



1180 NW Maple St., Suite 310  
Issaquah, WA 98027

T 425.395.0010  
TRCcompanies.com

August 24, 2020

Mr. Jason Cook, L.G.  
Washington State Department of Ecology  
Toxics Cleanup Program  
300 Desmond Drive SE  
Lacey, Washington 98503

Re: Quarterly Compliance Monitoring Report – July 2020  
Lorenz Residence  
8009 41<sup>st</sup> Avenue NE  
Seattle, Washington  
VCP Site No. NW1762

TRC Project Number: 015329.0004

Dear Mr. Cook:

TRC Environmental Corporation (TRC), is pleased to present this Quarterly Compliance Monitoring Report for July 2020 for the Lorenz Residence Site located at 8009 41<sup>st</sup> Avenue NE in Seattle, Washington (Site). Quarterly compliance monitoring was first performed in October 2019. This is the fourth quarterly sampling event for the Site.

The Site is currently enrolled in the Washington State Department of Ecology (Ecology) Voluntary Cleanup Program (VCP) as Site No. NW1762. We understand that you are the current Site Manager. The location of the Site is indicated on Figure 1.

A No Further Action (NFA) determination was issued for this Site by Ecology on July 10, 2019 under the authority of the Model Toxics Control Act (MTCA), Revised Code of Washington (RCW), Chapter 70.105D.050(1). Ecology's NFA determination requires the performance of compliance monitoring to confirm the long-term effectiveness of the cleanup.

A *Groundwater Compliance Monitoring Plan (GCMP)*, dated July 31, 2018 was prepared for the Site by TRC (formerly Environmental Partners, Inc. [EPI]<sup>1</sup>) in 2018 to formalize the obligation to continue groundwater performance sampling as required in the NFA determination. The GCMP was reviewed and approved by Ecology as a condition of the NFA. In addition, the monitoring tasks are a requirement of the Environmental Covenants (ECs) that serve as institutional controls for each property listed for the

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<sup>1</sup> EPI was acquired by TRC on December 27, 2019. For the purposes of this report EPI and TRC may be used interchangeably.

Site. This Quarterly Compliance Monitoring Report presents the results of the July 2020 groundwater monitoring event and is the fourth such sampling event under the GCMP.

## **GROUNDWATER MONITORING AND SAMPLING PROCEDURES**

All actions documented herein were in conformance with the procedures and methods approved in the GCMP. During the July 2020 monitoring event, groundwater levels were measured in all seven monitoring wells to determine depths to water and the hydraulic gradient. Groundwater samples were collected from the monitoring wells that were scheduled for sampling during the July 2020 event (MW-1, MW-4, MW-5, and MW-6). Groundwater samples were analyzed for the contaminants of concern (COCs), as established in the GCMP

Additional details of the July 2020 groundwater monitoring activities are described below.

### **Groundwater Measurements**

On July 15, 2020, TRC personnel measured water levels in the seven Site monitoring wells. An electronic water level meter was used to measure depth to water to the nearest 0.01 foot from a surveyed point at the top of the well casing. The measurements were subtracted from the surveyed casing elevations to establish piezometric groundwater elevations. Monitoring well MW-4 is fitted with an oleophilic sorbent “sock” for the purposes of passively collecting light non-aqueous phase liquid (LNAPL) that may enter the well. This sorbent sock was removed from the well prior to collection of water levels and groundwater samples.

A hydrocarbon interface probe was used to assess the presence and measure the thickness of LNAPL in the wells that contained LNAPL during the prior monitoring event. LNAPL was not identified in any of the monitoring wells during the July 2020 event.

The depth to groundwater ranged between 27.75 feet to 30.39 feet below grade. The piezometric elevation data indicate that groundwater continues to migrate to the northwest. The groundwater gradient averaged approximately 0.035 feet/foot as measured between wells MW-3 and MW-5. These piezometric conditions are consistent with previous findings at the Site. A summary of groundwater elevation data for the Site is included in Table 1. Figure 2 presents the groundwater elevations and piezometric contours for the July 2020 event.

### **Groundwater Sampling and Analysis**

On July 15, 2020, TRC collected groundwater samples from monitoring wells MW-1, MW-4, MW-5 and MW-6 using low-flow techniques. During pre-sample purging, geochemical conditions of the groundwater including temperature, pH, specific conductivity, dissolved oxygen (DO) and oxidation-reduction potential (ORP), were monitored. Groundwater samples were collected after these parameters had stabilized to within 10 percent of the prior reading.

