# ATTACHMENT A LABORATORY ANALYTICAL REPORTS

Friedman & Bruya, Inc. #605227

#### 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

June 14, 2016

Tim Brown, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Mr. Brown:

Included are the results from the testing of material submitted on May 12, 2016 from the TOC\_01-600\_20160512 WORFDB8, F&BI 605227 project. There are 19 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Jessica Brown, Courtney Schaumberg, Jennifer Cyr, Jonathan Loeffler, Pete Kingston SOU0614R.DOC

#### ENVIRONMENTAL CHEMISTS

### CASE NARRATIVE

This case narrative encompasses samples received on May 12, 2016 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC\_01-600\_20160512 WORFDB8, F&BI 605227 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
605227 -01	01MW54-20160512
605227 -02	01MW65-20160512
605227 -03	01MW77-20160512
605227 -04	01MW64-20160512
605227 -05	01MW60-20160512

Sample 01MW60-20160512 was sent to Aquatic Research for sulfate, nitrate, nitrite, total phosphorus, hardness, alkalinity, TKN, and sulfide analyses. In addition, the sample was sent to Amtest for ferrous iron analysis. The reports are enclosed.

All quality control requirements were acceptable.

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16 Date Received: 05/12/16 Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605227 Date Extracted: 05/13/16 Date Analyzed: 05/13/16

#### RESULTS FROM THE ANALYSIS OF WATER 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 52-124)
01MW54-20160512 605227-01	<1	<1	<1	<3	<100	96
01MW65-20160512 605227-02	<1	<1	<1	<3	<100	96
01MW77-20160512 605227-03	<1	<1	<1	<3	<100	95
01MW64-20160512 605227-04	<1	<1	<1	<3	<100	97
01MW60-20160512 605227-05	<1	<1	<1	<3	<100	99
Method Blank 06-947 MB	<1	<1	<1	<3	<100	94

Results Reported as ug/L (ppb)

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16 Date Received: 05/12/16 Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605227 Date Extracted: 05/16/16 Date Analyzed: 05/16/16

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

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	Diesel Range (C10-C25)	Motor Oil Range (C25-C36)	Surrogate <u>(% Recovery)</u> (Limit 41-152)
01MW54-20160512 605227-01	<50	<250	115
01MW65-20160512 605227-02	<50	<250	106
01MW77-20160512 605227-03	55 x	<250	107
01MW64-20160512 605227-04	100 x	<250	113
01MW60-20160512 605227-05	<50	<250	102
Method Blank 06-981 MB	<50	<250	104

## ENVIRONMENTAL CHEMISTS

# Analysis For Total Metals By EPA Method 200.8

Client ID:	01MW60-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512 WORFDB8
Date Extracted:	05/23/16	Lab ID:	605227-05
Date Analyzed:	05/24/16	Data File:	605227-05.132
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP
	Concentration		
Analyte:	ug/L (ppb)		
Iron	3,580		
Manganese	1,120		

## ENVIRONMENTAL CHEMISTS

# Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	TOC_01-600_20160512 WORFDB8
Date Extracted:	05/23/16	Lab ID:	I6-325 mb
Date Analyzed:	05/23/16	Data File:	I6-325 mb.069
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP
	Concentration		
Analyte:	ug/L (ppb)		
Iron	<50		
Manganese	<1		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW54-20 05/12/16 05/16/16 05/16/16 Water ug/L (ppb)	0160512	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160512 WORFDB8 605227-01 051627.D GCMS4 JS
Surrogates: 1,2-Dichloroethane Toluene-d8 4-Bromofluorobenz		% Recovery: 100 104 103	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroet 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichlor oetha Trichloroethene Tetrachloroethene	ethene ene (EDC)	<0.2 <1 <1 <5 <1 <1 <1 <1 <1 <1 <1 <1 <1		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW65-20 05/12/16 05/16/16 05/16/16 Water ug/L (ppb)	0160512	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160512 WORFDB8 605227-02 051628.D GCMS4 JS
Surrogates: 1,2-Dichloroethane Toluene-d8 4-Bromofluorobenz		% Recovery: 104 106 103	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ethene ene (EDC)	<0.2 <1 <1 <5 <1 <1 <1 <1 <1 <1 <1 <1		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW77-20 05/12/16 05/16/16 05/16/16 Water ug/L (ppb)	0160512	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160512 WORFDB8 605227-03 051629.D GCMS4 JS
Surrogates: 1,2-Dichloroethane Toluene-d8 4-Bromofluorobenz		% Recovery: 104 105 102	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ethene ene (EDC)	<0.2 <1 <1 <5 <1 <1 <1 <1 <1 <1 <1 <1		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW64-20 05/12/16 05/16/16 05/16/16 Water ug/L (ppb)	0160512	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160512 WORFDB8 605227-04 051630.D GCMS4 JS
Surrogates: 1,2-Dichloroethane Toluene-d8 4-Bromofluorobenze		% Recovery: 102 106 103	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ethene ene (EDC)	<0.2 <1 <1 <5 <1 <1 <1 <1 <1 <1 <1 <1		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW60-20 05/12/16 05/16/16 05/16/16 Water ug/L (ppb)	0160512	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160512 WORFDB8 605227-05 051631.D GCMS4 JS
Surrogates: 1,2-Dichloroethane Toluene-d8 4-Bromofluorobenz		% Recovery: 102 106 103	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	e ethene ene (EDC)	<0.2 <1 <1 <5 <1 <1 <1 <1 <1 <1 1.5 <1		

## ENVIRONMENTAL CHEMISTS

Surrogates:% Recovery:LowerUpper1,2-Dichloroethane-d410157121Toluene-d8106631274-Bromofluorobenzen e10260133ConcentrationCompounds:ug/L (ppb)Vinyl chloride<0.2Chloroethane<11,1-Dichloroethene<11,1-Dichloroethene<11,1-Dichloroethene<11,2-Dichloroethene<11,2-Dichloroethene<11,2-Dichloroethene<11,2-Dichloroethene<11,2-Dichloroethene<11,1-Trichloroethene<11,1-Trichloroethene<11,1-Trichloroethene<1Trichloroethene<11,1-Trichloroethene<11,1-Trichloroethene<11,1-Trichloroethene<1Trichloroethene<11,1-Trichloroethene<1Trichloroethene<1	Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Method Blan Not Applica 05/16/16 05/16/16 Water ug/L (ppb)		Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160512 WORFDB8 06-967 mb 051626.D GCMS4 JS
Toluene-d8106631274-Bromofluorobenzen e10260133ConcentrationCompounds:ug/L (ppb)Vinyl chloride<0.2	Surrogates:		% Recovery:		
4-Bromofluorobenzen e10260133Concentration ug/L (ppb)Vinyl chloride<0.2	1,2-Dichloroethane	-d4	101	57	121
ConcentrationCompounds:ug/L (ppb)Vinyl chloride<0.2	Toluene-d8		106	63	127
Compounds:ug/L (ppb)Vinyl chloride<0.2	4-Bromofluorobenze	en e	102	60	133
Vinyl chloride<0.2Chloroethane<1			Concentration		
Chloroethane<11,1-Dichloroethene<1	Compounds:		ug/L (ppb)		
1,1-Dichloroethene<1Methylene chloride<5			<0.2		
Methylene chloride<5trans-1,2-Dichloroethene<1	Chloroethane		<1		
trans-1,2-Dichloroethene<11,1-Dichloroethane<1	1,1-Dichloroethene		<1		
1,1-Dichloroethane<1	Methylene chloride	<u>)</u>	<5		
cis-1,2-Dichloroethene<11,2-Dichloroethane (EDC)<1	trans-1,2-Dichloroe	ethene	<1		
1,2-Dichloroethane (EDC)<1	1,1-Dichloroethane		<1		
1,1,1-Trichloroethane<1	cis-1,2-Dichloroeth	ene	<1		
Trichloroethene <1	1,2-Dichloroethane	(EDC)	<1		
	1,1,1-Trichloroetha	ne	<1		
Tetrachloroethene <1	Trichloroethene		<1		
	Tetrachloroethene		<1		

### ENVIRONMENTAL CHEMISTS

# Analysis For Dissolved Gasses By RSK 175

Ethene

Client Sample ID:	01MW60-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512 WORFDB8
Date Extracted:	05/23/16	Lab ID:	605227-05
Date Analyzed:	05/23/16	Data File:	027F2701.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS
	Concentration		
Compounds:	ug/L (ppb)		
Methane	<5		
Ethane	<10		

<10

### ENVIRONMENTAL CHEMISTS

# Analysis For Dissolved Gasses By RSK 175

Ethene

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	TOC_01-600_20160512 WORFDB8
Date Extracted:	05/23/16	Lab ID:	06-1023 mb
Date Analyzed:	05/23/16	Data File:	014F1401.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS
	Concentration		
Compounds:	ug/L (ppb)		
Methane	<5		
Ethane	<10		

<10

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16 Date Received: 05/12/16 Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605227

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

Laboratory Code:	605227-01 (Duplica	ate)		
	Reporting	Sample	Duplicate	RPD
Analyte	Units	Result	Result	(Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/L (ppb)	50	96	65-118
Toluene	ug/L (ppb)	50	101	72-122
Ethylbenzene	ug/L (ppb)	50	101	73-126
Xylenes	ug/L (ppb)	150	99	74-118
Gasoline	ug/L (ppb)	1,000	90	69-134

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16 Date Received: 05/12/16 Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605227

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

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Diesel Extended	ug/L (ppb)	2,500	104	104	63-142	0

#### ENVIRONMENTAL CHEMISTS

#### Date of Report: 06/14/16 Date Received: 05/12/16 Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605227

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

Laboratory Cod	e: 605188-01 x	:10 (Matri	x Spike)				
				Percent	Percent		
	Reporting	Spike	Sample	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	Result	MS	MSD	Criteria	(Limit 20)
Iron	ug/L (ppb)	100	766	152 b	108 b	70-130	34 b
Manganese	ug/L (ppb)	20	9,890	274 b	223 b	70-130	21 b

Laboratory Code: 605188-01 x10 (Matrix Spike)

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Iron	ug/L (ppb)	100	103	85-115
Manganese	ug/L (ppb)	20	106	85-115

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16 Date Received: 05/12/16 Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605227

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

Laboratory Code: 605227-02 (Matrix Spike)

, , , , , , , , , , , , , , , , , , ,	Reporting	Spike	Sample	Percent Recovery	Acceptance
Analyte	Units	Level	Result	MS	Criteria
Vinyl chloride	ug/L (ppb)	50	< 0.2	95	36-166
Chloroethane	ug/L (ppb)	50	<1	111	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	93	60-136
Methylene chloride	ug/L (ppb)	50	<5	105	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	96	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	98	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	92	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	96	60-146
Trichloroethene	ug/L (ppb)	50	<1	97	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	89	10-226

	r		Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Vinyl chloride	ug/L (ppb)	50	98	102	50-154	4
Chloroethane	ug/L (ppb)	50	114	119	58-146	4
1,1-Dichloroethen e	ug/L (ppb)	50	98	102	67-136	4
Methylene chloride	ug/L (ppb)	50	120	124	39-148	3
trans-1,2-Dichloroethene	ug/L (ppb)	50	103	108	68-128	5
1,1-Dichloroethane	ug/L (ppb)	50	103	106	79-121	3
cis-1,2-Dichloroethene	ug/L (ppb)	50	107	112	80-123	5
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	95	99	73-132	4
1,1,1-Trichloroethane	ug/L (ppb)	50	102	106	83-130	4
Trichloroethene	ug/L (ppb)	50	99	104	80-120	5
Tetrachloroethene	ug/L (ppb)	50	94	95	76-121	1

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 06/14/16 Date Received: 05/12/16 Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605227

#### **QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF** WATER SAMPLES FOR DISSOLVED GASSES **USING METHOD RSK 175**

<10

nm

Laboratory Code: 605344-03 (Duplicate) **Relative Percent** Reporting Sample Duplicate Difference Units Result Result Analyte (Limit 20) Methane ug/L (ppb) 210 210 0 Ethane ug/L (ppb) <10 <10 nm ug/L (ppb)

<10

Laboratory Code: Laboratory Control Sample

Ethene

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Methane	ug/L (ppb)	59	81	81	50-150	0
Ethane	ug/L (ppb)	110	75	74	50-150	1
Ethene	ug/L (ppb)	102	108	99	50-150	9

#### 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.

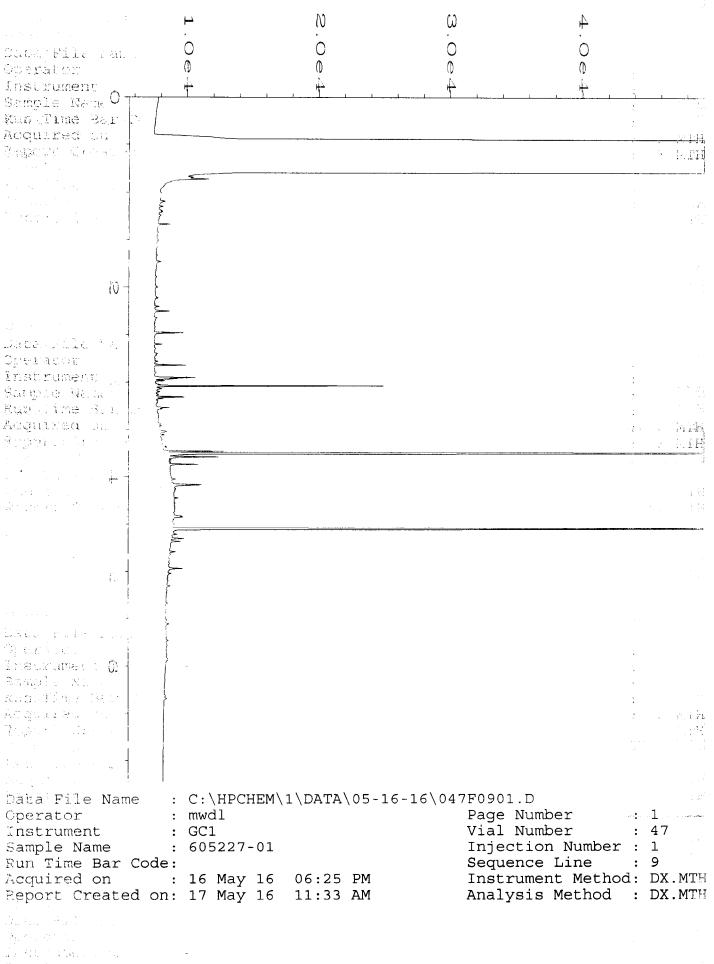
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.



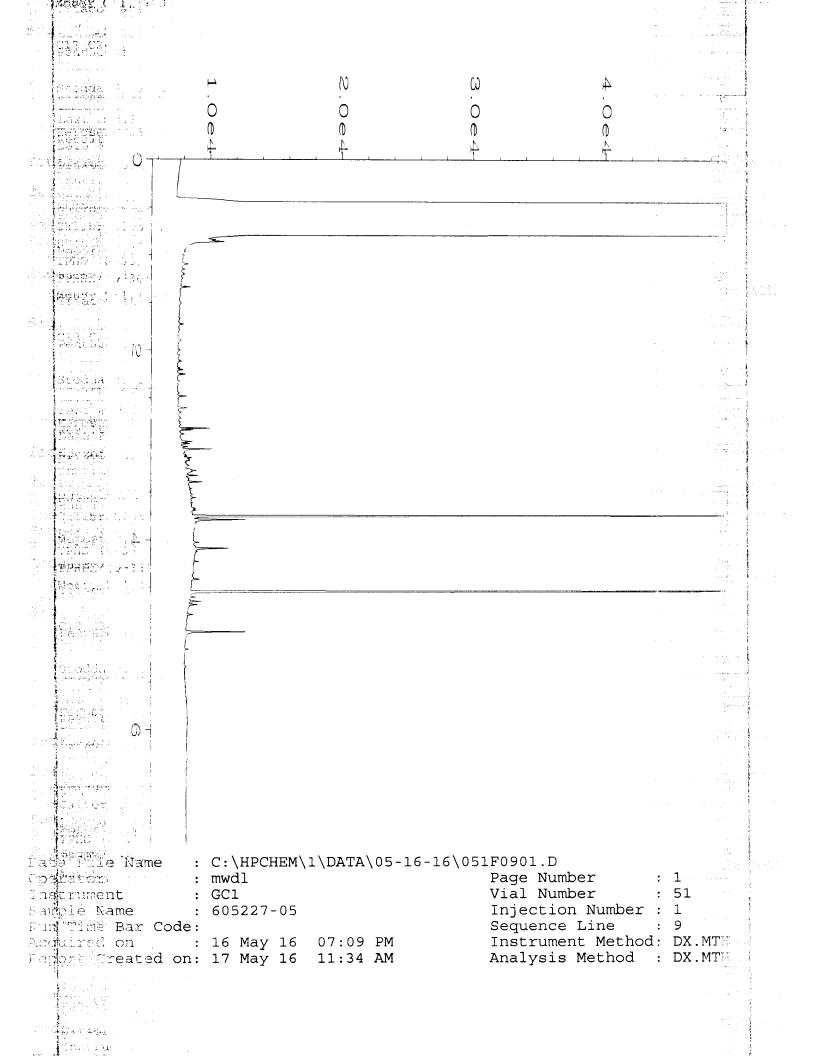
Rug Hine Ma

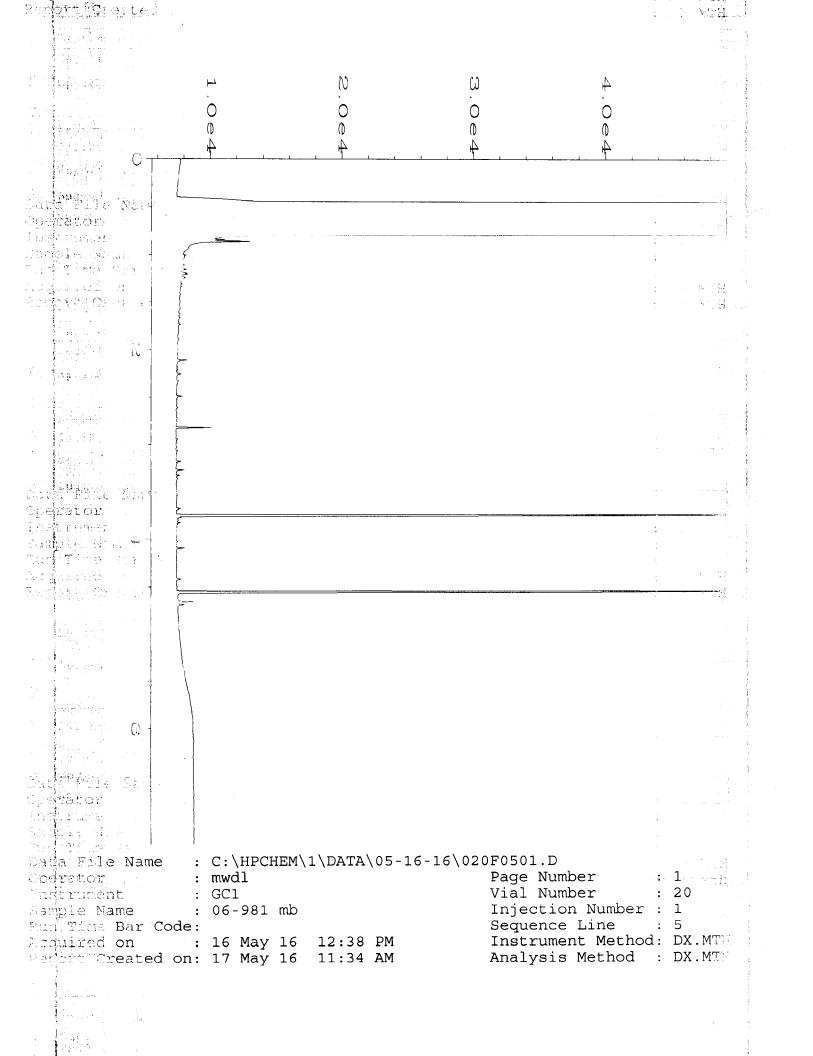
#### 한 유민이는 영화 1.14 N ω $\vdash$ entre de la composition de la Instrume... 0 0 0 0 Sample brase Ô (0 (Ran Time Sar (). 4 4 4 4 Angutued 1.0 T Report Grante · 4194 - Area and a second $\mathbb{N}$ Park and the training وردا وبار كمامرو Energia de co Cample ive de Run Dime Her Ando ned wer MAH $^{\circ}$ $> { m cH}$ Report Charles an attact at a دار Real and the second i da ŝ New York Contraction $\frac{\pi}{L} \left\{ (S_{1}^{(1)}, \ldots, S_{n}^{(1)}) \in \mathbb{N} \right\}$ Stroppiscael . Run filis t e fil Ar ben een l New Contraction and the second sec 33 S. 187 : C:\HPCHEM\1\DATA\05-16-16\048F0901.D Data File Name 12.500 Page Number: 1Vial Number: 48 : mwdl Operator : GC1 Instrument Sample Name Injection Number : 1 : 605227-02 Sequence Line : 9 Run Time Bar Code: Instrument Method: DX.MTH Acquired on : 16 May 16 06:36 PM Analysis Method : DX.MTH Report Created on: 17 May 16 11:33 AM andre an Andre and

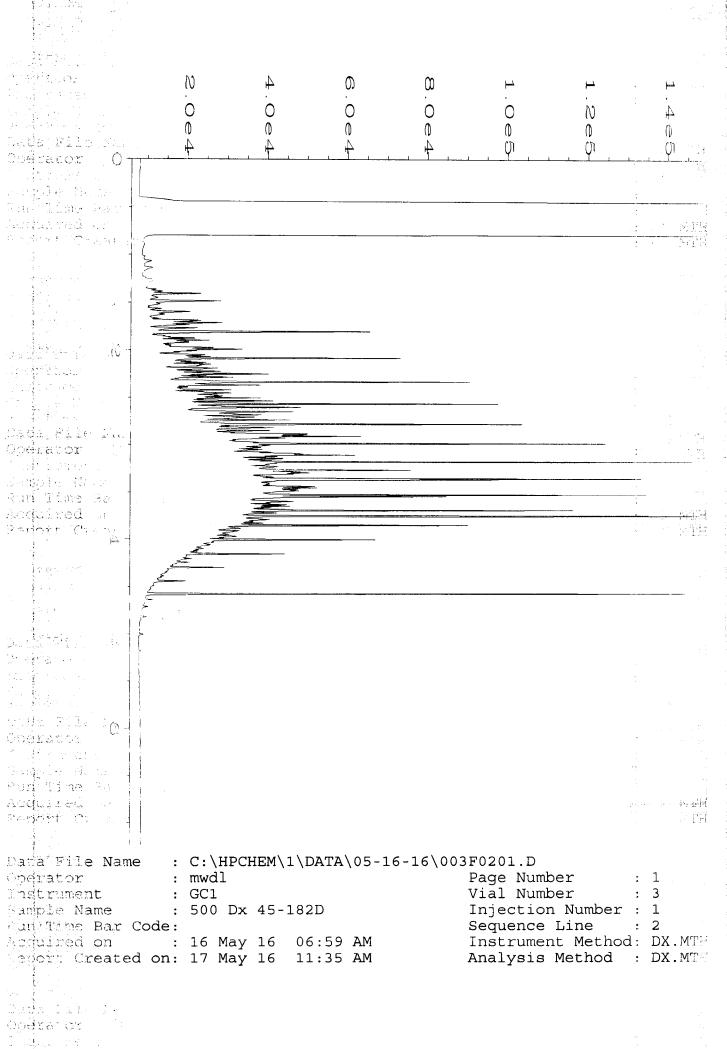
Berlin Marthales and A set of the set of align the second s

nte contra su Detar Piño do Baltar Spilitaros					a dhac an an an dh
instrument Sample Acto Rogerad Colo Report Cracked Literat	1.0 @	N 0 e	ω Ο Φ	4.0e	
			₩ <u>₩</u> 	↓	
Date Folk School					
Instrume: N- Gample M.					
Repti 1196 des des Repti des des des Repti de careta des					
	Mush Mar and a			······································	
Alexandra de la composición de					
Inder slatter i state Generalister i state				•	
Republications of the second sec					
φ					
					1. . :
!					
Data File Name		\1\DATA\05-16	-16\049F0901.D		1.
Operator Instrument Sample Name Fun Time Bar Co Acquired on Report Oreated	ode: : 16 May 16		Sequenc Instrum		9 DX.MTH
an an an Anna Anna Anna Anna Anna Bhairte an Anna Anna Anna Anna					

Data File same Openator Hestrumer Sample Mane Hestrime Des Augulred Des Augulred Des Augulred Des Augulred Des Augulred Des		N. 0 4	ω Ο «	4 0 0 4 4
Daca File Sco				
Operato: Instrumen Sample Na e Ver There ex Abquincters Republic Crease Acquincters	han be have been			
	Ę.			
Deta Sale non Operator Insonaec Saquie Nes Southere Acquired Report of Sale Sale S				
				* · ·
Operator Instrument	: mwdl : GC1 : 605227-04 de: : 16 May 16	5 06:58 PM	Sequen Instru	umber : 1









Am Test Inc. 13600 NE 126TH PL Suite C Kirkland, WA 98034 (425) 885-1664 Professional Analytical Services

May 19 2016 Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Attention: MICHAEL ERDAHL

Dear MICHAEL ERDAHL:

Enclosed please find the analytical data for your 605227 project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID TEST
01MW60-20160512	Water	16-A008432 MET

Your sample was received on Friday, May 13, 2016. At the time of receipt, the sample was logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to conact me.

Sincerely,

Aaron W. Young Laboratory Manager

Project #: 605227 PO Number: D-972

BACT = Bacteriological CONV = Conventionals MET = Metals ORG = Organics NUT=Nutrients DEM=Demand **MIN=Minerals** 

Am Test Inc. 13600 NE 126TH PL Suite C Kirkland, WA 98034 (425) 885-1664 www.amtestlab.com



Professional Analytical Services

#### **ANALYSIS REPORT**

Date Received: 05/13/16 Date Reported: 5/19/16

Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Attention: MICHAEL ERDAHL Project Name: 605227 Project #: 605227 PO Number: D-972 All results reported on an as received basis.

AMTEST Identification Number	16-A008432
Client Identification	01MW60-20160512
Sampling Date	05/12/16, 14:38

#### Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	2.23	mg/l		0.01	SM 3500Fe D	MJ	05/13/16

aron W Aaron W. Young Laboratory Manager

Am Test Inc. 13600 NE 126th PL Suite C Kirkland, WA, 98034 (425) 885-1664 www.amtestlab.com



#### QC Summary for sample number: 16-A008432

#### **MATRIX SPIKES**

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
16-A008432	Ferrous Iron	mg/l	2.23	7.19	5.00	99.20 %
16-A008432	Ferrous Iron	mg/l	2.23	7.28	5.00	101.00 %
MATRIX SP	PIKE DUPLICATES					
SAMPLE #	ANALYTE	UNITS	SAMPLE + SPK	MSD VALUE		RPD
Spike	Ferrous Iron	mg/l	7.19	7.28		1.2
STANDARD	D REFERENCE MATERIAL	_S				
ANALYTE		UNITS	TRUE VALUE	MEASURED	VALUE	RECOVERY
Ferrous Iron		mg/l	0.50	0.52		104. %
BLANKS						
ANALYTE		UNITS	RESULT			
Ferrous Iron		mg/l	< 0.01			

## SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report <u>ToMichael</u>	l Erdahl			SUB	CONTI	RACTER	۲ <i>س</i> .	he f	~				] r		Page	#	l ROUND'	
				PRO	JECT 1	NAME/NO	·				PO #			ASta			Veeks)	
	an and Bruya th Ave W	., Inc.		. <del></del>	600	5227				D-	972		1 1	RUSH Rush charges authorized by:		d by:		
City, State, ZIP_ <u>Seattle</u> ,	WA 98119			REM	IARKS												E DISPC	
Phone #(206) 285-8282	Fax #(2	06) 283-50	44		Ple	ase Email	Res	ults					<ul> <li>Dispose after 30 days</li> <li>Return samples</li> <li>Will call with instructions</li> </ul>					
			·····							ANA	LYSES	REQU	JEST	ED				
Sample ID	Lab ID	Date Sampled	Time Sampled	Sampl	e Type	# of containers	Potall	Hardness	Sulfate	Nitrate	, Nitrite	Alkalinity	Sulfide	TKN	Total Phosphorus	Dissolved Gasses		Notes
01MW60-20160512	8432	5/12/16	1438	wet	٢.		X											
Friedman & Bruya, Inc. 3012 16th Avenue West	Relinquished	SIGNATI	JRE	7		PRIN	IT N	AM	£				MPA				DATE	TIME
	10	y were	$\checkmark$	-	Micha	ael Erdahl					Frie	dman	& B	ruya		5/1	3/16	087.0
Seattle, WA 98119-2029	Received by:		1	٠														
Ph. (206) 285-8282	Relinquished by:									/		1						
Fax (206) 283-5044	Received by:													<u>,</u>	×.			· · · · · · · · · · · · · · · · · · ·



### IEH ANALYTICAL LABORATORIES

LABORATORY & CONSULTING SERVICES

#### 3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER:	FBI014-67	P	PAGE 1			
REPORT DATE:	06/10/16					
DATE SAMPLED:	05/12/16	DATE RECEIVED:	05/13/16			
FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER						
SAMPLES FROM FRIEDMAN & BRUYA, INC. / PROJECT NO. 605227						

#### CASE NARRATIVE

One water sample was received by the laboratory in good condition and analyzed according to the chain of custody. No difficulties were encountered in the preparation or analysis of this sample. Sample data follows while QA/QC data is contained on subsequent pages.

#### **SAMPLE DATA**

	ALKALINITY	SULFATE	SULFIDE	TOTAL-P	TKN
SAMPLE ID	(mgCaCO3/l)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
01MW60-20160512	349	57.9	0.36	0.208	0.897

	NITRATE	NITRITE	HARDNESS
SAMPLE ID	(mg/L)	(mg/L)	(mgCaCO3/L)
01MW60-20160512	< 0.010	0.003	368



### IEH ANALYTICAL LABORATORIES

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER:	FBI014-67	PAGE 2				
REPORT DATE:	06/10/16					
DATE SAMPLED:	05/12/16	DATE RECEIVED:	05/13/16			
FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER						
SAMPLES FROM FRIEDMAN & BRUYA, INC. / PROJECT NO. 605227						

#### QA/QC DATA

ALKALINITY	SULFATE	SULFIDE	TOTAL-P	TKN
(mgCaCO3/l)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
SM18 2320B	SM184500SO4E	EPA 376.1	EPA 365.1	EPA 351.1
05/23/16	06/02/16	05/18/16	06/07/16	06/08/16
1.00	1.00	0.05	0.002	0.200
BATCH	BATCH	BATCH	BATCH	BATCH
61.5	2.43	0.28	0.089	0.508
61.0	2.40	0.28	0.090	0.509
0.82%	1.27%	0.00%	1.18%	0.17%
	BATCH		BATCH	BATCH
	2.43		0.089	0.508
	12.4		0.139	2.46
	10.0		0.050	2.00
NA	100.08%	NA	100.72%	97.59%
105	9.88		0.095	6.74
100	10.0		0.094	6.70
105.00%	98.80%	NA	101.06%	100.60%
NA	<1.00	< 0.05	< 0.002	< 0.200
	(mgCaCO3/l) SM18 2320B 05/23/16 1.00 BATCH 61.5 61.0 0.82% NA NA 105 100 105.00%	Image: marked state	Image: Caccol (mg/L)         (mg/L)         (mg/L)           SM18 2320B         SM184500SO4E         EPA 376.1           05/23/16         06/02/16         05/18/16           1.00         1.00         0.05           BATCH         BATCH         BATCH           61.5         2.43         0.28           0.82%         1.27%         0.00%           BATCH         2.43         12.4           10.0         NA         100.08%         NA           105         9.88         100         10.0           105.00%         98.80%         NA         NA	Image (mgCaCO3/l)         (mg/L)         (mg/L)         (mg/L)           SM18 2320B         SM184500SO4E         EPA 376.1         EPA 365.1           05/23/16         06/02/16         05/18/16         06/07/16           1.00         1.00         0.05         0.002           BATCH         BATCH         BATCH         BATCH           61.5         2.43         0.28         0.089           61.0         2.40         0.28         0.090           0.82%         1.27%         0.00%         1.18%           Interval         Interval         Interval         Interval           0.82%         1.24         0.139         0.050           Interval         Interval         Interval         Interval           10.0         NA         100.72%         Interval           105         9.88         0.095         0.094           105.00%         98.80%         NA         101.06%

RPD = RELATIVE PERCENT DIFFERENCE. NA = NOT APPLICABLE OR NOT AVAILABLE. NC = NOT CALCULABLE DUE TO ONE OR MORE VALUES BEING BELOW THE DETECTION LIMIT. OR = RECOVERY NOT CALCULABLE DUE TO SPIKE SAMPLE OUT OF RANGE OR SPIKE TOO LOW RELATIVE TO SAMPLE CONCENTRATION.



#### **IEH ANALYTICAL LABORATORIES**

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER:	FBI014-67	PAGE 3				
REPORT DATE:	06/10/16					
DATE SAMPLED:	05/12/16	DATE RECEIVED:	05/13/16			
FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER						
SAMPLES FROM FRIEDMAN & BRUYA, INC. / PROJECT NO. 605227						

#### QA/QC DATA

QC PARAMETER	NITRATE	NITRITE	HARDNESS
	(mg/L)	(mg/L)	(mgCaCO3/L)
METHOD	SM184500N03F	EPA 353.2	SM18 2340C
DATE ANALYZED	05/13/16	05/13/16	06/07/16
DETECTION LIMIT	0.010	0.002	2.00
DUPLICATE			
SAMPLE ID	ВАТСН	ВАТСН	BATCH
ORIGINAL	0.234	0.004	131
DUPLICATE	0.231	0.004	134
RPD	1.01%	0.00%	2.26%
SPIKE SAMPLE			
SAMPLE ID	BATCH	BATCH	
ORIGINAL	0.234	0.004	
SPIKED SAMPLE	0.444	0.044	
SPIKE ADDED	0.200	0.040	
% RECOVERY	105.03%	100.00%	NA
QC CHECK			
			-
FOUND	0.412	0.040	39.5
TRUE	0.408	0.040	40.0
% RECOVERY	100.98%	100.00%	98.75%
BLANK	< 0.010	< 0.002	<2.00

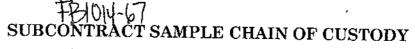
RPD = RELATIVE PERCENT DIFFERENCE.

ND - NELATIVE FIRENCE. NA = NOT APPLICABLE OR NOT AVAILABLE. NC = NOT CALCULABLE DUE TO ONE OR MORE VALUES BEING BELOW THE DETECTION LIMIT. OR = RECOVERY NOT CALCULABLE DUE TO SPIKE SAMPLE OUT OF RANGE OR SPIKE TOO LOW RELATIVE TO SAMPLE CONCENTRATION.

#### SUBMITTED BY:

Mamien Hadomsh"

Damien Gadomski Project Manager



Send Report <u>To Michael Erdahl</u>			SU	SUBCONTRACTER Az, hereb							7	Page # of TURNAROUND TIME							
		т		PR					PO#		-	Z St							
	an and Bruya	a, Inc.							RUSH										
Address3012 16th Ave W					60	5227				D	-980	2		Rush	ı char	ges a	uthoriz	ed by:	
City, State, ZIP_ <u>Seattle</u>	WA 98119			RE	MARKS	;							-		SAMPLE DISPOSAL				
					Pl	ease Email	Ro							D Di	spose	after	fter 30 days		
Phone #(206) 285-8282	Fax #(2	<u>206) 283-50</u>	44		····		1000	suute	,					□ Return samples □ Will call with instructions			ctions		
······································	_	<u></u>			<u> </u>	· ·	<b>r</b> —			AN	ALYSE	S REO	יים ב- נודדים						
								<u> </u>	1			Tubq	6100		SI.	50		-v	
Sample ID	Lab ID	Date Sampled	Time Sampled	Samı	ole Type	# of containers	Total Fe	Hardness	Sulfate	Nitrate	Nitrite	Alkalinity	Sulfide	TKN	Total Phosphorus	Dissolved Gasses		Notes	
01MW60-20160512		5/12/16	1438	wet	20	4		X	$\mathbf{\tilde{\gamma}}$		~ `}	_ ×	×	×	ب بر				
									<b>-</b> '	×	~	_~	~	~	~				
					·	· · · · · · · · · · · · · · · · · · ·				-							·······		_
							÷.												
- <u> </u>						:													
······································															·····			······································	
						· · ·													
· · · · · · · · · · · · · · · · · · ·	·															·			
				,										ſ					1
		i i																	1
Friedman & Bruya, Inc. 3012 16th Avenue West	Belinquished b	SIGNATU	IRE	7		PRIN'	<u>r n</u>	AMI	C			COM			<u> </u>	D.	ATE	TIME	┥
	10	ner	$\prec$		Micha	el Erdahl					Fried	lman	& Bı	uya	-	5/13	1/4	0870	1
Seattle, WA 98119-2029	Received by:				Da	D 216		2			-f	TC	Ħ				-16	1000	┥
Ph. (206) 285-8282	Relinquished b	y:				NU IUIIC	5	<u></u>				C	<u>[/</u>			7-17	-10	1000	4
Fax (206) 283-5044	Received by:				· · ·												· ··		4
	12,600	= (4)	) John		<b></b>						-L	· <u> </u>							

227

Send Report To\_\_\_<u>Tim Brown, cc: Jessica Brown, Jennifer Cyr, Pete</u> Kingston, Courtney Schaumberg, Jonathan Loeffler

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

S	AMPLE CHAIN OF CUSTODY ME	- 05/12/	$16 V_{ATZ}/$
	SAMPLERS (signature)		Page # of Dog
<u>əte</u>	Clan Toll		TURNAROUND TIME
	PROJECT NAME/NO.	PO #	Standard (2 Weeks) RUSH
	TOC Holdings Co. Facility No. 01-600 Seattle Terminal – ASKO Property	0440-004-41	Rush charges authorized by:
	REMARKS	EIM Y	SAMPLE DISPOSAL Dispose after 30 days Return samples Will call with instructions

- 1...

