

**ATTACHMENT A**  
**LABORATORY ANALYTICAL REPORTS**

***Friedman & Bruya, Inc. #605167***

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

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

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

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 10, 2016 from the TOC\_01-600\_20160510 WORFDB8, F&BI 605167 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl  
Project Manager

Enclosures

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

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 10, 2016 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC\_01-600\_20160510 WORFDB8, F&BI 605167 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
605167 -01	01MW37-20160510
605167 -02	01MW38-20160510

Sample 01MW37-20160510 was sent to Aquatic Research for sulfate analysis. Review of the enclosed report indicates that all quality assurance were acceptable.

All quality control requirements were acceptable.



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/07/16

Date Received: 05/10/16

Project: TOC\_01-600\_20160510 WORFDB8, F&BI 605167

Date Extracted: 05/11/16

Date Analyzed: 05/11/16

**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)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
01MW37-20160510 605167-01	<1	<1	<1	<3	<100	95
01MW38-20160510 605167-02	1.7	<1	2.0	<3	<100	102
Method Blank 06-896 MB	<1	<1	<1	<3	<100	95

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/07/16

Date Received: 05/10/16

Project: TOC\_01-600\_20160510 WORFDB8, F&BI 605167

Date Extracted: 05/12/16

Date Analyzed: 05/12/16

**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>	<u>Diesel Range</u>	<u>Motor Oil Range</u>	<u>Surrogate</u>
Laboratory ID	(C <sub>10</sub> -C <sub>25</sub> )	(C <sub>25</sub> -C <sub>36</sub> )	(% Recovery)
			(Limit 41-152)
01MW37-20160510 605167-01	380 x	<250	100
01MW38-20160510 605167-02	930 x	<250	116
Method Blank 06-959 MB	<50	<250	97

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/07/16

Date Received: 05/10/16

Project: TOC\_01-600\_20160510 WORFDB8, F&BI 605167

**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: 605167-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (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

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	92	65-118
Toluene	ug/L (ppb)	50	94	72-122
Ethylbenzene	ug/L (ppb)	50	96	73-126
Xylenes	ug/L (ppb)	150	94	74-118
Gasoline	ug/L (ppb)	1,000	95	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/07/16

Date Received: 05/10/16

Project: TOC\_01-600\_20160510 WORFDB8, F&BI 605167

**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

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	97	96	63-142	1

# FRIEDMAN & BRUYA, INC.

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## ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

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

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.

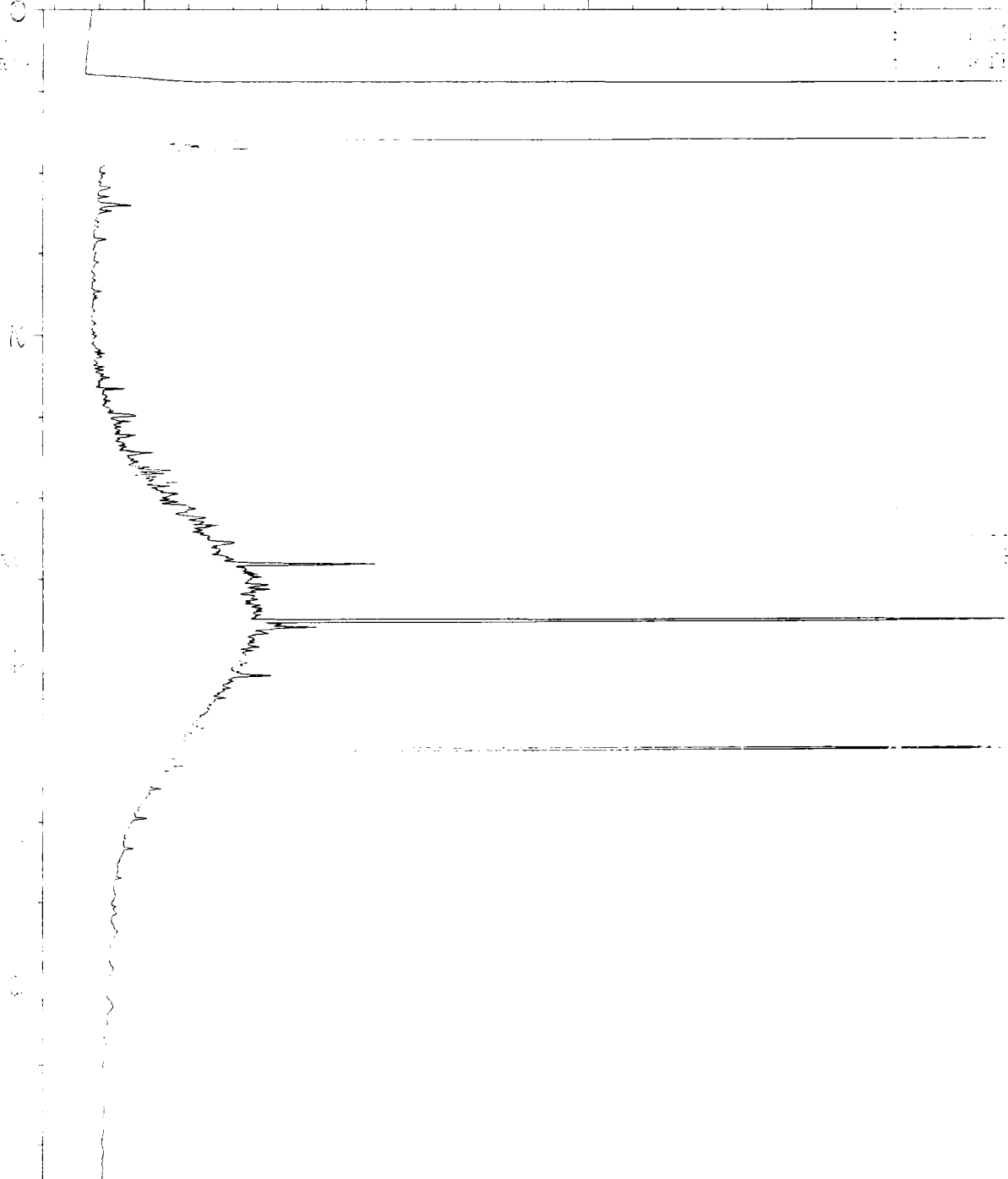
Operator  
Instrument  
Sample Name  
Report Date

Sample Name  
Sample Weight  
Sample Volume  
Sample Concentration  
Report Date

Data File Name : C:\HPCHEM\1\DATA\05-12-16\048F0901.D  
Operator : mwdl  
Instrument : GC1  
Sample Name : 605167-01  
Run Time Bar Code:  
Acquired on : 12 May 16 08:02 PM  
Sample created on: 16 May 16 10:45 AM

Page Number : 1  
Vial Number : 48  
Injection Number : 1  
Sequence Line : 9  
Instrument Method: DX.MTF  
Analysis Method : DX.MTF

1.0e4  
2.0e4  
3.0e4  
4.0e4



Data File Name

Operator

Instrument

Sample Name

Acquired on

Report Created on

Page Number

Vial Number

Injection Number

Sequence Line

Instrument Method

Analysis Method

Sample Name

Acquired on

Report Created on

Page Number

Vial Number

Injection Number

Sequence Line

Instrument Method

Analysis Method

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Analysis Method

Sample Name

Acquired on

Report Created on

Page Number

Vial Number

Injection Number

Sequence Line

Instrument Method

Analysis Method

Sample Name

Acquired on

Report Created on

Page Number

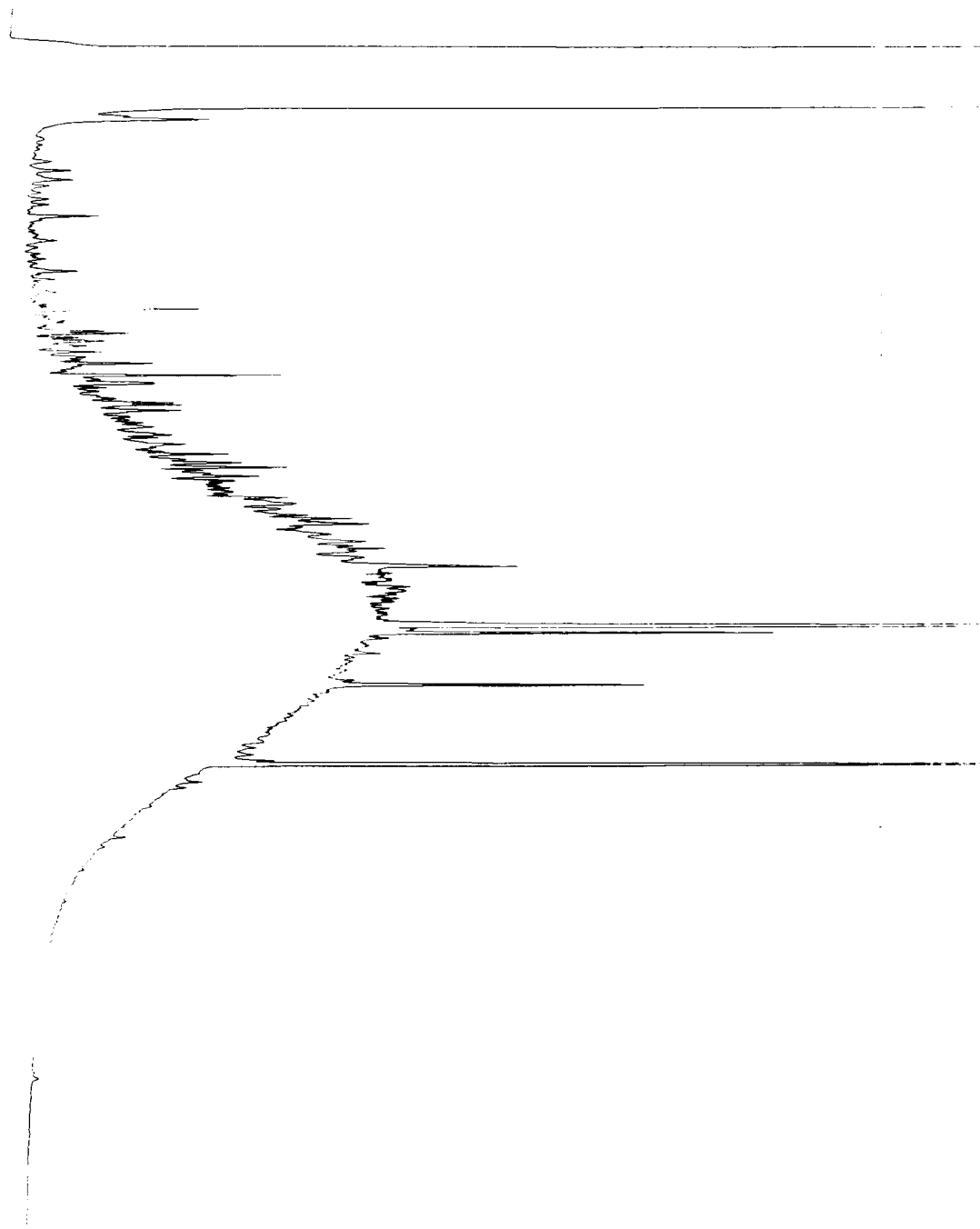
Vial Number

1.0e4

2.0e4

3.0e4

4.0e4



Data File Name : C:\HPCHEM\1\DATA\05-12-16\049F0901.D

Operator : mwdl

Instrument : GC1

Sample Name : 605167-02

Run Time Bar Code:

