211215	Client:	SoundEarth Strategies
Date Received:	12/15/21	Project:	SOU_0731-004-08_20211215
Date Extracted:	12/20/21	Lab ID:	112310-02
Date Analyzed:	12/21/21	Data File:	122134.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	85	117
Toluene-d8	97	88	112
4-Bromofluorobenzene	102	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	14
Trichloroethene	12
Tetrachloroethene	15

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW01-20211215	Client:	SoundEarth Strategies
Date Received:	12/15/21	Project:	SOU_0731-004-08_20211215
Date Extracted:	12/20/21	Lab ID:	112310-03
Date Analyzed:	12/21/21	Data File:	122135.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	85	117
Toluene-d8	99	88	112
4-Bromofluorobenzene	100	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	0.50
Tetrachloroethene	<1



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW30-20211215	Client:	SoundEarth Strategies
Date Received:	12/15/21	Project:	SOU_0731-004-08_20211215
Date Extracted:	12/20/21	Lab ID:	112310-04
Date Analyzed:	12/21/21	Data File:	122136.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	85	117
Toluene-d8	99	88	112
4-Bromofluorobenzene	103	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	5.2
Trichloroethene	2.2
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW04-20211215	Client:	SoundEarth Strategies
Date Received:	12/15/21	Project:	SOU_0731-004-08_20211215
Date Extracted:	12/20/21	Lab ID:	112310-05
Date Analyzed:	12/21/21	Data File:	122137.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	85	117
Toluene-d8	96	88	112
4-Bromofluorobenzene	98	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	7.8
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW07-20211215	Client:	SoundEarth Strategies
Date Received:	12/15/21	Project:	SOU_0731-004-08_20211215
Date Extracted:	12/20/21	Lab ID:	112310-06
Date Analyzed:	12/21/21	Data File:	122138.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	85	117
Toluene-d8	96	88	112
4-Bromofluorobenzene	101	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	7.2
Tetrachloroethene	2.0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW31-20211215	Client:	SoundEarth Strategies
Date Received:	12/15/21	Project:	SOU_0731-004-08_20211215
Date Extracted:	12/20/21	Lab ID:	112310-07
Date Analyzed:	12/21/21	Data File:	122139.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	85	117
Toluene-d8	96	88	112
4-Bromofluorobenzene	102	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	6.3
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW27-20211215	Client:	SoundEarth Strategies
Date Received:	12/15/21	Project:	SOU_0731-004-08_20211215
Date Extracted:	12/20/21	Lab ID:	112310-08
Date Analyzed:	12/21/21	Data File:	122140.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	85	117
Toluene-d8	99	88	112
4-Bromofluorobenzene	98	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	8.2
Trichloroethene	28
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW32-20211215	Client:	SoundEarth Strategies
Date Received:	12/15/21	Project:	SOU_0731-004-08_20211215
Date Extracted:	12/20/22	Lab ID:	112310-09
Date Analyzed:	12/22/21	Data File:	122214.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	110	85	117
Toluene-d8	99	88	112
4-Bromofluorobenzene	100	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<0.5
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0731-004-08_20211215
Date Extracted:	12/20/21	Lab ID:	01-2839 mb
Date Analyzed:	12/20/21	Data File:	122014.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	96	88	112
4-Bromofluorobenzene	100	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<0.5
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/04/22

Date Received: 12/15/21

Project: SOU\_0731-004-08\_ 20211215, F&BI 112310

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

Laboratory Code: 112312-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Iron	ug/L (ppb)	100	4,820	0 b	191 b	70-130	200 b
Manganese	ug/L (ppb)	20	2,520	6 b	267 b	70-130	191 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Iron	ug/L (ppb)	100	91	85-115
Manganese	ug/L (ppb)	20	94	85-115



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/04/22

Date Received: 12/15/21

Project: SOU\_0731-004-08\_ 20211215, F&BI 112310

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

Laboratory Code: 112280-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	10	<0.2	91	36-166
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	100	61-136
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	101	63-134
Trichloroethene	ug/L (ppb)	10	<1	91	66-135
Tetrachloroethene	ug/L (ppb)	10	<1	91	10-226

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	10	91	91	50-154	0
trans-1,2-Dichloroethene	ug/L (ppb)	10	100	100	68-128	0
cis-1,2-Dichloroethene	ug/L (ppb)	10	101	100	74-136	1
Trichloroethene	ug/L (ppb)	10	91	92	67-133	1
Tetrachloroethene	ug/L (ppb)	10	91	92	76-121	1

# 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.

**SAMPLE CHAIN OF CUSTODY**

112310

ME 12/15/21

Page # 1 of 1  
 TURNAROUND TIME  
 Standard (2 weeks)  
 RUSH  
 Rush charges authorized by: WJ3  
 SAMPLE DISPOSAL  
 Dispose after 30 days  
 Return samples  
 Will call with instructions

Send Report To Levi Fernandes, cc Claire Tochilin

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature)	<u>[Signature]</u>
PROJECT NAME/NO.	Troy Laundry Property
PO #	0731-004-08
REMARKS	*cVOCs = PCE, TCE, Cis/Trans-DCE, and VC EIM-V

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	GRPH by NWTPH-Gx	BTEX by EPA 8021B	DRPH/ORPH by NWTPH-Dx	cVOCs * by EPA 8260C	Methane, Ethane, Ethene by RSK175	Sulfate, Nitrate, Alkalinity by SM1845/SM2320B	Total Fe and Mn by EPA 200.8	Fe 2+ by SM 3500	TOC By EPA 415.1	Notes
MW26-2021215	MW26	—	01F	12/15/21	08:50	H <sub>2</sub> O	10				X	X	X	X	X		
MW29-2021215	MW29	—	02E	12/15/21	09:55	H <sub>2</sub> O	3				X	X	X	X	X		
MW01-2021215	MW01	—	03	12/15/21	10:25	H <sub>2</sub> O	3				X	X	X	X	X		
MW30-2021215	MW30	—	04	12/15/21	10:43	H <sub>2</sub> O	3				X	X	X	X	X		
MW04-2021215	MW04	—	05E	12/15/21	11:48	H <sub>2</sub> O	9				X	X	X	X	X		
MW07-2021215	MW07	—	06E	12/15/21	13:21	H <sub>2</sub> O	10				X	X	X	X	X		
MW31-2021215	MW31	—	07E	12/15/21	13:47	H <sub>2</sub> O	3				X	X	X	X	X		
MW27-2021215	MW27	—	08	12/15/21	14:16	H <sub>2</sub> O	3				X	X	X	X	X		
MW32-2021215	MW32	—	09	12/15/21	12:11	H <sub>2</sub> O	3				X	X	X	X	X		
BDB 12/15/21																	

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

SIGNATURE		PRINT NAME		COMPANY		DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>Brennan Busher</u>	SoundEarth Strategies	12/15/21	12:35			
Received by: <u>[Signature]</u>	<u>VINH</u>	FEI	12/15/21	17:35			
Relinquished by:							
Received by:							

Samples received at 4 o'clock

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 28, 2021

Levi Fernandes, Project Manager  
SoundEarth Strategies  
2811 Fairview Ave. East, Suite 2000  
Seattle, WA 98102

Dear Mr Fernandes:

Included is the amended report from the testing of material submitted on December 15, 2021 from the SOU\_0731-004-08\_ 20211215, F&BI 112311 project. Per your request, the vinyl chloride reporting limit was raised to <0.2 ug/L.

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: Clare Tochilin  
SOU1223R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

December 23, 2021

Levi Fernandes, Project Manager  
SoundEarth Strategies  
2811 Fairview Ave. East, Suite 2000  
Seattle, WA 98102

Dear Mr Fernandes:

Included are the results from the testing of material submitted on December 15, 2021 from the SOU\_0731-004-08\_ 20211215, F&BI 112311 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: Clare Tochilin  
SOU1223R.DOC

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 15, 2021 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0731-004-08\_ 20211215, F&BI 112311 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
112311 -01	ONNI-MW-5-20211214
112311 -02	ONNI-MW-9-20211214
112311 -03	ONNI-MW-4-20211215

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	ONNI-MW-5-20211214	Client:	SoundEarth Strategies
Date Received:	12/15/21	Project:	SOU_0731-004-08_20211215
Date Extracted:	12/20/21	Lab ID:	112311-01
Date Analyzed:	12/21/21	Data File:	122118.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	109	85	117
Toluene-d8	93	88	112
4-Bromofluorobenzene	101	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<0.5
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	ONNI-MW-9-20211214	Client:	SoundEarth Strategies
Date Received:	12/15/21	Project:	SOU_0731-004-08_20211215
Date Extracted:	12/20/21	Lab ID:	112311-02
Date Analyzed:	12/21/21	Data File:	122119.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	85	117
Toluene-d8	95	88	112
4-Bromofluorobenzene	99	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	1.3
Trichloroethene	<0.5
Tetrachloroethene	<1



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	ONNI-MW-4-20211215	Client:	SoundEarth Strategies
Date Received:	12/15/21	Project:	SOU_0731-004-08_20211215
Date Extracted:	12/20/21	Lab ID:	112311-03
Date Analyzed:	12/21/21	Data File:	122120.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	85	117
Toluene-d8	101	88	112
4-Bromofluorobenzene	99	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<0.5
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0731-004-08_20211215
Date Extracted:	12/20/21	Lab ID:	01-2838 mb
Date Analyzed:	12/20/21	Data File:	122007.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	85	117
Toluene-d8	96	88	112
4-Bromofluorobenzene	98	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<0.5
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/23/21

Date Received: 12/15/21

Project: SOU\_0731-004-08\_ 20211215, F&BI 112311

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

Laboratory Code: 112368-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	
				Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	10	<0.2	111	16-176
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	98	50-150
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	98	50-150
Trichloroethene	ug/L (ppb)	10	<0.5	93	43-133
Tetrachloroethene	ug/L (ppb)	10	<1	96	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent		Acceptance Criteria	RPD (Limit 20)
			Recovery LCS	Recovery LCS D		
Vinyl chloride	ug/L (ppb)	10	106	112	70-130	6
trans-1,2-Dichloroethene	ug/L (ppb)	10	96	99	70-130	3
cis-1,2-Dichloroethene	ug/L (ppb)	10	100	99	70-130	1
Trichloroethene	ug/L (ppb)	10	91	93	70-130	2
Tetrachloroethene	ug/L (ppb)	10	93	95	70-130	2

# 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.

112311

Send Report To Levi Fernandes, cc: Claire Touchlin

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

**SAMPLE CHAIN OF CUSTODY**

ME 12/15/21

Page # 1 of 1 vuv2

SAMPLERS (signature)  
*Levi Fernandes*

PROJECT NAME/NO.

Troy Laundry Property

PO #

0731-004-08

REMARKS  
\*cVOCs = PCE, TCE, Cis/Trans-DCE, and VC

EIM:Y

TURNAROUND TIME

Standard (2 Weeks)  
RUSH

Rush charges authorized by:

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	GRPH by NWTPH-Gx	BTEX by EPA 8021B	DRPH/ORPH by NWTPH-Dx	cVOCs* by EPA 8260C	Methane, Ethane, Ethene by RSK175	Sulfate, Nitrate, Alkalinity by SM1845/SM2320B	Total Fe and Mn by EPA 200.8	Fe 2+ by SM 3500	TOC By EPA 415.1	Notes	
0NNI-MU-5-20211214	0NNI-MU-5	—	016	12/14/21	1410	1420	3				XX							
0NNI-MU-9-20211214	0NNI-MU-9	—	021	12/14/21	1551	1420	3				XX							
0NNI-MU-9-20211215	0NNI-MU-9	—	03	12/15/21	0905	1420	3											
<i>OT 20211215</i>																		

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
<i>Levi Fernandes</i>	Brennan Boehler	SoundEarth Strategies	12/15/21	1335
<i>Mark</i>	VINTA	FDI	12/15/21	1735
Received by:		Samples received at	4	00

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 29, 2021

Levi Fernandes, Project Manager  
SoundEarth Strategies  
2811 Fairview Ave. East, Suite 2000  
Seattle, WA 98102

Dear Ms Fernandes:

Included are the results from the testing of material submitted on December 16, 2021 from the SOU\_0731-004-08\_ 20211216, F&BI 112344 project. There are 15 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: Clare Tochilin  
SOU1229R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 16, 2020 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0731-004-08\_ 20211216, F&BI 112344 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
112344 -01	MW33-20211216
112344 -02	MW13-20211216
112344 -03	MW34-20211216
112344 -04	MW28-20211216

Samples MW28-20211216 was sent to Fremont Analytical for dissolved gasses, sulfate, nitrate, alkalinity, and ferrous iron analyses.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/29/21

Date Received: 12/16/21

Project: SOU\_0731-004-08\_ 20211216, F&BI 112344

Date Extracted: 12/21/21

Date Analyzed: 12/21/21

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

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 51-134)
MW13-20211216 112344-02	<100	83
MW28-20211216 112344-04	<100	88
Method Blank 01-2675 MB	<100	87



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/29/21

Date Received: 12/16/21

Project: SOU\_0731-004-08\_ 20211216, F&BI 112344

Date Extracted: 12/17/21

Date Analyzed: 12/17/21

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS**

**DIESEL AND MOTOR OIL  
USING METHOD NWTPH-D<sub>x</sub>**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 41-152)
MW13-20211216 112344-02	<50	<250	125
MW28-20211216 112344-04	190 x	600	116
Method Blank 01-2898 MB	<50	<250	107

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW28-20211216	Client:	SoundEarth Strategies
Date Received:	12/16/21	Project:	SOU_0731-004-08_20211216
Date Extracted:	12/20/21	Lab ID:	112344-04 x10
Date Analyzed:	12/20/21	Data File:	112344-04 x10.141
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	7,380
Manganese	744

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	SOU_0731-004-08_20211216
Date Extracted:	12/20/21	Lab ID:	I1-847 mb
Date Analyzed:	12/20/21	Data File:	I1-847 mb.116
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	<50
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW33-20211216	Client:	SoundEarth Strategies
Date Received:	12/16/21	Project:	SOU_0731-004-08_20211216
Date Extracted:	12/17/21	Lab ID:	112344-01
Date Analyzed:	12/17/21	Data File:	121736.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	110	85	117
Toluene-d8	102	88	112
4-Bromofluorobenzene	102	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
1,1-Dichloroethene	<1
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<0.5
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW13-20211216	Client:	SoundEarth Strategies
Date Received:	12/16/21	Project:	SOU_0731-004-08_20211216
Date Extracted:	12/17/21	Lab ID:	112344-02
Date Analyzed:	12/17/21	Data File:	121737.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	113	85	117
Toluene-d8	97	88	112
4-Bromofluorobenzene	98	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
1,1-Dichloroethene	<1
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	1.0
Tetrachloroethene	5.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW34-20211216	Client:	SoundEarth Strategies
Date Received:	12/16/21	Project:	SOU_0731-004-08_20211216
Date Extracted:	12/17/21	Lab ID:	112344-03
Date Analyzed:	12/17/21	Data File:	121738.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	98	88	112
4-Bromofluorobenzene	100	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
1,1-Dichloroethene	<1
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	5.3
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW28-20211216	Client:	SoundEarth Strategies
Date Received:	12/16/21	Project:	SOU_0731-004-08_20211216
Date Extracted:	12/17/21	Lab ID:	112344-04
Date Analyzed:	12/17/21	Data File:	121739.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	85	117
Toluene-d8	99	88	112
4-Bromofluorobenzene	100	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
1,1-Dichloroethene	<1
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	17
Trichloroethene	2.8
Tetrachloroethene	5.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0731-004-08_20211216
Date Extracted:	12/17/21	Lab ID:	01-2836 mb
Date Analyzed:	12/17/21	Data File:	121707.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	85	117
Toluene-d8	95	88	112
4-Bromofluorobenzene	101	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
1,1-Dichloroethene	<1
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<0.5
Tetrachloroethene	<1



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/29/21

Date Received: 12/16/21

Project: SOU\_0731-004-08\_ 20211216, F&BI 112344

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

Laboratory Code: 112389-01 (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	91	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/29/21

Date Received: 12/16/21

Project: SOU\_0731-004-08\_ 20211216, F&BI 112344

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL EXTENDED USING METHOD NWTPH-D<sub>x</sub>**

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	104	108	63-142	4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/29/21

Date Received: 12/16/21

Project: SOU\_0731-004-08\_ 20211216, F&BI 112344

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

Laboratory Code: 112248-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Iron	ug/L (ppb)	100	143	84	87	70-130	4
Manganese	ug/L (ppb)	20	50.4	85	90	70-130	6

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Iron	ug/L (ppb)	100	108	85-115
Manganese	ug/L (ppb)	20	90	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/29/21

Date Received: 12/16/21

Project: SOU\_0731-004-08\_ 20211216, F&BI 112344

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

Laboratory Code: 112338-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance
				Recovery MS	Criteria
Vinyl chloride	ug/L (ppb)	10	<0.02	112	16-176
1,1-Dichloroethene	ug/L (ppb)	10	<1	94	50-150
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	96	50-150
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	101	50-150
Trichloroethene	ug/L (ppb)	10	<0.5	93	43-133
Tetrachloroethene	ug/L (ppb)	10	<1	94	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Percent	Acceptance Criteria	RPD (Limit 20)
			Recovery LCS	Recovery LCSD		
Vinyl chloride	ug/L (ppb)	10	110	111	70-130	1
1,1-Dichloroethene	ug/L (ppb)	10	93	101	70-130	8
trans-1,2-Dichloroethene	ug/L (ppb)	10	96	97	70-130	1
cis-1,2-Dichloroethene	ug/L (ppb)	10	96	98	70-130	2
Trichloroethene	ug/L (ppb)	10	89	92	70-130	3
Tetrachloroethene	ug/L (ppb)	10	93	95	70-130	2

# 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.

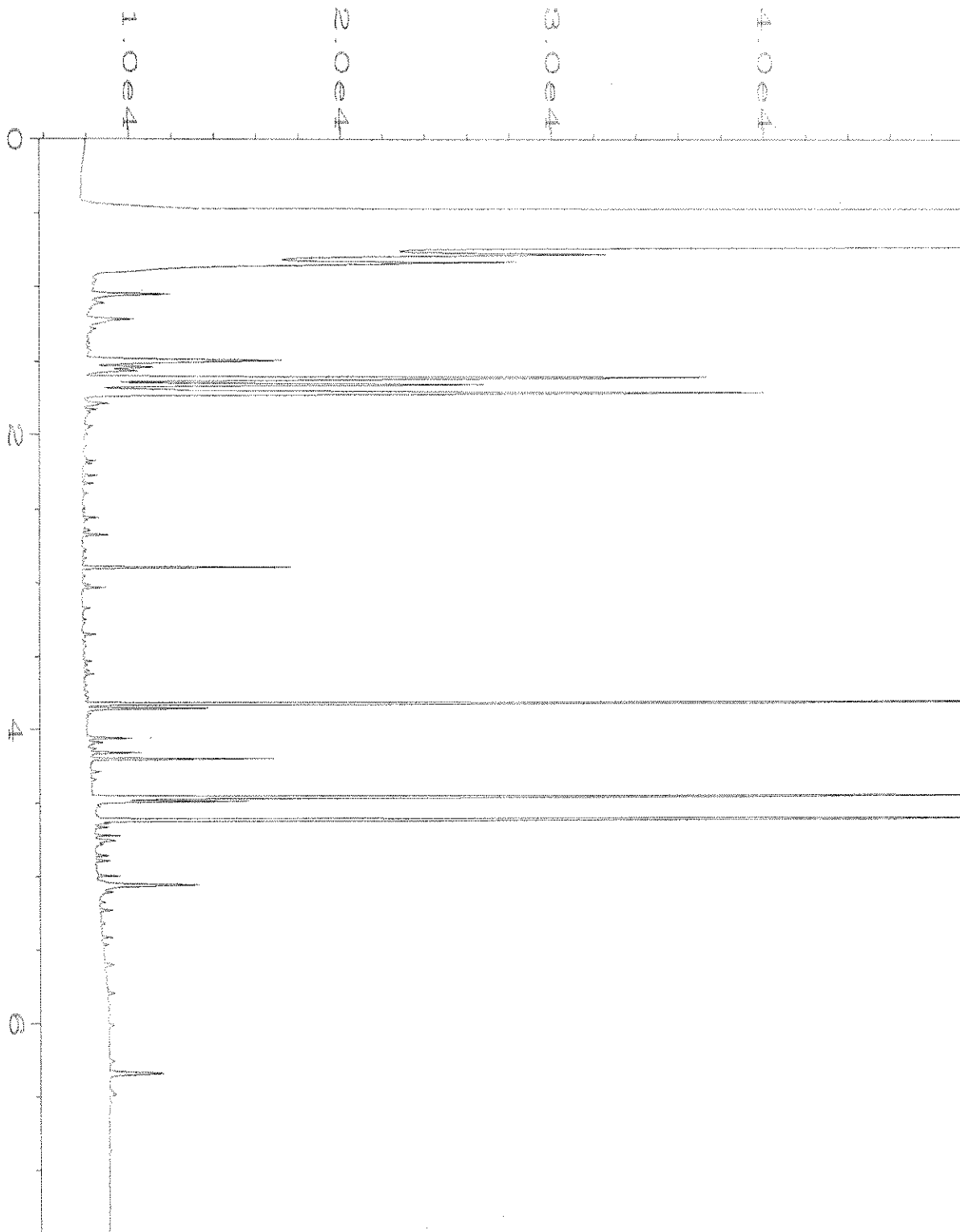
pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

