501017

SAMPLE CHAIN OF CUSTODY ME 1/5/15

B01/VS1

Page # 1 of 1

Send Report To Frank Mocker

Company AESI

Address 911 F. 5th Ave ste 100

City, State, ZIP Kirkland, WA 98033

Phone # 4257665112 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. NorthEdge / KV0307.72B

PO#

REMARKS

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

Rush charges authorized by F.S. 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	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	PAH						Notes
Com 14	01	1/5/15	0750	Soil	1 tint jar	X	X	X				X						
~~COM 22 SW-17~~ @+1	02	"	0805	"	"	X	X	X										
~~COM 24 SW-19~~ @47	03	"	1025	"	"	X	X	X										
Com 15	04	"	1035	"	"	X	X	X				X						
~~COM 23 SW-18~~ @44'	05	"	1407	"	"	X	X	X				X						
ID changes per FM 1/7/15 MS																		

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Frank Mocker	AESI	1/5/15	1455
Received by:	Nhan Phan	FEBI	1/5/15	1455
Relinquished by:				
Received by:				

Samples received at 0 °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

January 8, 2015

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 January 6, 2015 from the North Edge KV030772B, F&BI 501049 project. There are 10 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
AE10108R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 6, 2015 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 501049 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
501049 -01	SW-5 @ 40
501049 -02	SW-7 @ 41
501049 -03	SW-16 @ 30
501049 -04	SW-11 @ 25

All quality control requirements were acceptable.

Date of Report: 01/08/15
Date Received: 01/06/15
Project: North Edge KV030772B, F&BI 501049
Date Extracted: 01/07/15
Date Analyzed: 01/07/15

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 @ 40 501049-01	<0.02	<0.02	<0.02	<0.06	<2	96
SW-7 @ 41 501049-02	<0.02	<0.02	<0.02	<0.06	<2	96
SW-16 @ 30 501049-03	<0.02	<0.02	<0.02	<0.06	<2	85
SW-11 @ 25 501049-04	<0.02	<0.02	<0.02	<0.06	<2	96
Method Blank 05-0017 MB	<0.02	<0.02	<0.02	<0.06	<2	91

Date of Report: 01/08/15
Date Received: 01/06/15
Project: North Edge KV030772B, F&BI 501049
Date Extracted: 01/07/15
Date Analyzed: 01/07/15

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

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

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
SW-5 @ 40 501049-01	<50	<250	108
SW-7 @ 41 501049-02	<50	<250	111
SW-16 @ 30 501049-03	<50	<250	98
SW-11 @ 25 501049-04	<50	<250	110
Method Blank 05-034 MB	<50	<250	107

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SW-7 @ 41	Client:	Associated Earth Sciences
Date Received:	01/06/15	Project:	North Edge KV030772B, F&BI 501049
Date Extracted:	01/07/15	Lab ID:	501049-02 1/5
Date Analyzed:	01/07/15	Data File:	010729.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	88	50	150
Benzo(a)anthracene-d12	107	50	150

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

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SW-11 @ 25	Client:	Associated Earth Sciences
Date Received:	01/06/15	Project:	North Edge KV030772B, F&BI 501049
Date Extracted:	01/07/15	Lab ID:	501049-04 1/5
Date Analyzed:	01/07/15	Data File:	010730.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	85	50	150
Benzo(a)anthracene-d12	108	50	150

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

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 501049
Date Extracted:	01/07/15	Lab ID:	05-031 mb 1/5
Date Analyzed:	01/07/15	Data File:	010725.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

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

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: 01/08/15
Date Received: 01/06/15
Project: North Edge KV030772B, F&BI 501049

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: 501056-01 (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	90	69-120
Toluene	mg/kg (ppm)	0.5	93	70-117
Ethylbenzene	mg/kg (ppm)	0.5	94	65-123
Xylenes	mg/kg (ppm)	1.5	92	66-120
Gasoline	mg/kg (ppm)	20	90	71-131

Date of Report: 01/08/15
Date Received: 01/06/15
Project: North Edge KV030772B, F&BI 501049

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

Laboratory Code: 501049-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	104	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	103	79-144

Date of Report: 01/08/15
Date Received: 01/06/15
Project: North Edge KV030772B, F&BI 501049

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

Laboratory Code: 501049-04 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.17	<0.01	88	50-150
Acenaphthylene	mg/kg (ppm)	0.17	<0.01	93	50-150
Acenaphthene	mg/kg (ppm)	0.17	<0.01	90	50-150
Fluorene	mg/kg (ppm)	0.17	<0.01	95	50-150
Phenanthrene	mg/kg (ppm)	0.17	<0.01	90	50-150
Anthracene	mg/kg (ppm)	0.17	<0.01	88	50-150
Fluoranthene	mg/kg (ppm)	0.17	<0.01	97	50-150
Pyrene	mg/kg (ppm)	0.17	<0.01	94	50-150
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.01	100	50-150
Chrysene	mg/kg (ppm)	0.17	<0.01	97	50-150
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.01	97	50-150
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01	101	50-150
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.01	94	50-150
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.01	107	50-150
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01	108	50-150
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	<0.01	102	50-150

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	90	91	70-130	1
Acenaphthylene	mg/kg (ppm)	0.17	94	93	70-130	1
Acenaphthene	mg/kg (ppm)	0.17	92	92	70-130	0
Fluorene	mg/kg (ppm)	0.17	97	98	70-130	1
Phenanthrene	mg/kg (ppm)	0.17	91	94	70-130	3
Anthracene	mg/kg (ppm)	0.17	88	92	70-130	4
Fluoranthene	mg/kg (ppm)	0.17	97	100	70-130	3
Pyrene	mg/kg (ppm)	0.17	91	97	70-130	6
Benz(a)anthracene	mg/kg (ppm)	0.17	97	101	70-130	4
Chrysene	mg/kg (ppm)	0.17	96	102	70-130	6
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	98	98	59-118	0
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	102	105	70-130	3
Benzo(a)pyrene	mg/kg (ppm)	0.17	90	92	63-105	2
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	106	107	47-126	1
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	109	111	49-128	2
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	104	104	51-119	0

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.