1

Sample ID	Sampl <del>e</del> Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	GRPH by NWTPH-Gx	BTEX by EPA 8021B	DRPH/ORPH by NWTPH-Dx	cVOCs by EPA 8260C	Methane, Ethane, and Ethene by RSK 175	Sulfate, Nitrate, Nitrite, Total P, Hardness, and Alkalinity	Total Fe and Total Mn	Sulfide, TKN, and Fe 2+	Notes
01 MW54-2016092	01111154	<b></b> .	01 175	5/12/16	1030	itzu	()	$\times$	$\mathbf{X}$	$\left[ \times \right]$	$\times$	T				
01MW65 - 20160512	U, MW65		02	5/12/16	1116	120	6	$\left  \times \right $	X	X	X			-		
01110177 - 20160512		·	03	5/12/16	1225	HLO	6	$\left  \times \right $	$\times$	メ	XX				1	
011264-20160712	OIMW04		er 1	5/12/16	1336	420	6	$\left  \times \right $	X	$\times$	X					
OIMW60 LUIGUSTZ	GINUUU		05T-	5/12/16	1435	Hico	14	×	$\times$	$\times$	$\times$	×	$\times$	$\left \times\right $	$\times$	
					<u> </u>	52	· 12/16									
										· · · · · · · · · · · · · · · · · · ·		<u> </u>				

Friedman & Bruya, Inc.	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
3012 16th Avenue West	Relinquished by law for	Clare Techlin,	Sund Er th	5/12/16	1606
Seattle, WA 98119-2029	Received by:	Mitt Lansten	t.Btue	5/12/16	1606
Ph. (206) 285-8282	Ŕelinquished by:				
Fax (206) 283-5044	Received by:		Samples received	at°C	

Friedman & Bruya, Inc. #605258

#### 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

May 27, 2016

Tim Brown, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Mr. Brown:

Included are the results from the testing of material submitted on May 13, 2016 from the TOC\_01-600\_20160513 WORFDB8, F&BI 605258 project. There are 14 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Jessica Brown, Courtney Schaumberg, Jennifer Cyr, Jonathan Loeffler, Pete Kingston SOU0527R.DOC

## ENVIRONMENTAL CHEMISTS

#### CASE NARRATIVE

This case narrative encompasses samples received on May 13, 2016 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC\_01-600\_20160513 WORFDB8, F&BI 605258 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
605258 -01	01MW61-20160513
605258 -02	01MW78-20160513
605258 -03	01MW62-20160513
605258 -04	01MW15-20160513
605258 -05	01MW79-20160513

Methylene chloride was detected in the dilution of sample 01MW62-20160513. The data were flagged as due to laboratory contamination.

All other quality control requirements were acceptable.

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/16 Date Received: 05/13/16 Project: TOC\_01-600\_20160513 WORFDB8, F&BI 605258 Date Extracted: 05/16/16 Date Analyzed: 05/16/16

### RESULTS FROM THE ANALYSIS OF WATER 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 52-124)
01MW61-20160513 605258-01	<1	<1	<1	<3	<100	101
01MW78-20160513 605258-02	<1	<1	<1	<3	<100	100
01MW62-20160513 605258-03	<1	<1	<1	<3	270 x	99
01MW15-20160513 605258-04	1.5	<1	<1	<3	<100	99
01MW79-20160513 605258-05	<1	<1	<1	<3	110 x	100
Method Blank 06-948 MB	<1	<1	<1	<3	<100	99

Results Reported as ug/L (ppb)

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/16 Date Received: 05/13/16 Project: TOC\_01-600\_20160513 WORFDB8, F&BI 605258 Date Extracted: 05/18/16 Date Analyzed: 05/18/16

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

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	Diesel Range (C10-C25)	Motor Oil Range (C25-C36)	Surrogate <u>(% Recovery)</u> (Limit 41-152)
01MW61-20160513 605258-01	56 x	<250	108
01MW78-20160513 605258-02	<50	<250	100
01MW62-20160513 605258-03	53 x	<250	98
01MW15-20160513 605258-04	220 x	<250	102
01MW79-20160513 605258-05	1,400 x	1,100 x	113
Method Blank 06-992 MB	<50	<250	107

# ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW61-20 05/13/16 05/17/16 05/17/16 Water ug/L (ppb)	160513	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160513 WORFDB8 605258-01 051708.D GCMS9 JS
Surrogates:		% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-	d4	109	85	117
Toluene-d8	u4	109	91	108
4-Bromofluorobenze	no	97	76	126
4 DI OINOITUOI ODCIIZC	inc.	57	70	120
		Concentration		
Compounds:		ug/L (ppb)		
Vinyl chloride		<0.2		
Chloroethane		<1		
1,1-Dichloroethene		<1		
Methylene chloride		<5		
trans-1,2-Dichloroet	thene	<1		
1,1-Dichloroethane		<1		
cis-1,2-Dichloroethe	ene	<1		
1,2-Dichloroethane	(EDC)	<1		
1,1,1-Trichloroetha	ne	<1		
Trichloroethene		<1		
Tetrachloroethene		<1		

# ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW78-202 05/13/16 05/17/16 05/17/16 Water ug/L (ppb)	160513	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160513 WORFDB8 605258-02 051709.D GCMS9 JS
Surrogates: 1,2-Dichloroethane- Toluene-d8 4-Bromofluorobenze		% Recovery: 107 100 95	Lower Limit: 85 91 76	Upper Limit: 117 108 126
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroeth 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ne (EDC)	<0.2 <1 <1 <5 <1 <1 <1 <1 <1 <1 <1 4.0 <1		

# ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW62-202 05/13/16 05/17/16 05/17/16 Water ug/L (ppb)	160513	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160513 WORFDB8 605258-03 051710.D GCMS9 JS
Surrogates: 1,2-Dichloroethane- Toluene-d8 4-Bromofluorobenze		% Recovery: 104 99 96	Lower Limit: 85 91 76	Upper Limit: 117 108 126
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroet 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ne (EDC)	<0.2 <1 <1 <5 <1 <1 7.0 <1 <1 630 ve <1		

# ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW62-20 05/13/16 05/17/16 05/20/16 Water ug/L (ppb)	160513	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160513 WORFDB8 605258-03 1/10 052025.D GCMS4 JS
Surrogates:		% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-	d4	100 100 100 100 100 100 100 100 100 100	57	121
Toluene-d8	u i	103	63	127
4-Bromofluorobenze	ne	102	60	133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride		<2		
Chloroethane		<10		
1,1-Dichloroethene		<10		
Methylene chloride		91 lc		
trans-1,2-Dichloroet	thene	<10		
1,1-Dichloroethane		<10		
cis-1,2-Dichloroethe	ne	<10		
1,2-Dichloroethane		<10		
1,1,1-Trichloroetha	ne	<10		
Trichloroethene		610		
Tetrachloroethene		<10		

# ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW15-20 05/13/16 05/17/16 05/17/16 Water ug/L (ppb)	160513	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160513 WORFDB8 605258-04 051711.D GCMS9 JS
Surrogates:		% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-	d4	102	85	117
Toluene-d8		99	91	108
4-Bromofluorobenze	ne	97	76	126
		Concentration		
Compounds:		ug/L (ppb)		
Vinyl chloride		8.5		
Chloroethane		<1		
1,1-Dichloroethene		<1		
Methylene chloride		<5		
trans-1,2-Dichloroet	thene	<1		
1,1-Dichloroethane		<1		
cis-1,2-Dichloroethe	ne	1.4		
1,2-Dichloroethane	(EDC)	<1		
1,1,1-Trichloroetha	ne	<1		
Trichloroethene		<1		
Tetrachloroethene		<1		

# ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW79-20 05/13/16 05/17/16 05/17/16 Water ug/L (ppb)	160513	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160513 WORFDB8 605258-05 051712.D GCMS9 JS
Surrogates:		% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-	d4	105	85	117
Toluene-d8		100	91	108
4-Bromofluorobenze	ne	95	76	126
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride		7.3		
Chloroethane		<1		
1,1-Dichloroethene		1.2		
Methylene chloride		<5		
trans-1,2-Dichloroet	thene	2.9		
1,1-Dichloroethane		<1		
cis-1,2-Dichloroethe	ne	35		
1,2-Dichloroethane	(EDC)	<1		
1,1,1-Trichloroetha	ne	<1		
Trichloroethene		100		
Tetrachloroethene		<1		

# ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Method Blan Not Applicab 05/17/16 05/17/16 Water ug/L (ppb)		Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160513 WORFDB8 06-969 mb 051707.D GCMS9 JS
Surrogates: 1,2-Dichloroethane- Toluene-d8 4-Bromofluorobenze		% Recovery: 107 100 99	Lower Limit: 85 91 76	Upper Limit: 117 108 126
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroet 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ene (EDC)	<0.2 <1 <1 <5 <1 <1 <1 <1 <1 <1 <1 <1		

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/16 Date Received: 05/13/16 Project: TOC\_01-600\_20160513 WORFDB8, F&BI 605258

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

Laboratory Code: 605266-01 (Duplicate)

5	Reporting	Sample	Duplicate	RPD
Analyte	Units	Result	Result	(Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/L (ppb)	50	100	65-118
Toluene	ug/L (ppb)	50	101	72-122
Ethylbenzene	ug/L (ppb)	50	102	73-126
Xylenes	ug/L (ppb)	150	99	74-118
Gasoline	ug/L (ppb)	1,000	94	69-134

### ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/16 Date Received: 05/13/16 Project: TOC\_01-600\_20160513 WORFDB8, F&BI 605258

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

Laboratory Code: Laboratory Control Sample

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Diesel Extended	ug/L (ppb)	2,500	105	104	63-142	1

### ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/16 Date Received: 05/13/16 Project: TOC\_01-600\_20160513 WORFDB8, F&BI 605258

#### **QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 605258-01 (Matrix Spike)

	- 1			Percent	
	Reporting	Spike	Sample	Recovery	Acceptance
Analyte	Units	Level	Result	MS	Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	113	61-139
Chloroethane	ug/L (ppb)	50	<1	120	55-149
1,1-Dichloroethene	ug/L (ppb)	50	<1	110	71-123
Methylene chloride	ug/L (ppb)	50	<5	107	61-126
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	108	72-122
1,1-Dichloroethane	ug/L (ppb)	50	<1	104	79-113
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	104	63-126
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	105	70-119
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	113	75-121
Trichloroethene	ug/L (ppb)	50	<1	97	75-109
Tetrachloroethene	ug/L (ppb)	50	<1	96	72-113

Laboratory Code: Laboratory Control Sample

Laboratory Coue. Laboratory Cont	for Sumple		Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Vinyl chloride	ug/L (ppb)	50	117	117	70-119	0
Chloroethane	ug/L (ppb)	50	124	123	66-149	1
1,1-Dichloroethene	ug/L (ppb)	50	111	112	75-119	1
Methylene chloride	ug/L (ppb)	50	106	106	63-132	0
trans-1,2-Dichloroethene	ug/L (ppb)	50	106	106	76-118	0
1,1-Dichloroethane	ug/L (ppb)	50	103	103	80-116	0
cis-1,2-Dichloroethene	ug/L (ppb)	50	102	101	80-112	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	108	107	79-109	1
1,1,1-Trichloroethane	ug/L (ppb)	50	116	116	80-116	0
Trichloroethene	ug/L (ppb)	50	96	97	77-108	1
Tetrachloroethene	ug/L (ppb)	50	94	93	78-109	1

#### 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.

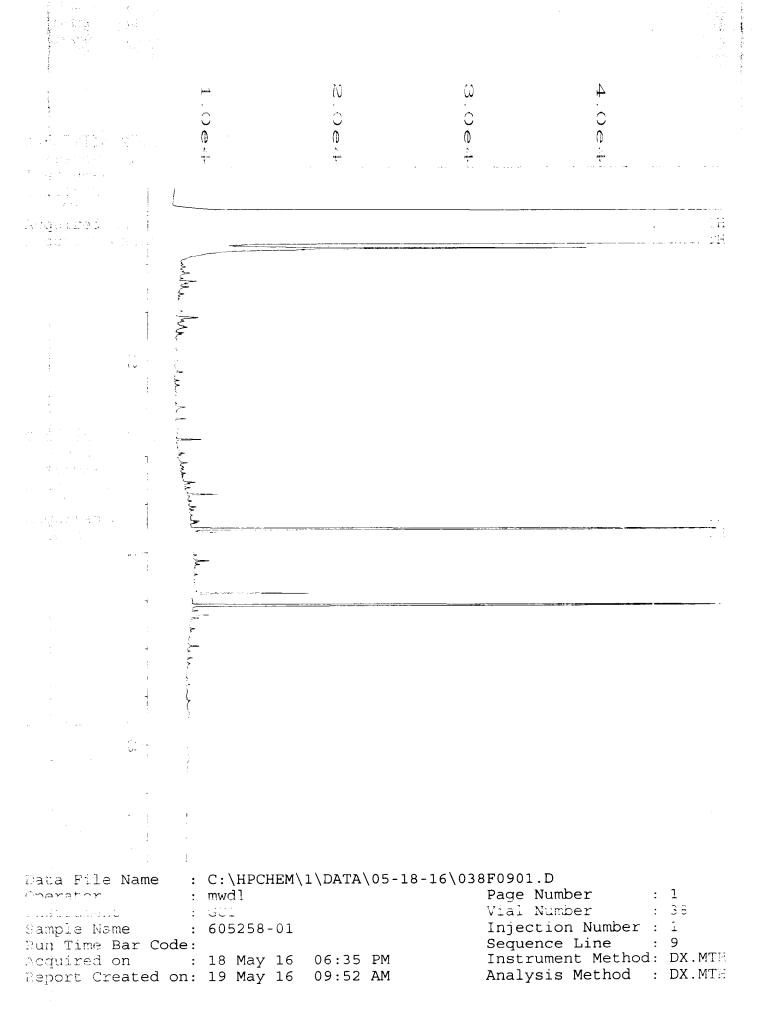
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.



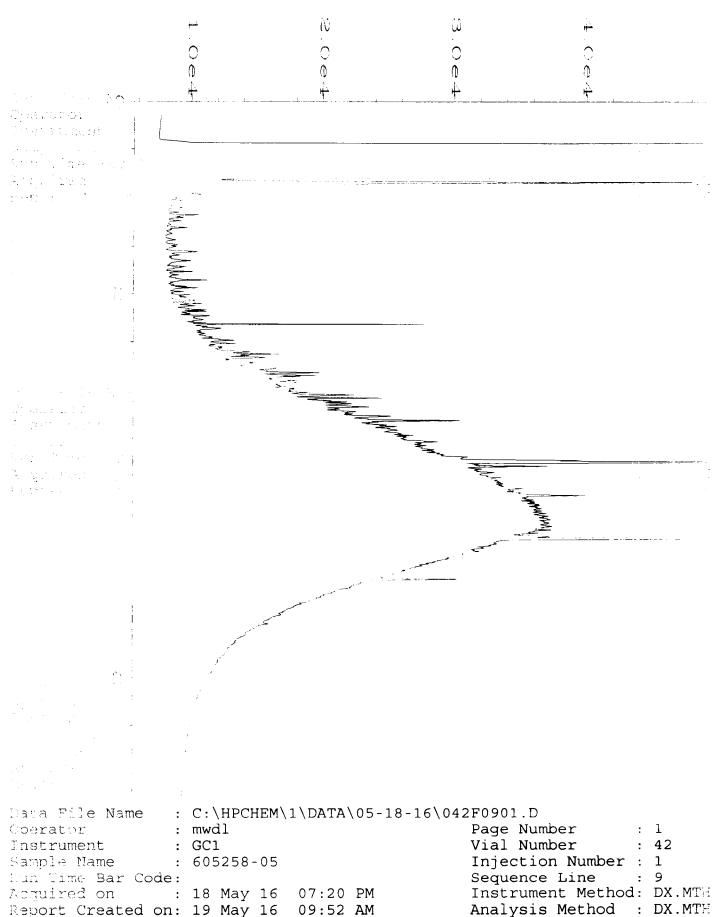
Sample Name Rud Time & c Store of pr	<u>C</u> i					
Biggeore Miller of		p	ίλ. ·		nias	
		⊖ ∂		$\bigcirc$ ex	002	
0-	· <u>+</u>	· · · · · · · · · · · · · · · · · · ·		jagan ↓ ↓ ↓ ↓ ↓		<u> </u>
: .	L					
na las thas sil. M	-A, A A					
na an an Anton An Di An Anna Anna Anna Anna Anna Anna Anna	March Shi					
- - -						
under all and a second	ALSOMA TAK I					
	A Jula	<u></u>	, <u></u>			
nter en esta Norden en autor Antonio	-					
	1					
	\ -					
	:					
-	1					
	ľ					
Operator Instrument Sample Name Fun Time Bar Acquired on	: : Code: :	mwdl GC1 605258-02 18 May 16	06:46 PM	<b>Inject</b> Sequend Instru	umber : : umber : : ion Number : : ce Line : ! ment Method: !	39 1 9 0 <u>x.</u> mto
Operator Instrument Sample Name Fun Time Bar	: : Code: :	mwdl GC1 605258-02 18 May 16	06:46 PM	Page N Vial N Inject Sequen Instru	umber : : umber : : ion Number : : ce Line : :	39 1 9 0x.mt:-

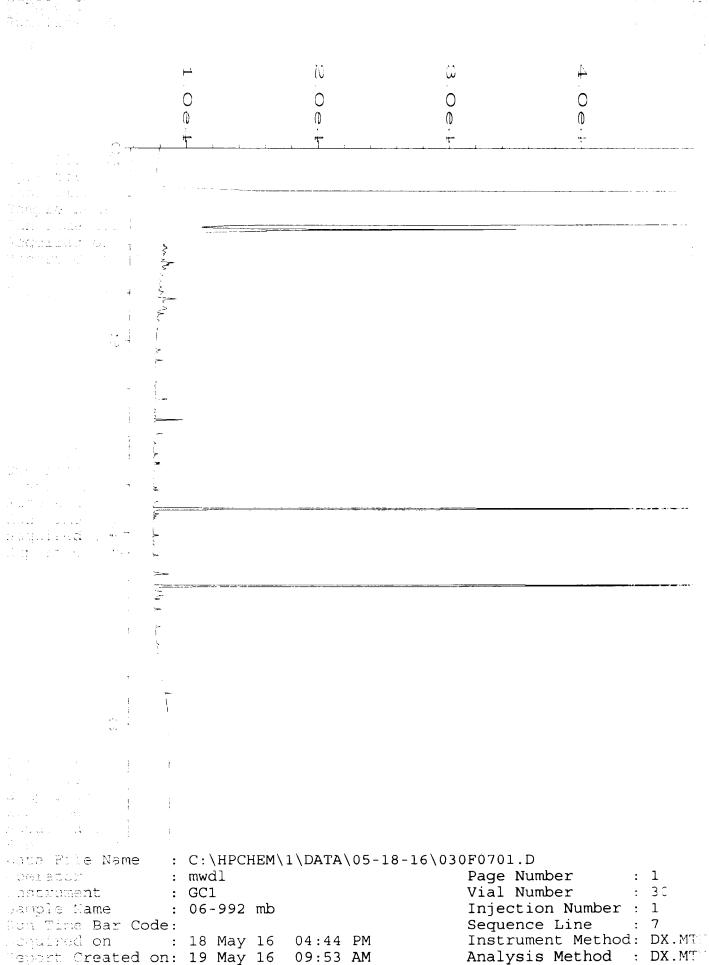
ogitica de compositores de la compo		K			
	0 4	2. 0 ¢ 4	0 1 2	0 ¢ 4	
	· · ·	-			
	5 Martin La				
	a har was had a she will			- · · ·	
	λ.				
7					
Cata File Name Operator Instrument Cample Name	: mwdl : GC1 : 605258-0		Page Nu Vial Nu Injecti	mber : mber : on Number : e Line :	1
oun Time Bar Coc Classes On Seport Created c	: 18 May 1	6 06:57 PM 6 09:52 AM	Instrum	ent Method: s Method :	DX.MTH

					1. 
na si	0 0 4	10 0 0 4	∷ 0 0 ₽	· L. O · · · ·	
and the second					
- · · ·					
	Mar and a should a share and the share and				
	: mwdl : GC1 : 605258-04 ode: : 18 May 16		Page Numb Vial Numb Injection Sequence Instrumen	er : er : Number : Line : t Method: Method :	9 DX.MTH

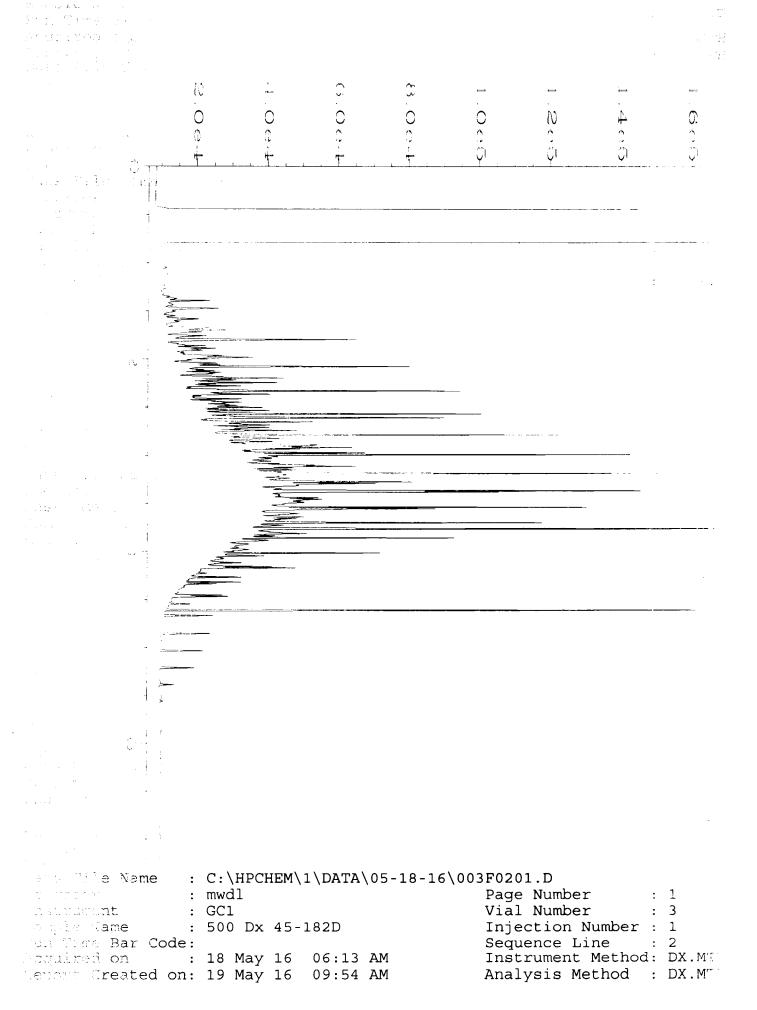


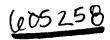






Nego a M  a 112





SAMPLE CHAIN OF CUSTODY HE5/13/16

SAMPLERS (signature)

Send Report To\_\_\_\_\_\_ Tim Brown, cc: Jessica Brown, Jennifer Cyr, Pete 1. 1 Kingston, Courtney Schaumberg, Jonathan Loeffler

Address 2811 Fairview Ave E, Suite 2000

Company SoundEarth Strategies

City, State, ZIP\_\_\_Seattle, WA 98102

Clan Torto		TURNAROUND TIME
PROJECT NAME/NO.	PO #	Standard (2 Weeks) RUSH
TOC Holdings Co. Facility No. 01-600 Seattle Terminal – ASKO Property	0440-004-41	Rush charges authorized by:
REMARKS	EIM Y	SAMPLE DISPOSAL Dispose after 30 days Return samples
L		Will call with instructions

DOLIVIZ

of\_

१

Page #

Sample ID	Sample #Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	GRPH by NWTPH-Gx	BTEX by EPA 8021B	DRPH/ORPH by NWTPH-Dx	cVOCs by EPA 8260C	Methane, Ethane, and Ethene by RSK 175	Sulfate, Nitrate, Nitrite, Total P, Hardness, and Alkalinity	Total Fe and Total Mn	Sulfide, TKN, and Fe 2+	Notes
0:MW61-60.60-513		~		5/1316	10.54	HZO	Ó	$\times$	×	$\times$	$\mathbf{\mathbf{x}}$	1	· ······		+	
01111178-2016013		• <del>•••••</del>	02	5/13/16	1146	H2O	6	$\times$	X	X	X	1				
01 MW62 20160513				5/13/16	1246	170	6	$\times$	X	X		1				
01MW15-20160513	UIMW15		04	5/13/16	13'30	HZO	ه)	X	X	X	×	1				
0111177-20160513	CIMMIS		ost	5/13/16	1407	Hec	و	$\times$	$\star$	×	X					
					G											
					2	113~A									<b> </b>	
						~~									├ <b> </b>	
											_	<u> </u>				

		د	Samples rec	eived at $\underline{3}$	_•C
Friedman & Bruya, Inc.	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
3012 16th Avenue West	Relinquished by la and	Clare Tochlin	Sander-H-	5/13/16	1555
Seattle, WA 98119-2029	Received by: (ellipto Robod	GI Lat DICO	F3R		
Ph. (206) 285-8282	Relinquished by:	Clizabeth Radford		5/13/16_	1922
Fax (206) 283-5044	Received by:			·····	

Friedman & Bruya, Inc. #605283

#### 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

May 25, 2016

Tim Brown, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Mr. Brown:

Included are the results from the testing of material submitted on May 16, 2016 from the TOC\_01-600\_20160516 WORFDB8, F&BI 605283 project. There are 11 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Jessica Brown, Courtney Schaumberg, Jennifer Cyr, Jonathan Loeffler, Pete Kingston SOU0525R.DOC

### ENVIRONMENTAL CHEMISTS

### CASE NARRATIVE

This case narrative encompasses samples received on May 16, 2016 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC\_01-600\_20160516 WORFDB8, F&BI 605283 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
605283 -01	01MW57-20160516
605283 -02	01MW58-20160516
605283 -03	MW03-20160516

All quality control requirements were acceptable.

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/25/16 Date Received: 05/16/16 Project: TOC\_01-600\_20160516 WORFDB8, F&BI 605283 Date Extracted: 05/17/16 Date Analyzed: 05/17/16

#### RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx Results Reported as ug/L (ppb)

Results	Reported	as ug/L	(ppp)

<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 52-124)
01MW57-20160516 605283-01	<1	<1	<1	<3	<100	99
01MW58-20160516 605283-02	<1	<1	<1	<3	<100	95
MW03-20160516 605283-03	3.9	1.7	1.3	6.1	580	96
Method Blank 06-950 MB	<1	<1	<1	<3	<100	92

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/25/16 Date Received: 05/16/16 Project: TOC\_01-600\_20160516 WORFDB8, F&BI 605283 Date Extracted: 05/17/16 Date Analyzed: 05/17/16

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

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	$\frac{\text{Diesel Range}}{(C_{10}-C_{25})}$	Motor Oil Range (C25-C36)	Surrogate <u>(% Recovery)</u> (Limit 41-152)
01MW57-20160516 605283-01	<50	<250	99
01MW58-20160516 605283-02	98 x	<250	100
MW03-20160516 605283-03	4,500 x	1,700 x	118
Method Blank 06-994 MB	<50	<250	98

# ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW57-20 05/16/16 05/17/16 05/17/16 Water ug/L (ppb)	160516	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160516 WORFDB8 605283-01 051713.D GCMS9 JS
Surrogates:		% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-	d4	<sup>70</sup> Recovery. 106	85	117
Toluene-d8	u4	98	91	108
4-Bromofluorobenze	ne	95	76	126
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride		<0.2		
Chloroethane		<1		
1,1-Dichloroethene		<1		
Methylene chloride		<5		
trans-1,2-Dichloroet	thene	<1		
1,1-Dichloroethane		<1		
cis-1,2-Dichloroethe	ne	<1		
1,2-Dichloroethane	(EDC)	<1		
1,1,1-Trichloroetha	ne	<1		
Trichloroethene		<1		
Tetrachloroethene		<1		

# ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW58-20 05/16/16 05/17/16 05/17/16 Water ug/L (ppb)	160516	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160516 WORFDB8 605283-02 051714.D GCMS9 JS
Surrogates:		% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-	d4	108	85	117
Toluene-d8		99	91	108
4-Bromofluorobenze	ene	97	76	126
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride		0.36		
Chloroethane		<1		
1,1-Dichloroethene		<1		
Methylene chloride		<5		
trans-1,2-Dichloroet	thene	<1		
1,1-Dichloroethane		<1		
cis-1,2-Dichloroethe	ne	<1		
1,2-Dichloroethane	(EDC)	<1		
1,1,1-Trichloroetha	ne	<1		
Trichloroethene		<1		
Tetrachloroethene		<1		

# ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	MW03-2016 05/16/16 05/17/16 05/17/16 Water ug/L (ppb)	0516	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160516 WORFDB8 605283-03 051715.D GCMS9 JS
Surrogates: 1,2-Dichloroethane- Toluene-d8 4-Bromofluorobenze		% Recovery: 103 98 96	Lower Limit: 85 91 76	Upper Limit: 117 108 126
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroet 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ne (EDC)	0.75 <1 <1 <5 <1 <1 10 <1 <1 <1 <1 <1		

# ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Method Blan Not Applicab 05/17/16 05/17/16 Water ug/L (ppb)		Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160516 WORFDB8 06-969 mb 051707.D GCMS9 JS
Surrogates: 1,2-Dichloroethane- Toluene-d8 4-Bromofluorobenze		% Recovery: 107 100 99	Lower Limit: 85 91 76	Upper Limit: 117 108 126
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroet 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ene (EDC)	<0.2 <1 <1 <5 <1 <1 <1 <1 <1 <1 <1 <1		

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/25/16 Date Received: 05/16/16 Project: TOC\_01-600\_20160516 WORFDB8, F&BI 605283

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

Laboratory Code: 605283-01 (Duplicate)

5	Reporting	Sample	Duplicate	RPD
Analyte	Units	Result	Result	(Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

		Percent				
	Reporting	Spike	Recovery	Acceptance		
Analyte	Units	Level	LCS	Criteria		
Benzene	ug/L (ppb)	50	95	65-118		
Toluene	ug/L (ppb)	50	96	72-122		
Ethylbenzene	ug/L (ppb)	50	97	73-126		
Xylenes	ug/L (ppb)	150	95	74-118		
Gasoline	ug/L (ppb)	1,000	94	69-134		

### ENVIRONMENTAL CHEMISTS

Date of Report: 05/25/16 Date Received: 05/16/16 Project: TOC\_01-600\_20160516 WORFDB8, F&BI 605283

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

Laboratory Code: Laboratory Control Sample

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Diesel Extended	ug/L (ppb)	2,500	101	101	63-142	0

### ENVIRONMENTAL CHEMISTS

Date of Report: 05/25/16 Date Received: 05/16/16 Project: TOC\_01-600\_20160516 WORFDB8, F&BI 605283

### **QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 605258-01 (Matrix Spike)

				Percent	
	Reporting	Spike	Sample	Recovery	Acceptance
Analyte	Units	Level	Result	MS	Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	113	61-139
Chloroethane	ug/L (ppb)	50	<1	120	55-149
1,1-Dichloroethene	ug/L (ppb)	50	<1	110	71-123
Methylene chloride	ug/L (ppb)	50	<5	107	61-126
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	108	72-122
1,1-Dichloroethane	ug/L (ppb)	50	<1	104	79-113
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	104	63-126
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	105	70-119
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	113	75-121
Trichloroethene	ug/L (ppb)	50	<1	97	75-109
Tetrachloroethene	ug/L (ppb)	50	<1	96	72-113

Laboratory Code: Laboratory Control Sample

Laboratory Coue. Laboratory Cont	i or Bumple		Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Vinyl chloride	ug/L (ppb)	50	117	117	70-119	0
Chloroethane	ug/L (ppb)	50	124	123	66-149	1
1,1-Dichloroethene	ug/L (ppb)	50	111	112	75-119	1
Methylene chloride	ug/L (ppb)	50	106	106	63-132	0
trans-1,2-Dichloroethene	ug/L (ppb)	50	106	106	76-118	0
1,1-Dichloroethane	ug/L (ppb)	50	103	103	80-116	0
cis-1,2-Dichloroethene	ug/L (ppb)	50	102	101	80-112	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	108	107	79-109	1
1,1,1-Trichloroethane	ug/L (ppb)	50	116	116	80-116	0
Trichloroethene	ug/L (ppb)	50	96	97	77-108	1
Tetrachloroethene	ug/L (ppb)	50	94	93	78-109	1

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.

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.

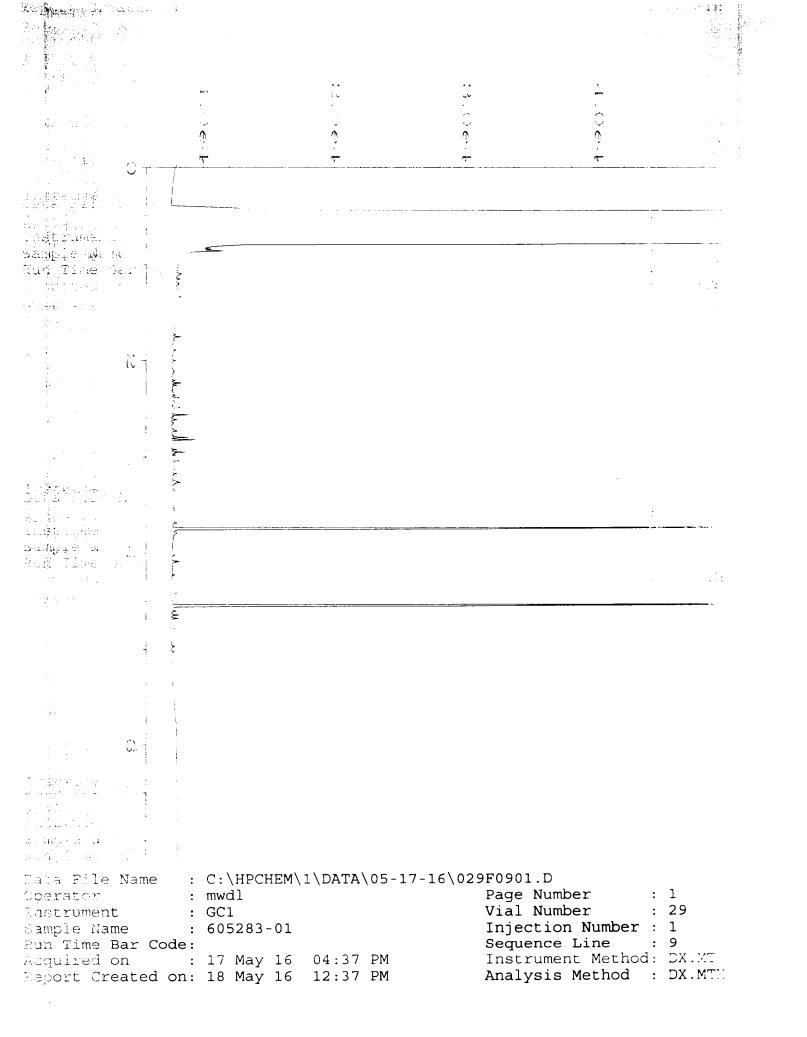
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.