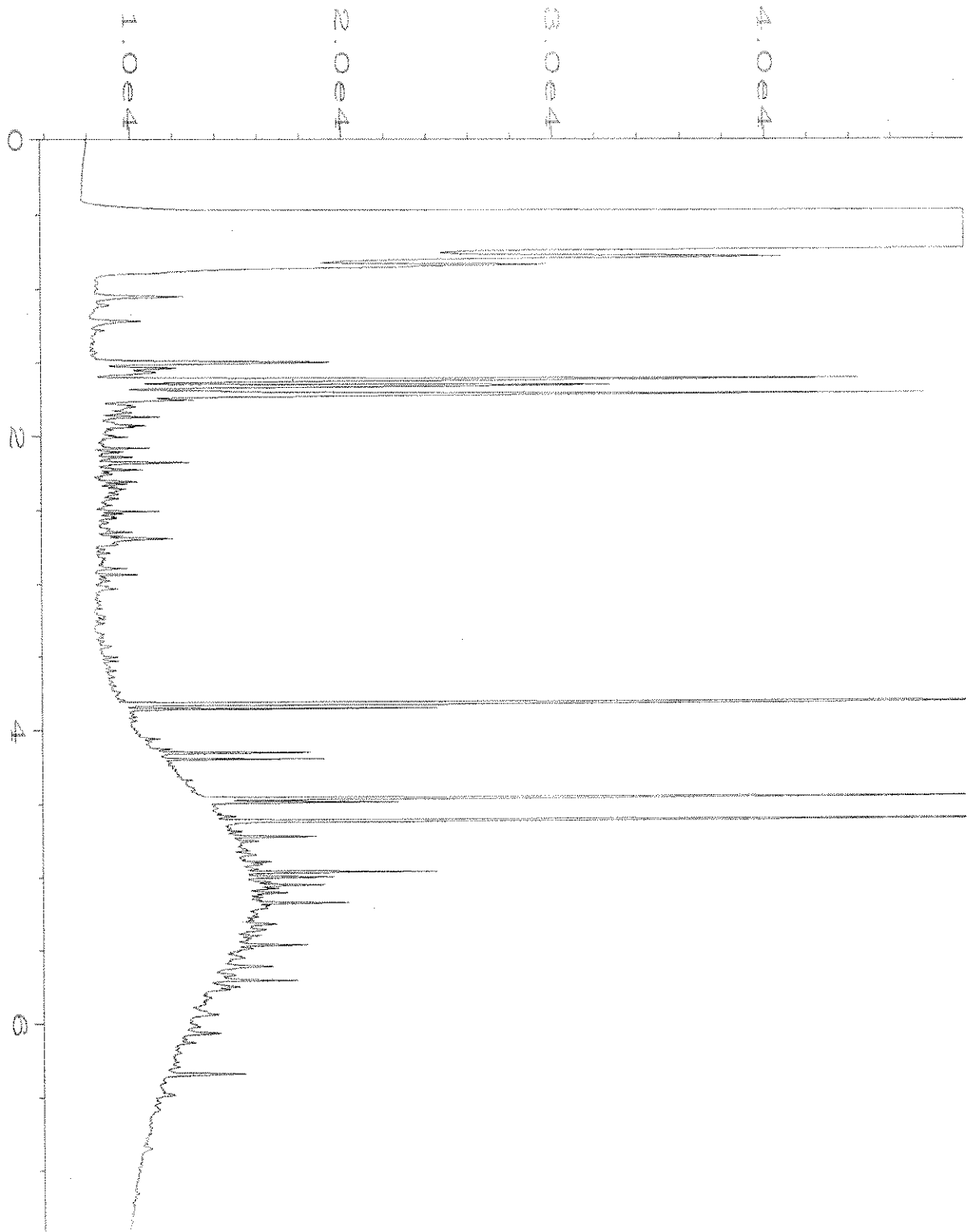
vo - The value reported fell outside the control limits established for this analyte.

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



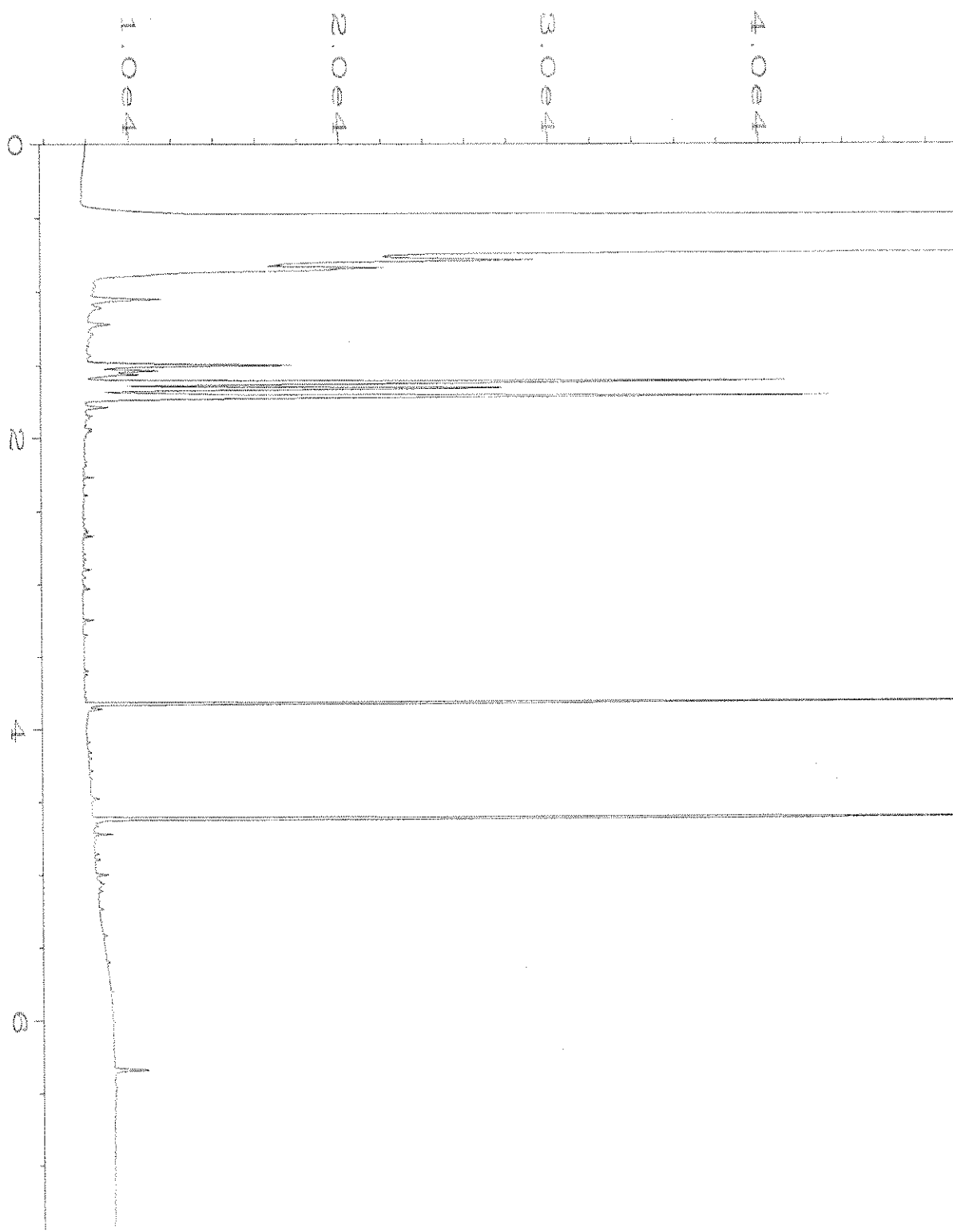


Data File Name	: C:\HPCHEM\1\DATA\12-17-21\028F0701.D	Page Number	: 1
Operator	: TL	Vial Number	: 28
Instrument	: GC1	Injection Number	: 1
Sample Name	: 112344-02	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 17 Dec 21 06:42 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	20 Dec 21 08:49 AM		



Data File Name	: C:\HPCHEM\1\DATA\12-17-21\029F0701.D	Page Number	: 1
Operator	: TL	Vial Number	: 29
Instrument	: GC1	Injection Number	: 1
Sample Name	: 112344-04	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 17 Dec 21 06:57 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	20 Dec 21 08:49 AM		





Data File Name	: C:\HPCHEM\1\DATA\12-17-21\025F0701.D	Page Number	: 1
Operator	: TL	Vial Number	: 25
Instrument	: GC1	Injection Number	: 1
Sample Name	: 01-2898 mb	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 17 Dec 21 06:00 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	20 Dec 21 08:50 AM		



**Friedman & Bruya**

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

**RE: 112344**

**Work Order Number: 2112310**

December 27, 2021

**Attention Michael Erdahl:**

Fremont Analytical, Inc. received 1 sample(s) on 12/17/2021 for the analyses presented in the following report.

***Dissolved Gases by RSK-175***

***Ferrous Iron by SM3500-Fe B***

***Ion Chromatography by EPA Method 300.0***

***Total Alkalinity by SM 2320B***

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes  
Project Manager



Date: 12/27/2021

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**CLIENT:** Friedman & Bruya  
**Project:** 112344  
**Work Order:** 2112310

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## Work Order Sample Summary

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Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2112310-001	MW28-20211216	12/16/2021 12:29 PM	12/17/2021 1:41 PM

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

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Original

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**CLIENT:** Friedman & Bruya  
**Project:** 112344

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**I. SAMPLE RECEIPT:**

Samples receipt information is recorded on the attached Sample Receipt Checklist.

**II. GENERAL REPORTING COMMENTS:**

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

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

**III. ANALYSES AND EXCEPTIONS:**

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

### Qualifiers:

- \* - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

### Acronyms:

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



**Client:** Friedman & Bruya

**Collection Date:** 12/16/2021 12:29:00 PM

**Project:** 112344

**Lab ID:** 2112310-001

**Matrix:** Water

**Client Sample ID:** MW28-20211216

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Dissolved Gases by RSK-175**

Batch ID: R72107 Analyst: MS

Methane	0.143	0.00675		mg/L	1	12/20/2021 4:35:00 PM
Ethene	ND	0.0146		mg/L	1	12/20/2021 4:35:00 PM
Ethane	ND	0.0151		mg/L	1	12/20/2021 4:35:00 PM

**Ion Chromatography by EPA Method 300.0**

Batch ID: 34852 Analyst: SS

Nitrate (as N)	0.110	0.200	JDH	mg/L	2	12/23/2021 4:33:00 AM
Nitrate (as N)	ND	1.00	DQ	mg/L	10	12/18/2021 1:52:00 AM
Sulfate	8.39	1.20	D	mg/L	2	12/23/2021 4:33:00 AM
Sulfate	8.79	6.00	D	mg/L	10	12/18/2021 1:52:00 AM

**Total Alkalinity by SM 2320B**

Batch ID: R72105 Analyst: CH

Alkalinity, Total (As CaCO3)	223	2.50		mg/L	1	12/21/2021 8:28:27 AM
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R72084 Analyst: SG

Ferrous Iron	1.17	0.100	H	mg/L	1	12/17/2021 5:00:00 PM
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Work Order: 2112310  
 CLIENT: Friedman & Bruya  
 Project: 112344

**QC SUMMARY REPORT**  
**Total Alkalinity by SM 2320B**

Sample ID: <b>MB-R72105</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>12/21/2021</b>	RunNo: <b>72105</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>R72105</b>	Analysis Date: <b>12/21/2021</b>	SeqNo: <b>1471196</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	ND	2.50									

Sample ID: <b>LCS-R72105</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>12/21/2021</b>	RunNo: <b>72105</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R72105</b>	Analysis Date: <b>12/21/2021</b>	SeqNo: <b>1471197</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	101	2.50	100.0	0	101	88.3	113				

Sample ID: <b>2112337-006BDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>12/21/2021</b>	RunNo: <b>72105</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>R72105</b>	Analysis Date: <b>12/21/2021</b>	SeqNo: <b>1472884</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	483	2.50						488.4	1.21	20	

**Work Order:** 2112310  
**CLIENT:** Friedman & Bruya  
**Project:** 112344

**QC SUMMARY REPORT**  
**Ferrous Iron by SM3500-Fe B**

Sample ID: <b>MB-R72084</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>12/17/2021</b>	RunNo: <b>72084</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>R72084</b>	Analysis Date: <b>12/17/2021</b>	SeqNo: <b>1470627</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron ND 0.100

Sample ID: <b>LCS-R72084</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>12/17/2021</b>	RunNo: <b>72084</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R72084</b>	Analysis Date: <b>12/17/2021</b>	SeqNo: <b>1470628</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 0.352 0.100 0.4000 0 88.0 85 115

Sample ID: <b>2112310-001BDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>12/17/2021</b>	RunNo: <b>72084</b>							
Client ID: <b>MW28-20211216</b>	Batch ID: <b>R72084</b>	Analysis Date: <b>12/17/2021</b>	SeqNo: <b>1470630</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 1.31 0.100 1.165 11.7 20 H

Sample ID: <b>2112310-001BMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>	Prep Date: <b>12/17/2021</b>	RunNo: <b>72084</b>							
Client ID: <b>MW28-20211216</b>	Batch ID: <b>R72084</b>	Analysis Date: <b>12/17/2021</b>	SeqNo: <b>1470631</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 1.71 0.100 0.4000 1.165 136 70 130 SH

**NOTES:**

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

Sample ID: <b>2112310-001BMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>	Prep Date: <b>12/17/2021</b>	RunNo: <b>72084</b>							
Client ID: <b>MW28-20211216</b>	Batch ID: <b>R72084</b>	Analysis Date: <b>12/17/2021</b>	SeqNo: <b>1470632</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 1.56 0.100 0.4000 1.165 98.4 70 130 1.710 9.23 20 H



Work Order: 2112310  
 CLIENT: Friedman & Bruya  
 Project: 112344

**QC SUMMARY REPORT**  
**Ion Chromatography by EPA Method 300.0**

Sample ID: <b>MB-34804</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>			Prep Date: <b>12/17/2021</b>	RunNo: <b>72168</b>					
Client ID: <b>MBLKW</b>	Batch ID: <b>34804</b>				Analysis Date: <b>12/17/2021</b>	SeqNo: <b>1472980</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	ND	0.100									
Sulfate	ND	0.600									

Sample ID: <b>LCS-34804</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>			Prep Date: <b>12/17/2021</b>	RunNo: <b>72168</b>					
Client ID: <b>LCSW</b>	Batch ID: <b>34804</b>				Analysis Date: <b>12/17/2021</b>	SeqNo: <b>1472981</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	0.679	0.100	0.7500	0	90.5	90	110				
Sulfate	3.46	0.600	3.750	0	92.2	90	110				

Sample ID: <b>2112280-006BDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>			Prep Date: <b>12/17/2021</b>	RunNo: <b>72168</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>34804</b>				Analysis Date: <b>12/17/2021</b>	SeqNo: <b>1472993</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	1.84	1.00						1.800	2.20	20	DHQ
Sulfate	8.60	6.00						7.990	7.35	20	D

Sample ID: <b>2112280-006BMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>			Prep Date: <b>12/17/2021</b>	RunNo: <b>72168</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>34804</b>				Analysis Date: <b>12/17/2021</b>	SeqNo: <b>1472994</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	6.92	1.00	7.500	1.800	68.3	80	120				SDH
Sulfate	35.9	6.00	37.50	7.990	74.3	80	120				SD

**NOTES:**

S - Outlying spike recoveries were associated with this sample.

Work Order: 2112310  
 CLIENT: Friedman & Bruya  
 Project: 112344

**QC SUMMARY REPORT**  
 Ion Chromatography by EPA Method 300.0

Sample ID: <b>2112311-001ADUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>			Prep Date: <b>12/17/2021</b>	RunNo: <b>72168</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>34804</b>				Analysis Date: <b>12/18/2021</b>	SeqNo: <b>1473005</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	ND	1.00						0	0	20	DQ
Sulfate	ND	6.00						0	0	20	D

**NOTES:**

Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Sample ID: <b>2112311-001AMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>			Prep Date: <b>12/17/2021</b>	RunNo: <b>72168</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>34804</b>				Analysis Date: <b>12/18/2021</b>	SeqNo: <b>1473006</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	7.67	1.00	7.500	0	102	80	120				D
Sulfate	14.9	6.00	37.50	0	39.7	80	120				SD

**NOTES:**

S - Outlying spike recoveries were associated with this sample.

Sample ID: <b>2112311-001AMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>			Prep Date: <b>12/17/2021</b>	RunNo: <b>72168</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>34804</b>				Analysis Date: <b>12/18/2021</b>	SeqNo: <b>1473007</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	6.71	1.00	7.500	0	89.5	80	120	7.670	13.4	20	D
Sulfate	35.0	6.00	37.50	0	93.3	80	120	14.90	80.5	20	RD

**NOTES:**

R - High RPD due to sample inhomogeneity.

Sample ID: <b>2112280-006BDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>			Prep Date: <b>12/17/2021</b>	RunNo: <b>72176</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>34804</b>				Analysis Date: <b>12/20/2021</b>	SeqNo: <b>1473370</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	1.86	1.00						1.860	0	20	DQH
Sulfate	4.28	6.00						4.120	3.81	20	JDQ

**NOTES:**

Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Work Order: 2112310  
 CLIENT: Friedman & Bruya  
 Project: 112344

**QC SUMMARY REPORT**  
 Ion Chromatography by EPA Method 300.0

Sample ID: <b>2112280-006BMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>				Prep Date: <b>12/17/2021</b>	RunNo: <b>72176</b>				
Client ID: <b>BATCH</b>	Batch ID: <b>34804</b>					Analysis Date: <b>12/20/2021</b>	SeqNo: <b>1473372</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	7.83	1.00	7.500	1.860	79.6	80	120				SDH
Sulfate	52.5	6.00	37.50	4.120	129	80	120				DS

**NOTES:**

S - Spike recovery indicates a possible matrix effect.

Sample ID: <b>MB-34852</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>				Prep Date: <b>12/22/2021</b>	RunNo: <b>72201</b>				
Client ID: <b>MBLKW</b>	Batch ID: <b>34852</b>					Analysis Date: <b>12/22/2021</b>	SeqNo: <b>1473997</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	ND	0.100									
Sulfate	ND	0.600									

Sample ID: <b>LCS-34852</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>				Prep Date: <b>12/22/2021</b>	RunNo: <b>72201</b>				
Client ID: <b>LCSW</b>	Batch ID: <b>34852</b>					Analysis Date: <b>12/22/2021</b>	SeqNo: <b>1473998</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	0.712	0.100	0.7500	0	94.9	90	110				
Sulfate	3.55	0.600	3.750	0	94.7	90	110				

Sample ID: <b>2112337-004BDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>				Prep Date: <b>12/22/2021</b>	RunNo: <b>72201</b>				
Client ID: <b>BATCH</b>	Batch ID: <b>34852</b>					Analysis Date: <b>12/23/2021</b>	SeqNo: <b>1474005</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	0.0570	0.100						0.05700	0	20	JH
Sulfate	0.283	0.600						0.2840	0.353	20	J

Work Order: 2112310  
 CLIENT: Friedman & Bruya  
 Project: 112344

**QC SUMMARY REPORT**  
**Ion Chromatography by EPA Method 300.0**

Sample ID: <b>2112337-004BMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>				Prep Date: <b>12/22/2021</b>	RunNo: <b>72201</b>				
Client ID: <b>BATCH</b>	Batch ID: <b>34852</b>					Analysis Date: <b>12/23/2021</b>	SeqNo: <b>1474006</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	0.750	0.100	0.7500	0.05700	92.4	80	120				H
Sulfate	3.84	0.600	3.750	0.2840	94.8	80	120				

Sample ID: <b>2112312-001ADUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>				Prep Date: <b>12/22/2021</b>	RunNo: <b>72201</b>				
Client ID: <b>BATCH</b>	Batch ID: <b>34852</b>					Analysis Date: <b>12/23/2021</b>	SeqNo: <b>1474029</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	ND	0.100						0	0	20	H
Sulfate	0.358	0.600						0.3530	1.41	20	J

Sample ID: <b>2112312-001AMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>				Prep Date: <b>12/22/2021</b>	RunNo: <b>72201</b>				
Client ID: <b>BATCH</b>	Batch ID: <b>34852</b>					Analysis Date: <b>12/23/2021</b>	SeqNo: <b>1474030</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	0.677	0.100	0.7500	0	90.3	80	120				H
Sulfate	3.54	0.600	3.750	0.3530	84.9	80	120				

Sample ID: <b>2112312-001AMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>				Prep Date: <b>12/22/2021</b>	RunNo: <b>72201</b>				
Client ID: <b>BATCH</b>	Batch ID: <b>34852</b>					Analysis Date: <b>12/23/2021</b>	SeqNo: <b>1474031</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	0.685	0.100	0.7500	0	91.3	80	120	0.6770	1.17	20	H
Sulfate	3.58	0.600	3.750	0.3530	86.1	80	120	3.538	1.18	20	

Work Order: 2112310  
 CLIENT: Friedman & Bruya  
 Project: 112344

**QC SUMMARY REPORT**  
**Dissolved Gases by RSK-175**

Sample ID: <b>LCS-R72107</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>				Prep Date: <b>12/20/2021</b>	RunNo: <b>72107</b>				
Client ID: <b>LCSW</b>	Batch ID: <b>R72107</b>					Analysis Date: <b>12/20/2021</b>	SeqNo: <b>1471285</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	1,040	0.00675	1,000	0	104	66.7	141				
Ethene	1,090	0.0146	1,000	0	109	68.6	139				
Ethane	1,110	0.0151	1,000	0	111	69.3	136				

Sample ID: <b>MB-R72107</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>				Prep Date: <b>12/20/2021</b>	RunNo: <b>72107</b>				
Client ID: <b>MBLKW</b>	Batch ID: <b>R72107</b>					Analysis Date: <b>12/20/2021</b>	SeqNo: <b>1471287</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00675									
Ethene	ND	0.0146									
Ethane	ND	0.0151									

Sample ID: <b>2112224-001FREP</b>	SampType: <b>REP</b>	Units: <b>mg/L</b>				Prep Date: <b>12/20/2021</b>	RunNo: <b>72107</b>				
Client ID: <b>BATCH</b>	Batch ID: <b>R72107</b>					Analysis Date: <b>12/20/2021</b>	SeqNo: <b>1471231</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00675						0	0	30	
Ethene	ND	0.0146						0	0	30	
Ethane	ND	0.0151						0	0	30	