501049

SAMPLE CHAIN OF CUSTODY

ME 01/06/15 VSI

Page # 1 of 1 BOI

Send Report To Frank Moeller

Company AESE

Address 911 Fifth Ave Ste 100

City, State, ZIP Kirkland, WA 98033

Phone # 425 766 5712 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. NorthEdge/ICV0307728

PO#

REMARKS

TURNAROUND TIME
~~Standard (2 Weeks)~~
RUSH 2-day per FM 1/6/15
Rush charges authorized by MA

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						Notes
SW-5@40	01 A-E	1/6/15	0733	Soil	1 jar	X	X	X										
SW-7@41	02		0837			X	X	X				X						
SW-16@30	03		1129			X	X	X										
SW-11@25	04		1052			X	X	X				X						

Samples received at 4 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Frank Moeller	AESE	1/6/15	1300
Received by:	Nhan Pham	FedEx	1/6/15	V
Relinquished by:				
Received by:				

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

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www.friedmanandbruya.com

January 8, 2015

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 January 7, 2015 from the North Edge KV030772B, F&BI 501064 project. There are 9 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
AE10108R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 7, 2015 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 501064 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
501064 -01	SW-10@21
501064 -02	PC-15@35.5
501064 -03	PC-18@35
501064 -04	PC-11@35.5

All quality control requirements were acceptable.

Date of Report: 01/08/15
Date Received: 01/07/15
Project: North Edge KV030772B, F&BI 501064
Date Extracted: 01/07/15
Date Analyzed: 01/07/15

**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)
SW-10@21 501064-01	<0.02	<0.02	<0.02	<0.06	<2	96
PC-15@35.5 501064-02	<0.02	<0.02	<0.02	<0.06	<2	94
PC-18@35 501064-03	<0.02	<0.02	<0.02	<0.06	<2	98
PC-11@35.5 501064-04	<0.02	<0.02	<0.02	<0.06	<2	100
Method Blank 05-0019 MB	<0.02	<0.02	<0.02	<0.06	<2	97

Date of Report: 01/08/15
Date Received: 01/07/15
Project: North Edge KV030772B, F&BI 501064
Date Extracted: 01/08/15
Date Analyzed: 01/08/15

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

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

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 53-144)
SW-10@21 501064-01	<50	<250	104
PC-15@35.5 501064-02	<50	<250	98
PC-18@35 501064-03	<50	<250	99
PC-11@35.5 501064-04	<50	<250	98
Method Blank 05-057 MB	<50	<250	97

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SW-10@21	Client:	Associated Earth Sciences
Date Received:	01/07/15	Project:	North Edge KV030772B, F&BI 501064
Date Extracted:	01/07/15	Lab ID:	501064-01 1/5
Date Analyzed:	01/07/15	Data File:	010732.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	90	50	150
Benzo(a)anthracene-d12	92	50	150

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

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 501064
Date Extracted:	01/07/15	Lab ID:	05-031 mb 1/5
Date Analyzed:	01/07/15	Data File:	010725.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

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

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: 01/08/15
Date Received: 01/07/15
Project: North Edge KV030772B, F&BI 501064

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: 501064-01 (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	88	66-121
Toluene	mg/kg (ppm)	0.5	91	72-128
Ethylbenzene	mg/kg (ppm)	0.5	91	69-132
Xylenes	mg/kg (ppm)	1.5	91	69-131
Gasoline	mg/kg (ppm)	20	105	61-153

Date of Report: 01/08/15
Date Received: 01/07/15
Project: North Edge KV030772B, F&BI 501064

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

Laboratory Code: 501064-01 (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	94	98	64-133	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	94	58-147

Date of Report: 01/08/15
Date Received: 01/07/15
Project: North Edge KV030772B, F&BI 501064

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

Laboratory Code: 501049-04 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.17	<0.01	88	50-150
Acenaphthylene	mg/kg (ppm)	0.17	<0.01	93	50-150
Acenaphthene	mg/kg (ppm)	0.17	<0.01	90	50-150
Fluorene	mg/kg (ppm)	0.17	<0.01	95	50-150
Phenanthrene	mg/kg (ppm)	0.17	<0.01	90	50-150
Anthracene	mg/kg (ppm)	0.17	<0.01	88	50-150
Fluoranthene	mg/kg (ppm)	0.17	<0.01	97	50-150
Pyrene	mg/kg (ppm)	0.17	<0.01	94	50-150
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.01	100	50-150
Chrysene	mg/kg (ppm)	0.17	<0.01	97	50-150
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.01	97	50-150
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01	101	50-150
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.01	94	50-150
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.01	107	50-150
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01	108	50-150
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	<0.01	102	50-150