Groundwater samples were placed into appropriately labeled, pre-preserved 40-milliliter vials and unpreserved 500 milliliter amber glass bottles using the same pump and tubing utilized for purging. The groundwater samples were placed in a chilled cooler and submitted to Friedman & Bruya, Inc. in Seattle, Washington, under standard chain of custody protocol.

All samples were analyzed for diesel-range and oil-range organics (DRO and ORO) using the Northwest Total Petroleum Hydrocarbons as Diesel (NWTPH-Dx) analytical method and naphthalene by U.S. Environmental Protection Agency (EPA) Method 8260C. Samples submitted for DRO and ORO were passed through a silica gel column prior to analysis to remove biogenic polar hydrocarbon compounds, per the Ecology-approved GCMP.

### **Groundwater Analytical Results – July 2020**

Table 2 summarizes the laboratory analytical data for the groundwater samples and Figure 2 depicts the analytical data at each well location. The laboratory analytical report is included in Attachment A. Pertinent field observations and analytical results are described below.

- The sorbent sock in well MW-4 exhibited minor apparent hydrocarbon staining but no LNAPL was observed in that well or any of the other Site monitoring wells.
- DRO was detected in samples from monitoring wells MW-1 and MW-4 at concentrations of 430 micrograms per liter ( $\mu\text{g/L}$ ) and 1,800  $\mu\text{g/L}$ , respectively. The detected DRO concentration at MW-4 exceeded the MTCA Method A Cleanup Level (CUL) for groundwater of 500  $\mu\text{g/L}$ .
- ORO was not detected in any of the groundwater samples.
- Naphthalene was only detected in groundwater from monitoring well MW-1 at a concentration of 7.2  $\mu\text{g/L}$ , which is less than the MTCA Method A CUL of 160  $\mu\text{g/L}$ . The detected concentration was also less than the groundwater screening level for potential vapor intrusion of 8.9  $\mu\text{g/L}$ .

After sampling, TRC reinstalled a new absorbent sock in MW-4.

### **COMPLIANCE MONITORING**

The GCMP allows for reductions or increases in sampling frequency of individual wells based on prior sampling results and trends in the available data. The GCMP established the following adaptive sampling protocols:

- Wells that do not exceed a CUL by more than 10 percent for four consecutive quarters will be reduced to semiannual sampling;
- Wells that do not exceed a CUL by more than 10 percent for two consecutive semiannual sampling events will be reduced to annual sampling;

- Wells that do not exhibit detectable concentrations of all COCs for a period of four consecutive quarters may be considered for removal from the sampling program.

Since this is the fourth consecutive quarterly sampling event for the Site, TRC proposes future groundwater sampling according to the schedule provided in the Conclusions section, below.

## CONCLUSIONS

The following conclusions are supported by the findings of the groundwater monitoring documented herein:

- LNAPL does not currently appear to be present at the Site.
- Compliance monitoring wells MW-5 and MW-6 consistently meet CULs and confirm the downgradient point of compliance. Samples from these wells have never contained a detectable concentration of DRO or ORO. Based upon the GCMP, the sampling frequency in these wells will be reduced to semi-annual and may be reduced to annual sampling based on future data.
- Naphthalene does not appear to be present at the Site at a concentration exceeding a CUL. Naphthalene has remained at concentrations less than the CUL for four consecutive quarters. In accordance with the GCMP, analyses for naphthalene will be reduced to semi-annual frequency.
- Monitoring wells MW-1 and MW-4 exceeded the CUL for DRO by more than 10 percent during the last year. These wells will continue to be sampled on a quarterly basis.
- Water levels will continue to be collected from all seven wells on a quarterly basis.

In accordance with the GCMP, future sampling events will follow the sampling schedule illustrated below.

| Sampling Event | MW-1        | MW-4        | MW-5     | MW-6     |
|----------------|-------------|-------------|----------|----------|
| October 2020   | DRO, ORO    | DRO, ORO    |          |          |
| January 2021   | DRO, ORO, N | DRO, ORO, N | DRO, ORO | DRO, ORO |
| April 2021     | DRO, ORO    | DRO, ORO    |          |          |
| July 2020      | DRO, ORO, N | DRO, ORO, N | DRO, ORO | DRO, ORO |

Notes:

- DRO Diesel-range organics
- N Naphthalene
- ORO Oil-range organics

Mr. Jason Cook, L.G., Ecology  
Quarterly Compliance Monitoring Report – July 2020  
Lorenz Residence  
8009 41<sup>st</sup> Avenue NE, Seattle, WA  
August 24, 2020

This sampling schedule may be further modified as additional data become available. As indicated in the GCMP, sampling frequency may be increased if concentrations in particular wells exceed a CUL by more than 10 percent. If you have any questions or comments regarding this report, please do not hesitate to contact us at (425) 395-0010.

