

WHITMAN Environmental Sciences

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Seattle, WA 98115

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Whitenviro@yahoo.com

June 25, 2020

FedEx Freight, Inc.
3405 Victor St.
Santa Clara, CA 95054

Attention: Mr. Chong Lee

Subject: 1st Quarter 2020 Groundwater Monitoring
Former FedEx Freight, Inc. Seattle Area Terminal
18221 E. Valley Highway
Kent, Washington

Dear Mr. Lee:

As you requested, Whitman Environmental Sciences (WES) has conducted a quarterly sampling event on monitoring well RW-2 at the FedEx Freight terminal in Kent, Washington (Figure 1). This letter is to document the monitoring procedures and report the results of our sampling.

Field Procedures

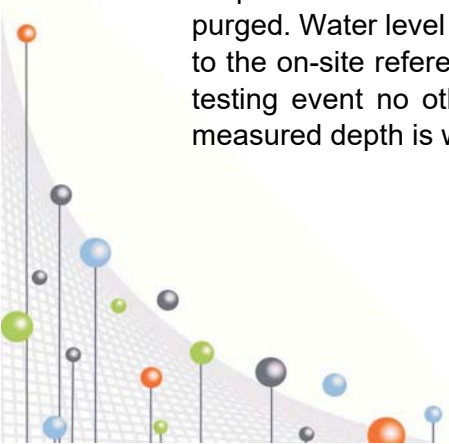
WES mobilized to the site for a groundwater purge on February 18th, 2020. A vacuum truck was used to purge a total of approximately 4,800 gallons of water from RW-2, a six-inch diameter well installed near the southern boundary of the site (Figure 2). This procedure is in accordance with the scope of work proposed to the Washington Department of Ecology in our November 15th, 2019 summary letter of monitoring conducted from 2016 to 2019, and our discussions with Mr. Grant Yang, the Department of Ecology Site Manager.

The vacuum truck was supplied and operated by Marine Vacuum Services, Inc., of Seattle, who managed and disposed the purge water under their wastewater discharge permit with King County METRO.

The well was allowed to recover for about five weeks before sampling. On March 24th, 2020, WES returned to the site and conducted a limited purge of approximately three well volumes, then sampled RW-2 following standard environmental sampling protocols.

Groundwater Level Measurements

As part of this monitoring event, WES measured the depth to groundwater before the well was purged. Water level in RW-2 was 5.61 feet below the top of pipe, at an elevation of 92.35 relative to the on-site reference point used for all prior measurements. Due to the limited scope of this testing event no other wells were accessed for measurements or testing on that date. The measured depth is within the range of prior measurements of water level in RW-2.



**Groundwater Monitoring Results
Former FedEx Freight Seattle Area Terminal
Kent, Washington**

Groundwater Sampling

Samples were taken following proper environmental sampling techniques and protocols, placed in laboratory prepared bottles, chilled and held under chain of custody until delivered to the laboratory. The samples were submitted to Friedman & Bruya, Inc., a Washington State accredited laboratory, for testing.

The sample was analyzed by Washington accepted methods NWTPH-G for total petroleum hydrocarbons (TPH) in the gasoline range, as well as the volatile aromatic compounds benzene, toluene, ethylbenzene and xylenes (BTEX), commonly associated with gasoline. The sample was also tested for total petroleum hydrocarbons in the diesel and oil ranges by Washington accepted method NWTPH-D(x).

Laboratory Analytical Results

The results of laboratory testing and Washington State cleanup criteria are summarized in Table 1. The laboratory report of analytical results is attached. All laboratory quality assurance/quality control criteria were met by the analyses and the laboratory reporting limits are low enough that the data can be compared to appropriate regulatory cleanup levels.

Table 1
1st Quarter 2020 Groundwater Monitoring Results - RW-2
Sample Date: Mar 24, 2020

Parameter	Laboratory Analytical Result (ug/l)	MTCA Method A Groundwater Cleanup Level (ug/l)
Benzene	1.2	5
Toluene	ND (<1)	1,000
Ethylbenzene	ND (<1)	700
Xylenes	ND (<3)	1,000
GRO- (NWTPH-G)	ND (<100)	800*
DRO - (NWTPH-D(x))	ND (<50)	500
MRO - (NWTPH-D(x))	ND (<250)	500

Table Notes:

BTEX compounds by EPA Method 8021B.