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	90	91	70-130	1
Acenaphthylene	mg/kg (ppm)	0.17	94	93	70-130	1
Acenaphthene	mg/kg (ppm)	0.17	92	92	70-130	0
Fluorene	mg/kg (ppm)	0.17	97	98	70-130	1
Phenanthrene	mg/kg (ppm)	0.17	91	94	70-130	3
Anthracene	mg/kg (ppm)	0.17	88	92	70-130	4
Fluoranthene	mg/kg (ppm)	0.17	97	100	70-130	3
Pyrene	mg/kg (ppm)	0.17	91	97	70-130	6
Benz(a)anthracene	mg/kg (ppm)	0.17	97	101	70-130	4
Chrysene	mg/kg (ppm)	0.17	96	102	70-130	6
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	98	98	59-118	0
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	102	105	70-130	3
Benzo(a)pyrene	mg/kg (ppm)	0.17	90	92	63-105	2
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	106	107	47-126	1
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	109	111	49-128	2
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	104	104	51-119	0

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.

501064

SAMPLE CHAIN OF CUSTODY

ME 01-07-15

B01 / 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 5712 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. North Edge / KUU 307228

PO#

REMARKS

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

Rush charges authorized by F.S. 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	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	BAH						Notes
SW-10@21	01	1/7/15	0804	Soil	1 jar	X	X	X				X						
PC-15@35.5	02		0825			X	X	X										
PC-18@35	03		0916			X	X	X										
PC-11@35.5	04		1348			X	X	X										

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Frank Mocker	AESI	1/7/15	1515
Received by:	Doug	Fed Ex	1/	15:15
Relinquished by:				
Received by:		[redacted] 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

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

January 9, 2015

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 January 8, 2015 from the North Edge KV030772B, F&BI 501086 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
AE10109R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on January 8, 2015 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 501086 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
501086 -01	PC-13@35.5

All quality control requirements were acceptable.

Date of Report: 01/09/15
Date Received: 01/08/15
Project: North Edge KV030772B, F&BI 501086
Date Extracted: 01/08/15
Date Analyzed: 01/08/15

**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-13@35.5 501086-01	<0.02	<0.02	<0.02	<0.06	<2	100
Method Blank 05-0019 MB	<0.02	<0.02	<0.02	<0.06	<2	97

Date of Report: 01/09/15
Date Received: 01/08/15
Project: North Edge KV030772B, F&BI 501086
Date Extracted: 01/08/15
Date Analyzed: 01/08/15

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

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

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 53-144)
PC-13@35.5 501086-01	<50	<250	99
Method Blank 05-057 MB	<50	<250	97

Date of Report: 01/09/15
Date Received: 01/08/15
Project: North Edge KV030772B, F&BI 501086

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: 501064-01 (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	88	66-121
Toluene	mg/kg (ppm)	0.5	91	72-128
Ethylbenzene	mg/kg (ppm)	0.5	91	69-132
Xylenes	mg/kg (ppm)	1.5	91	69-131
Gasoline	mg/kg (ppm)	20	105	61-153

Date of Report: 01/09/15
Date Received: 01/08/15
Project: North Edge KV030772B, F&BI 501086

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

Laboratory Code: 501064-01 (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	94	98	64-133	4

Laboratory Code: Laboratory Control Sample

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

501086

SAMPLE CHAIN OF CUSTODY

ME 1/8/15

B01/VS1

Page # 1 of 1

Send Report To Frank Moeller

Company AGI

Address 911 Fifth Ave Ste 100

City, State, ZIP Kirkland, WA 98033

Phone # 425 766 5112 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. North Edge / KV0307228

PO#

REMARKS

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

Rush charges authorized by F.S. Moeller

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-13 @ 35.5	01 A-E	1/8/15	1000	Soil	1 Jar	X	X	X										

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Frank Moeller	AGI	1/8/15	1130
Received by:	Matt Langston	FB	1/8/15	1130
Relinquished by:				
Received by:		Samples received at 1 °C		

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

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

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January 16, 2015

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 January 14, 2015 from the North Edge KV030772B, F&BI 501169 project. There are 9 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
AE10116R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 14, 2015 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 501169 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
501169 -01	COM5
501169 -02	COM12
501169 -03	COM6
501169 -04	COM11

All quality control requirements were acceptable.

Date of Report: 01/16/15
Date Received: 01/14/15
Project: North Edge KV030772B, F&BI 501169
Date Extracted: 01/14/15
Date Analyzed: 01/14/15

**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)
COM5 501169-01	<0.02	<0.02	<0.02	<0.06	<2	79
COM12 501169-02	<0.02	<0.02	<0.02	<0.06	<2	84
COM6 501169-03	<0.02	<0.02	<0.02	<0.06	<2	79
COM11 501169-04	<0.02	<0.02	<0.02	<0.06	<2	84
Method Blank 05-0082 MB	<0.02	<0.02	<0.02	<0.06	<2	86

Date of Report: 01/16/15
Date Received: 01/14/15
Project: North Edge KV030772B, F&BI 501169
Date Extracted: 01/14/15
Date Analyzed: 01/14/15

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

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

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 48-168)
COM5 501169-01	<50	<250	104
COM12 501169-02	<50	<250	99
COM6 501169-03	<50	<250	103
COM11 501169-04	<50	<250	112
Method Blank 05-097 MB	<50	<250	103

