ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The compound is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

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

0955 TIME +1/92/5 4/97/6 DATE n Samples received Le BI COMPANY Phan rank Woder PRINT NAME 1490 SIGNATURE Received by Relinquished by: Relinquished Received by:

FORMS\COC\COC.DOC

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Arina Podnozova, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

September 30, 2014

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

Dear Mr. Sondergaard:

Included are the results from the testing of material submitted on September 29, 2014 from the North Edge KV030772B, F&BI 409540 project. There are 8 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Frank Mocker AE10930R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

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

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

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/30/14 Date Received: 09/29/14

Project: North Edge KV030772B, F&BI 409540

Date Extracted: 09/29/14 Date Analyzed: 09/29/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 09/30/14 Date Received: 09/29/14

Project: North Edge KV030772B, F&BI 409540

Date Extracted: 09/29/14 Date Analyzed: 09/29/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 09/30/14 Date Received: 09/29/14

Project: North Edge KV030772B, F&BI 409540

Date Extracted: 09/29/14

Date Analyzed: 09/29/14 and 09/30/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 09/30/14 Date Received: 09/29/14

Project: North Edge KV030772B, F&BI 409540

Date Extracted: 09/29/14

Date Analyzed: 09/29/14 and 09/30/14

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

Sample ID Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	Motor Oil Range (C ₂₅ -C ₃₆)	Surrogate (% Recovery) (Limit 56-165)
PC-20 0-4' 409540-13	<50	<250	107
PC-20 4-8' 409540-14	600	<250	109
Method Blank	<50	<250	115

ENVIRONMENTAL CHEMISTS

Date of Report: 09/30/14 Date Received: 09/29/14

Project: North Edge KV030772B, F&BI 409540

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

Laboratory Code: 409540-05 (Duplicate)

•	-	Sample Result	Duplicate Result	RPD
Analyte	Reporting Units	(Wet Wt)	(Wet Wt)	(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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 09/30/14 Date Received: 09/29/14

Project: North Edge KV030772B, F&BI 409540

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

Laboratory Code: 409540-06 (Matrix Spike)

•		_	Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	60	88	87	63-146	1

Laboratory Code: Laboratory Control Sample

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

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The compound is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

12 452 ☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions TURNAROUND TIME ☐ Standard (2 Weeks)

RUSH 2+6

Rush charges authorized by £03/ SAMPLE DISPOSA 4/68/60 PO# 1 x10307 x B SAMPLE CHAIN OF CUSTODY SAMPLERS (signature) PROJECT NAME/NO Namedal/ REMARKS City, State, ZIP Letten 1 wot 9833 Address 911 Fight Are 540102 Send Report To Frank Wheke Phone #1257665/12 Fax #_ REST 94540 Company __

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

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129 My EU3/182	Page # 2 of Z TURNAROUND TIME	U Standard (2 Weeks)	Rush charges authorized by	SAMPLE DISPOSAL □ Dispose after 30 days	☐ Return samples ☐ Will call with instructions
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Friedman & Bruya, Inc.
3012 16th Avenue Wesst
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044
Received by:

FORMS/COC/COC.DOC

DATE COMPANY Frank Warker PRINT NAME SIGNATURE Relinquished by Received by:

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Arina Podnozova, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

October 10, 2014

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

Dear Mr. Sondergaard:

Included are the results from the testing of material submitted on October 8, 2014 from the North Edge KV030772B, F&BI 410140 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures c: Frank Mocker AE11010R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

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

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

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/10/14 Date Received: 10/08/14

Project: North Edge KV030772B, F&BI 410140

Date Extracted: 10/09/14 Date Analyzed: 10/09/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 10/10/14 Date Received: 10/08/14

Project: North Edge KV030772B, F&BI 410140

Date Extracted: 10/09/14 Date Analyzed: 10/09/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 10/10/14 Date Received: 10/08/14

Project: North Edge KV030772B, F&BI 410140

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

Laboratory Code: 410124-01 (Duplicate)

