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
Laboratory Code: La	aboratory Control	Sample					
			Percent				
	Reporting	Spike	Recovery	Accept	tance		
Analyte	Units	Level	LCS	Crite	eria		
Diesel Extended	mg/kg (ppm)	5,000	97	79-1	.44		

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.

 ${\bf b}$ - 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.

 $\ensuremath{\mathsf{ca}}$ - 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.

 $hr\ \text{-}\ The\ sample\ and\ duplicate\ were\ reextracted\ and\ reanalyzed.\ RPD\ results\ were\ still\ outside\ of\ control\ limits.\ Variability\ is\ attributed\ to\ sample\ inhomogeneity.$

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

 $\ensuremath{\text{ip}}$ - 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.

 ${\rm J}$ - 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.

11-05-14 CO3 /183	Page # TURNARC TURNARC AUSH Rush charges au Rush charges au SAMPLE Dispose after C Return sample	NALYSES REQUESTED NALYSES REQUESTED HFS SVOCs by \$270	< S day			24 Mon		AGE W/CLIVES	FCBT 11/5/14 1420	Samples noce ved at 2
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411062		Sample ID	5W-5 @ 10' PC-22 3-12'	PC-22 12-16' PC-28 8-12'	PC-31 8-12	PC-31 12-16'	PC-29 3-12	Friedman & Bruya, Inc. 3012 16th Avenue West	Seattle, WA 98119-2029 Ph. (206) 285-8282	Fax (206) 283-5044 Forms/coccoc.doc

Page # 03 / Bage # 2 of 2 Page # 2 of 2 TURNAROUND TIME Standard (2 weeks) Rush charges authorized by Rush charges authorized by SAMPLE DISPOSAL Dispose after 30 days Return samples Will call with instructions		1PANY DATE TIME CSP 145/4 (420 Samples, tocelved at 2 °C
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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 7, 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 6, 2014 from the North Edge KV030772B, F&BI 411101 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 AE11107R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 6, 2014 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 411101 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	Associated Earth Sciences
411101 -01	PC-25 8-12
411101 -02	PC-25 12-16
411101 -03	SW-3 @ 20
411101 -04	SW-6 @ 10
411101 -05	SW-4 @ 20
411101 -06	PC-27 8-12
411101 -07	PC-27 12-16

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/07/14 Date Received: 11/06/14 Project: North Edge KV030772B, F&BI 411101 Date Extracted: 11/06/14 Date Analyzed: 11/06/14 and 11/07/14

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery)</u> (Limit 50-150)
PC-25 8-12 411101-01	< 0.02	< 0.02	< 0.02	< 0.06	<2	102
PC-25 12-16 411101-02 1/5	<0.02 j	0.93	3.6	5.0	620	117
SW-3 @ 20 411101-03	< 0.02	< 0.02	< 0.02	< 0.06	<2	101
SW-6 @ 10 411101-04	< 0.02	< 0.02	< 0.02	< 0.06	<2	101
SW-4 @ 20 411101-05	< 0.02	< 0.02	< 0.02	< 0.06	<2	100
PC-27 8-12 411101-06	< 0.02	< 0.02	< 0.02	< 0.06	<2	101
PC-27 12-16 411101-07 1/5	<0.02 j	0.54	2.1	2.9	410	110
Method Blank ^{04-2242 MB}	< 0.02	< 0.02	< 0.02	< 0.06	<2	85

ENVIRONMENTAL CHEMISTS

Date of Report: 11/07/14 Date Received: 11/06/14 Project: North Edge KV030772B, F&BI 411101 Date Extracted: 11/07/14 Date Analyzed: 11/07/14

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

<u>Sample ID</u> Laboratory ID	Diesel Range (C10-C25)	Motor Oil Range (C25-C36)	Surrogate <u>(% Recovery)</u> (Limit 56-165)
PC-25 8-12 411101-01	3,400	<250	93
PC-25 12-16 411101-02	1,600	<250	88
SW-3 @ 20 411101-03	<50	<250	93
SW-6 @ 10 411101-04	<50	<250	85
SW-4 @ 20 411101-05	<50	<250	84
PC-27 8-12 411101-06	<50	<250	88
PC-27 12-16 411101-07	<50	<250	97
Method Blank 04-2271 MB	<50	<250	86

ENVIRONMENTAL CHEMISTS

Date of Report: 11/07/14 Date Received: 11/06/14 Project: North Edge KV030772B, F&BI 411101

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: 411096-01 (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	91	69-120
Toluene	mg/kg (ppm)	0.5	93	70-117
Ethylbenzene	mg/kg (ppm)	0.5	93	65-123
Xylenes	mg/kg (ppm)	1.5	94	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

ENVIRONMENTAL CHEMISTS

Date of Report: 11/07/14 Date Received: 11/06/14 Project: North Edge KV030772B, F&BI 411101

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

Laboratory Code:	411101-06 (Matri	x 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	105	111	63-146	6
Laboratory Code:	Laboratory Contr	ol Samp	le				
			Percent	t			
	Reporting	Spike	Recover	y Accep	tance		
Analyte	Units	Level	LCS	Crit	eria		
Diesel Extended	mg/kg (ppm)	5,000	98	79-1	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.

 ${\bf b}$ - 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.

 ${\rm d}$ - 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.

41/10/ Send Report To For No Company 911 Afth	× +	Frank Muscher 1 Fight Ave Shel	23	SAMPLE (ST SAMPL PROJEC	SAMPLE CHAIN OF CUSTODY SAMPLERS (signated) PROJECT NAME/NO.	N.C. N.C.	PO# - 06 - 11- 06 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100	76 - 14 US2 Page # 0 of CO2 TURNAROUND TIME □ Standard (2 Weeks) Kush Charges authorized by
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Friedman & Bruya, Inc. Friedman & Bruya, Inc. 3012 16th Avenue West R Seattle, WA 98119-2029 Ph. (206) 285-8282 Fax (206) 283-5044 FoxMSNCOCCOC DOC	Relinquished by: Received by: Received by: Received by:		SONATURE 2000		PRINT NAME Freme Wail	38	COMPANY COMPANY FC B.T Samples , receive	DATE TIME N/6/1+ 1530 1/6/14 1530

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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 12, 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 10, 2014 from the North Edge KV030772B, F&BI 411152 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 AE11112R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 10, 2014 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 411152 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	Associated Earth Sciences
411152 -01	PC-18 8-12
411152 -02	PC-18 12-16
411152 -03	PC-33 8-12
411152 -04	PC-33 12-16

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/12/14 Date Received: 11/10/14 Project: North Edge KV030772B, F&BI 411152 Date Extracted: 11/10/14 Date Analyzed: 11/10/14

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 (<u>% Recovery)</u> (Limit 50-132)
PC-18 8-12 411152-01	<0.02	< 0.02	<0.02	<0.06	<2	86
PC-18 12-16 411152-02	< 0.02	< 0.02	<0.02	<0.06	<2	96
PC-33 8-12 411152-03	<0.02	< 0.02	<0.02	<0.06	<2	83
PC-33 12-16 411152-04	< 0.02	< 0.02	< 0.02	<0.06	<2	86
Method Blank 04-2278 MB	< 0.02	< 0.02	< 0.02	<0.06	<2	89

ENVIRONMENTAL CHEMISTS

Date of Report: 11/12/14 Date Received: 11/10/14 Project: North Edge KV030772B, F&BI 411152 Date Extracted: 11/10/14 Date Analyzed: 11/10/14

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

<u>Sample ID</u> Laboratory ID	Diesel Range (C10-C25)	Motor Oil Range (C25-C36)	Surrogate <u>(% Recovery)</u> (Limit 56-165)
PC-18 8-12 411152-01	<50	<250	77
PC-18 12-16 411152-02	<50	<250	77
PC-33 8-12 411152-03	<50	<250	78
PC-33 12-16 411152-04	<50	<250	79
Method Blank 04-2289 MB	<50	<250	88