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	COM11	Client:	Associated Earth Sciences
Date Received:	01/14/15	Project:	North Edge KV030772B, F&BI 501169
Date Extracted:	01/14/15	Lab ID:	501169-04 1/5
Date Analyzed:	01/15/15	Data File:	011508.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	93	50	150
Benzo(a)anthracene-d12	102	50	150

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

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 501169
Date Extracted:	01/14/15	Lab ID:	05-098 mb 1/5
Date Analyzed:	01/15/15	Data File:	011507.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	98	50	150
Benzo(a)anthracene-d12	98	50	150

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: 01/16/15
Date Received: 01/14/15
Project: North Edge KV030772B, F&BI 501169

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: 501167-01 (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	87	69-120
Toluene	mg/kg (ppm)	0.5	88	70-117
Ethylbenzene	mg/kg (ppm)	0.5	89	65-123
Xylenes	mg/kg (ppm)	1.5	87	66-120
Gasoline	mg/kg (ppm)	20	105	71-131

Date of Report: 01/16/15
Date Received: 01/14/15
Project: North Edge KV030772B, F&BI 501169

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

Laboratory Code: 501168-01 (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	100	104	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	104	74-139

Date of Report: 01/16/15
Date Received: 01/14/15
Project: North Edge KV030772B, F&BI 501169

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

Laboratory Code: 501137-27 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.17	<0.01	90	50-150
Acenaphthylene	mg/kg (ppm)	0.17	<0.01	97	50-150
Acenaphthene	mg/kg (ppm)	0.17	0.33	102 b	50-150
Fluorene	mg/kg (ppm)	0.17	0.13	101 b	50-150
Phenanthrene	mg/kg (ppm)	0.17	0.85	116 b	50-150
Anthracene	mg/kg (ppm)	0.17	0.21	98 b	50-150
Fluoranthene	mg/kg (ppm)	0.17	0.98	184 b	50-150
Pyrene	mg/kg (ppm)	0.17	0.94	186 b	50-150
Benz(a)anthracene	mg/kg (ppm)	0.17	0.52	178 b	50-150
Chrysene	mg/kg (ppm)	0.17	0.51	163 b	50-150
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	0.62	104 b	50-150
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	0.16	185 b	50-150
Benzo(a)pyrene	mg/kg (ppm)	0.17	0.50	175 b	50-150
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	0.28	140 b	50-150
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	0.073	104 b	50-150
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	0.25	105 b	50-150

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	88	89	70-130	1
Acenaphthylene	mg/kg (ppm)	0.17	94	95	70-130	1
Acenaphthene	mg/kg (ppm)	0.17	91	91	70-130	0
Fluorene	mg/kg (ppm)	0.17	95	95	70-130	0
Phenanthrene	mg/kg (ppm)	0.17	89	89	70-130	0
Anthracene	mg/kg (ppm)	0.17	88	89	70-130	1
Fluoranthene	mg/kg (ppm)	0.17	96	98	70-130	2
Pyrene	mg/kg (ppm)	0.17	102	97	70-130	5
Benz(a)anthracene	mg/kg (ppm)	0.17	95	97	70-130	2
Chrysene	mg/kg (ppm)	0.17	98	98	70-130	0
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	97	98	59-118	1
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	107	104	70-130	3
Benzo(a)pyrene	mg/kg (ppm)	0.17	91	94	63-105	3
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	97	103	47-126	6
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	100	107	49-128	7
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	92	96	51-119	4

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.

501169

SAMPLE CHAIN OF CUSTODY

ME 01-14-15 VSI / B02

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 / 1CV130 | PO# 7728

REMARKS

Page # 1 of 1

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

Rush charges authorized by F. S. 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	24H						Notes
COM 5	01	1/13/15	1315	Soil	1 4oz 1 jar	X	X	X										
COM 12	02	1/14/15	0815	"	"	X	X	X										
COM 6	03	"	1015	"	"	X	X	X										
COM 11	04	"	1300	"	"	X	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 Mocker	AESI	1/14/15	1334
Received by:		James Bruya	F&B	1/14/15	1334
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

January 19, 2015

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 January 16, 2015 from the North Edge/KV030772B, F&BI 501213 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
AE10119R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 16, 2015 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge/KV030772B project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
501213 -01	COM 7
501213 -02	COM 8
501213 -03	COM 10
501213 -04	COM 9

All quality control requirements were acceptable.

Date of Report: 01/19/15
Date Received: 01/16/15
Project: North Edge/KV030772B, F&BI 501213
Date Extracted: 01/16/15
Date Analyzed: 01/16/15

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)
COM 7 501213-01	<0.02	<0.02	<0.02	<0.06	<2	92
COM 8 501213-02	<0.02	<0.02	<0.02	<0.06	<2	96
COM 10 501213-03	<0.02	<0.02	<0.02	<0.06	<2	98
COM 9 501213-04	<0.02	<0.02	<0.02	<0.06	<2	100
Method Blank 05-0085 MB	<0.02	<0.02	<0.02	<0.06	<2	96

Date of Report: 01/19/15
Date Received: 01/16/15
Project: North Edge/KV030772B, F&BI 501213
Date Extracted: 01/16/15
Date Analyzed: 01/16/15