Acquired on : 12 May 16 08:13 PM

Report Created on: 16 May 16 10:45 AM

Page Number : 1

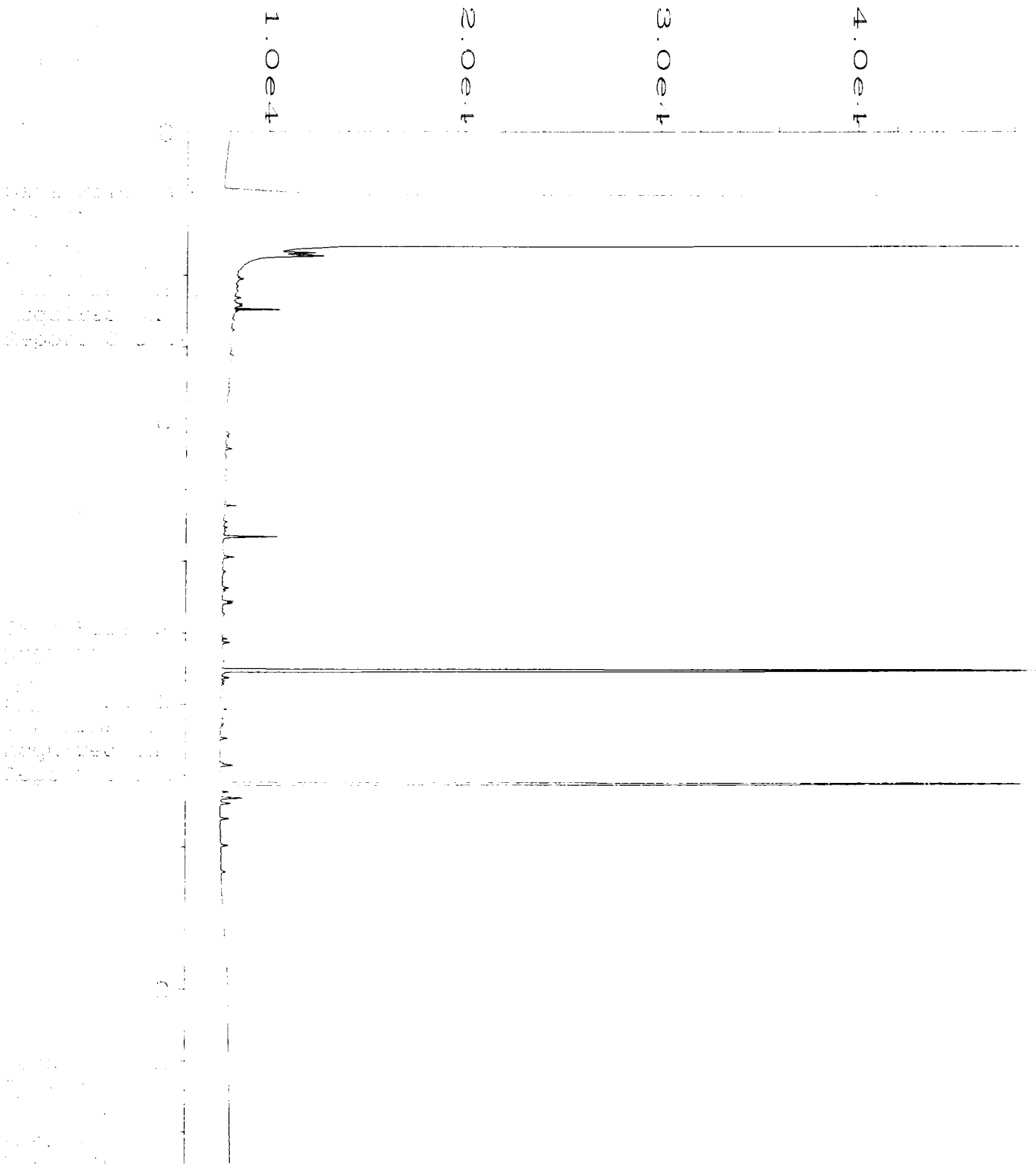
Vial Number : 49

Injection Number : 1

Sequence Line : 9

Instrument Method: DX.MTD

Analysis Method : DX.MTD

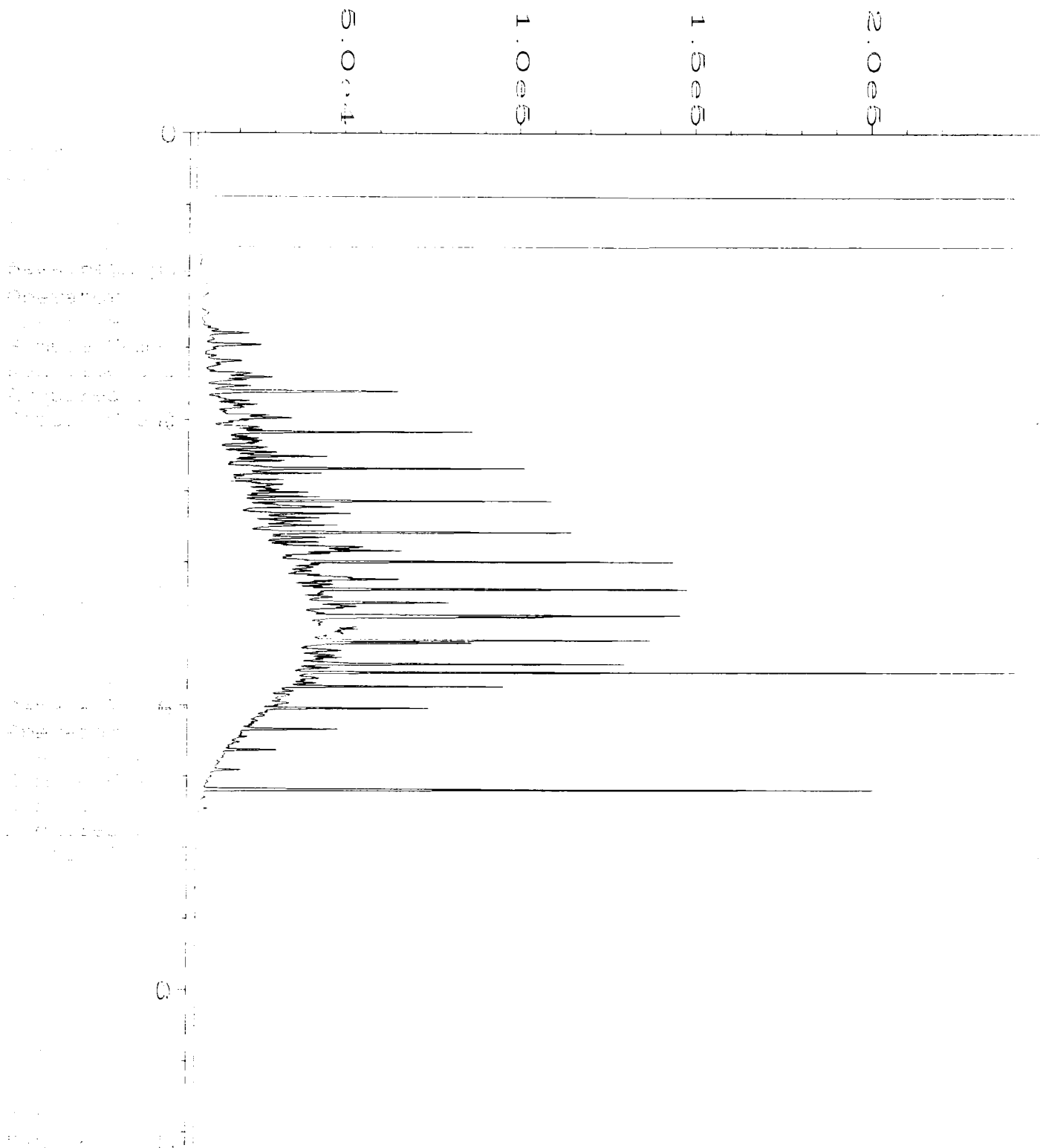


Data File Name	: C:\HPCHEM\1\DATA\05-12-16\013F0301.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 13
Instrument	: GC1	Injection Number	: 1
Sample Name	: 06-959 mb	Sequence Line	: 3
Run Time Bar Code:		Instrument Method:	: DX.MT
Acquired on	: 12 May 16 11:57 AM	Analysis Method	: DX.MT
Report Created on:	: 16 May 16 10:46 AM		



Sample Name:  
Run Time Bar Code:  
Acquired on:  
Report Created on:

05/16/16  
06:37 AM



Raw File Name : C:\HPCHEM\1\DATA\05-12-16\003F0201.D  
Operator : mwdl Page Number : 1  
Instrument : GC1 Vial Number : 3  
Sample Name : 500 Dx 45-182D Injection Number : 1  
Run Time Bar Code: Sequence Line : 2  
Acquired on : 12 May 16 06:37 AM Instrument Method: DX.METHOD  
Report Created on: 16 May 16 10:46 AM Analysis Method : DX.METHOD



**IEH ANALYTICAL LABORATORIES**  
**LABORATORY & CONSULTING SERVICES**  
3927 AURORA AVENUE NORTH, SEATTLE, WA 98103  
PHONE: (206) 632-2715 FAX: (206) 632-2417

<b>CASE FILE NUMBER:</b>	<b>FBI014-63</b>	<b>PAGE 1</b>
<b>REPORT DATE:</b>	<b>06/02/16</b>	
<b>DATE SAMPLED:</b>	<b>05/10/16</b>	<b>DATE RECEIVED: 05/12/16</b>
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605167</b>		

**CASE NARRATIVE**

One water sample was received by the laboratory in good condition and analyzed according to the chain of custody. No other 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**

SAMPLE ID	SULFATE (mg/L)
01MW37-20160510	67.7



**IEH ANALYTICAL LABORATORIES**  
**LABORATORY & CONSULTING SERVICES**  
3927 AURORA AVENUE NORTH, SEATTLE, WA 98103  
PHONE: (206) 632-2715 FAX: (206) 632-2417

<b>CASE FILE NUMBER:</b>	<b>FBI014-63</b>	<b>PAGE 2</b>
<b>REPORT DATE:</b>	<b>06/02/16</b>	
<b>DATE SAMPLED:</b>	<b>05/10/16</b>	<b>DATE RECEIVED: 05/12/16</b>
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605167</b>		

**QA/QC DATA**

QC PARAMETER	SULFATE (mg/L)
METHOD	SM184500SO4E
DATE ANALYZED	06/01/16
DETECTION LIMIT	1.00
DUPLICATE	
SAMPLE ID	BATCH
ORIGINAL	2.43
DUPLICATE	2.40
RPD	1.27%
SPIKE SAMPLE	
SAMPLE ID	BATCH
ORIGINAL	2.43
SPIKED SAMPLE	12.4
SPIKE ADDED	10.0
% RECOVERY	100.08%
QC CHECK	
FOUND	9.88
TRUE	10.0
% RECOVERY	98.80%
BLANK	<1.00

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 TO LOW RELATIVE TOO SAMPLE CONCENTRATION.

SUBMITTED BY:

Damien Gadomski  
Project Manager

FB1014-63

**SUBCONTRACT SAMPLE CHAIN OF CUSTODY**

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER <i>Ag. Research</i>	
PROJECT NAME/NO. <i>605167</i>	PO # <i>D-974</i>
REMARKS  Please Email Results	

Page # 1 of 1

TURNAROUND TIME	
<input type="checkbox"/> Standard (2 Weeks)	
<input type="checkbox"/> RUSH	
Rush charges authorized by:	
SAMPLE DISPOSAL	
<input type="checkbox"/> Dispose after 30 days	
<input type="checkbox"/> Return samples	
<input type="checkbox"/> Will call with instructions	

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED								Notes	
						Dioxins/Furans	EPH	VPH	Nitrate	Sulfate	Alkalinity	TOC-9060M			
01MW37-20160510		5/10/16	1415	water	1					X					

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
<i>[Signature]</i>	Michael Erdahl	Friedman and Bruya	5/11/16	0745am.
<i>[Signature]</i>	SINA SONU total (1) temp. DELISH: Aquatic		5/12/16	1430

605167

SAMPLE CHAIN OF CUSTODY

ME 05/10/16

VI/C03/A1

Send Report To Tim Brown, cc: Jessica Brown, Courtney Schaumberg, Jonathan Loeffler, Jennifer Cyr

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature) 	
PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal	PO # 01-600
REMARKS 1 low level detection limit of 0.219 ug/L for PCP.	EIM Y / N

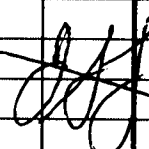
Page # 1 of 1

TURNAROUND TIME

Standard (2 Weeks)  
RUSH \_\_\_\_\_  
Rush charges authorized by: \_\_\_\_\_

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	DRPHORPH 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+	Notes	
11MW37-20160510	01MW37	—	01A-E	5/10/16	1415	H <sub>2</sub> O	5	X	X	X			X						
11MW38-20160510	01MW38	—	02A-D	5/10/16	1507	H <sub>2</sub> O	4	X	X	X									
<del> 5/10/16</del>																			
Samples received at <u>3</u> °C																			

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	JONATHAN LOEFFLER	SOUNDEARTH	5/10/16	4:20
Received by:	Elizabeth Rofford	F&B	5/10/16	4:20
Relinquished by:				
Received by:				

***Friedman & Bruya, Inc. #605168***

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

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 10, 2016 from the TOC\_01-600\_20160510 WORFDB8, F&BI 605168 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, Jonathan Loeffler  
SOU0527R.DOC

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 10, 2016 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC\_01-600\_20160510 WORFDB8, F&BI 605168 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
605168 -01	01MW100-20160510
605168 -02	01MW99-20160510
605168 -03	01MW17-20160510
605168 -04	01MW39-20160510
605168 -05	FD02-20160510

The 8270D surrogate phenol-d6 failed the acceptance criteria for the samples. The data were flagged accordingly. The surrogate is not associated with the analyte, therefore the results were acceptable.

All other quality control requirements were acceptable.



