



EHS-International, Inc.

1011 SW Klickitat Way, Suite 104
Seattle, Washington 98134
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Fax 206-254-4279

January 27, 2015

Mr. Nick Chou
Capital Projects
Edmonds School Districts #15
20420 68th Avenue W
Lynnwood, Washington 98036-7400

Re: City of Lynnwood Soil Boring Results
Edmonds School District Maintenance and Transportation Facility
2927 Alderwood Mall Boulevard
Lynnwood, WA
(EHSI Project No. 10719b)

Dear Nick:

On December 21, 2015 EHS-International (EHSI) collected soil and groundwater samples at the Edmonds School District (District) Maintenance and Transportation Facility (MTF) during the drilling of soil boring EB-20. EB-20 was installed by Holocene Drilling, Inc. (Holocene) under subcontract to RH2 Engineering who was directing the boring and is under subcontract to the Trane Company, who is contracted to the City of Lynnwood to manage the installation of the new pumping station. EB-20 was located in the southwest corner of Lot 4 of the MTF, near existing well AB-19B and the current storm water lift station (see attached Figure 1). A summary of the samples collected and the laboratory results is presented below:

- The soil sample collected at the interface with the water table (EB-20-12.5) was submitted for analysis for Total Petroleum Hydrocarbons (TPH) as gasoline, benzene, toluene, ethylbenzene and xylenes (BTEX), TPH as diesel and oil, and volatile organic compounds (VOCs). All of the results were reported to be below the laboratory's detection limits.
- A groundwater sample was also collected with a bailer (EB-20-GW) and submitted for analysis for diesel and oil. The reported results of those analyses were also below the laboratory's detection limits. The sample was too silty for analysis involving gasoline, BTEX, or VOCs.
- A copy of the lab report is attached to this letter

- Environmental Consulting
- Hazardous Materials Management
- Industrial Hygiene Services
- Construction Management
- Indoor Air Quality

Nick Chou, Capital Projects
Edmonds School District
January 27, 2016
Page 2 of 2

EHSI appreciates the opportunity to provide this letter to the District, documenting the analytical results of this requested sampling. If you have any questions or comments regarding this report, please contact me at any time at (206) 381-1128 or kurte@ehsintl.com.

Sincerely,
EHS-International, Inc.