ENVIRONMENTAL CHEMISTS

Date of Report: 11/12/14 Date Received: 11/10/14 Project: North Edge KV030772B, F&BI 411152

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: 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	87	91	66-121	4
Toluene	mg/kg (ppm)	0.5	88	92	72-128	4
Ethylbenzene	mg/kg (ppm)	0.5	95	96	69-132	1
Xylenes	mg/kg (ppm)	1.5	90	92	69-131	2
Gasoline	mg/kg (ppm)	20	100	100	61-153	0

ENVIRONMENTAL CHEMISTS

Date of Report: 11/12/14 Date Received: 11/10/14 Project: North Edge KV030772B, F&BI 411152

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

Laboratory Code: 411150-01 (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	98	109	63-146	11
Laboratory Code: L	aboratory Contro	l Sample					
			Percent				
	Reporting	Spike	Recovery	Accep	tance		
Analyte	Units	Level	LCS	Crite	eria		
Diesel Extended	mg/kg (ppm)	5,000	97	79 -1	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.

 ${\bf b}$ - 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.

 $\ensuremath{\text{ip}}$ - 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.

 ${\rm J}$ - 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.

411152		SAMPLE CI	SAMPLE CHAIN OF CUSTODY	ME 11-	11-10-14 WS2
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City, State, ZIP Let'v KI L	+ mt 9033	3 REMARKS	(S l		SAMPLE DISPOSAL Dispose after 30 days Return samples Will call with instructions
			A	ANALYSES REQUESTED	4 4
Sample ID Lab ID S	Date Time Sampled Sampled	Sample Type c	VOCs by 8260 TPH-Diesel	НЕЗ ЗЛОС ² РЛ 8570	Notes
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PC-18 12-16 02	. \	~	XXX XXX		
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				Samples	Samples received at 2.°C
Friedman & Bruya, Inc.3012 16th Avenue West3012 16th Avenue WestSeattle, WA 98119-2029Ph. (206) 285-8282Ph. (206) 283-5044Fax (206) 283-5044Formsvcoccocococococococococococococococococ	SCINATURE		PRINT NAME Frank ULISCO	COMPANY FBE	Y DATE TIME NVVO/14 1045 1140/14 1045

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 12, 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 11, 2014 from the North Edge KV030772B, F&BI 411171 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 AE11112R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 11, 2014 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 411171 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	Associated Earth Sciences
411171 -01	PC-12 24.5-28.5
411171 -02	PC-12 28.5-32.5
411171 -03	PC-23 8-12'
411171 -04	PC-23 12-16'
411171 -05	PC-34 8-12'
411171 -06	PC-34 12-16'
411171 -07	PC-24 8-12'
411171 -08	PC-24 12-16'
411171 -09	PC-35 8-12'
411171 -10	PC-35 12-16'
411171 -11	PC-26 8-12'
411171 -12	PC-26 12-16'

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/12/14 Date Received: 11/11/14 Project: North Edge KV030772B, F&BI 411171 Date Extracted: 11/11/14 Date Analyzed: 11/11/14 and 11/12/14

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery)</u> (Limit 50-132)
PC-12 24.5-28.5 411171-01	<0.02	< 0.02	<0.02	<0.06	<2	88
PC-12 28.5-32.5 411171-02	<0.02	< 0.02	<0.02	<0.06	<2	85
PC-23 8-12' 411171-03 1/20	<0.4	<0.4	29	20	2,800	115
PC-23 12-16' 411171-04 1/5	0.11 j	0.14	2.3	1.6	280	101
PC-34 8-12' 411171-05 1/10	<0.2	<0.2	15	11	1,500	119
PC-34 12-16' 411171-06 1/10	<0.2	<0.2	21	14	2,100	127
PC-24 8-12' 411171-07 1/10	<0.2	<0.2	13	8.5	1,300	116
PC-24 12-16' 411171-08	< 0.02	< 0.02	1.1	0.81	150	116
PC-35 8-12' 411171-09 1/5	<0.02 j	<0.1	2.1	1.6	370	97
PC-35 12-16' 411171-10 1/10	<0.2	<0.2	18	12	1,800	127
PC-26 8-12' 411171-11	< 0.02	< 0.02	< 0.02	<0.06	<2	85

ENVIRONMENTAL CHEMISTS

Date of Report: 11/12/14 Date Received: 11/11/14 Project: North Edge KV030772B, F&BI 411171 Date Extracted: 11/11/14 Date Analyzed: 11/11/14 and 11/12/14

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery)</u> (Limit 50-132)
PC-26 12-16' 411171-12 1/10	<0.2	<0.2	18	15	1,900	128
Method Blank 04-2281 MB	<0.02	< 0.02	<0.02	<0.06	<2	79

ENVIRONMENTAL CHEMISTS

Date of Report: 11/12/14 Date Received: 11/11/14 Project: North Edge KV030772B, F&BI 411171 Date Extracted: 11/11/14 Date Analyzed: 11/11/14

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

<u>Sample ID</u> Laboratory ID	Diesel Range (C10-C25)	Motor Oil Range (C25-C36)	Surrogate <u>(% Recovery)</u> (Limit 48-168)
PC-12 24.5-28.5 411171-01	<50	<250	111
PC-12 28.5-32.5 411171-02	<50	<250	102
PC-23 8-12' 411171-03	1,100 x	<250	102
PC-23 12-16' 411171-04	210 x	<250	104
PC-34 8-12' 411171-05	260 x	<250	97
PC-34 12-16' 411171-06	290 x	<250	98
PC-24 8-12' 411171-07	1,200 x	<250	102
PC-24 12-16' 411171-08	<50	<250	104
PC-35 8-12' 411171-09	<50	<250	98
PC-35 12-16' 411171-10	710 x	<250	103
PC-26 8-12' 411171-11	<50	<250	97

ENVIRONMENTAL CHEMISTS

Date of Report: 11/12/14 Date Received: 11/11/14 Project: North Edge KV030772B, F&BI 411171 Date Extracted: 11/11/14 Date Analyzed: 11/11/14

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

<u>Sample ID</u> Laboratory ID	Diesel Range (C10-C25)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	Surrogate <u>(% Recovery)</u> (Limit 48-168)
PC-26 12-16' 411171-12	970 x	<250	103
Method Blank 04-2294 MB	<50	<250	104

ENVIRONMENTAL CHEMISTS

Date of Report: 11/12/14 Date Received: 11/11/14 Project: North Edge KV030772B, F&BI 411171

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: 411171-02 (Duplicate)

		Sample	Duplicate	
		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	90	66-121		
Toluene	mg/kg (ppm)	0.5	89	72-128		
Ethylbenzene	mg/kg (ppm)	0.5	88	69-132		
Xylenes	mg/kg (ppm)	1.5	87	69-131		
Gasoline	mg/kg (ppm)	20	95	61-153		

ENVIRONMENTAL CHEMISTS

Date of Report: 11/12/14 Date Received: 11/11/14 Project: North Edge KV030772B, F&BI 411171

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

Laboratory Code: 411164-01 (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	114	113	73-135	1
Laboratory Code: La	aboratory Control	Sample					
			Percent				

Analyte	Reporting Units	Spike Level	Recovery LCS	Acceptance Criteria	
Diesel Extended	mg/kg (ppm)	5,000	111	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.

 ${\bf b}$ - 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.

 $\ensuremath{\text{ip}}$ - 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.