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

Laboratory Code: Laboratory Control Sample

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

ENVIRONMENTAL CHEMISTS

Date of Report: 10/10/14 Date Received: 10/08/14

Project: North Edge KV030772B, F&BI 410140

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

Laboratory Code: 410140-01 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	87	87	63-146	0

Laboratory Code: Laboratory Control Sample

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

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The compound is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- ${
 m jl}$ The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

ME 10/8/14 US2/AOX	Page # of	A RUSH : Now. 8/13/14 Ann	Rush charges authorized by	SAMPLE DISPOSAL Dispose after 30 days	☐ Will call with instructions
SAMPLE CHAIN OF CUSTODY	SAMPLERS (signature) CLUC	PROJECT NAME/NO.	K1030772B	REMARKS	
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Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282 Fax (206) 283-5044

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ر.	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
1	Relinquished by:	Frank Mocke	NEST	co91 +1/8/01	1600
6	Received by:	A. Podnozour	FIM	11/8/01	WO h h/8/01
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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Arina Podnozova, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

October 21, 2014

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

Dear Mr. Sondergaard:

Included are the results from the testing of material submitted on October 14, 2014 from the North Edge KV030772B, F&BI 410242 project. There are 17 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Frank Mocker AE11021R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

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

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

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

All other quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/21/14 Date Received: 10/14/14

Project: North Edge KV030772B, F&BI 410242

Date Extracted: 10/16/14

Date Analyzed: 10/16/14 and 10/17/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 10/21/14 Date Received: 10/14/14

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Date Extracted: 10/16/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 10/21/14 Date Received: 10/14/14

Project: North Edge KV030772B, F&BI 410242

Date Extracted: 10/17/14 Date Analyzed: 10/17/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 10/21/14 Date Received: 10/14/14

Project: North Edge KV030772B, F&BI 410242

Date Extracted: 10/17/14 Date Analyzed: 10/17/14

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

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

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID: PC-5 0-5' Client: Associated Earth Sciences

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

 Date Extracted:
 10/15/14
 Lab ID:
 410242-15

 Date Analyzed:
 10/15/14
 Data File:
 410242-15.048

 Matrix:
 Soil
 Instrument:
 ICPMS1

Units: mg/kg (ppm) Dry Weight Operator: AP

Lower Upper aternal Standard: % Recovery: Limit: Limit:

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

Concentration

Analyte: mg/kg (ppm)

Lead 1.39

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID: PC-5 5-10' Client: Associated Earth Sciences

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

 Date Extracted:
 10/15/14
 Lab ID:
 410242-16

 Date Analyzed:
 10/15/14
 Data File:
 410242-16.051

 Matrix:
 Soil
 Instrument:
 ICPMS1

Units: mg/kg (ppm) Dry Weight Operator: AP

Lower Upper

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

Concentration

Analyte: mg/kg (ppm)

Lead 1.37

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID: Method Blank Client: Associated Earth Sciences

Date Received: NA Project: North Edge KV030772B, F&BI 410242

Date Extracted: 10/15/14 Lab ID: I4-642 mb
Date Analyzed: 10/15/14 Data File: I4-642 mb.044
Matrix: Soil Instrument: ICPMS1

Units: mg/kg (ppm) Dry Weight Operator: AP

Lower Upper

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

Concentration

Analyte: mg/kg (ppm)

Lead <1

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID: PC-5 0-5' Client: **Associated Earth Sciences**

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

Lab ID: Date Extracted: 410242-15 1/5 10/15/14 Date Analyzed: 10/16/14 Data File: 101611.D Instrument: Matrix: Soil GCMS6 Units: mg/kg (ppm) Dry Weight Operator: VM

Lower Upper % Recovery: Limit: Limit:

Surrogates: Anthracene-d10 136 50 150 Benzo(a)anthracene-d12 179 vo 35 159

< 0.01

Concentration Compounds: mg/kg (ppm) Naphthalene 2.2 ve Acenaphthylene < 0.01 Acenaphthene 0.16 Fluorene 0.76 Phenanthrene 0.79 Anthracene < 0.01 Fluoranthene 0.015 0.036 Pyrene Benz(a)anthracene < 0.01 Chrysene 0.014 jsBenzo(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

