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.

409512

SAMPLE CHAIN OF CUSTODY

MG 09/26/14

Page # 1 of 1

Send Report To Frank Mocker

Company AESF

Address 911 Fifth Ave Ste 100

City, State, ZIP Kirkland, WA 98033

Phone #425 766 5712 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. North Edge / KV030772B

PO#

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☒ RUSH 9/29/14 0800

Rush charges authorized by F.C. Mocker

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
PC-10 0-4	01	9/26/14	0745	Soil	1 jar 1 jar	X	X											
PC-10 4-8	02		0800			X	X											~~TCLP~~ SILICA GEL
PC-11 0-4	03		0810			X	X											
PC-11 4-8	04		0820			X	X											
PC-12 0-4	05		0830			X	X											
PC-12 4-8	06		0840			X	X											
PC-13 0-4	07		0846			X	X											~~TCLP~~ SILICA GEL
PC-13 4-8	08		0855			X	X											

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Frank Mocker	AESF	9/26/14	0955
Received by:	Nhan Phan	FEBT	9/26/14	0955
Relinquished by:				
Received by:				

Samples received at 5 °C

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

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

September 30, 2014

Jon Sondergaard, Project Manager
Associated Earth Sciences, Inc.
911 5th Avenue, Suite 100
Kirkland, WA 98033

Dear Mr. Sondergaard:

Included are the results from the testing of material submitted on September 29, 2014 from the North Edge KV030772B, F&BI 409540 project. There are 8 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Frank Mocker
AE10930R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 29, 2014 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 409540 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
409540 -01	PC-14 0-4'
409540 -02	PC-14 4-8'
409540 -03	PC-15 0-4'
409540 -04	PC-15 4-8'
409540 -05	PC-16 0-4'
409540 -06	PC-16 4-8'
409540 -07	PC-17 0-4'
409540 -08	PC-17 4-8'
409540 -09	PC-18 0-4'
409540 -10	PC-18 4-8'
409540 -11	PC-19 0-4'
409540 -12	PC-19 4-8'
409540 -13	PC-20 0-4'
409540 -14	PC-20 4-8'

All quality control requirements were acceptable.

Date of Report: 09/30/14
Date Received: 09/29/14
Project: North Edge KV030772B, F&BI 409540
Date Extracted: 09/29/14
Date Analyzed: 09/29/14

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
PC-14 0-4' 409540-01 1/5	0.06 j	0.41	3.2	3.4	570	110
PC-14 4-8' 409540-02 1/5	<0.02 j	<0.1	0.64	0.64	120	92
PC-15 0-4' 409540-03	<0.02	<0.02	<0.02	<0.06	3.3	88
PC-15 4-8' 409540-04	<0.02	<0.02	0.17	0.23	81	98
PC-16 0-4' 409540-05	<0.02	<0.02	<0.02	<0.06	<2	92
PC-16 4-8' 409540-06	<0.02	<0.02	<0.02	<0.06	<2	90
PC-17 0-4' 409540-07 1/2	<0.02 j	<0.04	0.69	1.2	300	107
PC-17 4-8' 409540-08 1/5	<0.02 j	0.16	2.5	3.2	430	111
PC-18 0-4' 409540-09	<0.02	<0.02	<0.02	<0.06	<2	91
PC-18 4-8' 409540-10	<0.02	<0.02	<0.02	<0.06	<2	94
PC-19 0-4' 409540-11	<0.02	<0.02	<0.02	<0.06	<2	91

Date of Report: 09/30/14
Date Received: 09/29/14
Project: North Edge KV030772B, F&BI 409540
Date Extracted: 09/29/14
Date Analyzed: 09/29/14

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
PC-19 4-8' 409540-12	<0.02	<0.02	<0.02	<0.06	<2	94
PC-20 0-4' 409540-13	<0.02	<0.02	<0.02	<0.06	<2	94
PC-20 4-8' 409540-14	<0.02	<0.02	<0.02	<0.06	<2	94
Method Blank 04-1952 MB	<0.02	<0.02	<0.02	<0.06	<2	92

Date of Report: 09/30/14
Date Received: 09/29/14
Project: North Edge KV030772B, F&BI 409540
Date Extracted: 09/29/14
Date Analyzed: 09/29/14 and 09/30/14

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)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
PC-14 0-4' 409540-01	2,200	<250	111
PC-14 4-8' 409540-02	540	<250	106
PC-15 0-4' 409540-03	76	<250	105
PC-15 4-8' 409540-04	890	<250	105
PC-16 0-4' 409540-05	150 x	490	107
PC-16 4-8' 409540-06	<50	<250	79
PC-17 0-4' 409540-07	2,100	470 x	118
PC-17 4-8' 409540-08	3,200	350 x	111
PC-18 0-4' 409540-09	<50	<250	122
PC-18 4-8' 409540-10	<50	<250	107
PC-19 0-4' 409540-11	68 x	<250	119
PC-19 4-8' 409540-12	<50	<250	120

Date of Report: 09/30/14
Date Received: 09/29/14
Project: North Edge KV030772B, F&BI 409540
Date Extracted: 09/29/14
Date Analyzed: 09/29/14 and 09/30/14

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)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
PC-20 0-4' 409540-13	<50	<250	107
PC-20 4-8' 409540-14	600	<250	109
Method Blank 04-1984 MB	<50	<250	115

Date of Report: 09/30/14
Date Received: 09/29/14
Project: North Edge KV030772B, F&BI 409540

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 409540-05 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	90	69-120
Toluene	mg/kg (ppm)	0.5	91	70-117
Ethylbenzene	mg/kg (ppm)	0.5	91	65-123
Xylenes	mg/kg (ppm)	1.5	90	66-120
Gasoline	mg/kg (ppm)	20	90	71-131

Date of Report: 09/30/14
Date Received: 09/29/14
Project: North Edge KV030772B, F&BI 409540

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

Laboratory Code: 409540-06 (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	60	88	87	63-146	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	87	79-144

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.