 ${\rm J}$ - 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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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 13, 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 12, 2014 from the North Edge KV030772B, F&BI 411205 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 AE11113R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 12, 2014 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 411205 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	Associated Earth Sciences
411205 -01	PC-40 (0-4)
411205 -02	PC-40 (4-8)
411205 -03	PC-41 (0-4)
411205 -04	PC-41 (4-8)
411205 -05	PC-42 (0-4)
411205 -06	PC-42 (4-8)

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/13/14 Date Received: 11/12/14 Project: North Edge KV030772B, F&BI 411205 Date Extracted: 11/12/14 Date Analyzed: 11/12/14 and 11/13/14

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery)</u> (Limit 50-132)
PC-40 (0-4) 411205-01	< 0.02	< 0.02	<0.02	<0.06	<2	88
PC-40 (4-8) 411205-02	< 0.02	< 0.02	< 0.02	<0.06	<2	87
PC-41 (0-4) 411205-03	< 0.02	<0.02	<0.02	<0.06	<2	87
PC-41 (4-8) 411205-04 1/2	<0.02 j	0.29	1.5	5.4	720	132
PC-42 (0-4) 411205-05	< 0.02	0.098	1.0	1.6	390	ip
PC-42 (4-8) 411205-06 1/50	3.0	21	8.9	51	1,700	99
Method Blank 04-2283 MB	< 0.02	<0.02	< 0.02	<0.06	<2	86

ENVIRONMENTAL CHEMISTS

Date of Report: 11/13/14 Date Received: 11/12/14 Project: North Edge KV030772B, F&BI 411205 Date Extracted: 11/12/14 Date Analyzed: 11/12/14

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

<u>Sample ID</u> Laboratory ID	Diesel Range (C10-C25)	Motor Oil Range (C25-C36)	Surrogate <u>(% Recovery)</u> (Limit 53-144)
PC-40 (0-4) 411205-01	<50	<250	104
PC-40 (4-8) 411205-02	<50	<250	104
PC-41 (0-4) 411205-03	<50	<250	99
PC-41 (4-8) 411205-04	11,000	<250	92
PC-42 (0-4) 411205-05	11,000	1,100 x	93
PC-42 (4-8) 411205-06	12,000	610 x	89
Method Blank 04-2303 MB	<50	<250	99

ENVIRONMENTAL CHEMISTS

Date of Report: 11/13/14 Date Received: 11/12/14 Project: North Edge KV030772B, F&BI 411205

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	91	89	66-121	2
Toluene	mg/kg (ppm)	0.5	90	88	72-128	2
Ethylbenzene	mg/kg (ppm)	0.5	91	88	69-132	3
Xylenes	mg/kg (ppm)	1.5	89	86	69-131	3
Gasoline	mg/kg (ppm)	20	100	95	61-153	5

ENVIRONMENTAL CHEMISTS

Date of Report: 11/13/14 Date Received: 11/12/14 Project: North Edge KV030772B, F&BI 411205

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

Laboratory Code: 411205-01 (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	111	111	64-133	0
Laboratory Code: Laboratory Control Sample							
			Percent				
	Reporting	Spike	Recovery	Accept	tance		
Analyte	Units	Level	LCS	Crite	eria		
Diesel Extended	mg/kg (ppm)	5,000	101	58-1	47		

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.

 ${\bf b}$ - 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.

 $\ensuremath{\mathsf{ca}}$ - 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.

 $hr\ \text{-}\ The\ sample\ and\ duplicate\ were\ reextracted\ and\ reanalyzed.\ RPD\ results\ were\ still\ outside\ of\ control\ limits.\ Variability\ is\ attributed\ to\ sample\ inhomogeneity.$

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

 $\ensuremath{\text{ip}}$ - 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.

 ${\rm J}$ - 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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41120S Send Report To Frank-INA Company MEST Addressell Fright Ave City, State, ZIP Knychand, I	Sample ID Sample ID PC-40 (4-8) PC-41 (4-8) PC-41 (4-8) PC-42 (0-4) PC-42 (0-4)	Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282 Fax (206) 283-5044 Formscocccoccpoc

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 25, 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 18, 2014 from the North Edge KV030772B, F&BI 411314 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 AE11125R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 18, 2014 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	Associated Earth Sciences
411314 -01	SW-7@11'
411314 -02	SW-7@13'
411314 -03	PC-22 16-20'
411314 -04	PC-22 20-24'
411314 -05	PC-23 16-20'
411314 -06	PC-23 20-24'
411314 -07	PC-24 16-20'
411314 -08	PC-24 20-24'
411314 -09	PC-25 16-20'
411314 -10	PC-25 20-24'

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/25/14 Date Received: 11/18/14 Project: North Edge KV030772B, F&BI 411314 Date Extracted: 11/19/14 Date Analyzed: 11/19/14 and 11/22/14

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

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery)</u> (Limit 50-150)
SW-7@11' 411314-01	<0.02	<0.02	< 0.02	<0.06	<2	90
SW-7@13' 411314-02 1/10	<0.2	0.31	3.5	2.2	630	94
PC-22 16-20' 411314-03	<0.02	<0.02	< 0.02	<0.06	<2	89
PC-22 20-24' 411314-04	<0.02	< 0.02	< 0.02	<0.06	<2	90
PC-23 16-20' 411314-05	<0.02	< 0.02	< 0.02	<0.06	<2	89
PC-23 20-24' 411314-06	<0.02	< 0.02	< 0.02	<0.06	<2	90
PC-24 16-20' 411314-07	<0.02	0.16	1.3	0.71	210	110
PC-24 20-24' 411314-08 1/10	<0.2	1.3	5.9	3.0	820	95
PC-25 16-20' 411314-09 1/20	<0.4	2.6	16	7.6	1,900	87
PC-25 20-24' 411314-10	<0.02	1.9	3.5	4.1	780	ip
Method Blank 04-2336 MB	< 0.02	< 0.02	< 0.02	< 0.06	<2	90

ENVIRONMENTAL CHEMISTS

Date of Report: 11/25/14 Date Received: 11/18/14 Project: North Edge KV030772B, F&BI 411314 Date Extracted: 11/19/14 Date Analyzed: 11/19/14

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

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

Surrogato

<u>Sample ID</u> Laboratory ID	Diesel Range (C10-C25)	Motor Oil Range (C25-C36)	Surrogate <u>(% Recovery)</u> (Limit 56-165)
SW-7@11' 411314-01	<50	<250	86
SW-7@13' 411314-02	310 x	<250	89
PC-22 16-20' 411314-03	<50	<250	87
PC-22 20-24' 411314-04	<50	<250	88
PC-23 16-20' 411314-05	<50	<250	90
PC-23 20-24' 411314-06	<50	<250	85
PC-24 16-20' 411314-07	120 x	<250	97
PC-24 20-24' 411314-08	170 x	<250	88
PC-25 16-20' 411314-09	690 x	<250	89
PC-25 20-24' 411314-10	320 x	<250	87
Method Blank 04-2353 MB	<50	<250	96

ENVIRONMENTAL CHEMISTS

Date of Report: 11/25/14 Date Received: 11/18/14 Project: North Edge KV030772B, F&BI 411314

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: 411314-01 (Duplicate)

		Sample	Duplicate	
		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	87	69-120
Toluene	mg/kg (ppm)	0.5	90	70-117
Ethylbenzene	mg/kg (ppm)	0.5	88	65-123
Xylenes	mg/kg (ppm)	1.5	89	66-120
Gasoline	mg/kg (ppm)	20	90	71-131

ENVIRONMENTAL CHEMISTS

Date of Report: 11/25/14 Date Received: 11/18/14 Project: North Edge KV030772B, F&BI 411314

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

Laboratory Code: 411302-01 (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	94	94	63-146	0
Laboratory Code: Laboratory Control Sample							
			Percent				
	Reporting	Spike	Recovery	Accept	tance		
Analyte	Units	Level	LCS	Crite	eria		
Diesel Extended	mg/kg (ppm)	5,000	92	79-1	44		

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.