Sincerely,

*Mariem Esparra*

*Prepared by:*  
Mariem Esparra  
Project Engineer

cc: Ms. Carol Lorenz  
Mr. John Houlihan, Houlihan Law



*Adam Morine*

*Reviewed and approved by:*  
Adam Morine, P.E.  
Senior Engineer

## ENCLOSURES

### Tables

Table 1 Groundwater Elevations  
Table 2 Groundwater Analytical Results

### Figures

Figure 1 General Vicinity Map  
Figure 2 Groundwater Contours and Analytical Results – July 2020

### Attachments

Attachment A Laboratory Analytical Report

## Tables

**Table 1**  
**Groundwater Elevations**  
**Quarterly Compliance Monitoring Report – July 2020**  
**Lorenz Residence**  
**8009 41st Avenue NE Seattle, Washington**

| Well ID | Date      | Total Well Depth | North Edge of PVC | Depth to Water | Depth to Product | Product Thickness | Calculated Groundwater Elevation |
|---------|-----------|------------------|-------------------|----------------|------------------|-------------------|----------------------------------|
| MW-1    | 10/8/2019 | 35.60            | 336.26            | 30.50          | 30.24            | 0.26              | 305.76                           |
|         | 1/22/2020 |                  | 336.26            | 29.16          | NP               | Sheen             | 307.10                           |
|         | 4/27/2020 |                  | 336.26            | 28.03          | NP               | 0                 | 308.23                           |
|         | 7/15/2020 |                  | 336.26            | 28.75          | NP               | Sheen             | 307.51                           |
| MW-2    | 10/8/2019 | 35.69            | 336.08            | 30.60          | NP               | 0                 | 305.48                           |
|         | 1/22/2020 |                  | 336.08            | 28.89          | NP               | 0                 | 307.19                           |
|         | 4/27/2020 |                  | 336.08            | 27.77          | NP               | 0                 | 308.31                           |
|         | 7/15/2020 |                  | 336.08            | 28.49          | NP               | Sheen             | 307.59                           |
| MW-3    | 10/8/2019 | 36.15            | 336.19            | 30.21          | NP               | 0                 | 305.98                           |
|         | 1/22/2020 |                  | 336.19            | 29.18          | NP               | 0                 | 307.01                           |
|         | 4/27/2020 |                  | 336.19            | 27.99          | NP               | 0                 | 308.20                           |
|         | 7/15/2020 |                  | 336.19            | 28.68          | NP               | Sheen             | 307.51                           |
| MW-4    | 10/8/2019 | 35               | 336.20            | 29.67          | 29.59            | 0.08              | 306.53                           |
|         | 1/22/2020 |                  | 336.20            | 27.05          | 27.02            | 0.03              | 309.15                           |
|         | 4/27/2020 |                  | 336.20            | 25.70          | NP               | 0                 | 310.50                           |
|         | 7/15/2020 |                  | 336.20            | 27.77          | NP               | Sheen             | 308.43                           |
| MW-5    | 10/8/2019 | 35               | 331.81            | 32.15          | NP               | 0                 | 299.66                           |
|         | 1/22/2020 |                  | 331.81            | 31.80          | NP               | 0                 | 300.01                           |
|         | 4/27/2020 |                  | 331.81            | 29.84          | NP               | 0                 | 301.97                           |
|         | 7/15/2020 |                  | 331.81            | 30.39          | NP               | 0                 | 301.42                           |
| MW-6    | 10/8/2019 | 34.59            | 333.91            | 30.85          | NP               | 0                 | 303.06                           |
|         | 1/22/2020 |                  | 333.91            | 30.29          | NP               | 0                 | 303.62                           |
|         | 4/27/2020 |                  | 333.91            | 28.86          | NP               | 0                 | 305.05                           |
|         | 7/15/2020 |                  | 333.91            | 29.44          | NP               | 0                 | 304.47                           |
| MW-7    | 10/8/2019 | 35               | 333.56            | 29.11          | NP               | 0                 | 304.45                           |
|         | 1/22/2020 |                  | 333.56            | 28.33          | NP               | 0                 | 305.23                           |
|         | 4/27/2020 |                  | 333.56            | 27.16          | NP               | 0                 | 306.40                           |
|         | 7/15/2020 |                  | 333.56            | 27.75          | NP               | 0                 | 305.81                           |

Notes:

Measurements presented in feet.