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/16

Date Received: 05/10/16

Project: TOC\_01-600\_20160510 WORFDB8, F&BI 605168

Date Extracted: 05/11/16

Date Analyzed: 05/11/16

**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)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
01MW100-20160510 605168-01	<1	<1	<1	<3	<100	97
01MW99-20160510 605168-02	<1	<1	<1	<3	<100	97
01MW17-20160510 605168-03	<1	<1	<1	<3	<100	96
01MW39-20160510 605168-04	<1	<1	<1	<3	<100	96
FD02-20160510 605168-05	<1	<1	<1	<3	<100	95
Method Blank 06-896 MB	<1	<1	<1	<3	<100	95

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/16

Date Received: 05/10/16

Project: TOC\_01-600\_20160510 WORFDB8, F&BI 605168

Date Extracted: 05/12/16

Date Analyzed: 05/12/16

**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	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> (% Recovery) (Limit 41-152)
01MW100-20160510 605168-01	<50	<250	102
01MW99-20160510 605168-02	850 x	<250	110
01MW17-20160510 605168-03	330 x	<250	105
01MW39-20160510 605168-04	220 x	<250	110
FD02-20160510 605168-05	310 x	<250	102
Method Blank 06-959 MB	<50	<250	97

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	01MW100-20160510	Client:	SoundEarth Strategies
Date Received:	05/10/16	Project:	TOC_01-600_20160510 WORFDB8
Date Extracted:	05/17/16	Lab ID:	605168-01
Date Analyzed:	05/18/16	Data File:	051807.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	53	50	150
Phenol-d6	32 vo	50	150
2,4,6-Tribromophenol	79	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	01MW99-20160510	Client:	SoundEarth Strategies
Date Received:	05/10/16	Project:	TOC_01-600_20160510 WORFDB8
Date Extracted:	05/17/16	Lab ID:	605168-02
Date Analyzed:	05/18/16	Data File:	051808.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	55	50	150
Phenol-d6	36 vo	50	150
2,4,6-Tribromophenol	125	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	TOC_01-600_20160510 WORFDB8
Date Extracted:	05/17/16	Lab ID:	06-982 mb
Date Analyzed:	05/18/16	Data File:	051806.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	53	50	150
Phenol-d6	33 vo	50	150
2,4,6-Tribromophenol	79	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/16

Date Received: 05/10/16

Project: TOC\_01-600\_20160510 WORFDB8, F&BI 605168

**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: 605167-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (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

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	92	65-118
Toluene	ug/L (ppb)	50	94	72-122
Ethylbenzene	ug/L (ppb)	50	96	73-126
Xylenes	ug/L (ppb)	150	94	74-118
Gasoline	ug/L (ppb)	1,000	95	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/16

Date Received: 05/10/16

Project: TOC\_01-600\_20160510 WORFDB8, F&BI 605168

**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

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	97	96	63-142	1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/16

Date Received: 05/10/16

Project: TOC\_01-600\_20160510 WORFDB8, F&BI 605168

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR SEMIVOLATILE PHENOLS BY EPA METHOD 8270D SIM**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 30)
Pentachlorophenol	ug/L (ppb)	2.5	56	62	56-114	10



# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

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

605168

**SAMPLE CHAIN OF CUSTODY**

ME 05-10-16

COU / v1

Send Report To Tim Brown, cc: Jessica Brown, Courtney Schaumberg, Jonathan Loeffler, Jennifer Cyr

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature) 	
PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal	PO # 01-600
REMARKS 1 low level detection limit of 0.219 ug/L for PCP.	EIM Y / N

Page # 1

TURNAROUND TIME

Standard (2 Weeks)  
RUSH \_\_\_\_\_  
Rush charges authorized by: \_\_\_\_\_

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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>	VOCs 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+	Notes	
01MW100-20160510	01MW100	25	01A-E	5/10/16	1212	H <sub>2</sub> O	5	X	X	X	X								
01MW99-20160510	01MW99	27	02+	5/10/16	1105	H <sub>2</sub> O	5	X	X	X	X								
01MW17-20160510	01MW17	21	03A-D	5/10/16	1341	H <sub>2</sub> O	4	X	X	X									
01MW39-20160510	01MW39	14	04+	5/10/16	1522	H <sub>2</sub> O	4	X	X	X									
FD02-20160510	FD02	21	05+	5/10/16	1349	H <sub>2</sub> O	4	X	X	X									
<del>DL</del>																			

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Travis Zandi	SoundEarth	5/10/16	4:20
Received by:	Elizabeth Reeford	F&B	5/10/16	4:20
Relinquished by:				
Received by:				

***Friedman & Bruya, Inc. #605195***

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

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

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

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 11, 2016 from the TOC\_01-600\_20160511 WORFDB8, F&BI 605195 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  
SOU0614R.DOC

# FRIEDMAN & BRUYA, INC.

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## ENVIRONMENTAL CHEMISTS

### CASE NARRATIVE

This case narrative encompasses samples received on May 11, 2016 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC\_01-600\_20160511 WORFDB8, F&BI 605195 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
605195 -01	L2-20160511
605195 -02	01MW13-20160511
605195 -03	01MW90-20160511

Sample 01MW13-20160511 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.

Several 8270D surrogates failed the laboratory acceptance criteria in sample L2-20160511 and the method blank. The surrogate is not associated with the analyte, therefore the results were acceptable.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/11/16

Project: TOC\_01-600\_20160511 WORFDB8, F&BI 605195

Date Extracted: 05/12/16

Date Analyzed: 05/12/16

**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)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
01MW13-20160511 605195-02	<1	<1	<1	<3	<100	97
01MW90-20160511 605195-03	<1	<1	<1	<3	<100	96
Method Blank 06-943 MB	<1	<1	<1	<3	<100	96

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/11/16

Project: TOC\_01-600\_20160511 WORFDB8, F&BI 605195

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	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> (% Recovery) (Limit 47-140)
01MW13-20160511 605195-02	2,000 x	590 x	79
01MW90-20160511 605195-03	4,500 x	1,400 x	76
Method Blank 06-980 MB	<50	<250	99

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	01MW13-20160511	Client:	SoundEarth Strategies
Date Received:	05/11/16	Project:	TOC_01-600_20160511, F&BI 605195
Date Extracted:	05/23/16	Lab ID:	605195-02
Date Analyzed:	05/24/16	Data File:	605195-02.123
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	1,540
Manganese	957



FRIEDMAN & BRUYA, INC.

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_20160511, F&BI 605195
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	<50
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	L2-20160511	Client:	SoundEarth Strategies
Date Received:	05/11/16	Project:	TOC_01-600_20160511, F&BI 605195
Date Extracted:	05/17/16	Lab ID:	605195-01
Date Analyzed:	05/18/16	Data File:	051809.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	62	50	150
Phenol-d6	38 vo	50	150
2,4,6-Tribromophenol	116	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	TOC_01-600_20160511, F&BI 605195
Date Extracted:	05/17/16	Lab ID:	06-982 mb
Date Analyzed:	05/18/16	Data File:	051806.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	53	50	150
Phenol-d6	33 vo	50	150
2,4,6-Tribromophenol	79	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	01MW13-20160511	Client:	SoundEarth Strategies
Date Received:	05/11/16	Project:	TOC_01-600_20160511, F&BI 605195
Date Extracted:	05/23/16	Lab ID:	605195-02
Date Analyzed:	05/23/16	Data File:	021F2101.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	150
Ethane	<10
Ethene	<10

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	TOC_01-600_20160511, F&BI 605195
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

Compounds:	Concentration ug/L (ppb)
Methane	<5
Ethane	<10
Ethene	<10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/11/16

Project: TOC\_01-600\_20160511 WORFDB8, F&BI 605195

**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: 605188-05 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (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

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	95	65-118
Toluene	ug/L (ppb)	50	97	72-122
Ethylbenzene	ug/L (ppb)	50	97	73-126
Xylenes	ug/L (ppb)	150	96	74-118
Gasoline	ug/L (ppb)	1,000	93	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/11/16

Project: TOC\_01-600\_20160511 WORFDB8, F&BI 605195

**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

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	106	108	61-133	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/11/16

Project: TOC\_01-600\_20160511 WORFDB8, F&BI 605195

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

Laboratory Code: 605188-01 x10 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (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: Laboratory Control Sample

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



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/11/16

Project: TOC\_01-600\_20160511 WORFDB8, F&BI 605195

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR SEMIVOLATILE PHENOLS BY EPA METHOD 8270D SIM**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 30)
Pentachlorophenol	ug/L (ppb)	2.5	56	62	56-114	10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/11/16

Project: TOC\_01-600\_20160511 WORFDB8, F&BI 605195

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

Laboratory Code: 605344-03 (Duplicate)

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (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

**Data Qualifiers & Definitions**

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

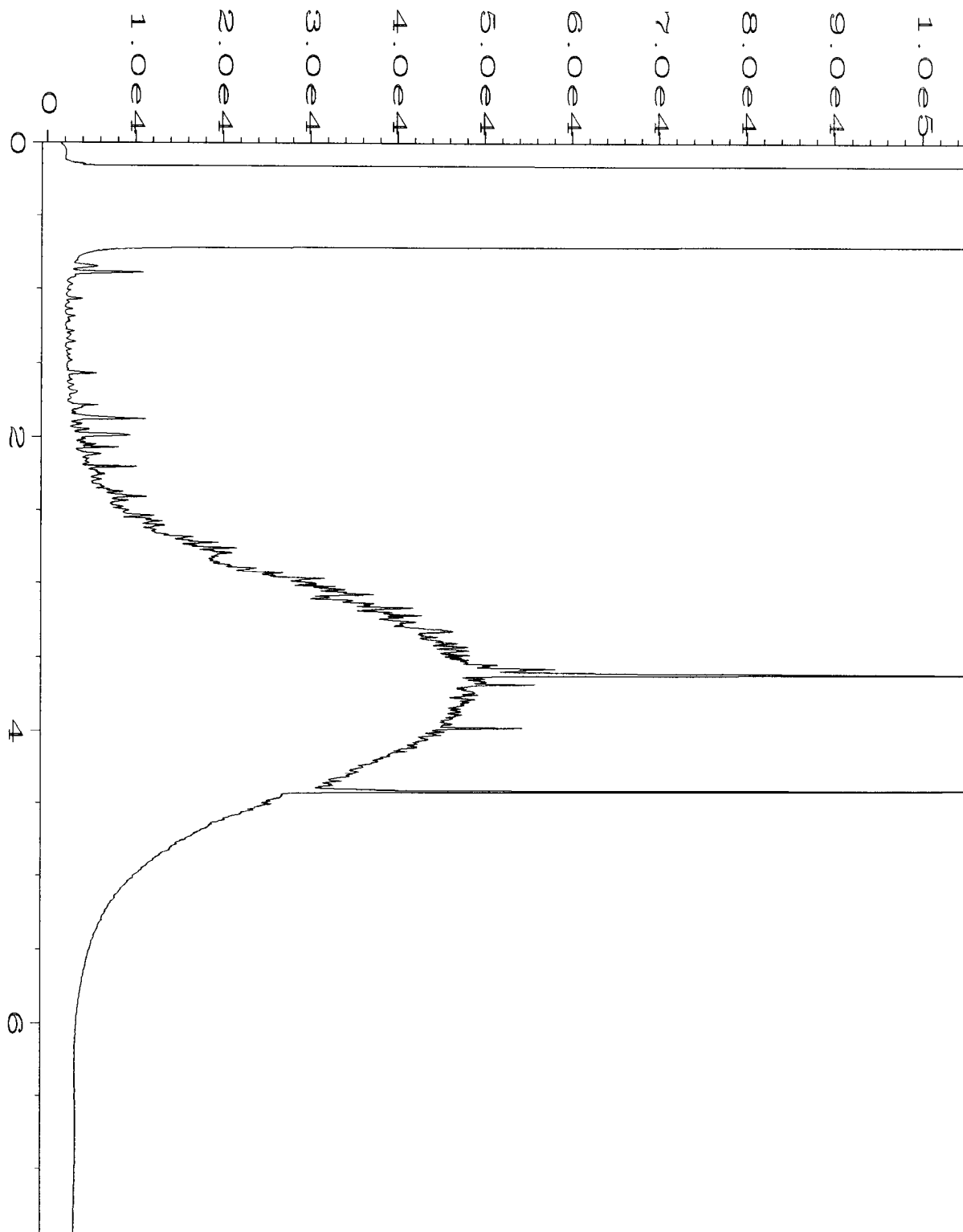
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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