409540

SAMPLE CHAIN OF CUSTODY

ME 09/29/14 E03 / VS2

Page # 1 of 2

Send Report To Frank Wacker

Company AESI

Address 911 Fifth Ave Ste 102

City, State, ZIP Kirkland, WA 98033

Phone #425 766 5112 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. NarrowEdge / KV030772B

PO#

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☒ RUSH 24 hr
- 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: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
PC-14 0-4'	01 A-E	9/29/14	1050	Soil	1 kit 1 jar	X	X	X										
PC-14 4-8'	02		1105			X	X	X										
PC-15 0-4'	03		1120			X	X	X										
PC-15 4-8'	04		1130			X	X	X										
PC-16 0-4'	05		1140			X	X	X										
PC-16 4-8'	06		1150			X	X	X										
PC-17 0-4'	07		1205			X	X	X										
PC-17 4-8'	08		1210			X	X	X										
PC-18 0-4'	09		1240			X	X	X										
PC-18 4-8'	10		1245			X	X	X										

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Frank Wacker	AESI	9/29/14	1435
Received by:	Nhan Phan	FBI	9/29/14	1435
Relinquished by:				
Received by:		Samples received at 4 °C		

FORMS\COC\COC.DOC

409540

SAMPLE CHAIN OF CUSTODY

ME 09/29/14

E03/V52

Page # 2 of 2

Send Report To Frank Mocker

Company AESI

Address 911 Fifth Ave, Ste 100

City, State, ZIP Kirkland, WA 98033

Phone #425 766 5112 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. North Edge / KV030772B

PO#

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☒ RUSH 24 hr

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	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
						ANALYSES REQUESTED												
PC-19 0-4	11 AE	9/29/14	1300	Soil	1 kit 1 jar	X	X	X										
PC-19 4-8	12		1310			X	X	X										
PC-20 0-4'	13		1350			X	X	X										
PC-20 4-8'	14		1400			X	X	X										
																	Samples received at 4 °C	

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

FORMS\COC\COC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Frank Mocker	AESI	9/29/14	1435
Received by:		Khan Phan	FedEx	9/29/14	1435
Relinquished by:					
Received by:					

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 10, 2014

Jon Sondergaard, Project Manager
Associated Earth Sciences, Inc.
911 5th Avenue, Suite 100
Kirkland, WA 98033

Dear Mr. Sondergaard:

Included are the results from the testing of material submitted on October 8, 2014 from the North Edge KV030772B, F&BI 410140 project. There are 6 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Frank Mocker
AE11010R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 8, 2014 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 410140 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
410140 -01	PC-6 8-12
410140 -02	PC-6 12-16
410140 -03	PC-8 8-12
410140 -04	PC-8 12-16
410140 -05	PC-11 8-12
410140 -06	PC-11 12-16
410140 -07	PC-13 8-12
410140 -08	PC-13 12-16

All quality control requirements were acceptable.

Date of Report: 10/10/14
Date Received: 10/08/14
Project: North Edge KV030772B, F&BI 410140
Date Extracted: 10/09/14
Date Analyzed: 10/09/14

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
PC-6 8-12 410140-01	<0.02	<0.02	<0.02	<0.06	<2	93
PC-6 12-16 410140-02	<0.02	<0.02	<0.02	<0.06	<2	82
PC-8 8-12 410140-03	<0.02	<0.02	<0.02	<0.06	<2	93
PC-8 12-16 410140-04	<0.02	<0.02	<0.02	<0.06	<2	94
PC-11 8-12 410140-05	<0.02	<0.02	<0.02	<0.06	<2	93
PC-11 12-16 410140-06	<0.02	<0.02	<0.02	<0.06	<2	93
PC-13 8-12 410140-07	<0.02	<0.02	<0.02	<0.06	<2	92
PC-13 12-16 410140-08	<0.02	<0.02	<0.02	<0.06	<2	93
Method Blank 04-2011 MB	<0.02	<0.02	<0.02	<0.06	<2	91

Date of Report: 10/10/14
Date Received: 10/08/14
Project: North Edge KV030772B, F&BI 410140
Date Extracted: 10/09/14
Date Analyzed: 10/09/14

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)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
PC-6 8-12 410140-01	<50	<250	105
PC-6 12-16 410140-02	<50	<250	107
PC-8 8-12 410140-03	<50	<250	107
PC-8 12-16 410140-04	<50	<250	106
PC-11 8-12 410140-05	<50	<250	117
PC-11 12-16 410140-06	<50	<250	105
PC-13 8-12 410140-07	<50	<250	105
PC-13 12-16 410140-08	<50	<250	106
Method Blank 04-2041 MB	<50	<250	105

Date of Report: 10/10/14
Date Received: 10/08/14
Project: North Edge KV030772B, F&BI 410140

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 410124-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	92	69-120
Toluene	mg/kg (ppm)	0.5	93	70-117
Ethylbenzene	mg/kg (ppm)	0.5	92	65-123
Xylenes	mg/kg (ppm)	1.5	91	66-120
Gasoline	mg/kg (ppm)	20	90	71-131

Date of Report: 10/10/14
Date Received: 10/08/14
Project: North Edge KV030772B, F&BI 410140

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

Laboratory Code: 410140-01 (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	87	87	63-146	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	86	79-144

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.

410140

SAMPLE CHAIN OF CUSTODY

ME 10/8/14 VS2/A03

Send Report To Frank Mocker
Company AESI
Address 911 Fifth Ave Ste 100
City, State, ZIP Kirkland, WA 98033
Phone #425 766 5712 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. North Edge KV030772B

PO#

REMARKS

Page # 1 of 1

TURNAROUND TIME
☐ Standard (2 Weeks)
☒ RUSH Mon 8/13/14 8AM
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	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
PC-6 8-12	01 A-E	10/8/14	0930	Soil	1 kit 1 Jar	X	X	X										
PC-6 12-16	02		0945			X	X	X										
PC-8 8-12	03		1010			X	X	X										
PC-8 12-16	04		1015			X	X	X										
PC-11 8-12	05		0955			X	X	X										
PC-11 12-16	06		1000			X	X	X										
PC-13 8-12	07		1140			X	X	X										
PC-13 12-16	08 V		1145			X	X	X										

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Frank Mocker	AESI	10/8/14	1600
Received by:		A. Podnozova	FBI	10/8/14	4 PM
Relinquished by:					
Received by:			Samples received at 10.1 °C		

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 21, 2014

Jon Sondergaard, Project Manager
Associated Earth Sciences, Inc.
911 5th Avenue, Suite 100
Kirkland, WA 98033

Dear Mr. Sondergaard:

Included are the results from the testing of material submitted on October 14, 2014 from the North Edge KV030772B, F&BI 410242 project. There are 17 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Frank Mocker
AE11021R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 14, 2014 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 410242 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
410242 -01	PC-21 0-4'
410242 -02	PC-21 4-8'
410242 -03	PC-22 0-4'
410242 -04	PC-22 4-8'
410242 -05	PC-23 0-4'
410242 -06	PC-23 4-8'
410242 -07	PC-24 0-4'
410242 -08	PC-24 4-8'
410242 -09	PC-25 0-4'
410242 -10	PC-25 4-8'
410242 -11	PC-26 0-4'
410242 -12	PC-26 4-8'
410242 -13	PC-27 0-4'
410242 -14	PC-27 4-8'
410242 -15	PC-5 0-5'
410242 -16	PC-5 5-10'

The 8270D surrogate failed the acceptance criteria for sample PC-5 0-5'. The affected results were flagged accordingly.