Horizontal datum: North American Datum (NAD) 1983/2007 Washington State Plane North Zone.

Vertical datum: North American Datum 1998 (NAVD 88) - based on GPS measurements using the Washington State Reference Network. Referenced to Washington State Department of Transportation (WSDOT) Monument GP17522-151, with published elevation of 361 feet, June 2009.

- PVC Polyvinyl chloride.
- NP No product in well.
- NM Not measured.

**Table 2**  
**Groundwater Analytical Results**  
**Quarterly Compliance Monitoring Report – July 2020**  
**Lorenz Residence**  
**8009 41st Avenue NE Seattle, Washington**

| Sample Location   | Sample Date | Petroleum Hydrocarbons <sup>a</sup> |            | Volatile Organic Compounds <sup>b</sup> |
|---|-------------|-------------------------------------|------------|---|
|   |             | DRO                                 | ORO        | Naphthalene                             |
| MW-1  | 10/8/2019   | NS                                  | NS         | NS                                      |
|   | 1/22/2020   | <b>500</b>                          | <250       | <b>12</b>                               |
|   | 4/27/2020   | <b>690</b>                          | <250       | <b>15</b>                               |
|   | 7/15/2020   | <b>430</b>                          | <250       | <b>7.2</b>                              |
| MW-4  | 10/8/2019   | NS                                  | NS         | NS                                      |
|   | 1/22/2020   | NS                                  | NS         | NS                                      |
|   | 4/27/2020   | <b>200</b>                          | <250       | <1                                      |
|   | 7/15/2020   | <b>1,800</b>                        | <250       | <1                                      |
| MW-5  | 10/8/2019   | <50                                 | <250       | <1                                      |
|   | 1/22/2020   | <50                                 | <250       | <1                                      |
|   | 4/27/2020   | <50                                 | <250       | <1                                      |
|   | 7/15/2020   | <50                                 | <250       | <1                                      |
| MW-6  | 10/8/2019   | <50                                 | <250       | <1                                      |
|   | 1/22/2020   | <50                                 | <250       | <1                                      |
|   | 4/27/2020   | <50                                 | <250       | <1                                      |
|   | 7/15/2020   | <50                                 | <250       | <1                                      |
| <b>MTCA Method A Cleanup Levels for Groundwater<sup>c</sup></b> |             | <b>500</b>                          | <b>500</b> | <b>160</b>                              |

Notes:

All results presented in micrograms per liter (µg/L).

**Bold** Bold results exceed the laboratory reporting limit.

**Shaded** Shaded results exceed the cleanup level.

a Analyzed by Method NWTPH-Dx. Samples extracts passed through a silica gel column prior to analysis.

b Analyzed by EPA Method 8260C.

c Model Toxics Control Act (MTCA) Method A Cleanup Levels for Groundwater, Table 720-1, WAC 173-340-900.

NS Not sampled; light non-aqueous phase liquid in well.

Compounds:

