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May 4, 2021

Ms. Jing Song
Washington State Department of Ecology
Toxics Cleanup Program, Northwest Regional Office
3190 160th Avenue Southeast
Bellevue, Washington

Re: Background Organic Carbon Study
Former Meeker Cleaners Site
1317 West Meeker
Kent, Washington
VCP Project No.: NW3168
Cleanup Site No.: 1177

TRC Project Number: 430367.0

Dear Ms. Song:

TRC Environmental Corporation (TRC) is pleased to submit this Letter Report documenting a background organic carbon assessment at the Former Meeker Cleaners Site located at 1317 West Meeker, Kent, Washington (Site). The Site location is depicted in the General Vicinity Map presented in Figure 1.

We received your Opinion Letter dated May 5, 2020 (Opinion Letter). The Opinion Letter called for a number of actions including additional soil sampling, evaluating background organic carbon concentrations in groundwater, installing and sampling additional groundwater monitoring wells, decommissioning monitoring wells, and evaluating the vapor intrusion pathway.

After reviewing the Opinion Letter, it occurred to us that many of the actions relating to groundwater impacts in the Opinion Letter hinge on the acceptance of the use of the Northwest Total Petroleum Hydrocarbons as Diesel Extended (NWTPH-Dx) Method's silica gel cleanup (SGC) option for diesel-range organics (DRO) and oil-range organics (ORO) analyses at the Site. Therefore, it made good sense to our team that conducting an organic study would likely assist in reducing the action items associated with impacts at the Site. We consulted with you via email regarding procedures for conducting such a study.

Following Ecology's recommendation to demonstrate the existence of naturally occurring organic matter in groundwater at the Site, TRC executed a background organic carbon study. This Letter Report documents the operation and findings of that study. The actions performed herein were consistent with

the requirements of the Model Toxics Control Act (RCW 70.105D) and its implementing regulations (WAC 173-340; collectively referred to as "MTCA").

BACKGROUND ORGANIC CARBON STUDY

On June 23, 2020 TRC mobilized to the Site to advance three soil borings north and upgradient of the known impacts to soil and groundwater. Borings were advanced using a direct-push technology drill rig to 10-feet below ground surface. Soil boring logs including lithology, photoionization detector readings, depths to water, and sample information are included in Attachment A. Groundwater samples were collected from each of the three borings using a peristaltic pump and dedicated tubing. Groundwater was purged from the boring until water began visibly clearing. Groundwater samples were collected directly into appropriate pre-labeled sample containers supplied 2021 04 12021by Friedman and Bruya, Inc. (F&B). All samples were placed on ice in a secured cooler immediately upon collection.

All samples were handled and transported following standard chain-of-custody protocols to F&B for analysis of DRO and ORO by NWTPH-Dx and total organic carbon (TOC) by Method Standard Methods 5310C.

The analytical results show no detections of DRO or ORO above associated reporting limits. All three reconnaissance groundwater samples contained detectable concentrations of TOC. Locations of soil borings locations are presented in Figure 2, final analytical reports are included in Attachment B, and the groundwater analytical results are summarized in Table 1, embedded below.

Table 1

Summary of Reconnaissance Groundwater Analytical Results

Sample ID	Sample Date	Depth to Water (feet)	Petroleum Hydrocarbons		Total Organic Carbon[b]
			DRO[a]	ORO[a]	
DP16-GW	6/23/2020	5	<65	<325	4,430
DP17-GW	6/23/2020	6	<65	<325	5,280
DP18-GW	6/23/2020	6	<65	<325	1,040
MTCA Method A Cleanup Levels for Groundwater[c]			**500**	**500**	**NA**

Notes:

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

Bold	Bold results indicate that the compound was detected above the laboratory method detection limit.
	Shaded cells indicate that the compound was detected at a concentration greater than the cleanup level.
a	Analyzed by NWTPH-Dx.
b	Analyzed by SM 5310C.
c	Model Toxics Control Act (MTCA) Method A Cleanup Levels for Groundwater, Table 720-1, Washington Administrative Code (WAC) 173-340-900.
<	Less than laboratory method detection limit.
NA	Not applicable.

Compounds:

DRO	Diesel-range organics.
ORO	Oil-range organics.