Sample ID: <b>LCS2-R72107</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>				Prep Date: <b>12/20/2021</b>	RunNo: <b>72107</b>				
Client ID: <b>LCSW</b>	Batch ID: <b>R72107</b>					Analysis Date: <b>12/20/2021</b>	SeqNo: <b>1471286</b>				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	940	0.00675	1,000	0	94.0	66.7	141				
Ethene	974	0.0146	1,000	0	97.4	68.6	139				
Ethane	970	0.0151	1,000	0	97.0	69.3	136				

Work Order: 2112310  
 CLIENT: Friedman & Bruya  
 Project: 112344

**QC SUMMARY REPORT**  
**Dissolved Gases by RSK-175**

Sample ID: <b>MBLK2-R72107</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>12/20/2021</b>	RunNo: <b>72107</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>R72107</b>		Analysis Date: <b>12/20/2021</b>	SeqNo: <b>1471299</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00675									
Ethene	ND	0.0146									
Ethane	ND	0.0151									

Sample ID: <b>2112280-001AREP</b>	SampType: <b>REP</b>	Units: <b>mg/L</b>	Prep Date: <b>12/20/2021</b>	RunNo: <b>72107</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>R72107</b>		Analysis Date: <b>12/20/2021</b>	SeqNo: <b>1471253</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	8.64	0.00675						9.717	11.8	30	E
Ethene	ND	0.0146						0.006111	200	30	
Ethane	ND	0.0151						0.007545	200	30	

Client Name: **FB**  
 Logged by: **Clare Griggs**

Work Order Number: **2112310**  
 Date Received: **12/17/2021 1:41:00 PM**

### Chain of Custody

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

### Log In

3. Coolers are present? Yes  No  NA   
 4. Shipping container/cooler in good condition? Yes  No   
 5. Custody Seals present on shipping container/cooler?  
 (Refer to comments for Custody Seals not intact) Yes  No  Not Present   
 6. Was an attempt made to cool the samples? Yes  No  NA   
 7. Were all items received at a temperature of >2°C to 6°C \* Yes  No  NA   
 8. Sample(s) in proper container(s)? Yes  No   
 9. Sufficient sample volume for indicated test(s)? Yes  No   
 10. Are samples properly preserved? Yes  No   
 11. Was preservative added to bottles? Yes  No  NA   
 12. Is there headspace in the VOA vials? Yes  No  NA   
 13. Did all samples containers arrive in good condition(unbroken)? Yes  No   
 14. Does paperwork match bottle labels? Yes  No   
 15. Are matrices correctly identified on Chain of Custody? Yes  No   
 16. Is it clear what analyses were requested? Yes  No   
 17. Were all holding times able to be met? Yes  No

### Special Handling (if applicable)

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

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

19. Additional remarks:

### Item Information

Item #	Temp °C
Sample	2.3

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

**SUBCONTRACT SAMPLE CHAIN OF CUSTODY**

2102310

Send Report To Michael Erdahl  
 Company Friedman and Bruya, Inc.  
 Address 3012 16th Ave W  
 City, State, ZIP Seattle, WA 98119  
 Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTOR <u>Fremont</u>	
PROJECT NAME/NO. <u>112344</u>	PO # <u>B-533</u>
REMARKS	

Page # 1 of 1

TURNAROUND TIME  
 Standard (1 Week)  
 RUSH  
 Rush charges authorized by: \_\_\_\_\_

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Containers	ANALYSES REQUESTED												
						TOC	Nitrate	Nitrite	Sulfate	Sulfide	Alkalinity	Fe <sup>++</sup> Ferrous Iron	Methane Ethane Ethene RSK175					
MW28-20211216		12/16/21	1229	H20	5		X		X		X	X						

Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282 Fax (206) 283-5044		SIGNATURE <u>MWB</u>		PRINT NAME Ann Weber-Bruya		COMPANY Friedman & Bruya		DATE 12/17/21	TIME 0800
Received by: <u>Alex Trego</u>		Relinquished by: <u>Alex Trego</u>		Received by: <u>Alex Trego</u>		Relinquished by: <u>Alex Trego</u>		DATE 12/17/21	TIME 13:41
Received by: _____		Relinquished by: _____		Received by: _____		Relinquished 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 4, 2022

Levi Fernandes, Project Manager  
SoundEarth Strategies  
2811 Fairview Ave. East, Suite 2000  
Seattle, WA 98102

Dear Mr Fernandes:

Included are the results from the testing of material submitted on December 17, 2021 from the SOU\_0731-004-08\_ 20211217, F&BI 112373 project. There are 27 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: Clare Tochilin  
SOU0104R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 17, 2020 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0731-004-08\_ 20211217, F&BI 112373 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
112373 -01	MW25-20211217
112373 -02	MW99-20211217
112373 -03	IW91-20211217
112373 -04	MW19-20211217
112373 -05	MW23-20211217
112373 -06	MW17-20211217
112373 -07	MW18-20211217
112373 -08	MW20-20211217
112373 -09	MW22-20211217
112373 -10	MW24-20211217
112373 -11	MW21-20211217

Samples MW25-20211217, MW23-20211217, MW18-20211217, MW22-20211217, and MW24-20211217 were sent to Fremont Analytical for dissolved gasses, sulfate, nitrate, alkalinity, ferrous iron, and total organic carbon analyses. In addition, sample MW19-20211217 was sent to Fremont for dissolved gasses, sulfate, nitrate, alkalinity, and ferrous iron analyses. Sample MW21-20211217 was sent to Fremont for dissolved gasses and total organic carbon. The report is enclosed.

The NWTPH-Gx samples MW22-20211217 and MW21-20211217 were diluted due to matrix effect (foamy). The reporting limits were raised accordingly.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/04/22

Date Received: 12/17/21

Project: SOU\_0731-004-08\_ 20211217, F&BI 112373

Date Extracted: 12/27/21

Date Analyzed: 12/28/21

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

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 51-134)
MW22-20211217 112373-09 1/10	<1,000	84
MW21-20211217 112373-11 1/10	<1,000	94
Method Blank 01-2927 MB	<100	77

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/04/22

Date Received: 12/17/21

Project: SOU\_0731-004-08\_ 20211217, F&BI 112373

Date Extracted: 12/22/21

Date Analyzed: 12/22/21

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL AND MOTOR OIL  
USING METHOD NWTPH-D<sub>x</sub>**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> (% Recovery) (Limit 41-152)
MW22-20211217 112373-09	47,000 x	5,700 x	121
MW21-20211217 112373-11	48,000 x	5,800 x	ip
Method Blank 01-2912 MB2	<50	<250	108

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW25-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217, F&BI 112373
Date Extracted:	12/21/21	Lab ID:	112373-01 x100
Date Analyzed:	12/22/21	Data File:	112373-01 x100.092
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	15,500
Manganese	8,390

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW19-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217, F&BI 112373
Date Extracted:	12/21/21	Lab ID:	112373-04 x100
Date Analyzed:	12/22/21	Data File:	112373-04 x100.095
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	15,900
Manganese	12,600

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW23-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217, F&BI 112373
Date Extracted:	12/21/21	Lab ID:	112373-05 x100
Date Analyzed:	12/22/21	Data File:	112373-05 x100.096
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	11,500
Manganese	11,700

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW18-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217, F&BI 112373
Date Extracted:	12/21/21	Lab ID:	112373-07 x100
Date Analyzed:	12/22/21	Data File:	112373-07 x100.097
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	15,700
Manganese	9,610



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW22-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217, F&BI 112373
Date Extracted:	12/21/21	Lab ID:	112373-09 x100
Date Analyzed:	12/22/21	Data File:	112373-09 x100.098
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	11,800
Manganese	10,600

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW24-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217, F&BI 112373
Date Extracted:	12/21/21	Lab ID:	112373-10 x100
Date Analyzed:	12/22/21	Data File:	112373-10 x100.099
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	14,800
Manganese	26,500

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	SOU_0731-004-08_20211217, F&BI 112373
Date Extracted:	12/21/21	Lab ID:	I1-854 mb
Date Analyzed:	12/21/21	Data File:	I1-854 mb.094
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	<50
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW25-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217, F&BI 112373
Date Extracted:	12/22/21	Lab ID:	112373-01
Date Analyzed:	12/22/21	Data File:	122222.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	109	85	117
Toluene-d8	97	88	112
4-Bromofluorobenzene	103	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	3.6
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	13
Trichloroethene	0.52
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW99-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217, F&BI 112373
Date Extracted:	12/22/21	Lab ID:	112373-02
Date Analyzed:	12/22/21	Data File:	122223.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	98	88	112
4-Bromofluorobenzene	97	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	3.7
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	13
Trichloroethene	0.53
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	IW91-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217, F&BI 112373
Date Extracted:	12/22/21	Lab ID:	112373-03
Date Analyzed:	12/22/21	Data File:	122224.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	85	117
Toluene-d8	96	88	112
4-Bromofluorobenzene	97	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<0.5
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW19-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217, F&BI 112373
Date Extracted:	12/22/21	Lab ID:	112373-04
Date Analyzed:	12/22/21	Data File:	122225.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	85	117
Toluene-d8	96	88	112
4-Bromofluorobenzene	103	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	1.5
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<0.5
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW23-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217, F&BI 112373
Date Extracted:	12/22/21	Lab ID:	112373-05
Date Analyzed:	12/22/21	Data File:	122226.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	85	117
Toluene-d8	98	88	112
4-Bromofluorobenzene	101	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	3.7
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	15
Trichloroethene	<0.5
Tetrachloroethene	<1



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW17-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217, F&BI 112373
Date Extracted:	12/22/21	Lab ID:	112373-06
Date Analyzed:	12/22/21	Data File:	122227.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	109	85	117
Toluene-d8	97	88	112
4-Bromofluorobenzene	97	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	1.5
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW18-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217, F&BI 112373
Date Extracted:	12/22/21	Lab ID:	112373-07
Date Analyzed:	12/22/21	Data File:	122228.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	113	85	117
Toluene-d8	93	88	112
4-Bromofluorobenzene	102	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	1.8
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<0.5
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW20-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217, F&BI 112373
Date Extracted:	12/22/21	Lab ID:	112373-08
Date Analyzed:	12/22/21	Data File:	122229.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	113	85	117
Toluene-d8	97	88	112
4-Bromofluorobenzene	99	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	5.2
Trichloroethene	0.94
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW22-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217, F&BI 112373
Date Extracted:	12/22/21	Lab ID:	112373-09
Date Analyzed:	12/23/21	Data File:	122316.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	85	117
Toluene-d8	99	88	112
4-Bromofluorobenzene	96	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	1.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	52
Trichloroethene	0.51
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW24-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217, F&BI 112373
Date Extracted:	12/22/21	Lab ID:	112373-10
Date Analyzed:	12/22/21	Data File:	122230.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	85	117
Toluene-d8	97	88	112
4-Bromofluorobenzene	95	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	0.71
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	46
Trichloroethene	<0.5
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	MW21-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217, F&BI 112373
Date Extracted:	12/22/21	Lab ID:	112373-11
Date Analyzed:	12/23/21	Data File:	122317.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	85	117
Toluene-d8	98	88	112
4-Bromofluorobenzene	94	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	1.3
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	12
Trichloroethene	<0.5
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0731-004-08_20211217, F&BI 112373
Date Extracted:	12/22/21	Lab ID:	01-2848 mb
Date Analyzed:	12/22/21	Data File:	122207.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	85	117
Toluene-d8	95	88	112
4-Bromofluorobenzene	102	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<0.5
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/04/22

Date Received: 12/17/21

Project: SOU\_0731-004-08\_ 20211217, F&BI 112373

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

Laboratory Code: 112442-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	140	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	500	112	70-119



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/04/22

Date Received: 12/17/21

Project: SOU\_0731-004-08\_ 20211217, F&BI 112373

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL EXTENDED USING METHOD NWTPH-D<sub>x</sub>**

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	108	104	63-142	4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/04/22

Date Received: 12/17/21

Project: SOU\_0731-004-08\_ 20211217, F&BI 112373

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

Laboratory Code: 112374-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Iron	ug/L (ppb)	100	14,000	287 b	549 b	70-130	63 b
Manganese	ug/L (ppb)	20	9,300	1210 b	1540 b	70-130	24 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Iron	ug/L (ppb)	100	96	85-115
Manganese	ug/L (ppb)	20	95	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/04/22

Date Received: 12/17/21

Project: SOU\_0731-004-08\_ 20211217, F&BI 112373

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

Laboratory Code: 112409-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance
				Recovery MS	Criteria
Vinyl chloride	ug/L (ppb)	10	<0.02	105	16-176
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	99	50-150
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	99	50-150
Trichloroethene	ug/L (ppb)	10	<0.5	94	43-133
Tetrachloroethene	ug/L (ppb)	10	<1	97	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Percent	Acceptance Criteria	RPD (Limit 20)
			Recovery LCS	Recovery LCS D		
Vinyl chloride	ug/L (ppb)	10	102	104	70-130	2
trans-1,2-Dichloroethene	ug/L (ppb)	10	95	96	70-130	1
cis-1,2-Dichloroethene	ug/L (ppb)	10	96	98	70-130	2
Trichloroethene	ug/L (ppb)	10	92	91	70-130	1
Tetrachloroethene	ug/L (ppb)	10	92	95	70-130	3

# 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.

**SAMPLE CHAIN OF CUSTODY**

12-17-21

Page # 102373 of 1412

Send Report To Levi Hernandez, cc Claire Tochilin

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature)

*[Signature]*

PROJECT NAME/NO.

Troy Laundry Property

PO #

0731-004-08

REMARKS

\*cVOCs = PCE, TCE, Cis/Trans-DCE, and VC

EM Y

TURNAROUND TIME

Standard (2 weeks)

RUSH

Dispose after 30 days  
Return samples  
Will call with instructions

GRPH by NWTPH-Gx	BTEX by EPA 8021B	DRPH/ORPH by NWTPH-Dx	cVOCs* by EPA 8260C	Methane, Ethane, Ethene by RSK175	Sulfate, Nitrate, Alkalinity by SM1845/SM2320B	Total Fe and Mn by EPA 200.8	Fe 2+ by SM 3500	TOC By EPA 415.1	Notes
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Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	GRPH by NWTPH-Gx	BTEX by EPA 8021B	DRPH/ORPH by NWTPH-Dx	cVOCs* by EPA 8260C	Methane, Ethane, Ethene by RSK175	Sulfate, Nitrate, Alkalinity by SM1845/SM2320B	Total Fe and Mn by EPA 200.8	Fe 2+ by SM 3500	TOC By EPA 415.1	Notes
MW25-20211217	MW25	-	01E	12/17/21	0823	120	3	X	X	X	X	X	X	X	X	X	
MW99-20211217	MW99	-	02H	12/17/21	0828		3	X	X	X	X	X	X	X	X	X	
1D91-20211217	MW91	-	03V	12/17/21	0839		3	X	X	X	X	X	X	X	X	X	
MW19-20211217	MW19	-	04E	12/17/21	0909		3	X	X	X	X	X	X	X	X	X	
MW23-20211217	MW23	-	05H	12/17/21	1005		10	X	X	X	X	X	X	X	X	X	
MW17-20211217	MW17	-	06E	12/17/21	1121		3	X	X	X	X	X	X	X	X	X	
MW18-20211217	MW18	-	07A	12/17/21	1157		10	X	X	X	X	X	X	X	X	X	
MW20-20211217	MW20	-	08A	12/17/21	1241		3	X	X	X	X	X	X	X	X	X	
MW22-20211217	MW22	-	09H	12/17/21	1303		14	X	X	X	X	X	X	X	X	X	
MW24-20211217	MW24	-	10H	12/17/21	1314		10	X	X	X	X	X	X	X	X	X	
MW21-20211217	MW21	-	11K	12/17/21	1425		10	X	X	X	X	X	X	X	X	X	
						OUT 12/17/21											

SIGNATURE

Relinquished by:

Received by:

Relinquished by:

Received by:

PRINT NAME

*[Signature]*

*[Signature]*

COMPANY

SoundEarth Strategies

SEA

DATE

12/19/21

12/17/21

TIME

1:25

1:25

Samples received at 4:00

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



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

**RE: 112373**  
**Work Order Number: 2112337**

December 31, 2021

**Attention Michael Erdahl:**

Fremont Analytical, Inc. received 7 sample(s) on 12/20/2021 for the analyses presented in the following report.

***Dissolved Gases by RSK-175***  
***Ferrous Iron by SM3500-Fe B***  
***Ion Chromatography by EPA Method 300.0***  
***Total Alkalinity by SM 2320B***  
***Total Organic Carbon by SM 5310C***

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes  
Project Manager

*DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing*  
*ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing*  
*Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910*

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Original

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**CLIENT:** Friedman & Bruya  
**Project:** 112373  
**Work Order:** 2112337

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**Work Order Sample Summary**

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Date/Time Collected</b>	<b>Date/Time Received</b>
2112337-001	MW25-20211217	12/17/2021 8:23 AM	12/20/2021 2:18 PM
2112337-002	MW19-20211217	12/17/2021 9:09 AM	12/20/2021 2:18 PM
2112337-003	MW23-20211217	12/17/2021 10:00 AM	12/20/2021 2:18 PM
2112337-004	MW18-20211217	12/17/2021 11:57 AM	12/20/2021 2:18 PM
2112337-005	MW22-20211217	12/17/2021 1:03 PM	12/20/2021 2:18 PM
2112337-006	MW24-20211217	12/17/2021 1:14 PM	12/20/2021 2:18 PM
2112337-007	MW21-20211217	12/17/2021 2:25 PM	12/20/2021 2:18 PM

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

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**CLIENT:** Friedman & Bruya  
**Project:** 112373

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**I. SAMPLE RECEIPT:**

Samples receipt information is recorded on the attached Sample Receipt Checklist.

**II. GENERAL REPORTING COMMENTS:**

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

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

**III. ANALYSES AND EXCEPTIONS:**

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



### Qualifiers:

- \* - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

### Acronyms:

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



**Client:** Friedman & Bruya

**Collection Date:** 12/17/2021 8:23:00 AM

**Project:** 112373

**Lab ID:** 2112337-001

**Matrix:** Water

**Client Sample ID:** MW25-20211217

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Dissolved Gases by RSK-175**

Batch ID: R72236 Analyst: MS

Methane	3.96	0.338	D	mg/L	50	12/28/2021 12:06:00 PM
Ethene	ND	0.0146		mg/L	1	12/28/2021 11:13:00 AM
Ethane	ND	0.0151		mg/L	1	12/28/2021 11:13:00 AM

**Ion Chromatography by EPA Method 300.0**

Batch ID: 34852 Analyst: SS

Nitrate (as N)	ND	0.200	DH	mg/L	2	12/22/2021 11:32:00 PM
Sulfate	4.71	1.20	D	mg/L	2	12/22/2021 11:32:00 PM

**NOTES:**

Diluted due to high levels of non-target analytes.

**Total Organic Carbon by SM 5310C**

Batch ID: R72289 Analyst: SS

Total Organic Carbon	4.18	0.500		mg/L	1	12/30/2021 3:37:00 AM
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**Total Alkalinity by SM 2320B**

Batch ID: R72105 Analyst: CH

Alkalinity, Total (As CaCO3)	431	2.50		mg/L	1	12/21/2021 8:28:27 AM
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R72150 Analyst: SS

Ferrous Iron	18.8	2.50	DH	mg/L	25	12/21/2021 11:35:00 AM
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**Client:** Friedman & Bruya

**Collection Date:** 12/17/2021 9:09:00 AM

**Project:** 112373

**Lab ID:** 2112337-002

**Matrix:** Water

**Client Sample ID:** MW19-20211217

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Dissolved Gases by RSK-175**

Batch ID: R72236 Analyst: MS

Methane	6.60	0.338	D	mg/L	50	12/28/2021 12:09:00 PM
Ethene	ND	0.0146		mg/L	1	12/28/2021 11:18:00 AM
Ethane	ND	0.0151		mg/L	1	12/28/2021 11:18:00 AM

**Ion Chromatography by EPA Method 300.0**

Batch ID: 34852 Analyst: SS

Nitrate (as N)	ND	0.200	DH	mg/L	2	12/22/2021 11:55:00 PM
Sulfate	ND	1.20	D	mg/L	2	12/22/2021 11:55:00 PM

**NOTES:**

Diluted due to high levels of non-target analytes.

**Total Alkalinity by SM 2320B**

Batch ID: R72105 Analyst: CH

Alkalinity, Total (As CaCO3)	488	2.50		mg/L	1	12/21/2021 8:28:27 AM
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R72150 Analyst: SS

Ferrous Iron	14.1	2.50	DH	mg/L	25	12/21/2021 11:35:00 AM
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**Client:** Friedman & Bruya

**Collection Date:** 12/17/2021 10:00:00 AM

**Project:** 112373

**Lab ID:** 2112337-003

**Matrix:** Water

**Client Sample ID:** MW23-20211217

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Dissolved Gases by RSK-175**

Batch ID: R72236 Analyst: MS

Methane	4.99	0.338	D	mg/L	50	12/28/2021 11:51:00 AM
Ethene	ND	0.0146		mg/L	1	12/28/2021 11:21:00 AM
Ethane	ND	0.0151		mg/L	1	12/28/2021 11:21:00 AM

**Ion Chromatography by EPA Method 300.0**

Batch ID: 34852 Analyst: SS

Nitrate (as N)	ND	0.200	DH	mg/L	2	12/23/2021 12:18:00 AM
Sulfate	ND	1.20	D	mg/L	2	12/23/2021 12:18:00 AM

**NOTES:**

Diluted due to high levels of non-target analytes.