DRO Diesel-range organics

ORO Oil-range organics

## Figures



**NOTES:**

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)  
SEATTLE, WA NORTH

2017  
SCALE = 1:24,000



1180 NW MAPLE ST, SUITE 310  
ISSAQUAH, WA 98027  
425.395.0010  
WWW.TRCCOMPANIES.COM

**FIGURE 1**  
**SITE VICINITY MAP**

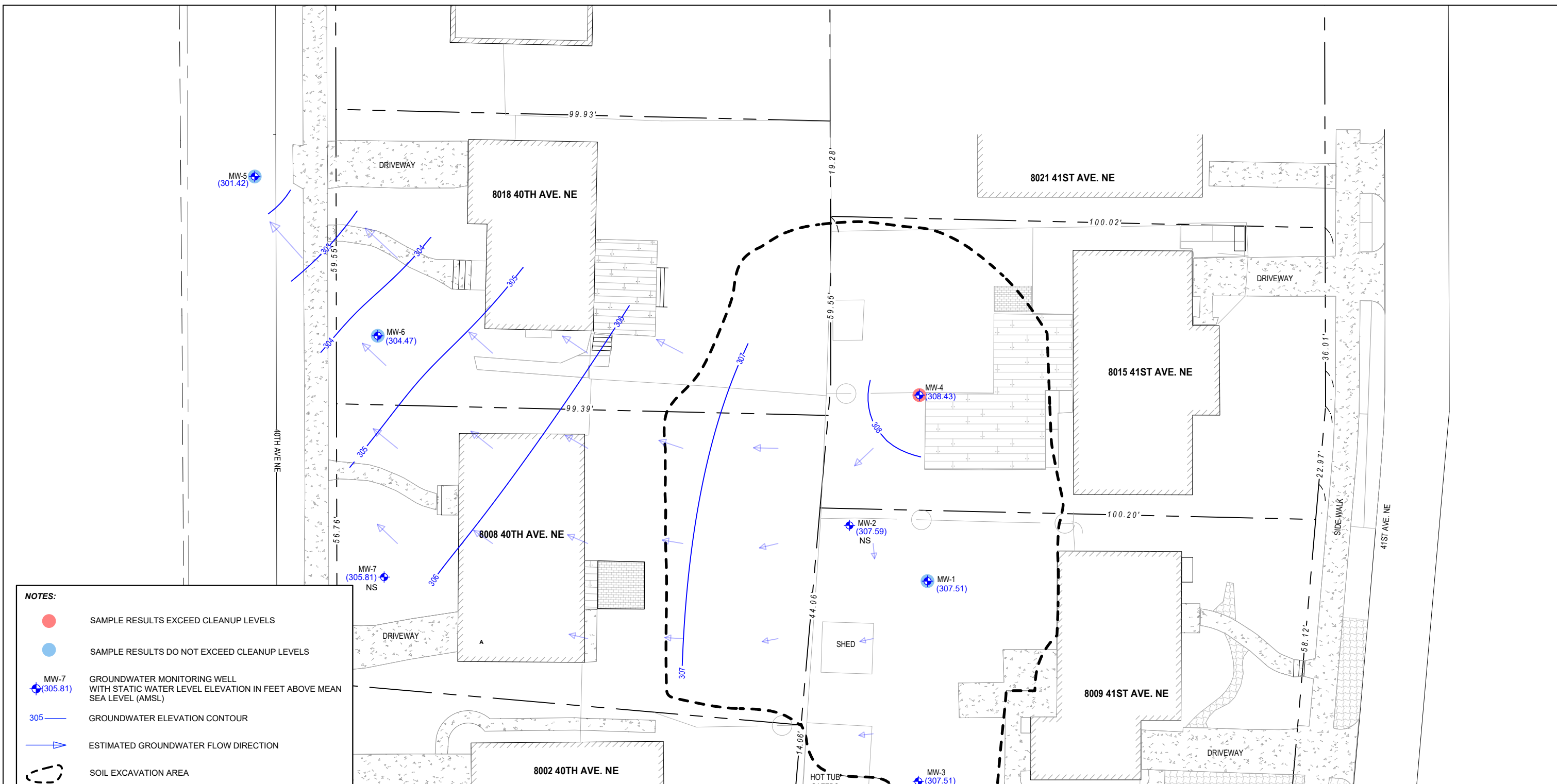
**REPORT**  
QUARTERLY COMPLIANCE  
MONITORING REPORT  
THIRD QUARTER 2020

**PREPARED FOR**  
ALLSTATE INSURANCE

**PROJECT NUMBER**  
015329.0004.0000

**LOCATION**  
8009 41ST AVENUE NE  
SEATTLE, WASHINGTON

**DATE** ..... 7/30/20  
**DRAWN BY** ..... JYT  
**REVIEWED BY** ..... ARM



- NOTES:**
- SAMPLE RESULTS EXCEED CLEANUP LEVELS
  - SAMPLE RESULTS DO NOT EXCEED CLEANUP LEVELS
  - ⊕ MW-7 (305.81) GROUNDWATER MONITORING WELL WITH STATIC WATER LEVEL ELEVATION IN FEET ABOVE MEAN SEA LEVEL (AMSL)
  - 305 GROUNDWATER ELEVATION CONTOUR
  - ➔ ESTIMATED GROUNDWATER FLOW DIRECTION
  - SOIL EXCAVATION AREA
  - APPROXIMATE PARCEL BOUNDARY
  - NS NOT SAMPLED