 ${\bf b}$ - 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.

 ${\rm J}$ - 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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Friedman & Bruya, Inc.	SIGNATURE	PRINT NAME	COMPANY	DATE TIME
3012 16th Avenue West	Relinquished by Relin	Frank Mocked	AEST	W18/4 1555
Seattle, WA 98119-2029	Received by: MC all	HONG NGUMEN	FAT	
Ph. (206) 285-8282	Relinquished by:	2		
Fax (206) 283-5044	Received by:		Samples received at	<i>w</i>
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 20, 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 19, 2014 from the North Edge KV030772B, F&BI 411335 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 AE11120R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 19, 2014 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 411335 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	Associated Earth Sciences
411335 -01	PC-43 0-4
411335 -02	PC-43 4-8
411335 -03	PC-44 0-4
411335 -04	PC-44 4-8

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/20/14 Date Received: 11/19/14 Project: North Edge KV030772B, F&BI 411335 Date Extracted: 11/19/14 Date Analyzed: 11/19/14 and 11/20/14

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

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

Sample ID Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery)</u> (Limit 50-150)
PC-43 0-4 411335-01 1/10	<0.02 j	0.52	1.5	8.1	410	94
PC-43 4-8 411335-02 1/20	1.2	16	20	100	1,200	92
PC-44 0-4 411335-03 1/10	1.5	7.6	7.7	14	1,100	98
PC-44 4-8 411335-04 1/100	8.5	72	53	280	4,300	92
Method Blank 04-2336 MB	<0.02	< 0.02	< 0.02	< 0.06	<2	90

ENVIRONMENTAL CHEMISTS

Date of Report: 11/20/14 Date Received: 11/19/14 Project: North Edge KV030772B, F&BI 411335 Date Extracted: 11/19/14 Date Analyzed: 11/19/14

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

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

Surrogato

<u>Sample ID</u> Laboratory ID	Diesel Range (C ₁₀ -C ₂₅)	Motor Oil Range (C ₂₅ -C ₃₆)	Surrogate <u>(% Recovery)</u> (Limit 53-144)
PC-43 0-4 411335-01	410	<250	99
PC-43 4-8 411335-02	250	<250	93
PC-44 0-4 411335-03	2,800	<250	97
PC-44 4-8 411335-04	1,900	330 x	97
Method Blank 04-2356 MB	<50	<250	103

ENVIRONMENTAL CHEMISTS

Date of Report: 11/20/14 Date Received: 11/19/14 Project: North Edge KV030772B, F&BI 411335

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: 411314-01 (Duplicate)

		Sample	Duplicate	
		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	87	69-120
Toluene	mg/kg (ppm)	0.5	90	70-117
Ethylbenzene	mg/kg (ppm)	0.5	88	65-123
Xylenes	mg/kg (ppm)	1.5	89	66-120
Gasoline	mg/kg (ppm)	20	90	71-131

ENVIRONMENTAL CHEMISTS

Date of Report: 11/20/14 Date Received: 11/19/14 Project: North Edge KV030772B, F&BI 411335

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

Laboratory Code: 411328-01 (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	250	99	89	64-133	11
Laboratory Code: Laboratory Control Sample							
			Percent				
	Reporting	Spike	Recovery	Accep	tance		
Analyte	Units	Level	LCS	Crite	eria		
Diesel Extended	mg/kg (ppm)	5,000	101	58-1	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.

 ${\bf b}$ - 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.

 $\ensuremath{\mathsf{ca}}$ - 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.

 ${\rm ip}$ - 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.

 ${\rm J}$ - 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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Friedman & Bruya, Inc. SIGNATURE PRINT NAME COMPANY 3012 16th Avenue West Relinquishedor: COMPANY DATE 3012 16th Avenue West Receivedut COMPANY DATE 7 7 COMPANY COMPANY DATE 9 1006) 285-8282 Receivedut CUC COMPANY Table 7 7 CUC COMPANY Table Undee 7 8 Received by: CUC COMPANY Table Undee 7 7 7 7 1 1 7 8 8 1 1 1 1 7 8 1 1 1 1 1 7 8 1 1 1 1 1 7 1 1 1 1 1 1 7 1 1 1 1 1 1 7 1 1 1 1 1 7 1 1 <	9/44425

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 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 November 20, 2014 from the North Edge/KV030772B, F&BI 411376 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 AE11121R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 20, 2014 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge/KV030772B, F&BI 411376 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
411376-01	PC-14 (8-12)
411376-02	PC-14 (12-16)
411376-03	PC-15 (13-17)
411376-04	PC-15 (17-21)
411376-05	PC-20 (16-20)
411376-06	PC-20 (20-24)

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/21/14 Date Received: 11/20/14 Project: North Edge/KV030772B, F&BI 411376 Date Extracted: 11/20/14 Date Analyzed: 11/20/14 and 11/21/14

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

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery)</u> (Limit 50-132)
PC-14 (8-12) 411376-01	< 0.02	< 0.02	< 0.02	< 0.06	<2	90
PC-14 (12-16) 411376-02	< 0.02	< 0.02	< 0.02	< 0.06	<2	85
PC-15 (13-17) 411376-03	< 0.02	< 0.02	<0.02	< 0.06	<2	87
PC-15 (17-21) 411376-04	< 0.02	<0.02	<0.02	<0.06	<2	86
PC-20 (16-20) 411376-05 1/5	<0.02 j	0.11	4.7	4.2	920	121
PC-20 (20-24) 411376-06	<0.02	<0.02	0.33	0.27	73	94
Method Blank 04-2337 MB	< 0.02	< 0.02	< 0.02	<0.06	<2	85

ENVIRONMENTAL CHEMISTS

Date of Report: 11/21/14 Date Received: 11/20/14 Project: North Edge/KV030772B, F&BI 411376 Date Extracted: 11/21/14 Date Analyzed: 11/21/14

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

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

Surrogato

<u>Sample ID</u> Laboratory ID	Diesel Range (C10-C25)	Motor Oil Range (C ₂₅ -C ₃₆)	Surrogate <u>(% Recovery)</u> (Limit 48-168)
PC-14 (8-12) 411376-01	<50	<250	94
PC-14 (12-16) 411376-02	<50	<250	104
PC-15 (13-17) 411376-03	<50	<250	106
PC-15 (17-21) 411376-04	<50	<250	104
PC-20 (16-20) 411376-05	1,400	<250	106
PC-20 (20-24) 411376-06	71	<250	100
Method Blank 04-2366 MB	<50	<250	101

ENVIRONMENTAL CHEMISTS

Date of Report: 11/21/14 Date Received: 11/20/14 Project: North Edge/KV030772B, F&BI 411376

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: 411342-04 (Duplicate)

		Sample Result	Duplicate Result	RPD
A 1.				
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	79	66-121
Toluene	mg/kg (ppm)	0.5	77	72-128
Ethylbenzene	mg/kg (ppm)	0.5	80	69-132
Xylenes	mg/kg (ppm)	1.5	77	69-131
Gasoline	mg/kg (ppm)	20	75	61-153

ENVIRONMENTAL CHEMISTS

Date of Report: 11/21/14 Date Received: 11/20/14 Project: North Edge/KV030772B, F&BI 411376

mg/kg (ppm)

5,000

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

Laboratory Code: 411360-01 (Matrix Spike)

Diesel Extended

			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	92	93	73-135	1
Laboratory Code:	Laboratory Control	Sample					
			Percent				
	Reporting Units	Spike	Recovery	Acceptan	ce		
Analyte	_	Level	LCS	Criteria	<u>l</u>		

98

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.