CLOSING

Organic Geochemistry of Natural Waters (2012) by E.M. Thurman shows typical concentrations of total organic carbon in groundwater to be around 700 µg/L. *Water Quality Assessments – A Guide to the Use of Biota, Sediments and Water in Environmental Monitoring – Second Edition* (1996) states that "In surface waters, TOC concentrations are generally less than 10 [mg/L], and in groundwater less than 2 [mg/L], unless the water receives municipal or industrial wastes, or is highly colored due to natural organic material, as in swamps."

The mean observed concentration of TOC in unimpacted, background portions of the Site is 3,583 µg/L. This is approximately five times the typical concentration found in groundwater. If the data from the boring farthest from the Site's DRO impacts are excluded (DP18), the mean concentration is 4,855 µg/L, or approximately seven times typical concentrations found in groundwater. These data strongly suggest groundwater at the Site contains elevated concentrations of naturally occurring organic matter in groundwater.

Ecology's 2016 *Guidance for Remediation of Petroleum Contaminated Sites* (Publication No. 10-09-057) states:

> "Silica gel cleanup should not be used for NWTPH-Dx analyses of groundwater sample unless uncontaminated background samples indicate that naturally occurring organic matter is a significant component of the TPH being detected in the groundwater samples."

As stated in Ecology's May 5, 2020 Opinion Letter, the SGC procedure can remove polar compounds from the sample, including the following:

- "Naturally occurring non-petroleum organic matter such as leaf litter, bark, and peat.
- Weathered or biodegraded petroleum from chemical or microbial reactions in the environment. This process transforms petroleum components to intermediate degradation by-products (degradates), which are commonly referred to as polar metabolites.
- Heavy fuel oils such as #6 fuel oil and Bunker-C, which contain significant amounts of polar organics."

Since the background samples contained no detectable concentrations of TPH, the data suggest the concentrations of TOC in the background samples are most likely due to naturally occurring non-petroleum organic matter such as leaf litter, bark, and peat. As further stated in Ecology's Publication No. 10-09-057: the purpose of SGC is "To minimize the potential for interferences by naturally occurring non-petroleum organic matter (such as leaf litter, back and peat)". It has been demonstrated that the Site's groundwater contains substantial concentrations of organic matter in groundwater that would contribute to analytical TPH concentrations.

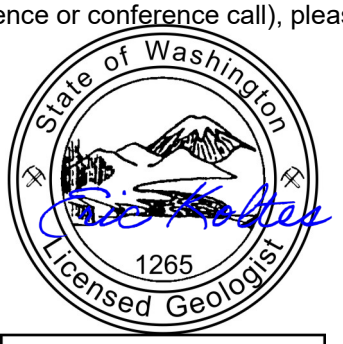
Based on established concentrations of TOC to be expected in groundwater, the observed concentrations of TOC observed at the Site are substantially higher than what is to be expected in typical groundwater. The existence of a substantial amount of polar organic material in groundwater justifies the use of SGC

in analysis of groundwater TPH concentrations in the demonstration of compliance with MTCA and applicable CULs.

Based on these results, we respectfully request that Ecology re-review the previous submittals and issue a new Opinion Letter for the Site with regards to the recent background organic carbon study documented herein.

If you would like to discuss in person (i.e., via video conference or conference call), please let us know.

Sincerely,



ERIC MICHAEL KOLTES

Prepared by:
Ramsey Mauldin
Project Environmental Scientist

Reviewed and approved by:
Eric Koltes, L.G.
Senior Geologist

REFERENCES

Chapman, D. and V. Kimstach. 1996. “Chapter 3 – Selection of water quality variables.” *Water Quality Assessments – A Guide to Use of Biota, Sediments and water in Environmental Monitoring*. Edited by Deborah Chapman. Second Edition. UNESCO/WHO/UNEP.

Thurman, E.M. 2012. *Organic Geochemistry of Natural Waters*. Springer.