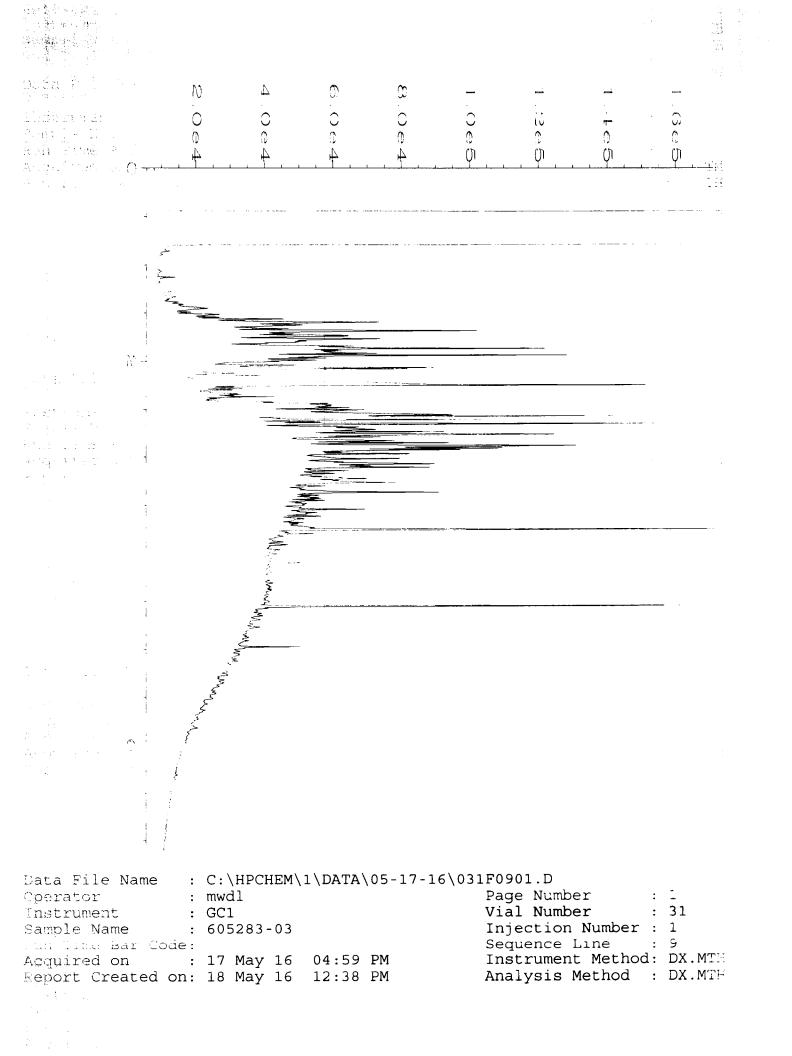
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

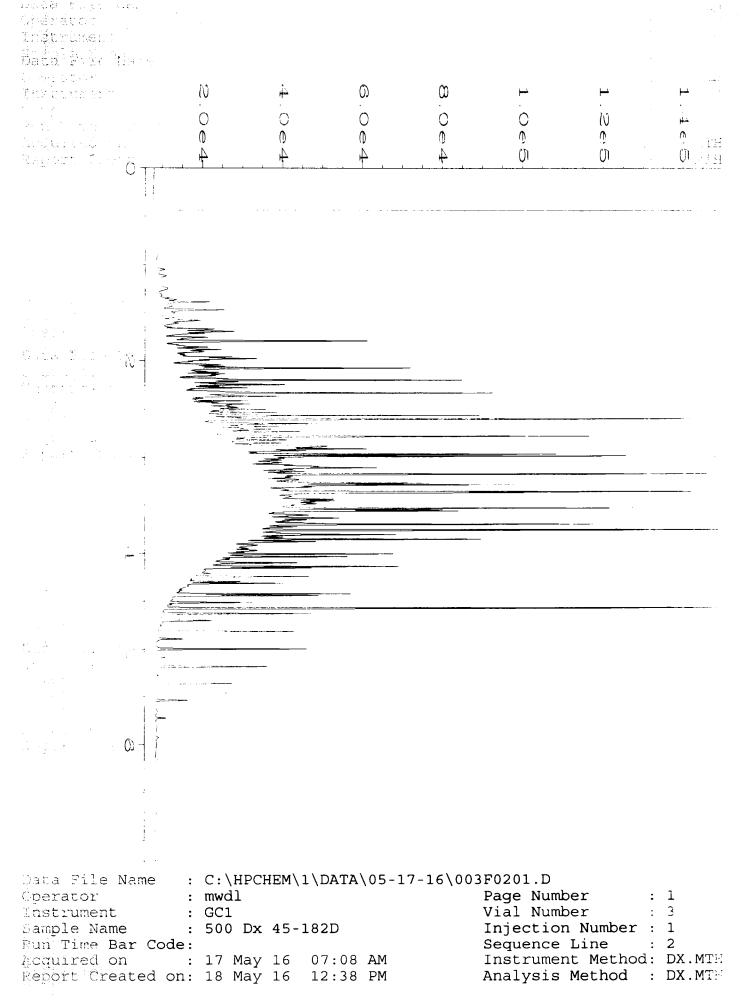
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



	gara di Lita
	1
	·······
ansigna de la Arra de la Arr	
4 i	
Data File Name: C:\HPCHEM\1\DATA\05-17-16\030F0901.DInstrument: mwdiPage Number: 1Instrument: GC1Vial Number: 30Sample Name: 605283-02Injection Number: 1Run Time Bar Code:Sequence Line: 9Acquired on: 17 May 1604:48 PMInstrument Method: DX.IReport Created on:18 May 1612:37 PMAnalysis Method	



Auguired ba Auguired ba Rep <b>ört C</b> rescott Handid das			t son s tot with s tot with	
	1.0e4	N C 0 4	<b>3</b> .00 <b>4</b> .00 <b>4</b> .00 <b>4</b> .00 <b>4</b> .00 <b>5</b> .00 <b>6</b> .000 <b>6</b> .0000 <b>6</b> .0000 <b>6</b> .0000 <b>6</b> .00000 <b>6</b> .000000000000000000000000000000000000	
	*			
	t - Jacob Jacob Jacob			
1977 - Angeland II. 1985 - Alfred State 1986 - Alfred State 1986 - Angeland State	<u>}</u>			
Data File Name Operator Instrument Comple Name Run Time Bar Co Acquired on Peport Created	: mwdl : GC1 : 06-994 mb ode: : 17 May 16	04:06 PM	6\026F0901.D Page Number : 1 Vial Number : 26 Injection Number : 1 Sequence Line : 9 Instrument Method: DX.MTH Analysis Method : DX.MTH	



	AMPLE CHAIN OF CUSTODY	ME 05/10	116 DO3/
Send Report To	SAMPLERS (signature) Ada Witts		TURNAROUND TIME
CompanySoundEarth Strategies Address2811 Fairview Ave E, Suite 2000	PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal – ASKO Property	PO # 0440-004-41	Kstandard (2 Weeks) RUSH Rush charges authorized by:
City, State, ZIP <u>Seattle, WA 98102</u>	REMARKS	EIM Y	SAMPLE DISPOSAL Dispose after 30 days Return samples Will call with instructions

Sample ID	Sampl <del>e</del> Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	GRPH by NWTPH-Gx	BTEX by EPA 8021B	DRPH/ORPH by NWTPH-Dx	cVOCs by EPA 8260C	Methane, Ethane, and Ethene by RSK 175	Sulfate, Nitrate, Nitrite, Total P, Hardness, and Alkalinity	Total Fe and Total Mn	Sulfide, TKN, and Fe 2+	Notes
01MW57-20160516	oimw57	-	61A-F	05-16-2016	1145	H2O	6	х	Х	X	X					
01MW58-20160576	OIMWSE	-	03 1	05-16-2016	1315	H2O	6	X	v	X	×	1				
MW03-20110516	MW03			05-16-2016	1435	H20	6	×	×	×	×					
		AT	<b>*</b> ••	2-16-16												
		· · · · · · · · · · · · · · · · · · ·														
								/								
										<u> </u>	*****			nd at	4 <sub>°C</sub>	
									N - 14 - 14 Inter ( Marcol and Providence of Concession)			San	ples receiv	eu at	<u>/_</u> ~	

Friedman & Bruya, Inc.	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
3012 16th Avenue West	Relinquished by: adv Demik	Ada Hamilton	Sound Earth	05-16-14	1702
Seattle, WA 98119-2029	Received by:	VING	FRI	5/16/16	1702
Ph. (206) 285-8282	Relinquished by:		11 11 11 11 11 11 11 11 11 11 11 11 11		
Fax (206) 283-5044	Received by:				

Friedman & Bruya, Inc. #605284

#### 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

May 25, 2016

Tim Brown, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Mr. Brown:

Included are the results from the testing of material submitted on May 16, 2016 from the TOC\_01-600\_20160516 WORFDB8, F&BI 605284 project. There are 12 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Jessica Brown, Courtney Schaumberg, Jennifer Cyr, Jonathan Loeffler SOU0525R.DOC

### ENVIRONMENTAL CHEMISTS

### CASE NARRATIVE

This case narrative encompasses samples received on May 16, 2016 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC\_01-600\_20160516 WORFDB8, F&BI 605284 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
605284 -01	01MW83-20160516
605284 -02	01MW89-20160516
605284 -03	MW01-20160516
605284 -04	MW02-20160516

All quality control requirements were acceptable.

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/25/16 Date Received: 05/16/16 Project: TOC\_01-600\_20160516 WORFDB8, F&BI 605284 Date Extracted: 05/17/16 Date Analyzed: 05/17/16

### RESULTS FROM THE ANALYSIS OF WATER 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 52-124)
01MW83-20160516 605284-01	<1	<1	<1	<3	<100	91
01MW89-20160516 605284-02	<1	<1	<1	<3	<100	92
MW01-20160516 605284-03	<1	<1	<1	<3	<100	94
MW02-20160516 605284-04	<1	<1	<1	<3	<100	96
Method Blank 06-950 MB	<1	<1	<1	<3	<100	92

Results Reported as ug/L (ppb)

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/25/16 Date Received: 05/16/16 Project: TOC\_01-600\_20160516 WORFDB8, F&BI 605284 Date Extracted: 05/18/16 Date Analyzed: 05/18/16

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

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	Diesel Range (C10-C25)	Motor Oil Range (C25-C36)	Surrogate <u>(% Recovery)</u> (Limit 41-152)
01MW83-20160516 605284-01	<50	<250	108
01MW89-20160516 605284-02	350 x	<250	115
MW01-20160516 605284-03	62 x	<250	98
MW02-20160516 605284-04	<50	<250	110
Method Blank 06-992 MB	<50	<250	107

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW83-20 05/16/16 05/17/16 05/17/16 Water ug/L (ppb)	160516	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160516 WORFDB8 605284-01 051716.D GCMS9 JS
Surrogates: 1,2-Dichloroethane- Toluene-d8 4-Bromofluorobenze		% Recovery: 102 100 97	Lower Limit: 85 91 76	Upper Limit: 117 108 126
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroet 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ene (EDC)	<0.2 <1 <1 <5 <1 <1 <1 <1 <1 <1 <1 <1 <1		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW89-20 05/16/16 05/17/16 05/17/16 Water ug/L (ppb)	160516	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160516 WORFDB8 605284-02 051717.D GCMS9 JS
Surrogates: 1,2-Dichloroethane- Toluene-d8 4-Bromofluorobenze		% Recovery: 103 98 95	Lower Limit: 85 91 76	Upper Limit: 117 108 126
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroet 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ne (EDC)	<0.2 <1 <1 <5 <1 <1 <1 <1 <1 <1 <1 <1		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	MW01-2016 05/16/16 05/17/16 05/17/16 Water ug/L (ppb)	0516	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160516 WORFDB8 605284-03 051718.D GCMS9 JS
Surrogates: 1,2-Dichloroethane- Toluene-d8 4-Bromofluorobenze		% Recovery: 104 101 97	Lower Limit: 85 91 76	Upper Limit: 117 108 126
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroet 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ne (EDC)	<0.2 <1 <1 <5 <1 <1 <1 <1 <1 <1 <1 <1 <1		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	MW02-2016 05/16/16 05/17/16 05/17/16 Water ug/L (ppb)	0516	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160516 WORFDB8 605284-04 051719.D GCMS9 JS
Surrogates: 1,2-Dichloroethane- Toluene-d8 4-Bromofluorobenze		% Recovery: 106 101 97	Lower Limit: 85 91 76	Upper Limit: 117 108 126
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroet 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ne (EDC)	<0.2 <1 <1 <5 <1 <1 <1 <1 <1 <1 <1 <1 <1		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Method Blan Not Applicab 05/17/16 05/17/16 Water ug/L (ppb)		Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160516 WORFDB8 06-969 mb 051707.D GCMS9 JS
Surrogates: 1,2-Dichloroethane- Toluene-d8 4-Bromofluorobenze		% Recovery: 107 100 99	Lower Limit: 85 91 76	Upper Limit: 117 108 126
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroet	thene	<0.2 <1 <1 <5 <1		
1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethan Trichloroethene Tetrachloroethene	(EDC)	<1 <1 <1 <1 <1 <1 <1		

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/25/16 Date Received: 05/16/16 Project: TOC\_01-600\_20160516 WORFDB8, F&BI 605284

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

Laboratory Code: 605283-01 (Duplicate)

0	Reporting	Sample	Duplicate	RPD
Analyte	Units	Result	Result	(Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

		Percent				
	Reporting	Spike	Recovery	Acceptance		
Analyte	Units	Level	LCS	Criteria		
Benzene	ug/L (ppb)	50	95	65-118		
Toluene	ug/L (ppb)	50	96	72-122		
Ethylbenzene	ug/L (ppb)	50	97	73-126		
Xylenes	ug/L (ppb)	150	95	74-118		
Gasoline	ug/L (ppb)	1,000	94	69-134		

### ENVIRONMENTAL CHEMISTS

Date of Report: 05/25/16 Date Received: 05/16/16 Project: TOC\_01-600\_20160516 WORFDB8, F&BI 605284

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

Laboratory Code: Laboratory Control Sample

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Diesel Extended	ug/L (ppb)	2,500	105	104	63-142	1

### ENVIRONMENTAL CHEMISTS

Date of Report: 05/25/16 Date Received: 05/16/16 Project: TOC\_01-600\_20160516 WORFDB8, F&BI 605284

### **QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 605258-01 (Matrix Spike)

	- 1			Percent	
	Reporting	Spike	Sample	Recovery	Acceptance
Analyte	Units	Level	Result	MS	Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	113	61-139
Chloroethane	ug/L (ppb)	50	<1	120	55-149
1,1-Dichloroethene	ug/L (ppb)	50	<1	110	71-123
Methylene chloride	ug/L (ppb)	50	<5	107	61-126
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	108	72-122
1,1-Dichloroethane	ug/L (ppb)	50	<1	104	79-113
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	104	63-126
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	105	70-119
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	113	75-121
Trichloroethene	ug/L (ppb)	50	<1	97	75-109
Tetrachloroethene	ug/L (ppb)	50	<1	96	72-113

Laboratory Code: Laboratory Control Sample

Laboratory Coue. Laboratory Cont	for Sumple		Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Vinyl chloride	ug/L (ppb)	50	117	117	70-119	0
Chloroethane	ug/L (ppb)	50	124	123	66-149	1
1,1-Dichloroethene	ug/L (ppb)	50	111	112	75-119	1
Methylene chloride	ug/L (ppb)	50	106	106	63-132	0
trans-1,2-Dichloroethene	ug/L (ppb)	50	106	106	76-118	0
1,1-Dichloroethane	ug/L (ppb)	50	103	103	80-116	0
cis-1,2-Dichloroethene	ug/L (ppb)	50	102	101	80-112	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	108	107	79-109	1
1,1,1-Trichloroethane	ug/L (ppb)	50	116	116	80-116	0
Trichloroethene	ug/L (ppb)	50	96	97	77-108	1
Tetrachloroethene	ug/L (ppb)	50	94	93	78-109	1

#### 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.

 ${\rm ip}$  - 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.

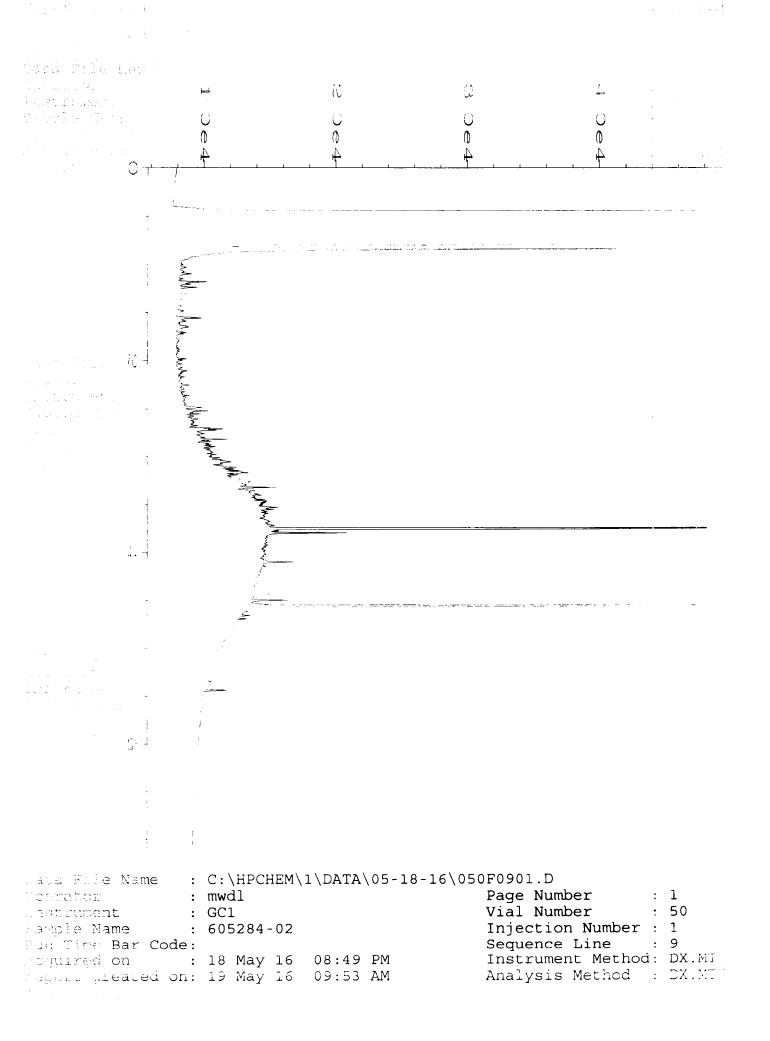
pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

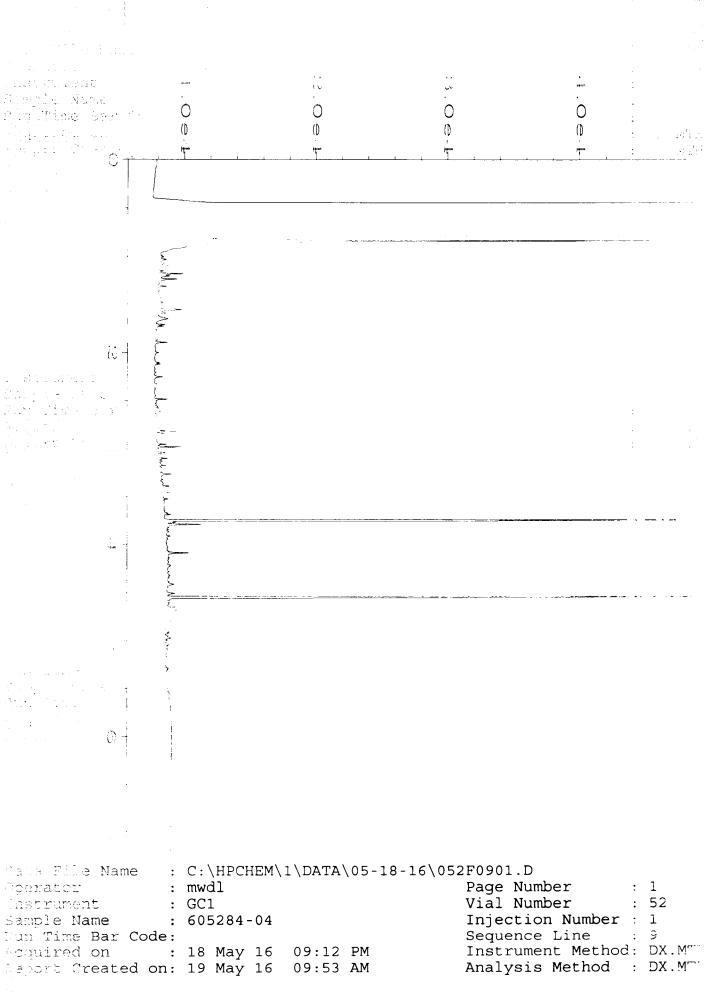
vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

operaror Instrument 2005 le bree				
Run Time Bur Co Accounted on				
Report Correct		N	4	· : ``
	$\bigcirc$	୍	⊖ 0 0	
ф. —	····	к. н <del>ут</del> 	Ť	<u></u>
		· · · · · · · · · · · · · · · · · · ·		
a mangan sa				
in a ser e inde	mantha			
and Mines (1997) Angolitea (1997) Breg at 100 (1997)				
-				
· · · · · · · · · · · · · · · · · · ·		<u> </u>		
0				
	;			
Data File Name Operator Destrument Sample Name Ein Time Bar Co	: GC1 : 605284-01 ode:		Vial Number Injection Num Sequence Line	: 49 ber : 1
Acquired on Report Created	: 18 May 16 on: 19 May 16	08:38 PM 09:53 AM	Instrument Me Analysis Meth	

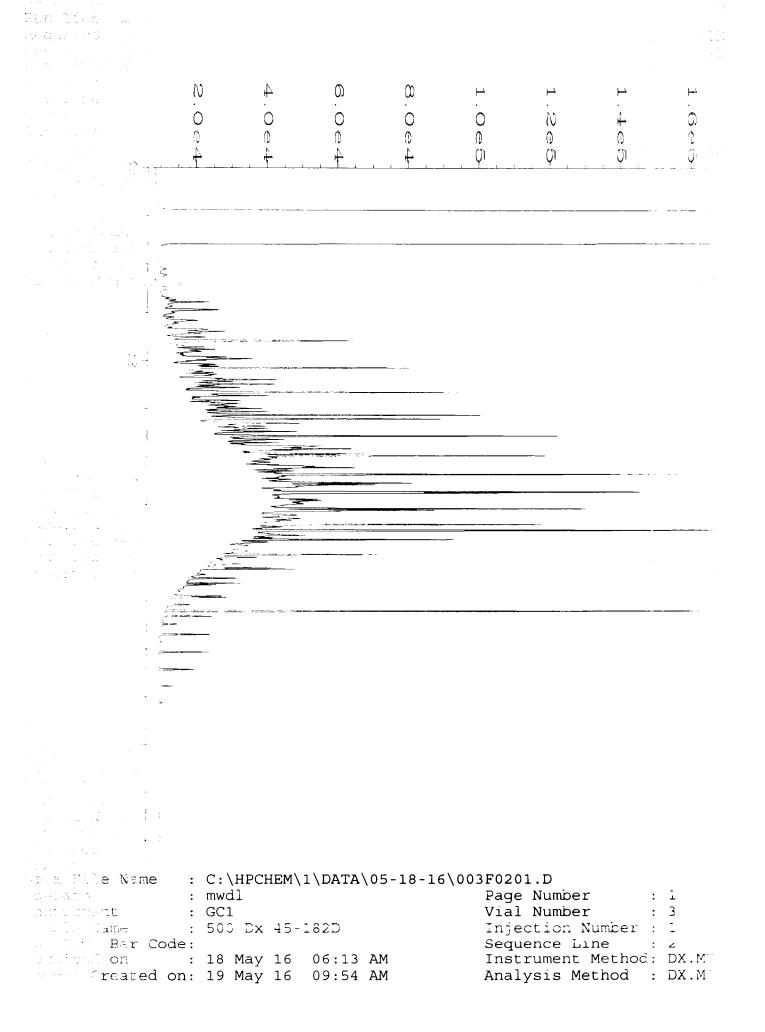


All Alt Alle Nells Locarator Locarator Sumple Black Statistics				
	And the second s			
Lata File Name Cogrator Lastrument Sample Name Fun Time Bar Co Acguired on Ecosy Created	: GC1 : 605284-03 ode: : 18 May 16	09:00 PM	Vial Numb Injection Sequence Instrumen	er : 1 er : 51 Number : 1 Line : 9 t Method: DX.MT Method : DX.MT



14 de 1

Beerling para terlini internet. At					
				Ν	
			ω	4 0	
	0 N	Ŭ Ŭ	e C	¢,	
· · · · · · · · · · · · · · · · · · ·		: <u>_</u>	_,, <del> }</del>		·
Dense a Della C					
					• 
· · · · · · · · ·	5				
	α <b>τ</b>  -  -  -				
	) e				
	in gaaa jaan S				
	е 1954 19				
	۶. ۲.				<b>.</b>
	۶ ر				
	)  X				
÷					
•	<del>.</del>				
· · · · ·					
an grand ang ang ang ang bianga		נובאו ז / האידא / הביי	8-16\02050701		
lasa 211 <b>e Name</b> Waanatoa	: mwdl	UEMITIUEN (TINEN (US	Page N	Jumber	: 1
Continuent Confile Name Confilme Bar Co	: GCI : 06-992	mb	Inject	Number tion Number	: 1
rogatica on	: 18 May	16 04:44 PM	Instru	nce Line Iment Method	: DX.M <sup>r</sup>
Bandst Greated	on: 19 May	16 09:54 AM	Analys	sis Method	: DX.M"



	SAMPLE CHAIN OF CUSTODY	ME 05	16/16 , 44/.
Send Report To <u>lim Brown, cc</u> : Jessica Brown, Courtney Schaumberg, Jonathan Loeffler, Jennifer Cyr	SAMPLERS (sigri, ure)		
Company SoundEarth Strategies, Inc.		PO #	RUSH
Address2811 Fairview Ave E, Suite 2000	TOC Holdings Co. Facility No. 01-600	01-600	Rush charges authorized by:
City, State, ZIP <u>Seattle, WA 98102</u>	REMARKS 1 low level detection limit of 0.219 ug/L for PCP.	EIM Y / N	SAMPLE DISPOSAL Dispose after 30 days Return samples Will call with instructions

-----

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	GRPH by NWTPH-Gx	BTEX by EPA 8021B	DRPH/ORPH by NWTPH-Dx	PCP by EPA 8270D (low-level detection limits) <sup>1</sup>	cVOCs by EPA 8260C	Sulfate by EPA 300.0	Methane, Ethane, and Ethene by RSK 175	Nitrate, Nitrite, Total P, Hardness and Alkalinity	Total Fe and Total Mn by EPA 200.7	TKN, Sulfide, and Fe 2+	Note
01MW73-20160516 01MW73-20160516	OIMW83	23.25	61 A-2	5/16/16	1108	Wyter	6	X	X	X		1	1	<b>-</b>				
01m289-2011051	61WP 801	24.75	021	5/16/16	1215	1	6	ĸ	X	X		X						
MW01-20160516 ML102-20160516	Minci	25 27	03	1	1357		. 6	X	X	X		X						
ML102=20160516	MW02	27	04	J	1452		h	X	X	X		X	1					
												1						
																		<b></b>
											{							
					Sr.							<u> </u>						
								l				T						
										[	1	1					-	*****
									Ι					Sar	nples rec	eived at	1	<u>ес</u>
Friedman & Bruy	va Inc	<b></b>		GIGNATURE				PRINT			•			MPANY		DATE	TIME	

Friedman & Bruya, Inc.	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
3012 16th Avenue West	Relinquished by:	Travis Zandi	SoundEnoth	5/16/2014	
Seattle, WA 98119-2029	Received by:	VINH	FB/	1/14/14	1702
Ph. (206) 285-8282	Relinquished by:				
Fax (206) 283-5044	Received by:				

Friedman & Bruya, Inc. #605316

#### 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

May 27, 2016

Tim Brown, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Mr. Brown:

Included are the results from the testing of material submitted on May 17, 2016 from the TOC\_01-600\_20160517 WORFDB8, F&BI 605316 project. There are 12 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Jessica Brown, Courtney Schaumberg, Jennifer Cyr, Pete Kingston, Jonathan Loeffler SOU0527R.DOC

### ENVIRONMENTAL CHEMISTS

### CASE NARRATIVE

This case narrative encompasses samples received on May 17, 2016 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC\_01-600\_20160517 WORFDB8, F&BI 605316 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	<u>SoundEarth Strategies</u>
605316 -01	MW06-20160517
605316 -02	01MW85-20160517
605316 -03	01MW80-20160517

All quality control requirements were acceptable.

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/16 Date Received: 05/17/16 Project: TOC\_01-600\_20160517 WORFDB8, F&BI 605316 Date Extracted: 05/18/16 Date Analyzed: 05/18/16

<1

Method Blank

06-951 MB

### RESULTS FROM THE ANALYSIS OF WATER 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 52-124)
MW06-20160517 605316-01	1.3	<1	<1	<3	<100	91
01MW85-20160517 605316-02	<1	<1	<1	<3	<100	90
01MW80-20160517 605316-03	11	<1	<1	<3	<100	90

<1

<1

<3

<100

88

Results Reported as ug/L (ppb)

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/16 Date Received: 05/17/16 Project: TOC\_01-600\_20160517 WORFDB8, F&BI 605316 Date Extracted: 05/19/16 Date Analyzed: 05/19/16

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

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	Diesel Range (C10-C25)	Motor Oil Range (C25-C36)	Surrogate <u>(% Recovery)</u> (Limit 47-140)
MW06-20160517 605316-01	410 x	<250	ip
01MW85-20160517 605316-02	330 x	<250	115
01MW80-20160517 605316-03	530 x	<250	120
Method Blank <sup>06-1014 MB</sup>	<50	<250	98

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	MW06-20160 05/17/16 05/18/16 05/18/16 Water ug/L (ppb)	0517	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160517 WORFDB8 605316-01 051813.D GCMS9 JS
Surrogates: 1,2-Dichloroethane- Toluene-d8 4-Bromofluorobenze		% Recovery: 104 98 99	Lower Limit: 85 91 76	Upper Limit: 117 108 126
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroeth 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ne (EDC)	2.6 < 1 < 1 < 5 < 1 < 1 < 1 < 1 < 1 < 1 < 1		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW85-20 05/17/16 05/18/16 05/18/16 Water ug/L (ppb)	160517	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160517 WORFDB8 605316-02 051814.D GCMS9 JS
Surrogates:		% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d	14	105	85	117
Toluene-d8		99	91	108
4-Bromofluorobenzer	ne	98	76	126
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride		2.2		
Chloroethane		<1		
1,1-Dichloroethene		<1		
Methylene chloride		<5		
trans-1,2-Dichloroet	hene	<1		
1,1-Dichloroethane		<1		
cis-1,2-Dichloroether	ne	<1		
1,2-Dichloroethane		<1		
1,1,1-Trichloroethan	ie	<1		
Trichloroethene		<1		
Tetrachloroethene		<1		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW80-20 05/17/16 05/18/16 05/18/16 Water ug/L (ppb)	160517	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160517 WORFDB8 605316-03 051815.D GCMS9 JS
Surrogates: 1,2-Dichloroethane- Toluene-d8 4-Bromofluorobenze		% Recovery: 101 98 97	Lower Limit: 85 91 76	Upper Limit: 117 108 126
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroet 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ne (EDC)	10 <1 3.7 <5 <1 <1 190 ve 1.2 <1 <1 <1		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW80-20 05/17/16 05/17/16 05/23/16 Water ug/L (ppb)	160517	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160517 WORFDB8 605316-03 1/10 052317.D GCMS9 JS
Surrogates:		% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-	d4	102	89	113
Toluene-d8		97	64	137
4-Bromofluorobenze	ne	96	81	119
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride		9.9		
Chloroethane		<10		
1,1-Dichloroethene		<10		
Methylene chloride		<50		
trans-1,2-Dichloroet	hene	<10		
1,1-Dichloroethane		<10		
cis-1,2-Dichloroethe	ne	190		
1,2-Dichloroethane		<10		
1,1,1-Trichloroetha	ne	<10		
Trichloroethene		<10		
Tetrachloroethene		<10		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Method Blar Not Applical 05/18/16 05/18/16 Water ug/L (ppb)		Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160517 WORFDB8 06-973 mb 051808.D GCMS9 JS
Surrogates:		% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-	d4	102	85	117
Toluene-d8	ui	98	91	108
4-Bromofluorobenze	ne	96	76	126
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride		< 0.2		
Chloroethane		<1		
1,1-Dichloroethene		<1		
Methylene chloride		<5		
trans-1,2-Dichloroet	thene	<1		
1,1-Dichloroethane		<1		
cis-1,2-Dichloroethe		<1		
1,2-Dichloroethane		<1		
1,1,1-Trichloroetha	ne	<1		
Trichloroethene		<1		
Tetrachloroethene		<1		

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/16 Date Received: 05/17/16 Project: TOC\_01-600\_20160517 WORFDB8, F&BI 605316

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

Laboratory Code: 605307-04 (Duplicate)

U U	Reporting		Duplicate	RPD
Analyte	Units	Sample Result	Result	(Limit 20)
Benzene	ug/L (ppb)	<1	1.0	nm
Toluene	ug/L (ppb)	5.9	5.6	5
Ethylbenzene	ug/L (ppb)	26	25	5
Xylenes	ug/L (ppb)	170	160	5
Gasoline	ug/L (ppb)	720	690	5

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/L (ppb)	50	96	65-118
Toluene	ug/L (ppb)	50	98	72-122
Ethylbenzene	ug/L (ppb)	50	99	73-126
Xylenes	ug/L (ppb)	150	97	74-118
Gasoline	ug/L (ppb)	1,000	96	69-134

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/16 Date Received: 05/17/16 Project: TOC\_01-600\_20160517 WORFDB8, F&BI 605316

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

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Diesel Extended	ug/L (ppb)	2,500	108	100	61-133	8

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/16 Date Received: 05/17/16 Project: TOC\_01-600\_20160517 WORFDB8, F&BI 605316

#### **QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 605314-01 (Matrix Spike)

				Percent	
	Reporting	Spike	Sample	Recovery	Acceptance
Analyte	Units	Level	Result	MS	Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	108	61-139
Chloroethane	ug/L (ppb)	50	<1	116	55-149
1,1-Dichloroethene	ug/L (ppb)	50	<1	105	71-123
Methylene chloride	ug/L (ppb)	50	<5	103	61-126
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	103	72-122
1,1-Dichloroethane	ug/L (ppb)	50	<1	100	79-113
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	63-126
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	106	70-119
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	112	75-121
Trichloroethene	ug/L (ppb)	50	<1	97	75-109
Tetrachloroethene	ug/L (ppb)	50	9.6	95	72-113

Laboratory Code: Laboratory Control Sample

Laboratory Coue. Laboratory Cont	tor Sumple		Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Vinyl chloride	ug/L (ppb)	50	107	108	70-119	1
Chloroethane	ug/L (ppb)	50	115	116	66-149	1
1,1-Dichloroethene	ug/L (ppb)	50	105	109	75-119	4
Methylene chloride	ug/L (ppb)	50	103	104	63-132	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	100	102	76-118	2
1,1-Dichloroethane	ug/L (ppb)	50	99	100	80-116	1
cis-1,2-Dichloroethene	ug/L (ppb)	50	99	101	80-112	2
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	101	103	79-109	2
1,1,1-Trichloroethane	ug/L (ppb)	50	108	112	80-116	4
Trichloroethene	ug/L (ppb)	50	93	94	77-108	1
Tetrachloroethene	ug/L (ppb)	50	91	92	78-109	1

ENVIRONMENTAL CHEMISTS

#### **Data Qualifiers & Definitions**

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The compound is a common laboratory and field contaminant.

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

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

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

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.

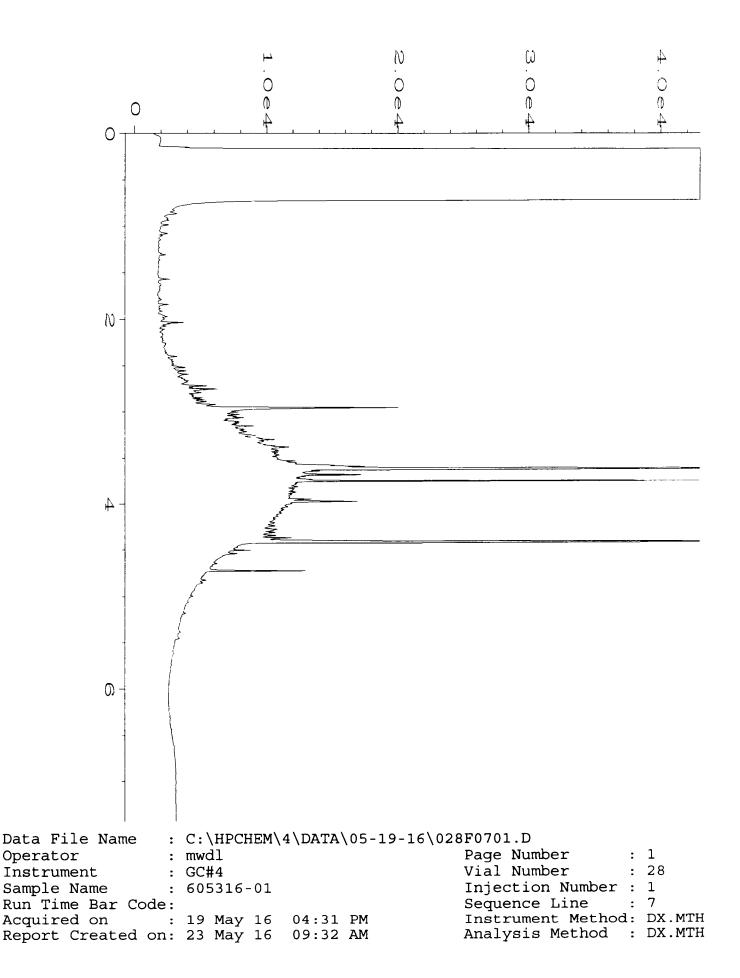
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

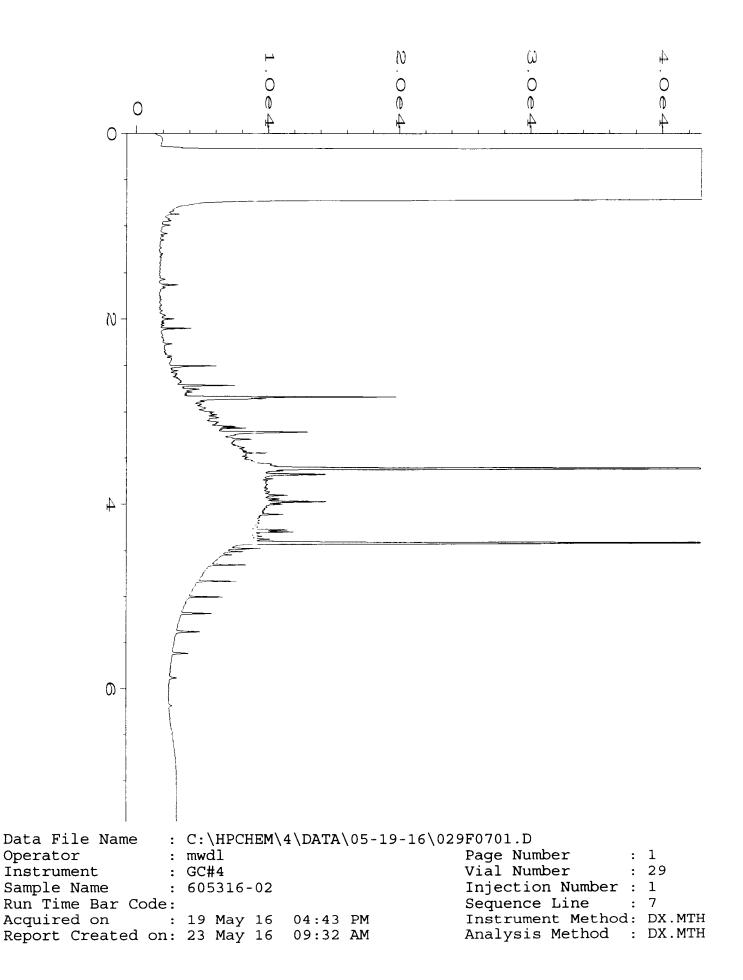
pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

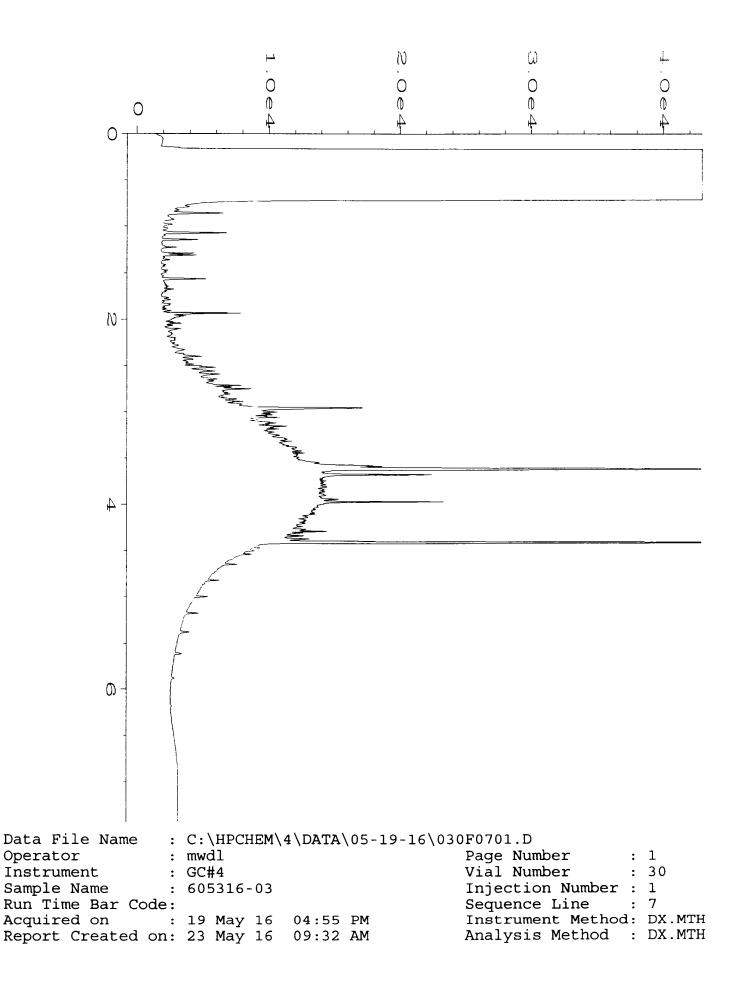
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

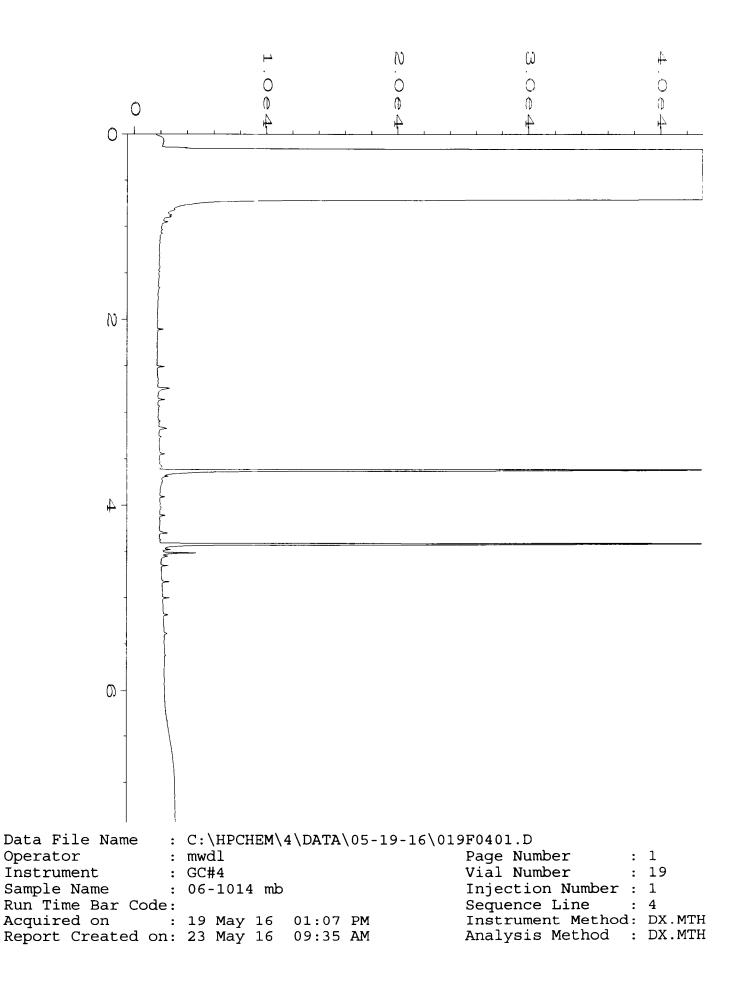
vo - The value reported fell outside the control limits established for this analyte.