MTCA Method A Cleanup Levels from Dept. of Ecology 2020 CLARC database.

ND - Not detected at a level above the noted concentration.

* - MTCA Method A cleanup level for gasoline range petroleum hydrocarbons, when benzene is present.
If benzene is not present, the Method A cleanup level is 1,000 ug/l.

June 25, 2020

**Groundwater Monitoring Results
Former FedEx Freight Seattle Area Terminal
Kent, Washington**

Page 3

The sample contained a low but detectable concentration of benzene (1.2 ug/l) but no other detections of the analyzed parameters. The detected benzene is below the applicable Washington Model Toxics Control Act (MTCA) Method A groundwater cleanup criteria of 5 ug/l for benzene.

Conclusions

This sampling was conducted as part of compliance monitoring of the subject site. The current groundwater sampling shows no evidence of petroleum impacts in RW-2 exceeding Washington State groundwater cleanup criteria under the Model Toxics Control Act (Chapter 173-340 WAC). Monitoring well RW-2 is the only remaining well on the property that has a recent history of exceeding groundwater cleanup levels.

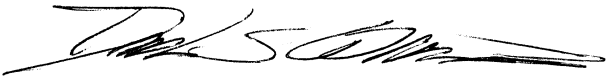
Additional quarterly monitoring will be conducted throughout 2020, following the same purge and sampling technique used in this quarter. Over the year at least one sample from each of the remaining on-site wells will also be collected to demonstrate continuing compliance throughout the site.

Closure

Thank you for the opportunity to be of service to you in this matter. If you have any questions regarding this letter, or if I may be of any further assistance, please feel free to contact me at your convenience.