 ${\bf b}$ - 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.

 $hr\ \text{-}\ The\ sample\ and\ duplicate\ were\ reextracted\ and\ reanalyzed.\ RPD\ results\ were\ still\ outside\ of\ control\ limits.\ Variability\ is\ attributed\ to\ sample\ inhomogeneity.$

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

 $\ensuremath{\text{ip}}$ - 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.

 ${\rm J}$ - 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.

20/14 US/ Do2 Page # of Do2 TURNAROUND TIME D Standard (2 Weeks) RuSH 24 60 Rush charges authorized by	SAMPLE DISPOSAL Dispose after 30 days Return samples Will call with instructions	Notes				DATE DATE	Samples received at
SAMPLE CHAIN OF CUSTODY NE // SAMPLERS (signature) (2) PROJECT NAME/NO. PO# NartEdye/ /20030772B	REMARKS	VOCs by 82260 TPH-Gasoline BTEX by 8021B				PRINT NAME COMPANY Frunde Wiecker Acsi Nam Phane Tesi	Samp
4/1376 SAMPLI Send Report To Franke Whele SAM Company MEST Stello No	te, ZIP KVX/ml wg-98033	Sample ID Lab Date Time Sample TD ID Sampled Sampled	PC-14 (8-12) 01/ 11/20/14 0730 5001 PC-14 (12-16) 02 1 (0740 (pc-15 (13-17) 03 / 0750 /	PC-22 (16-20) of (0825 V	Friedman & Bruya, Inc.SIGNATURE3012 16th Avenue WestRelinquished N:3012 16th Avenue WestReceived by:3012 16th Avenue WestReceived by:3012 16th Avenue WestRelinquished by:3012 16th Avenue WestReceived 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

December 5, 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 26, 2014 from the North Edge KV030772B, F&BI 411467 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 AE11205R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 26, 2014 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 411467 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
411467 -01	PC-3 8-12
411467 -02	PC-3 12-16
411467 -03	PC-42 8-12
411467 -04	PC-42 12-16
411467 -05	PC-41 8-12
411467 -06	PC-41 12-16
411467 -07	PC-40 8-12
411467 -08	PC-40 12-16
411467 -09	PC-4 8-12
411467 -10	PC-4 12-16
411467 -11	PC-16 7-11
411467 -12	PC-16 11-15
411467 -13	PC-44 8-12
411467 -14	PC-44 12-16
411467 -15	PC-43 8-12
411467 -16	PC-43 12-16
411467 -17	PC-45 0-4
411467 -18	PC-45 4-8

Several compounds in the 8270D laboratory control sample and laboratory control sample duplicate exceeded the acceptance criteria. The analytes were not detected in the sample, therefore the data were acceptable.

All other quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/05/14 Date Received: 11/26/14 Project: North Edge KV030772B, F&BI 411467 Date Extracted: 12/01/14 Date Analyzed: 12/01/14 and 12/03/14

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

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery)</u> (Limit 50-132)
PC-3 8-12 411467-01 1/5	0.1 j	0.47	1.2	4.5	150	96
PC-3 12-16 411467-02	< 0.02	0.056	0.11	0.22	24	88
PC-42 8-12 411467-03 1/5	0.02 j	0.19	0.32	1.9	170	90
PC-42 12-16 411467-04 1/5	0.21	<0.1	3.9	6.9	750	114
PC-41 8-12 411467-05 1/2	<0.02 j	< 0.04	0.59	0.68	230	98
PC-41 12-16 411467-06 1/100	6.4	<2	21	27	3,200	95
PC-40 8-12 411467-07	< 0.02	< 0.02	<0.02	< 0.06	<2	84
PC-40 12-16 411467-08	< 0.02	< 0.02	<0.02	< 0.06	<2	82
PC-4 8-12 411467-09 1/10	0.02 j	<0.2	1.6	4.4	800	101
PC-4 12-16 411467-10	< 0.02	< 0.02	< 0.02	<0.06	<2	85
PC-16 7-11 411467-11 1/5	<0.02 j	<0.1	0.87	1.4	580	97

ENVIRONMENTAL CHEMISTS

Date of Report: 12/05/14 Date Received: 11/26/14 Project: North Edge KV030772B, F&BI 411467 Date Extracted: 12/01/14 Date Analyzed: 12/01/14 and 12/03/14

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

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery)</u> (Limit 50-132)
PC-16 11-15 411467-12	< 0.02	< 0.02	<0.02	<0.06	<2	83
PC-44 8-12 411467-13 1/2	0.071	0.31	0.51	1.9	65	93
PC-44 12-16 411467-14	< 0.02	0.022	<0.02	0.13	9.5	87
PC-43 8-12 411467-15 1/50	23	150	65	400	5,300	101
PC-43 12-16 411467-16	0.034	0.025	< 0.02	< 0.06	<2	76
PC-45 0-4 411467-17	< 0.02	< 0.02	0.027	<0.06	6.1	85
PC-45 4-8 411467-18	< 0.02	<0.02	<0.02	<0.06	3.6	84
Method Blank 04-2393 MB	< 0.02	< 0.02	<0.02	<0.06	<2	80
Method Blank 04-2394 MB	< 0.02	< 0.02	< 0.02	<0.06	<2	76

ENVIRONMENTAL CHEMISTS

Date of Report: 12/05/14 Date Received: 11/26/14 Project: North Edge KV030772B, F&BI 411467 Date Extracted: 12/01/14 Date Analyzed: 12/01/14 and 12/02/14

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

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

Surrogato

			Surrogate
<u>Sample ID</u> Laboratory ID	Diesel Range (C ₁₀ -C ₂₅)	Motor Oil Range (C25-C36)	<u>(% Recovery)</u> (Limit 56-165)
PC-3 8-12 411467-01	130	<250	95
PC-3 12-16 411467-02	70	<250	104
PC-42 8-12 411467-03	910	<250	100
PC-42 12-16 411467-04	2,000	<250	95
PC-41 8-12 411467-05	3,300	<250	110
PC-41 12-16 411467-06	18,000	750 x	97
PC-40 8-12 411467-07	<50	<250	97
PC-40 12-16 411467-08	<50	<250	105
PC-4 8-12 411467-09	370 x	<250	92
PC-4 12-16 411467-10	<50	<250	83
PC-16 7-11 411467-11	220 x	<250	84
PC-16 11-15 411467-12	<50	<250	83

ENVIRONMENTAL CHEMISTS

Date of Report: 12/05/14 Date Received: 11/26/14 Project: North Edge KV030772B, F&BI 411467 Date Extracted: 12/01/14 Date Analyzed: 12/01/14 and 12/02/14

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

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

Surrogato

<u>Sample ID</u> Laboratory ID	Diesel Range (C10-C25)	Motor Oil Range (C25-C36)	Surrogate (% Recovery) (Limit 56-165)
PC-44 8-12 411467-13	<50	<250	110
PC-44 12-16 411467-14	<50	<250	110
PC-43 8-12 411467-15	1,300	<250	112
PC-43 12-16 411467-16	<50	<250	111
PC-45 0-4 411467-17	<50	<250	113
PC-45 4-8 411467-18	<50	<250	107
Method Blank 04-2408 MB	<50	<250	85

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	PC-4 8-12 11/26/14 12/01/14 12/01/14 Soil mg/kg (ppm) Dry Weight	Client: Project: Lab ID: Data File: Instrument: Operator:	Associated Earth Sciences North Edge KV030772B, F&BI 411467 411467-09 411467-09.014 ICPMS1 AP
Internal Standard: Holmium	% Recovery: 97	Lower Limit: 60	Upper Limit: 125
Analyte:	Concentration mg/kg (ppm)		
Lead	1.36		