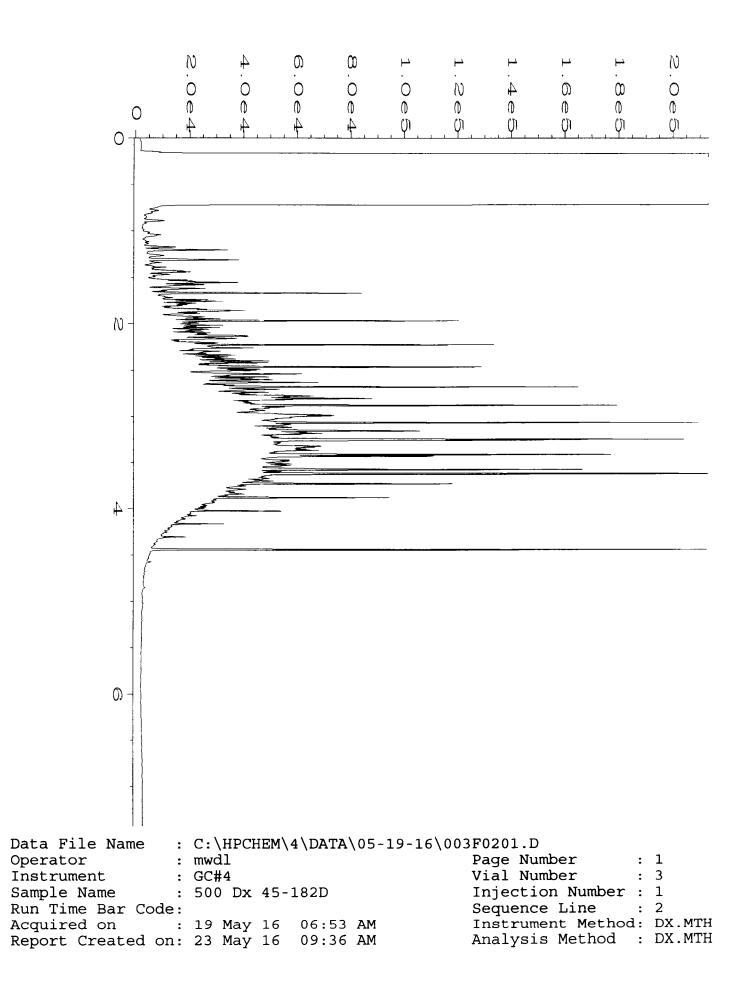
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.











605 3/6

#### **SAMPLE CHAIN OF CUSTODY**

ME	05/17/16;	V4/2
	rage #	_of

#### Send Report To\_\_\_\_IIM Brown, cc: Jessica Brown, Jennifer Cyr, Pete Kingston, Courtney Schaumberg, Jonathan Loeffler

Company SoundEarth Strategies

Address 2811 Fairview Ave E. Suite 2000

City, State, ZIP <u>Seattle, WA 98102</u>

₹	SAMPLERS (signature)		TURNAROUND TIME
	PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal – ASKO Property	PO # 0440-004-41	Standard (2 Weeks) RUSH Rush charges authorized by:
	REMARKS	EIM Y	SAMPLE DISPOSAL Dispose after 30 days Return samples Will call with instructions

| Sampl <del>e</del><br>Location | Sample<br>Depth    | Lab<br>ID   | Date<br>Sampled   | Time<br>Sampled  | Matrix  | # of<br>jars  | GRPH<br>by NWTPH-Gx  | BTEX<br>by EPA 8021B  | DRPH/ORPH<br>by NWTPH-Dx   
   
  | cVOCs<br>by EPA 8260C  
   
   | Methane, Ethane,<br>and Ethane by<br>RSK 175  
  | Sulfate, Nitrate,<br>Nitrite, Total P,<br>Hardness, and<br>Alkalinity   | Total Fe and Total<br>Min  
   | Sulfide, TKN,<br>and Fe 2+   | Notes  |
|--------------------------------|--------------------|---|---|--|---|---|--|---
--
--
---
--
--
--
--|---
--|--|--|
| MW06                           | ~~                 | 61 F  | 05/17/16  |  | Witer   | Ğ   | $\mathbf{X}$   | $\times$  | $\mathbf{\times}$  
   
  | $\sim$   
   
   |   
  |   |  
   |  |  |
| UMWU35                         | •                  | 02 ]  | 1   | 1433   | <b>1</b>  | 6   | X  | $\mathbf{X}$  | $\times$   
   
  | $\sim$   
   
   |   
  |   |  
   | 1  |  |
| DIMWAD                         |                    | 03 V  |   | 1600   | e/  | 6   | ×  | $\times$  | $\sim$   
   
  | $\geq$   
   
   | 1   
  |   |  
   | -  |  |
|                                |                    |   |   |  |   |   |  |   |  
   
  |  
   
   | 1   
  |   | ·  
   |  |  |
|                                |                    |   |   |  | i   |   |  |   |  
   
  |  
   
   |   
  |   |  
   |  |  |
|                                |                    |   |   |  |   |   |  |   |  
   
  |  
   
   |   
  |   |  
   | 1  |  |
|                                |                    |   |   |  |   |   |  |   |  
   
  |  
   
   |   
  |   |  
   | · · ·  |  |
|                                |                    |   |   |  |   |   |  | • •   |  
   
  |  
   
   |   
  |   |  
   | 1  |  |
|                                |                    |   |   |  |   |   |  |   |  
   
  |  
   
   |   
  |   |  
   | 1  |  |
|                                |                    |   | Carl  |  |   |   |  |   |  
   
  |  
   
   | <u> </u>  
  | · · · · ·   |  
   | ±  |  |
|                                |                    |   | -1712   |  |   |   |  |   |  
   
  |  
   
   | Samples   
  | received at   |  
   | <b>U</b>   | [  |
|                                |                    |   |   |  |   |   |  |   |  
   
  |  
   
   |   
  |   |  
   |  |  |
|                                |                    |   |   |  |   |   |  |   |  
   
  |  
   
   |   
  |   |  
   |  |  |
|                                | Location<br>MW 2 ( | Sample<br>Location Sample<br>Depth<br>MW36<br>UMW35 | Sample<br>Location Sample<br>Depth ID<br>MW06 - 61 F<br>UMW085 - BA | Sample<br>LocationSample<br>DepthLab<br>IDDate<br>Sampled $MWUG$ - $61^{-1} = 05^{-1}/17/16^{-1}$ $MWUG$ - $61^{-1} = 05^{-1}/17/16^{-1}$ $01MWUS$ - $03^{-1}$ $01MWUS$ - $03^{-1}$ $01MWUS$ - $03^{-1}$ | Sample<br>LocationSample<br>DepthLab<br>IDDate<br>SampledTime<br>SampledMW26-61-611247UMW25-0311433 | Sample<br>LocationSample<br>DepthLab<br>IDDate<br>SampledTime<br>SampledMatrix $MWUG$ - $61^{12} = 057/17/16$ $1247$ $W.4cc$ $MWUG$ - $61^{12} = 057/17/16$ $1247$ $W.4cc$ $UMWUS$ - $03$ 14331 $DIMWU$ - $03$ - $1600$ $1600$ $DIMWU$ - $03$ - $1600$ $1600$ | Sample<br>LocationSample<br>DepthLab<br>IDDate<br>SampledTime<br>SampledMatrix# of<br>jars $MW \cup C$ - $61^{\prime\prime} = 05^{\prime\prime}/17/1/C$ $1247$ $W.V \cup C$ C $MW \cup C$ - $61^{\prime\prime} = 05^{\prime\prime}/17/1/C$ $1247$ $W.V \cup C$ C $UMW \cup S$ - $cA$ 114331C $DIMW \cup D$ - $o3$ 11600VC $DIMW \cup D$ - $o3$ -1600VC | Sample<br>LocationSample<br>DepthLab<br>IDDate<br>SampledTime<br>SampledMatrix# of<br>jars $\stackrel{\bullet}{}_{gars}$ $MW \cup C$ - $61^{\circ} = 057/17/1/C$ $1247$ $W.V = C$ $\times$ $MW \cup C$ - $61^{\circ} = 057/17/1/C$ $1247$ $W.V = C$ $\times$ $UMW \cup S$ - $03$ $1433$ $4$ $6$ $\times$ $DIMW V = 03$ - $14733$ $4$ $6$ $\times$ $DIMW V = 03$ $1600$ $4$ - $UMW V = 03$ $UMV V = 03$ < | Sample<br>LocationSample<br>DepthLab<br>IDDate<br>SampledTime<br>SampledMatrix# of<br>jars $\stackrel{\bullet}{}$<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H <b< td=""><td>Sample<br/>LocationSample<br/>DepthLab<br/>IDDate<br/>SampledTime<br/>SampledMatrix# of<br/>jars<math>\overset{\circ}{}</math><br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<b< td=""><td>Sample<br/>LocationSample<br/>DepthLab<br/>IDDate<br/>SampledTime<br/>SampledMatrix# of<br/>jars<math>\overset{\circ}{}</math><br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<b< td=""><td>Sample<br/>LocationSample<br/>DepthLab<br/>IDDate<br/>SampledTime<br/>SampledMatrix# of<br/>jars<math>\stackrel{\circ}{}</math> of<br/><math>jars<math>\stackrel{\circ}{}</math> of<br/><math>\stackrel{\circ}{}</math> of<br/></math></td><td>Sample<br/>LocationLab<br/>DepthDate<br/>SampledTime<br/>SampledMatrix# of<br/>Jars<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow</math></td><td>Sample<br/>LocationLab<br/>DepthDate<br/>SampledTime<br/>SampledMatrix# of<br/>Jars<math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math>&lt;</td><td>Sample<br/>LocationLab<br/>DepthDate<br/>SampledTime<br/>SampledMath# of<br/>Jars<math>\mathcal{X}</math> of<br/><math>\mathcal{Y}</math> of<br/><math>Y</math></td></b<></td></b<></td></b<> | Sample<br>LocationSample<br>DepthLab<br>IDDate<br>SampledTime<br>SampledMatrix# of<br>jars $\overset{\circ}{}$<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H <b< td=""><td>Sample<br/>LocationSample<br/>DepthLab<br/>IDDate<br/>SampledTime<br/>SampledMatrix# of<br/>jars<math>\overset{\circ}{}</math><br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<br/>H<b< td=""><td>Sample<br/>LocationSample<br/>DepthLab<br/>IDDate<br/>SampledTime<br/>SampledMatrix# of<br/>jars<math>\stackrel{\circ}{}</math> of<br/><math>jars<math>\stackrel{\circ}{}</math> of<br/><math>\stackrel{\circ}{}</math> of<br/></math></td><td>Sample<br/>LocationLab<br/>DepthDate<br/>SampledTime<br/>SampledMatrix# of<br/>Jars<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow</math></td><td>Sample<br/>LocationLab<br/>DepthDate<br/>SampledTime<br/>SampledMatrix# of<br/>Jars<math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math>&lt;</td><td>Sample<br/>LocationLab<br/>DepthDate<br/>SampledTime<br/>SampledMath# of<br/>Jars<math>\mathcal{X}</math> of<br/><math>\mathcal{Y}</math> of<br/><math>Y</math></td></b<></td></b<> | Sample<br>LocationSample<br>DepthLab<br>IDDate<br>SampledTime<br>SampledMatrix# of<br>jars $\overset{\circ}{}$<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H<br>H <b< td=""><td>Sample<br/>LocationSample<br/>DepthLab<br/>IDDate<br/>SampledTime<br/>SampledMatrix# of<br/>jars<math>\stackrel{\circ}{}</math> of<br/><math>jars<math>\stackrel{\circ}{}</math> of<br/><math>\stackrel{\circ}{}</math> of<br/></math></td><td>Sample<br/>LocationLab<br/>DepthDate<br/>SampledTime<br/>SampledMatrix# of<br/>Jars<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow{V}</math><br/>Hatting<math>\overrightarrow</math></td><td>Sample<br/>LocationLab<br/>DepthDate<br/>SampledTime<br/>SampledMatrix# of<br/>Jars<math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math><math>\frac{3}{20}</math>&lt;</td><td>Sample<br/>LocationLab<br/>DepthDate<br/>SampledTime<br/>SampledMath# of<br/>Jars<math>\mathcal{X}</math> of<br/><math>\mathcal{Y}</math> of<br/><math>Y</math></td></b<> | Sample<br>LocationSample<br>DepthLab<br>IDDate<br>SampledTime<br>SampledMatrix# of<br>jars $\stackrel{\circ}{}$ of<br>$jars\stackrel{\circ}{} of\stackrel{\circ}{} of$ | Sample<br>LocationLab<br>DepthDate<br>SampledTime<br>SampledMatrix# of<br>Jars $\overrightarrow{V}$<br>Hatting $\overrightarrow$ | Sample<br>LocationLab<br>DepthDate<br>SampledTime<br>SampledMatrix# of<br>Jars $\frac{3}{20}$ < | Sample<br>LocationLab<br>DepthDate<br>SampledTime<br>SampledMath# of<br>Jars $\mathcal{X}$ of<br>$\mathcal{Y}$ of<br>$Y$ |

Friedman & Bruya, Inc.	SIGNATURE	PRINT NAME	COMPANY	DATE TIME
3012 16th Avenue West	Relinquished by: Costan	Chas Cass	Saultato	05/17/16 1811
Seattle, WA 98119-2029	Received by:	Jan Shimm	FBST	+ 4
Ph. (206) 285-8282	Relinquished by:			· · · · · · · · · · · · · · · · · · ·
Fax (206) 283-5044	Received by:			·····

Friedman & Bruya, Inc. #605317

#### 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

May 25, 2016

Tim Brown, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Mr. Brown:

Included are the results from the testing of material submitted on May 17, 2016 from the TOC\_01-600\_20160517 WORFDB8, F&BI 605317 project. There are 16 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Jessica Brown, Courtney Schaumberg, Jennifer Cyr, Pete Kingston, Jonathan Loeffler SOU0525R.DOC

#### ENVIRONMENTAL CHEMISTS

#### CASE NARRATIVE

This case narrative encompasses samples received on May 17, 2016 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC\_01-600\_20160517 WORFDB8, F&BI 605317 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
605317 -01	MW04-20160517
605317 -02	MW05-20160517
605317 -03	01MW46-20160517
605317 -04	01MW76-20160517
605317 -05	FD03-20160517

All quality control requirements were acceptable.

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/25/16 Date Received: 05/17/16 Project: TOC\_01-600\_20160517 WORFDB8, F&BI 605317 Date Extracted: 05/18/16 Date Analyzed: 05/18/16

#### RESULTS FROM THE ANALYSIS OF WATER 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)
MW04-20160517 605317-01	1.1	<1	<1	<3	270 x	79
MW05-20160517 605317-02	1.5	<1	<1	<3	130 x	80
01MW46-20160517 605317-03	7.9	<1	<1	<3	<100	81
01MW76-20160517 605317-04	<1	<1	<1	<3	<100	80
FD03-20160517 605317-05	<1	1.4	<1	<3	300 x	82
Method Blank 06-997 MB	<1	<1	<1	<3	<100	80

Results Reported as ug/L (ppb)

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/25/16 Date Received: 05/17/16 Project: TOC\_01-600\_20160517 WORFDB8, F&BI 605317 Date Extracted: 05/19/16 Date Analyzed: 05/19/16

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

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	Diesel Range (C10-C25)	Motor Oil Range (C25-C36)	Surrogate <u>(% Recovery)</u> (Limit 47-140)
MW04-20160517 605317-01	430 x	<250	116
MW05-20160517 605317-02	430 x	<250	125
01MW46-20160517 605317-03	420 x	<250	129
01MW76-20160517 605317-04	<50	<250	123
FD03-20160517 605317-05	490 x	<250	128
Method Blank 06-1014 MB	<50	<250	98

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	MW04-2016 05/17/16 05/18/16 05/18/16 Water ug/L (ppb)	0517	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160517 WORFDB8 605317-01 051812.D GCMS4 JS
Surrogates: 1,2-Dichloroethane- Toluene-d8 4-Bromofluorobenze		% Recovery: 101 108 101	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroeth 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ene (EDC)	2.3 <1 <1 <5 <1 <1 14 <1 <1 610 ve <1		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	MW04-20160 05/17/16 05/18/16 05/18/16 Water ug/L (ppb)	)517	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160517 WORFDB8 605317-01 1/100 051826.D GCMS4 JS
Surrogates:		% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-	d٨	102	57	121
Toluene-d8	u-1	102	63	127
4-Bromofluorobenze	ne	102	60	133
Compounds:		Concentration ug/L (ppb)		
-		• • • •		
Vinyl chloride		<20		
Chloroethane 1,1-Dichloroethene		<100 <100		
Methylene chloride		<100 <500		
trans-1,2-Dichloroet	hono	<500 <100		
1,1-Dichloroethane	linene	<100		
cis-1,2-Dichloroethe	ne	<100		
1,2-Dichloroethane		<100		
1,1,1-Trichloroetha		<100		
Trichloroethene		650		
Tetrachloroethene		<100		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	MW05-2016 05/17/16 05/18/16 05/18/16 Water ug/L (ppb)	0517	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160517 WORFDB8 605317-02 051813.D GCMS4 JS
Surrogates: 1,2-Dichloroethane- Toluene-d8 4-Bromofluorobenze		% Recovery: 99 108 104	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroet 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ene (EDC)	23 <1 <1 <5 <1 <1 23 <1 <1 280 ve <1		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	MW05-20160 05/17/16 05/18/16 05/18/16 Water ug/L (ppb)	)517	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160517 WORFDB8 605317-02 1/10 051828.D GCMS4 JS
Surrogates:		% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-	d4	99	57	121
Toluene-d8		102	63	127
4-Bromofluorobenze	ne	102	60	133
		Concentration		
Compounds:		ug/L (ppb)		
Vinyl chloride		21		
Chloroethane		<10		
1,1-Dichloroethene		<10		
Methylene chloride		<50		
trans-1,2-Dichloroet	thene	<10		
1,1-Dichloroethane		<10		
cis-1,2-Dichloroethe	ne	18		
1,2-Dichloroethane	(EDC)	<10		
1,1,1-Trichloroethau	ne	<10		
Trichloroethene		230		
Tetrachloroethene		<10		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW46-20 05/17/16 05/18/16 05/18/16 Water ug/L (ppb)	160517	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160517 WORFDB8 605317-03 051814.D GCMS4 JS
Surrogates:		% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-	d4	103	57	121
Toluene-d8		107	63	127
4-Bromofluorobenze	ne	103	60	133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride		11		
Chloroethane		<1		
1,1-Dichloroethene		2.7		
Methylene chloride		<5		
trans-1,2-Dichloroet	hene	<1		
1,1-Dichloroethane		<1		
cis-1,2-Dichloroethe	ne	130		
1,2-Dichloroethane	(EDC)	1.4		
1,1,1-Trichloroethau	ne	<1		
Trichloroethene		90		
Tetrachloroethene		<1		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW76-20 05/17/16 05/18/16 05/18/16 Water ug/L (ppb)	160517	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160517 WORFDB8 605317-04 051825.D GCMS4 JS
Surrogates: 1,2-Dichloroethane- Toluene-d8 4-Bromofluorobenze		% Recovery: 99 102 104	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroet 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ne (EDC)	<0.2 <1 <1 <5 <1 <1 10 <1 <1 <1 <1 <1		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	FD03-20160 05/17/16 05/18/16 05/18/16 Water ug/L (ppb)	517	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160517 WORFDB8 605317-05 051816.D GCMS4 JS
Surrogates: 1,2-Dichloroethane- Toluene-d8 4-Bromofluorobenze		% Recovery: 98 108 103	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroet 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ene (EDC)	2.5 <1 <1 <5 <1 <1 15 <1 <1 <1 650 ve <1		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	FD03-201605 05/17/16 05/18/16 05/18/16 Water ug/L (ppb)	517	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160517 WORFDB8 605317-05 1/100 051827.D GCMS4 JS
Sumagatagi		0/ Decovery	Lower	Upper Limite
Surrogates:	-14	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-	<b>u</b> 4	100	57	121
Toluene-d8		102	63	127
4-Bromofluorobenze	ne	102	60	133
		Concentration		
Compounds:		ug/L (ppb)		
Vinyl chloride		<20		
Chloroethane		<100		
1,1-Dichloroethene		<100		
Methylene chloride		<500		
trans-1,2-Dichloroet	thene	<100		
1,1-Dichloroethane		<100		
cis-1,2-Dichloroethe	ne	<100		
1,2-Dichloroethane (	(EDC)	<100		
1,1,1-Trichloroethar	ne	<100		
Trichloroethene		700		
Tetrachloroethene		<100		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Method Blan Not Applical 05/18/16 05/18/16 Water ug/L (ppb)		Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160517 WORFDB8 06-972 mb 051808.D GCMS4 JS
Surrogates: 1,2-Dichloroethane- Toluene-d8 4-Bromofluorobenze		% Recovery: 101 107 103	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroet 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ene (EDC)	<0.2 <1 <1 <5 <1 <1 <1 <1 <1 <1 <1 <1 <1		

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/25/16 Date Received: 05/17/16 Project: TOC\_01-600\_20160517 WORFDB8, F&BI 605317

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

Laboratory Code: 605313-01 (Duplicate)

5	Reporting	Sample	Duplicate	RPD
Analyte	Units	Result	Result	(Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

		Percent				
	Reporting	Spike	Recovery	Acceptance		
Analyte	Units	Level	LCS	Criteria		
Benzene	ug/L (ppb)	50	95	72-119		
Toluene	ug/L (ppb)	50	100	71-113		
Ethylbenzene	ug/L (ppb)	50	102	72-114		
Xylenes	ug/L (ppb)	150	93	72-113		
Gasoline	ug/L (ppb)	1,000	95	70-119		

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/25/16 Date Received: 05/17/16 Project: TOC\_01-600\_20160517 WORFDB8, F&BI 605317

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

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Diesel Extended	ug/L (ppb)	2,500	108	100	61-133	8

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/25/16 Date Received: 05/17/16 Project: TOC\_01-600\_20160517 WORFDB8, F&BI 605317

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

Laboratory Code: 605307-01 (Matrix Spike)

			Percent			
	Reporting	Spike	Sample	Recovery	Acceptance	
Analyte	Units	Level	Result	MS	Criteria	
Vinyl chloride	ug/L (ppb)	50	< 0.2	96	36-166	
Chloroethane	ug/L (ppb)	50	<1	109	46-160	
1,1-Dichloroethene	ug/L (ppb)	50	<1	91	60-136	
Methylene chloride	ug/L (ppb)	50	<5	99	67-132	
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	95	72-129	
1,1-Dichloroethane	ug/L (ppb)	50	<1	95	70-128	
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	99	71-127	
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	89	69-133	
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	94	60-146	
Trichloroethene	ug/L (ppb)	50	<1	96	66-135	
Tetrachloroethene	ug/L (ppb)	50	<1	93	10-226	

Laboratory Coue. Laboratory C	one of Sumple		Percent	Percent		
		C 11			<b>A</b> <i>i</i>	DDD
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Vinyl chloride	ug/L (ppb)	50	109	111	50-154	2
Chloroethane	ug/L (ppb)	50	120	124	58-146	3
1,1-Dichloroethene	ug/L (ppb)	50	102	104	67-136	2
Methylene chloride	ug/L (ppb)	50	109	113	39-148	4
trans-1,2-Dichloroethene	ug/L (ppb)	50	103	107	68-128	4
1,1-Dichloroethane	ug/L (ppb)	50	103	106	79-121	3
cis-1,2-Dichloroethene	ug/L (ppb)	50	107	111	80-123	4
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	96	100	73-132	4
1,1,1-Trichloroethane	ug/L (ppb)	50	102	105	83-130	3
Trichloroethene	ug/L (ppb)	50	103	106	80-120	3
Tetrachloroethene	ug/L (ppb)	50	92	97	76-121	5

#### 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.

 $\mbox{ca}$  - 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.

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.

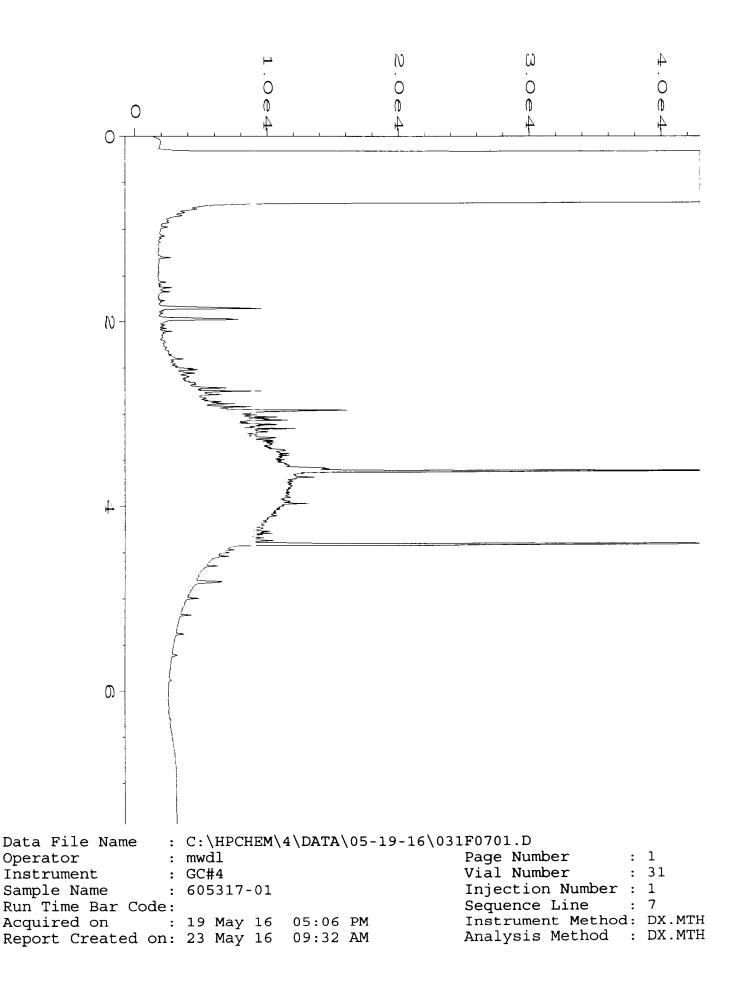
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

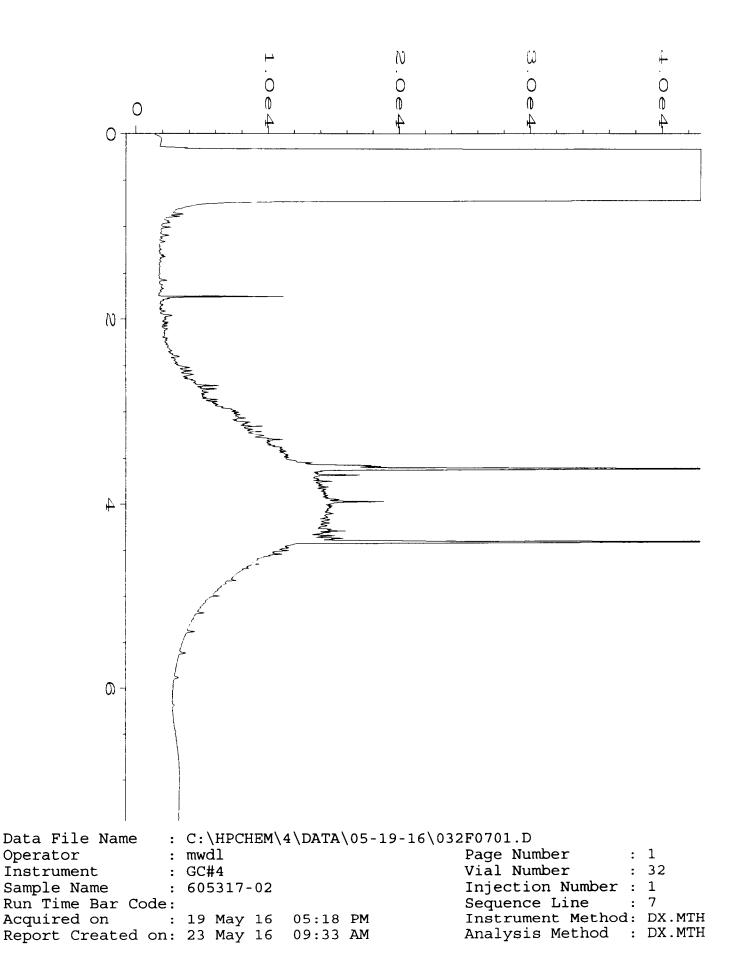
pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

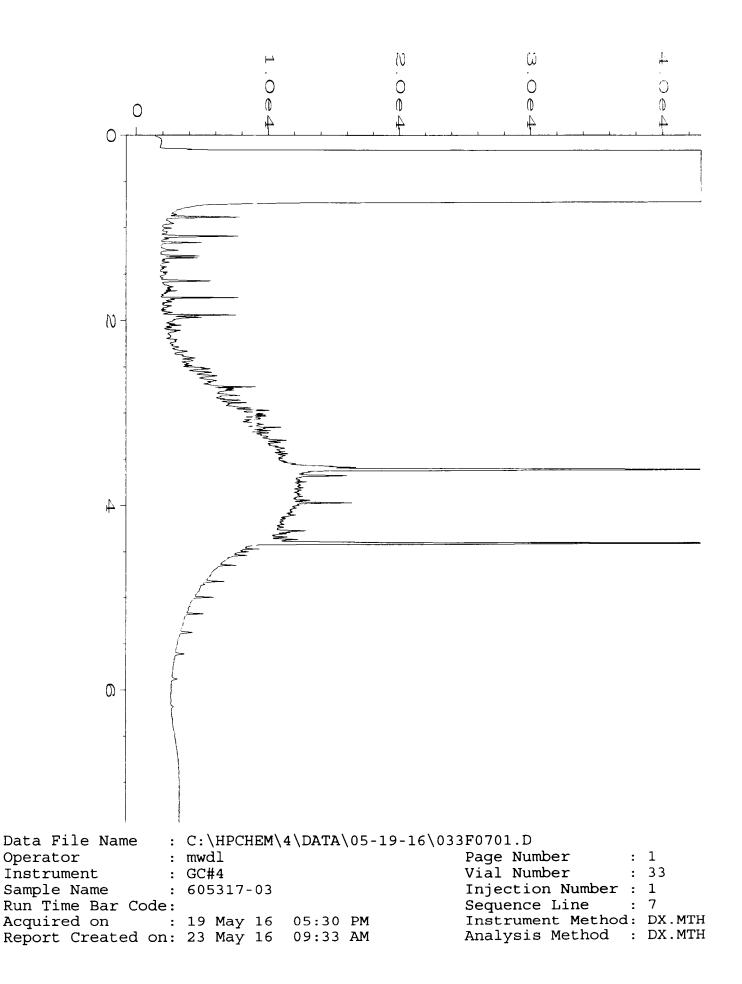
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

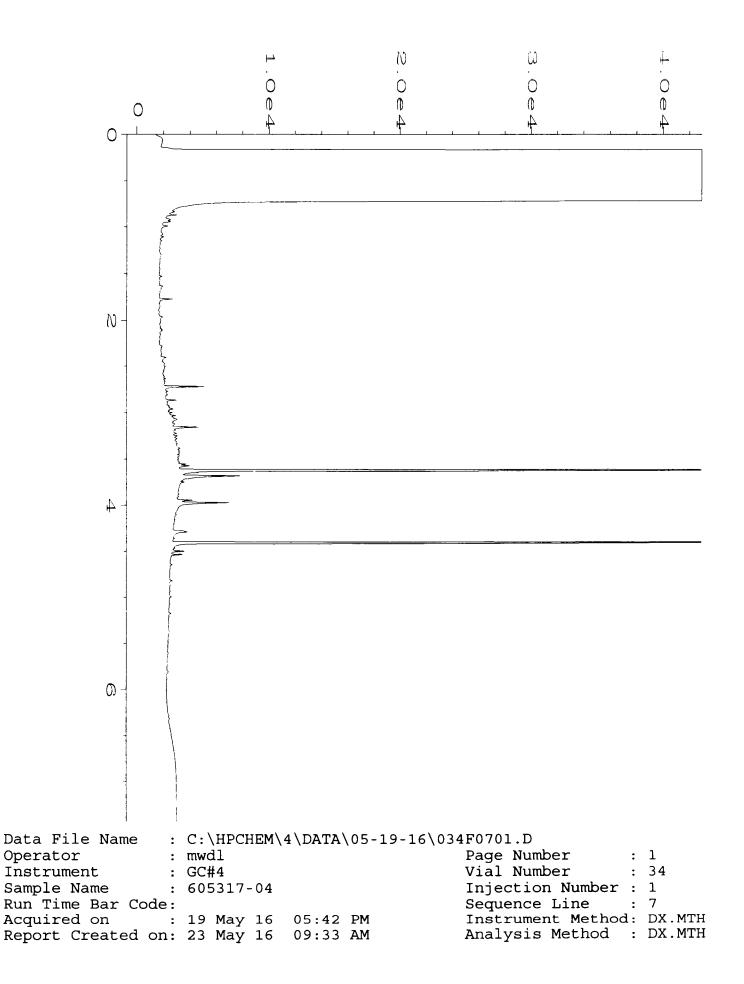
vo - The value reported fell outside the control limits established for this analyte.