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Cheffit Sample 1D. 1 C-3 0-3 Cheffit Associated Earth Science	Client Sample ID:	PC-5 0-5'	Client:	Associated Earth Sciences
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Date Received: 10/14/14 Project: North Edge KV030772B, F&BI 410242

Lab ID: Date Extracted: 10/15/14 410242-15 1/50 Data File: Date Analyzed: 10/16/14 101610.D Matrix: Soil Instrument: GCMS6 Units: mg/kg (ppm) Dry Weight Operator: VM

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

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

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	PC-5 5-10'	Client:	Associated Earth Sciences
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Date Received: 10/14/14 Project: North Edge KV030772B, F&BI 410242

Lab ID: Date Extracted: 10/15/14 410242-16 1/5 101606.D Data File: Date Analyzed: 10/16/14 Matrix: Soil Instrument: GCMS6 Units: mg/kg (ppm) Dry Weight Operator: VM

Lower

Surrogates: Kecovery: Limit: Limit: Anthracene-d10 87 50 150 Benzo(a)anthracene-d12 110 35 159

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

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID: Method Blank Client: Associated Earth Sciences

Date Received: Not Applicable Project: North Edge KV030772B, F&BI 410242

Lab ID: Date Extracted: 10/15/14 04-2098 mb 1/5 10/16/14 Date Analyzed: Data File: 101530.D Instrument: Matrix: Soil GCMS6 Units: mg/kg (ppm) Dry Weight Operator: ya

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

Concentration Compounds: 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

ENVIRONMENTAL CHEMISTS

Date of Report: 10/21/14 Date Received: 10/14/14

Project: North Edge KV030772B, F&BI 410242

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

Laboratory Code: 410242-07 (Duplicate)

·	-	Sample Result	Duplicate Result	RPD
Analyte	Reporting Units	(Wet Wt)	(Wet Wt)	(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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 10/21/14 Date Received: 10/14/14

Project: North Edge KV030772B, F&BI 410242

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

Laboratory Code: 410242-05 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (nnm)	5.000	1.800	112	108	63-146	4

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5.000	100	79-144

ENVIRONMENTAL CHEMISTS

Date of Report: 10/21/14 Date Received: 10/14/14

Project: North Edge KV030772B, F&BI 410242

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

Laboratory Code: 410242-15 (Matrix Spike)

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

Laboratory Code: Laboratory Control Sample

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

ENVIRONMENTAL CHEMISTS

Date of Report: 10/21/14 Date Received: 10/14/14

Project: North Edge KV030772B, F&BI 410242

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

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

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

Laboratory Code: Laboratory Control Sample 1/5

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

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The compound is a common laboratory and field contaminant.
- $hr\ \hbox{- The sample and duplicate were reextracted and reanalyzed.} \ RPD\ results\ were\ still\ outside\ of\ control\ limits. \ Variability\ is\ attributed\ to\ sample\ inhomogeneity.}$
- 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.

AS CHEOIH	SAMPLE CHAIN OF CUSTODY ME 10/14/14	4 152/423
Take A Mary Mary Control of the Cont	SAMPLERS (signature) of COC	Page # of 2
Company ACS C	PROJECT NAME/NO. PO#	☐ Standard (2 Weeks)
711 = 1	NormEdge/KN0307728-	Rush charges authorized by
City State 719 1425/1 1 4 98033	REMARKS (SAMPLE DISPOSAL Dispose after 30 days
Phone # 425 766 5112 Fax #		☐ Return samples ☐ Will call with instructions

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

FORMS/COC/COC.DOC

19/4/4 1600 TIME 7,0 DATE Samples received at COMPANY MESP Fraz PRINT NAME Relinquished by Received by: Received by

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	SAMPI FRS (cionature)	2 2 of 2 %
Send Report To Frank Whyches	Similar Signature Par Charles	TURNAROUND TIME
Company ATES I	PROJECT NAME/NO.	☐ Standard (2 Weeks)
Address 911 Fifth Ne Ste 100	Novaccdge / 160030772B>	Rush charges authorized by
City, State, ZIP Leinteland 18033	REMARKS	SAMPLE DISPOSAL □ Dispose after 30 days
Phone # 425 766 5112 Fax #		☐ Return samples ☐ Will call with instructions