ENCLOSURES

Tables

Table 1 Summary of Reconnaissance Groundwater Analytical Results (embedded)

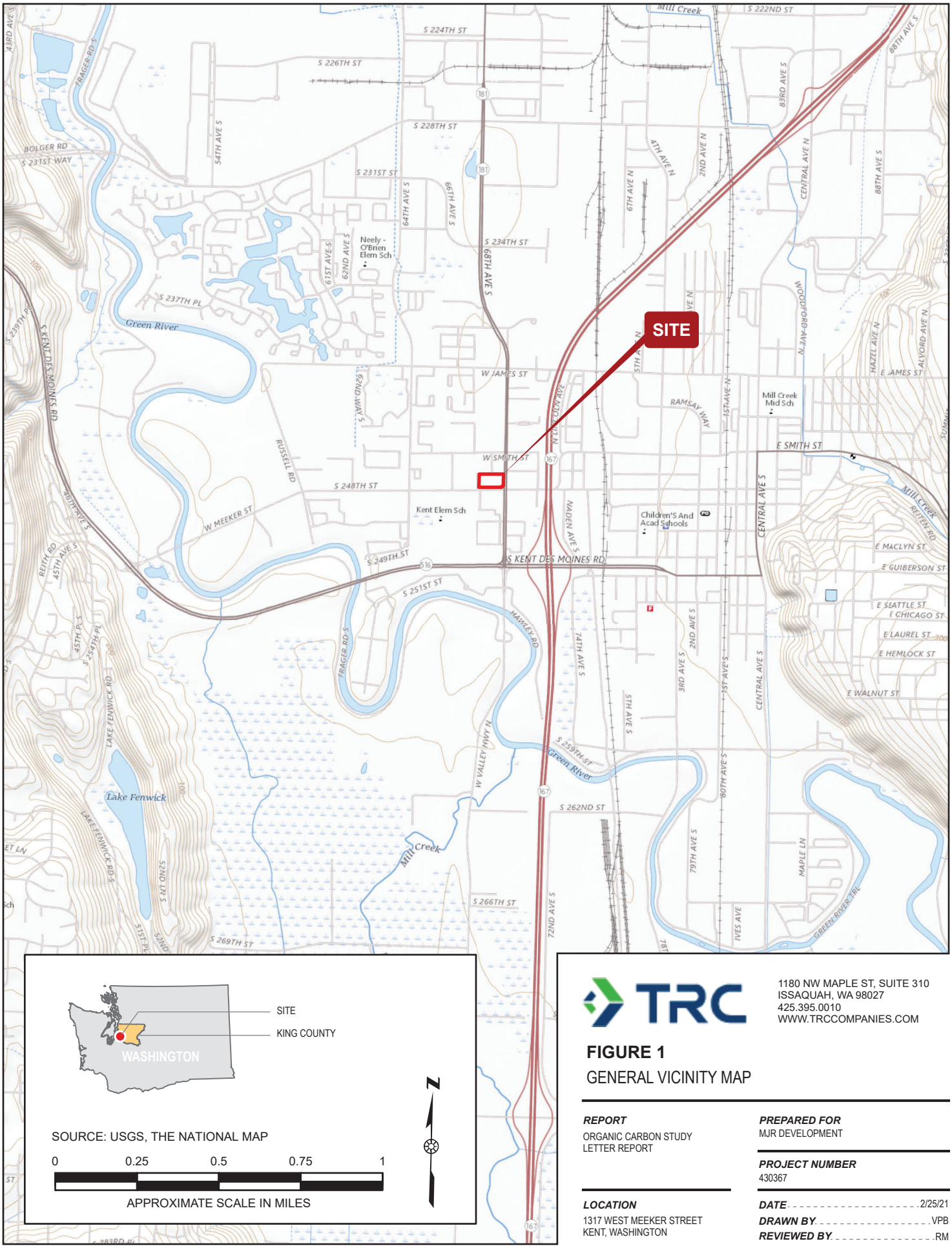
Figures

Figure 1 General Vicinity Map
Figure 2 Site Representation

Attachments

Attachment A Bore Logs
Attachment B Analytical Report

Figures



SOURCE: USGS, THE NATIONAL MAP

0 0.25 0.5 0.75 1

APPROXIMATE SCALE IN MILES

N

TRC

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FIGURE 1

GENERAL VICINITY MAP

REPORT
ORGANIC CARBON STUDY
LETTER REPORT

PREPARED FOR
MJR DEVELOPMENT

PROJECT NUMBER
430367

LOCATION
1317 WEST MEEKER STREET
KENT, WASHINGTON

DATE 2/25/21
DRAWN BY VPB
REVIEWED BY RM

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

FIGURE 2
SITE REPRESENTATION

REPORT
ORGANIC CARBON STUDY
LETTER REPORT

PREPARED FOR
MJR DEVELOPMENT

PROJECT NUMBER
430367

LOCATION
1317 WEST MEEKER STREET
KENT, WASHINGTON

DATE 2/25/21
DRAWN BY ..... VPB
REVIEWED BY ..... RM

Attachment A
Boring Logs

ENVIRONMENTAL PARTNERS INC

BORING ID: DP16

SITE ADDRESS **1301 W Meeker St, Kent, WA**	CLIENT: **MJR Development**	CASING MATERIAL AND SIZE: **2" Diameter Stainless Steel**
DRILLING CONTRACTOR: **Environmental Services Network Northwest (ESN NW)**	PROJECT #: **15363**	SCREEN SIZE: **0.010" Slot**
DRILLING EQUIPMENT: **Geoprobe 7800**	DATE: **6/23/20**	SCREEN INTERVAL: **5' - 10' bgs**
DRILLING METHOD: **Direct Push Technology (DPT)**	GROUND SURFACE ELEV. FT AMSL: **Not Measured**	FILTER PACK: **N/A**
LOGGED BY: **N. Dorfner** / BOREHOLE SIZE: **2.25" Diameter**	TOTAL DEPTH: **10' bgs**	FILTER PACK INTERVAL: **N/A**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Well Construction