All other quality control requirements were acceptable.

Date of Report: 10/21/14
Date Received: 10/14/14
Project: North Edge KV030772B, F&BI 410242
Date Extracted: 10/16/14
Date Analyzed: 10/16/14 and 10/17/14

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
PC-21 0-4' 410242-01 1/5	<0.02 j	<0.1	2.5	1.7	580	107
PC-21 4-8' 410242-02 1/5	<0.02 j	0.24	5.3	3.2	780	117
PC-22 0-4' 410242-03	<0.02	<0.02	<0.02	<0.06	89	95
PC-22 4-8' 410242-04 1/2	<0.02 j	<0.04	0.21	0.53	260	110
PC-23 0-4' 410242-05	<0.02	<0.02	<0.02	<0.06	14	98
PC-23 4-8' 410242-06	<0.02	<0.02	0.027	0.067	90	99
PC-24 0-4' 410242-07	<0.02	<0.02	<0.02	<0.06	<2	91
PC-24 4-8' 410242-08	<0.02	<0.02	<0.02	<0.06	<2	95
PC-25 0-4' 410242-09 1/2	<0.02 j	<0.04	0.55	0.71	360	110
PC-25 4-8' 410242-10 1/5	<0.02 j	<0.1	11	6.8	1,200	ip
PC-26 0-4' 410242-11	<0.02	<0.02	<0.02	<0.06	21	95

Date of Report: 10/21/14
Date Received: 10/14/14
Project: North Edge KV030772B, F&BI 410242
Date Extracted: 10/16/14
Date Analyzed: 10/16/14 and 10/17/14

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
PC-26 4-8' 410242-12	<0.02	<0.02	<0.02	<0.06	<2	98
PC-27 0-4' 410242-13	<0.02	<0.02	<0.02	<0.06	<2	97
PC-27 4-8' 410242-14	<0.02	<0.02	<0.02	<0.06	18	98
PC-5 0-5' 410242-15 1/10	<0.2	<0.2	15	12	2,300	ip
PC-5 5-10' 410242-16 1/5	<0.02 j	<0.1	0.93	0.81	240	101
Method Blank 04-2072 MB	<0.02	<0.02	<0.02	<0.06	<2	96

Date of Report: 10/21/14
Date Received: 10/14/14
Project: North Edge KV030772B, F&BI 410242
Date Extracted: 10/17/14
Date Analyzed: 10/17/14

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)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
PC-21 0-4' 410242-01	2,200	<250	110
PC-21 4-8' 410242-02	4,000	<250	108
PC-22 0-4' 410242-03	2,500	300	113
PC-22 4-8' 410242-04	3,700	270	117
PC-23 0-4' 410242-05	1,100	1,200	98
PC-23 4-8' 410242-06	210	<250	103
PC-24 0-4' 410242-07	280	400	109
PC-24 4-8' 410242-08	<50	<250	113
PC-25 0-4' 410242-09	2,600	<250	105
PC-25 4-8' 410242-10	5,800	<250	118
PC-26 0-4' 410242-11	1,400	<250	91
PC-26 4-8' 410242-12	<50	<250	102

Date of Report: 10/21/14
Date Received: 10/14/14
Project: North Edge KV030772B, F&BI 410242
Date Extracted: 10/17/14
Date Analyzed: 10/17/14

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)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
PC-27 0-4' 410242-13	60	<250	102
PC-27 4-8' 410242-14	<50	<250	110
PC-5 0-5' 410242-15	1,800	<250	110
PC-5 5-10' 410242-16	310	<250	114
Method Blank 04-2111 MB	<50	<250	101

Analysis For Total Metals By EPA Method 200.8

Client ID:	PC-5 0-5'	Client:	Associated Earth Sciences
Date Received:	10/14/14	Project:	North Edge KV030772B, F&BI 410242
Date Extracted:	10/15/14	Lab ID:	410242-15
Date Analyzed:	10/15/14	Data File:	410242-15.048
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	1.39

Analysis For Total Metals By EPA Method 200.8

Client ID:	PC-5 5-10'	Client:	Associated Earth Sciences
Date Received:	10/14/14	Project:	North Edge KV030772B, F&BI 410242
Date Extracted:	10/15/14	Lab ID:	410242-16
Date Analyzed:	10/15/14	Data File:	410242-16.051
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	1.37

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Associated Earth Sciences
Date Received:	NA	Project:	North Edge KV030772B, F&BI 410242
Date Extracted:	10/15/14	Lab ID:	I4-642 mb
Date Analyzed:	10/15/14	Data File:	I4-642 mb.044
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	<1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	PC-5 0-5'	Client:	Associated Earth Sciences
Date Received:	10/14/14	Project:	North Edge KV030772B, F&BI 410242
Date Extracted:	10/15/14	Lab ID:	410242-15 1/5
Date Analyzed:	10/16/14	Data File:	101611.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	136	50	150
Benzo(a)anthracene-d12	179 vo	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	2.2 ve
Acenaphthylene	<0.01
Acenaphthene	0.16
Fluorene	0.76
Phenanthrene	0.79
Anthracene	<0.01
Fluoranthene	0.015
Pyrene	0.036
Benz(a)anthracene	<0.01
Chrysene	0.014 js
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	PC-5 0-5'	Client:	Associated Earth Sciences
Date Received:	10/14/14	Project:	North Edge KV030772B, F&BI 410242
Date Extracted:	10/15/14	Lab ID:	410242-15 1/50
Date Analyzed:	10/16/14	Data File:	101610.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	105 d	50	150
Benzo(a)anthracene-d12	96 d	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	1.5
Acenaphthylene	<0.1
Acenaphthene	0.10
Fluorene	0.47
Phenanthrene	0.50
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	PC-5 5-10'	Client:	Associated Earth Sciences
Date Received:	10/14/14	Project:	North Edge KV030772B, F&BI 410242
Date Extracted:	10/15/14	Lab ID:	410242-16 1/5
Date Analyzed:	10/16/14	Data File:	101606.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	87	50	150
Benzo(a)anthracene-d12	110	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	0.46
Acenaphthylene	<0.01
Acenaphthene	0.052
Fluorene	0.18
Phenanthrene	0.20
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Associated Earth Sciences
Date Received:	Not Applicable	Project:	North Edge KV030772B, F&BI 410242
Date Extracted:	10/15/14	Lab ID:	04-2098 mb 1/5
Date Analyzed:	10/16/14	Data File:	101530.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	88	50	150
Benzo(a)anthracene-d12	108	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Date of Report: 10/21/14
Date Received: 10/14/14
Project: North Edge KV030772B, F&BI 410242