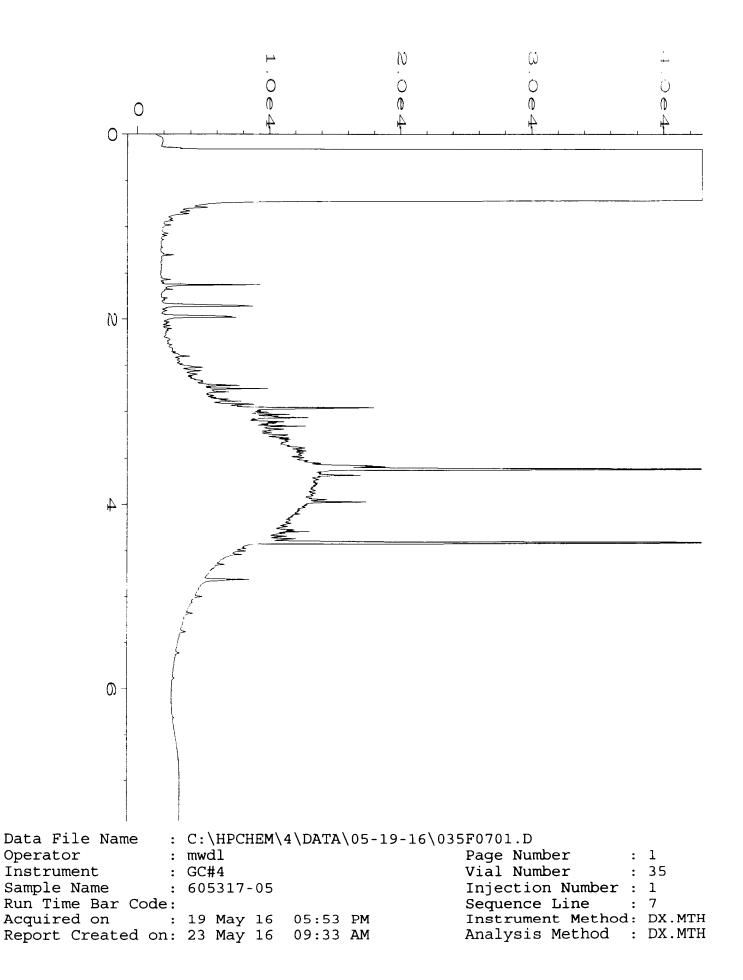
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

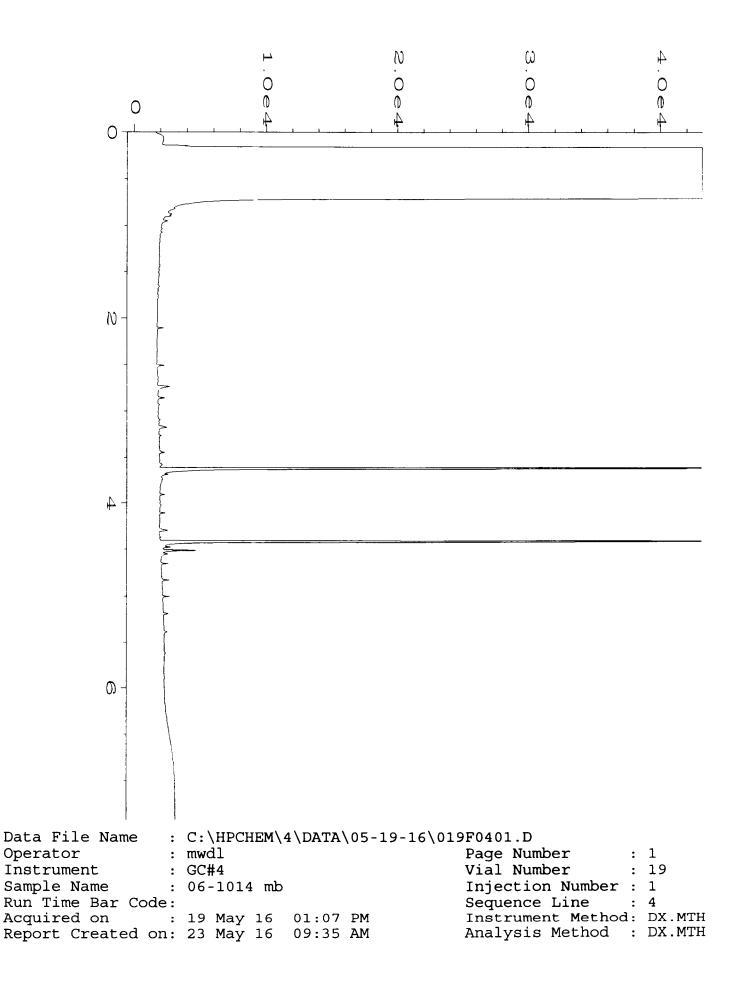


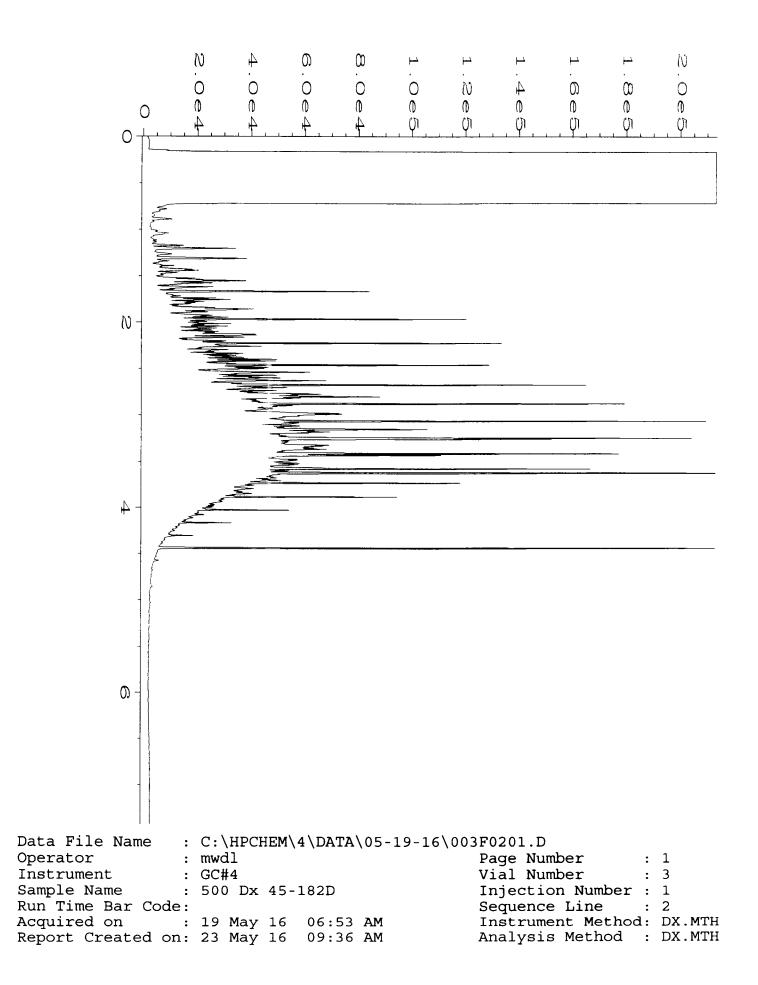












	SAMPLE CHAIN OF CUSTODY	ME OST	17/16 44/200
Send Report to Brown, cc: Jessica Brown, Jennifer Cyr, Pete Kingston, Courtney Schaumberg, Jonathan Loeffler	SAMPLERS (signature)		TURNAROUND TIME
CompanySoundEarth Strategies	PROJECT NAME/NO.	PO #	Standard (2 Weeks) RUSH
Address 2811 Fairview Ave E, Suite 2000	TOC Holdings Co. Facility No. 01-600 Seattle Terminal – ASKO Property	0440-004-41	Rush charges authorized by:
City, State, ZIP <u>Seattle, WA 98102</u>	REMARKS	EIM Y	SAMPLE DISPOSAL Dispose after 30 days Return samples Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	GRPH by NWTPH-Gx	BTEX by EPA 8021B	DRPHUORPH by NWTPH-DX	cVOCs by EPA 8260C	Methane, Ethane, and Ethene by RSK 175	Sulfate, Nitrate, Nitrite, Total P, Hardness, and Alkalinity	Total Fe and Total Min	Sulfide, TKN, and Fe 2+	Note
MW 04-2016087	MW04		のた	05-17-16	1205	HL0	6	X	X	X	X					
MWUS-20160517	L	-	091	i	1400	1	1	X	X	X	X					
01MW46-20160517	OIMW 46	•	63		1515			X	×	X	X					
01MW76-20160517	oimw76	-	04	/	1620			X	X	×	X					
FD03-20160517	F00'3	-	a5-1	Ŀ.	1215		1.	X	X	X	X					
												ļ				
				N					•						\	
-					H CI-	7-16						S	amples rec	elved at	<u></u> •c	
-														ļ		
		_			•											

Friedman & Bruya, Inc.	SIGNATURE	PRINT NAME	COMPANY	DATE TIME	
3012 16th Avenue West	Relinquished by: An Hunto	Ada Kamilton	Sound Earth	05-17-16 1811	
Seattle, WA 98119-2029	Received by:	Je Sunan	FB = I	+ +	
Ph. (206) 285-8282	Relinquished by:				
Fax (206) 283-5044	Received by:			· · · · · · · · · · · · · · · · · · ·	

Friedman & Bruya, Inc. #605344

#### 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

June 15, 2016

Tim Brown, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Mr. Brown:

Included are the results from the testing of material submitted on May 18, 2016 from the TOC\_01-600\_20160518 WORFDB8, F&BI 605344 project. There are 24 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Jessica Brown, Courtney Schaumberg, Jennifer Cyr, Pete Kingston, Jonathan Loeffler SOU0615R.DOC

#### ENVIRONMENTAL CHEMISTS

#### CASE NARRATIVE

This case narrative encompasses samples received on May 18, 2016 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC\_01-600\_20160518 WORFDB8, F&BI 605344 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	<u>SoundEarth Strategies</u>
605344 -01	01MW45-20160518
605344 -02	01MW44-20160518
605344 -03	01MW55-20160518

The samples were sent to Aquatic Research for sulfate, nitrate, nitrite, total phosphorus, hardness, alkalinity, TKN, and sulfide analyses. In addition, the samples were sent to Amtest for ferrous iron analysis. The report from Amtest is enclosed. The report from Aquatic Research will be forwarded upon receipt.

All quality control requirements were acceptable.

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16 Date Received: 05/18/16 Project: TOC\_01-600\_20160518 WORFDB8, F&BI 605344 Date Extracted: 05/19/16 Date Analyzed: 05/19/16

#### RESULTS FROM THE ANALYSIS OF WATER 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 52-124)
01MW45-20160518 605344-01	2.1	<1	<1	<3	140 x	96
01MW44-20160518 605344-02	15	<1	<1	<3	490 x	96
01MW55-20160518 605344-03	1.7	<1	<1	<3	810 x	94
Method Blank 06-999 MB	<1	<1	<1	<3	<100	93

Results Reported as ug/L (ppb)

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16 Date Received: 05/18/16 Project: TOC\_01-600\_20160518 WORFDB8, F&BI 605344 Date Extracted: 05/19/16 Date Analyzed: 05/19/16

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

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	Diesel Range (C10-C25)	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	Surrogate <u>(% Recovery)</u> (Limit 47-140)
01MW45-20160518 605344-01	1,300 x	280 x	107
01MW44-20160518 605344-02	770 x	<250	126
01MW55-20160518 605344-03	1,200 x	750 x	108
Method Blank <sup>06-1014 MB</sup>	<50	<250	98

## ENVIRONMENTAL CHEMISTS

# Analysis For Total Metals By EPA Method 200.8

Client ID:	01MW45-20160518	Client:	SoundEarth Strategies
Date Received:	05/18/16	Project:	TOC_01-600_20160518 WORFDB8,
Date Extracted:	05/23/16	Lab ID:	605344-01 x10
Date Analyzed:	05/25/16	Data File:	605344-01 x10.026
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP
	Concentration		
Analyte:	ug/L (ppb)		
Iron	10,700		
Manganese	1,390		

## ENVIRONMENTAL CHEMISTS

# Analysis For Total Metals By EPA Method 200.8

Client ID:	01MW44-20160518	Client:	SoundEarth Strategies
Date Received:	05/18/16	Project:	TOC_01-600_20160518 WORFDB8
Date Extracted:	05/23/16	Lab ID:	605344-02
Date Analyzed:	05/24/16	Data File:	605344-02.135
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP
	Concentration		
Analyte:	ug/L (ppb)		
Iron	7,600		
Manganese	844		

## ENVIRONMENTAL CHEMISTS

# Analysis For Total Metals By EPA Method 200.8

Client ID: Date Received: Date Extracted: Date Analyzed: Matrix:	01MW55-20160518 05/18/16 05/23/16 05/24/16 Water	Client: Project: Lab ID: Data File: Instrument:	SoundEarth Strategies TOC_01-600_20160518 WORFDB8 605344-03 605344-03.136 ICPMS1
Units:	ug/L (ppb)	Operator:	SP
Analyte:	Concentration ug/L (ppb)		
Iron	338		

1,480

Manganese

## ENVIRONMENTAL CHEMISTS

# Analysis For Total Metals By EPA Method 200.8

Method Blank	Client:	SoundEarth Strategies
NA	Project:	TOC_01-600_20160518 WORFDB8
05/23/16	Lab ID:	I6-325 mb
05/23/16	Data File:	I6-325 mb.069
Water	Instrument:	ICPMS1
ug/L (ppb)	Operator:	SP
Concentration		
ug/L (ppb)		
<50		
<1		
	NA 05/23/16 05/23/16 Water ug/L (ppb) Concentration ug/L (ppb) <50	NA Project: 05/23/16 Lab ID: 05/23/16 Data File: Water Instrument: ug/L (ppb) Operator: Concentration ug/L (ppb) <50

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW45-20 05/18/16 05/19/16 05/19/16 Water ug/L (ppb)	0160518	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160518 WORFDB8 605344-01 051929.D GCMS4 JS
Surrogates:		% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane	-d4	100	57	121
Toluene-d8		103	63	127
4-Bromofluorobenz	ene	104	60	133
		Concentration		
Compounds:		ug/L (ppb)		
Vinyl chloride		3.7		
Chloroethane		<1		
1,1-Dichloroethene		<1		
Methylene chloride	<u>)</u>	<5		
trans-1,2-Dichloroe	ethene	<1		
1,1-Dichloroethane		<1		
cis-1,2-Dichloroeth	ene	200 ve		
1,2-Dichloroethane	(EDC)	<1		
1,1,1-Trichloroetha	ine	<1		
Trichloroethene		190 ve		
Tetrachloroethene		<1		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW45-20 05/18/16 05/19/16 05/20/16 Water ug/L (ppb)	0160518	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160518 WORFDB8 605344-01 1/10 052016.D GCMS4 JS
Surrogates: 1,2-Dichloroethane Toluene-d8 4-Bromofluorobenz		% Recovery: 102 102 104	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ethene ene (EDC)	3.3 <10 <10 <50 <10 200 <10 200 <10 180 <10		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW44-20 05/18/16 05/19/16 05/19/16 Water ug/L (ppb)	0160518	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160518 WORFDB8 605344-02 051930.D GCMS4 JS
Surrogates: 1,2-Dichloroethane Toluene-d8 4-Brom ofluorobenz		% Recovery: 100 105 104	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	e ethene ene (EDC)	16 <1 1.3 <5 1.9 <1 90 5.5 <1 970 ve <1		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW44-20 05/18/16 05/19/16 05/20/16 Water ug/L (ppb)	0160518	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160518 WORFDB8 605344-02 1/100 052017.D GCMS4 JS
Surrogates: 1,2-Dichloroethane Toluene-d8 4-Bromofluorobenz		% Recovery: 104 102 102	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroet 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ethene ene (EDC)	<20 <100 <500 <100 <100 <100 <100 <100 1,000 <100		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW55-20 05/18/16 05/19/16 05/19/16 Water ug/L (ppb)	0160518	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160518 WORFDB8 605344-03 051931.D GCMS4 JS
Surrogates:		% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane	-d4	96 <sup>°</sup>	57	121
Toluene-d8		105	63	127
4-Bromofluorobenz	ene	104	60	133
Compounda		Concentration		
Compounds:		ug/L (ppb)		
Vinyl chloride		64		
Chloroethane		<1		
1,1-Dichloroethene	:	7.3		
Methylene chloride	<u>)</u>	<5		
trans-1,2-Dichloroe	ethene	12		
1,1-Dichloroethane		<1		
cis-1,2-Dichloroeth	ene	250 ve		
1,2-Dichloroethane	(EDC)	<1		
1,1,1-Trichloroetha	ine	<1		
Trichloroethene		1,900 ve		
Tetrachloroethene		2.5		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW55-20 05/18/16 05/19/16 05/20/16 Water ug/L (ppb)	0160518	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160518 WORFDB8 605344-03 1/100 052019.D GCMS4 JS
Surrogates: 1,2-Dichloroethane Toluene-d8	-d4	% Recovery: 102 102	Lower Limit: 57 63	Upper Limit: 121 127
4-Bromofluorobenz	ene	102	60	133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride		60		
Chloroethane		<100		
1,1-Dichloroethene		<100		
Methylene chloride	:	<500		
trans-1,2-Dichloroe	ethene	<100		
1,1-Dichloroethane		<100		
cis-1,2-Dichloroethe		250		
1,2-Dichloroethane		<100		
1,1,1-Trichloroetha	ne	<100		
Trichloroethene		2,800		
Tetrachloroethene		<100		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Method Blar Not Applical 05/19/16 05/19/16 Water ug/L (ppb)		Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160518 WORFDB8 06-1018 mb 051919.D GCMS4 JS
Surrogates: 1,2-Dichloroethane Toluene-d8 4-Bromofluorobenz		% Recovery: 98 103 103	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	e ethene ene (EDC)	<0.2 <1 <1 <5 <1 <1 <1 <1 <1 <1 <1 <1		

### ENVIRONMENTAL CHEMISTS

# Analysis For Dissolved Gasses By RSK 175

Ethene

Client Sample ID:	01MW45-20160518	Client:	SoundEarth Strategies
Date Received:	05/18/16	Project:	TOC_01-600_20160518 WORFDB8
Date Extracted:	05/23/16	Lab ID:	605344-01
Date Analyzed:	05/23/16	Data File:	028F2801.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS
	Concentration		
Compounds:	ug/L (ppb)		
Methane	190		
Ethane	<10		

### ENVIRONMENTAL CHEMISTS

# Analysis For Dissolved Gasses By RSK 175

Ethene

Client Sample ID:	01MW44-20160518	Client:	SoundEarth Strategies
Date Received:	05/18/16	Project:	TOC_01-600_20160518 WORFDB8
Date Extracted:	05/23/16	Lab ID:	605344-02
Date Analyzed:	05/23/16	Data File:	029F2901.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS
	Concentration		
Compounds:	ug/L (ppb)		
Methane	220		
Ethane	<10		

### ENVIRONMENTAL CHEMISTS

# Analysis For Dissolved Gasses By RSK 175

Ethene

Client Sample ID:	01MW55-20160518	Client:	SoundEarth Strategies
Date Received:	05/18/16	Project:	TOC_01-600_20160518 WORFDB8
Date Extracted:	05/23/16	Lab ID:	605344-03
Date Analyzed:	05/23/16	Data File:	031F3101.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS
	Concentration		
Compounds:	ug/L (ppb)		
Methane	210		
Ethane	<10		

### ENVIRONMENTAL CHEMISTS

# Analysis For Dissolved Gasses By RSK 175

Ethene

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	TOC_01-600_20160518 WORFDB8
Date Extracted:	05/23/16	Lab ID:	06-1023 mb
Date Analyzed:	05/23/16	Data File:	014F1401.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS
	Concentration		
Compounds:	ug/L (ppb)		
Methane	<5		
Ethane	<10		

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16 Date Received: 05/18/16 Project: TOC\_01-600\_20160518 WORFDB8, F&BI 605344

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

Laboratory Code:	605347-02 (Duplica	ate)		
	Reporting	Sample	Duplicate	RPD
Analyte	Units	Result	Result	(Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

		Percent			
	Reporting	Spike	Recovery	Acceptance	
Analyte	Units	Level	LCS	Criteria	
Benzene	ug/L (ppb)	50	94	65-118	
Toluene	ug/L (ppb)	50	96	72-122	
Ethylbenzene	ug/L (ppb)	50	97	73-126	
Xylenes	ug/L (ppb)	150	95	74-118	
Gasoline	ug/L (ppb)	1,000	94	69-134	

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16 Date Received: 05/18/16 Project: TOC\_01-600\_20160518 WORFDB8, F&BI 605344

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

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Diesel Extended	ug/L (ppb)	2,500	108	100	61-133	8

#### ENVIRONMENTAL CHEMISTS

#### Date of Report: 06/15/16 Date Received: 05/18/16 Project: TOC\_01-600\_20160518 WORFDB8, F&BI 605344

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

Laboratory Code	Laboratory Code: 605188-01 x10 (Matrix Spike)						
				Percent	Percent		
	Reporting	Spike	Sample	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	Result	MS	MSD	Criteria	(Limit 20)
Iron	ug/L (ppb)	100	766	152 b	108 b	70-130	34 b
Manganese	ug/L (ppb)	20	9,890	274 b	223 b	70-130	21 b

Laboratory Code: 605188-01 x10 (Matrix Spike)

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Iron	ug/L (ppb)	100	103	85-115
Manganese	ug/L (ppb)	20	106	85-115

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16 Date Received: 05/18/16 Project: TOC\_01-600\_20160518 WORFDB8, F&BI 605344

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

Laboratory Code: 605344-01 (Matrix Spike)

, , , , , , , , , , , , , , , , , , ,	Reporting	Spike	Sample	Percent Recovery	Acceptance
Analyte	Units	Level	Result	MS	Criteria
Vinyl chloride	ug/L (ppb)	50	3.7	109	36-166
Chloroethane	ug/L (ppb)	50	<1	121	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	99	60-136
Methylene chloride	ug/L (ppb)	50	<5	107	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	100	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	200 ve	92 b	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	90	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	97	60-146
Trichloroethene	ug/L (ppb)	50	190 ve	86 b	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	95	10-226

	r		Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Vinyl chloride	ug/L (ppb)	50	107	105	50-154	2
Chloroethane	ug/L (ppb)	50	119	117	58-146	2
1,1-Dichloroethene	ug/L (ppb)	50	100	96	67-136	4
Methylene chloride	ug/L (ppb)	50	111	105	39-148	6
trans-1,2-Dichloroethene	ug/L (ppb)	50	102	99	68-128	3
1,1-Dichloroethane	ug/L (ppb)	50	102	99	79-121	3
cis-1,2-Dichloroethene	ug/L (ppb)	50	105	103	80-123	2
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	94	90	73-132	4
1,1,1-Trichloroethane	ug/L (ppb)	50	100	97	83-130	3
Trichloroethene	ug/L (ppb)	50	102	99	80-120	3
Tetrachloroethene	ug/L (ppb)	50	99	96	76-121	3

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16 Date Received: 05/18/16 Project: TOC\_01-600\_20160518 WORFDB8, F&BI 605344

#### QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED GASSES USING METHOD RSK 175

Laboratory Code: 605344-03 (Duplicate)

5	Reporting	Sample	Duplicate	Relative Percent Difference
Analyte	Units	Result	Result	(Limit 20)
Methane	ug/L (ppb)	210	210	0
Ethane	ug/L (ppb)	<10	<10	nm
Ethene	ug/L (ppb)	<10	<10	nm

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Methane	ug/L (ppb)	59	81	81	50-150	0
Ethane	ug/L (ppb)	110	75	74	50-150	1
Ethene	ug/L (ppb)	102	108	99	50-150	9

#### 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.

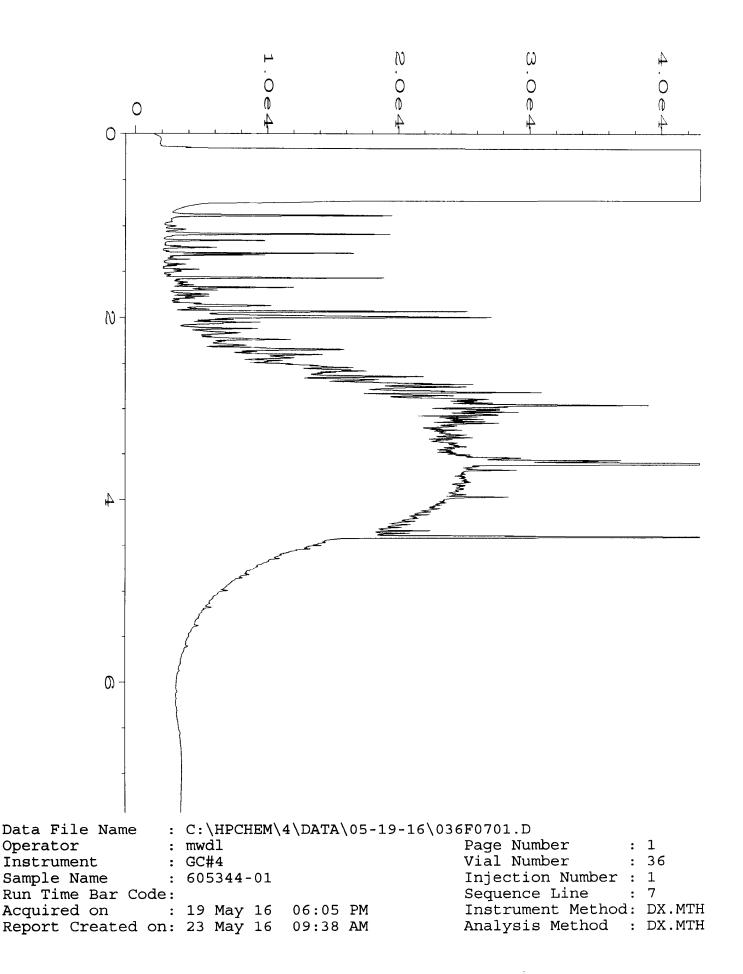
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

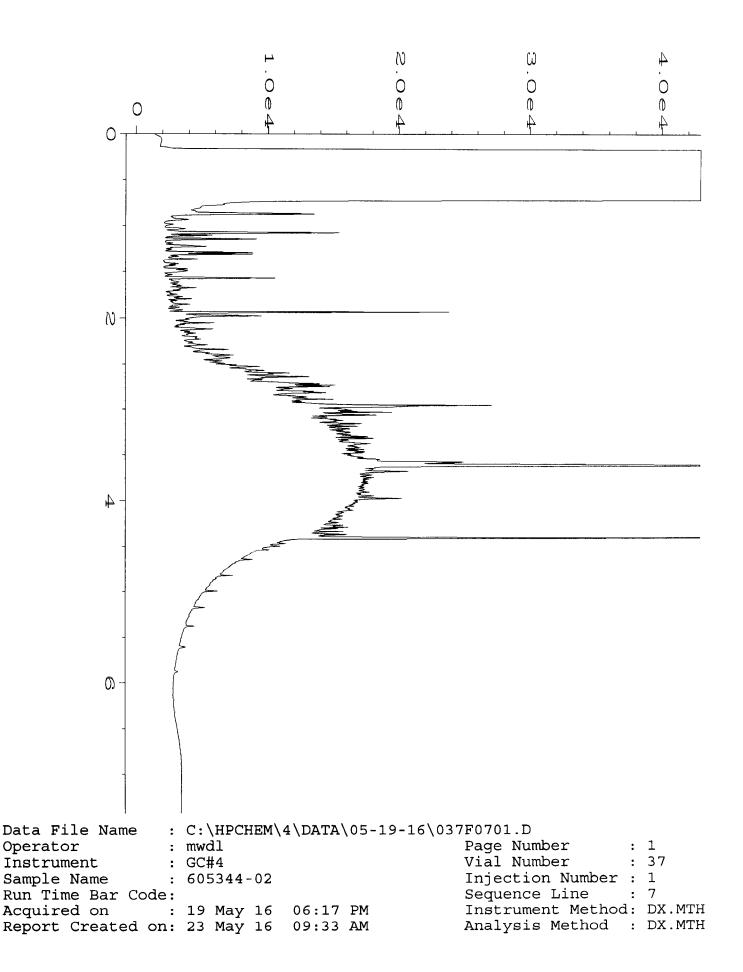
pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

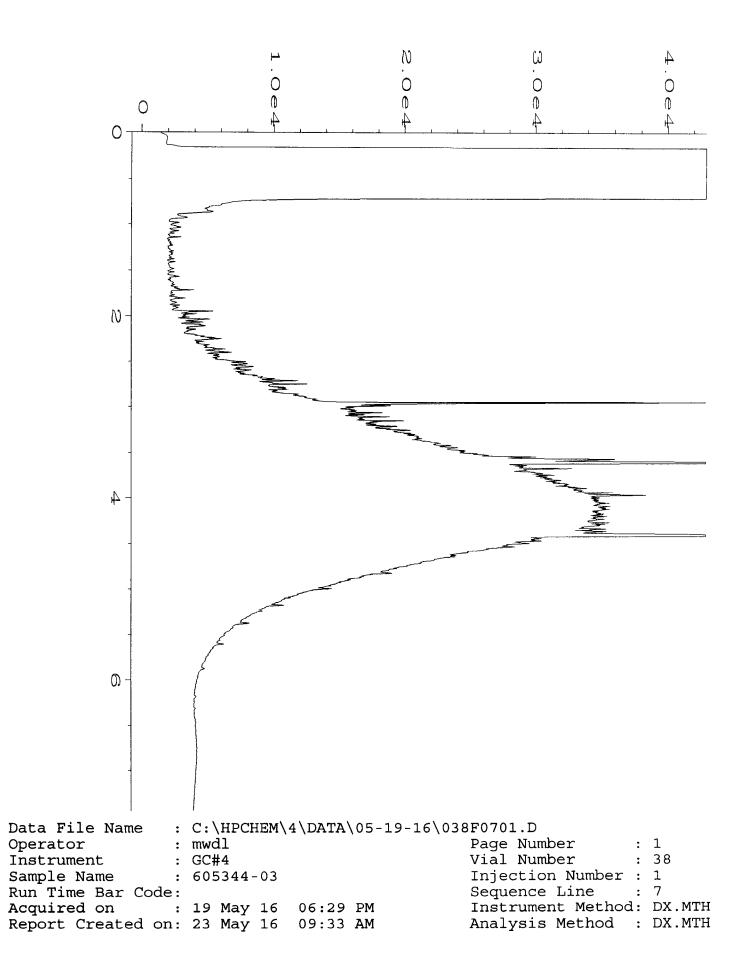
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

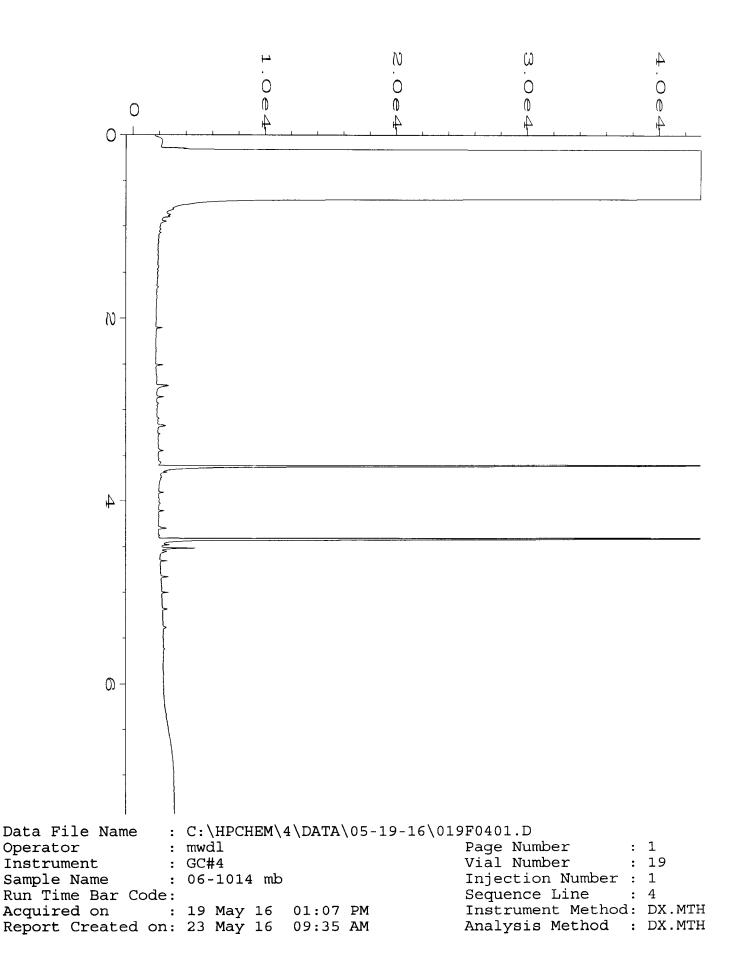
vo - The value reported fell outside the control limits established for this analyte.

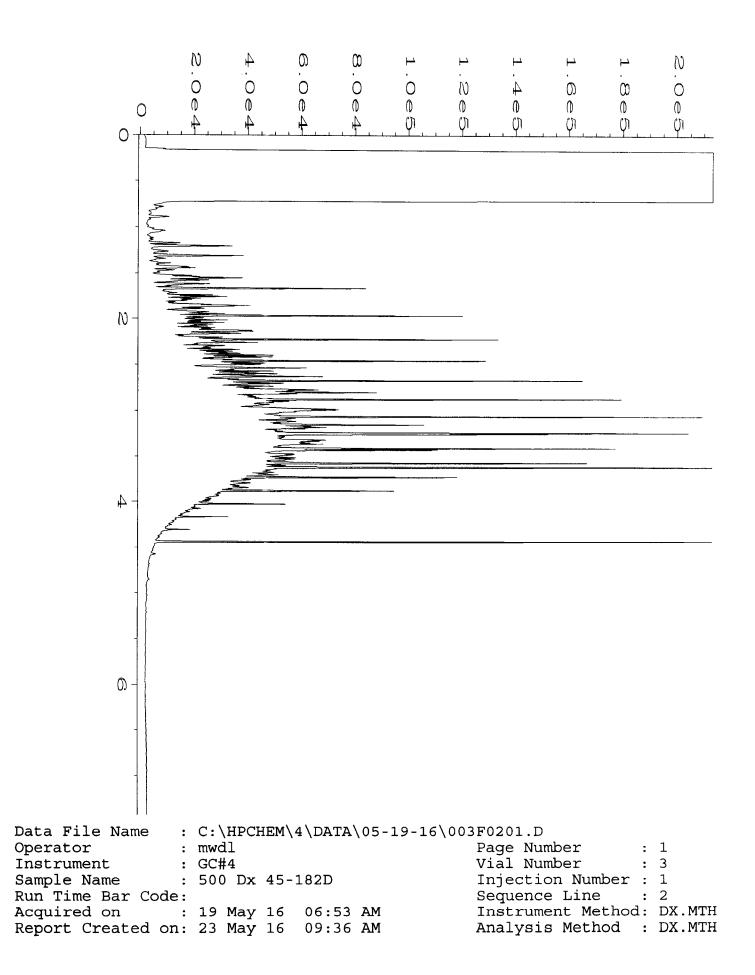
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.













Am Test Inc. 13600 NE 126TH PL Suite C Kirkland, WA 98034 (425) 885-1664 Professional Analytical Services

Jun 2 2016 Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Attention: MICHAEL ERDAHL

Dear MICHAEL ERDAHL:

Enclosed please find the analytical data for your 605344 project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
01MW45-20160518	Water	16-A009381	MET
01MW44-20160518	Water	16-A009382	MET
01MW55-20160518	Water	16-A009383	MET

Your samples were received on Thursday, May 19, 2016. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to conact me.

Sincerely,

Aaron W. Young

Laboratory Manager

Project #: 605344 PO Number: D-991

BACT = Bacteriological CONV = Conventionals MET = Metals ORG = Organics NUT=Nutrients DEM=Demand **MIN=Minerals** 

Am Test Inc. 13600 NE 126TH PL Suite C Kirkland, WA 98034 (425) 885-1664 www.amtestlab.com



Professional Analytical Services

#### **ANALYSIS REPORT**

Date Received: 05/19/16 Date Reported: 6/ 2/16

Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Attention: MICHAEL ERDAHL Project Name: 605344 Project #: 605344 PO Number: D-991 All results reported on an as received basis.

AMTEST Identification Number	16-A009381
Client Identification	01MW45-20160518
Sampling Date	05/18/16, 11:05

#### Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	9.95	mg/l		0.01	SM 3500Fe D	MJ	05/19/16

AMTEST Identification Number	
Client Identification	
Sampling Date	

16-A009382 01MW44-20160518 05/18/16, 12:45

### Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	6.09	mg/l		0.01	SM 3500Fe D	MJ	05/19/16

<b>AMTEST Identification Number</b>	r
Client Identification	
Sampling Date	

16-A009383 01MW55-20160518 05/18/16, 14:45

### Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	0.09	mg/l		0.01	SM 3500Fe D	MJ	05/19/16

aron W Aaron W. Young Laboratory Manager

Am Test Inc. 13600 NE 126th PL Suite C Kirkland, WA, 98034 (425) 885-1664 www.amtestlab.com



#### QC Summary for sample numbers: 16-A009381 to 16-A009383

#### **MATRIX SPIKES**

			1									
SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY						
16-A009383	Ferrous Iron	mg/l	0.09	0.58	0.50	98.00 %						
16-A009383	Ferrous Iron	mg/l	0.09	0.58	98.00 %							
IVIA I KIA SP	PIKE DUPLICATES											
SAMPLE #	ANALYTE	UNITS	SAMPLE + SPK	MSD VALUE		RPD						
Spike	Ferrous Iron	mg/l	0.58	0.58	0.00							
STANDARI	D REFERENCE MATERIAL	.S										
ANALYTE		UNITS	TRUE VALUE	MEASURED	RECOVERY							
Ferrous Iron		mg/l	0.50	0.50		100. %						
BLANKS												
ANALYTE		UNITS	RESULT									
Ferrous Iron		mg/l	< 0.01									

### SUBCONTRACT SAMPLE CHAIN OF CUSTODY

		501														1	l
				SUBCONTRACTER Antest							_	Page # of					
Send Report <u>ToMichael</u>	Erdahl								00 //		TURNAROUND TIME				IME P		
CompanyFriedma	n and Bruya	, Inc.		PROJECT NAME/NO. PO					PO#	Standard (2 Weeks)							
1 U				(	05344				D-C	191						athorized	by:
Address 3012 16t	h Ave W				•				-			╎╎				E DISPOS	
City, State, ZIP_ <u>Seattle</u> , V	WA 98119			REMARK	S								🗆 Dis			30 days	SAL
Phone #(206) 285-8282Fax #(206) 283-5044			F	lease Email	Res	ults						$\Box$ Ret	urn s	ampl	es		
Phone # (206) 285-8282 Fax # (206) 283-5044													l call	with	instructi	ions	
			-						ANA	LYSES	REQU	JESI	ED				
														rus	ses		
									ş					Total Phosphorus	Dissolved Gasses		
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Typ	e # of containers	e	SS		5		ity			hos	ed (	1	Notes
		Dampieu	Dampieu		containers	Total Fe	Hardness	Sulfate	erre Pate	Nitrite	Alkalinity	Sulfide	z	al P	solv		
						Tot	Haı	Sul	Forwaton Nitrate	Nit	Alk	Sul	TKN	Tot	Dis		
01MW45-20160518	9381	5/18/16	1105	water	l				×								
01MW44-2016 0518	82	ĺ ')	1245		3				X								
01 MW55-2016 0518	83	Ļ	1445		l				×								
Friedman & Bruya, Inc.		SIGNATU	JRE	1	PRIN		IAM	E			CON				I	DATE	TIME
3012 16th Avenue West	Relinquished	No Contra	n		hael Erdahl					Frie	dman	& B	ruya		5	19/4	0738
Seattle, WA 98119-2029	Received by:	M		Fe	dEr	¢,	Te	22	State?						7	B./16	930
Ph. (206) 285-8282	Relinquished	by:													1	<u>~ (// ~ -</u>	<i>٣</i>
Fax (206) 283-5044	Received by:																
l																	

605344	SAMPLE CHAIN OF CUSTODY	ME OS/18	116 V5/203/0-
Send Report To Kingston, Courtney Schaumberg, Jonathan Loeffler	SAMPLERS (signature)		Page #of
CompanySoundEarth Strategies Address2811 Fairview Ave E, Suite 2000	PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal – ASKO Property	PO # 0440-004-41	Standard (2 Weeks) RUSH Rush charges authorized by:
City, State, ZIP <u>Seattle, WA 98102</u>	REMARKS	EIM Y	SAMPLE DISPOSAL Dispose after 30 days Return samples Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	GRPH by NWTPH-Gx	BTEX by EPA <b>80</b> 21B	DRPH/ORPH by NWTPH-Dx	cVOCs by EPA 8260C	Methane, Ethane, and Ethene by RSK 175	Sulfate, Nitrate, Nitrite, Total P, Hardness, and Alkalinity	Total Fe and Total Mn	Sulfide, TKN, and Fe 2+	Notes
011145-216018		1	OIN	05-18-16	1105	1720	14	×	×	×	×	×	Х	×	X	
01 MW44-2016018		-	02)	05-15-16	1245	Hro	14	X	X	×	×	×	X	X	X	
01MW55-2016078	0111155		031	05-18-16	1445	Hzu	14	X	X	X	×	×	×	$\boldsymbol{\lambda}$	X	
				tru .												
				Atra o	5-18-16											
												<b>C</b>		. 11	°C	
												Sample	s received		- <u>·</u> ·	
											<u> </u>					
							******									

Friedman & Bruya, Inc.	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
3012 16th Avenue West	Relinquished by: an thurd	Ada Mamilton	Sound Earth	05-18-16	1720
Seattle, WA 98119-2029	Received by:	<u>î</u> <u>0</u> /1	TRET		-I-
Ph. (206) 285-8282	Relinquished by	Jon Shilman	4/072	¢	Y
Fax (206) 283-5044	Received by:				

Friedman & Bruya, Inc. #605345

#### 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

June 16, 2016

Tim Brown, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Mr. Brown:

Included are the results from the testing of material submitted on May 18, 2016 from the TOC\_01-600\_20160518 WORFDB8, F&BI 605345 project. There are 22 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Jessica Brown, Courtney Schaumberg, Jennifer Cyr SOU0616R.DOC

#### ENVIRONMENTAL CHEMISTS

#### CASE NARRATIVE

This case narrative encompasses samples received on May 18, 2016 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC\_01-600\_20160518 WORFDB8, F&BI 605345 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u> <u>SoundEarth Strategies</u>	
605345 -01 01MW70-20160518	
605345 -02 01MW71-20160518	
605345 -03 01MW63-20160518	
605345 -04 FD04-20160518	

Sample 01MW63-20160518 was sent to Aquatic Research for sulfate, nitrate, nitrite, total phosphorus, hardness, alkalinity, TKN, and sulfide analyses. In addition, sample 01MW63-20160518 was sent to Amtest for ferrous iron analysis. The report from Amtest is enclosed. The report from Aquatic Research will be forwarded upon receipt.