**Total Organic Carbon by SM 5310C**

Batch ID: R72289 Analyst: SS

Total Organic Carbon	6.10	0.500		mg/L	1	12/30/2021 4:09:00 AM
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**Total Alkalinity by SM 2320B**

Batch ID: R72105 Analyst: CH

Alkalinity, Total (As CaCO3)	374	2.50		mg/L	1	12/21/2021 8:28:27 AM
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R72150 Analyst: SS

Ferrous Iron	15.2	2.50	DH	mg/L	25	12/21/2021 11:35:00 AM
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**Client:** Friedman & Bruya

**Collection Date:** 12/17/2021 11:57:00 AM

**Project:** 112373

**Lab ID:** 2112337-004

**Matrix:** Water

**Client Sample ID:** MW18-20211217

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Dissolved Gases by RSK-175**

Batch ID: R72236 Analyst: MS

Methane	8.11	0.338	D	mg/L	50	12/28/2021 11:53:00 AM
Ethene	ND	0.0146		mg/L	1	12/28/2021 11:24:00 AM
Ethane	ND	0.0151		mg/L	1	12/28/2021 11:24:00 AM

**Ion Chromatography by EPA Method 300.0**

Batch ID: 34852 Analyst: SS

Nitrate (as N)	ND	0.100	H	mg/L	1	12/23/2021 12:41:00 AM
Sulfate	ND	0.600		mg/L	1	12/23/2021 12:41:00 AM

**Total Organic Carbon by SM 5310C**

Batch ID: R72289 Analyst: SS

Total Organic Carbon	11.9	0.500		mg/L	1	12/30/2021 5:35:00 AM
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**Total Alkalinity by SM 2320B**

Batch ID: R72105 Analyst: CH

Alkalinity, Total (As CaCO <sub>3</sub> )	503	2.50		mg/L	1	12/21/2021 8:28:27 AM
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R72150 Analyst: SS

Ferrous Iron	11.0	2.50	DH	mg/L	25	12/21/2021 11:35:00 AM
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**Client:** Friedman & Bruya

**Collection Date:** 12/17/2021 1:03:00 PM

**Project:** 112373

**Lab ID:** 2112337-005

**Matrix:** Water

**Client Sample ID:** MW22-20211217

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Dissolved Gases by RSK-175**

Batch ID: R72236 Analyst: MS

Methane	4.51	0.169	D	mg/L	25	12/28/2021 11:55:00 AM
Ethene	ND	0.0146		mg/L	1	12/28/2021 11:26:00 AM
Ethane	ND	0.0151		mg/L	1	12/28/2021 11:26:00 AM

**Ion Chromatography by EPA Method 300.0**

Batch ID: 34852 Analyst: SS

Nitrate (as N)	ND	0.500	DH	mg/L	5	12/23/2021 2:37:00 AM
Sulfate	ND	3.00	D	mg/L	5	12/23/2021 2:37:00 AM

**NOTES:**

Diluted due to high levels of non-target analytes.

**Total Organic Carbon by SM 5310C**

Batch ID: R72289 Analyst: SS

Total Organic Carbon	133	5.00	D	mg/L	10	12/30/2021 1:20:00 PM
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**Total Alkalinity by SM 2320B**

Batch ID: R72105 Analyst: CH

Alkalinity, Total (As CaCO3)	287	2.50		mg/L	1	12/21/2021 8:28:27 AM
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R72150 Analyst: SS

Ferrous Iron	16.4	2.50	DH	mg/L	25	12/21/2021 11:35:00 AM
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**Client:** Friedman & Bruya

**Collection Date:** 12/17/2021 1:14:00 PM

**Project:** 112373

**Lab ID:** 2112337-006

**Matrix:** Water

**Client Sample ID:** MW24-20211217

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Dissolved Gases by RSK-175**

Batch ID: R72236 Analyst: MS

Methane	7.66	0.338	D	mg/L	50	12/28/2021 11:57:00 AM
Ethene	ND	0.0146		mg/L	1	12/28/2021 11:28:00 AM
Ethane	ND	0.0151		mg/L	1	12/28/2021 11:28:00 AM

**Ion Chromatography by EPA Method 300.0**

Batch ID: 34852 Analyst: SS

Nitrate (as N)	ND	0.200	DH	mg/L	2	12/23/2021 3:00:00 AM
Sulfate	ND	1.20	D	mg/L	2	12/23/2021 3:00:00 AM

**NOTES:**

Diluted due to high levels of non-target analytes.

**Total Organic Carbon by SM 5310C**

Batch ID: R72289 Analyst: SS

Total Organic Carbon	ND	0.500		mg/L	1	12/30/2021 6:30:00 AM
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**Total Alkalinity by SM 2320B**

Batch ID: R72105 Analyst: CH

Alkalinity, Total (As CaCO3)	488	2.50		mg/L	1	12/21/2021 8:28:27 AM
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R72150 Analyst: SS

Ferrous Iron	18.7	2.50	DH	mg/L	25	12/21/2021 11:35:00 AM
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**Client:** Friedman & Bruya

**Collection Date:** 12/17/2021 2:25:00 PM

**Project:** 112373

**Lab ID:** 2112337-007

**Matrix:** Water

**Client Sample ID:** MW21-20211217

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Dissolved Gases by RSK-175</u></b>					Batch ID: R72236	Analyst: MS
Methane	5.02	0.338	D	mg/L	50	12/28/2021 11:59:00 AM
Ethene	ND	0.0146		mg/L	1	12/28/2021 11:30:00 AM
Ethane	ND	0.0151		mg/L	1	12/28/2021 11:30:00 AM
<b><u>Total Organic Carbon by SM 5310C</u></b>					Batch ID: R72289	Analyst: SS
Total Organic Carbon	330	10.0	D	mg/L	20	12/30/2021 1:42:00 PM



Work Order: 2112337  
 CLIENT: Friedman & Bruya  
 Project: 112373

**QC SUMMARY REPORT**  
**Total Alkalinity by SM 2320B**

Sample ID: <b>MB-R72105</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>12/21/2021</b>	RunNo: <b>72105</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>R72105</b>	Analysis Date: <b>12/21/2021</b>	SeqNo: <b>1471196</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	ND	2.50									

Sample ID: <b>LCS-R72105</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>12/21/2021</b>	RunNo: <b>72105</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R72105</b>	Analysis Date: <b>12/21/2021</b>	SeqNo: <b>1471197</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	101	2.50	100.0	0	101	88.3	113				

Sample ID: <b>2112337-006BDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>12/21/2021</b>	RunNo: <b>72105</b>							
Client ID: <b>MW24-20211217</b>	Batch ID: <b>R72105</b>	Analysis Date: <b>12/21/2021</b>	SeqNo: <b>1472884</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	483	2.50						488.4	1.21	20	

Work Order: 2112337  
 CLIENT: Friedman & Bruya  
 Project: 112373

**QC SUMMARY REPORT**  
**Ferrous Iron by SM3500-Fe B**

Sample ID: <b>MB-R72150</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>			Prep Date: <b>12/21/2021</b>	RunNo: <b>72150</b>					
Client ID: <b>MBLKW</b>	Batch ID: <b>R72150</b>				Analysis Date: <b>12/21/2021</b>	SeqNo: <b>1472305</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron ND 0.100

Sample ID: <b>LCS-R72150</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>			Prep Date: <b>12/21/2021</b>	RunNo: <b>72150</b>					
Client ID: <b>LCSW</b>	Batch ID: <b>R72150</b>				Analysis Date: <b>12/21/2021</b>	SeqNo: <b>1472306</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 0.385 0.100 0.4000 0 96.2 85 115

Sample ID: <b>2112338-003CDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>			Prep Date: <b>12/21/2021</b>	RunNo: <b>72150</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>R72150</b>				Analysis Date: <b>12/21/2021</b>	SeqNo: <b>1472318</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 22.2 2.50 22.41 0.734 20 DH

Sample ID: <b>2112338-003CMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>			Prep Date: <b>12/21/2021</b>	RunNo: <b>72150</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>R72150</b>				Analysis Date: <b>12/21/2021</b>	SeqNo: <b>1472319</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 35.1 2.50 10.00 22.41 127 70 130 DH

Sample ID: <b>2112338-003CMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>			Prep Date: <b>12/21/2021</b>	RunNo: <b>72150</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>R72150</b>				Analysis Date: <b>12/21/2021</b>	SeqNo: <b>1472320</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 34.5 2.50 10.00 22.41 121 70 130 35.11 1.89 20 DH

Work Order: 2112337  
 CLIENT: Friedman & Bruya  
 Project: 112373

**QC SUMMARY REPORT**  
**Ion Chromatography by EPA Method 300.0**

Sample ID: <b>MB-34852</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>			Prep Date: <b>12/22/2021</b>	RunNo: <b>72201</b>					
Client ID: <b>MBLKW</b>	Batch ID: <b>34852</b>				Analysis Date: <b>12/22/2021</b>	SeqNo: <b>1473997</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	ND	0.100									
Sulfate	ND	0.600									

Sample ID: <b>LCS-34852</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>			Prep Date: <b>12/22/2021</b>	RunNo: <b>72201</b>					
Client ID: <b>LCSW</b>	Batch ID: <b>34852</b>				Analysis Date: <b>12/22/2021</b>	SeqNo: <b>1473998</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	0.712	0.100	0.7500	0	94.9	90	110				
Sulfate	3.55	0.600	3.750	0	94.7	90	110				

Sample ID: <b>2112337-004BDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>			Prep Date: <b>12/22/2021</b>	RunNo: <b>72201</b>					
Client ID: <b>MW18-20211217</b>	Batch ID: <b>34852</b>				Analysis Date: <b>12/23/2021</b>	SeqNo: <b>1474005</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	ND	0.100						0		20	H
Sulfate	ND	0.600						0		20	

Sample ID: <b>2112337-004BMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>			Prep Date: <b>12/22/2021</b>	RunNo: <b>72201</b>					
Client ID: <b>MW18-20211217</b>	Batch ID: <b>34852</b>				Analysis Date: <b>12/23/2021</b>	SeqNo: <b>1474006</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	0.750	0.100	0.7500	0.05700	92.4	80	120				H
Sulfate	3.84	0.600	3.750	0.2840	94.8	80	120				

Work Order: 2112337  
 CLIENT: Friedman & Bruya  
 Project: 112373

**QC SUMMARY REPORT**  
**Ion Chromatography by EPA Method 300.0**

Sample ID: <b>2112312-001ADUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>			Prep Date: <b>12/22/2021</b>	RunNo: <b>72201</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>34852</b>				Analysis Date: <b>12/23/2021</b>	SeqNo: <b>1474029</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	ND	0.100						0		20	H
Sulfate	ND	0.600						0		20	

Sample ID: <b>2112312-001AMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>			Prep Date: <b>12/22/2021</b>	RunNo: <b>72201</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>34852</b>				Analysis Date: <b>12/23/2021</b>	SeqNo: <b>1474030</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	0.677	0.100	0.7500	0	90.3	80	120				H
Sulfate	3.54	0.600	3.750	0.3530	84.9	80	120				

Sample ID: <b>2112312-001AMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>			Prep Date: <b>12/22/2021</b>	RunNo: <b>72201</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>34852</b>				Analysis Date: <b>12/23/2021</b>	SeqNo: <b>1474031</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	0.685	0.100	0.7500	0	91.3	80	120	0.6770	1.17	20	H
Sulfate	3.58	0.600	3.750	0.3530	86.1	80	120	3.538	1.18	20	

Work Order: 2112337  
 CLIENT: Friedman & Bruya  
 Project: 112373

**QC SUMMARY REPORT**  
**Total Organic Carbon by SM 5310C**

Sample ID: <b>MB-R72289</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>12/29/2021</b>	RunNo: <b>72289</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>R72289</b>		Analysis Date: <b>12/29/2021</b>	SeqNo: <b>1476043</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon ND 0.500

Sample ID: <b>LCS-R72289</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>12/29/2021</b>	RunNo: <b>72289</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R72289</b>		Analysis Date: <b>12/29/2021</b>	SeqNo: <b>1476044</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 5.16 0.500 5.000 0 103 93.1 106

Sample ID: <b>2112279-001DDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>12/29/2021</b>	RunNo: <b>72289</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>R72289</b>		Analysis Date: <b>12/29/2021</b>	SeqNo: <b>1476046</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 0.886 0.500 0.9000 1.57 20

Sample ID: <b>2112279-001DMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>	Prep Date: <b>12/29/2021</b>	RunNo: <b>72289</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>R72289</b>		Analysis Date: <b>12/29/2021</b>	SeqNo: <b>1476047</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 5.94 0.500 5.000 0.9000 101 69.1 124

Sample ID: <b>2112279-001DMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>	Prep Date: <b>12/29/2021</b>	RunNo: <b>72289</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>R72289</b>		Analysis Date: <b>12/29/2021</b>	SeqNo: <b>1476048</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 5.80 0.500 5.000 0.9000 98.1 69.1 124 5.937 2.28 30

**Work Order:** 2112337  
**CLIENT:** Friedman & Bruya  
**Project:** 112373

**QC SUMMARY REPORT**  
**Total Organic Carbon by SM 5310C**

Sample ID: <b>2112337-003DDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>12/30/2021</b>	RunNo: <b>72289</b>							
Client ID: <b>MW23-20211217</b>	Batch ID: <b>R72289</b>		Analysis Date: <b>12/30/2021</b>	SeqNo: <b>1476068</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	5.98	0.500						6.096	1.85	20	

Sample ID: <b>2112337-003DMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>	Prep Date: <b>12/30/2021</b>	RunNo: <b>72289</b>							
Client ID: <b>MW23-20211217</b>	Batch ID: <b>R72289</b>		Analysis Date: <b>12/30/2021</b>	SeqNo: <b>1476069</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	10.7	0.500	5.000	6.096	91.2	69.1	124				

Work Order: 2112337  
 CLIENT: Friedman & Bruya  
 Project: 112373

**QC SUMMARY REPORT**  
**Dissolved Gases by RSK-175**

Sample ID: <b>LCS-R72236</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>12/28/2021</b>	RunNo: <b>72236</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R72236</b>		Analysis Date: <b>12/28/2021</b>	SeqNo: <b>1474674</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	929	0.00675	1,000	0	92.9	66.7	141				
Ethene	976	0.0146	1,000	0	97.6	68.6	139				
Ethane	968	0.0151	1,000	0	96.8	69.3	136				

Sample ID: <b>MB-R72236</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>12/28/2021</b>	RunNo: <b>72236</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>R72236</b>		Analysis Date: <b>12/28/2021</b>	SeqNo: <b>1474677</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00675									
Ethene	ND	0.0146									
Ethane	ND	0.0151									

Sample ID: <b>2112337-001AREP</b>	SampType: <b>REP</b>	Units: <b>mg/L</b>	Prep Date: <b>12/28/2021</b>	RunNo: <b>72236</b>							
Client ID: <b>MW25-20211217</b>	Batch ID: <b>R72236</b>		Analysis Date: <b>12/28/2021</b>	SeqNo: <b>1474646</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	5.75	0.00675						6.183	7.23	30	E
Ethene	ND	0.0146						0		30	
Ethane	ND	0.0151						0		30	

Client Name: <b>FB</b>	Work Order Number: <b>2112337</b>
Logged by: <b>Gabrielle Coeulle</b>	Date Received: <b>12/20/2021 2:18:00 PM</b>

### Chain of Custody

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

### Log In

3. Coolers are present? Yes  No  NA
4. Shipping container/cooler in good condition? Yes  No
5. Custody Seals present on shipping container/cooler?  
(Refer to comments for Custody Seals not intact) Yes  No  Not Present
6. Was an attempt made to cool the samples? Yes  No  NA
7. Were all items received at a temperature of >2°C to 6°C \* Yes  No  NA
8. Sample(s) in proper container(s)? Yes  No
9. Sufficient sample volume for indicated test(s)? Yes  No
10. Are samples properly preserved? Yes  No
11. Was preservative added to bottles? Yes  No  NA
12. Is there headspace in the VOA vials? Yes  No  NA
13. Did all samples containers arrive in good condition(unbroken)? Yes  No
14. Does paperwork match bottle labels? Yes  No
15. Are matrices correctly identified on Chain of Custody? Yes  No
16. Is it clear what analyses were requested? Yes  No
17. Were all holding times able to be met? Yes  No

### Special Handling (if applicable)

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

Person Notified:	<input type="text" value="Michael Erdahl"/>	Date:	<input type="text" value="12/20/2021"/>
By Whom:	<input type="text" value="Gabrielle Coeulle"/>	Via:	<input checked="" type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text" value="Ok to proceed out of hold?"/>		
Client Instructions:	<input type="text" value="Proceed."/>		

19. Additional remarks:

### Item Information

Item #	Temp °C
Sample 1	2.0

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



**SUBCONTRACT SAMPLE CHAIN OF CUSTODY**

2112337

Page # 1 of 1

SUBCONTRACTOR Fremont

PROJECT NAME/NO. 112373

PO # B-541

REMARKS

Please Email Results EIM

TURNAROUND TIME

Standard TAT

RUSH

Rush charges authorized by: \_\_\_\_\_

SAMPLE DISPOSAL

Dispose after 30 days

Return samples

Will call with instructions

Send Report To Michael Erdahl  
 Company Friedman and Bruya, Inc.  
 Address 3012 16th Ave W  
 City, State, ZIP Seattle, WA 98119  
 Phone # (206) 285-8282 merdahl@friedmanandbruya.com

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Disolved bases RSK	Sulfate + Nitrate	Alkalinity	Fe <sup>2+</sup>	TOC	Notes
MW25-2021217		12/17/17	0623			X	X	X	X	X	
MW19-20211217			0904			X	X	X	X		
MW23-2021217			1000			X	X	X	X	X	
MW18-2021217			1157			X	X	X	X	X	
MW22-2021217			1303			X	X	X	X	X	
MW24-2021217			1314			X	X	X	X	X	
MW21-2021217			1425			X				X	


Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
	<u>Michael Erdahl</u>	<u>Friedman &amp; Bruya</u>	<u>12/17/17</u>	<u>0602</u>
Received by: <u>Justine Mantz</u>	<u>Justine Mantz</u>	<u>FAI</u>	<u>12/17/17</u>	<u>14:18</u>
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 10, 2022

Levi Fernandes, Project Manager  
SoundEarth Strategies  
2811 Fairview Ave. East, Suite 2000  
Seattle, WA 98102

Dear Mr Fernandes:

Included is the amended report from the testing of material submitted on December 17, 2021 from the SOU\_0731-004-08\_ 20211217, F&BI 112374 project. The sample IDs have been amended to reflect the chain of custody.

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: Clare Tochilin  
SOU0104R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.  
Yelena Aravkina, M.S.  
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Eric Young, B.S.

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

January 4, 2022

Levi Fernandes, Project Manager  
SoundEarth Strategies  
2811 Fairview Ave. East, Suite 2000  
Seattle, WA 98102

Dear Mr Fernandes:

Included are the results from the testing of material submitted on December 17, 2021 from the SOU\_0731-004-08\_ 20211217, F&BI 112374 project. There are 13 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: Clare Tochilin  
SOU0104R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 17, 2021 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0731-004-08\_ 20211217, F&BI 112374 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
112374 -01	IW06-20211217
112374 -02	IW04-20211217
112374 -03	IW61-20211217
112374 -04	IW50-20211217

Samples IW61-20211217 and IW50-20211217 were sent to Fremont Analytical for dissolved gasses, sulfate, nitrate, alkalinity, ferrous iron, and total organic carbon analyses. In addition, sample IW04-20211217 was sent to Fremont for sulfate, nitrate, alkalinity, and ferrous iron analyses. The report is enclosed.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	IW04-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217
Date Extracted:	12/21/21	Lab ID:	112374-02 x100
Date Analyzed:	12/22/21	Data File:	112374-02 x100.089
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	15,800
Manganese	11,500

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	IW61-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217
Date Extracted:	12/21/21	Lab ID:	112374-03 x100
Date Analyzed:	12/22/21	Data File:	112374-03 x100.090
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	20,600
Manganese	12,300

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	IW50-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217
Date Extracted:	12/21/21	Lab ID:	112374-04 x100
Date Analyzed:	12/22/21	Data File:	112374-04 x100.091
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	17,000
Manganese	15,500

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_0731-004-08_20211217
Date Extracted:	12/21/21	Lab ID:	I1-854 mb
Date Analyzed:	12/21/21	Data File:	I1-854 mb.094
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	<50
Manganese	<1



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	IW06-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217
Date Extracted:	12/20/21	Lab ID:	112374-01
Date Analyzed:	12/20/21	Data File:	122033.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	85	117
Toluene-d8	96	88	112
4-Bromofluorobenzene	98	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<0.5
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	IW04-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217
Date Extracted:	12/20/21	Lab ID:	112374-02
Date Analyzed:	12/20/21	Data File:	122034.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	85	117
Toluene-d8	98	88	112
4-Bromofluorobenzene	101	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	0.34
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	1.1
Trichloroethene	<0.5
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	IW61-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217
Date Extracted:	12/20/21	Lab ID:	112374-03
Date Analyzed:	12/22/21	Data File:	122215.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	110	85	117
Toluene-d8	106	88	112
4-Bromofluorobenzene	176 vo	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	3.8
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	41
Trichloroethene	<0.5
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	IW50-20211217	Client:	SoundEarth Strategies
Date Received:	12/17/21	Project:	SOU_0731-004-08_20211217
Date Extracted:	12/20/21	Lab ID:	112374-04
Date Analyzed:	12/20/21	Data File:	122035.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	85	117
Toluene-d8	97	88	112
4-Bromofluorobenzene	100	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	0.80
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	2.9
Trichloroethene	<0.5
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0731-004-08_20211217
Date Extracted:	12/20/21	Lab ID:	01-2842 mb
Date Analyzed:	12/20/21	Data File:	122031.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	85	117
Toluene-d8	98	88	112
4-Bromofluorobenzene	100	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
trans-1,2-Dichloroethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<0.5
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/04/22

Date Received: 12/17/21

Project: SOU\_0731-004-08\_ 20211217, F&BI 112374

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

Laboratory Code: 112374-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Iron	ug/L (ppb)	100	14,000	287 b	549 b	70-130	63 b
Manganese	ug/L (ppb)	20	9,300	1210 b	1540 b	70-130	24 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Iron	ug/L (ppb)	100	96	85-115
Manganese	ug/L (ppb)	20	95	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/04/22

Date Received: 12/17/21

Project: SOU\_0731-004-08\_ 20211217, F&BI 112374

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

Laboratory Code: 112363-08 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance
				Recovery MS	Criteria
Vinyl chloride	ug/L (ppb)	10	<0.02	111	16-176
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	98	50-150
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	102	50-150
Trichloroethene	ug/L (ppb)	10	<0.5	92	43-133
Tetrachloroethene	ug/L (ppb)	10	<1	97	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Percent	Acceptance Criteria	RPD (Limit 20)
			Recovery LCS	Recovery LCSD		
Vinyl chloride	ug/L (ppb)	10	112	103	70-130	8
trans-1,2-Dichloroethene	ug/L (ppb)	10	99	91	70-130	8
cis-1,2-Dichloroethene	ug/L (ppb)	10	100	94	70-130	6
Trichloroethene	ug/L (ppb)	10	93	86	70-130	8
Tetrachloroethene	ug/L (ppb)	10	96	93	70-130	3

# 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.



112344

12-17-21

ATD/vw3

Send Report To FEH@soundearthstrategies.com Claire Toehlin

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature)		PROJECT NAME/NO.		PO #	
<i>[Signature]</i>		Troy Laundry Property		0731-004-08	
REMARKS		EIM Y			
*cVOCs = PCE, TCE, Cis/Trans-DCE, and VC					

TURNAROUND TIME	Standard (2 weeks)
	RUSH
	Rush charges authorized by:
SAMPLE DISPOSAL	
<input checked="" type="checkbox"/> Dispose after 30 days	
<input type="checkbox"/> Return samples	
Will call with instructions	

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	GRPH by NWTPH-Gx	BTEX by EPA 8021B	DRPH/ORPH by NWTPH-Dx	cVOCs * by EPA 8260C	Methane, Ethane, Ethene by RSK175	Sulfate, Nitrate, Alkalinity by SM1845/SM2320B	Total Fe and Mn by EPA 200.8	Fe 2+ by SM 3500	TOC By EPA 415.1	Notes
W06-2021217	W06	-	014	12/17/21	1003	H2O	3				X						
W04-2021217	W04	-	028	12/17/21	1037		7				X						
W61-2021217	W61	-	034	12/17/21	1116		10				X						
W50-2021217	W50	-	044	12/17/21	1402		10				X						
<i>[Handwritten: CAT 12/17/21]</i>																	

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

SIGNATURE		PRINT NAME		COMPANY		DATE		TIME	
<i>[Signature]</i>		Bryan Prosker		SoundEarth Strategies		12/17/21		12:25	
Received by:		<i>[Signature]</i>		EIM Y		12/17/21		12:25	
Relinquished by:									
Received by:				Samples received at		4:00			



**Friedman & Bruya**

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

**RE: 112374**

**Work Order Number: 2112338**

December 31, 2021

**Attention Michael Erdahl:**

Fremont Analytical, Inc. received 3 sample(s) on 12/20/2021 for the analyses presented in the following report.