**TABLE NOTES:**  
 ALL RESULTS PRESENTED IN MICROGRAMS PER LITER (µg/L).  
**SHADED** SAMPLE RESULTS EXCEED THE CLEANUP LEVEL  
**BOLD** SAMPLE RESULTS EXCEED LABORATORY REPORTING LIMIT  
 < LESS THAN LABORATORY REPORTING LIMIT SHOWN  
 DRO DIESEL-RANGE ORGANICS BY NWTPH-DX  
 ORO OIL-RANGE ORGANICS BY NWTPH-DX  
 NAPHTHALENE BY EPA METHOD 8260C

HORIZONTAL SCALE: 1" = 20'

| SAMPLE LOCATION                                     | DATE    | PETROLEUM HYDROCARBONS |            | VOLATILE ORGANIC COMPOUNDS |
|---|---------|------------------------|------------|----------------------------|
|   |         | DRO                    | ORO        | NAPHTHALENE                |
| MW-1  | 7/15/20 | <b>430</b>             | <250       | <b>7.2</b>                 |
| MW-4  | 7/15/20 | <b>1,800</b>           | <250       | <1                         |
| MW-5  | 7/15/20 | <50                    | <250       | <1                         |
| MW-6  | 7/15/20 | <50                    | <250       | <1                         |
| <b>MTCA METHOD A CLEANUP LEVELS FOR GROUNDWATER</b> |         | <b>500</b>             | <b>500</b> | <b>160</b>                 |

**TRC** 1180 NW MAPLE ST, SUITE 310  
 ISSAQUAH, WA 98027  
 WWW.TRCCOMPANIES.COM  
 425.395.0010

**FIGURE 2**  
 GROUNDWATER CONTOURS AND ANALYTICAL RESULTS - JULY 2020

**REPORT**  
 QUARTERLY COMPLIANCE MONITORING REPORT  
 THIRD QUARTER 2020

**PREPARED FOR**  
 ALLSTATE INSURANCE

**PROJECT NUMBER**  
 015329.0004.0000

**LOCATION**  
 8009 41ST AVENUE NE  
 SEATTLE, WASHINGTON

**DATE** ..... 7/30/20  
**DRAWN BY** ..... JYT  
**REVIEWED BY** ..... ARM

**Attachment A**  
**Laboratory Analytical Report**

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 21, 2020

Mariem Esparra, Project Manager  
TRC Environmental  
1180 NW Maple St, Suite 310  
Issaquah, WA 98027

RE: 015329, F&BI 007258

Dear Ms Esparra:

Included are the results from the testing of material submitted on July 15, 2020 from the 015329, F&BI 007258 project. There are 10 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl  
Project Manager

Enclosures  
c: Cynthia Moon, Adam Morine  
TRC0721R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on July 15, 2020 by Friedman & Bruya, Inc. from the TRC Environmental 015329, F&BI 007258 project. Samples were logged in under the laboratory ID's listed below.

| <u>Laboratory ID</u> | <u>TRC Environmental</u> |
|----------------------|--------------------------|
| 007258 -01           | MW-5                     |
| 007258 -02           | MW-6                     |
| 007258 -03           | MW-4                     |
| 007258 -04           | MW-1                     |

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/21/20

Date Received: 07/15/20

Project: 015329, F&BI 007258

Date Extracted: 07/16/20

Date Analyzed: 07/16/20

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

| <u>Sample ID</u><br>Laboratory ID | <u>Diesel Range</u><br>(C <sub>10</sub> -C <sub>25</sub> ) | <u>Motor Oil Range</u><br>(C <sub>25</sub> -C <sub>36</sub> ) | <u>Surrogate</u><br><u>(% Recovery)</u><br>(Limit 47-140) |
|-----------------------------------|--|---|---|
| MW-5<br>007258-01                 | <50  | <250  | 110   |
| MW-6<br>007258-02                 | <50  | <250  | 94  |
| MW-4<br>007258-03                 | 1,800  | <250  | 122   |
| MW-1<br>007258-04                 | 430  | <250  | 108   |
| Method Blank<br>00-1643 MB        | <50  | <250  | 109   |