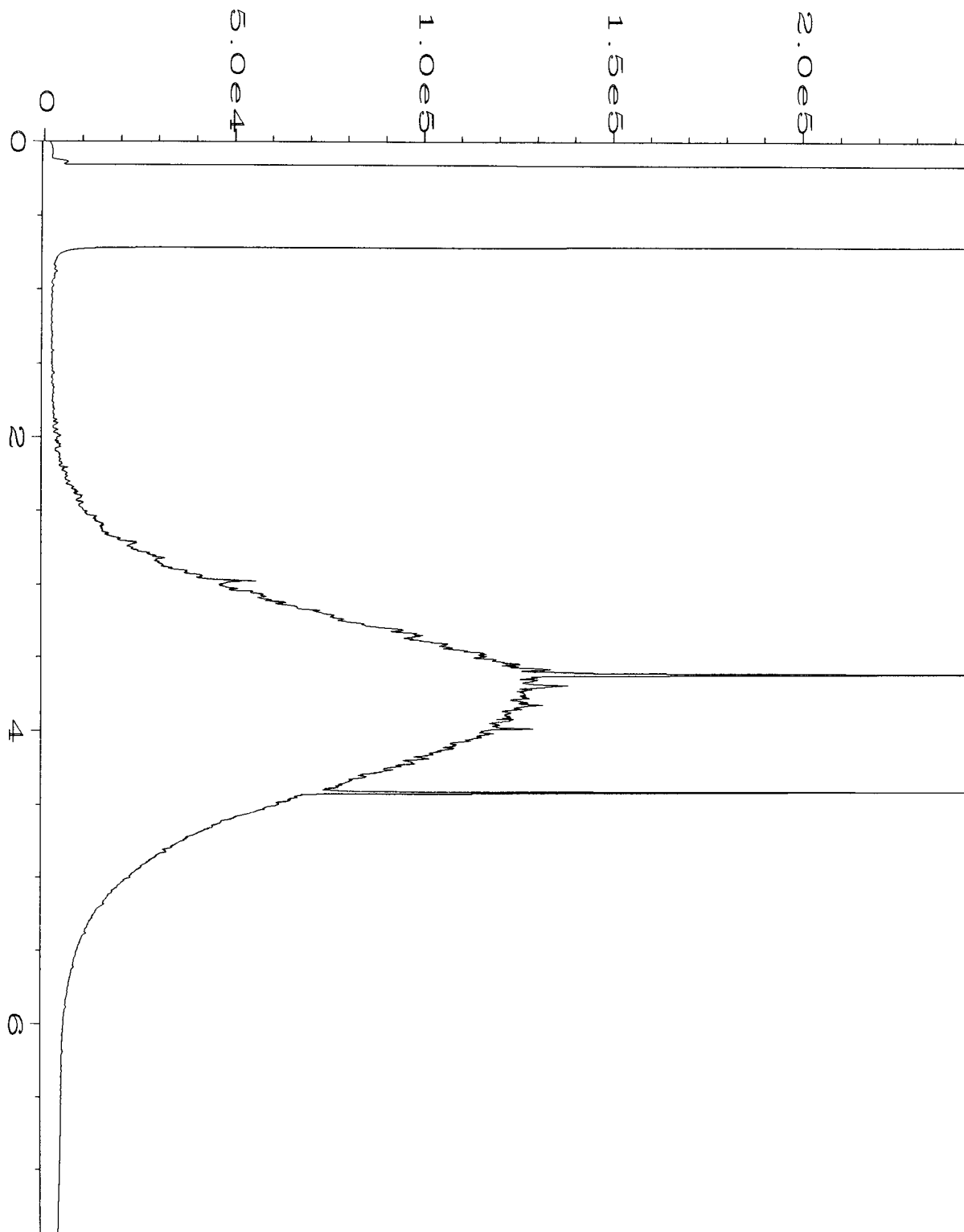
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

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

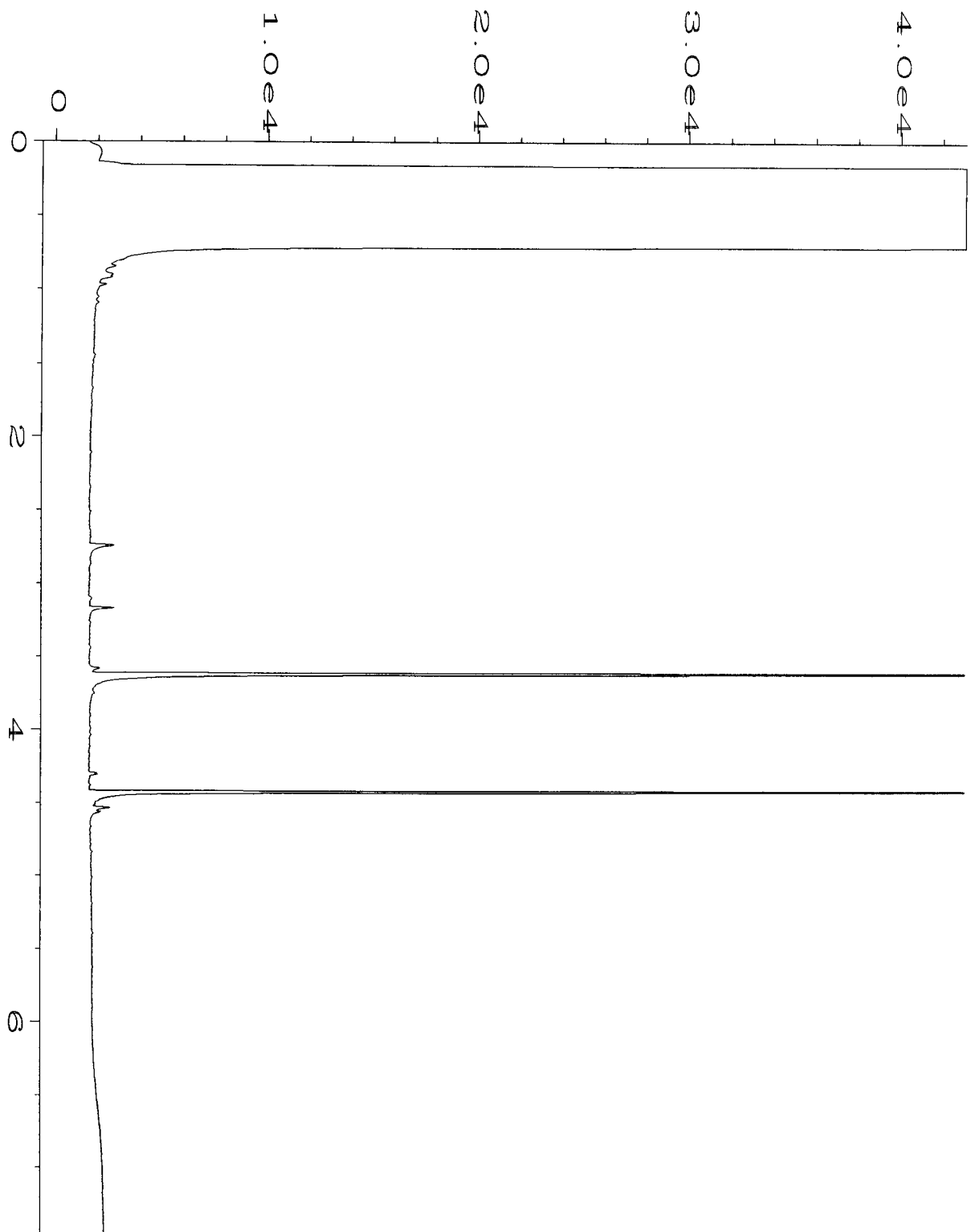
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



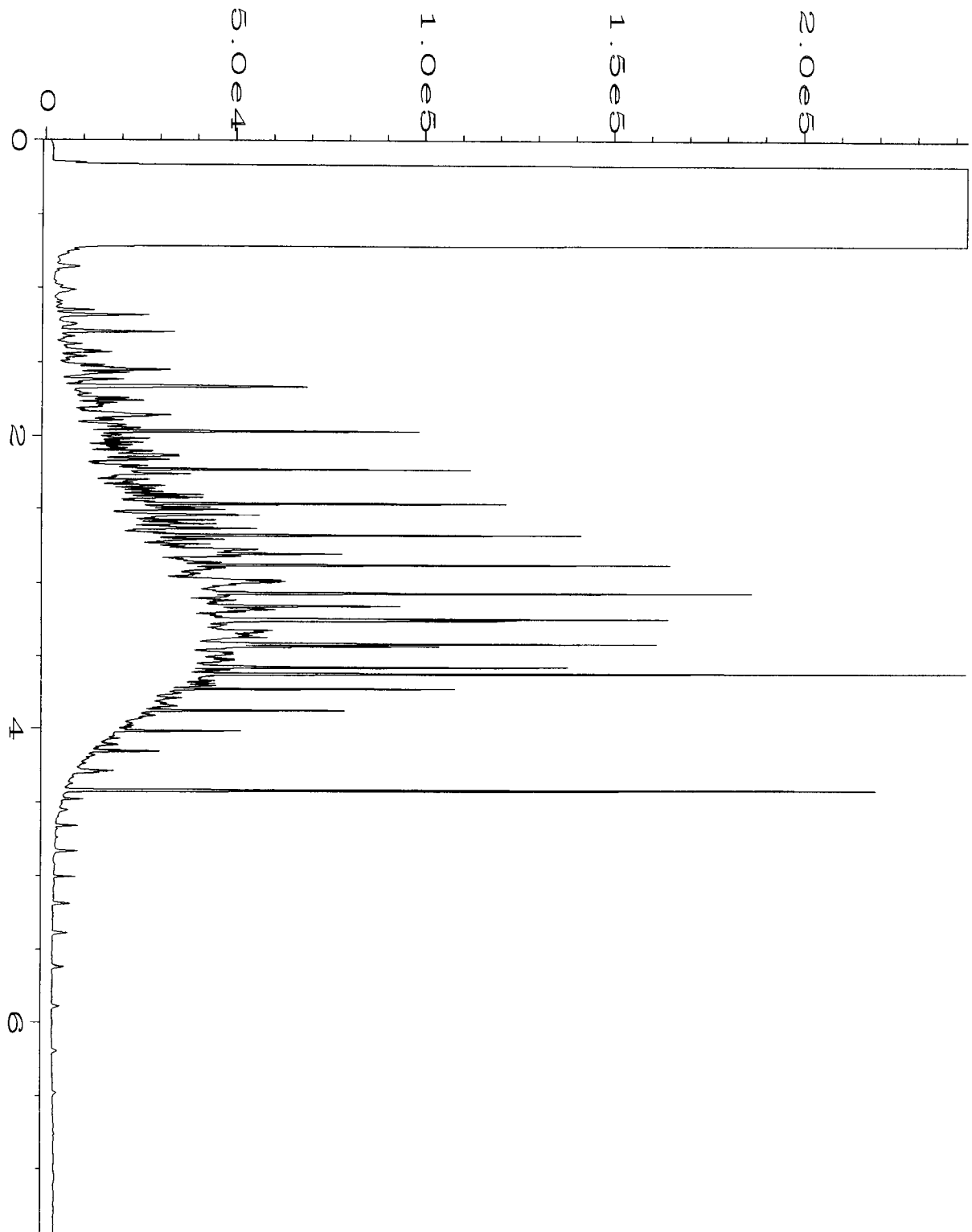
Data File Name	: C:\HPCHEM\4\DATA\05-16-16\020F0601.D	Page Number	: 1
Operator	: mwd1	Vial Number	: 20
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 605195-02	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 May 16 12:31 PM	Analysis Method	: DX.MTH
Report Created on:	17 May 16 11:38 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-16-16\021F0601.D	Page Number	: 1
Operator	: mwd1	Vial Number	: 21
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 605195-03	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 May 16 12:43 PM	Analysis Method	: DX.MTH
Report Created on:	17 May 16 11:38 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-16-16\016F0601.D	Page Number	: 1
Operator	: mwd1	Vial Number	: 16
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 06-980 mb	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 May 16 11:36 AM	Analysis Method	: DX.MTH
Report Created on:	17 May 16 11:39 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-16-16\003F0201.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 3
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 500 Dx 45-182D	Sequence Line	: 2
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 May 16 07:03 AM	Analysis Method	: DX.MTH
Report Created on:	17 May 16 11:39 AM		



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 605195 project.

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

CLIENT ID	MATRIX	AMTEST ID	TEST
01MW13-20160511	Soil	16-A008316	MET

Your sample was received on Thursday, May 12, 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 #: 605195  
PO Number: D-964

BACT = Bacteriological  
CONV = Conventional

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

Friedman & Bruya, Inc.  
3012 16th Avenue West  
Seattle, WA 98119-2029  
Attention: MICHAEL ERDAHL  
Project Name: 605195  
Project #: 605195  
PO Number: D-964  
All results reported on an as received basis.