All quality control requirements were acceptable.

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/16/16 Date Received: 05/18/16 Project: TOC\_01-600\_20160518 WORFDB8, F&BI 605345 Date Extracted: 05/19/16 Date Analyzed: 05/19/16

#### RESULTS FROM THE ANALYSIS OF WATER 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 52-124)
01MW70-20160518 605345-01	<1	<1	<1	<3	210 x	94
01MW71-20160518 605345-02	<1	1.4	<1	<3	930 x	91
01MW63-20160518 605345-03	3.8	2.9	<1	<3	1,300 x	98
FD04-20160518 605345-04	5.3	2.8	<1	<3	1,400 x	94
Method Blank 06-999 MB	<1	<1	<1	<3	<100	93

Results Reported as ug/L (ppb)

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/16/16 Date Received: 05/18/16 Project: TOC\_01-600\_20160518 WORFDB8, F&BI 605345 Date Extracted: 05/19/16 Date Analyzed: 05/20/16

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

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	Diesel Range (C10-C25)	Motor Oil Range (C25-C36)	Surrogate <u>(% Recovery)</u> (Limit 41-152)
01MW70-20160518 605345-01	1,200 x	1,500 x	128
01MW71-20160518 605345-02	1,700 x	2,300 x	132
01MW63-20160518 <sup>605345-03</sup>	850 x	680 x	121
FD04-20160518 605345-04	1,000 x	840 x	128
Method Blank <sup>06-1035 MB</sup>	<50	<250	138

### ENVIRONMENTAL CHEMISTS

# Analysis For Total Metals By EPA Method 200.8

01MW63-20160518	Client:	SoundEarth Strategies
05/18/16	Project:	TOC_01-600_20160518 WORFDB8
05/23/16	Lab ID:	605345-03
05/24/16	Data File:	605345-03.137
Water	Instrument:	ICPMS1
ug/L (ppb)	Operator:	SP
Concentration		
ug/L (ppb)		
4.470		
1,020		
	05/18/16 05/23/16 05/24/16 Water ug/L (ppb) Concentration ug/L (ppb) 4,470	05/18/16 Project: 05/23/16 Lab ID: 05/24/16 Data File: Water Instrument: ug/L (ppb) Operator: Concentration ug/L (ppb) 4,470

### ENVIRONMENTAL CHEMISTS

# Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	TOC_01-600_20160518 WORFDB8
Date Extracted:	05/23/16	Lab ID:	I6-325 mb
Date Analyzed:	05/23/16	Data File:	I6-325 mb.069
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP
Analyte:	Concentration ug/L (ppb)		
Iron Manganese	<50 <1		

# ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW70-20 05/18/16 05/19/16 05/19/16 Water ug/L (ppb)	160518	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160518 WORFDB8 605345-01 051932.D GCMS4 JS
Surrogates: 1,2-Dichloroethane- Toluene-d8 4-Bromofluorobenze		% Recovery: 98 105 105	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroet 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ne (EDC)	0.87 <1 <1 <5 7.3 <1 37 <1 <1 <1 430 ve <1		

### ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW70-202 05/18/16 05/19/16 05/20/16 Water ug/L (ppb)	160518	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160518 WORFDB8 605345-01 1/100 052021.D GCMS4 JS
Surrogates:		% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-	d4	100	57	121
Toluene-d8		102	63	127
4-Bromofluorobenze	ne	103	60	133
		Concentration		
Compounds:		ug/L (ppb)		
Vinyl chloride		<20		
Chloroethane		<100		
1,1-Dichloroethene		<100		
Methylene chloride		<500		
trans-1,2-Dichloroet	hene	<100		
1,1-Dichloroethane		<100		
cis-1,2-Dichloroethe		<100		
1,2-Dichloroethane (		<100		
1,1,1-Trichloroethar	ne	<100		
Trichloroethene		480		
Tetrachloroethene		<100		

# ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW71-20 05/18/16 05/19/16 05/19/16 Water ug/L (ppb)	160518	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160518 WORFDB8 605345-02 051933.D GCMS4 JS
Surrogates: 1,2-Dichloroethane- Toluene-d8 4-Bromofluorobenze		% Recovery: 98 107 104	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroet 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ne (EDC)	12 <1 11 <5 20 <1 110 <1 <1 2,200 ve <1		

### ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW71-202 05/18/16 05/19/16 05/20/16 Water ug/L (ppb)	160518	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160518 WORFDB8 605345-02 1/100 052022.D GCMS4 JS
Surrogates:		% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-	d4	100	57	121
Toluene-d8	u4	100	63	121
4-Bromofluorobenze	ne	103	60	133
		Concentration		
Compounds:		ug/L (ppb)		
Vinyl chloride		<20		
Chloroethane		<100		
1,1-Dichloroethene		<100		
Methylene chloride		<500		
trans-1,2-Dichloroet	thene	<100		
1,1-Dichloroethane		<100		
cis-1,2-Dichloroethe	ne	120		
1,2-Dichloroethane	(EDC)	<100		
1,1,1-Trichloroetha	ne	<100		
Trichloroethene		4,900		
Tetrachloroethene		<100		

# ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW63-20 05/18/16 05/19/16 05/19/16 Water ug/L (ppb)	160518	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160518 WORFDB8 605345-03 051934.D GCMS4 JS
Surrogates:		% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-	d4	96	57	121
Toluene-d8		103	63	127
4-Bromofluorobenze	ene	104	60	133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride		81		
Chloroethane		<1		
1,1-Dichloroethene		8.2		
Methylene chloride		<5		
trans-1,2-Dichloroe	thene	6.8		
1,1-Dichloroethane		<1		
cis-1,2-Dichloroethe		420 ve		
1,2-Dichloroethane		2.5		
1,1,1-Trichloroetha	ne	<1		
Trichloroethene		2,800 ve		
Tetrachloroethene		<1		

### ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW63-201 05/18/16 05/19/16 05/20/16 Water ug/L (ppb)	160518	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160518 WORFDB8 605345-03 1/100 052023.D GCMS4 JS
Surrogates:		% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-	d4	100	57	121
Toluene-d8		100	63	127
4-Bromofluorobenze	ne	102	60	133
		Concentration		
Compounds:		ug/L (ppb)		
Vinyl chloride		79		
Chloroethane		<100		
1,1-Dichloroethene		<100		
Methylene chloride		<500		
trans-1,2-Dichloroet	thene	<100		
1,1-Dichloroethane		<100		
cis-1,2-Dichloroethe		440		
1,2-Dichloroethane		<100		
1,1,1-Trichloroethar	ne	<100		
Trichloroethene		7,700		
Tetrachloroethene		<100		

# ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	FD04-20160 05/18/16 05/19/16 05/19/16 Water ug/L (ppb)	518	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160518 WORFDB8 605345-04 051935.D GCMS4 JS
Surrogates:		% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-	d4	98	57	121
Toluene-d8	ui	104	63	127
4-Bromofluorobenze	ne	101	60	133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride		81		
Chloroethane		<1		
1,1-Dichloroethene		8.4		
Methylene chloride		<5		
trans-1,2-Dichloroet	thene	7.0		
1,1-Dichloroethane		<1		
cis-1,2-Dichloroethe	ene	420 ve		
1,2-Dichloroethane		2.5		
1,1,1-Trichloroetha	ne	<1		
Trichloroethene		2,800 ve		
Tetrachloroethene		<1		

### ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	FD04-201603 05/18/16 05/19/16 05/20/16 Water ug/L (ppb)	518	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160518 WORFDB8 605345-04 1/100 052024.D GCMS4 JS
Surrogates:		% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-	d4	99	57	121
Toluene-d8		104	63	127
4-Bromofluorobenze	ne	103	60	133
		Concentration		
Compounds:		ug/L (ppb)		
Vinyl chloride		84		
Chloroethane		<100		
1,1-Dichloroethene		<100		
Methylene chloride		<500		
trans-1,2-Dichloroet	thene	<100		
1,1-Dichloroethane		<100		
cis-1,2-Dichloroethe		420		
1,2-Dichloroethane		<100		
1,1,1-Trichloroetha	ne	<100		
Trichloroethene		7,500		
Tetrachloroethene		<100		

# ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Method Blar Not Applical 05/19/16 05/19/16 Water ug/L (ppb)		Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160518 WORFDB8 06-1018 mb 051919.D GCMS4 JS
Surrogates:		% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-	d4	98	57	121
Toluene-d8	ui	103	63	127
4-Bromofluorobenze	ene	103	60	133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride		<0.2		
Chloroethane		<1		
1,1-Dichloroethene		<1		
Methylene chloride		<5		
trans-1,2-Dichloroet	thene	<1		
1,1-Dichloroethane		<1		
cis-1,2-Dichloroethe	ene	<1		
1,2-Dichloroethane		<1		
1,1,1-Trichloroetha	ne	<1		
Trichloroethene		<1		
Tetrachloroethene		<1		

### ENVIRONMENTAL CHEMISTS

# Analysis For Dissolved Gasses By RSK 175

Ethene

Client Sample ID:	01MW63-20160518	Client:	SoundEarth Strategies
Date Received:	05/18/16	Project:	TOC_01-600_20160518 WORFDB8
Date Extracted:	05/24/16	Lab ID:	605345-03
Date Analyzed:	05/24/16	Data File:	011F1101.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS
	Concentration		
Compounds:	ug/L (ppb)		
Methane	220		
Ethane	<10		

<10

### ENVIRONMENTAL CHEMISTS

# Analysis For Dissolved Gasses By RSK 175

Ethene

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	TOC_01-600_20160518 WORFDB8
Date Extracted:	05/24/16	Lab ID:	06-1024 mb
Date Analyzed:	05/24/16	Data File:	005F0501.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS
	Concentration		
Compounds:	ug/L (ppb)		
Methane	<5		
Ethane	<10		

<10

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/16/16 Date Received: 05/18/16 Project: TOC\_01-600\_20160518 WORFDB8, F&BI 605345

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

Laboratory Code: 605347-02 (Duplicate)

5	Reporting	Sample	Duplicate	RPD
Analyte	Units	Result	Result	(Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

		Percent				
	Reporting	Spike	Recovery	Acceptance		
Analyte	Units	Level	LCS	Criteria		
Benzene	ug/L (ppb)	50	94	65-118		
Toluene	ug/L (ppb)	50	96	72-122		
Ethylbenzene	ug/L (ppb)	50	97	73-126		
Xylenes	ug/L (ppb)	150	95	74-118		
Gasoline	ug/L (ppb)	1,000	94	69-134		

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/16/16 Date Received: 05/18/16 Project: TOC\_01-600\_20160518 WORFDB8, F&BI 605345

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

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Diesel Extended	ug/L (ppb)	2,500	121	116	63-142	4

#### ENVIRONMENTAL CHEMISTS

#### Date of Report: 06/16/16 Date Received: 05/18/16 Project: TOC\_01-600\_20160518 WORFDB8, F&BI 605345

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

		G .!		Percent	Percent	<b>.</b> .	DDD
	Reporting	Spike	Sample	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	Result	MS	MSD	Criteria	(Limit 20)
Iron	ug/L (ppb)	100	766	152 b	108 b	70-130	34 b
Manganese	ug/L (ppb)	20	9,890	274 b	223 b	70-130	21 b

Laboratory Code: 605188-01 x10 (Matrix Spike)

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Iron	ug/L (ppb)	100	103	85-115
Manganese	ug/L (ppb)	20	106	85-115

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/16/16 Date Received: 05/18/16 Project: TOC\_01-600\_20160518 WORFDB8, F&BI 605345

#### **QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 605344-01 (Matrix Spike)

	I /			Percent	
	Reporting	Spike	Sample	Recovery	Acceptance
Analyte	Units	Level	Result	MS	Criteria
Vinyl chloride	ug/L (ppb)	50	3.7	109	36-166
Chloroethane	ug/L (ppb)	50	<1	121	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	99	60-136
Methylene chloride	ug/L (ppb)	50	<5	107	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	100	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	200 ve	92 b	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	90	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	97	60-146
Trichloroethene	ug/L (ppb)	50	190 ve	86 b	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	95	10-226

Laboratory Code: Laboratory Control Sample

Laboratory Code. Laboratory Control Sample								
		Percent	Percent					
Reporting	Spike	Recovery	Recovery	Acceptance	RPD			
Units	Level	LCS	LCSD	Criteria	(Limit 20)			
ug/L (ppb)	50	107	105	50-154	2			
ug/L (ppb)	50	119	117	58-146	2			
ug/L (ppb)	50	100	96	67-136	4			
ug/L (ppb)	50	111	105	39-148	6			
ug/L (ppb)	50	102	99	68-128	3			
ug/L (ppb)	50	102	99	79-121	3			
ug/L (ppb)	50	105	103	80-123	2			
ug/L (ppb)	50	94	90	73-132	4			
ug/L (ppb)	50	100	97	83-130	3			
ug/L (ppb)	50	102	99	80-120	3			
ug/L (ppb)	50	99	96	76-121	3			
	Reporting Units ug/L (ppb) ug/L (ppb) ug/L (ppb) ug/L (ppb) ug/L (ppb) ug/L (ppb) ug/L (ppb) ug/L (ppb) ug/L (ppb) ug/L (ppb)	Reporting Units         Spike Level           ug/L (ppb)         50           ug/L (ppb)         50	Reporting         Spike         Percent           Reporting         Spike         Recovery           Units         Level         LCS           ug/L (ppb)         50         107           ug/L (ppb)         50         119           ug/L (ppb)         50         100           ug/L (ppb)         50         111           ug/L (ppb)         50         102           ug/L (ppb)         50         102           ug/L (ppb)         50         105           ug/L (ppb)         50         94           ug/L (ppb)         50         100           ug/L (ppb)         50         102	Percent         Percent         Percent           Reporting         Spike         Recovery         Recovery           Units         Level         LCS         LCSD           ug/L (ppb)         50         107         105           ug/L (ppb)         50         119         117           ug/L (ppb)         50         100         96           ug/L (ppb)         50         111         105           ug/L (ppb)         50         102         99           ug/L (ppb)         50         102         99           ug/L (ppb)         50         103         103           ug/L (ppb)         50         94         90           ug/L (ppb)         50         100         97           ug/L (ppb)         50         102         99	Percent         Percent         Percent           Reporting Units         Spike Level         Recovery LCS         Recovery LCSD         Acceptance Criteria           ug/L (ppb)         50         107         105         50-154           ug/L (ppb)         50         119         117         58-146           ug/L (ppb)         50         100         96         67-136           ug/L (ppb)         50         111         105         39-148           ug/L (ppb)         50         102         99         68-128           ug/L (ppb)         50         102         99         79-121           ug/L (ppb)         50         105         103         80-123           ug/L (ppb)         50         94         90         73-132           ug/L (ppb)         50         100         97         83-130           ug/L (ppb)         50         102         99         80-120			

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/16/16 Date Received: 05/18/16 Project: TOC\_01-600\_20160518 WORFDB8, F&BI 605345

#### QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED GASSES USING METHOD RSK 175

Laboratory Code: 605407-01 (Duplicate)

5	Reporting Units S	Duplicate	Relative Percent Difference	
Analyte			Result	(Limit 20)
Methane	ug/L (ppb)	117	97	19
Ethane	ug/L (ppb)	<10	<10	nm
Ethene	ug/L (ppb)	<10	<10	nm

			Percent	Percent		
	Reporting Units	Spike	Recovery	Recovery	Acceptance	RPD
Analyte		Level	LCS	LCSD	Criteria	(Limit 20)
Methane	ug/L (ppb)	59	81	80	50-150	1
Ethane	ug/L (ppb)	110	79	78	50-150	1
Ethene	ug/L (ppb)	102	93	98	50-150	5

#### 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.

 $\mbox{ca}$  - 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.



Am Test Inc. 13600 NE 126TH PL Suite C Kirkland, WA 98034 (425) 885-1664 Professional Analytical Services

Jun 2 2016 Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Attention: MICHAEL ERDAHL

Dear MICHAEL ERDAHL:

Enclosed please find the analytical data for your 605345 project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
01MW63-20160518	Water	16-A009380	MET

Your sample was received on Thursday, May 19, 2016. At the time of receipt, the sample was logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to conact me.

Sincerely,

Aaron W. Young Laboratory Manager

Project #: 605345 PO Number: D-991

BACT = Bacteriological CONV = Conventionals MET = Metals ORG = Organics NUT=Nutrients DEM=Demand **MIN=Minerals** 

Am Test Inc. 13600 NE 126TH PL Suite C Kirkland, WA 98034 (425) 885-1664 www.amtestlab.com



Professional Analytical Services

#### **ANALYSIS REPORT**

Date Received: 05/19/16 Date Reported: 6/ 2/16

Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Attention: MICHAEL ERDAHL Project Name: 605345 Project #: 605345 PO Number: D-991 All results reported on an as received basis.

AMTEST Identification Number	16-A009380
Client Identification	01MW63-20160518
Sampling Date	05/18/16, 14:48

#### Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	2.56	mg/l		0.01	SM 3500Fe D	MJ	05/19/16

aron W Aaron W. Young Laboratory Manager

Am Test Inc. 13600 NE 126th PL Suite C Kirkland, WA, 98034 (425) 885-1664 www.amtestlab.com



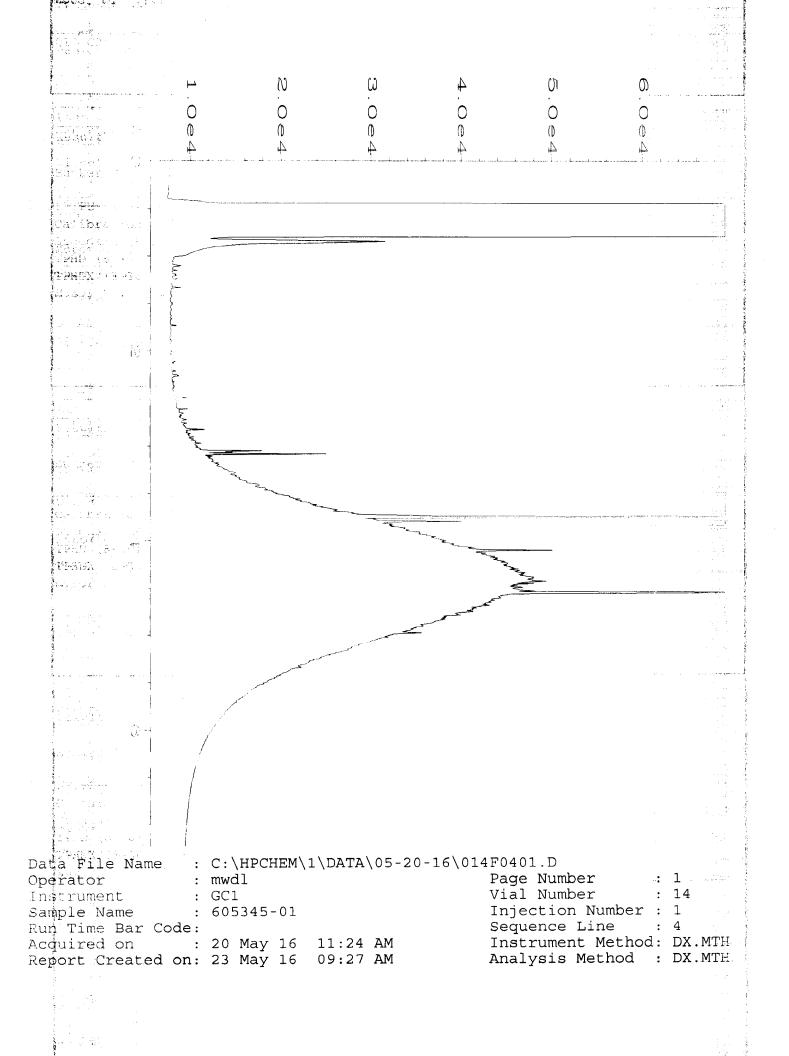
#### QC Summary for sample number: 16-A009380

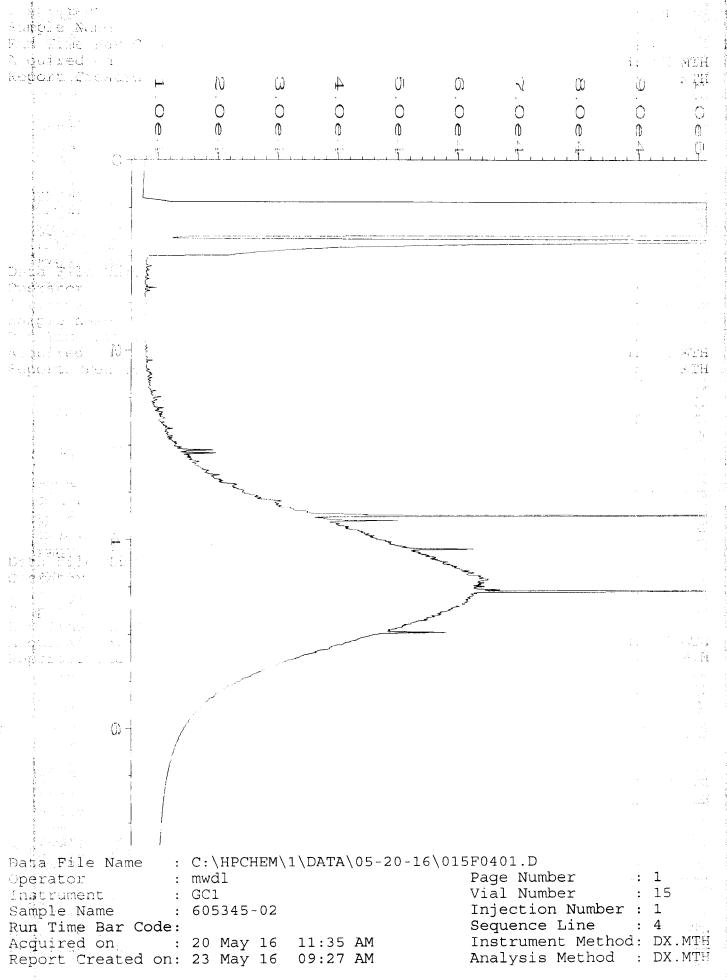
#### **MATRIX SPIKES**

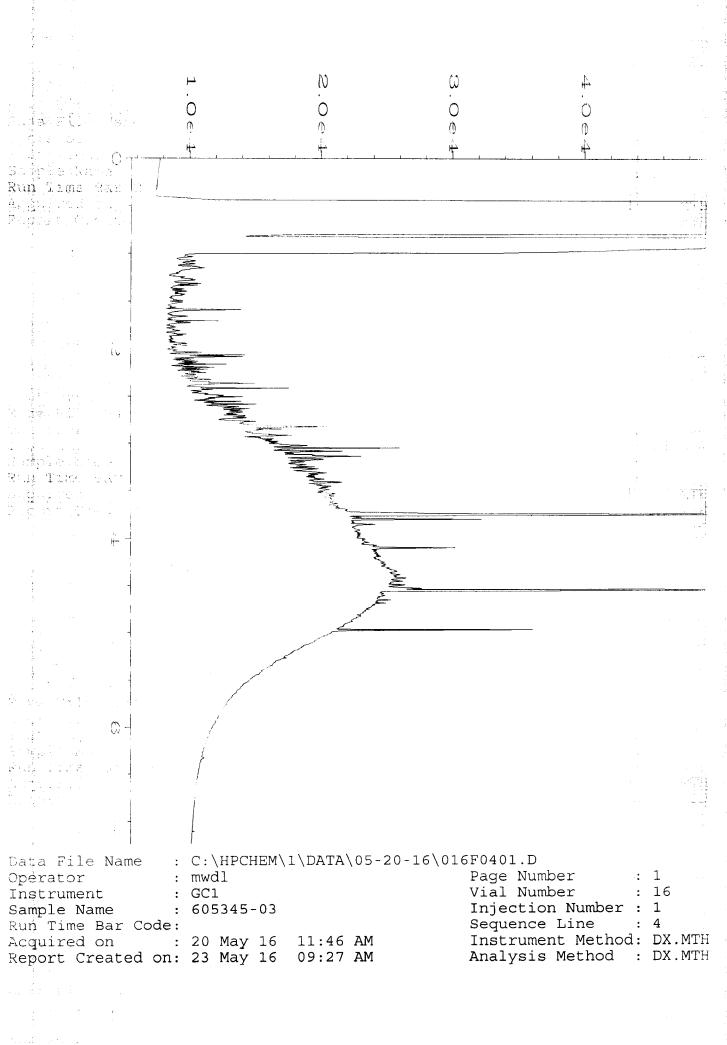
SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY			
16-A009383	Ferrous Iron	mg/l	0.09	0.58	0.50	98.00 %			
16-A009383	Ferrous Iron	mg/l	0.09	0.58	0.50	98.00 %			
MATRIX SP	IKE DUPLICATES								
SAMPLE #	ANALYTE	UNITS	SAMPLE + SPK	MSD VALUE		RPD			
Spike	Ferrous Iron	mg/l	0.58	0.58		0.00			
STANDARD REFERENCE MATERIALS									
ANALYTE		UNITS	TRUE VALUE	MEASURED	VALUE	RECOVERY			
Ferrous Iron		mg/l	0.50	0.50		100. %			
BLANKS									
ANALYTE		UNITS	RESULT						
Ferrous Iron		mg/l	< 0.01						

### SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report <u>To Michael Erdahl</u>				SUBCONTRACTER Amtst							Page # of TURNAROUND TIME ¶.							
									PO#									
					605345 D-0					991		C RUSH Rush charges authorized by					l by:	
Address			DEMA						1		SAMPLE DISPOSAL							
City, State, ZIPSeattle, WA_98119			REMARKS									🗆 Dispose after 30 days						
Phone #(206) 285-8282Fax #(206) 283-5044				Please Email Results							<ul><li>Return samples</li><li>Will call with instructions</li></ul>						ions	
										ANA	LYSES REQUESTED							
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type		# of containers	Total Fe	Hardness	Sulfate	Farrous Iron Nitrate	Nitrite	Alkalinity	Sulfide	TKN	Total Phosphorus	Dissolved Gasses	]	Notes
01MW63-20160518	9380	5/18/16	1448	water		١				×								
Friedman & Bruya, Inc.		SIGNATU	JRE	7	PRINT NAME				COMPANY					DATE	TIME			
3012 16th Avenue West	Relinquished by				Michael Erdahl					Frie					5	19/16	0738	
Seattle, WA 98119-2029	Received by: PM				PEREX 7=22											930		
Ph. (206) 285-8282	Relinquished by:				- X										-		1 × ~~~	
Fax (206) 283-5044	Received by:																	
L	· · · · · · · · · · · · · · · · · · ·			<b>i</b>												_		•

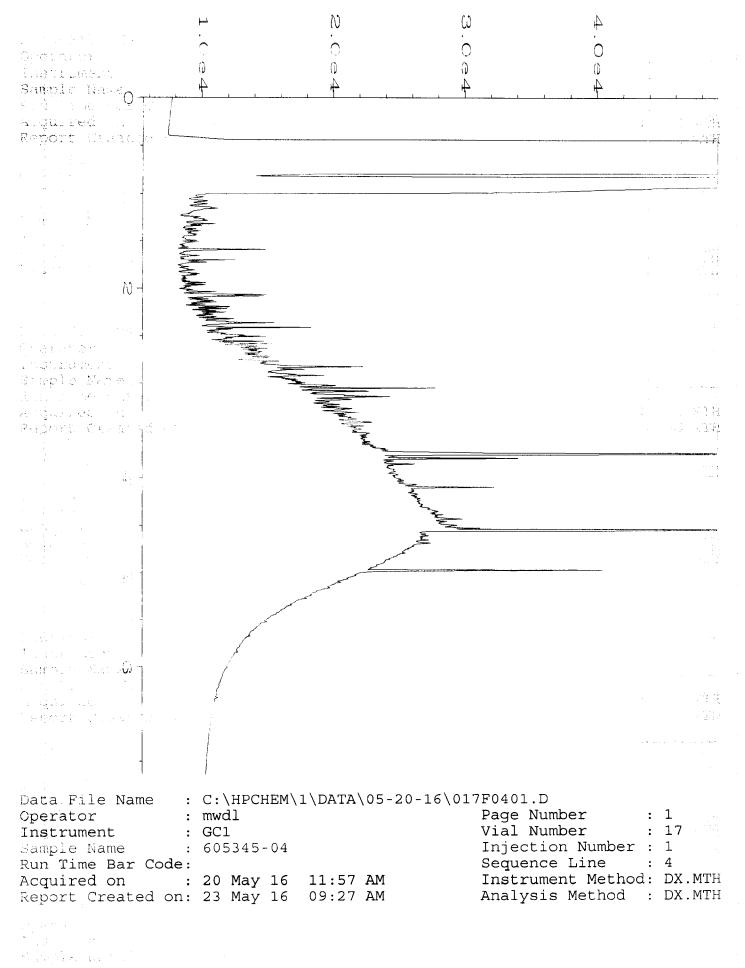












	<b>⊢</b>	lu	ώ ·	₩	
	O 0	0	0	Ŭ M	
a sharaya na sharan Balan inga wa sharan <mark>a a</mark> ra			4 	Å	
Angel es of Data File meter					
tha'r Clerc. Sampie Name	•			°	
Ron Time Herrich A olimpia	< \$			:	t i selasi
	- -				
N - {					
Real Andreas (States)	-				
	,				
Dapa				£	
Britting Street Sintagolere Netters	-			<del>2</del> .	
	-				
					1917 - 1919 - 1919 - 1919 - 1919 - 1919 - 1919 - 1919 - 1919 - 1919 - 1919 - 1919 - 1919 - 1919 - 1919 - 1919 -
res l					
a 1917 - 1900 - 1900 - 1900 - 1900 - 1900 - 1900 - 1900 - 1900 - 1900 - 1900 - 1900 - 1900 - 1900 - 1900 - 1900					
Data da la da la					
enne en la compañía de la compañía En entre de la compañía de la compañí					
		L\DATA\05-20-16	\011F0401.D		
Operator Instrument	: mwdl : GC1		Page Numbe Vial Numbe		1 1
Sample Name Run Time Bar Cod			Injection Sequence L		
Acquired on Report Created c	: 20 May 16	10:51 AM	Instrument Analysis M	Method:	DX.MTH
Report Created C	MI: 25 May 10	09.20 AN	Anarysis M		ex . 1.1 . 1.1
an a					
9 1997 - 199 1997 - 199					

	4 VI	Ø	ω	щ	1	freed	yuur s
Company of the second sec		0 #	0 1 1	O Ø ŲI	N O	4 0 0	0 0 0
Dota Sile Nus Operado Lastramena Sample Ness							
Ran Inne Klanky Arguinnet ur Reno – Correge						•	- 193 <b>日</b> 1011月1日
							· · ·
Datis Porcessan Creasing Instrument Semple Nuter Run Tisse Poet						· · · · · · · · · · · · · · · · · · ·	
Constant De reference daar op de Sourgeleite Norsen daar Sourgeleite Subservierende							
L.	: mwdl : GC1		5-20-16	Page Vial	)1.D Number Number ection N	· · · · ·	
Run Time Bar Code Acquired on Report Created on	: : 20 May 16	06:51 A	M M	Sequ Inst	ience Li rument ysis Me	ne : Method:	2 DX.MTH



Am Test Inc. 13600 NE 126TH PL Suite C Kirkland, WA 98034 (425) 885-1664 Professional Analytical Services

Jun 2 2016 Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Attention: MICHAEL ERDAHL

Dear MICHAEL ERDAHL:

Enclosed please find the analytical data for your 605345 project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
01MW63-20160518	Water	16-A009380	MET

Your sample was received on Thursday, May 19, 2016. At the time of receipt, the sample was logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to conact me.

Sincerely,

Aaron W. Young Laboratory Manager

Project #: 605345 PO Number: D-991

BACT = Bacteriological CONV = Conventionals MET = Metals ORG = Organics NUT=Nutrients DEM=Demand **MIN=Minerals** 

Am Test Inc. 13600 NE 126TH PL Suite C Kirkland, WA 98034 (425) 885-1664 www.amtestlab.com



Professional Analytical Services

### **ANALYSIS REPORT**

Date Received: 05/19/16 Date Reported: 6/ 2/16

Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Attention: MICHAEL ERDAHL Project Name: 605345 Project #: 605345 PO Number: D-991 All results reported on an as received basis.

AMTEST Identification Number	16-A009380
Client Identification	01MW63-20160518
Sampling Date	05/18/16, 14:48

#### Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	2.56	mg/l		0.01	SM 3500Fe D	MJ	05/19/16

aron W Aaron W. Young Laboratory Manager

Am Test Inc. 13600 NE 126th PL Suite C Kirkland, WA, 98034 (425) 885-1664 www.amtestlab.com



#### QC Summary for sample number: 16-A009380

#### **MATRIX SPIKES**

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
16-A009383	Ferrous Iron	mg/l	0.09	0.58	0.50	98.00 %
16-A009383	Ferrous Iron	mg/l	0.09	0.58	0.50	98.00 %
MATRIX SP	PIKE DUPLICATES					
SAMPLE #	ANALYTE	UNITS	SAMPLE + SPK	MSD VALUE		RPD
Spike	Ferrous Iron	mg/l	0.58	0.58		0.00
STANDAR	D REFERENCE MATERIAL	S				
ANALYTE		UNITS	TRUE VALUE	MEASURED	VALUE	RECOVERY
Ferrous Iron		mg/l	0.50	0.50		100. %
BLANKS						
ANALYTE		UNITS	RESULT			
Ferrous Iron		mg/l	< 0.01			
			•			

# SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report <u>To Michael</u>	Erdahl			SUBCO	ONTI	RACTER	An	ntes	F				] г			e#	l OUND 7	of( TIME <b>ヤ</b> .
_	n and Bruya	T		PROJE	ECT 1	NAME/NO.					PO#		Standard (2 Weeks)			TIME T.		
1		, <u>inc.</u>			1	60534	5			D-	991	Image: Constraint of the second secon			uthorized	l by:		
Address 3012 16t	ch Ave W			REMARKS							1		SAMPLE DISPOSAL				CAT	
City, State, ZIP_Seattle,	WA 98119_												🗆 Dispose after 30 days			SAL		
Phone #(206) 285-8282Fax #(206) 283-5044					Ple	ase Email	Res	ults							urn sa l call		es instruct	ions
			•	ANALYS					LYSES	REQU	JEST	ED						
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample	Туре	# of containers	Total Fe	Hardness	Sulfate	Farrous Iron Nitrate	Nitrite	Alkalinity	Sulfide	TKN	Total Phosphorus	Dissolved Gasses	]	Notes
01MW63-20160518	9380	5/18/16	1448	water		١				الا								
	_																	
-																		
						-												
Friedman & Bruya, Inc.		I SIGNATU	JRE			PRIN	ΤN	AM]	£	l		CON	MPA	NY			DATE	TIME
3012 16th Avenue West	Relinquished	7:1-0	nf		Micha	ael Erdahl					Frie	dman	& B	ruya		5	19/16	0738
Seattle, WA 98119-2029	Received by:	pn		1	pedi	4	1	18 1850-10- 1655-1860-1-	22	/						1 (	allo	930
Ph. (206) 285-8282	Relinquished b		4	<u> </u>	1										f li rest	- 140 ····		
Fax (206) 283-5044	Received by:																	
l	· · · · · · · · · · · · · · · · · · ·																	I

605345	SAMPLE CHAIN OF CUSTODY	60 05/18/	16 ATS/11/
Send Report To <u>Tim Brown, cc: Jessica Brown, Jennifer Cyr, Pete</u> Kingston, Courtney Schaumberg, Jonathan Loeffler	SAMPLERS (signature)		Page #of
Company SoundEarth Strategies	PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600	PO <sup>*</sup> #	XStandard (2 Weeks) RUSH Rush charges authorized by:
Address 2811 Fairview Ave E, Suite 2000 City, State, ZIP Seattle, WA 98102	Seattle Terminal – ASKO Property REMARKS	ΕΙΜΥ	SAMPLE DISPOSAL Dispose after 30 days
			Return samples Will call with instructions

Sample ID	Sampl <del>e</del> Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Ma	trix	# of jars	GRPH by NWTPH-Gx	BTEX by EPA 8021B	DRPH/ORPH by NWTPH-Dx	cVOCs by EPA 8260C	Methane, Ethane, and Ethene by RSK 175	Sulfate, Nitrate, Nitrite, Total P, Hardness, and Alkalinity	Total Fe and Total Mn	Sulfide, TKN, and Fe 2+	Notes
CIMWFC-20160518			ofF	5/18/16	1258	H <sub>2</sub>	Ο	6	×	×	×	×	T			· • • • • • • • • • • • • • • • • • • •	
01MW71-20160518	······		02 1		1346			6	×	×	×	×			-		
01MW63-20160518			O3N OYE		1448			14	X	×	×	×	×	×	×	×	
F004-20160518	FDOY		04F		1518		-	6	X	X	X	×					
			, .			1								······		1	
												••••••••••••••••••••••••••••••••••••••					
							6 0	2									
						-7	やポ	A	5/1	16							
				An a share a conservation of the second second on the second		<b>-</b> - (	×ң	1		1.0						+	
	·						l	<b>y</b>							L	+	
															•C		
												Sample	s receive	PO at	╡┷╶╲	<u> </u>	
													<u></u>				
												1.					