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

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

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 48-168)
COM 7 501213-01	<50	<250	99
COM 8 501213-02	<50	<250	95
COM 10 501213-03	<50	<250	96
COM 9 501213-04	<50	<250	96
Method Blank 05-118 MB	<50	<250	108

Date of Report: 01/19/15
Date Received: 01/16/15
Project: North Edge/KV030772B, F&BI 501213

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: 501198-05 (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	91	66-121
Toluene	mg/kg (ppm)	0.5	94	72-128
Ethylbenzene	mg/kg (ppm)	0.5	95	69-132
Xylenes	mg/kg (ppm)	1.5	94	69-131
Gasoline	mg/kg (ppm)	20	105	61-153

Date of Report: 01/19/15
Date Received: 01/16/15
Project: North Edge/KV030772B, F&BI 501213

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

Laboratory Code: 501195-01 (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	115	117	73-135	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	116	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.

501213

SAMPLE CHAIN OF CUSTODY

ME 01-16-15 VSI/COI

Page # 1 of 1

Send Report To Frank Moelcr

Company AESI

Address 911 Fifth Ave Ste 100

City, State, ZIP Kirkland, WA 98033

Phone #425 766 5512 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. NorthEdge / 1CV0307 | PO# 7253

REMARKS Please Provide Dust Results ASAP

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

Rush charges authorized by F.S. 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
						ANALYSES REQUESTED												
COM 7	01 AE	1/15/15	1222	Soil	1 jar	X	X	X										* SAME DAY TAT, ASB FM 1/16/15
COM 8	02	1/15/15	1230	"	"	X	X	X										
COM 10	03	1/16/15	0745	"	"	X	X	X										
COM 9	04	1/16/15	0957	"	"	X	X	X										
												Samples received at						4 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Frank Mocker	AESI	1/16/15	1032
Received by:	Matt Langston	F-B Inc	1/16/15	1032
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

January 19, 2015

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 January 16, 2015 from the North Edge/KV030772B, F&BI 501226 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
AE10119R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 16, 2015 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge/KV030772B, F&BI 501226 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
501226 -01	Com13
501226 -02	Com19

All quality control requirements were acceptable.

Date of Report: 01/19/15
Date Received: 01/16/15
Project: North Edge/KV030772B, F&BI 501226
Date Extracted: 01/19/15
Date Analyzed: 01/19/15

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)
Com13 501226-01	<0.02	<0.02	<0.02	<0.06	<2	101
Com19 501226-02	<0.02	<0.02	<0.02	<0.06	<2	96
Method Blank 05-121 MB	<0.02	<0.02	<0.02	<0.06	<2	96

Date of Report: 01/19/15
Date Received: 01/16/15
Project: North Edge/KV030772B, F&BI 501226
Date Extracted: 01/16/15
Date Analyzed: 01/16/15

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

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

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 48-168)
Com13 501226-01	<50	<250	97
Com19 501226-02	<50	<250	104
Method Blank 05-132 MB	<50	<250	104

Date of Report: 01/19/15
Date Received: 01/16/15
Project: North Edge/KV030772B, F&BI 501226

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: 501226-01 (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	76	66-121
Toluene	mg/kg (ppm)	0.5	78	72-128
Ethylbenzene	mg/kg (ppm)	0.5	77	69-132
Xylenes	mg/kg (ppm)	1.5	79	69-131
Gasoline	mg/kg (ppm)	20	90	61-153

Date of Report: 01/19/15
Date Received: 01/16/15
Project: North Edge/KV030772B, F&BI 501226

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

Laboratory Code: 501217-03 (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	119	114	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	115	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.

501226

SAMPLE CHAIN OF CUSTODY

ME 1/16/15 BO, IV2

Page # ___ of ___

Send Report To Frank Mocker
Company AESI
Address 911 Fifth Ave Ste 100
City, State, ZIP Kirkland, WA 98033
Phone # 4257665112 Fax # ___

SAMPLERS (signature)
PROJECT NAME/NO. NorthEdge/ 1CV03077.28
PO#
REMARKS

TURNAROUND TIME
☐ Standard (2 Weeks)
☒ RUSH 1/19/15
Rush charges authorized by F.S. 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
COM 13	01A-D	1/16/15	1220	Soil	1 Brass 1 Jar	X	X	X										
COM 19	02A-D	1/16/15	1353	Soil	↓	X	X	X										
																		Samples received at 2 °C

ANALYSES REQUESTED

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	1/16/15	1530
Received by:	Nham Pham	FEBT	1/16/15	1530
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

January 27, 2015

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

Dear Mr. Sondergaard:

Included are the additional results from the testing of material submitted on January 19, 2015 from the North Edge KV030772B, F&BI 501242 project. There are 5 pages included in this report.

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
AE10127R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 19, 2015 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
501242 -01	COM 20
501242 -02	COM 21

All quality control requirements were acceptable.