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	PC-44 8-12 11/26/14 12/01/14 12/01/14 Soil mg/kg (ppm) Dry Weight	Client: Project: Lab ID: Data File: Instrument: Operator:	Associated Earth Sciences North Edge KV030772B, F&BI 411467 411467-13 411467-13.015 ICPMS1 AP
Internal Standard: Holmium	% Recovery: 96	Lower Limit: 60	Upper Limit: 125
Analyte:	Concentration mg/kg (ppm)		
Lead	1.26		

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Method Blank NA 12/01/14 12/01/14 Soil mg/kg (ppm) Dry Weight	Client: Project: Lab ID: Data File: Instrument: Operator:	Associated Earth Sciences North Edge KV030772B, F&BI 411467 I4-764 mb I4-764 mb.008 ICPMS1 AP
Internal Standard: Holmium	% Recovery: 99	Lower Limit: 60	Upper Limit: 125
Analyte:	Concentration mg/kg (ppm)		
Lead	<1		

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

5		1	5	
Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	PC-4 8-12 11/26/14 12/01/14 12/01/14 Soil mg/kg (ppm)) Dry Weight	Client: Project: Lab ID: Data File: Instrument: Operator:	Associated Earth Sciences North Edge KV030772B, F&BI 411467 411467-09 1/5 120108.D GCMS6 ya
Surrogates: Anthracene-d10 Benzo(a)anthracene-	-d12	% Recovery: 87 100	Lower Limit: 50 35	Upper Limit: 150 159
		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)fluoranthen	e	< 0.01		
Benzo(k)fluoranther	ie	< 0.01		
Indeno(1,2,3-cd)pyre	ene	< 0.01		
Dibenz(a,h)anthrace	ene	< 0.01		
Benzo(g,h,i)perylene	•	< 0.01		

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

0		1 5		
Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	PC-44 8-12 11/26/14 12/01/14 12/01/14 Soil mg/kg (ppm)) Dry Weight	Client: Project: Lab ID: Data File: Instrument: Operator:	Associated Earth Sciences North Edge KV030772B, F&BI 411467 411467-13 1/5 120109.D GCMS6 ya
Surrogates: Anthracene-d10 Benzo(a)anthracene	-d12	% Recovery: 81 107 Concentration	Lower Limit: 50 35	Upper Limit: 150 159
Compounds:		mg/kg (ppm)		
Naphthalene		0.031		
Acenaphthylene		< 0.01		
Acenaphthene		< 0.01		
Fluorene		0.019		
Phenanthrene		0.032		
Anthracene		< 0.01		
Fluoranthene		< 0.01		
Pyrene		< 0.01		
Benz(a)anthracene		< 0.01		
Chrysene		< 0.01		
Benzo(a)pyrene		< 0.01		
Benzo(b)fluoranthen	e	< 0.01		
Benzo(k)fluoranther	ne	< 0.01		
Indeno(1,2,3-cd)pyre	ene	< 0.01		
Dibenz(a,h)anthrace	ene	< 0.01		
Benzo(g,h,i)perylene	<u>)</u>	< 0.01		

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

5	1 5		
Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Method Blank Not Applicable 12/01/14 12/01/14 Soil mg/kg (ppm) Dry Weight	Client: Project: Lab ID: Data File: Instrument: Operator:	Associated Earth Sciences North Edge KV030772B, F&BI 411467 04-2409 mb 1/5 120107.D GCMS6 ya
Surrogates: Anthracene-d10 Benzo(a)anthracene		Lower Limit: 50 35	Upper Limit: 150 159
Compounds:	Concentration mg/kg (ppm)		
F			
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)fluoranthen	e <0.01		
Benzo(k)fluoranther	ne <0.01		
Indeno(1,2,3-cd)pyre	ene <0.01		
Dibenz(a,h)anthrace	ene <0.01		
Benzo(g,h,i)perylene	< 0.01		

ENVIRONMENTAL CHEMISTS

Date of Report: 12/05/14 Date Received: 11/26/14 Project: North Edge KV030772B, F&BI 411467

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: 411466-06 (Duplicate)

		Sample	Duplicate	
		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	0.021	nm
Ethylbenzene	mg/kg (ppm)	< 0.02	< 0.02	nm
Xylenes	mg/kg (ppm)	< 0.06	< 0.06	nm
Gasoline	mg/kg (ppm)	<2	8	nm

Laboratory Code: Laboratory Control Sample

			Percent	
		Spike	Recovery	Acceptance
Analyte	Reporting Units	Level	LCS	Criteria
Benzene	mg/kg (ppm)	0.5	78	66-121
Toluene	mg/kg (ppm)	0.5	76	72-128
Ethylbenzene	mg/kg (ppm)	0.5	80	69-132
Xylenes	mg/kg (ppm)	1.5	77	69-131
Gasoline	mg/kg (ppm)	20	85	61-153

ENVIRONMENTAL CHEMISTS

Date of Report: 12/05/14 Date Received: 11/26/14 Project: North Edge KV030772B, F&BI 411467

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	83	85	66-121	2
Toluene	mg/kg (ppm)	0.5	84	83	72-128	1
Ethylbenzene	mg/kg (ppm)	0.5	83	82	69-132	1
Xylenes	mg/kg (ppm)	1.5	81	80	69-131	1
Gasoline	mg/kg (ppm)	20	90	90	61-153	0

ENVIRONMENTAL CHEMISTS

Date of Report: 12/05/14 Date Received: 11/26/14 Project: North Edge KV030772B, F&BI 411467

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

Laboratory Code: 411467-07 (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	86	89	63-146	3
Laboratory Code: L	aboratory Control	Sample					
			Percent				
	Reporting	Spike	Recovery	Accep	tance		
Analyte	Units	Level	LCS	Crite	eria		
Diesel Extended	mg/kg (ppm)	5,000	86	79-1	44		

ENVIRONMENTAL CHEMISTS

Date of Report: 12/05/14 Date Received: 11/26/14 Project: North Edge KV030772B, F&BI 411467

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

Laboratory Code:	411466-07 (Ma Reporting	trix Spike) Spike	Sample Result	Percent Recovery	Percent Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet wt)	MS	MSD	Criteria	(Limit 20)
Lead	mg/kg (ppm)	50	10.3	98 b	99 b	59-148	1 b
Laboratory Code:	Laboratory Con	trol Samp	le				

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Lead	mg/kg (ppm)	50	103	80-120

ENVIRONMENTAL CHEMISTS

Date of Report: 12/05/14 Date Received: 11/26/14 Project: North Edge KV030772B, F&BI 411467

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

Laboratory Code: 411467-09 1/5 (Matrix Spike)

o no (mai in Sp	IKC)			
		Sample	Percent	
Reporting	Spike	Result	Recovery	Acceptance
Units	Level	(Wet wt)	MS	Criteria
mg/kg (ppm)	0.17	< 0.01	100	44-129
mg/kg (ppm)	0.17	< 0.01	93	52-121
mg/kg (ppm)	0.17	< 0.01	91	51-123
mg/kg (ppm)	0.17	< 0.01	94	37-137
mg/kg (ppm)	0.17	< 0.01	91	45-124
mg/kg (ppm)	0.17	< 0.01	90	32-124
mg/kg (ppm)	0.17	< 0.01	96	50-125
mg/kg (ppm)	0.17	< 0.01	94	41-135
mg/kg (ppm)	0.17	< 0.01	96	23-144
mg/kg (ppm)	0.17	< 0.01	94	45-122
mg/kg (ppm)	0.17	< 0.01	132	31-144
mg/kg (ppm)	0.17	< 0.01	130	45-130
mg/kg (ppm)	0.17	< 0.01	128	39-128
mg/kg (ppm)	0.17	< 0.01	129	28-146
mg/kg (ppm)	0.17	< 0.01	126	46-129
mg/kg (ppm)	0.17	< 0.01	125	37-133
	Reporting Units mg/kg (ppm) mg/kg (ppm)	Units Level mg/kg (ppm) 0.17 mg/kg (ppm) 0.17	Reporting Units Spike Level Sample Result mg/kg (ppm) 0.17 <0.01	Reporting Units Spike Level Sample Result Percent Recovery mg/kg (ppm) 0.17 <0.01