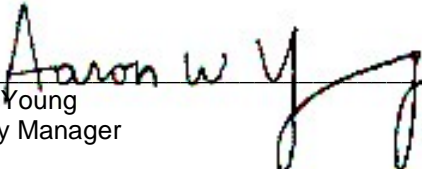
Date Received: 05/12/16  
Date Reported: 5/19/16

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AMTEST Identification Number      16-A008316  
Client Identification                01MW13-20160511  
Sampling Date                        05/11/16, 09:00

### Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	0.82	mg/l		0.01	SM 3500Fe D	MJ	05/12/16

  
Aaron W. Young  
Laboratory Manager

**QC Summary for sample number: 16-A008316**

**MATRIX SPIKES**

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
16-A008248	Ferrous Iron	mg/l	4.25	9.31	5.00	101.20 %
16-A008248	Ferrous Iron	mg/l	4.25	9.33	5.00	101.60 %

**MATRIX SPIKE DUPLICATES**

SAMPLE #	ANALYTE	UNITS	SAMPLE + SPK	MSD VALUE	RPD
Spike	Ferrous Iron	mg/l	9.31	9.33	0.21

**STANDARD REFERENCE MATERIALS**

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Ferrous Iron	mg/l	0.50	0.46	92.0 %

**BLANKS**

ANALYTE	UNITS	RESULT
Ferrous Iron	mg/l	< 0.01

## SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl  
 Company Friedman and Bruya, Inc.  
 Address 3012 16th Ave W  
 City, State, ZIP Seattle, WA 98119  
 Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER <i>Amtest</i>	
PROJECT NAME/NO. <i>605195</i>	PO # <i>D-964</i>
REMARKS <p style="text-align: center;">Please Email Results</p>	

Page # 1 of 1

TURNAROUND TIME <span style="float: right;">D. <u>4</u></span> <input checked="" type="checkbox"/> Standard (2 Weeks) <input type="checkbox"/> RUSH Rush charges authorized by: _____
SAMPLE DISPOSAL <input type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED										Notes	
						Total Fe	Hardness	Sulfate	Ferrous Iron Nitrate	Nitrite	Alkalinity	Sulfide	TKN	Total Phosphorus	Dissolved Gasses		
<i>01MWB-20160511</i>		<i>5/11/16</i>	<i>1305</i>	<i>water</i>	<i>1</i>				<i>X</i>								<i>8316</i>

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
<i>[Signature]</i>	Michael Erdahl	Friedman & Bruya	<i>5/12/16</i>	<i>6758</i>
Relinquished by:	<i>[Signature]</i>			
Received by:	<i>Ru</i>			
Relinquished by:	<i>[Signature]</i>		<i>5/12/16</i>	<i>1105</i>
Received by:				

*T=16.2*



**IEH ANALYTICAL LABORATORIES**  
**LABORATORY & CONSULTING SERVICES**  
3927 AURORA AVENUE NORTH, SEATTLE, WA 98103  
PHONE: (206) 632-2715 FAX: (206) 632-2417

<b>CASE FILE NUMBER:</b>	<b>FBI014-66</b>	<b>PAGE 1</b>
<b>REPORT DATE:</b>	<b>06/10/16</b>	
<b>DATE SAMPLED:</b>	<b>05/11/16</b>	<b>DATE RECEIVED: 05/12/16</b>
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605195</b>		

**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**

SAMPLE ID	ALKALINITY (mgCaCO3/l)	SULFATE (mg/L)	SULFIDE (mg/L)	TOTAL-P (mg/L)	TKN (mg/L)
01MW13-20160511	448	9.29	0.32	0.022	0.483

SAMPLE ID	NITRATE (mg/L)	NITRITE (mg/L)	HARDNESS (mgCaCO3/L)
01MW13-20160511	<0.010	0.002	392



**IEH ANALYTICAL LABORATORIES**  
**LABORATORY & CONSULTING SERVICES**  
 3927 AURORA AVENUE NORTH, SEATTLE, WA 98103  
 PHONE: (206) 632-2715 FAX: (206) 632-2417

**CASE FILE NUMBER:** FBI014-66 **PAGE 2**  
**REPORT DATE:** 06/10/16  
**DATE SAMPLED:** 05/11/16 **DATE RECEIVED:** 05/12/16  
**FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER**  
**SAMPLES FROM FRIEDMAN & BRUYA, INC. / PROJECT NO. 605195**

**QA/QC DATA**

QC PARAMETER	ALKALINITY (mgCaCO3/l)	SULFATE (mg/L)	SULFIDE (mg/L)	TOTAL-P (mg/L)	TKN (mg/L)
METHOD	SM18 2320B	SM184500SO4E	EPA 376.1	EPA 365.1	EPA 351.1
DATE ANALYZED	05/23/16	06/02/16	05/18/16	06/01/16	06/08/16
DETECTION LIMIT	1.00	1.00	0.05	0.002	0.200
DUPLICATE					
SAMPLE ID	BATCH	BATCH	BATCH	BATCH	BATCH
ORIGINAL	61.5	2.43	0.28	0.029	0.508
DUPLICATE	61.0	2.40	0.28	0.029	0.509
RPD	0.82%	1.27%	0.00%	2.01%	0.17%
SPIKE SAMPLE					
SAMPLE ID		BATCH		BATCH	BATCH
ORIGINAL		2.43		0.029	0.508
SPIKED SAMPLE		12.4		0.083	2.46
SPIKE ADDED		10.0		0.050	2.00
% RECOVERY	NA	100.08%	NA	107.56%	97.59%
QC CHECK					
FOUND	105	9.88		0.095	6.74
TRUE	100	10.0		0.094	6.70
% RECOVERY	105.00%	98.80%	NA	101.06%	100.60%
BLANK					
	NA	<1.00	<0.05	<0.002	<0.200

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

<b>CASE FILE NUMBER:</b>	<b>FBI014-66</b>	<b>PAGE 3</b>
<b>REPORT DATE:</b>	<b>06/10/16</b>	
<b>DATE SAMPLED:</b>	<b>05/11/16</b>	<b>DATE RECEIVED:</b> <b>05/12/16</b>
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605195</b>		

**QA/QC DATA**

QC PARAMETER	NITRATE (mg/L)	NITRITE (mg/L)	HARDNESS (mgCaCO3/L)
METHOD	SM184500N03F	EPA 353.2	SM18 2340C
DATE ANALYZED	05/12/16	05/12/16	06/07/16
DETECTION LIMIT	0.010	0.002	2.00
DUPLICATE			
SAMPLE ID	BATCH	BATCH	BATCH
ORIGINAL	0.012	0.002	131
DUPLICATE	0.011	0.002	134
RPD	2.33%	0.00%	2.26%
SPIKE SAMPLE			
SAMPLE ID	BATCH	BATCH	
ORIGINAL	0.012	0.002	
SPIKED SAMPLE	0.209	0.041	
SPIKE ADDED	0.200	0.040	
% RECOVERY	98.66%	97.50%	NA
QC CHECK			
FOUND	0.405	0.040	39.5
TRUE	0.408	0.040	40.0
% RECOVERY	99.26%	100.00%	98.75%
BLANK	<0.010	<0.002	<2.00

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.

SUBMITTED BY:

Damien Gadomski  
Project Manager

FB1014-66

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl  
 Company Friedman and Bruya, Inc.  
 Address 3012 16th Ave W  
 City, State, ZIP Seattle, WA 98119  
 Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER <i>Ag. Resourch.</i>	
PROJECT NAME/NO. <b>605195</b>	PO # <b>D-975</b>
REMARKS  Please Email Results	

Page # 1 of 1

**TURNAROUND TIME**  
 Standard (2 Weeks)  
 RUSH  
 Rush charges authorized by: \_\_\_\_\_

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED										Notes
						Total Fe	Hardness	Sulfate	Nitrate	Nitrite	Alkalinity	Sulfide	TKN	Total Phosphorus	Dissolved Gasses	
01MW13-2060511		5/11/16	1305	water	4		X	X	X	X	X	X	X	X		

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
	Michael Erdahl	Friedman & Bruya	5/12/16	6758
	SINA SONW total(4) temp: 11.1°C ICH Aquatic		5/12/16	1430
Relinquished by:				
Received by:				

605195

SAMPLE CHAIN OF CUSTODY

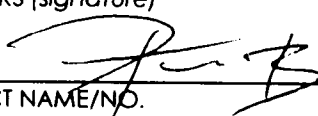
ME 05/11/16

Send Report To Tim Brown, cc: Jessica Brown, Courtney Schaumberg, Jonathan Loeffler, Jennifer Cyr

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature) 

PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal PO # 01-600

REMARKS low level detection limit of 0.219 ug/L for PCP. EIM Y / N



Page # 1 of 1

TURNAROUND TIME  
Standard (2 Weeks)  
 RUSH  
 Rush charges authorized by: \_\_\_\_\_

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+	Notes	
L2-20160511	L2		01	5/11/16	1040	GW	1				<input checked="" type="checkbox"/>								
01MW13-20160511	01MW13		02	5/11/16	1305	GW	12	X	X	X			X	X	X	X	X		
01MW90-20160511	01MW90		03	5/11/16	1442	GW	4	X	X	X									
Samples received at <u>4</u> °C																			

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Kevin Bartelt	SES	5/11/16	1620
Received by: 	Nham Phan	FEBT	5/11/16	1620
Relinquished by:				
Received by:				



***Friedman & Bruya, Inc. #605196***

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

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

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

June 8, 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 11, 2016 from the TOC\_01-600\_20160511 WORFDB8, F&BI 605196 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  
SOU0608R.DOC

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 11, 2016 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC\_01-600\_20160511 WORFDB8, F&BI 605196 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
605196 -01	01MW42-20160511
605196 -02	01MW12-20160511
605196 -03	Q9-20160511

Sample 01MW42-20160511 was sent to Aquatic Research for sulfate analysis. Sample Q9-20160511 was sent to Aquatic Research for sulfate, nitrate, nitrite, total phosphorus, hardness, alkalinity, TKN, and sulfide analyses. In addition, sample Q9-20160511 was sent to Amtest for ferrous iron analysis. The reports are enclosed.

Several 8270D surrogates failed the laboratory acceptance criteria in sample Q9-20160511 and the method blank. The surrogate is not associated with the analyte, therefore the results were acceptable.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/08/16

Date Received: 05/11/16

Project: TOC\_01-600\_20160511 WORFDB8, F&BI 605196

Date Extracted: 05/12/16

Date Analyzed: 05/12/16

**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)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
01MW42-20160511 605196-01	<1	<1	<1	<3	<100	97
01MW12-20160511 605196-02	5.7	1.5	3.2	<3	210	95
Q9-20160511 605196-03	<1	<1	<1	<3	<100	96
Method Blank 06-943 MB	<1	<1	<1	<3	<100	96

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/08/16

Date Received: 05/11/16

Project: TOC\_01-600\_20160511 WORFDB8, F&BI 605196

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	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 47-140)
01MW42-20160511 605196-01	560 x	520 x	92
01MW12-20160511 605196-02	1,900 x	630 x	85
Q9-20160511 605196-03	960 x	360 x	87
Method Blank 06-980 MB	<50	<250	99

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Q9-20160511	Client:	SoundEarth Strategies
Date Received:	05/11/16	Project:	TOC_01-600_20160511 WORFDB8
Date Extracted:	05/23/16	Lab ID:	605196-03
Date Analyzed:	05/24/16	Data File:	605196-03.124
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	1,870
Manganese	1,550

FRIEDMAN & BRUYA, INC.

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_20160511 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	<50
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	Q9-20160511	Client:	SoundEarth Strategies
Date Received:	05/11/16	Project:	TOC_01-600_20160511 WORFDB8
Date Extracted:	05/17/16	Lab ID:	605196-03
Date Analyzed:	05/18/16	Data File:	051810.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	65	50	150
Phenol-d6	43 vo	50	150
2,4,6-Tribromophenol	153 vo	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	TOC_01-600_20160511 WORFDB8
Date Extracted:	05/17/16	Lab ID:	06-982 mb
Date Analyzed:	05/18/16	Data File:	051806.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	53	50	150
Phenol-d6	33 vo	50	150
2,4,6-Tribromophenol	79	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

Date of Report: 06/08/16

Date Received: 05/11/16

Project: TOC\_01-600\_20160511 WORFDB8, F&BI 605196

**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: 605188-05 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (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

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	95	65-118
Toluene	ug/L (ppb)	50	97	72-122
Ethylbenzene	ug/L (ppb)	50	97	73-126
Xylenes	ug/L (ppb)	150	96	74-118
Gasoline	ug/L (ppb)	1,000	93	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/08/16

Date Received: 05/11/16

Project: TOC\_01-600\_20160511 WORFDB8, F&BI 605196

**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

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	106	108	61-133	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/08/16

Date Received: 05/11/16

Project: TOC\_01-600\_20160511 WORFDB8, F&BI 605196

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

Laboratory Code: 605188-01 x10 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (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: Laboratory Control Sample

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/08/16

Date Received: 05/11/16

Project: TOC\_01-600\_20160511 WORFDB8, F&BI 605196

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR SEMIVOLATILE PHENOLS BY EPA METHOD 8270D SIM**