0		Asphalt Surface 0'-0.25'				
	SW	WELL-GRADED SAND WITH GRAVEL; brown; moist; loose; well-graded fine to coarse-grained sand with gravel, few silt, no odor	20	0.0		Temp. Well Casing
5		5' Becomes wet		0.0	DP16:5	
			10			Temp. Well Screen
10		End of Borehole		0.0	DP16:10	

NOTES: Sample DP16-GW collected

ENVIRONMENTAL PARTNERS INC

BORING ID: DP17

SITE ADDRESS: **1301 W Meeker St, Kent, WA**	CLIENT: **MJR Development**	CASING MATERIAL AND SIZE: **2" Diameter Stainless Steel**
DRILLING CONTRACTOR: **Environmental Services Network Northwest (ESN NW)**	PROJECT #: **15363**	SCREEN SIZE: **0.010" Slot**
DRILLING EQUIPMENT: **Geoprobe 7800**	DATE: **6/23/20**	SCREEN INTERVAL: **5' - 10' bgs**
DRILLING METHOD: **Direct Push Technology (DPT)**	GROUND SURFACE ELEV. FT AMSL: **Not Measured**	FILTER PACK: **N/A**
LOGGED BY: **N. Dorfner** / BOREHOLE SIZE: **2.25" Diameter**	TOTAL DEPTH: **10' bgs**	FILTER PACK INTERVAL: **N/A**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other)	Interval & % Recovery	PID (ppm)	Sample	Well Construction
0		Asphalt Surface 0'-0.25'				
1	SW	WELL-GRADED SAND WITH GRAVEL; brown; moist; loose to medium dense; well-graded fine to coarse-grained sand with gravel, few silt, no odor		0.0		Temp. Well Casing
2				0.0		
3	SM	SILTY SAND; reddish gray; moist; medium dense; silty sand, no odor	75	0.0		
4	SP	POORLY-GRADED SAND; strong brown; moist; medium dense; poorly-graded medium-grained sand, no odor		0.0		
5				0.0	DP17:5	
6		6' Becomes wet		0.0		Temp. Well Screen
7		7' Becomes reddish gray	100	0.0		
8				0.0		
9	ML	SILT; reddish gray; moist; medium dense; silt, no odor		0.0		
10		End of Borehole		0.0	DP17:10	