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Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029

Ph. (206) 285-8282 Fax (206) 283-5044

FORMS\COC\COC.DOC

0091 TIME 10/1-/10 DATE - mples received at COMPANY pran Jan-1-Wocker PRINT NAME SIGNATURE Relinquished by: Received by:

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Arina Podnozova, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

October 22, 2014

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

Dear Mr. Sondergaard:

Included are the results from the testing of material submitted on October 15, 2014 from the North Edge KV030772B, F&BI 410273 project. There are 8 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Frank Mocker AE11022R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

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

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

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/22/14 Date Received: 10/15/14

Project: North Edge KV030772B, F&BI 410273

Date Extracted: 10/17/14

Date Analyzed: 10/18/14 and 10/22/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 10/22/14 Date Received: 10/15/14

Project: North Edge KV030772B, F&BI 410273

Date Extracted: 10/17/14

Date Analyzed: 10/18/14 and 10/22/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 10/22/14 Date Received: 10/15/14

Project: North Edge KV030772B, F&BI 410273

Date Extracted: 10/16/14 Date Analyzed: 10/17/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 10/22/14 Date Received: 10/15/14

Project: North Edge KV030772B, F&BI 410273

Date Extracted: 10/16/14 Date Analyzed: 10/17/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 10/22/14 Date Received: 10/15/14

Project: North Edge KV030772B, F&BI 410273

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

Laboratory Code: 410304-02 (Duplicate)

·	-	Sample Result	Duplicate Result	RPD
Analyte	Reporting Units	(Wet Wt)	(Wet Wt)	(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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 10/22/14 Date Received: 10/15/14

Project: North Edge KV030772B, F&BI 410273

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS

FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 410273-04 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	98	102	73-135	4

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting Units	Spike	Recovery	Acceptance
Analyte		Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5.000	102	74-139

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The compound is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Asy 152 TURNAROUND TIME ☐ Standard (2 Weeks)

■ RUSH

■ Rush charges authorited by ☐ Return samples ☐ Will call with instructions SAMPLE DISPOSAI ☐ Dispose after 30 days HE 10-15-14 PO# 12030726B SAMPLE CHAIN OF CUSTODY SAMPLERS (signature) PROJECT NAME/NO Harrichael REMARKS Address 9(1) 1-8-44 Ase 54e 100 City, State, ZIP Kirkson Lut 48033 Frank Whoched Phone #455 766 5112 Fax # 410273 Send Report To ____ Company

					,						
Notes						1 10/10			3,5		DATE TIME
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Sample ID	PC-28 0-41	PC-23 4-81	DC-29 6-4'	PC-21 4-81	PK-30 0-4'	26-30 4-81	25-31 O-4'	PC-31 4-8'	PC-32 0-4	18-75 25-29	Friedman & Bruya, Inc.
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3012 16th Avenue West

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Received by

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to 32

Seattle, WA 98119-2029 Fax (206) 283-5044 Ph. (206) 285-8282

Relinquished by:

Received by:

FORMS\COC\COC.DOC

1350 TIME ☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions TURNAROUND TIME SAMPLE CHAIN OF CUSTODY ME 10-15-14 kg4/V2 L
SAMPLERS (signature) SAMPLE DISPOSAL Notes 10ks. Av DATE COMPANY ANALYSES REQUESTED T+82 ACST ACST **B**0# HFS KN030772B **2AOCs** py 8270 VO'Cs by8260 Carle Mecke PRINT NAME BLEX by 8021B TPH-Gasoline SAMPLERS (signature) PROJECT NAME/NO. TPH-Diesel Sample Type | containers 工艺不同文件 REMARKS 500) City, State, ZIP Levelan wh 48033 Sampled 11 FE 10/5/4 1230 1231 Address 911 Figh Ave 5/0100 Frank Wheny SIGNATU Sampled Date Relinquished by: 不ららさ Relinquished by Phone #425 766 5112 Fax #_ Received by: Received by g E 2 410273 4-86 Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 910 Fax (206) 283-5044 Sample ID Ph. (206) 285-8282 Send Report To_ FORMS/COC/COC.DOC 25-23 05-33 Company