Laboratory Code: Laboratory Control Sample

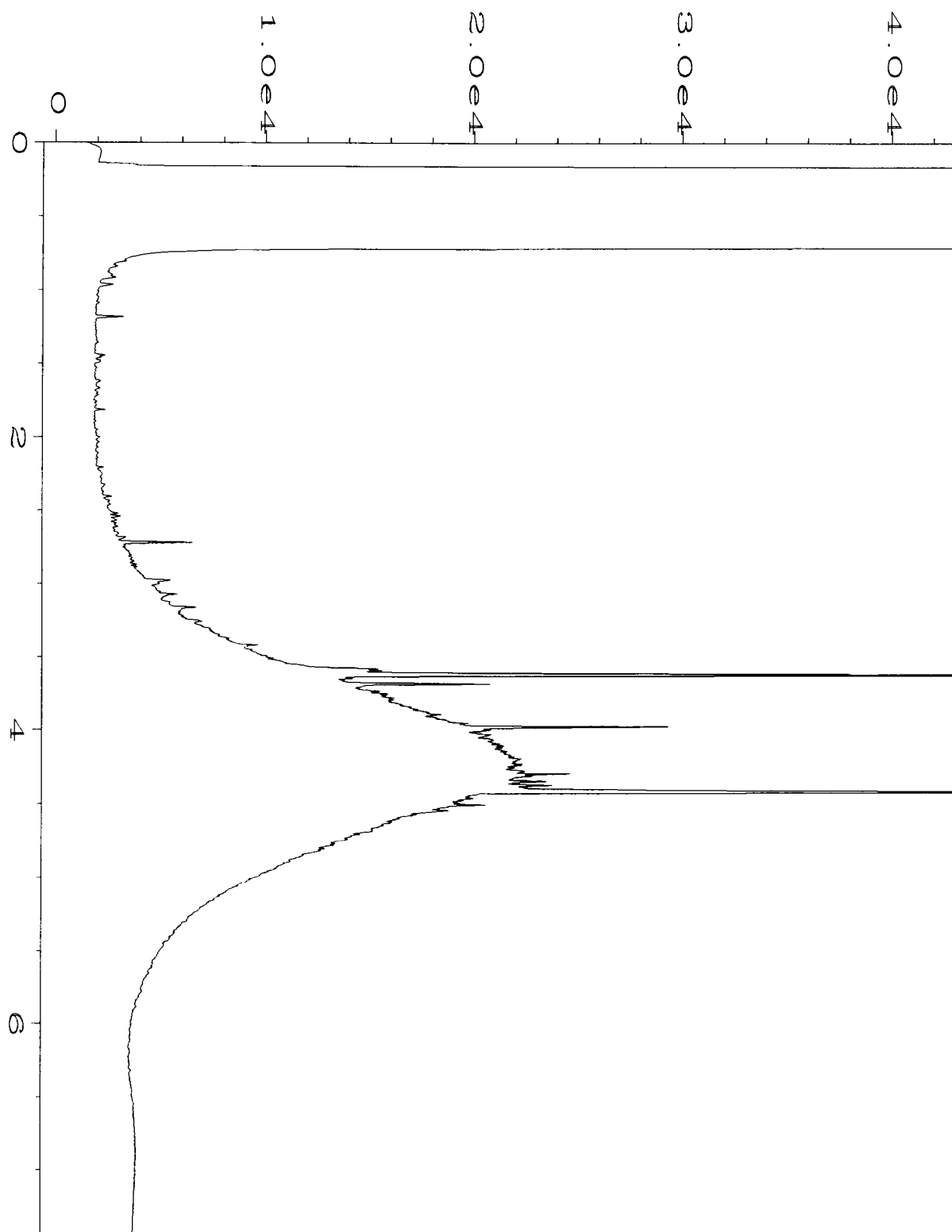
Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 30)
Pentachlorophenol	ug/L (ppb)	2.5	56	62	56-114	10

# FRIEDMAN & BRUYA, INC.

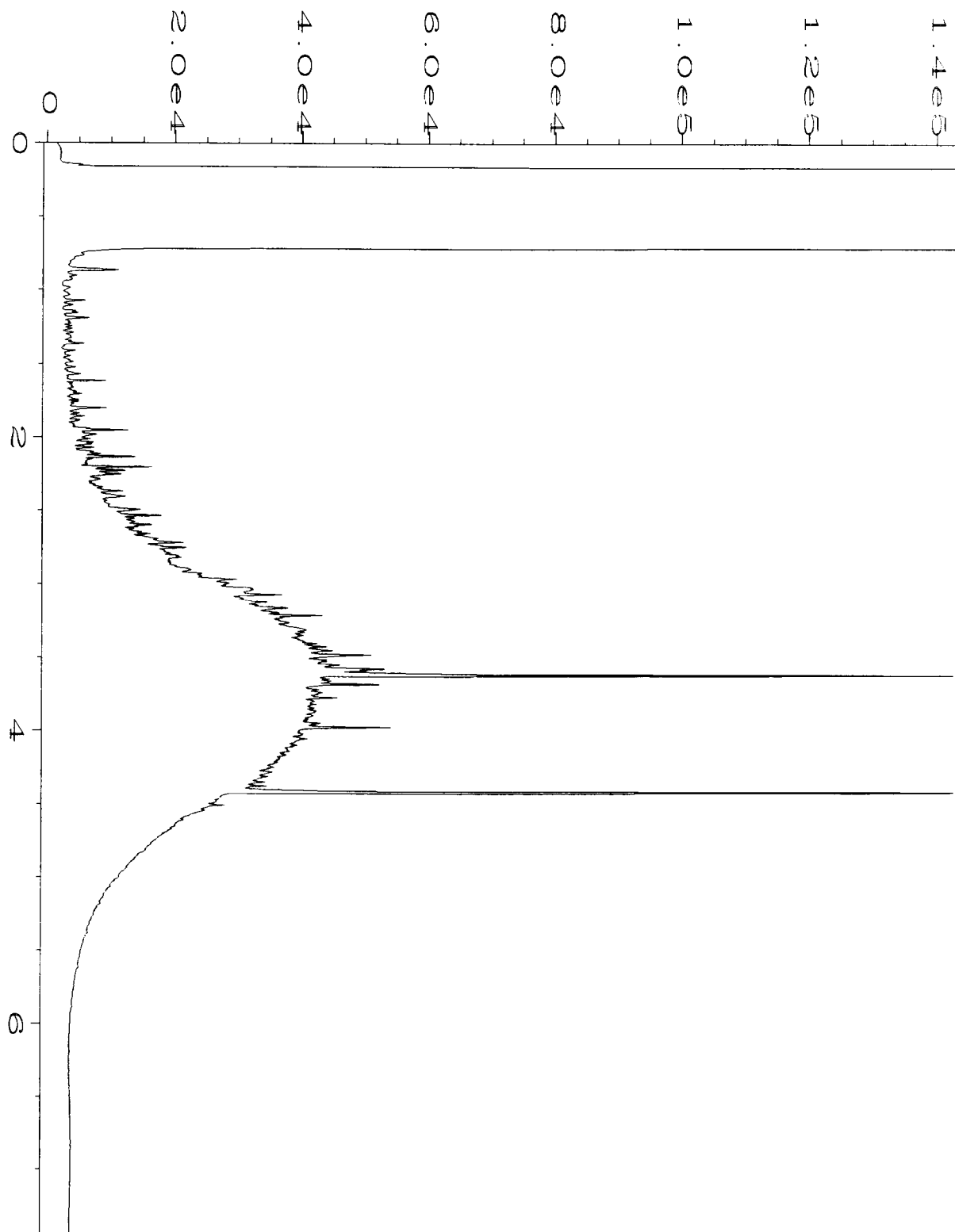
## ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

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

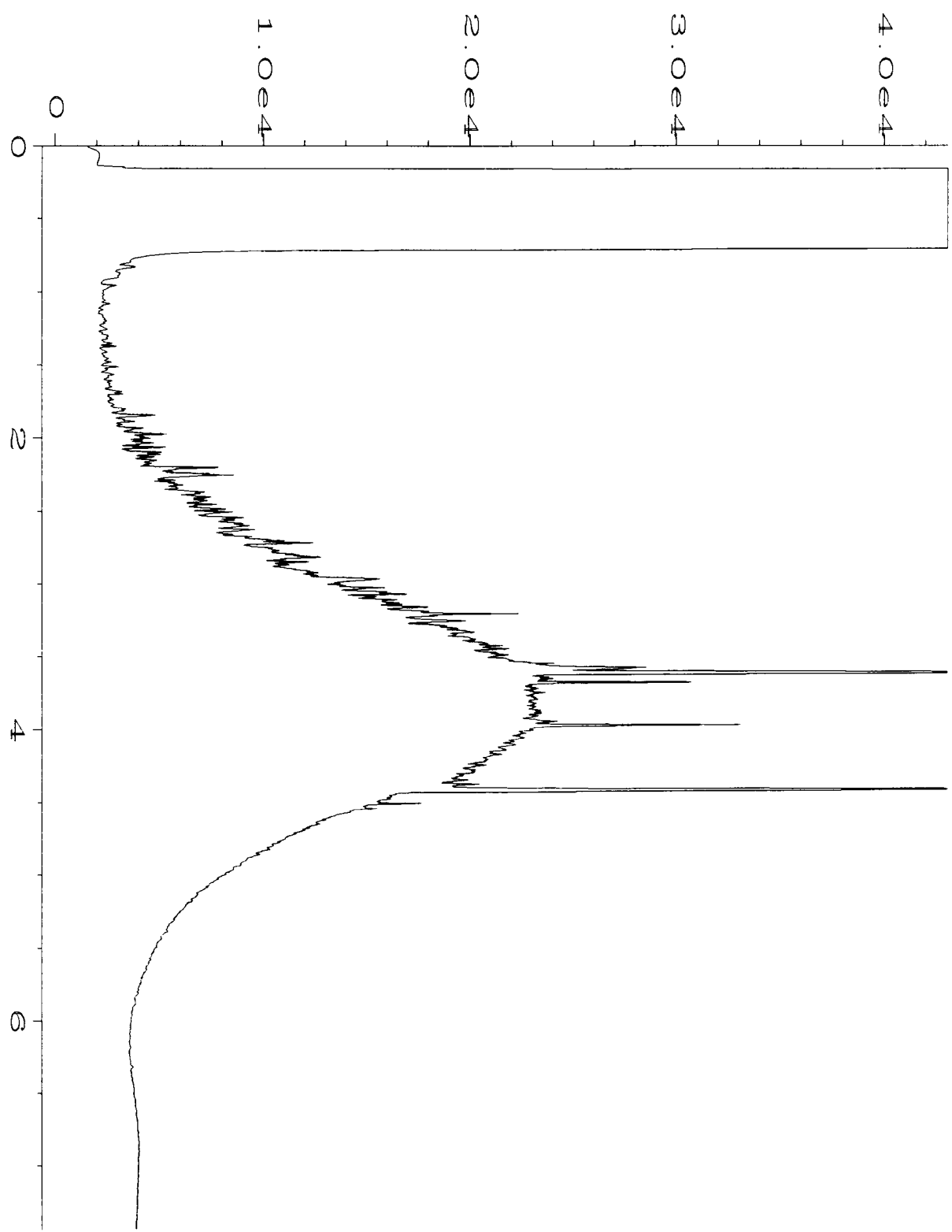


Data File Name	: C:\HPCHEM\4\DATA\05-16-16\022F0601.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 22
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 605196-01	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 May 16 12:54 PM	Analysis Method	: DX.MTH
Report Created on:	17 May 16 11:41 AM		

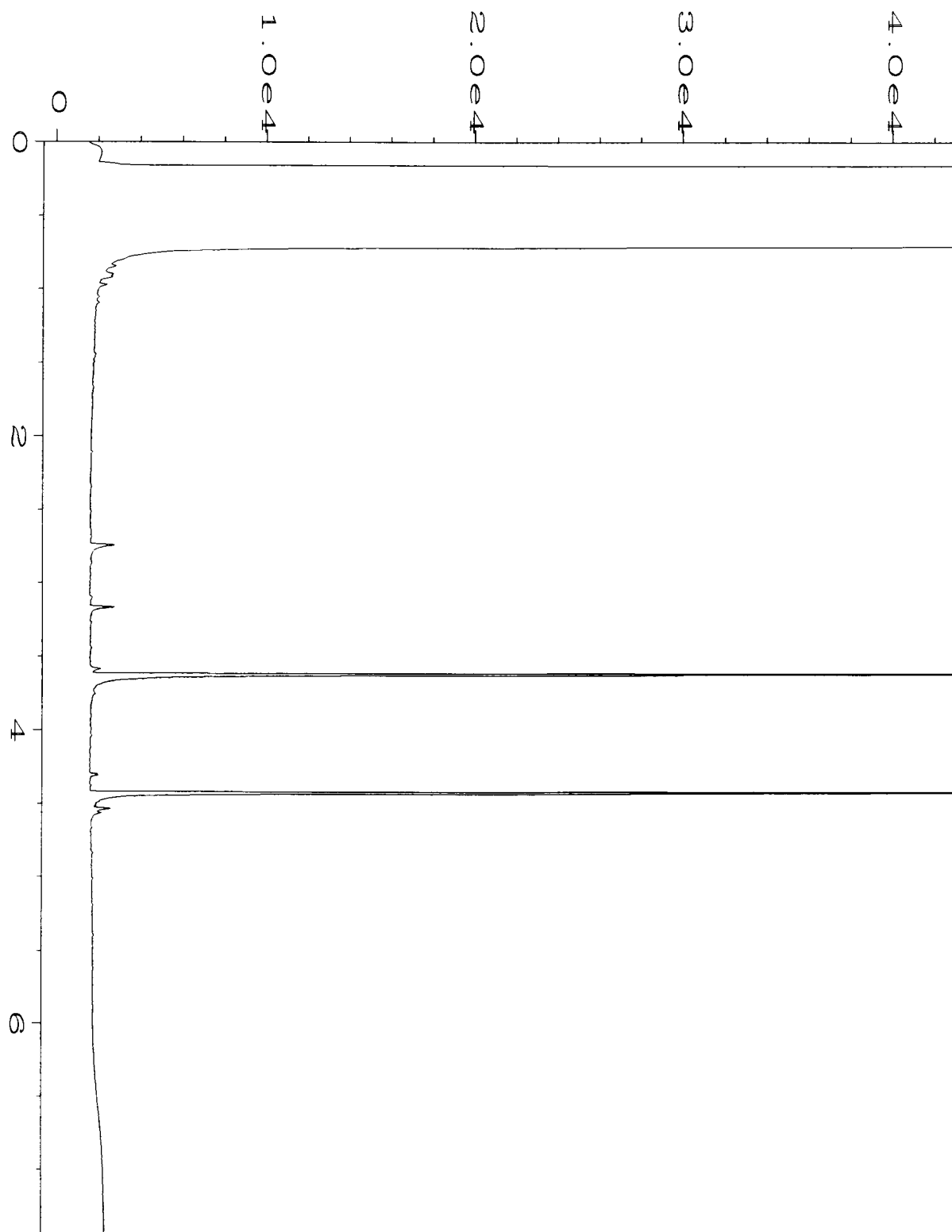


Data File Name	: C:\HPCHEM\4\DATA\05-16-16\023F0601.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 23
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 605196-02	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 May 16 01:06 PM	Analysis Method	: DX.MTH
Report Created on:	17 May 16 11:41 AM		