NOTES: Sample DP17-GW collected

ENVIRONMENTAL PARTNERS INC

BORING ID: DP18

SITE ADDRESS: **1301 W Meeker St, Kent, WA**	CLIENT: **MJR Development**	CASING MATERIAL AND SIZE: **2" Diameter Stainless Steel**
DRILLING CONTRACTOR: **Environmental Services Network Northwest (ESN NW)**	PROJECT #: **15363**	SCREEN SIZE: **0.010" Slot**
DRILLING EQUIPMENT: **Geoprobe 7800**	DATE: **6/23/20**	SCREEN INTERVAL: **5' - 10' bgs**
DRILLING METHOD: **Direct Push Technology (DPT)**	GROUND SURFACE ELEV. FT AMSL: **Not Measured**	FILTER PACK: **N/A**
LOGGED BY: **N. Dorfner** / BOREHOLE SIZE: **2.25" Diameter**	TOTAL DEPTH: **10' bgs**	FILTER PACK INTERVAL: **N/A**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other)	Interval & % Recovery	PID (ppm)	Sample	Well Construction
0		Asphalt Surface 0'-0.25'				
1	SW	WELL-GRADED SAND WITH GRAVEL; brown; moist; loose to medium dense; well-graded fine to coarse sand with gravel, few silt, no odor		0.0		Temp. Well Casing
2				0.0		
3	SM	SILTY SAND; reddish gray with iron oxide staining; moist; medium dense; silty sand, no odor	80	0.0		
4				0.0		
5	SP	POORLY-GRADED SAND; dark brown; moist; medium dense; poorly-graded medium-grained sand, no odor		0.0	DP18:5	
6		6' Becomes wet		0.0		Temp. Well Screen
7			90	0.0		
8	ML	SILT; reddish gray; moist; medium dense; silt, no odor		0.0		
9				0.0		
10		End of Borehole		0.0	DP18:10	

NOTES: Sample DP18-GW collected

Attachment B
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 2, 2020

Eric Koltes, Project Manager
TRC Environmental
1180 NW Maple St, Suite 310
Issaquah, WA 98027

RE: 015363.0004, F&BI 006386

Dear Mr Koltes:

Included are the results from the testing of material submitted on June 23, 2020 from the 015363.0004, F&BI 006386 project. There are 4 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, Ramsey Mauldin
TRC0702R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on June 23, 2020 by Friedman & Bruya, Inc. from the TRC Environmental 015363.0004, F&BI 006386 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	TRC Environmental
006386 -01	DP16-GW
006386 -02	DP17-GW
006386 -03	DP18-GW

The samples were sent to Fremont Analytical for total organic carbon analysis. The report is enclosed.

All quality control requirements were acceptable.

Date of Report: 07/02/20
Date Received: 06/23/20
Project: 015363.0004, F&BI 006386
Date Extracted: 06/30/20
Date Analyzed: 06/30/20

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 41-152)
DP16-GW 006386-01 1/1.3	<65	<325	88
DP17-GW 006386-02 1/1.3	<65	<325	99
DP18-GW 006386-03 1/1.3	<65	<325	100
Method Blank 00-1529 MB	<50	<250	107

Date of Report: 07/02/20
Date Received: 06/23/20
Project: 015363.0004, F&BI 006386

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	88	96	63-142	9

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.

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

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

RE: 006386
Work Order Number: 2006394

June 30, 2020

Attention Michael Erdahl:

Fremont Analytical, Inc. received 3 sample(s) on 6/24/2020 for the analyses presented in the following report.

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: *06/30/2020*

CLIENT: Friedman & Bruya
Project: 006386
Work Order: 2006394

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2006394-001	DP16-GW	06/23/2020 12:29 PM	06/24/2020 1:05 PM
2006394-002	DP17-GW	06/23/2020 12:53 PM	06/24/2020 1:05 PM
2006394-003	DP18-GW	06/23/2020 1:19 PM	06/24/2020 1:05 PM

Case Narrative

WO#: **2006394**
Date: **6/30/2020**

CLIENT: Friedman & Bruya
Project: 006386

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 (<20%RSD, <20% Drift or minimum RRF)
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
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **2006394**
Date Reported: **6/30/2020**

Client: Friedman & Bruya
Project: 006386
Lab ID: 2006394-001
Client Sample ID: **DP16-GW**

Collection Date: 6/23/2020 12:29:00 PM
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Organic Carbon by SM 5310C				Batch ID: R60182		Analyst: SS
Total Organic Carbon	4.43	0.500		mg/L	1	6/26/2020 12:35:00 AM

Analytical Report

Work Order: **2006394**
Date Reported: **6/30/2020**

Client: Friedman & Bruya
Project: 006386
Lab ID: 2006394-002
Client Sample ID: **DP17-GW**

Collection Date: 6/23/2020 12:53:00 PM
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Organic Carbon by SM 5310C				Batch ID: R60182		Analyst: SS
Total Organic Carbon	5.28	0.500		mg/L	1	6/26/2020 12:54:00 AM