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 410242-07 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	85	66-121
Toluene	mg/kg (ppm)	0.5	94	72-128
Ethylbenzene	mg/kg (ppm)	0.5	99	69-132
Xylenes	mg/kg (ppm)	1.5	94	69-131
Gasoline	mg/kg (ppm)	20	100	61-153

Date of Report: 10/21/14
Date Received: 10/14/14
Project: North Edge KV030772B, F&BI 410242

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

Laboratory Code: 410242-05 (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	1,800	112	108	63-146	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	100	79-144

Date of Report: 10/21/14
Date Received: 10/14/14
Project: North Edge KV030772B, F&BI 410242

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

Laboratory Code: 410242-15 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	1.28	106	107	59-148	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	105	80-120

Date of Report: 10/21/14
Date Received: 10/14/14
Project: North Edge KV030772B, F&BI 410242

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM

Laboratory Code: 410257-01 1/5 (Matrix Spike) 1/5

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	<0.01	95	95	44-129	0
Acenaphthylene	mg/kg (ppm)	0.17	<0.01	100	101	52-121	1
Acenaphthene	mg/kg (ppm)	0.17	<0.01	95	96	51-123	1
Fluorene	mg/kg (ppm)	0.17	<0.01	100	100	37-137	0
Phenanthrene	mg/kg (ppm)	0.17	<0.01	97	98	45-124	1
Anthracene	mg/kg (ppm)	0.17	<0.01	96	96	32-124	0
Fluoranthene	mg/kg (ppm)	0.17	<0.01	99	100	50-125	1
Pyrene	mg/kg (ppm)	0.17	<0.01	105	103	41-135	2
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.01	101	103	23-144	2
Chrysene	mg/kg (ppm)	0.17	<0.01	98	98	45-122	0
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.01	103	101	31-144	2
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01	100	103	45-130	3
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.01	106	107	39-128	1
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.01	103	103	28-146	0
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01	100	103	46-129	3
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	<0.01	98	99	37-133	1

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.17	98	58-121
Acenaphthylene	mg/kg (ppm)	0.17	99	54-121
Acenaphthene	mg/kg (ppm)	0.17	102	54-123
Fluorene	mg/kg (ppm)	0.17	100	56-127
Phenanthrene	mg/kg (ppm)	0.17	100	55-122
Anthracene	mg/kg (ppm)	0.17	98	50-120
Fluoranthene	mg/kg (ppm)	0.17	105	54-129
Pyrene	mg/kg (ppm)	0.17	104	53-127
Benz(a)anthracene	mg/kg (ppm)	0.17	102	51-115
Chrysene	mg/kg (ppm)	0.17	103	55-129
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	105	56-123
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	106	54-131
Benzo(a)pyrene	mg/kg (ppm)	0.17	98	51-118
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	104	49-148
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	104	50-141
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	103	52-131

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.

410242

SAMPLE CHAIN OF CUSTODY

ME 10/14/14

VS2 / SD3

Page # 1 of 2

Send Report To Frank Mocker

Company AESI

Address 911 Fifth Ave Ste 100

City, State, ZIP Kirkland, WA 98033

Phone # 425 766 5112 Fax #

SAMPLERS *(signature)*

PROJECT NAME/NO. NormEdge / KV030772B

PO#

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☒ RUSH 5 day

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	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
						ANALYSES REQUESTED												
PC-21 0-4'	01	10/14/14	0950	Soil	1 kit 1 jar	X	X	X										
PC-21 4-8'	02		0956			X	X	X										
PC-22 0-4'	03		0915			X	X	X										
PC-22 4-8'	04		0925			X	X	X										
PC-23 0-4'	05		1015			X	X	X										
PC-23 4-8'	06		1025			X	X	X										
PC-24 0-4'	07		1040			X	X	X										
PC-24 4-8'	08		1055			X	X	X										
PC-25 0-4'	09		1110			X	X	X										
PC-25 4-8'	10		1117			X	X	X										

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Frank Mocker	AESI	10/14/14	1600
Received by:	Nhan Phan	FedEx	10/14/14	1600
Relinquished by:				
Received by:		Samples received at 4 °C		

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

410242

SAMPLE CHAIN OF CUSTODY

ME 10/14/14 US2/BT3

Send Report To Frank Wacker

Company AESI

Address 911 Fifth Ave Ste 100

City, State, ZIP Kirkland, WA 98033

Phone # 425 766 5112 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. NorthEdge / KV030772B → PO#

REMARKS

Page # 2 of 2

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☒ RUSH 5 day

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	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	PAH	Pb					Notes
PC-26 0-4'	11 A-E	10/14/14	1145	Soil	1 kit 1 jar	X	X	X										
PC-26 4-8'	12		1150			X	X	X										
PC-27 0-4'	13		1210			X	X	X										
PC-27 4-8'	14		1217			X	X	X										
PC-5 0-5'	15 A-D		1345			X	X	X				X	X					TCLP if Pb exceeds 100 ppm may request TCLP on Benzene depending on Result
PC-5 5-10'	16 A-E		1415			X	X	X				X	X					

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Frank Wacker	AESI	10/14/14	1600
Received by:	Nhan Pham	FEBI	10/14/14	1600
Relinquished by:				
Received by:		Samples received at 4 °C		

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 22, 2014

Jon Sondergaard, Project Manager
Associated Earth Sciences, Inc.
911 5th Avenue, Suite 100
Kirkland, WA 98033

Dear Mr. Sondergaard:

Included are the results from the testing of material submitted on October 15, 2014 from the North Edge KV030772B, F&BI 410273 project. There are 8 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Frank Mocker
AE11022R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 15, 2014 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 410273 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
410273 -01	PC-28 0-4'
410273 -02	PC-28 4-8'
410273 -03	PC-29 0-4'
410273 -04	PC-29 4-8'
410273 -05	PC-30 0-4'
410273 -06	PC-30 4-8'
410273 -07	PC-31 0-4'
410273 -08	PC-31 4-8'
410273 -09	PC-32 0-4'
410273 -10	PC-32 4-8'
410273 -11	PC-33 0-4'
410273 -12	PC-33 4-8'

All quality control requirements were acceptable.