Friedman & Bruya, Inc.	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
3012 16th Avenue West	Relinquished by:	JONATHAN LOEFFLER	SOUND EARTH	5/18/16	1720
Seattle, WA 98119-2029	Received by: 25 Smi	Jen Shimara	FRET		1
Ph. (206) 285-8282	Relinquished by:				
Fax (206) 283-5044	Received by:				

Friedman & Bruya, Inc. #605370

#### 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

June 15, 2016

Tim Brown, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Mr. Brown:

Included are the results from the testing of material submitted on May 19, 2016 from the TOC\_01-600\_20160519 WORFDB8, F&BI 605370 project. There are 15 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Jessica Brown, Courtney Schaumberg, Jennifer Cyr, Jonathan Loeffler, Pete Kingston SOU0615R.DOC

### ENVIRONMENTAL CHEMISTS

### CASE NARRATIVE

This case narrative encompasses samples received on May 19, 2016 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC\_01-600\_20160519 WORFDB8, F&BI 605370 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
605370-01	01MW07-20160519

Sample 01MW07-20160519 was sent to Aquatic Research for sulfate, nitrate, nitrite, total phosphorus, hardness, alkalinity, TKN, and sulfide analyses. In addition, the sample was sent to Amtest for ferrous iron analysis. The report from Amtest is enclosed. The report from Aquatic Research will be forwarded upon receipt.

Methylene chloride was detected in the 8260C method blank. The results were flagged as due to laboratory contamination.

All other quality control requirements were acceptable.

## ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16 Date Received: 05/19/16 Project: TOC\_01-600\_20160519 WORFDB8, F&BI 605370 Date Extracted: 05/20/16 Date Analyzed: 05/20/16

### RESULTS FROM THE ANALYSIS OF WATER 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 52-124)
01MW07-20160519 605370-01	<1	<1	<1	<3	<100	89
Method Blank <sup>06-1001 MB</sup>	<1	<1	<1	<3	<100	92

Results Reported as ug/L (ppb)

## ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16 Date Received: 05/19/16 Project: TOC\_01-600\_20160519 WORFDB8, F&BI 605370 Date Extracted: 05/20/16 Date Analyzed: 05/20/16

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

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	Diesel Range (C10-C25)	Motor Oil Range (C25-C36)	Surrogate <u>(% Recovery)</u> (Limit 47-140)
01MW07-20160519 605370-01	1,300 x	<250	108
Method Blank 06-1038 MB	<50	<250	122

# ENVIRONMENTAL CHEMISTS

# Analysis For Total Metals By EPA Method 200.8

Client ID:	01MW07-20160519	Client:	SoundEarth Strategies
Date Received:	05/19/16	Project:	TOC_01-600_20160519 WORFDB8
Date Extracted:	05/24/16	Lab ID:	605370-01
Date Analyzed:	06/08/16	Data File:	605370-01.030
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP
	Concentration		
Analyte:	ug/L (ppb)		
Iron	5,990		
Manganese	337		

# ENVIRONMENTAL CHEMISTS

# Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	TOC_01-600_20160519 WORFDB8
Date Extracted:	05/24/16	Lab ID:	I6-331 mb
Date Analyzed:	05/25/16	Data File:	I6-331 mb.022
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP
	Concentration		
Analyte:	ug/L (ppb)		
Iron	<50		
Manganese	<1		

# ENVIRONMENTAL CHEMISTS

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW07-20 05/19/16 05/20/16 05/20/16 Water ug/L (ppb)	0160519	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160519 WORFDB8 605370-01 052036.D GCMS4 JS
Surrogates: 1,2-Dichloroethane Toluene-d8 4-Bromofluorobenz		% Recovery: 100 103 103	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroet 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ethene ene (EDC)	1.2 <1 <1 <5 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1		

# ENVIRONMENTAL CHEMISTS

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Method Bla NA 05/20/16 05/20/16 Water ug/L (ppb)	nk	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160519 WORFDB8 06-1020 mb 052032.D GCMS4 JS
Surrogates: 1,2-Dichloroethane Toluene-d8 4-Bromofluorobenz		% Recovery: 98 104 105	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	e ethene ene (EDC)	<0.2 <1 <1 5.3 lc <1 <1 <1 <1 <1 <1 <1 <1 <1 <1		

# ENVIRONMENTAL CHEMISTS

# Analysis For Dissolved Gasses By RSK 175

Ethene

Client Sample ID:	01MW07-20160519	Client:	SoundEarth Strategies
Date Received:	05/19/16	Project:	TOC_01-600_20160519 WORFDB8
Date Extracted:	05/24/16	Lab ID:	605370-01
Date Analyzed:	05/24/16	Data File:	012F1201.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS
	Concentration		
Compounds:	ug/L (ppb)		
Methane	54		
Ethane	<10		

<10

# ENVIRONMENTAL CHEMISTS

# Analysis For Dissolved Gasses By RSK 175

Ethene

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	TOC_01-600_20160519 WORFDB8
Date Extracted:	05/24/16	Lab ID:	06-1024 mb
Date Analyzed:	05/24/16	Data File:	005F0501.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS
	Concentration		
Compounds:	ug/L (ppb)		
Methane	<5		
Ethane	<10		

<10

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16 Date Received: 05/19/16 Project: TOC\_01-600\_20160519 WORFDB8, F&BI 605370

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

Laboratory Code:	605375-02 (Duplica	ate)		
	Reporting	Sample	Duplicate	RPD
Analyte	Units	Result	Result	(Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

		Percent				
	Reporting	Spike	Recovery	Acceptance		
Analyte	Units	Level	LCS	Criteria		
Benzene	ug/L (ppb)	50	98	65-118		
Toluene	ug/L (ppb)	50	100	72-122		
Ethylbenzene	ug/L (ppb)	50	101	73-126		
Xylenes	ug/L (ppb)	150	99	74-118		
Gasoline	ug/L (ppb)	1,000	95	69-134		

### ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16 Date Received: 05/19/16 Project: TOC\_01-600\_20160519 WORFDB8, F&BI 605370

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

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Diesel Extended	ug/L (ppb)	2,500	116	131	61-133	12

### ENVIRONMENTAL CHEMISTS

### Date of Report: 06/15/16 Date Received: 05/19/16 Project: TOC\_01-600\_20160519 WORFDB8, F&BI 605370

### **QUALITY ASSURANCE RESULTS** FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Co	de: 605386-01	(Matrix Sp	oike)				
-		_		Percent	Percent		
	Reporting	Spike	Sample	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	Result	MS	MSD	Criteria	(Limit 20)
Iron	ug/L (ppb)	100	132	97	97	70-130	0
Manganese	ug/L (ppb)	20	5.08	106	105	70-130	1

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Iron	ug/L (ppb)	100	103	85-115
Manganese	ug/L (ppb)	20	109	85-115

### ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16 Date Received: 05/19/16 Project: TOC\_01-600\_20160519 WORFDB8, F&BI 605370

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

Laboratory Code: 605384-01 (Matrix Spike)

	Reporting	Spike	Sample	Percent Recovery	Acceptance
Analyte	Units	Level	Result	MS	Criteria
Vinyl chloride	ug/L (ppb)	50	< 0.2	102	36-166
Chloroethane	ug/L (ppb)	50	<1	115	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	95	60-136
Methylene chloride	ug/L (ppb)	50	<5	103	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	99	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	99	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	93	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	97	60-146
Trichloroethene	ug/L (ppb)	50	<1	99	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	96	10-226

Laboratory Coue. Laboratory C	one of Sumpr	0	Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Vinyl chloride	ug/L (ppb)	50	103	104	50-154	1
Chloroethane	ug/L (ppb)	50	115	116	58-146	1
1,1-Dichloroethene	ug/L (ppb)	50	93	95	67-136	2
Methylene chloride	ug/L (ppb)	50	100	99	39-148	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	100	100	68-128	0
1,1-Dichloroethane	ug/L (ppb)	50	99	100	79-121	1
cis-1,2-Dichloroethene	ug/L (ppb)	50	101	103	80-123	2
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	91	91	73-132	0
1,1,1-Trichloroethane	ug/L (ppb)	50	97	97	83-130	0
Trichloroethene	ug/L (ppb)	50	99	100	80-120	1
Tetrachloroethene	ug/L (ppb)	50	95	96	76-121	1

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16 Date Received: 05/19/16 Project: TOC\_01-600\_20160519 WORFDB8, F&BI 605370

### QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED GASSES USING METHOD RSK 175

**Relative Percent** Reporting Sample Duplicate Difference Units Result Result Analyte (Limit 20) Methane ug/L (ppb) 117 97 19 Ethane ug/L (ppb) <10 <10 nm ug/L (ppb) Ethene <10 <10 nm

Laboratory Code: Laboratory Control Sample

Laboratory Code: 605407-01 (Duplicate)

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Methane	ug/L (ppb)	59	81	80	50-150	1
Ethane	ug/L (ppb)	110	79	78	50-150	1
Ethene	ug/L (ppb)	102	93	98	50-150	5

### 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.

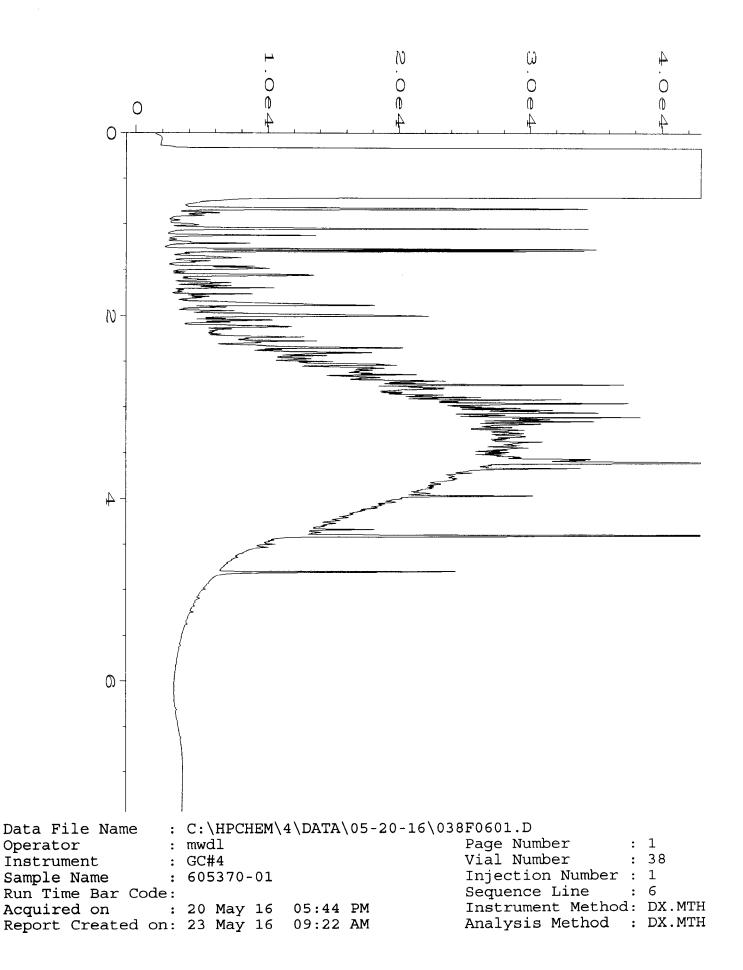
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

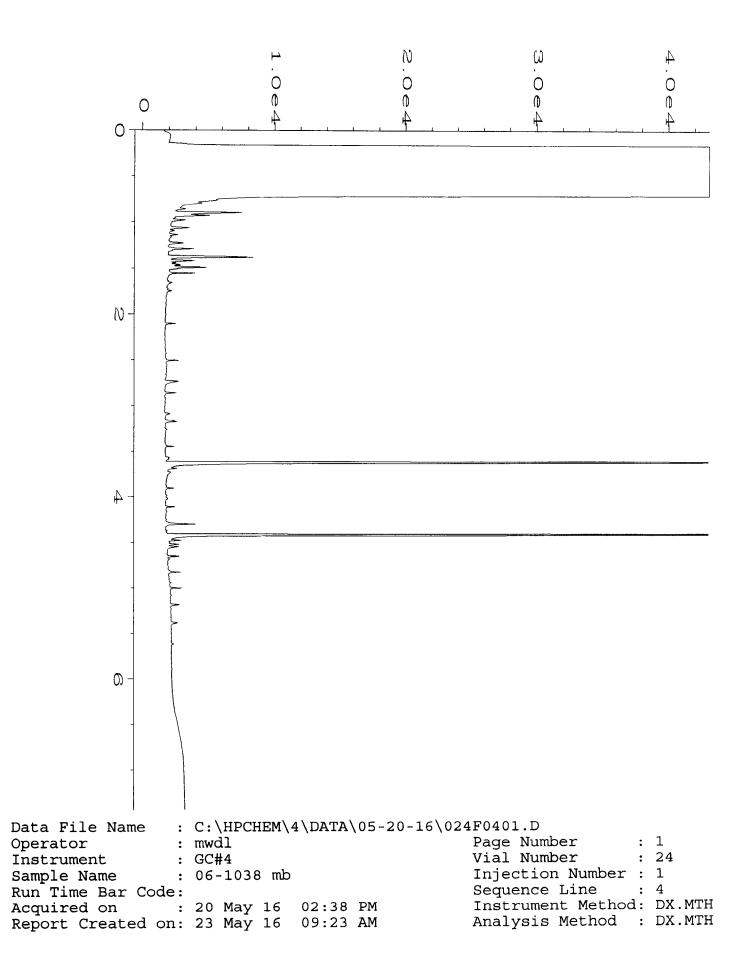
pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

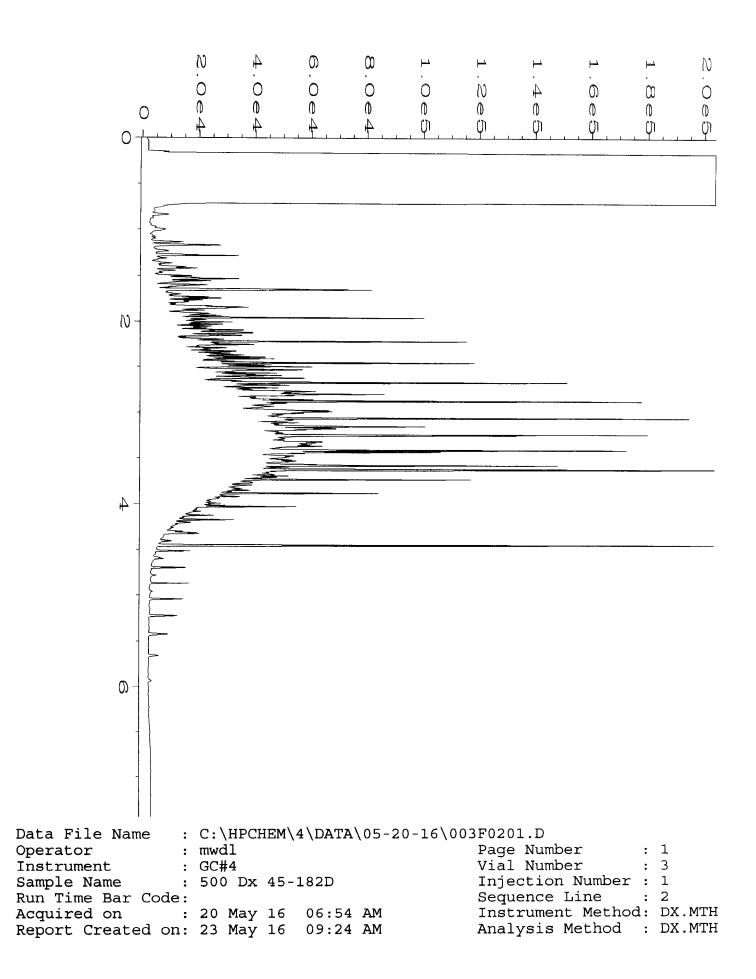
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

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.









Am Test Inc. 13600 NE 126TH PL Suite C Kirkland, WA 98034 (425) 885-1664 Professional Analytical Services

Jun 2 2016 Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Attention: MICHAEL ERDAHL

Dear MICHAEL ERDAHL:

Enclosed please find the analytical data for your 605370 project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
01MW07-20160519	Water	16-A009561	MET

Your sample was received on Friday, May 20, 2016. At the time of receipt, the sample was logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to conact me.

Sincerely,

Aaron W. Young Laboratory Manager

Project #: 605370 PO Number: D-991

BACT = Bacteriological CONV = Conventionals MET = Metals ORG = Organics NUT=Nutrients DEM=Demand **MIN=Minerals** 

Am Test Inc. 13600 NE 126TH PL Suite C Kirkland, WA 98034 (425) 885-1664 www.amtestlab.com



Professional Analytical Services

### **ANALYSIS REPORT**

Date Received: 05/20/16 Date Reported: 6/ 2/16

Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Attention: MICHAEL ERDAHL Project Name: 605370 Project #: 605370 PO Number: D-991 All results reported on an as received basis.

AMTEST Identification Number	16-A009561
Client Identification	01MW07-20160519
Sampling Date	05/19/16, 13:30

#### Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	5.27	mg/l		0.01	SM 3500Fe D	MJ	05/20/16

aron W Aaron W. Young Laboratory Manager

Am Test Inc. 13600 NE 126th PL Suite C Kirkland, WA, 98034 (425) 885-1664 www.amtestlab.com



#### QC Summary for sample number: 16-A009561

#### **MATRIX SPIKES**

		1	1	1	1	1
SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
16-A009561	Ferrous Iron	mg/l	5.27	15.2	10.0	99.30 %
16-A009561	Ferrous Iron	mg/l	5.27	15.4	10.0	101.30 %
MATRIX SP	PIKE DUPLICATES					
SAMPLE #	ANALYTE	UNITS	SAMPLE + SPK	MSD VALUE		RPD
Spike	Ferrous Iron	mg/l	15.2	15.4		1.3
STANDARE	D REFERENCE MATERIAL	.S				
ANALYTE		UNITS	TRUE VALUE	MEASURED	VALUE	RECOVERY
Ferrous Iron		mg/l	0.50	0.49		98.0 %
BLANKS						
ANALYTE		UNITS	RESULT			
Ferrous Iron		mg/l	< 0.01			

# SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report <u>ToMichael Erdahl</u>				SUBCONTRACTER							] [	Page # of TURNAROUND TIME						
CompanyFriedma	in and Bruya	, Inc.		PROJ		NAME/NO.				I	PO #		≪Standard (2 Weeks) □ RUSH					
	th Ave W			è	605370 D-0					991		Rush charges authorized by:						
City, State, ZIP_ <u>Seattle</u> ,	WA 98119			REMA	ARKS								] [	🗆 Dis			E DISPO 30 days	SAL
Phone #(206) 285-8282Fax #(206) 283-5044				Ple	ase Email	Res	ults						🗆 Ret	urn sa	ampl		ions	
			•							ANA	LYSES	REQU	JESI	ED				
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample	Туре	# of containers	Total Fe	Hardness	Sulfate	Ferris Fron	Nitrite	Alkalinity	Sulfide	TKN	Total Phosphorus	Dissolved Gasses	]	Notes
GIMW07-20160519	19561	5/14/16	1330	wate	~					X								
		-																
· · · · · · · · · · · · · · · · · · ·																		
				<u>``</u>														
·																		
Friedman & Bruya, Inc.		 SIGNATU	IRE			PRIN	T N				- <u></u>	COI		NV			DATE	TIME
3012 16th Avenue West	Relinquished	W.	N		Micha	ael Erdahl	1 11	11111			Frie	dman			n n n <del>a</del>		20/10	0735
Seattle, WA 98119-2029	Received by:		(													°'	- 70	
Ph. (206) 285-8282	Relinquished by:									<u>.</u>								
Fax (206) 283-5044	Received by:				Collin Harlow A				Ain	ntes	The second	\ ,		9,	20/16	10:55		

T= 10.4

Fedex

-

	SAMPLE CHAIN OF CUSTODY	ME OS/	19/16 11/Ais/
Send Report To <u>Tim Brown, Cc: Jessica Brown, Jennifer Cyr, Pete</u> Kingston, Courtney Schaumberg, Jonathan Loeffler	SAMPLERS (signature)		TURNAROUND TIME
Company SoundEarth Strategies	PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600	PO # 0440-004-41	Standard (2 Weeks) RUSH Rush charges authorized by:
Address <u>2811 Fairview Ave E, Suite 2000</u> City, State, ZIP <u>Seattle, WA 98102</u>	Seattle Terminal – ASKO Property REMARKS	ΕΙΜΥ	SAMPLE DISPOSAL Ø Dispose after 30 days
			Return samples Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	GRPH by NWTPH-Gx	BTEX by EPA 8021B	DRPH/ORPH by NWTPH-DX	cVOCs by EPA 8260C	Methane, Ethane, and Ethene by RSK 175	Sulfate, Nitrate, Nitrite, Total P, Hardness, and Alkalinity	Total Fe and Total Mn	Sulfide, TKN, and Fe 2+	Notes
011107-20160519	CIMWOJ	25	piti	5/14/16	1330	HZŨ	iн	×	X	X	×	X	×	×	$\checkmark$	
<u> </u>																
	<u> </u>															
	$\overline{}$	·								· · · · · · · · · · · · · · · · · · ·						
	*****		Ŕ													
		<u> </u>	Ø													
															1	
													Samples rec	eivea a	t <u>3</u> °	<b>F</b>

Friedman & Bruya, Inc.	SIGNATURE /2	PRINT NAME	COMPANY	DATE	TIME
3012 16th Avenue West	Relinquished by:	Liz Failes	SES	5/19/4	1650
Seattle, WA 98119-2029	Received by: Whith Reped	Elizabeth Radford	FAB	5/19/16	1650
Ph. (206) 285-8282	Relinquished by:			<b>,</b>	
Fax (206) 283-5044	Received by:				

Friedman & Bruya, Inc. #605372

#### 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

May 27, 2016

Tim Brown, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Mr. Brown:

Included are the results from the testing of material submitted on May 19, 2016 from the TOC\_01-600\_20160519 WORFDB8, F&BI 605372 project. There are 9 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Jessica Brown, Courtney Schaumberg, Jennifer Cyr. Pete Kingston, Jonathan Loeffler SOU0527R.DOC

### ENVIRONMENTAL CHEMISTS

### CASE NARRATIVE

This case narrative encompasses samples received on May 19, 2016 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC\_01-600\_20160519 WORFDB8, F&BI 605372 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
605372 -01	01MW56-20160519

Methylene chloride was detected in the 8260C method blank. The data were flagged as due to laboratory contamination.

All other quality control requirements were acceptable.

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/16 Date Received: 05/19/16 Project: TOC\_01-600\_20160519 WORFDB8, F&BI 605372 Date Extracted: 05/20/16 Date Analyzed: 05/20/16

#### RESULTS FROM THE ANALYSIS OF WATER 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)
01MW56-20160519 605372-01	) <1	<1	<1	<3	<100	80
Method Blank 06-1002 MB	<1	<1	<1	<3	<100	80

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/16 Date Received: 05/19/16 Project: TOC\_01-600\_20160519 WORFDB8, F&BI 605372 Date Extracted: 05/23/16 Date Analyzed: 05/23/16

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

Sample ID Laboratory ID	Diesel Range (C10-C25)	Motor Oil Range (C25-C36)	Surrogate <u>(% Recovery)</u> (Limit 47-140)
01MW56-20160519 605372-01	1,300 x	<250	92
Method Blank <sup>06-1042 MB</sup>	<50	<250	115

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW56-20 05/19/16 05/20/16 05/20/16 Water ug/L (ppb)	0160519	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160519 WORFDB8 605372-01 052039.D GCMS4 JS
Surrogatas		% Pacovoru	Lower Limit:	Upper Limit:
Surrogates:	44	% Recovery: 101	57	121
1,2-Dichloroethane- Toluene-d8	u4	101	63	121 127
4-Bromofluorobenze	20	103	60	133
4-DI OIIIOIIUOI ODEIIZE	ne	104	00	155
		Concentration		
Compounds:		ug/L (ppb)		
Vinyl chloride		0.64		
Chloroethane		<1		
1,1-Dichloroethene		<1		
Methylene chloride		<5		
trans-1,2-Dichloroet	thene	<1		
1,1-Dichloroethane		<1		
cis-1,2-Dichloroethe	ne	<1		
1,2-Dichloroethane	(EDC)	<1		
1,1,1-Trichloroetha	ne	<1		
Trichloroethene		<1		
Tetrachloroethene		<1		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Method Blan NA 05/20/16 05/20/16 Water ug/L (ppb)	nk	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160519 WORFDB8 06-1020 mb 052032.D GCMS4 JS
Surrogates: 1,2-Dichloroethane- Toluene-d8 4-Bromofluorobenze		% Recovery: 98 104 105	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroeth 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ne (EDC)	<0.2 <1 <1 5.3 lc <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1		

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/16 Date Received: 05/19/16 Project: TOC\_01-600\_20160519 WORFDB8, F&BI 605372

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

Laboratory Code: 605374-01 (Duplicate)

5	Reporting	Sample	Duplicate	RPD
Analyte	Units	Result	Result	(Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/L (ppb)	50	98	72-119
Toluene	ug/L (ppb)	50	103	71-113
Ethylbenzene	ug/L (ppb)	50	106	72-114
Xylenes	ug/L (ppb)	150	96	72-113
Gasoline	ug/L (ppb)	1,000	94	70-119

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/16 Date Received: 05/19/16 Project: TOC\_01-600\_20160519 WORFDB8, F&BI 605372

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

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Diesel Extended	ug/L (ppb)	2,500	113	112	61-133	1

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/16 Date Received: 05/19/16 Project: TOC\_01-600\_20160519 WORFDB8, F&BI 605372

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

Laboratory Code: 605384-01 (Matrix Spike)

, ,	1 /			Percent	
	Reporting	Spike	Sample	Recovery	Acceptance
Analyte	Units	Level	Result	MS	Criteria
Vinyl chloride	ug/L (ppb)	50	< 0.2	102	36-166
Chloroethane	ug/L (ppb)	50	<1	115	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	95	60-136
Methylene chloride	ug/L (ppb)	50	<5	103	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	99	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	99	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	93	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	97	60-146
Trichloroethene	ug/L (ppb)	50	<1	99	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	96	10-226

Laboratory Code. Laboratory C	ontroi Sampic		_	_		
			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Vinyl chloride	ug/L (ppb)	50	103	104	50-154	1
Chloroethane	ug/L (ppb)	50	115	116	58-146	1
1,1-Dichloroethene	ug/L (ppb)	50	93	95	67-136	2
Methylene chloride	ug/L (ppb)	50	100	99	39-148	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	100	100	68-128	0
1,1-Dichloroethane	ug/L (ppb)	50	99	100	79-121	1
cis-1,2-Dichloroethene	ug/L (ppb)	50	101	103	80-123	2
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	91	91	73-132	0
1,1,1-Trichloroethane	ug/L (ppb)	50	97	97	83-130	0
Trichloroethene	ug/L (ppb)	50	99	100	80-120	1
Tetrachloroethene	ug/L (ppb)	50	95	96	76-121	1

ENVIRONMENTAL CHEMISTS

## **Data Qualifiers & Definitions**

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The compound is a common laboratory and field contaminant.

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

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

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

 ${\rm ip}$  - 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.

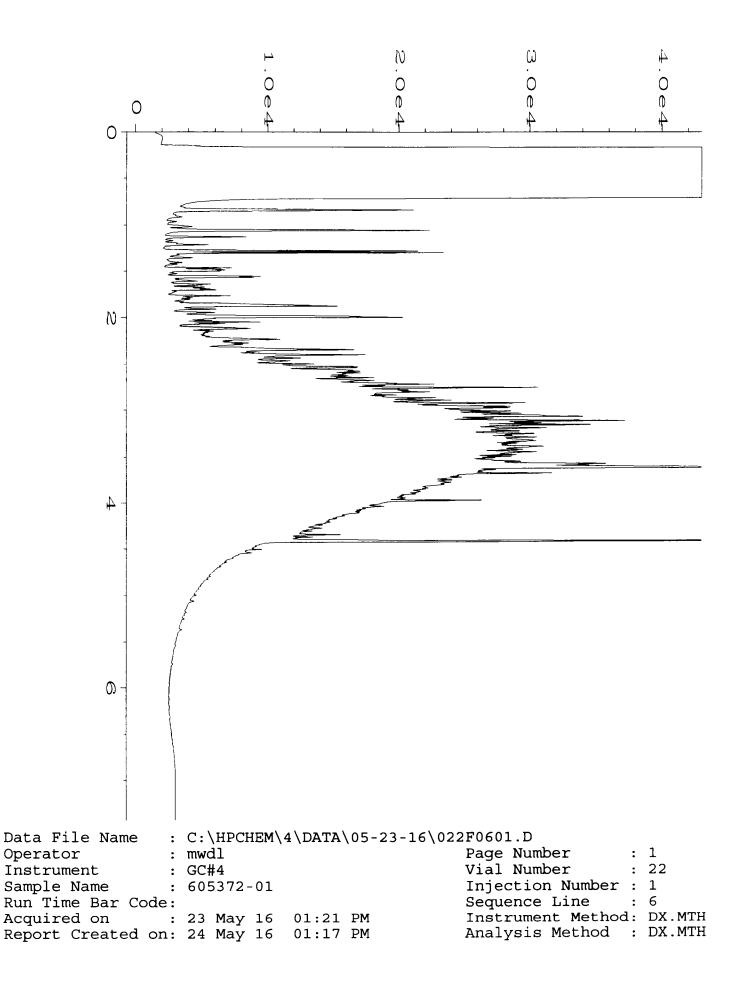
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

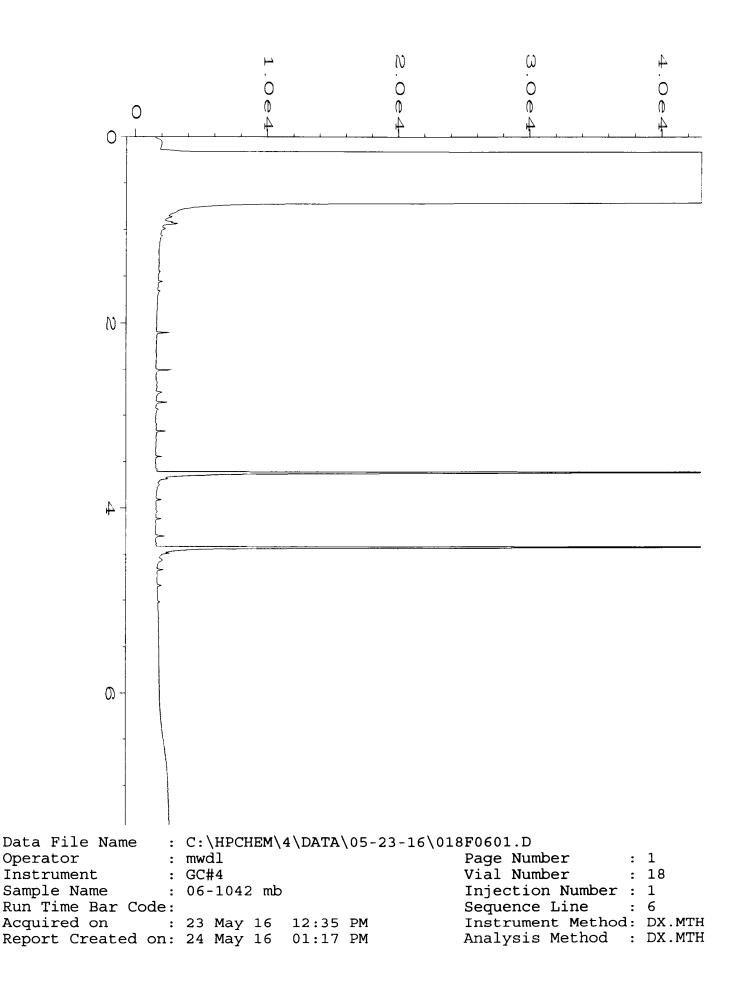
pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

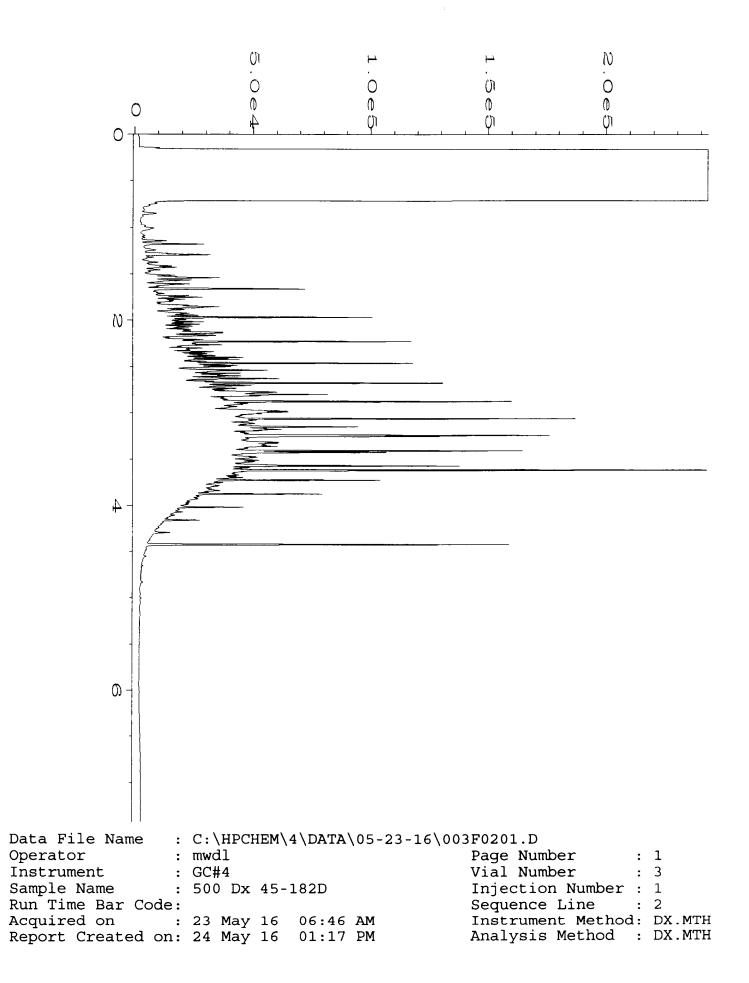
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

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.







605372	SAMPLE CHAIN OF CUSTODY	MEOSTIQ,	16 1 111
Send Report To Ambrown, cc: Jessica Brown, Jennifer Cyr, Pete Kingston, Courtney Schaumberg, Jonathan Loeffler	SAMPLERS (signature)		Page #of
CompanySoundEarth Strategies	PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600	PO # 0440-004-41	Kstandard (2 Weeks) RUSH Rush charges authorized by:
Address 2811 Fairview Ave E, Suite 2000	Seattle Terminal – ASKO Property REMARKS		SAMPLE DISPOSAL
City, State, ZIP <u>Seattle, WA 98102</u>		EIM Y	Dispose after 30 days Return samples Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	GRPH by NWTPH-Gx	BTEX by EPA 8021B	DRPH/ORPH by NWTPH-Dx	cVOCs by EPA 8260C	Methane, Ethane, and Ethene by RSK 175	Sulfate, Nitrate, Nitrite, Total P, Hardness, and Alkalinity	Total Fe and Total Mn	Sulfide, TKN, and Fe 2+	Notes
01MW56-20160519	CIMW56		ojAr	5/19/16	1313	HZO	6	$\star$	×	×	メ					
								$\cap$								
								$\rightarrow$	H	51						
								A	$\prod$	5/19	16					
									V							
													mples rece	ved at	3.0	
																~~~~

Friedman & Bruya, Inc.	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
3012 16th Avenue West	Relinquished by	JONATHAN LOEFFLER	SOUNDEARTH	5/19/16	1650
Seattle, WA 98119-2029	Received by: My arth La guid	Elizabeth Ractford	FIR	5/19/16	1650
Ph. (206) 285-8282	Relinquished by	gas and all a		<u>ı                                 </u>	
Fax (206) 283-5044	Received by:				

Friedman & Bruya, Inc. #605508

#### 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

June 7, 2016

Tim Brown, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Mr. Brown:

Included are the results from the testing of material submitted on May 26, 2016 from the TOC\_01-600\_20160526 WORFDB8, F&BI 605508 project. There are 9 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Jessica Brown, Courtney Schaumberg, Jennifer Cyr, Pete Kingston, Jonathan Loeffler SOU0607R.DOC

### ENVIRONMENTAL CHEMISTS

### CASE NARRATIVE

This case narrative encompasses samples received on May 26, 2016 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC\_01-600\_20160526 WORFDB8, F&BI 605508 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
605508 -01	01MW53-20160526

All quality control requirements were acceptable.