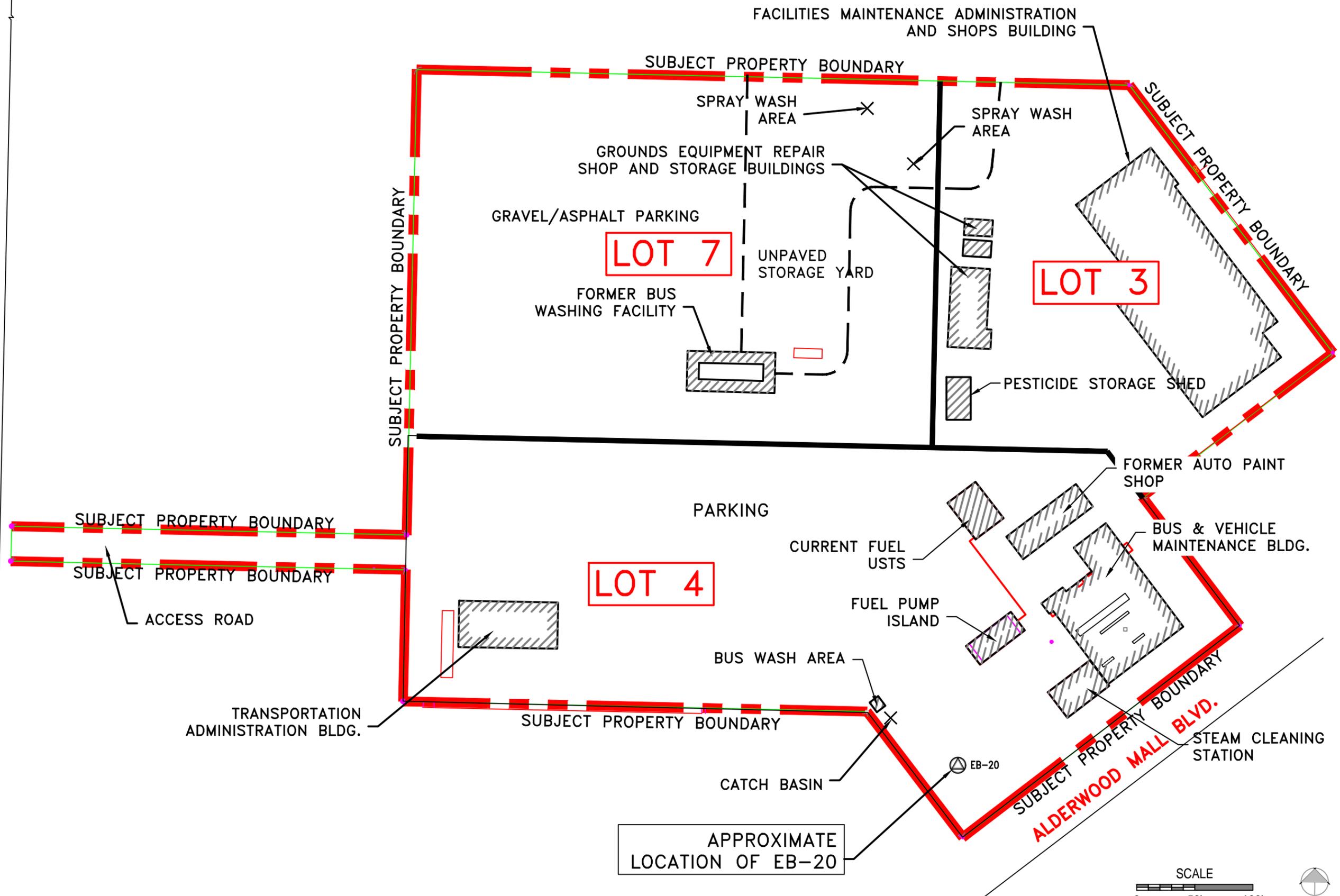
A handwritten signature in blue ink, appearing to read 'Kurt A. Easthouse', with a long horizontal flourish extending to the right.

Kurt A. Easthouse, LG, LHg, RG
Principal Geologist

Attachments: Figure 1 – Approximate Location of EB-20
Certified Analytical Report

FIGURE

33rd AVE WEST



APPROXIMATE LOCATION OF EB-20

EDMONDS MAINTENANCE AND TRANSPORTATION FACILITY
 APPROXIMATE LOCATION EB-20

PROJECT MANAGER:
 KURT EASTHOUSE
 INSPECTORS:
 JASON CASS
 SURVEY DATE:
 EHSI PROJECT #
 10719b
 DRAWN BY:
 DIMALANTA
 SCALE:
 NOTED
 ISSUE DATE:
 1/26/2016

APPROXIMATE LOCATION EB-20

FIG. 1

CERTIFIED 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

December 28, 2015

Kurt Easthouse, Project Manager
EHSI
1011 SW Klickitat Way, Suite 104
Seattle, WA 98134

Dear Mr. Easthouse:

Included are the results from the testing of material submitted on December 21, 2015 from the 10719a-03, Edmonds Bus Barn, F&BI 512366 project. There are 12 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. 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: Jason Cass
EHS1228R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 21, 2015 by Friedman & Bruya, Inc. from the EHSI 10719a-03, Edmonds Bus Barn, F&BI 512366 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>EHSI</u>
512366 -01	EB-20-7.5
512366 -02	EB-20-12.5
512366 -03	EB-20-17.5
512366 -04	EB-20-22.5
512366 -05	EB-20-27.5
512366 -06	EB-20-GW

Dichlorofluoromethane failed below the acceptance criteria in the 8260C matrix spike sample. The laboratory control sample met the acceptance criteria, therefore the data were likely due to sample matrix effect. In addition, the matrix spike and matrix spike duplicate relative percent difference did not pass the acceptance criteria for several samples. The compounds were not detected, therefore the data were acceptable.