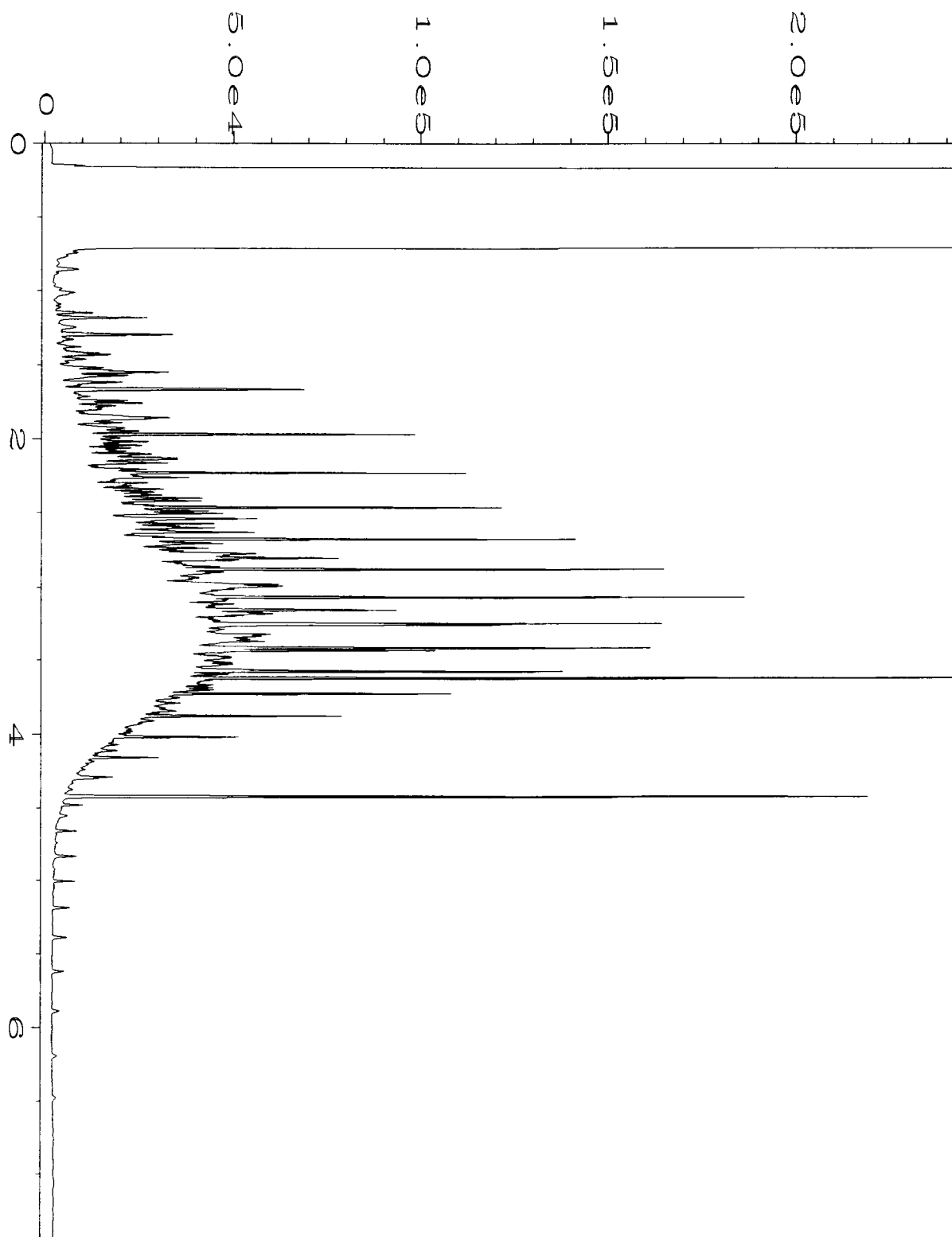




Data File Name	: C:\HPCHEM\4\DATA\05-16-16\024F0601.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 24
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 605196-03	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 May 16 01:17 PM	Analysis Method	: DX.MTH
Report Created on:	17 May 16 11:41 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-16-16\016F0601.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 16
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 06-980 mb	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 May 16 11:36 AM	Analysis Method	: DX.MTH
Report Created on:	17 May 16 11:42 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-16-16\003F0201.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 3
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 500 Dx 45-182D	Sequence Line	: 2
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 May 16 07:03 AM	Analysis Method	: DX.MTH
Report Created on:	17 May 16 11:42 AM		



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 605196 project.

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

CLIENT ID	MATRIX	AMTEST ID	TEST
Q9-20160511	Soil	16-A008317	MET

Your sample was received on Thursday, May 12, 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 #: 605196  
PO Number: D-964

BACT = Bacteriological  
CONV = Conventional

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

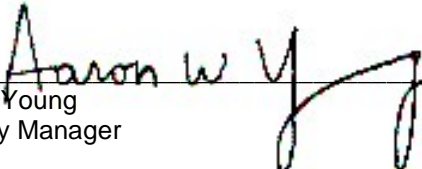
Friedman & Bruya, Inc.  
3012 16th Avenue West  
Seattle, WA 98119-2029  
Attention: MICHAEL ERDAHL  
Project Name: 605196  
Project #: 605196  
PO Number: D-964  
All results reported on an as received basis.

Date Received: 05/12/16  
Date Reported: 5/19/16

AMTEST Identification Number 16-A008317  
Client Identification Q9-20160511  
Sampling Date 05/11/16, 13:05

### Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	1.39	mg/l		0.01	SM 3500Fe D	MJ	05/12/16

  
Aaron W. Young  
Laboratory Manager

**QC Summary for sample number: 16-A008317**

**MATRIX SPIKES**

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
16-A008248	Ferrous Iron	mg/l	4.25	9.31	5.00	101.20 %
16-A008248	Ferrous Iron	mg/l	4.25	9.33	5.00	101.60 %

**MATRIX SPIKE DUPLICATES**

SAMPLE #	ANALYTE	UNITS	SAMPLE + SPK	MSD VALUE	RPD
Spike	Ferrous Iron	mg/l	9.31	9.33	0.21

**STANDARD REFERENCE MATERIALS**

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Ferrous Iron	mg/l	0.50	0.46	92.0 %

**BLANKS**

ANALYTE	UNITS	RESULT
Ferrous Iron	mg/l	< 0.01

## SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl  
 Company Friedman and Bruya, Inc.  
 Address 3012 16th Ave W  
 City, State, ZIP Seattle, WA 98119  
 Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER <span style="float: right;"><i>Amtest</i></span>	
PROJECT NAME/NO.  <i>605196</i>	PO #  <i>D-964</i>
REMARKS  <p style="text-align: center;">Please Email Results</p>	

Page # 1 of 1

TURNAROUND TIME
<input checked="" type="checkbox"/> Standard (2 Weeks) <input type="checkbox"/> RUSH Rush charges authorized by: _____
SAMPLE DISPOSAL
<input type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED											Notes		
						Dioxins/Furans	EPH	VPH	Nitrate	Sulfate	Alkalinity	TOC-9060M	Ferrous	Iron					
<i>Q9</i> <i>01MWT3-20160511</i>		<i>5/11/16</i>	<i>1305</i>	<i>water</i>	<i>1</i>													<i>X</i>	<i>831.7</i>

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Michael Erdahl	Friedman and Bruya	5/11/16	08:10AM
Received by: <i>RM</i>	<i>Tom Z Fedex</i>		5/12/16	1105
Relinquished by:				
Received by:				

14.2  
11  
T



**IEH ANALYTICAL LABORATORIES**  
**LABORATORY & CONSULTING SERVICES**  
3927 AURORA AVENUE NORTH, SEATTLE, WA 98103  
PHONE: (206) 632-2715 FAX: (206) 632-2417

<b>CASE FILE NUMBER:</b>	<b>FBI014-64</b>	<b>PAGE 1</b>
<b>REPORT DATE:</b>	<b>06/07/16</b>	
<b>DATE SAMPLED:</b>	<b>05/11/16</b>	<b>DATE RECEIVED: 05/12/16</b>
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605196</b>		

**CASE NARRATIVE**

Two water samples were 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 these samples. Sample data follows while QA/QC data is contained on subsequent pages.

**SAMPLE DATA**

SAMPLE ID	ALKALINITY (mgCaCO <sub>3</sub> /l)	SULFATE (mg/L)	SULFIDE (mg/L)	TOTAL-P (mg/L)	TKN (mg/L)
01MW42-20160511		32.5			
Q9-20160511	227	2.43	0.36	0.299	0.475

SAMPLE ID	NITRATE (mg/L)	NITRITE (mg/L)	HARDNESS (mgCaCO <sub>3</sub> /L)
Q9-20160511	0.027	0.003	196





# IEH ANALYTICAL LABORATORIES

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

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

<b>CASE FILE NUMBER:</b>	FBI014-64	<b>PAGE 2</b>
<b>REPORT DATE:</b>	06/07/16	
<b>DATE SAMPLED:</b>	05/11/16	<b>DATE RECEIVED:</b> 05/12/16
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605196</b>		

**QA/QC DATA**

QC PARAMETER	ALKALINITY (mgCaCO <sub>3</sub> /l)	SULFATE (mg/L)	SULFIDE (mg/L)	TOTAL-P (mg/L)	TKN (mg/L)
METHOD	SM18 2320B	SM184500SO4E	EPA 376.1	EPA 365.1	EPA 351.1
DATE ANALYZED	05/23/16	06/02/16	05/18/16	06/01/16	05/19/16
DETECTION LIMIT	1.00	1.00	0.05	0.002	0.200
DUPLICATE					
SAMPLE ID	BATCH	Q9-20160511	BATCH	BATCH	BATCH
ORIGINAL	61.5	2.43	0.28	0.029	0.542
DUPLICATE	61.0	2.40	0.28	0.029	0.546
RPD	0.82%	1.27%	0.00%	2.01%	0.70%
SPIKE SAMPLE					
SAMPLE ID		Q9-20160511		BATCH	BATCH
ORIGINAL		2.43		0.029	0.542
SPIKED SAMPLE		12.4		0.083	2.83
SPIKE ADDED		10.0		0.050	2.00
% RECOVERY	NA	100.08%	NA	107.56%	114.25%
QC CHECK					
FOUND	105	9.88		0.095	6.17
TRUE	100	10.0		0.094	6.70
% RECOVERY	105.00%	98.80%	NA	101.06%	92.09%
BLANK					
	NA	<1.00	<0.05	<0.002	<0.200

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:** FBI014-64 **PAGE 3**  
**REPORT DATE:** 06/07/16  
**DATE SAMPLED:** 05/11/16 **DATE RECEIVED:** 05/12/16  
**FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER**  
**SAMPLES FROM FRIEDMAN & BRUYA, INC. / PROJECT NO. 605196**

**QA/QC DATA**

QC PARAMETER	NITRATE (mg/L)	NITRITE (mg/L)	HARDNESS (mgCaCO3/L)
METHOD	SM184500N03F	EPA 353.2	SM18 2340C
DATE ANALYZED	05/12/16	05/12/16	06/07/16
DETECTION LIMIT	0.010	0.002	2.00
DUPLICATE			
SAMPLE ID	BATCH	BATCH	BATCH
ORIGINAL	0.012	0.002	131
DUPLICATE	0.011	0.002	134
RPD	2.33%	0.00%	2.26%
SPIKE SAMPLE			
SAMPLE ID	BATCH	BATCH	
ORIGINAL	0.012	0.002	
SPIKED SAMPLE	0.209	0.041	
SPIKE ADDED	0.200	0.040	
% RECOVERY	98.66%	97.50%	NA
QC CHECK			
FOUND	0.405	0.040	39.5
TRUE	0.408	0.040	40.0
% RECOVERY	99.26%	100.00%	98.75%
BLANK	<0.010	<0.002	<2.00

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.