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	COM 21	Client:	Associated Earth Sciences
Date Received:	01/19/15	Project:	North Edge KV030772B, F&BI 501242
Date Extracted:	01/22/15	Lab ID:	501242-02 1/5
Date Analyzed:	01/22/15	Data File:	012225.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	94	50	150
Benzo(a)anthracene-d12	92	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

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 501242
Date Extracted:	01/22/15	Lab ID:	05-155 mb 1/5
Date Analyzed:	01/22/15	Data File:	012221.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	92	50	150
Benzo(a)anthracene-d12	101	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: 01/27/15
Date Received: 01/19/15
Project: North Edge KV030772B, F&BI 501242

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

Laboratory Code: 501289-02 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.17	<0.01	92	44-129
Acenaphthylene	mg/kg (ppm)	0.17	<0.01	99	52-121
Acenaphthene	mg/kg (ppm)	0.17	<0.01	96	51-123
Fluorene	mg/kg (ppm)	0.17	<0.01	100	37-137
Phenanthrene	mg/kg (ppm)	0.17	<0.01	97	45-124
Anthracene	mg/kg (ppm)	0.17	<0.01	95	32-124
Fluoranthene	mg/kg (ppm)	0.17	<0.01	103	50-125
Pyrene	mg/kg (ppm)	0.17	<0.01	102	41-135
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.01	114	23-144
Chrysene	mg/kg (ppm)	0.17	<0.01	106	45-122
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.01	120	31-144
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01	114	45-130
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.01	108	39-128
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.01	108	28-146
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01	98	46-129
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	<0.01	91	37-133

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	93	90	58-121	3
Acenaphthylene	mg/kg (ppm)	0.17	98	91	54-121	7
Acenaphthene	mg/kg (ppm)	0.17	95	93	54-123	2
Fluorene	mg/kg (ppm)	0.17	100	93	56-127	7
Phenanthrene	mg/kg (ppm)	0.17	95	92	55-122	3
Anthracene	mg/kg (ppm)	0.17	92	90	50-120	2
Fluoranthene	mg/kg (ppm)	0.17	99	94	54-129	5
Pyrene	mg/kg (ppm)	0.17	102	100	53-127	2
Benz(a)anthracene	mg/kg (ppm)	0.17	107	100	51-115	7
Chrysene	mg/kg (ppm)	0.17	104	99	55-129	5
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	114	108	56-123	5
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	112	110	54-131	2
Benzo(a)pyrene	mg/kg (ppm)	0.17	103	98	51-118	5
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	118	107	49-148	10
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	111	106	50-141	5
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	102	96	52-131	6

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.

501242
[redacted]

SAMPLE CHAIN OF CUSTODY

ME 01-19-15 [redacted]

VS/COI

Send Report To Frank Mocker

Company AESI

Address 911 Fifth Ave, Ste 100

City, State, ZIP Kirkland, WA 98033

Phone # ______ Fax # ______

SAMPLERS (signature) [signature]

PROJECT NAME/NO. NorthEdge/KW030772B

PO#

REMARKS ✓-

Page # 1 of 1

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

Rush charges authorized by F.S. 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	PAH/s						Notes
COM 20	01 A-E	1/19/15	1150	Soil	1 kit 1 jar	X	X	X										✓- per FM 1/20/15
COM 21	02 ↓	1/19/15	1300	Soil	↓	X	X	X				✓						
																		[redacted] 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: [signature]	Frank Mocker	AESI	1/19/15	1453
Received by: [signature]	Eric Young	F&B	1/19/15	1453
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

January 28, 2015

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

Dear Mr. Sondergaard:

Included is the amended report from the testing of material submitted on January 19, 2015 from the North Edge KV030772B, F&BI 501242 project. Per your request, sample COM 20 has been removed from the case narrative since it was not logged in for any testing in this report.

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
AE10127R.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

January 27, 2015

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

Dear Mr. Sondergaard:

Included are the additional results from the testing of material submitted on January 19, 2015 from the North Edge KV030772B, F&BI 501242 project. There are 5 pages included in this report.

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
AE10127R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on January 19, 2015 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
501242 -02	COM 21

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	COM 21	Client:	Associated Earth Sciences
Date Received:	01/19/15	Project:	North Edge KV030772B, F&BI 501242
Date Extracted:	01/22/15	Lab ID:	501242-02 1/5
Date Analyzed:	01/22/15	Data File:	012225.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	94	50	150
Benzo(a)anthracene-d12	92	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

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 501242
Date Extracted:	01/22/15	Lab ID:	05-155 mb 1/5
Date Analyzed:	01/22/15	Data File:	012221.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	92	50	150
Benzo(a)anthracene-d12	101	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: 01/27/15
Date Received: 01/19/15
Project: North Edge KV030772B, F&BI 501242

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

Laboratory Code: 501289-02 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.17	<0.01	92	44-129
Acenaphthylene	mg/kg (ppm)	0.17	<0.01	99	52-121
Acenaphthene	mg/kg (ppm)	0.17	<0.01	96	51-123
Fluorene	mg/kg (ppm)	0.17	<0.01	100	37-137
Phenanthrene	mg/kg (ppm)	0.17	<0.01	97	45-124
Anthracene	mg/kg (ppm)	0.17	<0.01	95	32-124
Fluoranthene	mg/kg (ppm)	0.17	<0.01	103	50-125
Pyrene	mg/kg (ppm)	0.17	<0.01	102	41-135
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.01	114	23-144
Chrysene	mg/kg (ppm)	0.17	<0.01	106	45-122
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.01	120	31-144
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01	114	45-130
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.01	108	39-128
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.01	108	28-146
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01	98	46-129
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	<0.01	91	37-133

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	93	90	58-121	3
Acenaphthylene	mg/kg (ppm)	0.17	98	91	54-121	7
Acenaphthene	mg/kg (ppm)	0.17	95	93	54-123	2
Fluorene	mg/kg (ppm)	0.17	100	93	56-127	7
Phenanthrene	mg/kg (ppm)	0.17	95	92	55-122	3
Anthracene	mg/kg (ppm)	0.17	92	90	50-120	2
Fluoranthene	mg/kg (ppm)	0.17	99	94	54-129	5
Pyrene	mg/kg (ppm)	0.17	102	100	53-127	2
Benz(a)anthracene	mg/kg (ppm)	0.17	107	100	51-115	7
Chrysene	mg/kg (ppm)	0.17	104	99	55-129	5
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	114	108	56-123	5
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	112	110	54-131	2
Benzo(a)pyrene	mg/kg (ppm)	0.17	103	98	51-118	5
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	118	107	49-148	10
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	111	106	50-141	5
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	102	96	52-131	6

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.