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Arina Podnozova, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

October 29, 2014

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

Dear Mr. Sondergaard:

Included are the results from the testing of material submitted on October 24, 2014 from the North Edge KV030772B, F&BI 410461 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Frank Mocker AE11029R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

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

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

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/29/14 Date Received: 10/24/14

Project: North Edge KV030772B, F&BI 410461

Date Extracted: 10/24/14

Date Analyzed: 10/24/14 and 10/27/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 10/29/14 Date Received: 10/24/14

Project: North Edge KV030772B, F&BI 410461

Date Extracted: 10/27/14 Date Analyzed: 10/27/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 10/29/14 Date Received: 10/24/14

Project: North Edge KV030772B, F&BI 410461

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

Laboratory Code: Laboratory Control Sample

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

ENVIRONMENTAL CHEMISTS

Date of Report: 10/29/14 Date Received: 10/24/14

Project: North Edge KV030772B, F&BI 410461

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

Laboratory Code: 410470-02 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	107	96	63-146	11

Laboratory Code: Laboratory Control Sample

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

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The compound is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

802 / vo, TURNAROUND TIME ☐ Return samples ☐ Will call with instructions Notes SAMPLE DISPOSA ☐ Dispose after 30 days ME 10-84-14 ANALYSES REQUESTED PO# HES W030772B-2AOC[®] Py 8270 SAMPLE CHAIN OF CUSTODY **VOCs by8260** X X X XXX XXX SAMPLERS (signature) PPH-Gasoline PROJECT NAMENO. TPH-Diesel Sample Type | containers 4.5 # of REMARKS 20:1 City, State, ZIP [LIVE (and), UNA 98033 Address 911 Fifth Ave Ste 100 Sampled 0221 1237 1231 Time 11 5/1 1/2/4 /3.4 /1 Frank Mucher Date Sampled Phone #425 766 5112 Fax # **T20** E E ACS I 75-35 60-41 8-47 56-81) (10-4) 15-34/4-8 Sample ID Send Report To _ Company ___

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

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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Arina Podnozova, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

November 6, 2014

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

Dear Mr. Sondergaard:

Included are the results from the testing of material submitted on October 31, 2014 from the North Edge KV030772B, F&BI 410572 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Frank Mocker AE11106R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

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

<u>Laboratory ID</u>	Associated Earth Sciences
410572 -01	SW-1 @ 10'
410572 -02	SW-2 @ 10'

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/06/14 Date Received: 10/31/14

Project: North Edge KV030772B, F&BI 410572

Date Extracted: 11/03/14 Date Analyzed: 11/03/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 11/06/14 Date Received: 10/31/14

Project: North Edge KV030772B, F&BI 410572

Date Extracted: 11/03/14 Date Analyzed: 11/03/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 11/06/14 Date Received: 10/31/14

Project: North Edge KV030772B, F&BI 410572

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

Laboratory Code: 411006-01 (Duplicate)

			Duplicate	
		Sample Result	Result	RPD
Analyte	Reporting Units	(Wet Wt)	(Wet Wt)	(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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 11/06/14 Date Received: 10/31/14

Project: North Edge KV030772B, F&BI 410572

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

Laboratory Code: 411001-01 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (nnm)	5.000	< 50	96	107	63-146	11

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5.000	94	79-144

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The compound is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

SAMPLE CHAIN OF CUSTODY MC 10/3//	1/1c/01	
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Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Fax (206) 283-5044 Ph. (206) 285-8282

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TIME DATE COMPANY PRINT NAME SIGNATURE

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Arina Podnozova, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

November 6, 2014

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

Dear Mr. Sondergaard:

Included are the results from the testing of material submitted on October 31, 2014 from the North Edge KV030772B, F&BI 410585 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Frank Mocker AE11106R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