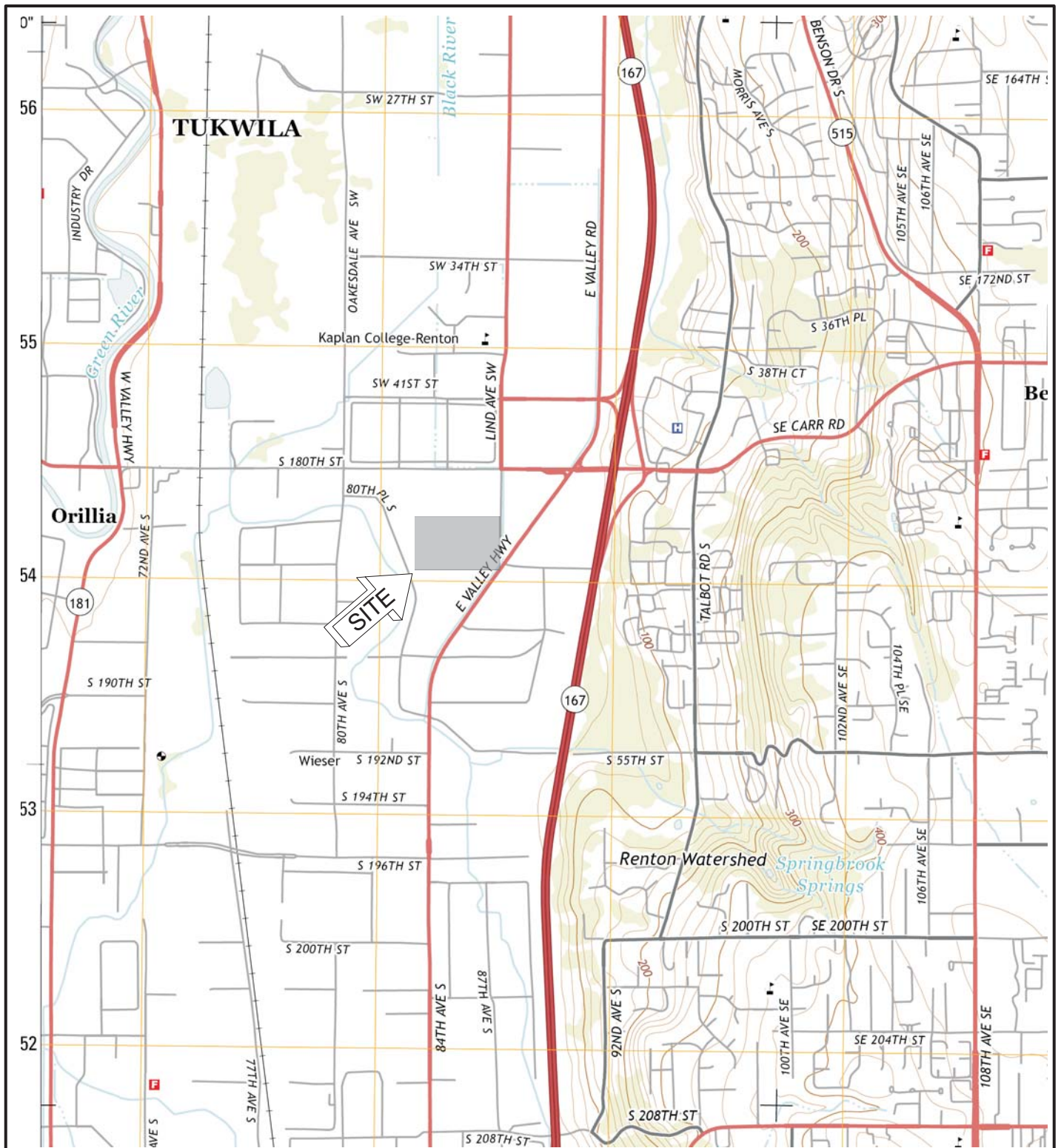
Respectfully submitted,

Whitman Environmental Sciences



Daniel S. Whitman
Principal

Attachments: Figure 1 - Site Location Map
Figure 2 - Groundwater Sample Location Plan
Laboratory Analytical Report - Friedman & Bruya, Inc.



North



Scale 1 : 24,000

From USGS

Figure 1 - Site Map

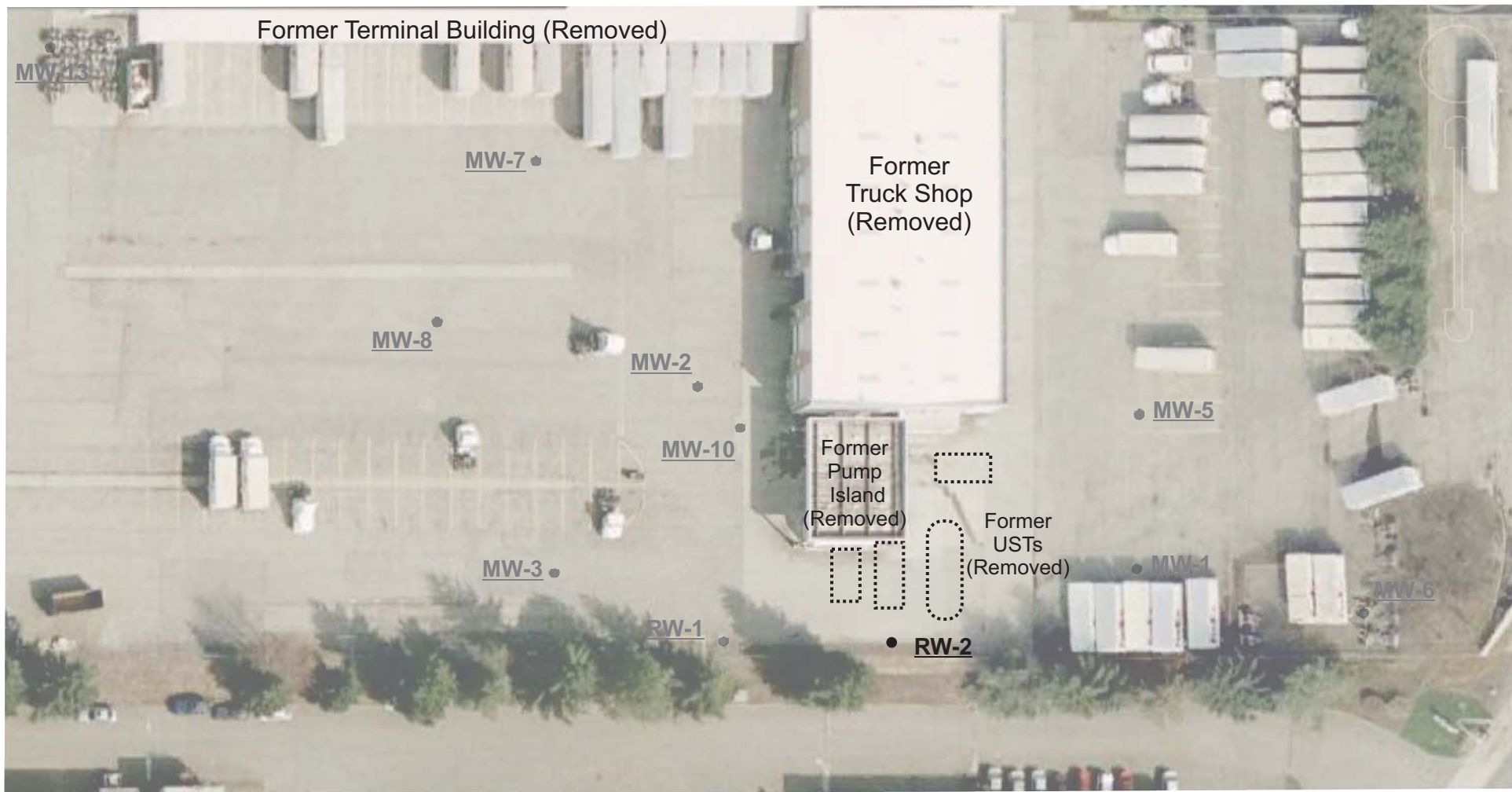
Former FedEx Freight Terminal
18221 E. Valley Highway
Kent, Washington