Date of Report: 10/22/14
Date Received: 10/15/14
Project: North Edge KV030772B, F&BI 410273
Date Extracted: 10/17/14
Date Analyzed: 10/18/14 and 10/22/14

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
PC-28 0-4' 410273-01 1/5	<0.1	<0.1	8.3	9.6	1,600	ip
PC-28 4-8' 410273-02 1/5	<0.1	<0.1	11	17	1,500	ip
PC-29 0-4' 410273-03 1/5	<0.1	<0.1	4.3	4.3	860	117
PC-29 4-8' 410273-04	<0.02	<0.02	<0.02	<0.06	14	98
PC-30 0-4' 410273-05	<0.02	<0.02	<0.02	<0.06	<2	101
PC-30 4-8' 410273-06	<0.02	<0.02	<0.02	<0.06	<2	97
PC-31 0-4' 410273-07 1/5	<0.1	<0.1	9.7	21	2,000	ip
PC-31 4-8' 410273-08 1/5	<0.1	<0.1	13	11	930	ip
PC-32 0-4' 410273-09 1/2	<0.04	0.073	2.4	2.5	610	ip
PC-32 4-8' 410273-10	<0.02	<0.02	0.23	0.28	110	104

Date of Report: 10/22/14
Date Received: 10/15/14
Project: North Edge KV030772B, F&BI 410273
Date Extracted: 10/17/14
Date Analyzed: 10/18/14 and 10/22/14

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
PC-33 0-4' 410273-11	<0.02	<0.02	<0.02	<0.06	<2	100
PC-33 4-8' 410273-12	<0.02	<0.02	<0.02	<0.06	<2	97
Method Blank 04-2074 MB	<0.02	<0.02	<0.02	<0.06	<2	94

Date of Report: 10/22/14
Date Received: 10/15/14
Project: North Edge KV030772B, F&BI 410273
Date Extracted: 10/16/14
Date Analyzed: 10/17/14

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)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 48-168)
PC-28 0-4' 410273-01	2,400	<250	96
PC-28 4-8' 410273-02	1,500	<250	94
PC-29 0-4' 410273-03	310	<250	96
PC-29 4-8' 410273-04	<50	<250	96
PC-30 0-4' 410273-05	<50	<250	96
PC-30 4-8' 410273-06	<50	<250	95
PC-31 0-4' 410273-07	2,800	<250	97
PC-31 4-8' 410273-08	1,500	<250	96
PC-32 0-4' 410273-09	1,100	410	96
PC-32 4-8' 410273-10	69	<250	95

Date of Report: 10/22/14
Date Received: 10/15/14
Project: North Edge KV030772B, F&BI 410273
Date Extracted: 10/16/14
Date Analyzed: 10/17/14

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)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 48-168)
PC-33 0-4' 410273-11	<50	<250	94
PC-33 4-8' 410273-12	<50	<250	98
Method Blank 04-2108 MB	<50	<250	99

Date of Report: 10/22/14
Date Received: 10/15/14
Project: North Edge KV030772B, F&BI 410273

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING METHOD 8021B AND NWTPH-Gx

Laboratory Code: 410304-02 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	84	66-121
Toluene	mg/kg (ppm)	0.5	90	72-128
Ethylbenzene	mg/kg (ppm)	0.5	96	69-132
Xylenes	mg/kg (ppm)	1.5	90	69-131
Gasoline	mg/kg (ppm)	20	90	61-153

Date of Report: 10/22/14
Date Received: 10/15/14
Project: North Edge KV030772B, F&BI 410273

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

Laboratory Code: 410273-04 (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	98	102	73-135	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	102	74-139

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.

410273

SAMPLE CHAIN OF CUSTODY

ME 10-15-14 A04 / VS2

Send Report To: Frank Mercer
Company: AESI
Address: 911 Fifth Ave Ste 100
City, State, ZIP: Kirkland WA 98033
Phone #: 425 766 5112 Fax #:

SAMPLERS (signature):
PROJECT NAME/NO.: Markedge / KN030772B
PO#:
REMARKS:

Page # 1 of 2

TURNAROUND TIME
☐ Standard (2 Weeks)
☒ RUSH 5 day
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: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
PC-28 0-4'	01A-E	10/15/14	1020	Soil	1 kit 1 jar	X	X	X										
PC-28 4-8'	02		1026			X	X	X										
PC-29 0-4'	03		1055			X	X	X										
PC-29 4-8'	04		1100			X	X	X										
PC-30 0-4'	05		1116			X	X	X										
PC-30 4-8'	06		1122			X	X	X										
PC-31 0-4'	07		1140			X	X	X										
PC-31 4-8'	08		1145			X	X	X										
PC-32 0-4'	09		1158			X	X	X										
PC-32 4-8'	10-D		1205		1 kit	X	X	X										Samples received at 3.1 °C

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Frank Mercer	AESI	10/15/14	1350
Received by:		DOD	FOB	11	11
Relinquished by:					
Received by:					

FORMS\COC\COC.DOC

410273

SAMPLE CHAIN OF CUSTODY

ME 10-15-14 A04/052

Page # 2 of 2

Send Report To Frank Mocker

Company AESI

Address 911 Fifth Ave Ste 100

City, State, ZIP Kirkland WA 98033

Phone # 425 766 5112 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Norcliffe / KU030772B

PO#

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☒ RUSH 5 day

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: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
PC-33 0-4	11AE	10/15/14	1230	Soil	1 Tub 1 Jar	X	X	X										
PC-33 4-8'	12T	↓	1236	↓	↓	X	X	X										

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Frank Mocker	AESI	10/15/14	1350
Received by:	David	F+BI	11	1
Relinquished by:				
Received by:				

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

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

October 29, 2014

Jon Sondergaard, Project Manager
Associated Earth Sciences, Inc.
911 5th Avenue, Suite 100
Kirkland, WA 98033

Dear Mr. Sondergaard:

Included are the results from the testing of material submitted on October 24, 2014 from the North Edge KV030772B, F&BI 410461 project. There are 6 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Frank Mocker
AE11029R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 24, 2014 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 410461 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
410461 -01	PC-34(0-4')
410461 -02	PC-34(4-8')
410461 -03	PC-35(0-4')
410461 -04	PC-35(4-8')

All quality control requirements were acceptable.