Sample EB-20-12.5 was not received in a 5035 sampling kit. The NWTPH-Gx and 8260C results were flagged accordingly.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/28/15

Date Received: 12/21/15

Project: 10719a-03, Edmonds Bus Barn, F&BI 512366

Date Extracted: 12/21/15

Date Analyzed: 12/21/15

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 50-150)
EB-20-12.5 pc 512366-02	<2	95
Method Blank 05-2569 MB	<2	95

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/28/15

Date Received: 12/21/15

Project: 10719a-03, Edmonds Bus Barn, F&BI 512366

Date Extracted: 12/21/15

Date Analyzed: 12/22/15

**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)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 51-134)
EB-20-GW 512366-06 1/1.5	<80	<380	86
Method Blank 05-2588 MB	<50	<250	88

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/28/15

Date Received: 12/21/15

Project: 10719a-03, Edmonds Bus Barn, F&BI 512366

Date Extracted: 12/21/15

Date Analyzed: 12/21/15

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 48-168)
EB-20-12.5 512366-02	<50	<250	93
Method Blank 05-2589 MB	<50	<250	93

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	EB-20-12.5 pc	Client:	EHSI
Date Received:	12/21/15	Project:	10719a-03, F&BI 512366
Date Extracted:	12/22/15	Lab ID:	512366-02
Date Analyzed:	12/22/15	Data File:	122225.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	95	55	145
4-Bromofluorobenzene	102	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	EHSI
Date Received:	Not Applicable	Project:	10719a-03, F&BI 512366
Date Extracted:	12/22/15	Lab ID:	05-2607 mb
Date Analyzed:	12/22/15	Data File:	122224.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	97	55	145
4-Bromofluorobenzene	103	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/28/15

Date Received: 12/21/15

Project: 10719a-03, Edmonds Bus Barn, F&BI 512366

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR TPH AS GASOLINE
USING METHOD NWTPH-Gx**

Laboratory Code: 512274-04 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	90	71-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/28/15

Date Received: 12/21/15

Project: 10719a-03, Edmonds Bus Barn, F&BI 512366

**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	90	82	58-134	9

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/28/15

Date Received: 12/21/15

Project: 10719a-03, Edmonds Bus Barn, F&BI 512366

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

Laboratory Code: 512359-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	104	95	73-135	9