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

|                   |            |             |                     |
|-------------------|------------|-------------|---------------------|
| Client Sample ID: | MW-5       | Client:     | TRC Environmental   |
| Date Received:    | 07/15/20   | Project:    | 015329, F&BI 007258 |
| Date Extracted:   | 07/16/20   | Lab ID:     | 007258-01           |
| Date Analyzed:    | 07/16/20   | Data File:  | 071616.D            |
| Matrix:           | Water      | Instrument: | GCMS13              |
| Units:            | ug/L (ppb) | Operator:   | MS                  |

| Surrogates:           | % Recovery: | Lower Limit: | Upper Limit: |
|-----------------------|-------------|--------------|--------------|
| 1,2-Dichloroethane-d4 | 96          | 50           | 150          |
| Toluene-d8            | 97          | 50           | 150          |
| 4-Bromofluorobenzene  | 100         | 50           | 150          |

| Compounds:  | Concentration<br>ug/L (ppb) |
|-------------|-----------------------------|
| Naphthalene | <1                          |

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

|                   |            |             |                     |
|-------------------|------------|-------------|---------------------|
| Client Sample ID: | MW-6       | Client:     | TRC Environmental   |
| Date Received:    | 07/15/20   | Project:    | 015329, F&BI 007258 |
| Date Extracted:   | 07/16/20   | Lab ID:     | 007258-02           |
| Date Analyzed:    | 07/16/20   | Data File:  | 071617.D            |
| Matrix:           | Water      | Instrument: | GCMS13              |
| Units:            | ug/L (ppb) | Operator:   | MS                  |

| Surrogates:           | % Recovery: | Lower Limit: | Upper Limit: |
|-----------------------|-------------|--------------|--------------|
| 1,2-Dichloroethane-d4 | 102         | 50           | 150          |
| Toluene-d8            | 101         | 50           | 150          |
| 4-Bromofluorobenzene  | 100         | 50           | 150          |

| Compounds:  | Concentration<br>ug/L (ppb) |
|-------------|-----------------------------|
| Naphthalene | <1                          |

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

|                   |            |             |                     |
|-------------------|------------|-------------|---------------------|
| Client Sample ID: | MW-4       | Client:     | TRC Environmental   |
| Date Received:    | 07/15/20   | Project:    | 015329, F&BI 007258 |
| Date Extracted:   | 07/16/20   | Lab ID:     | 007258-03           |
| Date Analyzed:    | 07/16/20   | Data File:  | 071618.D            |
| Matrix:           | Water      | Instrument: | GCMS13              |
| Units:            | ug/L (ppb) | Operator:   | MS                  |

| Surrogates:           | % Recovery: | Lower Limit: | Upper Limit: |
|-----------------------|-------------|--------------|--------------|
| 1,2-Dichloroethane-d4 | 99          | 50           | 150          |
| Toluene-d8            | 97          | 50           | 150          |
| 4-Bromofluorobenzene  | 99          | 50           | 150          |

| Compounds:  | Concentration<br>ug/L (ppb) |
|-------------|-----------------------------|
| Naphthalene | <1                          |

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

|                   |            |             |                     |
|-------------------|------------|-------------|---------------------|
| Client Sample ID: | MW-1       | Client:     | TRC Environmental   |
| Date Received:    | 07/15/20   | Project:    | 015329, F&BI 007258 |
| Date Extracted:   | 07/16/20   | Lab ID:     | 007258-04           |
| Date Analyzed:    | 07/16/20   | Data File:  | 071619.D            |
| Matrix:           | Water      | Instrument: | GCMS13              |
| Units:            | ug/L (ppb) | Operator:   | MS                  |

| Surrogates:           | % Recovery: | Lower Limit: | Upper Limit: |
|-----------------------|-------------|--------------|--------------|
| 1,2-Dichloroethane-d4 | 102         | 50           | 150          |
| Toluene-d8            | 99          | 50           | 150          |
| 4-Bromofluorobenzene  | 102         | 50           | 150          |

| Compounds:  | Concentration<br>ug/L (ppb) |
|-------------|-----------------------------|
| Naphthalene | 7.2                         |

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

|                   |                |             |                     |
|-------------------|----------------|-------------|---------------------|
| Client Sample ID: | Method Blank   | Client:     | TRC Environmental   |
| Date Received:    | Not Applicable | Project:    | 015329, F&BI 007258 |
| Date Extracted:   | 07/16/20       | Lab ID:     | 00-1613 mb          |
| Date Analyzed:    | 07/16/20       | Data File:  | 071609.D            |
| Matrix:           | Water          | Instrument: | GCMS13              |
| Units:            | ug/L (ppb)     | Operator:   | MS                  |

| Surrogates:           | % Recovery: | Lower Limit: | Upper Limit: |
|-----------------------|-------------|--------------|--------------|
| 1,2-Dichloroethane-d4 | 103         | 50           | 150          |
| Toluene-d8            | 97          | 50           | 150          |
| 4-Bromofluorobenzene  | 94          | 50           | 150          |

| Compounds:  | Concentration<br>ug/L (ppb) |
|-------------|-----------------------------|
| Naphthalene | <1                          |