Date of Report: 10/29/14
Date Received: 10/24/14
Project: North Edge KV030772B, F&BI 410461
Date Extracted: 10/24/14
Date Analyzed: 10/24/14 and 10/27/14

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
PC-34(0-4') 410461-01	<0.02	<0.02	<0.02	<0.06	<2	99
PC-34(4-8') 410461-02	<0.02	<0.02	0.85	0.96	260	140
PC-35(0-4') 410461-03	<0.02	<0.02	<0.02	<0.06	<2	85
PC-35(4-8') 410461-04	<0.02	<0.02	<0.02	<0.06	<2	98
Method Blank 04-2164 MB	<0.02	<0.02	<0.02	<0.06	<2	96

Date of Report: 10/29/14
Date Received: 10/24/14
Project: North Edge KV030772B, F&BI 410461
Date Extracted: 10/27/14
Date Analyzed: 10/27/14

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)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
PC-34(0-4') 410461-01	<50	<250	85
PC-34(4-8') 410461-02	110 x	<250	78
PC-35(0-4') 410461-03	<50	<250	85
PC-35(4-8') 410461-04	<50	<250	84
Method Blank 04-2179 MB	<50	<250	94

Date of Report: 10/29/14
Date Received: 10/24/14
Project: North Edge KV030772B, F&BI 410461

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING METHOD 8021B AND NWTPH-Gx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benzene	mg/kg (ppm)	0.5	85	84	69-120	1
Toluene	mg/kg (ppm)	0.5	88	88	70-117	0
Ethylbenzene	mg/kg (ppm)	0.5	89	89	65-123	0
Xylenes	mg/kg (ppm)	1.5	91	91	66-120	0
Gasoline	mg/kg (ppm)	20	95	95	71-131	0

Date of Report: 10/29/14
Date Received: 10/24/14
Project: North Edge KV030772B, F&BI 410461

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

Laboratory Code: 410470-02 (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	107	96	63-146	11

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	97	79-144

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.

410461

SAMPLE CHAIN OF CUSTODY

ME 10-24-14

B02 / V81

Page # 1 of 1

Send Report To Frank Mocker

Company AESI

Address 911 Fifth Ave Ste 100

City, State, ZIP Kirkland, WA 98033

Phone #425 766 5112 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. North Edge / KV030772B →

PO#

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☒ RUSH 5 day

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: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS						Notes
PC-34 (0-4')	01 A-E	10/24/14	1211	Soil	1 kit 1 jar	X	X	X									
PC-34 (4-8')	02 T		1220			X	X	X									
PC-35 (0-4')	03		1231			X	X	X									
PC-35 (4-8')	04	↓	1237	↓	↓	X	X	X									

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Frank Mocker	AESI	10/24/14	1430
Received by:	DO	F+BI	11	11
Relinquished by:				
Received by:				

Samples received at 2 °C

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

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

November 6, 2014

Jon Sondergaard, Project Manager
Associated Earth Sciences, Inc.
911 5th Avenue, Suite 100
Kirkland, WA 98033

Dear Mr. Sondergaard:

Included are the results from the testing of material submitted on October 31, 2014 from the North Edge KV030772B, F&BI 410572 project. There are 6 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Frank Mocker
AE11106R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 31, 2014 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 410572 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
410572 -01	SW-1 @ 10'
410572 -02	SW-2 @ 10'

All quality control requirements were acceptable.

Date of Report: 11/06/14
Date Received: 10/31/14
Project: North Edge KV030772B, F&BI 410572
Date Extracted: 11/03/14
Date Analyzed: 11/03/14

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SW-1 @ 10' 410572-01	<0.02	<0.02	<0.02	<0.06	<2	99
SW-2 @ 10' 410572-02	<0.02	<0.02	<0.02	<0.06	<2	100
Method Blank 04-2234 MB	<0.02	<0.02	<0.02	<0.06	<2	99

Date of Report: 11/06/14
Date Received: 10/31/14
Project: North Edge KV030772B, F&BI 410572
Date Extracted: 11/03/14
Date Analyzed: 11/03/14

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)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
SW-1 @ 10' 410572-01	<50	<250	88
SW-2 @ 10' 410572-02	<50	<250	98
Method Blank 04-2232 MB	<50	<250	92

Date of Report: 11/06/14
Date Received: 10/31/14
Project: North Edge KV030772B, F&BI 410572

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 411006-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	95	69-120
Toluene	mg/kg (ppm)	0.5	96	70-117
Ethylbenzene	mg/kg (ppm)	0.5	96	65-123
Xylenes	mg/kg (ppm)	1.5	96	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

Date of Report: 11/06/14
Date Received: 10/31/14
Project: North Edge KV030772B, F&BI 410572

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

Laboratory Code: 411001-01 (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	96	107	63-146	11

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	94	79-144

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.

410572

SAMPLE CHAIN OF CUSTODY ME 10/31/14

VST / BOI

Page # 1 of 1

Send Report To Frank Mosher

Company AESI

Address 911 Fifth Avenue Ste 100

City, State, ZIP Kirkland, WA 98033

Phone #425 766 5012 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Northridge / KV030772B →

PO#

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☑ RUSH 5 day

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	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS						Notes
SW-1 @10'	01A-E	10/29/14	0900	Soil	1 jar	X	X	X									
SW-2@10'	02A-E	10/30/14	0800	Soil	1 jar	X	X	X									
																	Samples received at 6 °C

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Frank Mosher	AESI	10/31/14	0900
Received by:	Jim Bruya	F&B	10/31	0900
Relinquished by:				
Received by:				

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

November 6, 2014

Jon Sondergaard, Project Manager
Associated Earth Sciences, Inc.
911 5th Avenue, Suite 100
Kirkland, WA 98033

Dear Mr. Sondergaard:

Included are the results from the testing of material submitted on October 31, 2014 from the North Edge KV030772B, F&BI 410585 project. There are 6 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Frank Mocker
AE11106R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 31, 2014 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 410585 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
410585 -01	SW-3@10'bgs
410585 -02	SW-4@10'bgs

All quality control requirements were acceptable.