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/07/16 Date Received: 05/26/16 Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605508 Date Extracted: 05/27/16 Date Analyzed: 05/27/16

#### RESULTS FROM THE ANALYSIS OF WATER 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 52-124)
01MW53-20160526 605508-01	<1	1.2	<1	<3	<100	95
Method Blank 06-1063 MB	<1	<1	<1	<3	<100	94

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/07/16 Date Received: 05/26/16 Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605508 Date Extracted: 05/31/16 Date Analyzed: 05/31/16

#### RESULTS FROM THE ANALYSIS OF WATER 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 41-152)
01MW53-20160526 605508-01	520 x	<250	100
Method Blank 06-1104 MB	<50	<250	81

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW53-20 05/26/16 05/27/16 05/27/16 Water ug/L (ppb)	0160526	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160526 WORFDB8 605508-01 052715.D GCMS4 JS
Surrogates: 1,2-Dichloroethane Toluene-d8 4-Bromofluorobenz		% Recovery: 102 104 106	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroet 1,1-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ethene ene (EDC)	$\begin{array}{c} 0.76 \\ <1 \\ <1 \\ <5 \\ <1 \\ <1 \\ 2.2 \\ <1 \\ <1 \\ <1 \\ <1 \\ <1 \end{array}$		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Method Blan Not Applica 05/27/16 05/27/16 Water ug/L (ppb)		Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160526 WORFDB8 06-1080 mb 052708.D GCMS4 JS
Surrogates: 1,2-Dichloroethane Toluene-d8	-d4	% Recovery: 101 105	Lower Limit: 57 63	Upper Limit: 121 127
4-Bromofluorobenz	ene	105	60	133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride		<0.2		
Chloroethane		<1		
1,1-Dichloroethene		<1		
Methylene chloride	•	<5		
trans-1,2-Dichloroe	ethene	<1		
1,1-Dichloroethane		<1		
cis-1,2-Dichloroethe	ene	<1		
1,2-Dichloroethane	(EDC)	<1		
1,1,1-Trichloroetha	ne	<1		
Trichloroethene		<1		
Tetrachloroethene		<1		

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/07/16 Date Received: 05/26/16 Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605508

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

Laboratory Code: 605506-02 (Duplicate) Reporting Sample Duplicate RPD Analyte Units Result Result (Limit 20) Benzene ug/L (ppb) <1 <1 nm Toluene ug/L (ppb) <1 <1 nm Ethylbenzene ug/L (ppb) <1 <1 nm Xylenes ug/L (ppb) <3 <3 nm Gasoline ug/L (ppb) <100 <100 nm

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/L (ppb)	50	93	65-118
Toluene	ug/L (ppb)	50	94	72-122
Ethylbenzene	ug/L (ppb)	50	95	73-126
Xylenes	ug/L (ppb)	150	94	74-118
Gasoline	ug/L (ppb)	1,000	95	69-134

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/07/16 Date Received: 05/26/16 Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605508

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

Laboratory Code:	605535-03 (Matrix	x Spike)						
				Percent	Percent			
	Reporting	Spike	Sample	Recovery	Recovery	Accep	otance	RPD
Analyte	Units	Level	Result	MS	MSD	Crit	eria	(Limit 20)
Diesel Extended	ug/L (ppb)	2,500	<350	83	89	50-	150	7
Laboratory Code:	Laboratory Contr	ol Sampl	e					
			Percent	Percent	t			
	Reporting	Spike	Recovery	Recover	y Accepta	ance	RPI	)
Analyte	Units	Level	LCS	LCSD	Criter	ria	(Limit	20)
Diesel Extended	ug/L (ppb)	2,500	87	95	63-14	12	9	

7

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/07/16 Date Received: 05/26/16 Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605508

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

Laboratory Code: 605535-03 (Matrix Spike)

, , , , , , , , , , , , , , , , , , ,	Reporting	Spike	Sample	Percent Recovery	Percent Recovery	Acceptance	RPD
Analyte	Units	Level	Result	MS	MSD	Criteria	(Limit 20)
Vinyl chloride	ug/L (ppb)	50	<0.2	95	98	36-166	3
Chloroethane	ug/L (ppb)	50 50	<1	107	112	46-160	5
1,1-Dichloroethene	ug/L (ppb)	50	<1	88	89	60-136	1
Methylene chloride	ug/L (ppb)	50	<5	100	105	67-132	5
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	93	95	72-129	2
1,1-Dichloroethane	ug/L (ppb)	50	<1	96	97	70-128	1
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	99	102	71-127	3
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	91	94	69-133	3
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	93	95	60-146	2
Trichloroethene	ug/L (ppb)	50	<1	95	98	66-135	3
Tetrachloroethene	ug/L (ppb)	50	<1	91	93	10-226	2

Laboratory coue. Laboratory c	1		Percent	Percent	<b>A</b> .	222
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Vinyl chloride	ug/L (ppb)	50	102	98	50-154	4
Chloroethane	ug/L (ppb)	50	117	109	58-146	7
1,1-Dichloroethene	ug/L (ppb)	50	95	90	67-136	5
Methylene chloride	ug/L (ppb)	50	106	100	39-148	6
trans-1,2-Dichloroethene	ug/L (ppb)	50	99	95	68-128	4
1,1-Dichloroethane	ug/L (ppb)	50	101	96	79-121	5
cis-1,2-Dichloroethene	ug/L (ppb)	50	104	98	80-123	6
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	94	90	73-132	4
1,1,1-Trichloroethane	ug/L (ppb)	50	99	94	83-130	5
Trichloroethene	ug/L (ppb)	50	100	97	80-120	3
Tetrachloroethene	ug/L (ppb)	50	96	92	76-121	4

#### 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.

Send Report T Kingston, Cour Company Address281 City, State, ZIP	o <u>Tim Brown</u> tney Schaum SoundEarth S Fairview Av	nberg, Jonc Strategies e E, Suite	<u>athan L</u>	<u>vn, Jennifer Cvoeffler</u>	vr, Pete	AMPLE CH SAMPLERS (S PROJECT NA TOC Hold Seattle REMARKS	ignatur C ME/NC	e) ). ).	ty No. (	01-600	0440	7 05 70 # 1-004-41 IM Y	Stand RUSH_ Rush ch  ØDispot	URNARC ard (2 W arges au SAMPLE I se after ( a sample	uthorized b DISPOSAL 30 days	) U2/ Dei y:
Sample ID 0(MW53-JCIW5	Sample Location	Sample Depth	Lab ID A-F	Date Sampled	Time Sample		# of jars	K GRPH by NWTPH-Gx	X BTEX by EPA 8021B		K cvocs by EPA 8260C	Methane, Ethane, and Ethene by RSK 175	Sulfate, Nitrate, Nitrite, Total P, Hardness, and Alkalinity	Total Fe and Total Mn	Sulfide, TKN, and Fe 2+	Notes
				2515 0515 017			•					Sar	nples receiv	ed at	<u>3.</u> c	

Friedman & Bruya, Inc. SIGNA	TURE PRINT NAME	COMPANY	DATE	TIME
3012 16th Avenue West Relinquished by:	tor Can Chris Cass	Soundary	15174/16	1535
Seattle, WA 98119-2029 Received by:	- <u>+ 1 1 61 10 11</u>	d FBB	5/26/16	3:20
Ph. (206) 285-8282 Relinquished by:	up a sizeri scripsi		5120110	<u> </u>
Fax (206) 283-5044 Received by:				

Friedman & Bruya, Inc. #605509

#### 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

June 7, 2016

Tim Brown, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Mr. Brown:

Included are the results from the testing of material submitted on May 26, 2016 from the TOC\_01-600\_20160526 WORFDB8, F&BI 605509 project. There are 9 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Jessica Brown, Courtney Schaumberg, Jennifer Cyr, Pete Kingston, Jonathan Loeffler SOU0607R.DOC

### ENVIRONMENTAL CHEMISTS

### CASE NARRATIVE

This case narrative encompasses samples received on May 26, 2016 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC\_01-600\_20160526 WORFDB8, F&BI 605509 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
605509 -01	01MW52-20160526

All quality control requirements were acceptable.

### ENVIRONMENTAL CHEMISTS

Date of Report: 06/07/16 Date Received: 05/26/16 Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605509 Date Extracted: 05/27/16 Date Analyzed: 05/27/16

#### RESULTS FROM THE ANALYSIS OF WATER 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 52-124)
01MW52-20160526 605509-01	<1	<1	<1	<3	<100	92
Method Blank 06-1063 MB	<1	<1	<1	<3	<100	94

### ENVIRONMENTAL CHEMISTS

Date of Report: 06/07/16 Date Received: 05/26/16 Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605509 Date Extracted: 05/31/16 Date Analyzed: 05/31/16

#### RESULTS FROM THE ANALYSIS OF WATER 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 41-152)
01MW52-20160526 605509-01	<50	<250	91
Method Blank 06-1104 MB	<50	<250	81

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW52-20 05/26/16 05/27/16 05/27/16 Water ug/L (ppb)	0160526	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160526 WORFDB8 605509-01 052725.D GCMS4 JS
Surrogates: 1,2-Dichloroethane Toluene-d8 4-Bromofluorobenz		% Recovery: 100 104 106	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ethene ene (EDC)	<0.2 <1 <1 <5 <1 <1 <1 <1 <1 <1 <1 <1		

## ENVIRONMENTAL CHEMISTS

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Method Bla Not Applica 05/27/16 05/27/16 Water ug/L (ppb)		Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160526 WORFDB8 06-1080 mb 052708.D GCMS4 JS
Surrogates:	14	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane	-04	101	57	121
Toluene-d8 4-Brom ofluorobenz	0.22.0	105 105	63 60	127 133
4-DI 0111 011 U01 0De112	ene	105	00	135
		Concentration		
Compounds:		ug/L (ppb)		
Vinyl chloride		<0.2		
Chloroethane		<1		
1,1-Dichloroethene		<1		
Methylene chloride	<u>,</u>	<5		
trans-1,2-Dichloroe	ethene	<1		
1,1-Dichloroethane		<1		
cis-1,2-Dichloroethe	ene	<1		
1,2-Dichloroethane	(EDC)	<1		
1,1,1-Trichloroetha	ne	<1		
Trichloroethene		<1		
Tetrachloroethene		<1		

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/07/16 Date Received: 05/26/16 Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605509

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

Laboratory Code: 605506-02 (Duplicate) Reporting Sample Duplicate RPD Analyte Units Result Result (Limit 20) Benzene ug/L (ppb) <1 <1 nm Toluene ug/L (ppb) <1 <1 nm Ethylbenzene ug/L (ppb) <1 <1 nm Xylenes ug/L (ppb) <3 <3 nm Gasoline ug/L (ppb) <100 <100 nm

		Percent					
	Reporting	Spike	Recovery	Acceptance			
Analyte	Units	Level	LCS	Criteria			
Benzene	ug/L (ppb)	50	93	65-118			
Toluene	ug/L (ppb)	50	94	72-122			
Ethylbenzene	ug/L (ppb)	50	95	73-126			
Xylenes	ug/L (ppb)	150	94	74-118			
Gasoline	ug/L (ppb)	1,000	95	69-134			

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/07/16 Date Received: 05/26/16 Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605509

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

Laboratory Code: 605535-03 (Matrix Spike)										
				Percent	Percent					
	Reporting	Spike	Sample	Recovery	Recovery	Accep	tance	RPD		
Analyte	Units	Level	Result	MS	MSD	Crit	eria	(Limit 20)		
Diesel Extended	ug/L (ppb)	2,500	<350	83	89	50-	150	7		
Laboratory Code:	Laboratory Contr	ol Sampl	e							
			Percent	Percent	t					
	Reporting	Spike	Recovery	Recover	y Accepta	ance	RPI	)		
Analyte	Units	Level	LCS	LCSD	Criter	ria	(Limit	20)		
Diesel Extended	ug/L (ppb)	2,500	87	95	63-14	12	9			

7

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/07/16 Date Received: 05/26/16 Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605509

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

Laboratory Code: 605535-03 (Matrix Spike)

	Reporting	Spike	Sample	Percent Recovery	Percent Recovery	Acceptance	RPD
Analyte	Units	Level	Result	MS	MSD	Criteria	(Limit 20)
Vinyl chloride	ug/L (ppb)	50	< 0.2	95	98	36-166	3
Chloroethane	ug/L (ppb)	50	<1	107	112	46-160	5
1,1-Dichloroethene	ug/L (ppb)	50	<1	88	89	60-136	1
Methylene chloride	ug/L (ppb)	50	<5	100	105	67-132	5
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	93	95	72-129	2
1,1-Dichloroethane	ug/L (ppb)	50	<1	96	97	70-128	1
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	99	102	71-127	3
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	91	94	69-133	3
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	93	95	60-146	2
Trichloroethene	ug/L (ppb)	50	<1	95	98	66-135	3
Tetrachloroethene	ug/L (ppb)	50	<1	91	93	10-226	2

	<b>r</b>	-	Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Vinyl chloride	ug/L (ppb)	50	102	98	50-154	4
Chloroethane	ug/L (ppb)	50	117	109	58-146	7
1,1-Dichloroethene	ug/L (ppb)	50	95	90	67-136	5
Methylene chloride	ug/L (ppb)	50	106	100	39-148	6
trans-1,2-Dichloroethene	ug/L (ppb)	50	99	95	68-128	4
1,1-Dichloroethane	ug/L (ppb)	50	101	96	79-121	5
cis-1,2-Dichloroethene	ug/L (ppb)	50	104	98	80-123	6
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	94	90	73-132	4
1,1,1-Trichloroethane	ug/L (ppb)	50	99	94	83-130	5
Trichloroethene	ug/L (ppb)	50	100	97	80-120	3
Tetrachloroethene	ug/L (ppb)	50	96	92	76-121	4

#### 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.

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.

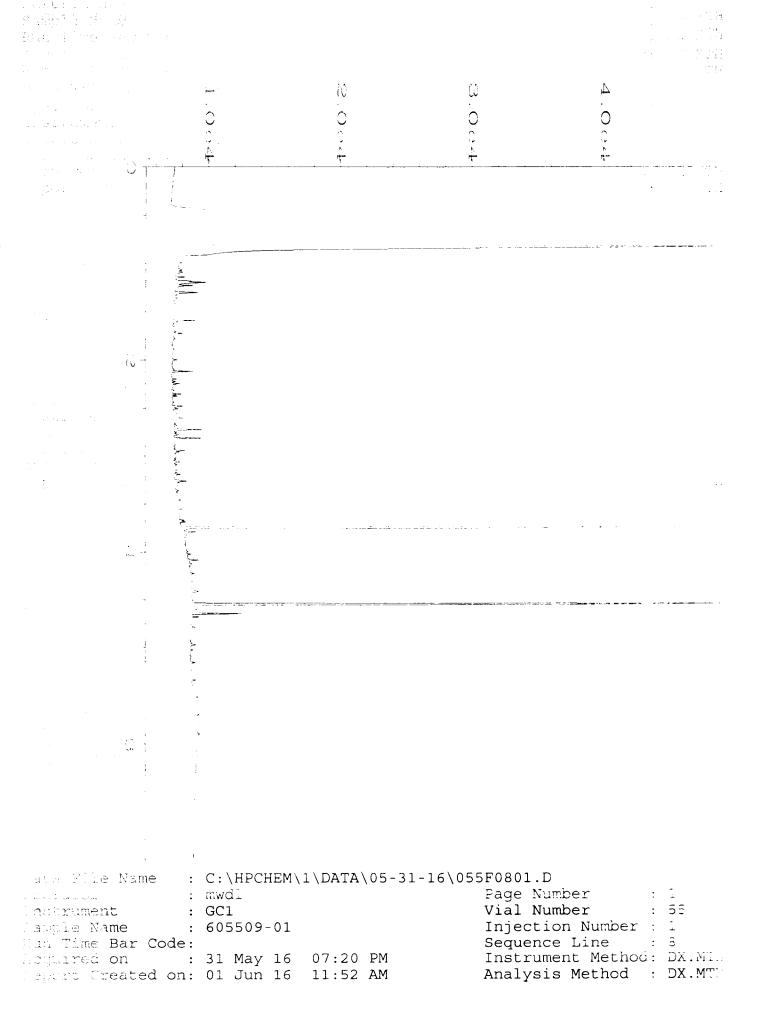
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.

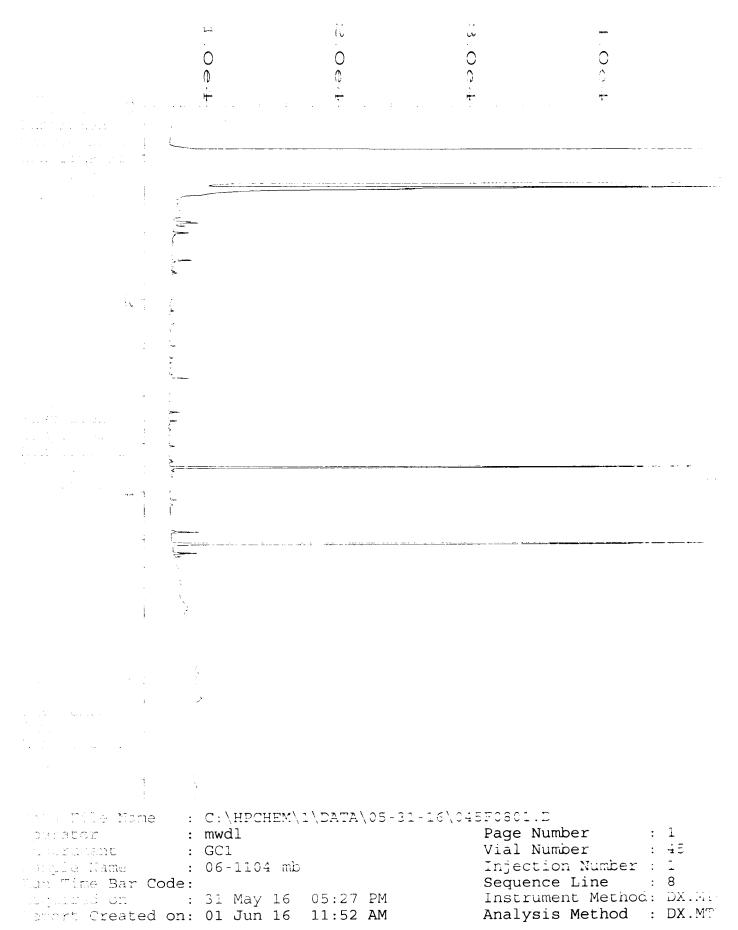
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

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.







	1						
			G.Oe.	8.0e.	1.0e	1. N e T	
Sate File Nam	e : C:\HI	PCHEM\1\I	DATA\05-3	1-16\0033	F0201.D		
Tperator Instrument Dample Name Bun Time Bar Controd on Tecort Create	: mwdl : GC1 : 500 I Code: : 31 Ma	Dx 45-182 ay 16 06	2D 5:29 Am	] - - - -	Page Numb Vial Numb Injection Sequence Instrumen Analysis	Number Line t Method	: 1 : 2 : DX.MT.

605509	SAMPLE CHAIN OF CUSTODY	ME 5126116	) VI/DOY
Send Report To <u>Tim Brown</u> , cc: Jessica Brown, Jennifer Cyr, Peter Kingston, Courtney Schaumberg, Jonathan Loeffler	SAMPLERS (signature)		Page #of
Company SoundEarth Strategies	PROJECT NAME/NO.	, PO #	X Standard (2 Weeks) RUSH
Address 2811 Fairview Ave E, Suite 2000	TOC Holdings Co. Facility No. 01-600 Seattle Terminal – ASKO Property	0440-004-41	Rush charges authorized by:
City, State, ZIP <u>Seattle, WA 98102</u>	REMARKS	EIM Y	SAMPLE DISPOSAL Dispose after 30 days Return samples Will call with instructions

Sample ID	Sampl <del>e</del> Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	+ of jars	GRPH by NWTPH-Gx	BTEX by EP <b>A 8</b> 021B	DRPH/ORPH by NWTPH-Dx	cVOCs by EPA 8260C	Methane, Ethane, and Ethene by RSK 175	Sulfate, Nitrate, Nitrite, Total P, Hardness, and Alkalinity	Total Fe and Total Mn	Sulfide, TKN, and Fe 2+	Notes
OIMW52-20160526	OIMW52	·	ON F	5/26/16	1420	H2O	6	$\star$	×	×	$\mathbf{X}$					
											94 49 14 14 14 14 14 14 14 14 14 14 14 14 14					
<b>`</b>									0							
								$\square$	td	1						
									XX		124/1	6			!	•
									0.7							
															<u> </u>	

Friedman & Bruya, Inc.	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
3012 16th Avenue West	Relinquished by:	JENATHAN LOEFFLER	SUNDEARTH	5/26/16	1535
Seattle, WA 98119-2029	Received by: yunth For frue	Elizabeth Radford	F\$B	5/26/16	3:3.5
·Ph. (206) 285-8282	Relinquished by:				
Fax (206) 283-5044	Received by:		Samples received at	t <u>_3_</u> ℃	

1.4

Friedman & Bruya, Inc. #606161

#### 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

June 15, 2016

Tim Brown, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Mr. Brown:

Included are the results from the testing of material submitted on June 9, 2016 from the TOC\_01-600\_20160609 WORFDB8, F&BI 606161 project. There are 10 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Jessica Brown, Courtney Schaumberg, Jennifer Cyr, Pete Kingston, Jonathan Loeffler SOU0615R.DOC

### ENVIRONMENTAL CHEMISTS

### CASE NARRATIVE

This case narrative encompasses samples received on June 9, 2016 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC\_01-600\_20160609 WORFDB8, F&BI 606161 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
606161-01	MW06-20160609
606161 -02	01MW46-20160609

All quality control requirements were acceptable.

### ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16 Date Received: 06/09/16 Project: TOC\_01-600\_20160609 WORFDB8, F&BI 606161 Date Extracted: 06/09/16 Date Analyzed: 06/09/16

#### RESULTS FROM THE ANALYSIS OF WATER 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 52-124)
MW06-20160609 606161-01	1.5	<1	<1	<3	<100	90
01MW46-20160609 606161-02	8.4	<1	<1	<3	<100	92
Method Blank <sup>06-1131 MB</sup>	<1	<1	<1	<3	<100	90

Results Reported as ug/L (ppb)

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16 Date Received: 06/09/16 Project: TOC\_01-600\_20160609 WORFDB8, F&BI 606161 Date Extracted: 06/10/16 Date Analyzed: 06/10/16

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

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	Diesel Range (C10-C25)	Motor Oil Range (C25-C36)	Surrogate <u>(% Recovery)</u> (Limit 41-152)
MW06-20160609 606161-01	160 x	<250	90
01MW46-20160609 606161-02	240 x	<250	93
Method Blank 06-1167 MB	<50	<250	91

### ENVIRONMENTAL CHEMISTS

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	MW06-2016 06/09/16 06/09/16 06/09/16 Water ug/L (ppb)	60609	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160609 WORFDB8 606161-01 060912.D GCMS4 JS
Commentant a su		0/ <b>D</b>	Lower	Upper
Surrogates:	14	% Recovery:	Limit:	Limit:
1,2-Dichloroethane	-d4	104	57	121
Toluene-d8		107	63	127
4-Bromofluorobenz	ene	102	60	133
		Concentration		
Compounds:		ug/L (ppb)		
Vinyl chloride		2.6		
Chloroethane		<1		
1,1-Dichloroethene		<1		
Methylene chloride		<5		
trans-1,2-Dichloroe		<1		
1,1-Dichloroethane		<1		
cis-1,2-Dichloroethe	ene	11		
1,2-Dichloroethane	(EDC)	<1		
1,1,1-Trichloroetha	ne	<1		
Trichloroethene		22		
Tetrachloroethene		<1		

### ENVIRONMENTAL CHEMISTS

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01MW46-20 06/09/16 06/09/16 06/09/16 Water ug/L (ppb)	0160609	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160609 WORFDB8 606161-02 060913.D GCMS4 JS
Surrogates: 1,2-Dichloroethane Toluene-d8 4-Bromofluorobenz		% Recovery: 100 110 104	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Vinyl chloride Chloroethane 1,1-Dichloroethene Methylene chloride trans-1,2-Dichloroethane cis-1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Trichloroethene Tetrachloroethene	ethene ene (EDC)	11 <1 2.8 <5 <1 <1 120 1.3 <1 97 <1		

### ENVIRONMENTAL CHEMISTS

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Method Blan Not Applical 06/09/16 06/09/16 Water ug/L (ppb)		Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-600_20160609 WORFDB8 06-1098 mb 060910.D GCMS4 JS
Surrogates:		% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane	-d4	101	57	121
Toluene-d8		112	63	127
4-Bromofluorobenz	ene	103	60	133
		Concentration		
Compounds:		ug/L (ppb)		
Vinyl chloride		<0.2		
Chloroethane		<1		
1,1-Dichloroethene		<1		
Methylene chloride	<b>;</b>	<5		
trans-1,2-Dichloroe	ethene	<1		
1,1-Dichloroethane		<1		
cis-1,2-Dichloroethe	ene	<1		
1,2-Dichloroethane	(EDC)	<1		
1,1,1-Trichloroetha	ne	<1		
Trichloroethene		<1		
Tetrachloroethene		<1		

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16 Date Received: 06/09/16 Project: TOC\_01-600\_20160609 WORFDB8, F&BI 606161

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

Laboratory Code: 606156-01 (Duplicate)								
	Reporting	Sample	Duplicate	RPD				
Analyte	Units	Result	Result	(Limit 20)				
Benzene	ug/L (ppb)	<1	<1	nm				
Toluene	ug/L (ppb)	<1	<1	nm				
Ethylbenzene	ug/L (ppb)	<1	<1	nm				
Xylenes	ug/L (ppb)	<3	<3	nm				
Gasoline	ug/L (ppb)	<100	<100	nm				

Laboratory Code: Laboratory Control Sample

		Percent					
	Reporting	Spike	Recovery	Acceptance			
Analyte	Units	Level	LCS	Criteria			
Benzene	ug/L (ppb)	50	93	65-118			
Toluene	ug/L (ppb)	50	94	72-122			
Ethylbenzene	ug/L (ppb)	50	95	73-126			
Xylenes	ug/L (ppb)	150	94	74-118			
Gasoline	ug/L (ppb)	1,000	98	69-134			

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16 Date Received: 06/09/16 Project: TOC\_01-600\_20160609 WORFDB8, F&BI 606161

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

Laboratory Code: Laboratory Control Sample

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Diesel Extended	ug/L (ppb)	2,500	99	106	63-142	7

### ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16 Date Received: 06/09/16 Project: TOC\_01-600\_20160609 WORFDB8, F&BI 606161

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

Laboratory Code: 606161-02 (Matrix Spike)

, , , , , , , , , , , , , , , , , , ,	Reporting	Spike	Sample	Percent Recovery	Acceptance
Analyte	Units	Level	Result	MS	Criteria
Vinyl chloride	ug/L (ppb)	50	11	125 b	36-166
Chloroethane	ug/L (ppb)	50	<1	136	46-160
1,1-Dichloroethene	ug/L (ppb)	50	2.8	110	60-136
Methylene chloride	ug/L (ppb)	50	<5	121	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	114	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	110	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	120	111 b	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	1.3	101	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	107	60-146
Trichloroethene	ug/L (ppb)	50	97	107 b	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	95	10-226

Laboratory Code: Laboratory Control Sample

	<b>r</b>		Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Vinyl chloride	ug/L (ppb)	50	122	116	50-154	5
Chloroethane	ug/L (ppb)	50	132	131	58-146	1
1,1-Dichloroethene	ug/L (ppb)	50	107	107	67-136	0
Methylene chloride	ug/L (ppb)	50	114	115	39-148	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	111	111	68-128	0
1,1-Dichloroethane	ug/L (ppb)	50	108	109	79-121	1
cis-1,2-Dichloroethene	ug/L (ppb)	50	112	114	80-123	2
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	100	102	73-132	2
1,1,1-Trichloroethane	ug/L (ppb)	50	107	108	83-130	1
Trichloroethene	ug/L (ppb)	50	107	110	80-120	3
Tetrachloroethene	ug/L (ppb)	50	94	94	76-121	0

#### 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.

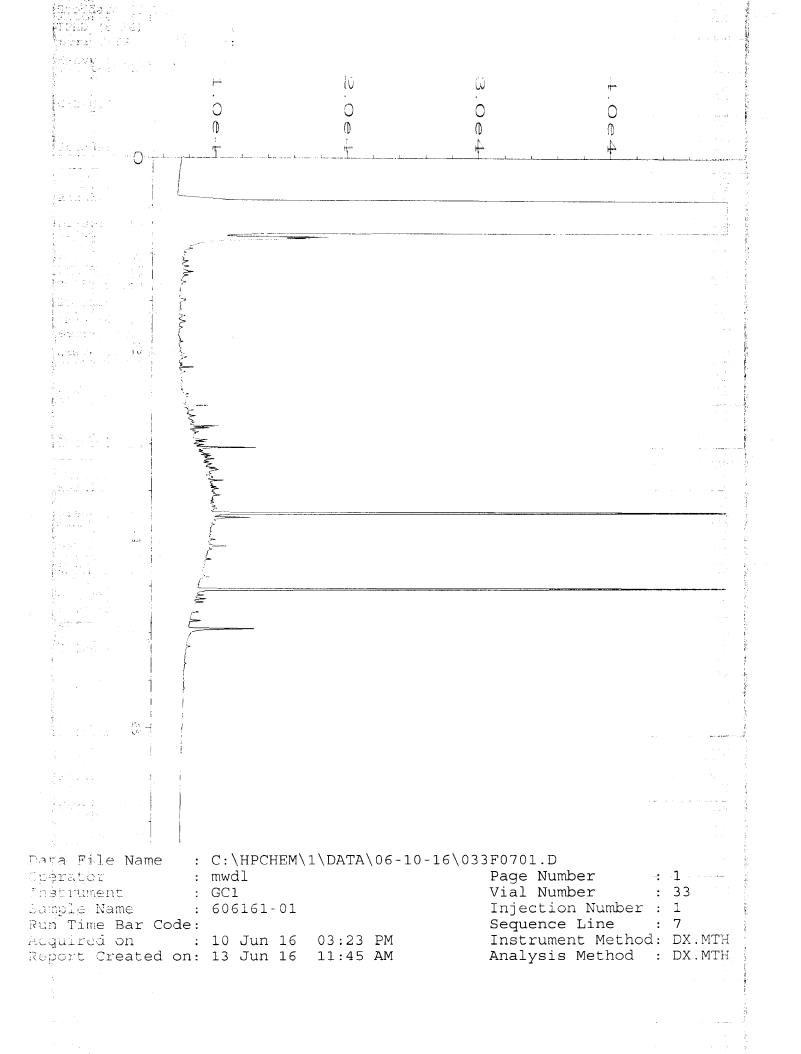
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

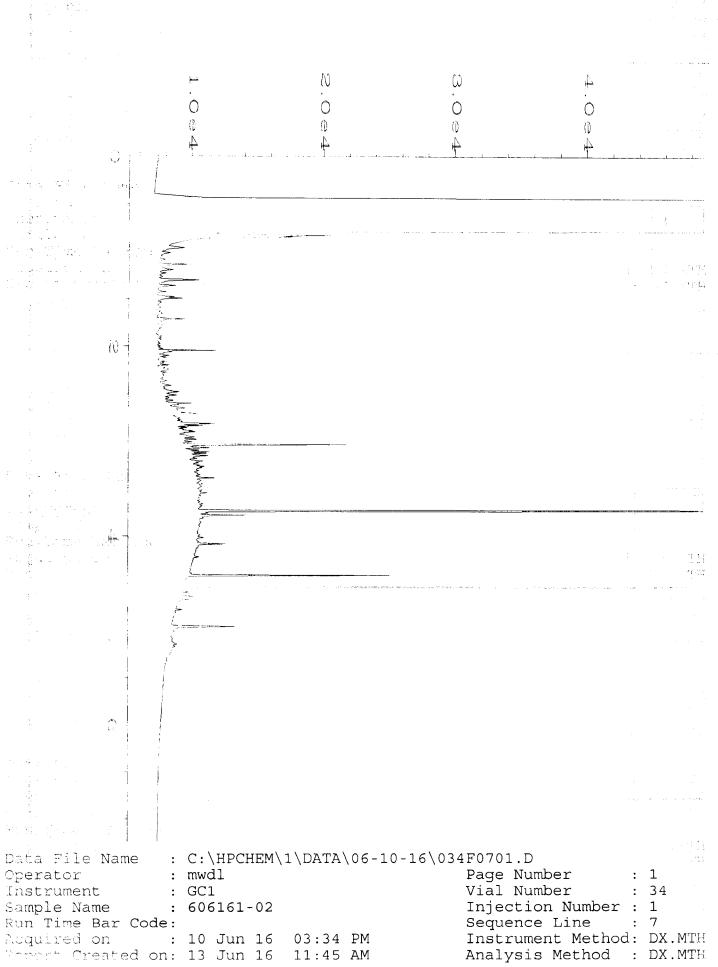
pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

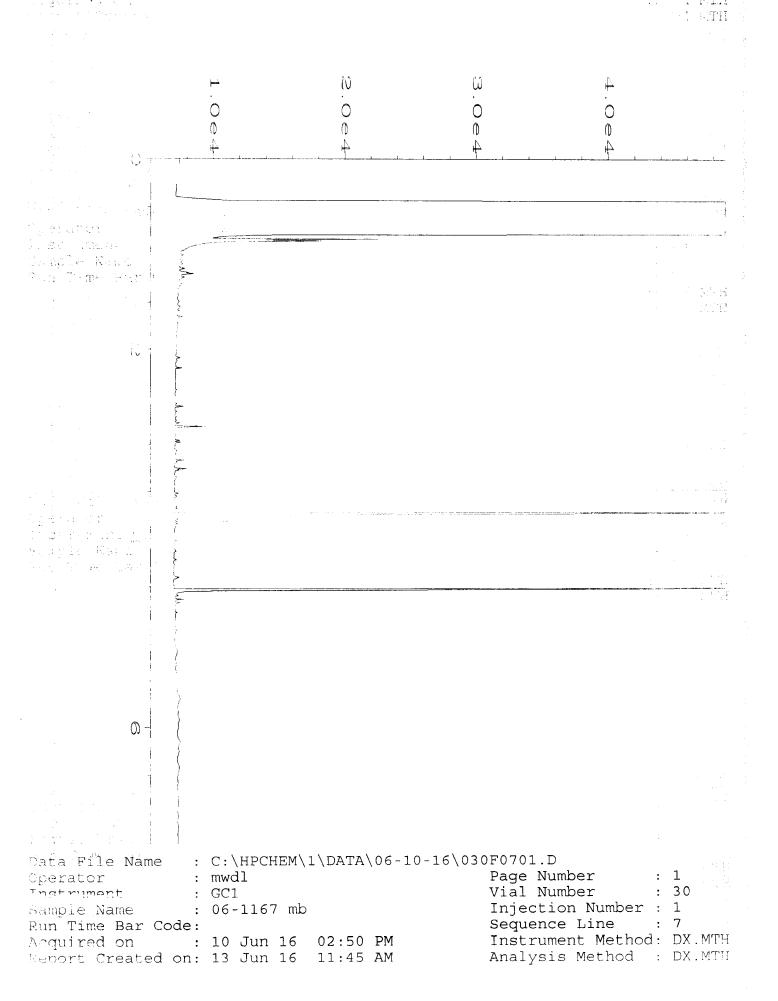
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

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.



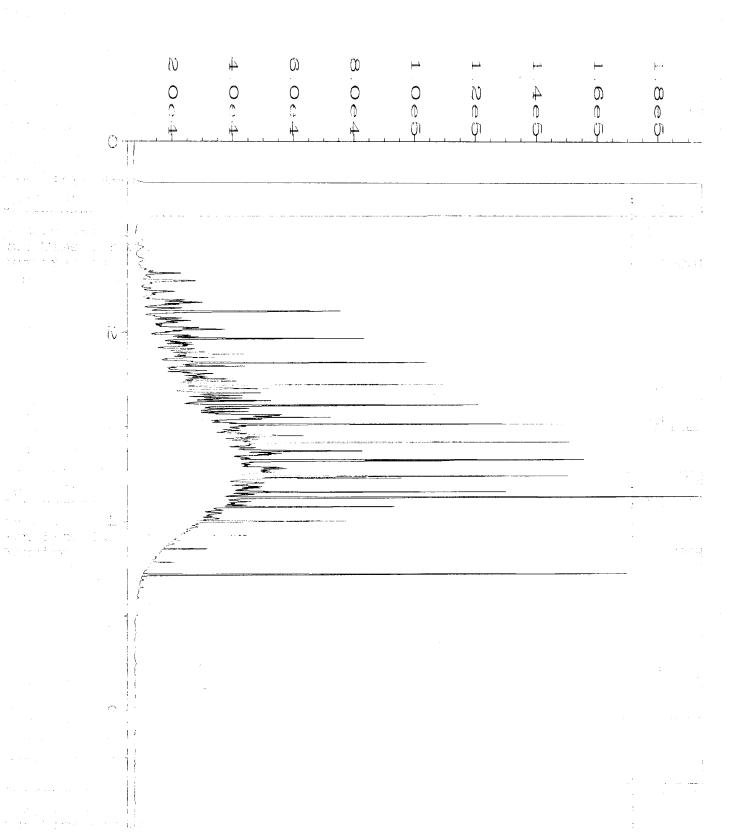




.

· ·

#### a manana daga sebih s



Sata File Name :	C:\HPCHEM\1\DATA\06-10-16\00	3F0201.D	$C_{2,2}$
Operator :	mwdl	Page Number :	1
Instrument :		Vial Number :	3
	500 Dx 45-182D	Injection Number :	
Run Time Bar Code:		Sequence Line :	
acquired on :	10 Jun 16 06:04 AM	Instrument Method:	
Report Created on:	13 Jun 16 11:46 AM	Analysis Method :	DX.MTH

(00616)	SAMPLE CHAIN OF CUSTODY 以在し	19/16	V1/E04,
Send Report To Tim Brown, cc: Jessica Brown, Jennifer Cyr, Peter Kingston, Courtney Schaumberg, Jonathan Loeffler	SAMPLERS (signature)		Page # of TURNAROUND TIME
Company SoundEarth Strategies Address 2811 Fairview Ave E, Suite 2000	PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal – ASKO Property	PO # 0440-004-41	RUSH Rush charges authorized by:
City, State, ZIP <u>Seattle, WA 98102</u>	REMARKS	EIM Y	SAMPLE DISPOSAL Dispose after 30 days Return samples Will call with instructions

				Sampled	Matrix	# of jars	GRPH by NWTPH-Gx	BTEX by EPA 8021B	DRPH/ORPH by NWTPH-Dx	cVOCs by EPA 8260C	Methane, Ethane, and Ethene by RSK 175	Sulfate, Nitrate, Nitrite, Total P, Hardness, and Alkalinity	Total Fe and Total Mn	Sulfide, TKN, and Fe 2+	Notes
Anno6	25	DINE	6/9/16	108	40	5	X	$\mathbf{X}$	X	X					<u> </u>
Ol Murros	26.9	02 1	i y	1219	13	()	×	×	×	X				** <u>-</u> **********************************	
				<u> </u>		/									
					115										
												Samples re	ceived a	it_le	C
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		and 25. 01/jE [alanuse 26.9 02 ]	anvolo 25. 01 <sup>n</sup> ; E 6/9/16 [0141146 26.9 02 1 1)				$\frac{10006}{1000} \frac{25}{26.9} \frac{101}{02} \frac{6}{110} \frac{6}{110} \frac{1108}{10} \frac{1100}{10} \frac{1100}{10} \frac{5}{10} \frac{1}{10} \frac{1}{1$	$\frac{11006}{1000} \frac{25}{26.9} \frac{11}{02} \frac{6}{110} \frac{6}{110} \frac{1108}{10} \frac{1100}{10} \frac{1100}{10} \frac{5}{10} \frac{1}{10} \frac{1}{10$	$\frac{1}{100006} \frac{25}{26.9} = \frac{6/9/16}{01} \frac{108}{10} \frac{1108}{10} $	$\frac{1}{100006} \frac{25}{26.9} = \frac{6/9/16}{100} \frac{1108}{100} \frac{1108}{100} \frac{1100}{100} \frac{5}{100} \frac{1}{100} 1$	$\frac{1006}{10} \frac{25}{10} \frac{10}{10} \frac{6}{10} \frac{108}{10} \frac{100}{10} \frac{5}{10} \frac{10}{10} $	$\frac{10006}{25} \frac{25}{01} \frac{10}{16} \frac{108}{108} \frac{1108}{10} \frac{1108}$	$\frac{10006}{25} \frac{25}{01} \frac{01}{16} \frac{6}{9} \frac{108}{10} \frac{1108}{10} $	$\frac{1}{25} \frac{1}{9} \frac{1}{10} $

Friedman & Bruya, Inc.	SIGNATURE //	PRINT NAME	COMPANY	DATE	TIME
3012 16th Avenue West	Relinquished by:	Logan Schumacher	SES	6/9/16	1335
Seattle, WA 98119-2029	Received by				
Ph. (206) 285-8282	Relinquished by:	Elizabeth Bafford	FBB	6/9/16	1335
Fax (206) 283-5044	Received by:				
				,	