Laboratory Code: Laboratory Control Sample 1/5

Laboratory Coue. Laborat	ony control Sump		Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Naphthalene	mg/kg (ppm)	0.17	87	88	58-121	1
Acenaphthylene	mg/kg (ppm)	0.17	90	92	54-121	2
Acenaphthene	mg/kg (ppm)	0.17	87	89	54-123	2
Fluorene	mg/kg (ppm)	0.17	91	93	56-127	2
Phenanthrene	mg/kg (ppm)	0.17	89	92	55-122	3
Anthracene	mg/kg (ppm)	0.17	86	89	50-120	3
Fluoranthene	mg/kg (ppm)	0.17	92	94	54-129	2
Pyrene	mg/kg (ppm)	0.17	92	93	53-127	1
Benz(a)anthracene	mg/kg (ppm)	0.17	95	94	51-115	1
Chrysene	mg/kg (ppm)	0.17	92	95	55-129	3
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	127 vo	135 vo	56-123	6
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	133 vo	129	54-131	3
Benzo(a)pyrene	mg/kg (ppm)	0.17	122 vo	125 vo	51-118	2
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	133	131	49-148	2
Dibenz(a, h)anthracene	mg/kg (ppm)	0.17	130	132	50-141	2
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	127	130	52-131	2

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.

 ${\bf b}$ - 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.

 $\ensuremath{\mathsf{ca}}$ - 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.

 $\ensuremath{\text{ip}}$ - 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.

 ${\rm J}$ - 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.

	411467				SAMPLE CHAIN OF CUSTODY	CHAIN O	F CU	STO	DY		x	ME	1/0	10/11	7	·*.	5571
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L									AN	ANALYSES REQUESTED	ES RE	QUEST	ED				
	Sample ID	Lab	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel TPH-Gasoline	BTEX by 8021B	200C8 p3 8570 VOC8 b38260	SAH	HAG	a j				Notes	
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	19611				SAMPLE CHAIN OF CUSTODY	CHAIN (DF CUS	TODY		ME	= 11/26	26/14		222
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	Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel TPH-Gasoline	VOCs by 8021B	HES SAOC ² pà 8510	901 H400			Z	Notes
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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

December 2, 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 December 1, 2014 from the North Edge KV030772B, F&BI 412011 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 AE11202R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 1, 2014 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 412011 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
412011 -01	PC-29 16-20
412011 -02	PC-29 20-24
412011 -03	PC-32 16-20
412011 -04	PC-32 20-24
412011 -05	PC-46 0-4
412011 -06	PC-46 4-8
412011 -07	PC-36 4-8
412011 -08	PC-36 8-12
412011 -09	PC-39 4-8
412011 -10	PC-398-12

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/02/14 Date Received: 12/01/14 Project: North Edge KV030772B, F&BI 412011 Date Extracted: 12/01/14 Date Analyzed: 12/01/14 and 12/02/14

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery)</u> (Limit 50-150)
PC-29 16-20 412011-01 1/5	<0.02 j	1.3	4.6	5.5	740	104
PC-29 20-24 412011-02	<0.02	<0.02	< 0.02	<0.06	12	92
PC-32 16-20 412011-03 1/10	<0.2	0.90	5.4	9.1	790	100
PC-32 20-24 412011-04 1/5	<0.02 j	0.88	5.1	8.6	710	108
PC-46 0-4 412011-05	<0.02	<0.02	< 0.02	< 0.06	<2	92
PC-46 4-8 412011-06	<0.02	<0.02	< 0.02	<0.06	<2	92
PC-36 4-8 412011-07	<0.02	<0.02	< 0.02	<0.06	<2	92
PC-36 8-12 412011-08	<0.02	<0.02	< 0.02	<0.06	<2	92
PC-39 4-8 412011-09	<0.02	<0.02	< 0.02	<0.06	4.5	89
PC-39 8-12 412011-10 1/10	<0.2	2.9	16	12	2,500	113
Method Blank 04-2394 MB	< 0.02	< 0.02	< 0.02	< 0.06	<2	76

ENVIRONMENTAL CHEMISTS

Date of Report: 12/02/14 Date Received: 12/01/14 Project: North Edge KV030772B, F&BI 412011 Date Extracted: 12/01/14 Date Analyzed: 12/02/14

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

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

Surrogato

			Surrogate
<u>Sample ID</u> Laboratory ID	Diesel Range (C10-C25)	Motor Oil Range (C25-C36)	<u>(% Recovery)</u> (Limit 56-165)
	(C10-C25)	$(C_{25}-C_{36})$	(LIIIII 50-105)
PC-29 16-20 412011-01	3,700	<250	98
PC-29 20-24 412011-02	320	<250	101
PC-32 16-20 412011-03	490	<250	98
PC-32 20-24 412011-04	510	<250	98
PC-46 0-4 412011-05	<50	<250	111
PC-46 4-8 412011-06	<50	<250	103
PC-36 4-8 412011-07	<50	<250	105
PC-36 8-12 412011-08	<50	<250	92
PC-39 4-8 412011-09	<50	<250	102
PC-39 8-12 412011-10	2,300	<250	101
Method Blank ^{04-2411 MB}	<50	<250	102

ENVIRONMENTAL CHEMISTS

Date of Report: 12/02/14 Date Received: 12/01/14 Project: North Edge KV030772B, F&BI 412011

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	83	85	66-121	2
Toluene	mg/kg (ppm)	0.5	84	83	72-128	1
Ethylbenzene	mg/kg (ppm)	0.5	83	82	69-132	1
Xylenes	mg/kg (ppm)	1.5	81	80	69-131	1
Gasoline	mg/kg (ppm)	20	90	90	61-153	0

ENVIRONMENTAL CHEMISTS

Date of Report: 12/02/14 Date Received: 12/01/14 Project: North Edge KV030772B, F&BI 412011

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

Laboratory Code: 412011-05 (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 (ppm)	5,000	<50	100	99	63-146	1
Laboratory Code: L	aboratory Control	Sample					
			Percent				
	Reporting	Spike	Recovery	Accep	tance		
Analyte	Units	Level	LCS	Crite	eria		
Diesel Extended	mg/kg (ppm)	5,000	99	79-1	44		

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.

 ${\bf b}$ - 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.

 ${\rm J}$ - 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.