***Dissolved Gases by RSK-175***

***Ferrous Iron by SM3500-Fe B***

***Ion Chromatography by EPA Method 300.0***

***Total Alkalinity by SM 2320B***

***Total Organic Carbon by SM 5310C***

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes  
Project Manager



Date: 12/31/2021

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**CLIENT:** Friedman & Bruya  
**Project:** 112374  
**Work Order:** 2112338

## Work Order Sample Summary

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Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2112338-001	IW04-20211217	12/17/2021 10:37 AM	12/20/2021 2:18 PM
2112338-002	IW61-20211217	12/17/2021 11:16 AM	12/20/2021 2:18 PM
2112338-003	IW50-20211217	12/17/2021 2:02 PM	12/20/2021 2:18 PM

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

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Original

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**CLIENT:** Friedman & Bruya  
**Project:** 112374

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**I. SAMPLE RECEIPT:**

Samples receipt information is recorded on the attached Sample Receipt Checklist.

**II. GENERAL REPORTING COMMENTS:**

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

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

**III. ANALYSES AND EXCEPTIONS:**

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

### Qualifiers:

- \* - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

### Acronyms:

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



**Client:** Friedman & Bruya

**Collection Date:** 12/17/2021 10:37:00 AM

**Project:** 112374

**Lab ID:** 2112338-001

**Matrix:** Water

**Client Sample ID:** IW04-20211217

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Ion Chromatography by EPA Method 300.0</u></b>				Batch ID: 34852		Analyst: SS
Nitrate (as N)	ND	0.100	H	mg/L	1	12/23/2021 3:23:00 AM
Sulfate	ND	0.600		mg/L	1	12/23/2021 3:23:00 AM
<b><u>Total Organic Carbon by SM 5310C</u></b>				Batch ID: R72306		Analyst: SS
Total Organic Carbon	101	2.00	D	mg/L	4	12/31/2021 10:29:00 AM
<b><u>Total Alkalinity by SM 2320B</u></b>				Batch ID: R72190		Analyst: CH
Alkalinity, Total (As CaCO <sub>3</sub> )	458	2.50		mg/L	1	12/27/2021 9:30:43 AM
<b><u>Ferrous Iron by SM3500-Fe B</u></b>				Batch ID: R72150		Analyst: SS
Ferrous Iron	23.1	2.50	DH	mg/L	25	12/21/2021 11:35:00 AM



**Client:** Friedman & Bruya

**Collection Date:** 12/17/2021 11:16:00 AM

**Project:** 112374

**Lab ID:** 2112338-002

**Matrix:** Water

**Client Sample ID:** IW61-20211217

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Dissolved Gases by RSK-175**

Batch ID: R72236 Analyst: MS

Methane	5.04	0.338	D	mg/L	50	12/28/2021 12:15:00 PM
Ethene	ND	0.0146		mg/L	1	12/28/2021 11:33:00 AM
Ethane	ND	0.0151		mg/L	1	12/28/2021 11:33:00 AM

**Ion Chromatography by EPA Method 300.0**

Batch ID: 34852 Analyst: SS

Nitrate (as N)	0.248	0.200	DH	mg/L	2	12/23/2021 3:47:00 AM
Sulfate	ND	1.20	D	mg/L	2	12/23/2021 3:47:00 AM

**NOTES:**

Diluted due to high levels of non-target analytes.

**Total Organic Carbon by SM 5310C**

Batch ID: R72306 Analyst: SS

Total Organic Carbon	72.6	2.00	D	mg/L	4	12/31/2021 11:00:00 AM
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**Total Alkalinity by SM 2320B**

Batch ID: R72190 Analyst: CH

Alkalinity, Total (As CaCO3)	460	2.50		mg/L	1	12/27/2021 9:30:43 AM
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R72150 Analyst: SS

Ferrous Iron	30.4	2.50	DH	mg/L	25	12/21/2021 11:35:00 AM
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**Client:** Friedman & Bruya

**Collection Date:** 12/17/2021 2:02:00 PM

**Project:** 112374

**Lab ID:** 2112338-003

**Matrix:** Water

**Client Sample ID:** IW50-20211217

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Dissolved Gases by RSK-175**

Batch ID: R72236 Analyst: MS

Methane	6.89	0.338	D	mg/L	50	12/28/2021 12:04:00 PM
Ethene	ND	0.0146		mg/L	1	12/28/2021 11:35:00 AM
Ethane	ND	0.0151		mg/L	1	12/28/2021 11:35:00 AM

**Ion Chromatography by EPA Method 300.0**

Batch ID: 34852 Analyst: SS

Nitrate (as N)	ND	0.200	DH	mg/L	2	12/23/2021 4:10:00 AM
Sulfate	ND	1.20	D	mg/L	2	12/23/2021 4:10:00 AM

**NOTES:**

Diluted due to high levels of non-target analytes.

**Total Organic Carbon by SM 5310C**

Batch ID: R72306 Analyst: SS

Total Organic Carbon	38.1	0.500		mg/L	1	12/30/2021 9:38:00 PM
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**Total Alkalinity by SM 2320B**

Batch ID: R72190 Analyst: CH

Alkalinity, Total (As CaCO3)	468	2.50		mg/L	1	12/27/2021 9:30:43 AM
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R72150 Analyst: SS

Ferrous Iron	22.4	2.50	DH	mg/L	25	12/21/2021 11:35:00 AM
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**Work Order:** 2112338  
**CLIENT:** Friedman & Bruya  
**Project:** 112374

**QC SUMMARY REPORT**  
**Total Alkalinity by SM 2320B**

Sample ID: <b>MB-R72190</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>12/27/2021</b>	RunNo: <b>72190</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>R72190</b>	Analysis Date: <b>12/27/2021</b>	SeqNo: <b>1473852</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	ND	2.50									

Sample ID: <b>LCS-R72190</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>12/27/2021</b>	RunNo: <b>72190</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R72190</b>	Analysis Date: <b>12/27/2021</b>	SeqNo: <b>1473853</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	96.3	2.50	100.0	0	96.3	88.3	113				

Sample ID: <b>2112338-001ADUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>12/27/2021</b>	RunNo: <b>72190</b>							
Client ID: <b>IW04-20211217</b>	Batch ID: <b>R72190</b>	Analysis Date: <b>12/27/2021</b>	SeqNo: <b>1473855</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	456	2.50						458.4	0.447	20	

Work Order: 2112338  
 CLIENT: Friedman & Bruya  
 Project: 112374

**QC SUMMARY REPORT**  
**Ferrous Iron by SM3500-Fe B**

Sample ID: <b>MB-R72150</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>			Prep Date: <b>12/21/2021</b>	RunNo: <b>72150</b>					
Client ID: <b>MBLKW</b>	Batch ID: <b>R72150</b>				Analysis Date: <b>12/21/2021</b>	SeqNo: <b>1472305</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron ND 0.100

Sample ID: <b>LCS-R72150</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>			Prep Date: <b>12/21/2021</b>	RunNo: <b>72150</b>					
Client ID: <b>LCSW</b>	Batch ID: <b>R72150</b>				Analysis Date: <b>12/21/2021</b>	SeqNo: <b>1472306</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 0.385 0.100 0.4000 0 96.2 85 115

Sample ID: <b>2112338-003CDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>			Prep Date: <b>12/21/2021</b>	RunNo: <b>72150</b>					
Client ID: <b>IW50-20211217</b>	Batch ID: <b>R72150</b>				Analysis Date: <b>12/21/2021</b>	SeqNo: <b>1472318</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 22.2 2.50 22.41 0.734 20 DH

Sample ID: <b>2112338-003CMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>			Prep Date: <b>12/21/2021</b>	RunNo: <b>72150</b>					
Client ID: <b>IW50-20211217</b>	Batch ID: <b>R72150</b>				Analysis Date: <b>12/21/2021</b>	SeqNo: <b>1472319</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 35.1 2.50 10.00 22.41 127 70 130 DH

Sample ID: <b>2112338-003CMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>			Prep Date: <b>12/21/2021</b>	RunNo: <b>72150</b>					
Client ID: <b>IW50-20211217</b>	Batch ID: <b>R72150</b>				Analysis Date: <b>12/21/2021</b>	SeqNo: <b>1472320</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 34.5 2.50 10.00 22.41 121 70 130 35.11 1.89 20 DH

Work Order: 2112338  
 CLIENT: Friedman & Bruya  
 Project: 112374

**QC SUMMARY REPORT**  
**Ion Chromatography by EPA Method 300.0**

Sample ID: <b>MB-34852</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>			Prep Date: <b>12/22/2021</b>	RunNo: <b>72201</b>					
Client ID: <b>MBLKW</b>	Batch ID: <b>34852</b>				Analysis Date: <b>12/22/2021</b>	SeqNo: <b>1473997</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	ND	0.100									
Sulfate	ND	0.600									

Sample ID: <b>LCS-34852</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>			Prep Date: <b>12/22/2021</b>	RunNo: <b>72201</b>					
Client ID: <b>LCSW</b>	Batch ID: <b>34852</b>				Analysis Date: <b>12/22/2021</b>	SeqNo: <b>1473998</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	0.712	0.100	0.7500	0	94.9	90	110				
Sulfate	3.55	0.600	3.750	0	94.7	90	110				

Sample ID: <b>2112337-004BDUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>			Prep Date: <b>12/22/2021</b>	RunNo: <b>72201</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>34852</b>				Analysis Date: <b>12/23/2021</b>	SeqNo: <b>1474005</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	ND	0.100						0		20	H
Sulfate	ND	0.600						0		20	

Sample ID: <b>2112337-004BMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>			Prep Date: <b>12/22/2021</b>	RunNo: <b>72201</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>34852</b>				Analysis Date: <b>12/23/2021</b>	SeqNo: <b>1474006</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	0.750	0.100	0.7500	0.05700	92.4	80	120				H
Sulfate	3.84	0.600	3.750	0.2840	94.8	80	120				

Work Order: 2112338  
 CLIENT: Friedman & Bruya  
 Project: 112374

**QC SUMMARY REPORT**  
**Ion Chromatography by EPA Method 300.0**

Sample ID: <b>2112312-001ADUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>12/22/2021</b>	RunNo: <b>72201</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>34852</b>		Analysis Date: <b>12/23/2021</b>	SeqNo: <b>1474029</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	ND	0.100						0		20	H
Sulfate	ND	0.600						0		20	

Sample ID: <b>2112312-001AMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>	Prep Date: <b>12/22/2021</b>	RunNo: <b>72201</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>34852</b>		Analysis Date: <b>12/23/2021</b>	SeqNo: <b>1474030</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	0.677	0.100	0.7500	0	90.3	80	120				H
Sulfate	3.54	0.600	3.750	0.3530	84.9	80	120				

Sample ID: <b>2112312-001AMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>	Prep Date: <b>12/22/2021</b>	RunNo: <b>72201</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>34852</b>		Analysis Date: <b>12/23/2021</b>	SeqNo: <b>1474031</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	0.685	0.100	0.7500	0	91.3	80	120	0.6770	1.17	20	H
Sulfate	3.58	0.600	3.750	0.3530	86.1	80	120	3.538	1.18	20	



**Work Order:** 2112338  
**CLIENT:** Friedman & Bruya  
**Project:** 112374

**QC SUMMARY REPORT**  
**Total Organic Carbon by SM 5310C**

Sample ID: <b>2112339-002ADUP</b>		SampType: <b>DUP</b>		Units: <b>mg/L</b>		Prep Date: <b>12/30/2021</b>		RunNo: <b>72306</b>			
Client ID: <b>BATCH</b>		Batch ID: <b>R72306</b>				Analysis Date: <b>12/30/2021</b>		SeqNo: <b>1476588</b>			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	15.3	0.500						15.44	0.872	20	

Sample ID: <b>2112339-002AMS</b>		SampType: <b>MS</b>		Units: <b>mg/L</b>		Prep Date: <b>12/30/2021</b>		RunNo: <b>72306</b>			
Client ID: <b>BATCH</b>		Batch ID: <b>R72306</b>				Analysis Date: <b>12/30/2021</b>		SeqNo: <b>1476589</b>			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	19.8	0.500	5.000	15.44	87.1	69.1	124				

Work Order: 2112338  
 CLIENT: Friedman & Bruya  
 Project: 112374

**QC SUMMARY REPORT**  
**Dissolved Gases by RSK-175**

Sample ID: <b>LCS-R72236</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>12/28/2021</b>	RunNo: <b>72236</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R72236</b>		Analysis Date: <b>12/28/2021</b>	SeqNo: <b>1474674</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	929	0.00675	1,000	0	92.9	66.7	141				
Ethene	976	0.0146	1,000	0	97.6	68.6	139				
Ethane	968	0.0151	1,000	0	96.8	69.3	136				

Sample ID: <b>MB-R72236</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>12/28/2021</b>	RunNo: <b>72236</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>R72236</b>		Analysis Date: <b>12/28/2021</b>	SeqNo: <b>1474677</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00675									
Ethene	ND	0.0146									
Ethane	ND	0.0151									

Sample ID: <b>2112337-001AREP</b>	SampType: <b>REP</b>	Units: <b>mg/L</b>	Prep Date: <b>12/28/2021</b>	RunNo: <b>72236</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>R72236</b>		Analysis Date: <b>12/28/2021</b>	SeqNo: <b>1474646</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	5.75	0.00675						6.183	7.23	30	E
Ethene	ND	0.0146						0		30	
Ethane	ND	0.0151						0		30	

Client Name: <b>FB</b>	Work Order Number: <b>2112338</b>
Logged by: <b>Gabrielle Coeulle</b>	Date Received: <b>12/20/2021 2:18:00 PM</b>

### Chain of Custody

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

### Log In

3. Coolers are present? Yes  No  NA
4. Shipping container/cooler in good condition? Yes  No
5. Custody Seals present on shipping container/cooler?  
(Refer to comments for Custody Seals not intact) Yes  No  Not Present
6. Was an attempt made to cool the samples? Yes  No  NA
7. Were all items received at a temperature of >2°C to 6°C \* Yes  No  NA
8. Sample(s) in proper container(s)? Yes  No
9. Sufficient sample volume for indicated test(s)? Yes  No
10. Are samples properly preserved? Yes  No
11. Was preservative added to bottles? Yes  No  NA
12. Is there headspace in the VOA vials? Yes  No  NA
13. Did all samples containers arrive in good condition(unbroken)? Yes  No
14. Does paperwork match bottle labels? Yes  No
15. Are matrices correctly identified on Chain of Custody? Yes  No
16. Is it clear what analyses were requested? Yes  No
17. Were all holding times able to be met? Yes  No

### Special Handling (if applicable)

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

Person Notified:	<input type="text" value="Michael Erdahl"/>	Date:	<input type="text" value="12/20/2021"/>
By Whom:	<input type="text" value="Gabrielle Coeulle"/>	Via:	<input checked="" type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text" value="Ok to proceed out of hold?"/>		
Client Instructions:	<input type="text" value="Proceed."/>		

19. Additional remarks:

### Item Information

Item #	Temp °C
Sample 1	2.0

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





## Analytical Results

Client: Sound Earth Inc  
Client Project Number: 0731-004-08  
Date Samples Received: December 21, 2021  
Date Samples Analyzed: January 10, 2022

**SiREM File Reference: S-8782**

Client Sample ID	SiREM Reference ID	Client Sample Date	Sample Dilution Factor	Lactate	Acetate	Propionate	Formate	Butyrate	Pyruvate
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW25-20211217	21-8626	17-Dec-21	50	<0.39	<0.54	<0.31	<0.22	<0.41	<0.69
MW23-20211217	21-8627	17-Dec-21	50	<0.39	<0.54	<0.31	<0.22	<0.47	<0.69
IW04-20211217	21-8628	17-Dec-21	50	<0.39	2.4	1.2	<0.22	<0.47	<0.69
IW61-20211217	21-8629	17-Dec-21	50	<0.39	4.5	<0.31	<0.22	<0.47	<0.69
MW18-20211217	21-8630	17-Dec-21	50	<0.39	<0.54	<0.31	<0.22	<0.47	<0.69
MW22-20211217	21-8631	17-Dec-21	50	<0.39	169	16	<0.22	14	1.9
MW24-20211217	21-8632	17-Dec-21	50	<0.39	<0.54	<0.31	1.7	<0.47	<0.69
IW50-20211217	21-8633	17-Dec-21	50	<0.39	9.2	1.3	<0.22	<0.47	<0.69
MW21-20211217	21-8634	17-Dec-21	50	<0.39	174	62	1.5	31	16

QL	50	0.39	0.54	0.31	0.22	0.41	0.69
----	----	------	------	------	------	------	------

### Comments:

Method: Ion Chromatography

QL = Quantitation limit

J = associated value is estimated; compound positively detected at concentration below the QL

< = compound analysed for but not detected, associated value is QL. Sample QL is corrected for dilution.