Date of Report: 11/06/14
Date Received: 10/31/14
Project: North Edge KV030772B, F&BI 410585
Date Extracted: 11/03/14
Date Analyzed: 11/03/14

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SW-3@10'bgs 410585-01	<0.02	<0.02	<0.02	<0.06	<2	100
SW-4@10'bgs 410585-02	<0.02	<0.02	<0.02	<0.06	<2	100
Method Blank 04-2234 MB	<0.02	<0.02	<0.02	<0.06	<2	99

Date of Report: 11/06/14
Date Received: 10/31/14
Project: North Edge KV030772B, F&BI 410585
Date Extracted: 11/03/14
Date Analyzed: 11/03/14

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)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
SW-3@10'bgs 410585-01	<50	<250	90
SW-4@10'bgs 410585-02	<50	<250	103
Method Blank 04-2232 MB	<50	<250	92

Date of Report: 11/06/14
Date Received: 10/31/14
Project: North Edge KV030772B, F&BI 410585

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 411006-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	95	69-120
Toluene	mg/kg (ppm)	0.5	96	70-117
Ethylbenzene	mg/kg (ppm)	0.5	96	65-123
Xylenes	mg/kg (ppm)	1.5	96	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

Date of Report: 11/06/14
Date Received: 10/31/14
Project: North Edge KV030772B, F&BI 410585

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

Laboratory Code: 411001-01 (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	96	107	63-146	11

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	94	79-144

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.

410585

SAMPLE CHAIN OF CUSTODY

ME 10-31-14

VSI / 803

Page # 1 of 1

Send Report To Frank Mocker

Company AESI

Address 911 Fifth Ave, Ste 100

City, State, ZIP Kirkland, WA 98033

Phone #425 766 5112 Fax #

SAMPLERS (*signature*)

PROJECT NAME/NO. North Edge / KV030772B → PO#

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☒ RUSH 5 day
- 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: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
SW-3 @10'	01A-E	10/31/14	0930	Soil	1 kit 1 jar	X	X	X										
SW-4 @10'	02 T	10/31/14	1045	Soil	1 kit 1 jar	X	X	X										

Samples received at 4 °C

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

Relinquished by:	Frank Mocker	AESI	10/31/14	1520
Received by:	Nhan Phan	FEBT	10/31/14	K
Relinquished by:				
Received by:				

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

November 4, 2014

Jon Sondergaard, Project Manager
Associated Earth Sciences, Inc.
911 5th Avenue, Suite 100
Kirkland, WA 98033

Dear Mr. Sondergaard:

Included are the results from the testing of material submitted on November 3, 2014 from the North Edge KV030772B, F&BI 411010 project. There are 6 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Frank Mocker
AE11104R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on November 3, 2014 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 411010 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
411010 -01	PC-12 16.5-20.5'
411010 -02	PC-12 20.5-24.5'
411010 -03	PC-10 10-14'
411010 -04	PC-10 14-18'

All quality control requirements were acceptable.

Date of Report: 11/04/14
Date Received: 11/03/14
Project: North Edge KV030772B, F&BI 411010
Date Extracted: 11/03/14
Date Analyzed: 11/03/14

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
PC-12 16.5-20.5' 411010-01	<0.02	<0.02	<0.02	<0.06	<2	99
PC-12 20.5-24.5' 411010-02	<0.02	<0.02	<0.02	<0.06	<2	100
PC-10 10-14' 411010-03	<0.02	<0.02	<0.02	<0.06	<2	100
PC-10 14-18' 411010-04	<0.02	<0.02	<0.02	<0.06	<2	100
Method Blank 04-2234 MB	<0.02	<0.02	<0.02	<0.06	<2	99

Date of Report: 11/04/14
Date Received: 11/03/14
Project: North Edge KV030772B, F&BI 411010
Date Extracted: 11/03/14
Date Analyzed: 11/03/14

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)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 53-144)
PC-12 16.5-20.5' 411010-01	<50	<250	100
PC-12 20.5-24.5' 411010-02	<50	<250	97
PC-10 10-14' 411010-03	<50	<250	108
PC-10 14-18' 411010-04	<50	<250	105
Method Blank 04-2250 MB	<50	<250	107

Date of Report: 11/04/14
Date Received: 11/03/14
Project: North Edge KV030772B, F&BI 411010

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 411006-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	95	69-120
Toluene	mg/kg (ppm)	0.5	96	70-117
Ethylbenzene	mg/kg (ppm)	0.5	96	65-123
Xylenes	mg/kg (ppm)	1.5	96	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

Date of Report: 11/04/14
Date Received: 11/03/14
Project: North Edge KV030772B, F&BI 411010

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

Laboratory Code: 411010-01 (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	96	109	64-133	13

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	101	58-147

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.

411010

SAMPLE CHAIN OF CUSTODY

ME 11-03-14

USI/801

Send Report To Frank Moeker

Company AESI

Address 911 Fifth Avenue, Ste 100

City, State, ZIP Kirkland, WA 98033

Phone # 425 766 5112 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. NorthEdge / KV030772B

PO#

REMARKS

Page # 1 of 1

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☒ RUSH 11/4/14 PM

Rush charges authorized by F.S. Moeker

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Notes
PC-12 16.5-20.5'	01	11/3/14	1230	Soil	1 jar	X	X	X				
PC-12 20.5-24.5'	02		1240			X	X	X				
PC-10 10-14'	03		1250			X	X	X				
PC-10 14-18'	04		1300			X	X	X				

Samples received at 10 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Frank Moeker	AESI	11/3/14	1400
Received by:	NINA	FBI	11/3/14	1400
Relinquished by:				
Received by:				

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

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

November 11, 2014

Jon Sondergaard, Project Manager
Associated Earth Sciences, Inc.
911 5th Avenue, Suite 100
Kirkland, WA 98033

Dear Mr. Sondergaard:

Included are the results from the testing of material submitted on November 4, 2014 from the North Edge KV030772B, F&BI 411037 project. There are 6 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Frank Mocker
AE11111R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on November 4, 2014 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 411037 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
411037 -01	PC-36 0-4'
411037 -02	PC-37 0-4'
411037 -03	PC-38 0-4'
411037 -04	PC-39 0-4'

All quality control requirements were acceptable.