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
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fbi@isomedia.com
www.friedmanandbruya.com

January 23, 2015

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 January 21, 2015 from the North Edge KV030772B, F&BI 501261 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
AE10123R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 21, 2015 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 501261 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
501261 -01	COM 18

All quality control requirements were acceptable.

Date of Report: 01/23/15
Date Received: 01/21/15
Project: North Edge KV030772B, F&BI 501261
Date Extracted: 01/21/15
Date Analyzed: 01/21/15

**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)
COM 18 501261-01	<0.02	<0.02	<0.02	<0.06	<2	100
Method Blank 05-123 MB2	<0.02	<0.02	<0.02	<0.06	<2	105

Date of Report: 01/23/15
Date Received: 01/21/15
Project: North Edge KV030772B, F&BI 501261
Date Extracted: 01/21/15
Date Analyzed: 01/21/15

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

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

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 53-144)
COM 18 501261-01	<50	<250	86
Method Blank 05-148 MB	<50	<250	89

Date of Report: 01/23/15
Date Received: 01/21/15
Project: North Edge KV030772B, F&BI 501261

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: 501239-01 (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	76	66-121
Toluene	mg/kg (ppm)	0.5	79	72-128
Ethylbenzene	mg/kg (ppm)	0.5	76	69-132
Xylenes	mg/kg (ppm)	1.5	79	69-131
Gasoline	mg/kg (ppm)	20	85	61-153

Date of Report: 01/23/15
Date Received: 01/21/15
Project: North Edge KV030772B, F&BI 501261

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

Laboratory Code: 501261-01 (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	89	64-133	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	90	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.

501261

SAMPLE CHAIN OF CUSTODY

ME 01-21-15 VSI/COI

Page # 1 of 1

Send Report To Frank Mocker

Company AGI

Address 911 Fifth Ave Ste 100

City, State, ZIP Kirkland, WA 98033

Phone # 425 766 5112 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. NorthEdge/ ICV0307723

PO#

REMARKS Call with Results
Email Draft Today

TURNAROUND TIME
- ☐ Standard (2 Weeks) Same Day
- ☒ RUSH 24 hour
- Rush charges authorized by Frank F.S. Mocker

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

PB 1/21

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											
COM 18	01A-B	1/20/15	1330	Soil	1 clear 1 jar	X	X	X									
																	Sample received at 2 °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 Mocker	AGI	1/21/15	0732
Received by:		Jamie Bruya	FFB	1/21/15	0732
Relinquished by:					
Received by:					

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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Yelena Aravkina, M.S.
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www.friedmanandbruya.com

January 27, 2015

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 January 22, 2015 from the North Edge KV030772B, F&BI 501289 project. There are 10 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
AE10127R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on January 22, 2015 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 501289 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
501289 -01	Com16
501289 -02	Com25

All quality control requirements were acceptable.

Date of Report: 01/27/15
Date Received: 01/22/15
Project: North Edge KV030772B, F&BI 501289
Date Extracted: 01/22/15
Date Analyzed: 01/22/15

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)
Com16 501289-01	<0.02	<0.02	<0.02	<0.06	<2	83
Com25 501289-02	<0.02	<0.02	<0.02	<0.06	<2	82
Method Blank 05-125 MB2	<0.02	<0.02	<0.02	<0.06	<2	82

Date of Report: 01/27/15
Date Received: 01/22/15
Project: North Edge KV030772B, F&BI 501289
Date Extracted: 01/22/15
Date Analyzed: 01/22/15

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

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

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 48-168)
Com16 501289-01	<50	<250	105
Com25 501289-02	<50	<250	102
Method Blank 05-152 MB	<50	<250	110

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Com16	Client:	Associated Earth Sciences
Date Received:	01/22/15	Project:	North Edge KV030772B, F&BI 501289
Date Extracted:	01/22/15	Lab ID:	501289-01 1/5
Date Analyzed:	01/22/15	Data File:	012224.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	123	50	150
Benzo(a)anthracene-d12	130	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

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Com25	Client:	Associated Earth Sciences
Date Received:	01/22/15	Project:	North Edge KV030772B, F&BI 501289
Date Extracted:	01/22/15	Lab ID:	501289-02 1/5
Date Analyzed:	01/22/15	Data File:	012222.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	100	50	150
Benzo(a)anthracene-d12	99	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

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 501289
Date Extracted:	01/22/15	Lab ID:	05-155 mb 1/5
Date Analyzed:	01/22/15	Data File:	012221.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	92	50	150
Benzo(a)anthracene-d12	101	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: 01/27/15
Date Received: 01/22/15
Project: North Edge KV030772B, F&BI 501289