Analytical Report

Work Order: **2006394**
Date Reported: **6/30/2020**

Client: Friedman & Bruya
Project: 006386
Lab ID: 2006394-003
Client Sample ID: **DP18-GW**

Collection Date: 6/23/2020 1:19:00 PM
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Organic Carbon by SM 5310C				Batch ID: R60182		Analyst: SS
Total Organic Carbon	1.04	0.500		mg/L	1	6/26/2020 1:27:00 AM

Work Order: 2006394
CLIENT: Friedman & Bruya
Project: 006386

QC SUMMARY REPORT

Total Organic Carbon by SM 5310C

Sample ID: **MB-R60182** SampType: **MBLK** Units: **mg/L** Prep Date: **6/25/2020** RunNo: **60182**
Client ID: **MBLKW** Batch ID: **R60182** Analysis Date: **6/25/2020** SeqNo: **1205105**

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: **LCS-R60182** SampType: **LCS** Units: **mg/L** Prep Date: **6/25/2020** RunNo: **60182**
Client ID: **LCSW** Batch ID: **R60182** Analysis Date: **6/25/2020** SeqNo: **1205106**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	5.06	0.500	5.000	0	101	90.2	120				

Sample ID: **2006363-001ADUP** SampType: **DUP** Units: **mg/L** Prep Date: **6/25/2020** RunNo: **60182**
Client ID: **BATCH** Batch ID: **R60182** Analysis Date: **6/25/2020** SeqNo: **1205108**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	0.642	0.500						0.6650	3.52	20	

Sample ID: **2006363-001AMS** SampType: **MS** Units: **mg/L** Prep Date: **6/25/2020** RunNo: **60182**
Client ID: **BATCH** Batch ID: **R60182** Analysis Date: **6/25/2020** SeqNo: **1205109**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	5.74	0.500	5.000	0.6650	102	86.4	121				

Sample ID: **2006363-001AMSD** SampType: **MSD** Units: **mg/L** Prep Date: **6/25/2020** RunNo: **60182**
Client ID: **BATCH** Batch ID: **R60182** Analysis Date: **6/25/2020** SeqNo: **1205110**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	5.51	0.500	5.000	0.6650	96.9	86.4	121	5.745	4.18	30	

Sample Log-In Check List

Client Name:	**FB**	Work Order Number:	**2006394**
Logged by:	**Carissa True**	Date Received:	**6/24/2020 1:05:00 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 ☐
		No cooler present		
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: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Sample 1	4.4

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

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

2006394

Page # 1 of 1

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

SUBCONTRACTER Fremont

PROJECT NAME/NO. 006386

PO # A-271

REMARKS

Please Email Results

TURNAROUND TIME

☒ Standard TAT

☐ 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	Matrix	# of jars	ANALYSES REQUESTED: Dioxins/Furans	EPH	VPH	TOC							Notes
DP16-GW		6/23/20	1229	water	1				x							
DP17-GW		"	1253	"	1				x							
DP18-GW		"	1319	"	1				x							

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Michael Erdahl	Friedman & Bruya	6/24/20	09:15 AM
Received by:	CARISSA TRUE	FAI	6/24	13:05
Relinquished by:				
Received by:				

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

SAMPLE CHAIN OF CUSTODY

006386 [redacted] ME 06/23/20 AL4

Report To [redacted] Kolkes & Ramsey Mauldin
Company TRC
Address 11480 NW Maple St., Ste. 310
City, State, ZIP Issaquah, WA 98027
Phone 425-395-0010 Email ekolkes@trcompanies.com mauldin@trcompanies.com

SAMPLERS (signature) [signature]
PROJECT NAME 015363.0004
PO #
REMARKS
Project specific RLs? - Yes / No
INVOICE TO

Page # 1 of 1

TURNAROUND TIME
☒ 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: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	TOTAL ORGANIC CARBON				Notes
DP16-GW		6-23-20	1229	WATER	1	✓							X				✓ per EIL 6/30 ep
DP17-GW		↓	1253	↓	↓	✓							X				
DP18-GW		↓	1319	↓	↓	✓							X				

Samples received at 4 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Ramsey Mauldin	TRC	6-23-20	1530
Received by: [signature]	HONG NGUYEN	FBT	✓	✓
Relinquished by:				
Received by:				

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