		SAMPL	LE CHAIN OF CUSTODY	NE 12	101/14 M2
	Jar A Alat		SAMPLERS (signature)		Page #
	Hir 1	2	PROJECT NAME/NO.	PO#	□ Standard (2 Weeks)
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	-Kehand, wet	98033	REMARKS		SAMPLE DISPOSAL Dispose after 30 days Return samples Will call with instructions
			VNA T	ANALYSES DEOLESTED	
Sample ID	Lab Date ID Sampled	Time Sampled Sample Type	SVOCs by 8270 Containes TPH-Gasoline TPH-Diesel TPH-Diesel SVOCs by 8260	SनH	Notes
22-29 16-20	01 E 1 4 14	1010 201	V V XXX		
P2-29 20-24	r a 1				
PC-32 16-20		1023)			
22-32 20-24	+ or (1028			
P2-46 0-4	02	(252)			
2-+6 4-8	0%	1307			
P2-36 4-8	120	(3(6	XXX V		
92-36 8-12	Ro	1326	XXX		
PC-39 4-8		(335)			
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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

December 5, 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 December 4, 2014 from the North Edge KV030772B, F&BI 412091 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 AE11205R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 4, 2014 by Friedman & Bruya, Inc. from the Associated Earth Sciences North Edge KV030772B, F&BI 412091 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Associated Earth Sciences
412091 -01	PC-18 16-20
412091 -02	PC-18 20-24
412091 -03	PC-33 16-20
412091 -04	PC-33 20-24
412091 -05	PC-47 0-4
412091 -06	PC-47 4-8
412091 -07	PC-51 0-4
412091 -08	PC-51 4-8
412091 -09	PC-50 0-4
412091 -10	PC-50 4-8
412091 -11	PC-52 0-4
412091 -12	PC-52 4-8
412091 -13	PC-48 0-4
412091 -14	PC-48 4-8
412091 -15	PC-53 0-4
412091 -16	PC-53 4-8
412091 -17	PC-54 0-4
412091 -18	PC-54 4-8

The 8021B ethylbenzene, xylenes, and gasoline concentrations exceeded the calibration range of the instrument in sample PC-51 4-8. The data were flagged accordingly.

All other quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/05/14 Date Received: 12/04/14 Project: North Edge KV030772B, F&BI 412091 Date Extracted: 12/04/14 Date Analyzed: 12/04/14 and 12/05/14

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery)</u> (Limit 50-132)
PC-18 16-20 412091-01	< 0.02	< 0.02	< 0.02	< 0.06	<2	78
PC-18 20-24 412091-02	< 0.02	< 0.02	< 0.02	< 0.06	<2	80
PC-33 16-20 412091-03	< 0.02	< 0.02	< 0.02	< 0.06	<2	78
PC-33 20-24 412091-04	< 0.02	< 0.02	< 0.02	0.35	74	93
PC-47 0-4 412091-05	< 0.02	< 0.02	< 0.02	< 0.06	<2	79
PC-47 4-8 412091-06	< 0.02	< 0.02	< 0.02	< 0.06	<2	77
PC-51 0-4 412091-07 1/5	0.05 j	0.63	1.6	14	290	97
PC-51 4-8 412091-08 1/10	2.9	24	40 ve	220 ve	3,000 ve	ip
PC-50 0-4 412091-09	< 0.02	< 0.02	<0.02	< 0.06	<2	82
PC-50 4-8 412091-10	< 0.02	0.023	< 0.02	<0.06	15	78
PC-52 0-4 412091-11	< 0.02	< 0.02	<0.02	<0.06	<2	81

ENVIRONMENTAL CHEMISTS

Date of Report: 12/05/14 Date Received: 12/04/14 Project: North Edge KV030772B, F&BI 412091 Date Extracted: 12/04/14 Date Analyzed: 12/04/14 and 12/05/14

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery)</u> (Limit 50-132)
PC-52 4-8 412091-12 1/5	<0.02 j	10	5.4	12	1,200	123
PC-48 0-4 412091-13	< 0.02	< 0.02	< 0.02	<0.06	<2	79
PC-48 4-8 412091-14 1/5	<0.02 j	0.22	0.89	5.8	170	89
PC-53 0-4 412091-15	< 0.02	< 0.02	<0.02	< 0.06	<2	79
PC-53 4-8 412091-16	< 0.02	< 0.02	<0.02	< 0.06	<2	75
PC-54 0-4 412091-17	< 0.02	< 0.02	<0.02	< 0.06	<2	79
PC-54 4-8 412091-18	< 0.02	< 0.02	< 0.02	<0.06	<2	79
Method Blank 04-2399 MB	< 0.02	<0.02	< 0.02	<0.06	<2	83

ENVIRONMENTAL CHEMISTS

Date of Report: 12/05/14 Date Received: 12/04/14 Project: North Edge KV030772B, F&BI 412091 Date Extracted: 12/04/14 Date Analyzed: 12/04/14 and 12/05/14

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

<u>Sample ID</u> Laboratory ID	Diesel Range (C10-C25)	Motor Oil Range (C25-C36)	Surrogate (% Recovery) (Limit 48-168)
PC-18 16-20 412091-01	<50	<250	102
PC-18 20-24 412091-02	<50	<250	111
PC-33 16-20 412091-03	<50	<250	108
PC-33 20-24 412091-04	340	<250	111
PC-47 0-4 412091-05	<50	<250	114
PC-47 4-8 412091-06	<50	<250	104
PC-51 0-4 412091-07	290 x	<250	108
PC-51 4-8 412091-08	1,300 x	<250	102
PC-50 0-4 412091-09	<50	<250	99
PC-50 4-8 412091-10	<50	<250	103
PC-52 0-4 412091-11	<50	<250	103

ENVIRONMENTAL CHEMISTS

Date of Report: 12/05/14 Date Received: 12/04/14 Project: North Edge KV030772B, F&BI 412091 Date Extracted: 12/04/14 Date Analyzed: 12/04/14 and 12/05/14

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

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

Surrogato

<u>Sample ID</u> Laboratory ID	Diesel Range (C ₁₀ -C ₂₅)	Motor Oil Range (C ₂₅ -C ₃₆)	Surrogate <u>(% Recovery)</u> (Limit 48-168)
PC-52 4-8 412091-12	630 x	<250	103
PC-48 0-4 412091-13	<50	<250	103
PC-48 4-8 412091-14	310 x	<250	111
PC-53 0-4 412091-15	<50	<250	113
PC-53 4-8 412091-16	<50	<250	113
PC-54 0-4 412091-17	<50	<250	106
PC-54 4-8 412091-18	<50	<250	114
Method Blank 04-2442 MB	<50	<250	115

ENVIRONMENTAL CHEMISTS

Date of Report: 12/05/14 Date Received: 12/04/14 Project: North Edge KV030772B, F&BI 412091

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: 412042-23 (Duplicate)

112012 20 (Duplica	,		
		Duplicate	
	Sample Result	Result	RPD
Reporting Units	(Wet Wt)	(Wet Wt)	(Limit 20)
mg/kg (ppm)	< 0.02	< 0.02	nm
mg/kg (ppm)	< 0.02	< 0.02	nm
mg/kg (ppm)	< 0.02	< 0.02	nm
mg/kg (ppm)	< 0.06	< 0.06	nm
mg/kg (ppm)	<2	<2	nm
	Reporting Units mg/kg (ppm) mg/kg (ppm) mg/kg (ppm) mg/kg (ppm)	Reporting Units (Wet Wt) mg/kg (ppm) <0.02	DuplicateSample ResultDuplicateReporting Units(Wet Wt)mg/kg (ppm)<0.02

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	87	72-128		
Ethylbenzene	mg/kg (ppm)	0.5	87	69-132		
Xylenes	mg/kg (ppm)	1.5	84	69-131		
Gasoline	mg/kg (ppm)	20	90	61-153		

ENVIRONMENTAL CHEMISTS

Date of Report: 12/05/14 Date Received: 12/04/14 Project: North Edge KV030772B, F&BI 412091

mg/kg (ppm)

5,000

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

Laboratory Code: 412091-01 (Matrix Spike)

Diesel Extended

			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	102	98	73-135	4
Laboratory Code: Laboratory Control Sample							
			Percent				
	Reporting Units	Spike	Recovery	Acceptance	ce		
Analyte		Level	LCS	Criteria			

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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.

 ${\bf b}$ - 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.

 $\ensuremath{\mathsf{ca}}$ - 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.

 ${\rm ip}$ - 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.

 ${\rm J}$ - 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.