Analyst:



Alex Sweett, B.Sc.  
Laboratory Technician

Results approved:



Michael Healey, B.Sc.  
Laboratory Supervisor

Date:

12-Jan-22



**ATTACHMENT B**  
**PLUME STABILITY ANALYSIS RESULTS**

**Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)**

Site Name: Troy Site

Site Address: Seattle, WA

Additional Description: IW04

Well (Sampling) Location? IW04

Level of Confidence (Decision Criteria)? 85%

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

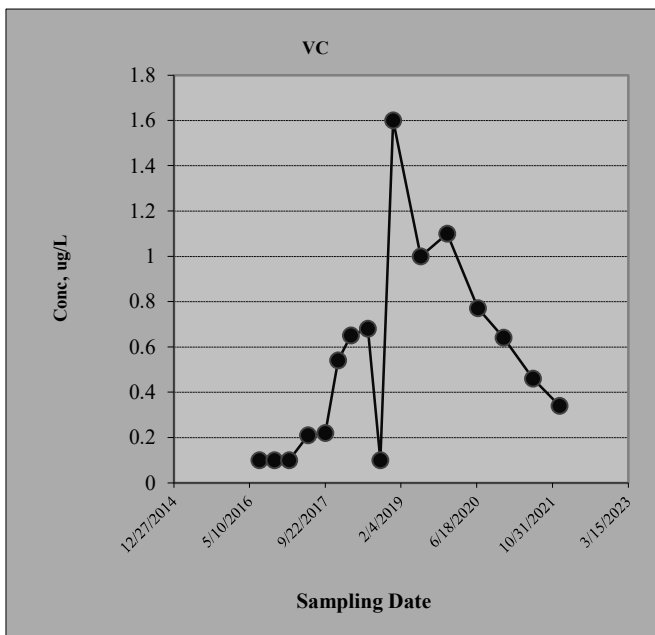
		Hazardous Substances (unit is ug/L)				
Sampling Event	Date Sampled	VC				
#1	7/14/2016	0.1				
#2	10/21/2016	0.1				
#3	1/26/2017	0.1				
#4	6/1/2017	0.21				
#5	9/23/2017	0.22				
#6	12/16/2017	0.54				
#7	3/10/2018	0.65				
#8	6/30/2018	0.68				
#9	9/22/2018	0.1				
#10	12/15/2018	1.6				
#11	6/15/2019	1				
#12	12/7/2019	1.1				
#13	6/27/2020	0.77				
#14	12/12/2020	0.64				
#15	6/25/2021	0.46				
#16	12/17/2021	0.34				

**2. Mann-Kendall Non-parametric Statistical Test Results**

Hazardous Substance?	VC					
Confidence Level Calculated?	98.40%	NA	NA	NA	NA	NA
<b>Plume Stability?</b>	<b>Expanding</b>	NA	NA	NA	NA	NA
Coefficient of Variation?		n<4	n<4	n<4	n<4	n<4
Mann-Kendall Statistic "S" value?	48	0	0	0	0	0
Number of Sampling Rounds?	16	0	0	0	0	0
Average Concentration?	0.54	NA	NA	NA	NA	NA
Standard Deviation?	0.43	NA	NA	NA	NA	NA
Coefficient of Variation?	0.80	NA	NA	NA	NA	NA
Blank if No Errors found		n<4	n<4	n<4	n<4	n<4

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

Hazardous substance? VC  
 Plume Stability? Expanding



**Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)**

Site Name: Troy Site

Site Address: Seattle, WA

Additional Description: IW50

Well (Sampling) Location? IW50

Level of Confidence (Decision Criteria)? 85%

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

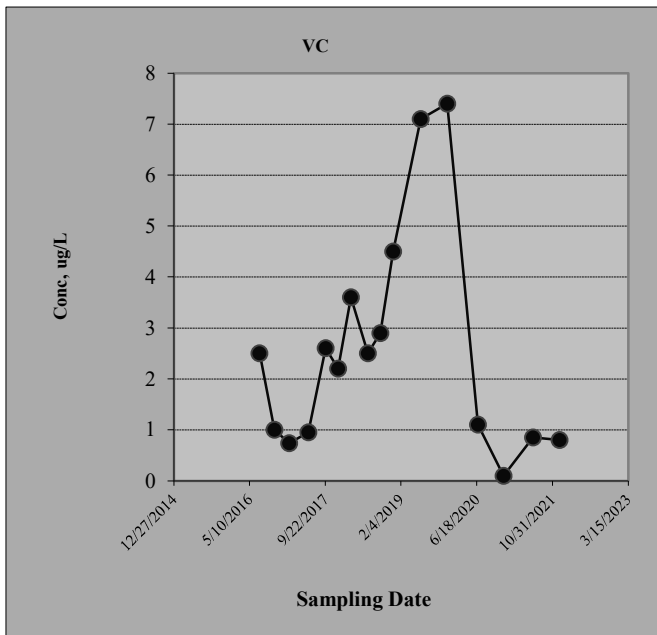
		Hazardous Substances (unit is ug/L)				
Sampling Event	Date Sampled	VC				
#1	7/15/2016	2.5				
#2	10/21/2016	1				
#3	1/26/2017	0.74				
#4	6/2/2017	0.95				
#5	9/24/2017	2.6				
#6	12/16/2017	2.2				
#7	3/10/2018	3.6				
#8	6/30/2018	2.5				
#9	9/22/2018	2.9				
#10	12/15/2018	4.5				
#11	6/15/2019	7.1				
#12	12/7/2019	7.4				
#13	6/27/2020	1.1				
#14	12/12/2020	0.1				
#15	6/25/2021	0.85				
#16	12/17/2021	0.8				

**2. Mann-Kendall Non-parametric Statistical Test Results**

Hazardous Substance?	VC					
Confidence Level Calculated?	55.30%	NA	NA	NA	NA	NA
<b>Plume Stability?</b>	Stable	NA	NA	NA	NA	NA
Coefficient of Variation?	CV <= 1	n<4	n<4	n<4	n<4	n<4
Mann-Kendall Statistic "S" value?	5	0	0	0	0	0
Number of Sampling Rounds?	16	0	0	0	0	0
Average Concentration?	2.55	NA	NA	NA	NA	NA
Standard Deviation?	2.19	NA	NA	NA	NA	NA
Coefficient of Variation?	0.86	NA	NA	NA	NA	NA
Blank if No Errors found		n<4	n<4	n<4	n<4	n<4

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

Hazardous substance? VC  
 Plume Stability? Stable





## Module 2: Graphical Presentation of Historical Ground Water Data: (Well to Well Analysis)

Site Name: Troy Laundry Property

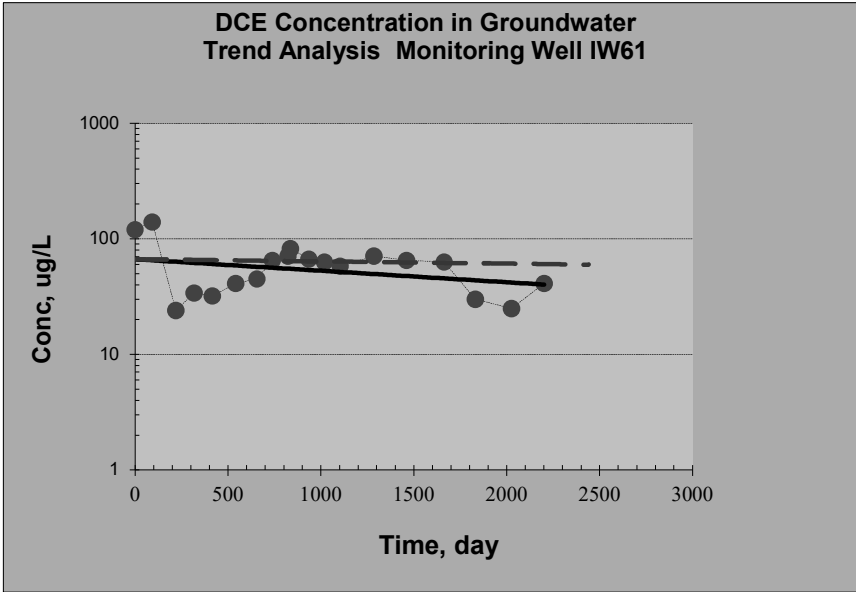
Site Address: 300 Boren Ave North Fairview Ave North

Additional Description: Seattle, Washington

Hazardous Substance cis-1,2-DCE

### 1. Temporal Trend at a Well (Concentration vs. Time & Groundwater Elevation : well-to-well analysis)

Name of Sampling Well?	IW61	Confidence Level (Decision Criteria)?	85.0%
Confidence Level calculated with log-linear regression is?	79.524%		
Plume Stability?	Stable	; Decision Criteria is 85%.	
Slope: Point decay rate constant ( $k_{point}$ ), yr <sup>-1</sup>	0.084 @50% C.L.;	0.016 @85% C.L.	
Half Life for $k_{point}$ , yr	8.280 @50% C.L.;	43.408 @85% C.L.	



### 2. Spatial and Temporal Trend along Overall Plume Length for Multiple Wells:

Plot #1: Sampling date #1	
Plot #2: Sampling date #2	
Plot #3: Sampling date #3	
Plot #4: Sampling date #4	
Plot #5: Sampling date #5	
Plot #6: Sampling date #6	





## Module 2: Graphical Presentation of Historical Ground Water Data: (Well to Well Analysis)

Site Name: Troy Laundry Property

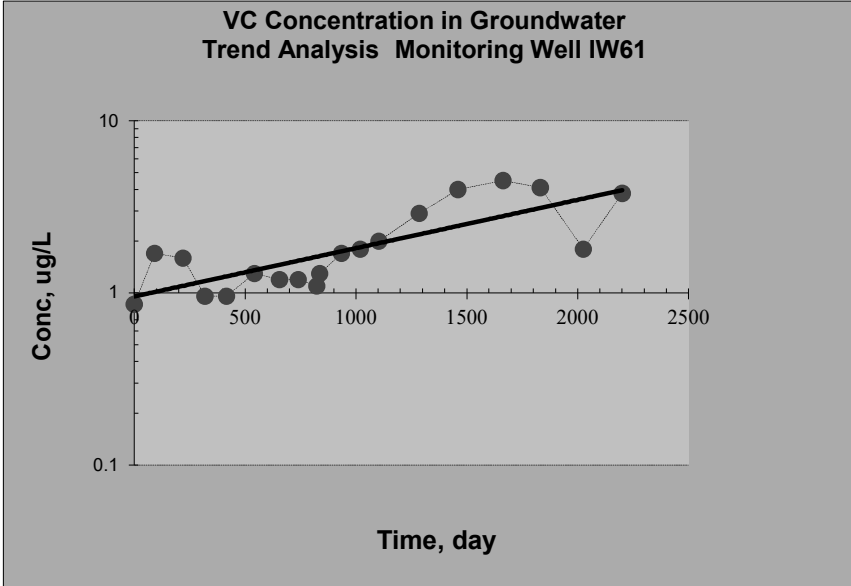
Site Address: 300 Boren Ave North Fairview Ave North

Additional Description: Seattle, Washington

Hazardous Substance VC

### 1. Temporal Trend at a Well (Concentration vs. Time & Groundwater Elevation : well-to-well analysis)

Name of Sampling Well?	IW61	Confidence Level (Decision Criteria)?	85.0%
Confidence Level calculated with log-linear regression is?	99.994%		
Plume Stability?	Expanding	; Decision Criteria is 85%.	
Slope: Point decay rate constant ( $k_{point}$ ), yr <sup>-1</sup>	NA @50% C.L.;	NA @85% C.L.	
Half Life for $k_{point}$ , yr	NA @50% C.L.;	NA @85% C.L.	



### 2. Spatial and Temporal Trend along Overall Plume Length for Multiple Wells:

Plot #1: Sampling date #1	<input type="text"/>
Plot #2: Sampling date #2	<input type="text"/>
Plot #3: Sampling date #3	<input type="text"/>
Plot #4: Sampling date #4	<input type="text"/>
Plot #5: Sampling date #5	<input type="text"/>
Plot #6: Sampling date #6	<input type="text"/>



## Module 2: Graphical Presentation of Historical Ground Water Data: (Well to Well Analysis)

Site Name: Troy Laundry Property

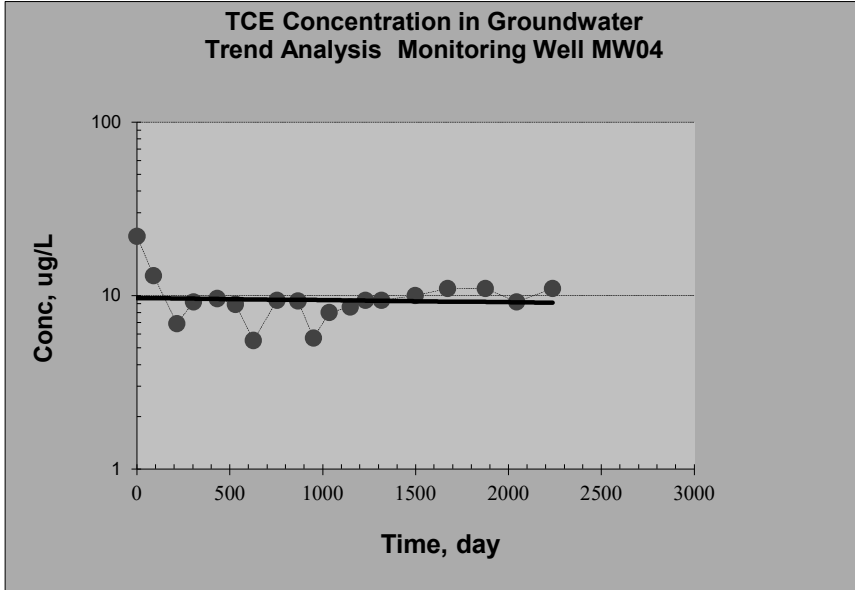
Site Address: 300 Boren Ave North Fairview Ave North

Additional Description: Seattle, Washington

Hazardous Substance TCE

### 1. Temporal Trend at a Well (Concentration vs. Time & Groundwater Elevation : well-to-well analysis)

Name of Sampling Well?	MW04	Confidence Level (Decision Criteria)?	85.0%
Confidence Level calculated with log-linear regression is?	35.767%		
Plume Stability?	Stable	; Decision Criteria is 85%.	
Slope: Point decay rate constant ( $k_{point}$ ), yr <sup>-1</sup>	0.016 @50% C.L.;	NA @85% C.L.	
Half Life for $k_{point}$ , yr	42.600 @50% C.L.;	NA @85% C.L.	



### 2. Spatial and Temporal Trend along Overall Plume Length for Multiple Wells:

Plot #1: Sampling date #1	
Plot #2: Sampling date #2	
Plot #3: Sampling date #3	
Plot #4: Sampling date #4	
Plot #5: Sampling date #5	
Plot #6: Sampling date #6	



## Module 2: Graphical Presentation of Historical Ground Water Data: (Well to Well Analysis)

Site Name: Troy Laundry Property

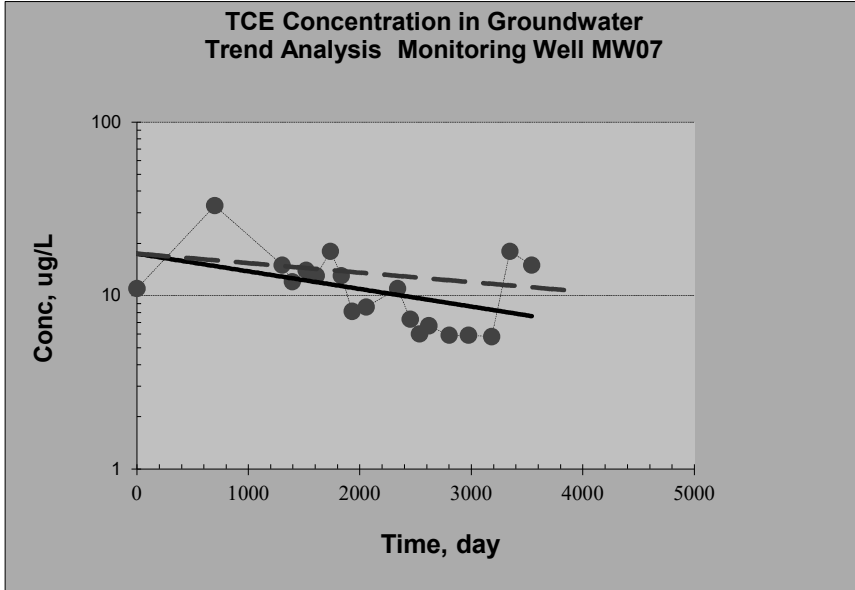
Site Address: 300 Boren Ave North Fairview Ave North

Additional Description: Seattle, Washington

Hazardous Substance TCE

### 1. Temporal Trend at a Well (Concentration vs. Time & Groundwater Elevation : well-to-well analysis)

Name of Sampling Well?	MW07	Confidence Level (Decision Criteria)?	85.0%
Confidence Level calculated with log-linear regression is?	96.653%		
Plume Stability?	Shrinking ; Decision Criteria is 85%.		
Slope: Point decay rate constant ( $k_{point}$ ), yr <sup>-1</sup>	0.086 @50% C.L.;	0.046 @85% C.L.	
Half Life for $k_{point}$ , yr	8.078 @50% C.L.;	15.037 @85% C.L.	



### 2. Spatial and Temporal Trend along Overall Plume Length for Multiple Wells:

Plot #1: Sampling date #1	<input type="text"/>
Plot #2: Sampling date #2	<input type="text"/>
Plot #3: Sampling date #3	<input type="text"/>
Plot #4: Sampling date #4	<input type="text"/>
Plot #5: Sampling date #5	<input type="text"/>
Plot #6: Sampling date #6	<input type="text"/>



## Module 2: Graphical Presentation of Historical Ground Water Data: (Well to Well Analysis)

Site Name: Troy Laundry Property

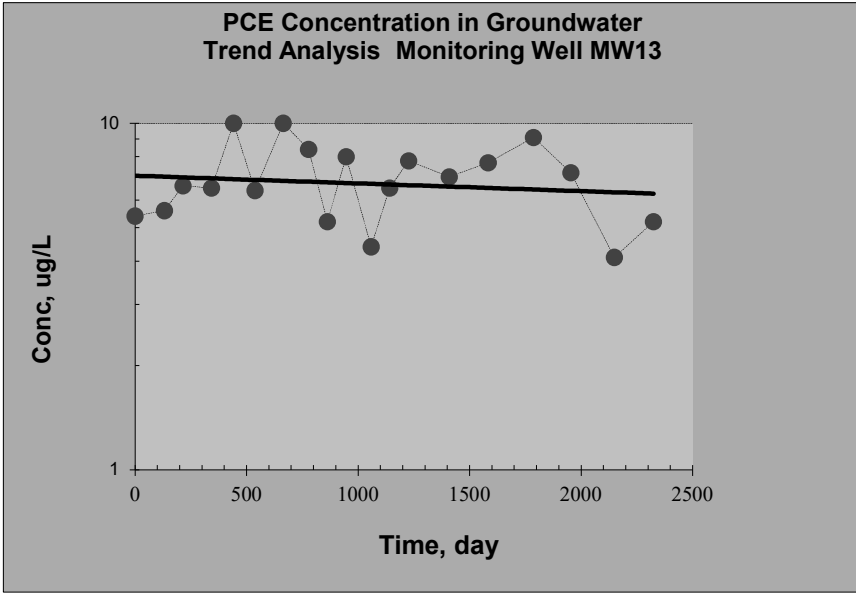
Site Address: 300 Boren Ave North Fairview Ave North

Additional Description: Seattle, Washington

Hazardous Substance: PCE

### 1. Temporal Trend at a Well (Concentration vs. Time & Groundwater Elevation : well-to-well analysis)

Name of Sampling Well?	MW13	Confidence Level (Decision Criteria)?	85.0%
Confidence Level calculated with log-linear regression is?	42.958%		
Plume Stability?	Stable	; Decision Criteria is 85%.	
Slope: Point decay rate constant ( $k_{point}$ ), yr <sup>-1</sup>	0.019 @50% C.L.;	NA @85% C.L.	
Half Life for $k_{point}$ , yr	37.130 @50% C.L.;	NA @85% C.L.	



### 2. Spatial and Temporal Trend along Overall Plume Length for Multiple Wells:

Plot #1: Sampling date #1	
Plot #2: Sampling date #2	
Plot #3: Sampling date #3	
Plot #4: Sampling date #4	
Plot #5: Sampling date #5	
Plot #6: Sampling date #6	





## Module 2: Graphical Presentation of Historical Ground Water Data: (Well to Well Analysis)

Site Name: Troy Laundry Property

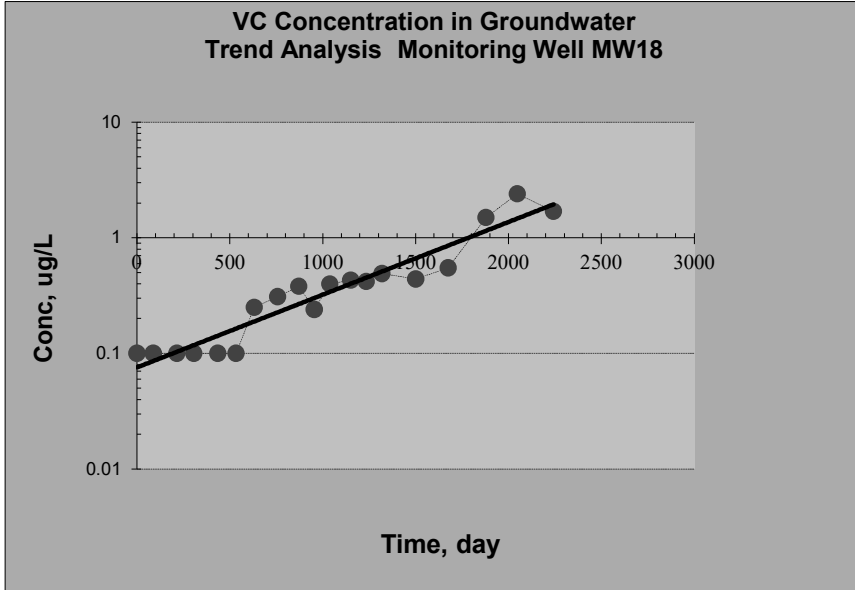
Site Address: 300 Boren Ave North Fairview Ave North

Additional Description: Seattle, Washington

Hazardous Substance VC

### 1. Temporal Trend at a Well (Concentration vs. Time & Groundwater Elevation : well-to-well analysis)

Name of Sampling Well?	MW18	Confidence Level (Decision Criteria)?	85.0%
Confidence Level calculated with log-linear regression is?	100.000%		
Plume Stability?	Expanding	; Decision Criteria is 85%.	
Slope: Point decay rate constant ( $k_{point}$ ), yr <sup>-1</sup>	NA @50% C.L.;	NA @85% C.L.	
Half Life for $k_{point}$ , yr	NA @50% C.L.;	NA @85% C.L.	