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

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

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/06/14 Date Received: 10/31/14

Project: North Edge KV030772B, F&BI 410585

Date Extracted: 11/03/14 Date Analyzed: 11/03/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 11/06/14 Date Received: 10/31/14

Project: North Edge KV030772B, F&BI 410585

Date Extracted: 11/03/14 Date Analyzed: 11/03/14

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

Sample ID Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	Motor Oil Range (C ₂₅ -C ₃₆)	Surrogate (% Recovery) (Limit 56-165)
SW-3@10'bgs 410585-01	<50	<250	90
SW-4@10'bgs 410585-02	<50	<250	103
Method Blank	<50	<250	92

ENVIRONMENTAL CHEMISTS

Date of Report: 11/06/14 Date Received: 10/31/14

Project: North Edge KV030772B, F&BI 410585

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

Laboratory Code: 411006-01 (Duplicate)

•	-	Sample Result	Duplicate Result	RPD
Analyte	Reporting Units	(Wet Wt)	(Wet Wt)	(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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 11/06/14 Date Received: 10/31/14

Project: North Edge KV030772B, F&BI 410585

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL DETROI FUM HYDROCAPRONS AS

FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 411001-01 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	96	107	63-146	11

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

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The compound is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

808/150 hi-	Page # of	TURNAROUND TIME	☐ Standard (2 Weeks)	Rush charges authorized by	SAMPLE DISPOSAL □ Dispose after 30 days	☐ Return samples ☐ Will call with instructions	HD.
SAMPLE CHAIN OF CUSTODY ME 10-31-14	SAMPLERS (signature)	18 XX	PROJECT NAME/NO.	New Hoody Levosanice	REMARKS		ANALVSES REDITESTED
410585 SA		Send Report To Carlo Valle	Company AESI	Address all ASthe Ade, Ste 100	City, State, ZIP 14 444, wt 98033	Phone #425 766 5112 Fax #	

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

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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Arina Podnozova, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

November 4, 2014

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

Dear Mr. Sondergaard:

Included are the results from the testing of material submitted on November 3, 2014 from the North Edge KV030772B, F&BI 411010 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Frank Mocker AE11104R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

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

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

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/04/14 Date Received: 11/03/14

Project: North Edge KV030772B, F&BI 411010

Date Extracted: 11/03/14 Date Analyzed: 11/03/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 11/04/14 Date Received: 11/03/14

Project: North Edge KV030772B, F&BI 411010

Date Extracted: 11/03/14 Date Analyzed: 11/03/14

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

			Surrogate
Sample ID	$\frac{\text{Diesel Range}}{(C_{10}\text{-}C_{25})}$	$\frac{\text{Motor Oil Range}}{(C_{25}-C_{36})}$	(% Recovery) (Limit 53-144)
Laboratory ID	(C ₁₀ -C ₂₅)	(C ₂₅ -C ₃₆)	(LIIIII 55-144)
PC-12 16.5-20.5'	<50	<250	100
PC-12 20.5-24.5' 411010-02	< 50	<250	97
PC-10 10-14' 411010-03	< 50	<250	108
PC-10 14-18' 411010-04	<50	<250	105
Method Blank 04-2250 MB	< 50	<250	107

ENVIRONMENTAL CHEMISTS

Date of Report: 11/04/14 Date Received: 11/03/14

Project: North Edge KV030772B, F&BI 411010

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

Laboratory Code: 411006-01 (Duplicate)

·	-	Sample Result	Duplicate Result	RPD
Analyte	Reporting Units	(Wet Wt)	(Wet Wt)	(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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 11/04/14 Date Received: 11/03/14

Project: North Edge KV030772B, F&BI 411010

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS

FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 411010-01 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	96	109	64-133	13

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5.000	101	58-147

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The compound is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

411010	MPLE CHAIN OF CUSTODY	MG 11-03-14 USI/
	SAMPLERS (signature)	Page #
end Report To Tame Wester	188 P	TURNAROUND TIME
TEST Windows	PROJECT NAME/NO.	Standard (2 Weeks)
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ity. State, ZIP KNY44 LA 48033	REMARKS	SAMPLE DISPOSAL □ Dispose after 30 days
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Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282