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/21/20

Date Received: 07/15/20

Project: 015329, F&BI 007258

**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 Silica Gel

| Analyte         | Reporting<br>Units | Spike<br>Level | Percent<br>Recovery<br>LCS | Percent<br>Recovery<br>LCSD | Acceptance<br>Criteria | RPD<br>(Limit 20) |
|-----------------|--------------------|----------------|----------------------------|-----------------------------|------------------------|-------------------|
| Diesel Extended | ug/L (ppb)         | 2,500          | 76                         | 80                          | 61-133                 | 5                 |

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/21/20

Date Received: 07/15/20

Project: 015329, F&BI 007258

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

Laboratory Code: 007224-01 (Matrix Spike)

| Analyte     | Reporting<br>Units | Spike<br>Level | Sample<br>Result | Percent<br>Recovery<br>MS | Acceptanc<br>e Criteria |
|-------------|--------------------|----------------|------------------|---------------------------|-------------------------|
| Naphthalene | ug/L (ppb)         | 10             | <1               | 101                       | 70-130                  |

Laboratory Code: Laboratory Control Sample

| Analyte     | Reporting<br>Units | Spike<br>Level | Percent<br>Recovery<br>LCS | Percent<br>Recovery<br>LCSD | Acceptance<br>Criteria | RPD<br>(Limit 20) |
|-------------|--------------------|----------------|----------------------------|-----------------------------|------------------------|-------------------|
| Naphthalene | ug/L (ppb)         | 10             | 96                         | 105                         | 70-130                 | 9                 |

# 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.

007258

SAMPLE CHAIN OF CUSTODY

ME 07-15-20

Page # 1 of 1 vwb

Report To: Morgan Espino & Associates

Company: TRC

Address: 1180 NW Maple St. Ste 310

City, State, ZIP: Issaquah, WA 98027

Phone: 425 395 0210 Email: m.espino@trc.com

am@trc.com

|                               |  |            |
|-------------------------------|--|------------|
| PROJECT NAME<br><u>015329</u> |  | PO #       |
| REMARKS                       |  | INVOICE TO |

TURNAROUND TIME: 5 days

Standard turnaround  
 RUSH  
 Rush charges authorized by: \_\_\_\_\_

SAMPLE DISPOSAL:  
 Archive samples  
 Other  
 Default: Dispose after 30 days

| Sample ID | Lab ID | Date Sampled | Time Sampled | Sample Type | # of Jars | ANALYSES REQUESTED      |          |               |            |               |               |               |             |  |  | Notes |                       |
|-----------|--------|--------------|--------------|-------------|-----------|-------------------------|----------|---------------|------------|---------------|---------------|---------------|-------------|--|--|-------|-----------------------|
|           |        |              |              |             |           | NWTPH-Dx <sup>2/5</sup> | NWTPH-Gx | BTEX EPA 8021 | NWTPH-HCID | VOCs EPA 8260 | PAHs EPA 8270 | PCBs EPA 8082 | Naphthalene |  |  |       |                       |
| MW-5      | 01 A-D | 7-15-20      | 1008         | WATER       | 1         | X                       |          |               |            |               |               |               |             |  |  | X     | Dx silica gel cleanup |
| MW-6      | 02     |              | 1054         |             | 1         | X                       |          |               |            |               |               |               |             |  |  | X     |                       |
| MW-4      | 03     |              | 1210         |             | 1         | X                       |          |               |            |               |               |               |             |  |  | X     |                       |
| MW-1      | 04     |              | 1345         |             | 1         | X                       |          |               |            |               |               |               |             |  |  | X     |                       |

Samples received at 4 of 07

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

|                                       |           |            |         |         |      |
|---------------------------------------|-----------|------------|---------|---------|------|
| Relinquished by: <u>Randy Mauldin</u> | SIGNATURE | PRINT NAME | COMPANY | DATE    | TIME |
| Received by: <u>Khari Hoang</u>       |           |            |         | 7-15-20 | 1500 |
| Relinquished by:                      |           |            |         | 7-15-20 | 1500 |
| Received by:                          |           |            |         |         |      |