### 2. Spatial and Temporal Trend along Overall Plume Length for Multiple Wells:

Plot #1: Sampling date #1	
Plot #2: Sampling date #2	
Plot #3: Sampling date #3	
Plot #4: Sampling date #4	
Plot #5: Sampling date #5	
Plot #6: Sampling date #6	

**Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)**

Site Name: *Troy Site*

Site Address: *Seattle, WA*

Additional Description: *VC*

Well (Sampling) Location? **MW-19**

Level of Confidence (Decision Criteria)? **85%**

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

Sampling Event	Date Sampled	Hazardous Substances (unit is ug/L)				
		VC				
#1	3/8/2016	0.1				
#2	7/13/2016	0.1				
#3	10/21/2016	0.4				
#4	1/25/2017	0.3				
#5	6/1/2017	0.44				
#6	9/23/2017	0.97				
#7	12/16/2017	0.97				
#8	3/10/2018	0.78				
#9	6/30/2018	0.96				
#10	9/22/2018	0.86				
#11	6/15/2019	0.79				
#12	12/7/2019	0.98				
#13	6/27/2020	0.78				
#14	12/12/2020	2.6				
#15	6/25/2021	1				
#16	12/17/2021	1.5				

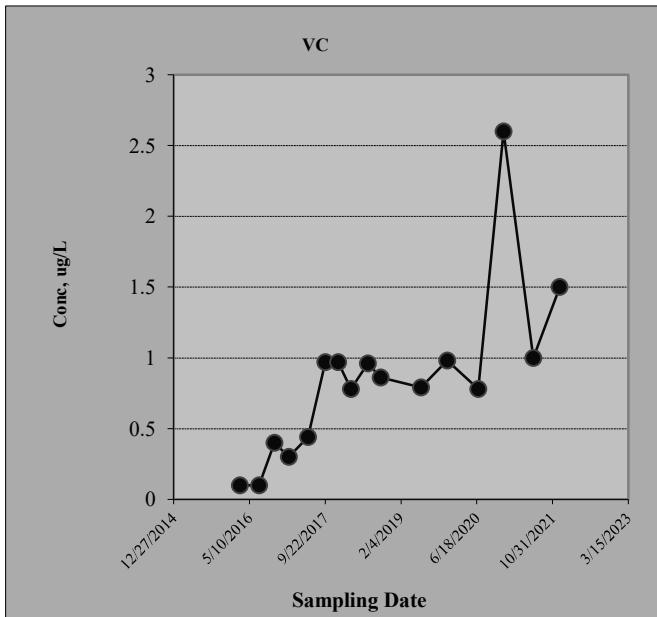
**2. Mann-Kendall Non-parametric Statistical Test Results**

Hazardous Substance?	VC					
Confidence Level Calculated?	100.00%	NA	NA	NA	NA	NA
<b>Plume Stability?</b>	<i>Expanding</i>	NA	NA	NA	NA	NA
Coefficient of Variation?		n<4	n<4	n<4	n<4	n<4
Mann-Kendall Statistic "S" value?	77	0	0	0	0	0
Number of Sampling Rounds?	16	0	0	0	0	0
Average Concentration?	0.85	NA	NA	NA	NA	NA
Standard Deviation?	0.60	NA	NA	NA	NA	NA
Coefficient of Variation?	0.71	NA	NA	NA	NA	NA
Blank if No Errors found		n<4	n<4	n<4	n<4	n<4

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

Hazardous substance? **VC**

Plume Stability? **Expanding**



**Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)**

Site Name: *Troy Site*

Site Address: *Seattle, WA*

Additional Description: *VC*

Well (Sampling) Location? **MW-21**

Level of Confidence (Decision Criteria)? **85%**

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

Sampling Event	Date Sampled	Hazardous Substances (unit is ug/L)				
		VC				
#1	7/13/2016	0.1				
#2	10/20/2016	0.1				
#3	1/26/2017	0.1				
#4	6/1/2017	0.1				
#5	9/23/2017	0.1				
#6	12/16/2017	0.49				
#7	3/10/2018	0.43				
#8	6/30/2018	0.29				
#9	9/22/2018	0.3				
#10	12/15/2018	0.96				
#11	6/15/2019	1.1				
#12	12/7/2019	1.3				
#13	6/27/2020	0.49				
#14	12/12/2020	1.8				
#15	6/25/2021	0.86				
#16	12/17/2021	1.3				

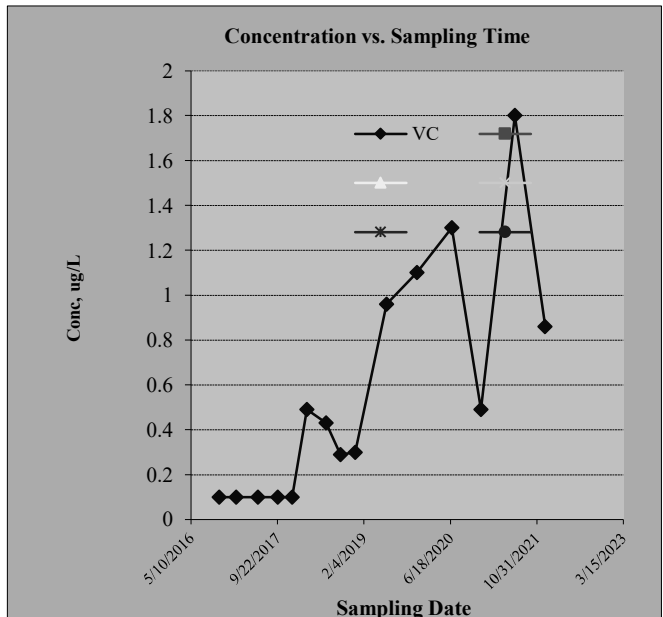
**2. Mann-Kendall Non-parametric Statistical Test Results**

Hazardous Substance?	VC					
Confidence Level Calculated?	100.00%	NA	NA	NA	NA	NA
<b>Plume Stability?</b>	<i>Expanding</i>	NA	NA	NA	NA	NA
Coefficient of Variation?		n<4	n<4	n<4	n<4	n<4
Mann-Kendall Statistic "S" value?	82	0	0	0	0	0
Number of Sampling Rounds?	16	0	0	0	0	0
Average Concentration?	0.61	NA	NA	NA	NA	NA
Standard Deviation?	0.54	NA	NA	NA	NA	NA
Coefficient of Variation?	0.88	NA	NA	NA	NA	NA
Blank if No Errors found		n<4	n<4	n<4	n<4	n<4

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

Hazardous substance? **VC**

Plume Stability? **Expanding**





## Module 2: Graphical Presentation of Historical Ground Water Data: (Well to Well Analysis)

Site Name: Troy Laundry Property

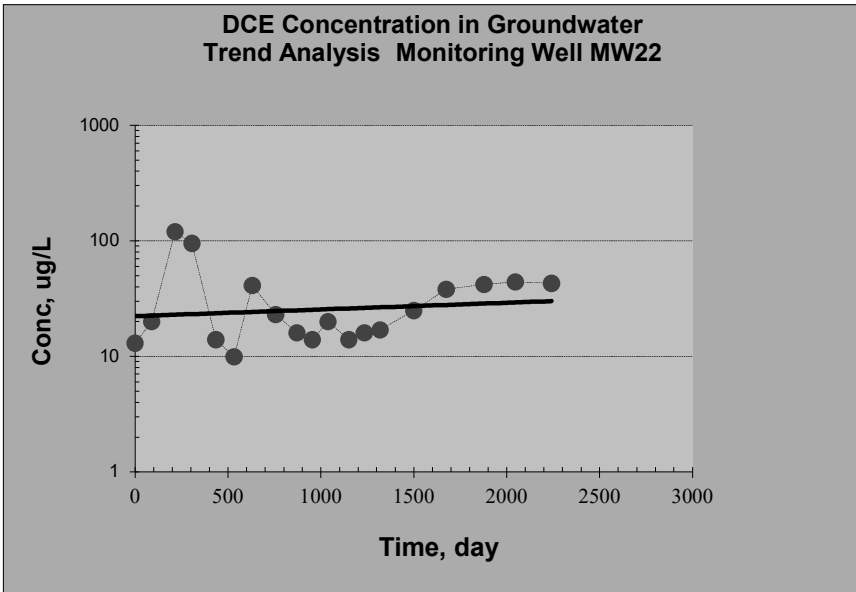
Site Address: 300 Boren Ave North Fairview Ave North

Additional Description: Seattle, Washington

Hazardous Substance cis-1,2-DCE

### 1. Temporal Trend at a Well (Concentration vs. Time & Groundwater Elevation : well-to-well analysis)

Name of Sampling Well?	MW22	Confidence Level (Decision Criteria)?	85.0%
Confidence Level calculated with log-linear regression is?	63.895%		
Plume Stability?	Stable	; Decision Criteria is 85%.	
Slope: Point decay rate constant ( $k_{point}$ ), yr <sup>-1</sup>	0.075 @50% C.L.;	NA @85% C.L.	
Half Life for $k_{point}$ , yr	9.245 @50% C.L.;	NA @85% C.L.	



### 2. Spatial and Temporal Trend along Overall Plume Length for Multiple Wells:

Plot #1: Sampling date #1	
Plot #2: Sampling date #2	
Plot #3: Sampling date #3	
Plot #4: Sampling date #4	
Plot #5: Sampling date #5	
Plot #6: Sampling date #6	



## Module 2: Graphical Presentation of Historical Ground Water Data: (Well to Well Analysis)

Site Name: Troy Laundry Property

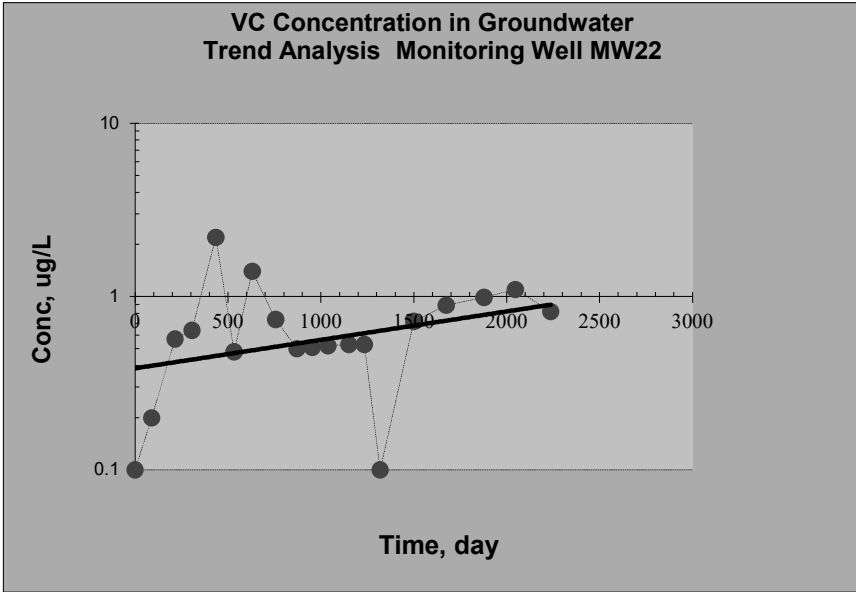
Site Address: 300 Boren Ave North Fairview Ave North

Additional Description: Seattle, Washington

Hazardous Substance VC

### 1. Temporal Trend at a Well (Concentration vs. Time & Groundwater Elevation : well-to-well analysis)

Name of Sampling Well?	MW22	Confidence Level (Decision Criteria)?	85.0%
Confidence Level calculated with log-linear regression is?	89.844%		
Plume Stability?	Expanding	; Decision Criteria is 85%.	
Slope: Point decay rate constant ( $k_{point}$ ), yr <sup>-1</sup>	NA @50% C.L.;	NA @85% C.L.	
Half Life for $k_{point}$ , yr	NA @50% C.L.;	NA @85% C.L.	



### 2. Spatial and Temporal Trend along Overall Plume Length for Multiple Wells:

Plot #1: Sampling date #1	<input type="text"/>
Plot #2: Sampling date #2	<input type="text"/>
Plot #3: Sampling date #3	<input type="text"/>
Plot #4: Sampling date #4	<input type="text"/>
Plot #5: Sampling date #5	<input type="text"/>
Plot #6: Sampling date #6	<input type="text"/>



**Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)**

Site Name:

Site Address:

Additional Description:

Well (Sampling) Location?

Level of Confidence (Decision Criteria)?

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

Sampling Event	Date Sampled	Hazardous Substances (unit is ug/L)				
		cDCE				
#1	7/14/2016	14				
#2	10/20/2016	9.9				
#3	1/26/2017	41				
#4	6/1/2017	23				
#5	9/23/2017	16				
#6	12/16/2017	14				
#7	3/10/2018	20				
#8	6/30/2018	14				
#9	9/22/2018	16				
#10	12/15/2018	17				
#11	6/15/2019	25				
#12	12/7/2019	38				
#13	6/27/2020	30				
#14	12/12/2020	30				
#15	6/25/2021	26				
#16	12/17/2021	15				

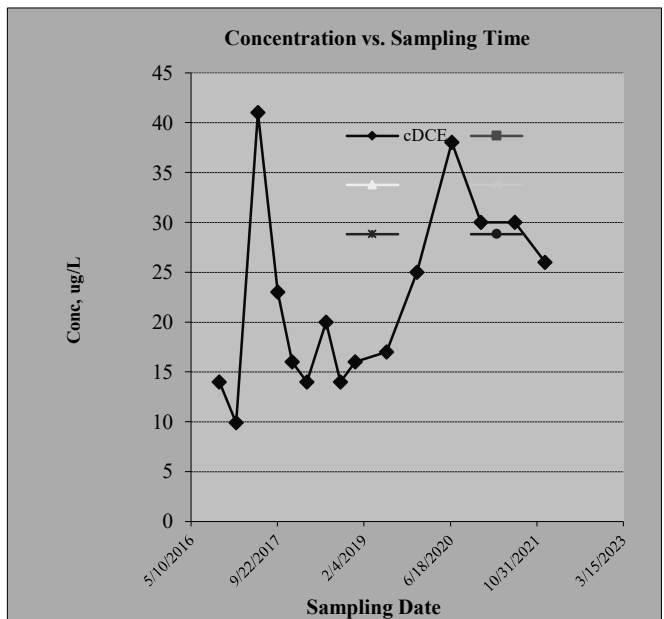
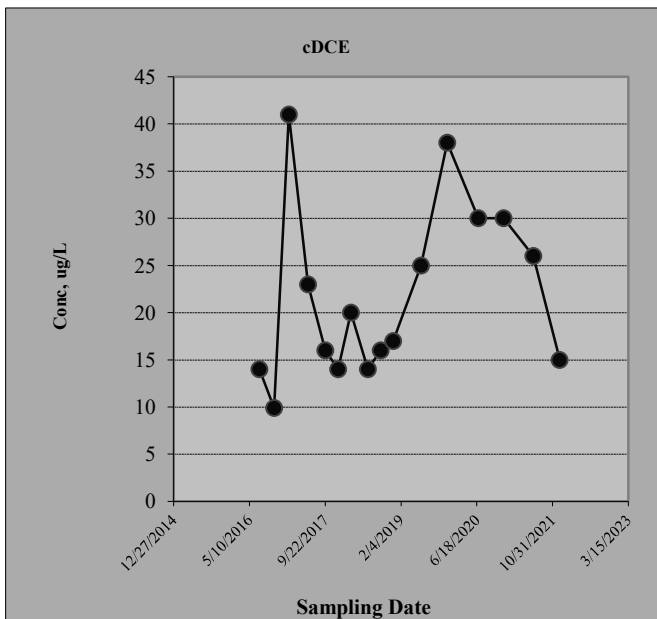
**2. Mann-Kendall Non-parametric Statistical Test Results**

Hazardous Substance?	cDCE					
Confidence Level Calculated?	93.00%	NA	NA	NA	NA	NA
<b>Plume Stability?</b>	<i>Expanding</i>	NA	NA	NA	NA	NA
Coefficient of Variation?		n<4	n<4	n<4	n<4	n<4
Mann-Kendall Statistic "S" value?	35	0	0	0	0	0
Number of Sampling Rounds?	16	0	0	0	0	0
Average Concentration?	21.81	NA	NA	NA	NA	NA
Standard Deviation?	9.16	NA	NA	NA	NA	NA
Coefficient of Variation?	0.42	NA	NA	NA	NA	NA
Blank if No Errors found		n<4	n<4	n<4	n<4	n<4

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

Hazardous substance?

Plume Stability?



## Module 2: Graphical Presentation of Historical Ground Water Data: (Well to Well Analysis)

Site Name: Troy Laundry Property

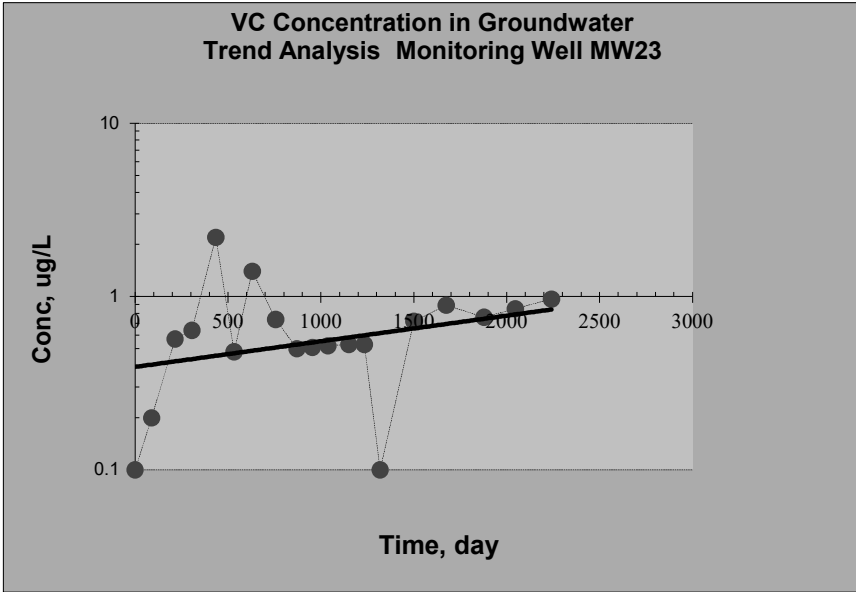
Site Address: 300 Boren Ave North Fairview Ave North

Additional Description: Seattle, Washington

Hazardous Substance VC

### 1. Temporal Trend at a Well (Concentration vs. Time & Groundwater Elevation : well-to-well analysis)

Name of Sampling Well?	MW23	Confidence Level (Decision Criteria)?	85.0%
Confidence Level calculated with log-linear regression is?	95.186%		
Plume Stability?	Expanding	; Decision Criteria is 85%.	
Slope: Point decay rate constant ( $k_{point}$ ), yr <sup>-1</sup>	NA @50% C.L.;	NA @85% C.L.	
Half Life for $k_{point}$ , yr	NA @50% C.L.;	NA @85% C.L.	



### 2. Spatial and Temporal Trend along Overall Plume Length for Multiple Wells:

Plot #1: Sampling date #1	
Plot #2: Sampling date #2	
Plot #3: Sampling date #3	
Plot #4: Sampling date #4	
Plot #5: Sampling date #5	
Plot #6: Sampling date #6	



## Module 2: Graphical Presentation of Historical Ground Water Data: (Well to Well Analysis)

Site Name: Troy Laundry Property

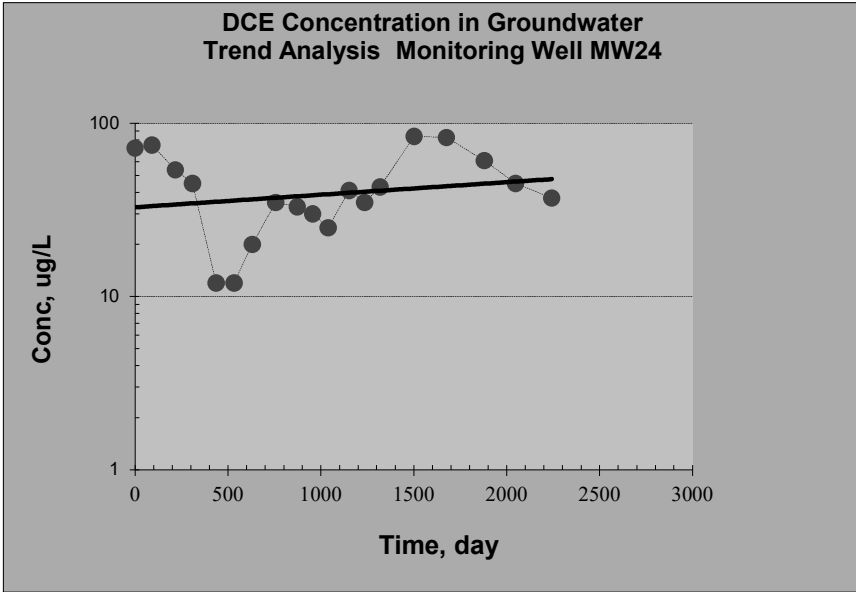
Site Address: 300 Boren Ave North Fairview Ave North

Additional Description: Seattle, Washington

Hazardous Substance: cis-1,2-DCE

### 1. Temporal Trend at a Well (Concentration vs. Time & Groundwater Elevation : well-to-well analysis)

Name of Sampling Well?	MW24	Confidence Level (Decision Criteria)?	85.0%
Confidence Level calculated with log-linear regression is?	61.305%		
Plume Stability?	Stable	; Decision Criteria is 85%.	
Slope: Point decay rate constant ( $k_{point}$ ), yr <sup>-1</sup>	0.058 @50% C.L.;	NA @85% C.L.	
Half Life for $k_{point}$ , yr	12.028 @50% C.L.;	NA @85% C.L.	



### 2. Spatial and Temporal Trend along Overall Plume Length for Multiple Wells:

Plot #1: Sampling date #1	
Plot #2: Sampling date #2	
Plot #3: Sampling date #3	
Plot #4: Sampling date #4	
Plot #5: Sampling date #5	
Plot #6: Sampling date #6	

## Module 2: Graphical Presentation of Historical Ground Water Data: (Well to Well Analysis)

Site Name: Troy Laundry Property

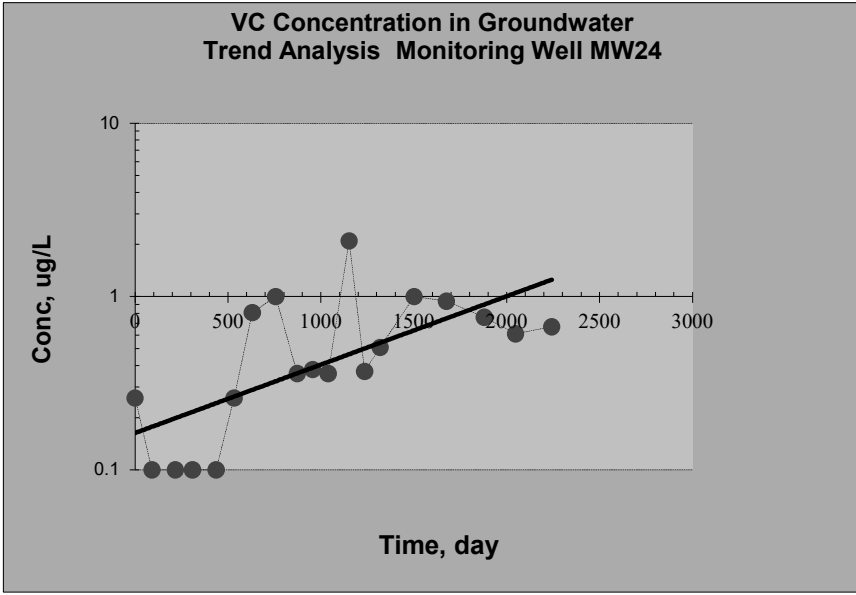
Site Address: 300 Boren Ave North Fairview Ave North

Additional Description: Seattle, Washington

Hazardous Substance VC

### 1. Temporal Trend at a Well (Concentration vs. Time & Groundwater Elevation : well-to-well analysis)

Name of Sampling Well?	MW24	Confidence Level (Decision Criteria)?	85.0%
Confidence Level calculated with log-linear regression is?	99.839%		
Plume Stability?	Expanding ; Decision Criteria is 85%.		
Slope: Point decay rate constant ( $k_{point}$ ), yr <sup>-1</sup>	NA @50% C.L.;	NA @85% C.L.	
Half Life for $k_{point}$ , yr	NA @50% C.L.;	NA @85% C.L.	