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: 501277-04 (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	82	66-121
Toluene	mg/kg (ppm)	0.5	86	72-128
Ethylbenzene	mg/kg (ppm)	0.5	85	69-132
Xylenes	mg/kg (ppm)	1.5	89	69-131
Gasoline	mg/kg (ppm)	20	100	61-153

Date of Report: 01/27/15
Date Received: 01/22/15
Project: North Edge KV030772B, F&BI 501289

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

Laboratory Code: 501285-01 (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	93	103	73-135	10

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	92	74-139

Date of Report: 01/27/15
Date Received: 01/22/15
Project: North Edge KV030772B, F&BI 501289

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

Laboratory Code: 501289-02 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.17	<0.01	92	44-129
Acenaphthylene	mg/kg (ppm)	0.17	<0.01	99	52-121
Acenaphthene	mg/kg (ppm)	0.17	<0.01	96	51-123
Fluorene	mg/kg (ppm)	0.17	<0.01	100	37-137
Phenanthrene	mg/kg (ppm)	0.17	<0.01	97	45-124
Anthracene	mg/kg (ppm)	0.17	<0.01	95	32-124
Fluoranthene	mg/kg (ppm)	0.17	<0.01	103	50-125
Pyrene	mg/kg (ppm)	0.17	<0.01	102	41-135
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.01	114	23-144
Chrysene	mg/kg (ppm)	0.17	<0.01	106	45-122
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.01	120	31-144
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01	114	45-130
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.01	108	39-128
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.01	108	28-146
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01	98	46-129
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	<0.01	91	37-133

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	93	90	58-121	3
Acenaphthylene	mg/kg (ppm)	0.17	98	91	54-121	7
Acenaphthene	mg/kg (ppm)	0.17	95	93	54-123	2
Fluorene	mg/kg (ppm)	0.17	100	93	56-127	7
Phenanthrene	mg/kg (ppm)	0.17	95	92	55-122	3
Anthracene	mg/kg (ppm)	0.17	92	90	50-120	2
Fluoranthene	mg/kg (ppm)	0.17	99	94	54-129	5
Pyrene	mg/kg (ppm)	0.17	102	100	53-127	2
Benz(a)anthracene	mg/kg (ppm)	0.17	107	100	51-115	7
Chrysene	mg/kg (ppm)	0.17	104	99	55-129	5
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	114	108	56-123	5
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	112	110	54-131	2
Benzo(a)pyrene	mg/kg (ppm)	0.17	103	98	51-118	5
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	118	107	49-148	10
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	111	106	50-141	5
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	102	96	52-131	6

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.

501289

SAMPLE CHAIN OF CUSTODY ME 01-22-15 A~~E~~1 / VS1 / E01

Send Report To Frank Mucker

Company AESI

Address 911 Fifth Ave Ste 100

City, State, ZIP Kirkland, WA 98033

Phone # 4257665112 Fax #

SAMPLERS (signature) [signature]

PROJECT NAME/NO. NorthEdge / KU030772B

PO#

REMARKS

Page # 1 of 1

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☒ RUSH 24 hour
- Rush charges authorized by F.S. Mucker

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						Notes
COM 16	01 A-E	1/21/15	1240	Soil	1 kit 1 jar	X	X	X				X						
COM 25	02	1/22/15	0815	Soil	1 kit 1 jar	X	X	X				X						

Samples received at 3 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Frank	AESI	1/22/15	0844
Received by: [signature]	James Bruya	F&B	1/22/15	0844
Relinquished by:				
Received by:				

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

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
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January 29, 2015

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 January 27, 2015 from the North Edge KV030772B, F&BI 501359 project. There are 9 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
AE10129R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 27, 2015 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 501359 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
501359 -01	COM17

All quality control requirements were acceptable.

Date of Report: 01/29/15
Date Received: 01/27/15
Project: North Edge KV030772B, F&BI 501359
Date Extracted: 01/27/15
Date Analyzed: 01/27/15

**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)
COM17 501359-01	<0.02	<0.02	<0.02	<0.06	<2	89
Method Blank 05-0163 MB	<0.02	<0.02	<0.02	<0.06	<2	77

Date of Report: 01/29/15
Date Received: 01/27/15
Project: North Edge KV030772B, F&BI 501359
Date Extracted: 01/27/15
Date Analyzed: 01/27/15

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

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

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
COM17 501359-01	<50	<250	91
Method Blank 05-188 MB	<50	<250	90

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	COM17	Client:	Associated Earth Sciences
Date Received:	01/27/15	Project:	North Edge KV030772B, F&BI 501359
Date Extracted:	01/27/15	Lab ID:	501359-01 1/5
Date Analyzed:	01/27/15	Data File:	012705.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	85	50	150
Benzo(a)anthracene-d12	107	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

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 501359
Date Extracted:	01/27/15	Lab ID:	05-185 mb 1/5
Date Analyzed:	01/27/15	Data File:	012704.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	104	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: 01/29/15
Date Received: 01/27/15
Project: North Edge KV030772B, F&BI 501359

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: 501354-01 (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	86	69-120
Toluene	mg/kg (ppm)	0.5	87	70-117
Ethylbenzene	mg/kg (ppm)	0.5	89	65-123
Xylenes	mg/kg (ppm)	1.5	86	66-120
Gasoline	mg/kg (ppm)	20	105	71-131