Date of Report: 11/11/14
Date Received: 11/04/14
Project: North Edge KV030772B, F&BI 411037
Date Extracted: 11/05/14
Date Analyzed: 11/05/14

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
PC-36 0-4' 411037-01	<0.02	<0.02	<0.02	<0.06	<2	99
PC-37 0-4' 411037-02	<0.02	<0.02	<0.02	<0.06	<2	99
PC-38 0-4' 411037-03	<0.02	<0.02	<0.02	<0.06	<2	100
PC-39 0-4' 411037-04	<0.02	<0.02	<0.02	<0.06	<2	100
Method Blank 04-2239 MB	<0.02	<0.02	<0.02	<0.06	<2	99

Date of Report: 11/11/14
Date Received: 11/04/14
Project: North Edge KV030772B, F&BI 411037
Date Extracted: 11/05/14
Date Analyzed: 11/05/14

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)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 53-144)
PC-36 0-4' 411037-01	<50	<250	86
PC-37 0-4' 411037-02	<50	<250	94
PC-38 0-4' 411037-03	<50	<250	94
PC-39 0-4' 411037-04	<50	<250	95
Method Blank 04-2257 MB2	<50	<250	81

Date of Report: 11/11/14
Date Received: 11/04/14
Project: North Edge KV030772B, F&BI 411037

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 411037-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	96	69-120
Toluene	mg/kg (ppm)	0.5	98	70-117
Ethylbenzene	mg/kg (ppm)	0.5	98	65-123
Xylenes	mg/kg (ppm)	1.5	97	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

Date of Report: 11/11/14
Date Received: 11/04/14
Project: North Edge KV030772B, F&BI 411037

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

Laboratory Code: 411030-09 (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	105	64-133	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	103	58-147

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.

411037

SAMPLE CHAIN OF CUSTODY

ME 11/4/14

C01 / VS1

Send Report To Frank Mocker

Company ACSI

Address 911 Fifth Avenue, Ste 100

City, State, ZIP Kirkland, WA 98033

Phone # 425 766 5712 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Hawthorne / ICW0307728

PO#

REMARKS

Page # 1 of 1

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☒ RUSH 5 day

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: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
PC-36 0-1'	01 A-E	11/1/14	1020	Soil	1 jar	X	X	X										
PC-37 0-1	02		1030			X	X	X										
PC-38 0-1	03		1040			X	X	X										
PC-39 0-1	04		1055			X	X	X										

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Frank Mocker	ACSI	11/4/14	1505
Received by:	Michael Erdahl	FB&M	11/4/14	1505
Relinquished by:				
Received by:		Samples received at 6 °C		

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Seattle, WA 98119-2029
Ph. (206) 285-8282
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November 6, 2014

Jon Sondergaard, Project Manager
Associated Earth Sciences, Inc.
911 5th Avenue, Suite 100
Kirkland, WA 98033

Dear Mr. Sondergaard:

Included are the results from the testing of material submitted on November 5, 2014 from the North Edge KV030772B, F&BI 411062 project. There are 8 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Frank Mocker
AE11106R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on November 5, 2014 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 411062 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
411062 -01	SW-5 @ 10'
411062 -02	PC-22 8-12'
411062 -03	PC-22 12-16'
411062 -04	PC-28 8-12'
411062 -05	PC-28 12-16'
411062 -06	PC-31 8-12'
411062 -07	PC-31 12-16'
411062 -08	PC-32 8-12'
411062 -09	PC-32 12-16'
411062 -10	PC-29 8-12'
411062 -11	PC-29 12-16'
411062 -12	SW-1 @ 20'
411062 -13	SW-2 @ 20'

All quality control requirements were acceptable.

Date of Report: 11/06/14
Date Received: 11/05/14
Project: North Edge KV030772B, F&BI 411062
Date Extracted: 11/05/14
Date Analyzed: 11/05/14 and 11/06/14

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SW-5 @ 10' 411062-01	<0.02	<0.02	<0.02	<0.06	<2	101
PC-22 8-12' 411062-02 1/5	<0.02 j	0.99	4.4	2.4	540	111
PC-22 12-16' 411062-03	<0.02	<0.02	0.078	<0.06	35	100
PC-28 8-12' 411062-04 1/10	<0.2	2.6	11	18	1,300	124
PC-28 12-16' 411062-05 1/10	<0.2	3.7	8.9	18	1,300	117
PC-31 8-12' 411062-06 1/10	<0.2	1.1	8.4	15	1,300	127
PC-31 12-16' 411062-07 1/20	<0.4	1.8	11	19	1,900	112
PC-32 8-12' 411062-08 1/5	<0.02 j	0.28	3.4	5.9	810	126
PC-32 12-16' 411062-09 1/5	<0.02 j	0.17	1.9	3.3	470	113
PC-29 8-12' 411062-10	<0.02	<0.02	<0.02	<0.06	3.0	87

Date of Report: 11/06/14
Date Received: 11/05/14
Project: North Edge KV030772B, F&BI 411062
Date Extracted: 11/05/14
Date Analyzed: 11/05/14 and 11/06/14

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
PC-29 12-16' 411062-11 1/5	<0.02 j	1.6	8.7	4.4	690	131
SW-1 @ 20' 411062-12	<0.02	<0.02	<0.02	<0.06	<2	101
SW-2 @ 20' 411062-13	<0.02	<0.02	<0.02	<0.06	<2	99
Method Blank 04-2241 MB	<0.02	<0.02	<0.02	<0.06	<2	100

Date of Report: 11/06/14
Date Received: 11/05/14
Project: North Edge KV030772B, F&BI 411062
Date Extracted: 11/05/14
Date Analyzed: 11/05/14

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)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
SW-5 @ 10' 411062-01	<50	<250	97
PC-22 8-12' 411062-02	3,700	<250	82
PC-22 12-16' 411062-03	420	<250	82
PC-28 8-12' 411062-04	6,800	<250	92
PC-28 12-16' 411062-05	7,800	<250	98
PC-31 8-12' 411062-06	520 x	<250	83
PC-31 12-16' 411062-07	930 x	<250	82
PC-32 8-12' 411062-08	340 x	<250	75
PC-32 12-16' 411062-09	110 x	<250	82
PC-29 8-12' 411062-10	<50	<250	74
PC-29 12-16' 411062-11	3,200	<250	84
SW-1 @ 20' 411062-12	<50	<250	84

Date of Report: 11/06/14
Date Received: 11/05/14
Project: North Edge KV030772B, F&BI 411062
Date Extracted: 11/05/14
Date Analyzed: 11/05/14

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)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
SW-2 @ 20' 411062-13	<50	<250	80
Method Blank 04-2262 MB	<50	<250	83

Date of Report: 11/06/14
Date Received: 11/05/14
Project: North Edge KV030772B, F&BI 411062

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING METHOD 8021B AND NWTPH-Gx

Laboratory Code: 411062-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	97	69-120
Toluene	mg/kg (ppm)	0.5	98	70-117
Ethylbenzene	mg/kg (ppm)	0.5	98	65-123
Xylenes	mg/kg (ppm)	1.5	97	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

Date of Report: 11/06/14
Date Received: 11/05/14
Project: North Edge KV030772B, F&BI 411062

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

Laboratory Code: 411056-01 (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	400	96	99	63-146	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	97	79-144