### 2. Spatial and Temporal Trend along Overall Plume Length for Multiple Wells:

Plot #1: Sampling date #1	
Plot #2: Sampling date #2	
Plot #3: Sampling date #3	
Plot #4: Sampling date #4	
Plot #5: Sampling date #5	
Plot #6: Sampling date #6	

**Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)**

Site Name:

Site Address:

Additional Description:

Well (Sampling) Location?

Level of Confidence (Decision Criteria)?

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

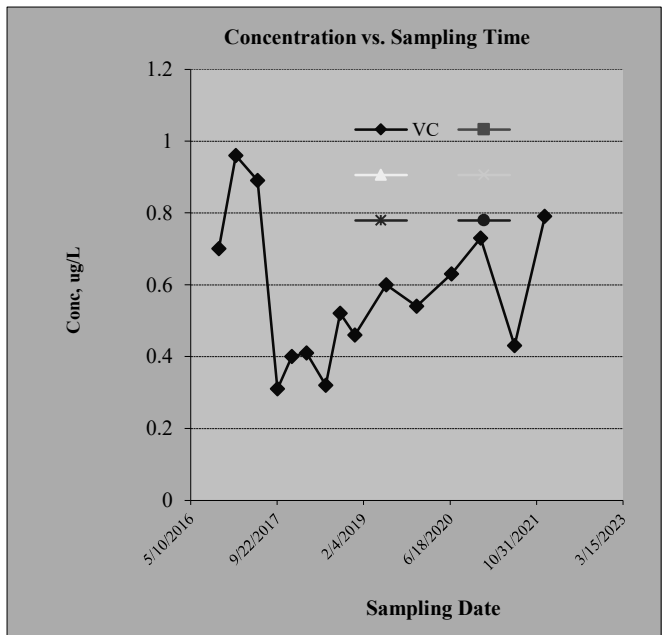
		Hazardous Substances (unit is ug/L)				
Sampling Event	Date Sampled	VC				
#1	7/13/2016	0.7				
#2	10/19/2016	0.96				
#3	1/25/2017	0.89				
#4	6/1/2017	0.31				
#5	9/23/2017	0.4				
#6	12/16/2017	0.41				
#7	3/10/2018	0.32				
#8	6/30/2018	0.52				
#9	9/22/2018	0.46				
#10	12/15/2018	0.6				
#11	6/15/2019	0.54				
#12	12/7/2019	0.63				
#13	6/27/2020	0.73				
#14	12/12/2020	0.43				
#15	6/25/2021	0.79				
#16	12/17/2021	3.6				

**2. Mann-Kendall Non-parametric Statistical Test Results**

Hazardous Substance?	VC					
Confidence Level Calculated?	90.30%	NA	NA	NA	NA	NA
<b>Plume Stability?</b>	<b>Expanding</b>	NA	NA	NA	NA	NA
Coefficient of Variation?		n<4	n<4	n<4	n<4	n<4
Mann-Kendall Statistic "S" value?	30	0	0	0	0	0
Number of Sampling Rounds?	16	0	0	0	0	0
Average Concentration?	0.77	NA	NA	NA	NA	NA
Standard Deviation?	0.78	NA	NA	NA	NA	NA
Coefficient of Variation?	1.02	NA	NA	NA	NA	NA
Blank if No Errors found		n<4	n<4	n<4	n<4	n<4

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

Hazardous substance?   
 Plume Stability?



## Module 2: Graphical Presentation of Historical Ground Water Data: (Well to Well Analysis)

Site Name: Troy Laundry Property

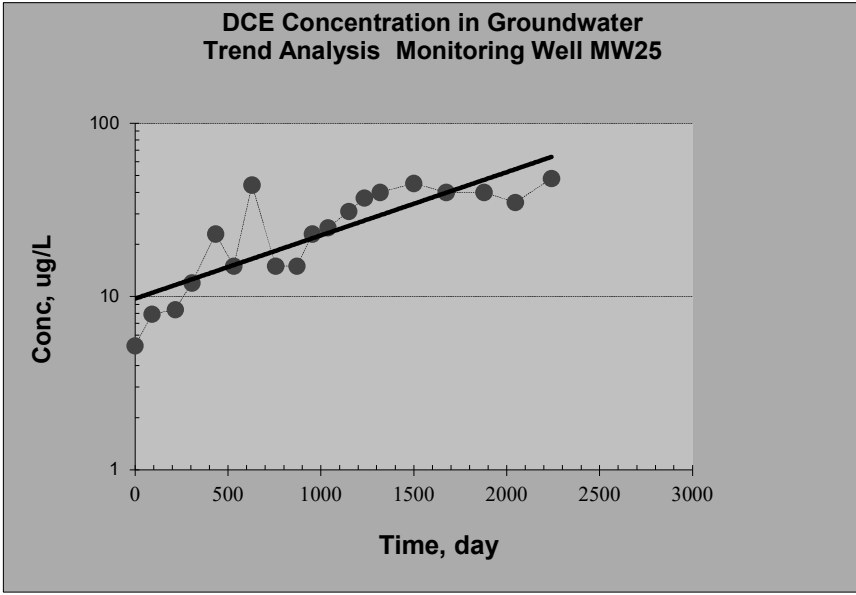
Site Address: 300 Boren Ave North Fairview Ave North

Additional Description: Seattle, Washington

Hazardous Substance: cis-1,2-DCE

### 1. Temporal Trend at a Well (Concentration vs. Time & Groundwater Elevation : well-to-well analysis)

Name of Sampling Well?	MW25	Confidence Level (Decision Criteria)?	85.0%
Confidence Level calculated with log-linear regression is?	99.819%		
Plume Stability?	Expanding ; Decision Criteria is 85%.		
Slope: Point decay rate constant ( $k_{point}$ ), yr <sup>-1</sup>	NA @50% C.L.;	NA @85% C.L.	
Half Life for $k_{point}$ , yr	NA @50% C.L.;	NA @85% C.L.	



### 2. Spatial and Temporal Trend along Overall Plume Length for Multiple Wells:

Plot #1: Sampling date #1	
Plot #2: Sampling date #2	
Plot #3: Sampling date #3	
Plot #4: Sampling date #4	
Plot #5: Sampling date #5	
Plot #6: Sampling date #6	







## Module 2: Graphical Presentation of Historical Ground Water Data: (Well to Well Analysis)

Site Name: Troy Laundry Property

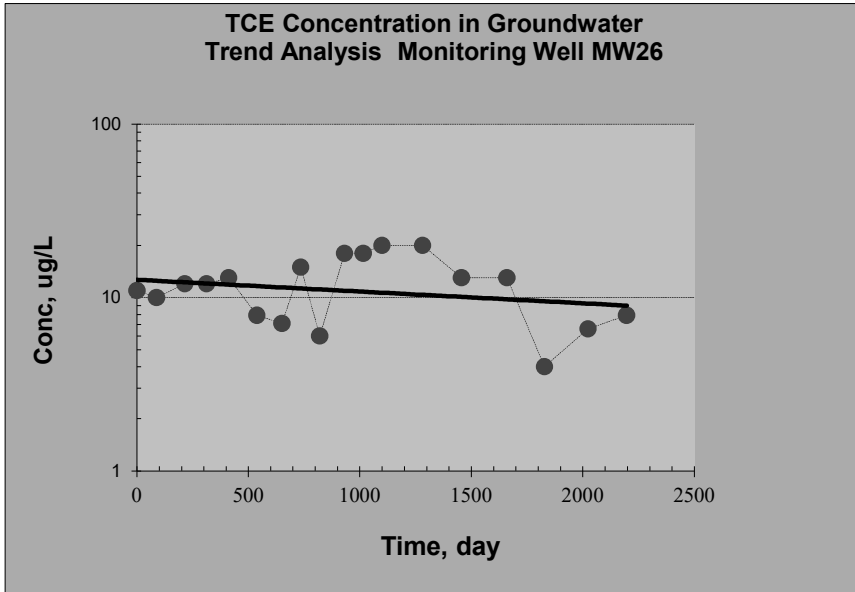
Site Address: 300 Boren Ave North Fairview Ave North

Additional Description: Seattle, Washington

Hazardous Substance: TCE

### 1. Temporal Trend at a Well (Concentration vs. Time & Groundwater Elevation : well-to-well analysis)

Name of Sampling Well?	MW26	Confidence Level (Decision Criteria)?	85.0%
Confidence Level calculated with log-linear regression is?	64.272%		
Plume Stability?	Stable	; Decision Criteria is 85%.	
Slope: Point decay rate constant ( $k_{point}$ ), yr <sup>-1</sup>	0.057 @50% C.L.;	NA @85% C.L.	
Half Life for $k_{point}$ , yr	12.179 @50% C.L.;	NA @85% C.L.	



### 2. Spatial and Temporal Trend along Overall Plume Length for Multiple Wells:

Plot #1: Sampling date #1	
Plot #2: Sampling date #2	
Plot #3: Sampling date #3	
Plot #4: Sampling date #4	
Plot #5: Sampling date #5	
Plot #6: Sampling date #6	

**Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)**

Site Name: Troy Site

Site Address: Seattle, Washington

Additional Description: MW27

Well (Sampling) Location? MW-27

Level of Confidence (Decision Criteria)? 85%

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

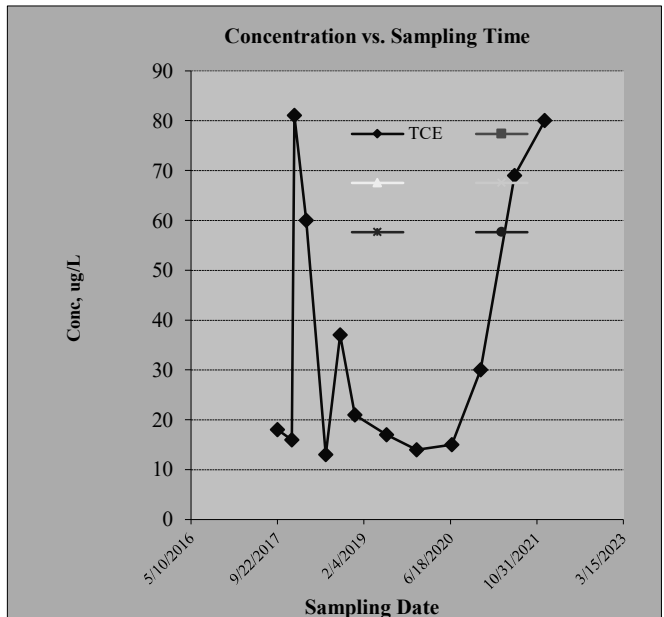
Sampling Event	Date Sampled	Hazardous Substances (unit is ug/L)				
		TCE				
#1	5/31/2017	18				
#2	9/21/2017	16				
#3	12/14/2017	81				
#4	12/29/2017	60				
#5	3/8/2018	13				
#6	6/28/2018	37				
#7	9/20/2018	21				
#8	12/14/2018	17				
#9	6/14/2019	14				
#10	12/5/2019	15				
#11	6/26/2020	30				
#12	12/10/2020	69				
#13	6/23/2021	80				
#14	12/15/2021	28				
#15						
#16						

**2. Mann-Kendall Non-parametric Statistical Test Results**

Hazardous Substance?	TCE					
Confidence Level Calculated?	66.60%	NA	NA	NA	NA	NA
Plume Stability?	Stable	NA	NA	NA	NA	NA
Coefficient of Variation?	CV <= 1	n<4	n<4	n<4	n<4	n<4
Mann-Kendall Statistic "S" value?	9	0	0	0	0	0
Number of Sampling Rounds?	14	0	0	0	0	0
Average Concentration?	35.64	NA	NA	NA	NA	NA
Standard Deviation?	25.55	NA	NA	NA	NA	NA
Coefficient of Variation?	0.72	NA	NA	NA	NA	NA
Blank if No Errors found		n<4	n<4	n<4	n<4	n<4

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

Hazardous substance? TCE  
 Plume Stability? Stable



**Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)**

Site Name: *Troy Site*

Site Address: *Seattle, Washington*

Additional Description: *MW28*

Well (Sampling) Location? **MW28**

Level of Confidence (Decision Criteria)? **85%**

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

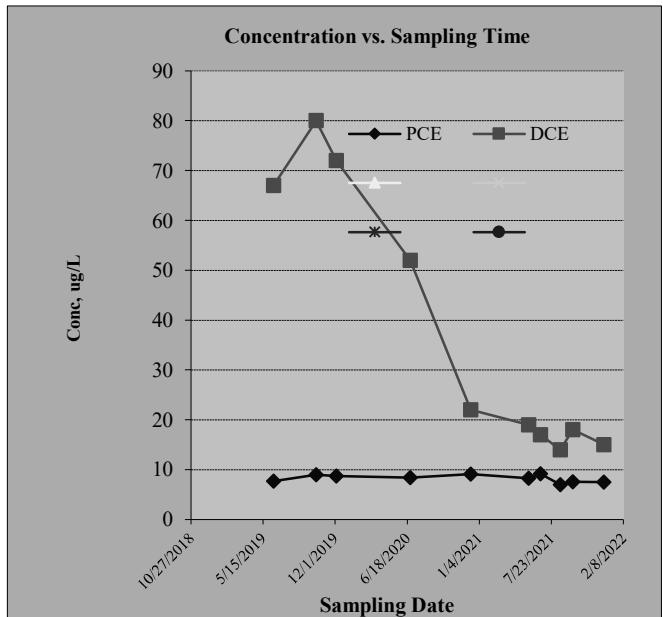
Sampling Event	Date Sampled	Hazardous Substances (unit is ug/L)			
		PCE	DCE		
#1	3/15/2019	7.7	67		
#2	6/13/2019	9	80		
#3	10/9/2019	8.7	72		
#4	12/4/2019	8.4	52		
#5	6/26/2020	9.1	22		
#6	12/11/2020	8.3	19		
#7	5/21/2021	9.2	17		
#8	6/23/2021	7	14		
#9	8/17/2021	7.6	18		
#10	9/21/2021	7.5	15		
#11	12/16/2021	5.2	17		
#12					
#13					
#14					
#15					
#16					

**2. Mann-Kendall Non-parametric Statistical Test Results**

Hazardous Substance?	PCE	DCE				
Confidence Level Calculated?	95.70%	99.90%	NA	NA	NA	NA
<b>Plume Stability?</b>	Shrinking	Shrinking	NA	NA	NA	NA
Coefficient of Variation?			n<4	n<4	n<4	n<4
Mann-Kendall Statistic "S" value?	-23	-40	0	0	0	0
Number of Sampling Rounds?	11	11	0	0	0	0
Average Concentration?	7.97	35.73	NA	NA	NA	NA
Standard Deviation?	1.17	26.28	NA	NA	NA	NA
Coefficient of Variation?	0.15	0.74	NA	NA	NA	NA
Blank if No Errors found			n<4	n<4	n<4	n<4

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

Hazardous substance? **PCE**  
 Plume Stability? **Shrinking**



**Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)**

Site Name: Troy Site

Site Address: Seattle, Washington

Additional Description: TCE

Well (Sampling) Location? MW29

Level of Confidence (Decision Criteria)? 85%

**1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.**

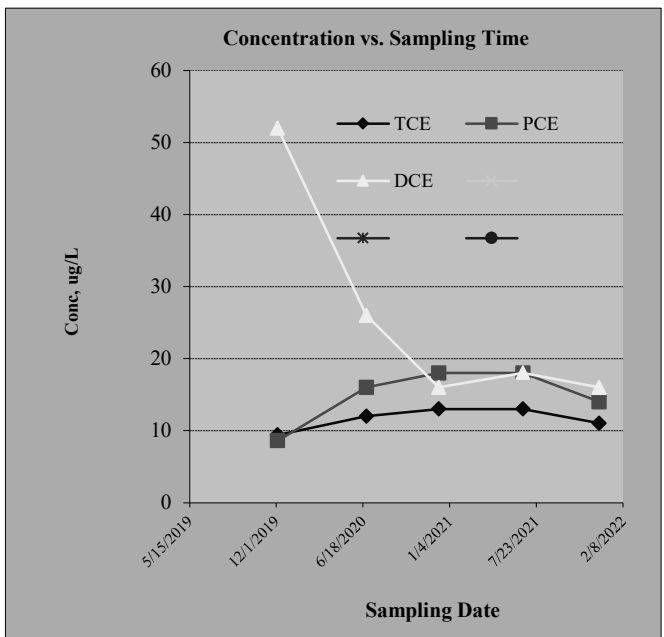
		Hazardous Substances (unit is ug/L)			
Sampling Event	Date Sampled	TCE	PCE	DCE	
#1	10/8/2019	9.4	8.6	52	
#2	12/4/2019	12	16	26	
#3	6/26/2020	13	18	16	
#4	12/10/2020	13	18	18	
#5	6/22/2021	11	14	16	
#6	12/15/2021	12	15	14	
#7					
#8					
#9					
#10					
#11					
#12					
#13					
#14					
#15					
#16					

**2. Mann-Kendall Non-parametric Statistical Test Results**

Hazardous Substance?	TCE	PCE	DCE			
Confidence Level Calculated?	64.00%	50.00%	97.20%	NA	NA	NA
<b>Plume Stability?</b>	Stable	Stable	Shrinking	NA	NA	NA
Coefficient of Variation?	CV <= 1	CV <= 1		n<4	n<4	n<4
Mann-Kendall Statistic "S" value?	3	2	-12	0	0	0
Number of Sampling Rounds?	6	6	6	0	0	0
Average Concentration?	11.73	14.93	23.67	NA	NA	NA
Standard Deviation?	1.37	3.49	14.50	NA	NA	NA
Coefficient of Variation?	0.12	0.23	0.61	NA	NA	NA
Blank if No Errors found				n<4	n<4	n<4

**3. Temporal Trend: Plot of Concentration vs. Sampling Time**

Hazardous substance? PCE  
 Plume Stability? Stable





## Module 2: Graphical Presentation of Historical Ground Water Data: (Well to Well Analysis)

Site Name: Troy Laundry Property

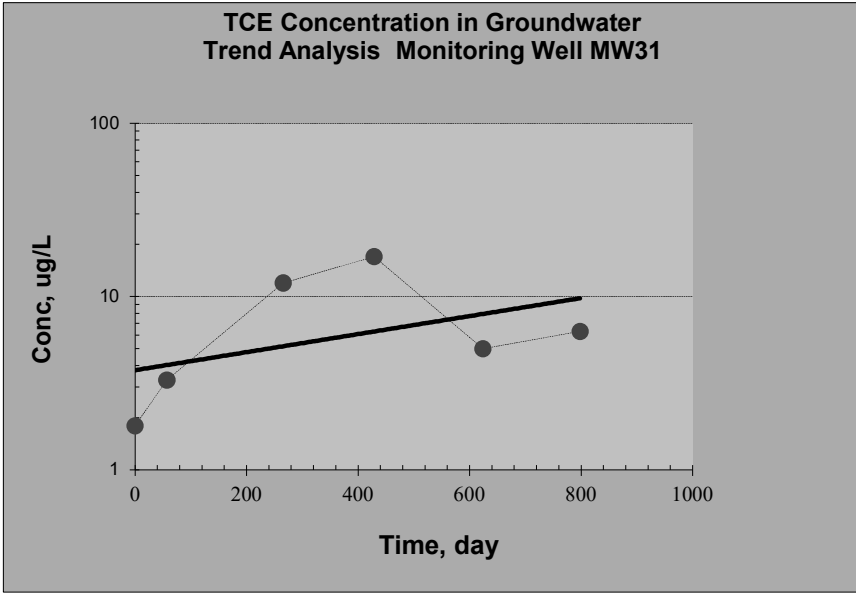
Site Address: 300 Boren Ave North Fairview Ave North

Additional Description: Seattle, Washington

Hazardous Substance TCE

### 1. Temporal Trend at a Well (Concentration vs. Time & Groundwater Elevation : well-to-well analysis)

Name of Sampling Well?	MW31	Confidence Level (Decision Criteria)?	85.0%
Confidence Level calculated with log-linear regression is?	63.881%		
Plume Stability?	Stable	; Decision Criteria is 85%.	
Slope: Point decay rate constant ( $k_{point}$ ), yr <sup>-1</sup>	0.437 @50% C.L.;	NA @85% C.L.	
Half Life for $k_{point}$ , yr	1.585 @50% C.L.;	NA @85% C.L.	



### 2. Spatial and Temporal Trend along Overall Plume Length for Multiple Wells:

Plot #1: Sampling date #1	<input type="text"/>
Plot #2: Sampling date #2	<input type="text"/>
Plot #3: Sampling date #3	<input type="text"/>
Plot #4: Sampling date #4	<input type="text"/>
Plot #5: Sampling date #5	<input type="text"/>
Plot #6: Sampling date #6	<input type="text"/>