DATE TIME 1400 ANVIMO. V-JANK-WYBE Relinquished by: Relinquished Received by: Received 6w Fax (206) 283-5044 FORMS\COC\COC.DOC

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Arina Podnozova, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

November 11, 2014

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

Dear Mr. Sondergaard:

Included are the results from the testing of material submitted on November 4, 2014 from the North Edge KV030772B, F&BI 411037 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Frank Mocker AE11111R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

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

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

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/11/14 Date Received: 11/04/14

Project: North Edge KV030772B, F&BI 411037

Date Extracted: 11/05/14 Date Analyzed: 11/05/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 11/11/14 Date Received: 11/04/14

Project: North Edge KV030772B, F&BI 411037

Date Extracted: 11/05/14 Date Analyzed: 11/05/14

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

			Surrogate
Sample ID	<u>Diesel Range</u>	Motor Oil Range	(% Recovery)
Laboratory ID	$(C_{10}-C_{25})$	$(C_{25}-C_{36})$	(Limit 53-144)
PC-36 0-4' 411037-01	< 50	<250	86
PC-37 0-4'	< 50	<250	94
411037-02	100	1200	01
PC-38 0-4'	< 50	<250	94
411037-03			
PC-39 0-4' 411037-04	< 50	<250	95
411037-04			
Method Blank	< 50	<250	81
04-2257 MB2			

ENVIRONMENTAL CHEMISTS

Date of Report: 11/11/14 Date Received: 11/04/14

Project: North Edge KV030772B, F&BI 411037

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

Laboratory Code: 411037-01 (Duplicate)

			Duplicate	
		Sample Result	Result	RPD
Analyte	Reporting Units	(Wet Wt)	(Wet Wt)	(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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 11/11/14 Date Received: 11/04/14

Project: North Edge KV030772B, F&BI 411037

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

Laboratory Code: 411030-09 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	104	105	64-133	1

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5.000	103	58-147

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The compound is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

411037	SA	SAMPLE CHAIN OF CUSTODY ME 11/4/14	4/14 COI/VSI
		SAMPLERS (signature)	Page # of
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	Lab	3y10	02	03	50				
	Sample ID	72-36 0-4'	PC-37 O-4	PC-38 0-4	PC-39 0-4				

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

FORMS\COC\COC.DOC

TIME 1001 DATE h/h/)) ပွ Samples received at (0) COMPANY Film Towns Wholes PRINT NAME Michael SIGNATURE Relinquished by: Received by:

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Arina Podnozova, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

November 6, 2014

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

Dear Mr. Sondergaard:

Included are the results from the testing of material submitted on November 5, 2014 from the North Edge KV030772B, F&BI 411062 project. There are 8 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Frank Mocker AE11106R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

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

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

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/06/14 Date Received: 11/05/14

Project: North Edge KV030772B, F&BI 411062

Date Extracted: 11/05/14

Date Analyzed: 11/05/14 and 11/06/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 11/06/14 Date Received: 11/05/14

Project: North Edge KV030772B, F&BI 411062

Date Extracted: 11/05/14

Date Analyzed: 11/05/14 and 11/06/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 11/06/14 Date Received: 11/05/14

Project: North Edge KV030772B, F&BI 411062

Date Extracted: 11/05/14 Date Analyzed: 11/05/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 11/06/14 Date Received: 11/05/14

Project: North Edge KV030772B, F&BI 411062

Date Extracted: 11/05/14 Date Analyzed: 11/05/14

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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 11/06/14 Date Received: 11/05/14

Project: North Edge KV030772B, F&BI 411062

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

Laboratory Code: 411062-01 (Duplicate)

-		Sample Result	Duplicate Result	RPD
Analyte	Reporting Units	(Wet Wt)	(Wet Wt)	(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

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

ENVIRONMENTAL CHEMISTS

Date of Report: 11/06/14 Date Received: 11/05/14

Project: North Edge KV030772B, F&BI 411062

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS

DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 411056-01 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	400	96	99	63-146	3

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