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	101	74-139

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/28/15

Date Received: 12/21/15

Project: 10719a-03, Edmonds Bus Barn, F&BI 512366

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 512381-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	9 vo	10	10-142	11
Chloromethane	mg/kg (ppm)	2.5	<0.5	30	31	10-126	3
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	28	30	10-138	7
Bromomethane	mg/kg (ppm)	2.5	<0.5	49	48	10-163	2
Chloroethane	mg/kg (ppm)	2.5	<0.5	46	47	10-176	2
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	30	35	10-176	15
Acetone	mg/kg (ppm)	12.5	<0.5	63	91	10-163	36 vo
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	44	51	10-160	15
Hexane	mg/kg (ppm)	2.5	<0.25	12	21	10-137	55 vo
Methylene chloride	mg/kg (ppm)	2.5	<0.5	60	82	10-156	31 vo
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	68	88	21-145	26 vo
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	50	63	14-137	23 vo
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	58	78	19-140	29 vo
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	50	63	10-158	23 vo
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	64	81	25-135	23 vo
Chloroform	mg/kg (ppm)	2.5	<0.05	63	81	21-145	25 vo
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	71	97	19-147	31 vo
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	62	68	12-160	9
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	53	67	10-156	23 vo
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	48	55	17-140	14
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	49	55	9-164	12
Benzene	mg/kg (ppm)	2.5	<0.03	57	64	29-129	12
Trichloroethene	mg/kg (ppm)	2.5	<0.02	56	64	21-139	13
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	60	68	30-135	12
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	69	76	23-155	10
Dibromomethane	mg/kg (ppm)	2.5	<0.05	68	76	23-145	11
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	73	84	24-155	14
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	65	74	28-144	13
Toluene	mg/kg (ppm)	2.5	<0.05	58	69	35-130	17
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	72	82	26-149	13
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	72	83	10-205	14
2-Hexanone	mg/kg (ppm)	12.5	<0.5	81	91	15-166	12
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	70	79	31-137	12
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	46	61	20-133	28 vo
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	75	87	28-150	15
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	71	84	28-142	17
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	61	72	32-129	17
Ethylbenzene	mg/kg (ppm)	2.5	0.88	59 b	68 b	32-137	14 b
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	69	78	31-143	12
m,p-Xylene	mg/kg (ppm)	5	2.0	58 b	66 b	34-136	13 b
o-Xylene	mg/kg (ppm)	2.5	0.69	60 b	70 b	33-134	15 b
Styrene	mg/kg (ppm)	2.5	<0.05	65	78	35-137	18
Isopropylbenzene	mg/kg (ppm)	2.5	0.56	55 b	66 b	31-142	18 b
Bromoform	mg/kg (ppm)	2.5	<0.05	73	83	21-156	13
n-Propylbenzene	mg/kg (ppm)	2.5	1.3	51 b	63 b	23-146	21 b
Bromobenzene	mg/kg (ppm)	2.5	<0.05	61	73	34-130	18
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	1.4	49 b	63 b	18-149	25 b
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	73	82	28-140	12
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	74	83	25-144	11
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	66	78	31-134	17
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	58	72	31-136	22 vo
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	47	64	30-137	31 vo
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	6.4	70 b	65 b	10-182	7 b
sec-Butylbenzene	mg/kg (ppm)	2.5	0.94	45 b	61 b	23-145	30 b
p-Isopropyltoluene	mg/kg (ppm)	2.5	0.82	42 b	57 b	21-149	30 b
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	54	70	30-131	26 vo
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	54	68	29-129	23 vo
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	61	76	31-132	22 vo
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	76	86	11-161	12
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	47	64	22-142	31 vo
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	29	50	10-142	53 vo
Naphthalene	mg/kg (ppm)	2.5	8.5	90 b	75 b	14-157	18 b
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	53	70	20-144	28 vo