Project No. WES - 1276

Date Aug 2, 2016

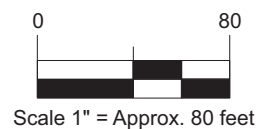
File ID. 1276F1

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Legend

- Approximate Location of Sampled Monitoring Well RW-2
- Approximate Location of Other Site Monitoring Wells



North



Figure 2 - Site Plan

Former FedEx Freight, Inc. Kent Terminal
18221 E. Valley Highway
Kent, Washington

Project No. WES - 1276
Date June 7, 2020
File ID. 1276F2D

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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April 7, 2020

Dan Whitman, Project Manager
Whitman Environmental Sciences
6812 16th Ave NE
Seattle, WA 98115

Dear Mr Whitman:

Included are the results from the testing of material submitted on March 31, 2020 from the FedEx Old Kent WES 1276, F&BI 003476 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
WES0407R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 31, 2020 by Friedman & Bruya, Inc. from the Whitman Environmental Sciences FedEx Old Kent WES 1276, F&BI 003476 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID

003476 -01

Whitman Environmental Sciences

RW-2-GW

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/07/20

Date Received: 03/31/20

Project: FedEx Old Kent WES 1276, F&BI 003476

Date Extracted: 04/02/20

Date Analyzed: 04/02/20

**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 50-150)
RW-2-GW 003476-01	1.2	<1	<1	<3	<100	58
Method Blank 00-669 MB	<1	<1	<1	<3	<100	102

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/07/20

Date Received: 03/31/20

Project: FedEx Old Kent WES 1276, F&BI 003476

Date Extracted: 04/01/20

Date Analyzed: 04/01/20

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

Results Reported as ug/L (ppb)

<u>Sample ID</u>	<u>Diesel Range</u>	<u>Motor Oil Range</u>	<u>Surrogate</u>
Laboratory ID	(C ₁₀ -C ₂₅)	(C ₂₅ -C ₃₆)	(% Recovery)
			(Limit 41-152)
RW-2-GW	<50	<250	101
003476-01			
Method Blank	<50	<250	93
00-794 MB3			

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/07/20

Date Received: 03/31/20

Project: FedEx Old Kent WES 1276, F&BI 003476

**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: 003473-01 (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	98	65-118
Toluene	ug/L (ppb)	50	98	72-122
Ethylbenzene	ug/L (ppb)	50	99	73-126
Xylenes	ug/L (ppb)	150	96	74-118
Gasoline	ug/L (ppb)	1,000	84	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/07/20

Date Received: 03/31/20

Project: FedEx Old Kent WES 1276, F&BI 003476

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

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	96	100	63-142	4

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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.

ME 03/31/20 Ver BOS

Page # / of
TURNAROUND TIME

PO #

LESTER O. KEND

INVOICE TO

Phone

Email

Project specific RLS? - Yes / No

ANALYSES REQUESTED

TURNAROUND TIME
standard turnaround

☒ Standard turnaround
☐ RUSH _____

Rush charges authorized by:

SAMPLE DISPOSAL

- Archive samples

☐ Other

Default: Dispose after 30 days

[illegible]

SIGNATURE

PRINT NAME _____

COMPANY

DATE _____

TIME

Friedman & Bruya, Inc.

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Seattle, WA 98119-2029

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