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/28/15

Date Received: 12/21/15

Project: 10719a-03, Edmonds Bus Barn, F&BI 512366

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Acceptance
			Recovery LCS	Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	45	10-146
Chloromethane	mg/kg (ppm)	2.5	61	27-133
Vinyl chloride	mg/kg (ppm)	2.5	73	22-139
Bromomethane	mg/kg (ppm)	2.5	85	38-114
Chloroethane	mg/kg (ppm)	2.5	88	10-163
Trichlorofluoromethane	mg/kg (ppm)	2.5	92	10-196
Acetone	mg/kg (ppm)	12.5	99	52-141
1,1-Dichloroethene	mg/kg (ppm)	2.5	94	47-128
Hexane	mg/kg (ppm)	2.5	82	43-142
Methylene chloride	mg/kg (ppm)	2.5	88	42-132
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	88	60-123
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	83	67-127
1,1-Dichloroethane	mg/kg (ppm)	2.5	90	68-115
2,2-Dichloropropane	mg/kg (ppm)	2.5	84	52-170
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	91	72-113
Chloroform	mg/kg (ppm)	2.5	90	66-120
2-Butanone (MEK)	mg/kg (ppm)	12.5	98	57-123
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	90	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	92	62-131
1,1-Dichloropropene	mg/kg (ppm)	2.5	88	69-128
Carbon tetrachloride	mg/kg (ppm)	2.5	93	60-139
Benzene	mg/kg (ppm)	2.5	89	68-114
Trichloroethene	mg/kg (ppm)	2.5	92	64-117
1,2-Dichloropropane	mg/kg (ppm)	2.5	91	72-127
Bromodichloromethane	mg/kg (ppm)	2.5	96	72-130
Dibromomethane	mg/kg (ppm)	2.5	94	70-120
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	93	45-145
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	94	75-136
Toluene	mg/kg (ppm)	2.5	97	66-126
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	103	72-132
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	96	75-113
2-Hexanone	mg/kg (ppm)	12.5	108	33-152
1,3-Dichloropropane	mg/kg (ppm)	2.5	98	72-130
Tetrachloroethene	mg/kg (ppm)	2.5	100	72-114
Dibromochloromethane	mg/kg (ppm)	2.5	103	74-125
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	103	74-132
Chlorobenzene	mg/kg (ppm)	2.5	96	76-111
Ethylbenzene	mg/kg (ppm)	2.5	96	64-123
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	96	69-135
m,p-Xylene	mg/kg (ppm)	5	97	78-122
o-Xylene	mg/kg (ppm)	2.5	97	77-124
Styrene	mg/kg (ppm)	2.5	100	74-126
Isopropylbenzene	mg/kg (ppm)	2.5	97	76-127
Bromoform	mg/kg (ppm)	2.5	97	56-132
n-Propylbenzene	mg/kg (ppm)	2.5	100	74-124
Bromobenzene	mg/kg (ppm)	2.5	100	72-122
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	102	76-126
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	97	56-143
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	101	61-137
2-Chlorotoluene	mg/kg (ppm)	2.5	99	74-121
4-Chlorotoluene	mg/kg (ppm)	2.5	101	75-122
tert-Butylbenzene	mg/kg (ppm)	2.5	102	73-130
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	102	76-125
sec-Butylbenzene	mg/kg (ppm)	2.5	102	71-130
p-Isopropyltoluene	mg/kg (ppm)	2.5	100	70-132
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	99	75-121
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	95	74-117
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	100	76-121
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	101	58-138
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	96	64-135
Hexachlorobutadiene	mg/kg (ppm)	2.5	93	50-153
Naphthalene	mg/kg (ppm)	2.5	101	63-140
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	95	63-138

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 compound 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. Compounds in the sample matrix interfered with the quantitation of the analyte.

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.

512366

SAMPLE CHAIN OF CUSTODY

ME 12-21-15

E02 / VS / CI

Send Report To Kurt Easthouse

Company EHSTI

Address 1611 SW Klickitat Way, #104

City, State, ZIP Seattle, WA 98134

Phone # (206) 381-1128

Fax # _____

SAMPLERS (signature) Mason Cass

PROJECT NAME/NO. 10719a-03

Edmonds Bus Base

PO# _____

REMARKS

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	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED						Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	
EB-20-7.5	01A	12/21/15	9:20	Soil	4							Hold
EB-20-12.5	02		9:30		1	X	X		X			Hold
EB-20-17.5	03		9:45		1							Hold
EB-20-22.5	04A		9:55		4							Hold
EB-20-27.5	05		10:05		1							Hold
EB-20-6W	06		10:45	1420	1	X	X		X			Gas + VOCs canceled Entire container will for Dr msl/2/16 MK
												Samples received at <u>4</u> °C

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 283-8282

Fax (206) 283-5044

FORMS\COC\COC.DOC

SIGNATURE		PRINT NAME		COMPANY		DATE	TIME
Relinquished by: <u>Mason Cass</u>		<u>Mason Cass</u>		<u>EHSTI</u>		12/21/15	12:10
Received by: <u>[Signature]</u>		<u>D d vd</u>		<u>EB2</u>		12-21-15	12:10
Relinquished by:							
Received by:							