SUBMITTED BY:

Damien Gadomski  
Project Manager

FB1014-64

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl  
 Company Friedman and Bruya, Inc.  
 Address 3012 16th Ave W  
 City, State, ZIP Seattle, WA 98119  
 Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER <i>Aq. Research</i>	
PROJECT NAME/NO. <b>605196</b>	PO # <b>D-974</b>
REMARKS  Please Email Results	

Page # 1 of 1

TURNAROUND TIME  
 Standard (2 Weeks)  
 RUSH  
 Rush charges authorized by: \_\_\_\_\_

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED										Notes	
						Total Fe	Hardness	Sulfate	Nitrate	Nitrite	Alkalinity	Sulfide	TKN	Total Phosphorus	Dissolved Gasses		
01MW42-02016 20160511	2	5/11/16	1204	water	1			X									
Q9-20160511	4	↓	1415	↓	4	X	X	X	X	X	X	X	X				

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
	Michael Erdahl	Friedman & Bruya	5/11/16	0801
	SINA SONN	total (5) temp. 11.4°C 1877 Aquatic	5/12/16	0430
Relinquished by:				
Received by:				

005196

SAMPLE CHAIN OF CUSTODY

ME 05/11/16

Page # 1

Send Report To Tim Brown, cc: Jessica Brown, Courtney Schaumberg, Jonathan Loeffler, Jennifer Cyr

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature) 	
PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal	PO # 01-600
REMARKS <input checked="" type="checkbox"/> <u>Rumper JAB 5/13/16</u>  1 low level detection limit of 0.219 ug/L for PCP.	EIM Y / N

TURNAROUND TIME <input checked="" type="checkbox"/> Standard (2 Weeks) <input type="checkbox"/> RUSH Rush charges authorized by: _____
SAMPLE DISPOSAL <input checked="" type="checkbox"/> 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	
01MW42-20160511	01MW42	—	01 <sup>A</sup>	5/11/16	1204	H <sub>2</sub> O	5	X	X	X			X						
01MW12-20160511	01MW12	—	02 <sup>B</sup>	5/11/16	1255	H <sub>2</sub> O	4	X	X	<input checked="" type="checkbox"/>									
Q9-20160511	Q9	—	03 <sup>A</sup>	5/11/16	1415	H <sub>2</sub> O	11	X	X	X	X		X		X	X	X		
5/11/16																			

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	JONATHAN LOEFFLER	SOUNDEARTH	5/11/16	1620
Received by:	Nhan Phan	FEBT	5/11/16	1620
Relinquished by:				
Received by:				

Samples received at 4 °C

***Friedman & Bruya, Inc. #605197***

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

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

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

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 11, 2016 from the TOC\_01-600\_20160511 WORFDB8, F&BI 605197 project. There are 20 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  
SOU0614R.DOC

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 11, 2016 by Friedman & Bruya, Inc. from the SoundEarth Strategies 01-600 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
605197 -01	O6-20160511
605197 -02	N7-20160511
605197 -03	M5-20160511
605197 -04	G10-20160511

Sample G10-20160511 was sent to Aquatic Research for sulfate analysis. Samples N7-20160511 and M5-20160511 were sent to Aquatic Research for sulfate, nitrate, nitrite, total phosphorus, hardness, alkalinity, TKN, and sulfide analyses. In addition, samples N7-20160511 and M5-20160511 were sent to Amtest for ferrous iron analysis. The reports are enclosed.

Phenol-d6 failed the laboratory acceptance criteria in the pentachlorophenol samples and the associated method blank. The surrogate is not associated with the analyte, therefore the results were acceptable.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/11/16

Project: TOC\_01-600\_20160511 WORFDB8, F&BI 605197

Date Extracted: 05/12/16

Date Analyzed: 05/12/16

**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)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
N7-20160511 605197-02	<1	<1	<1	<3	<100	98
M5-20160511 605197-03	<1	<1	<1	<3	<100	97
G10-20160511 605197-04	<1	<1	2.0	<3	<100	97
Method Blank 06-943 MB	<1	<1	<1	<3	<100	96



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/11/16

Project: TOC\_01-600\_20160511 WORFDB8, F&BI 605197

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	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> (% Recovery) (Limit 47-140)
N7-20160511 605197-02	200 x	<250	91
M5-20160511 605197-03	220 x	<250	107
G10-20160511 605197-04	2,000 x	560 x	89
Method Blank 06-980 MB	<50	<250	99

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	N7-20160511	Client:	SoundEarth Strategies
Date Received:	05/11/16	Project:	TOC_01-600_20160511 WORFDB8
Date Extracted:	05/23/16	Lab ID:	605197-02
Date Analyzed:	05/24/16	Data File:	605197-02.125
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	238
Manganese	364

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	M5-20160511	Client:	SoundEarth Strategies
Date Received:	05/11/16	Project:	TOC_01-600_20160511 WORFDB8
Date Extracted:	05/23/16	Lab ID:	605197-03 x10
Date Analyzed:	05/25/16	Data File:	605197-03 x10.025
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	10,500
Manganese	295

FRIEDMAN & BRUYA, INC.

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_20160511 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	<50
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	O6-20160511	Client:	SoundEarth Strategies
Date Received:	05/11/16	Project:	TOC_01-600_20160511 WORFDB8
Date Extracted:	05/17/16	Lab ID:	605197-01
Date Analyzed:	05/18/16	Data File:	051811.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	56	50	150
Phenol-d6	41 vo	50	150
2,4,6-Tribromophenol	139	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	N7-20160511	Client:	SoundEarth Strategies
Date Received:	05/11/16	Project:	TOC_01-600_20160511 WORFDB8
Date Extracted:	05/17/16	Lab ID:	605197-02
Date Analyzed:	05/18/16	Data File:	051812.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	63	50	150
Phenol-d6	38 vo	50	150
2,4,6-Tribromophenol	136	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	M5-20160511	Client:	SoundEarth Strategies
Date Received:	05/11/16	Project:	TOC_01-600_20160511 WORFDB8
Date Extracted:	05/17/16	Lab ID:	605197-03
Date Analyzed:	05/18/16	Data File:	051813.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	62	50	150
Phenol-d6	38 vo	50	150
2,4,6-Tribromophenol	127	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	1.7

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	G10-20160511	Client:	SoundEarth Strategies
Date Received:	05/11/16	Project:	TOC_01-600_20160511 WORFDB8
Date Extracted:	05/17/16	Lab ID:	605197-04
Date Analyzed:	05/18/16	Data File:	051814.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	56	50	150
Phenol-d6	41 vo	50	150
2,4,6-Tribromophenol	134	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	TOC_01-600_20160511 WORFDB8
Date Extracted:	05/17/16	Lab ID:	06-982 mb
Date Analyzed:	05/18/16	Data File:	051806.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	53	50	150
Phenol-d6	33 vo	50	150
2,4,6-Tribromophenol	79	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	N7-20160511	Client:	SoundEarth Strategies
Date Received:	05/11/16	Project:	TOC_01-600_20160511 WORFDB8
Date Extracted:	05/23/16	Lab ID:	605197-02
Date Analyzed:	05/23/16	Data File:	022F2201.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	83
Ethane	<10
Ethene	<10

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	M5-20160511	Client:	SoundEarth Strategies
Date Received:	05/11/16	Project:	TOC_01-600_20160511 WORFDB8
Date Extracted:	05/23/16	Lab ID:	605197-03
Date Analyzed:	05/23/16	Data File:	023F2301.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	18
Ethane	<10
Ethene	<10

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	TOC_01-600_20160511 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

Compounds:	Concentration ug/L (ppb)
Methane	<5
Ethane	<10
Ethene	<10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/11/16

Project: TOC\_01-600\_20160511 WORFDB8, F&BI 605197

**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: 605188-05 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (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

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	95	65-118
Toluene	ug/L (ppb)	50	97	72-122
Ethylbenzene	ug/L (ppb)	50	97	73-126
Xylenes	ug/L (ppb)	150	96	74-118
Gasoline	ug/L (ppb)	1,000	93	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/11/16

Project: TOC\_01-600\_20160511 WORFDB8, F&BI 605197

**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

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	106	108	61-133	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/11/16

Project: TOC\_01-600\_20160511 WORFDB8, F&BI 605197

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

Laboratory Code: 605188-01 x10 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (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: Laboratory Control Sample

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/11/16

Project: TOC\_01-600\_20160511 WORFDB8, F&BI 605197

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR SEMIVOLATILE PHENOLS BY EPA METHOD 8270D SIM**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 30)
Pentachlorophenol	ug/L (ppb)	2.5	56	62	56-114	10



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/11/16

Project: TOC\_01-600\_20160511 WORFDB8, F&BI 605197

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

Laboratory Code: 605344-03 (Duplicate)

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (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

# FRIEDMAN & BRUYA, INC.

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## ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

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

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.

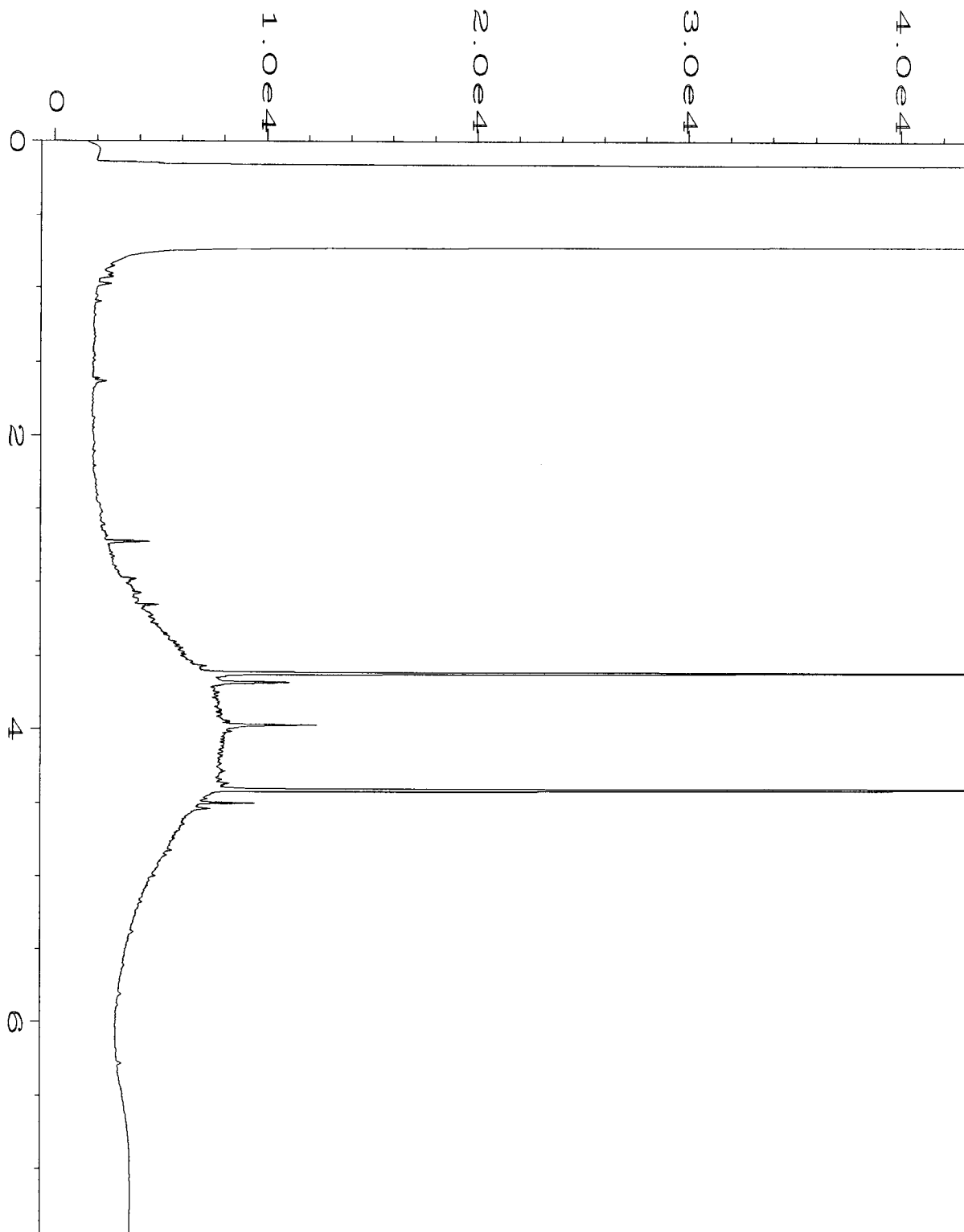
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.

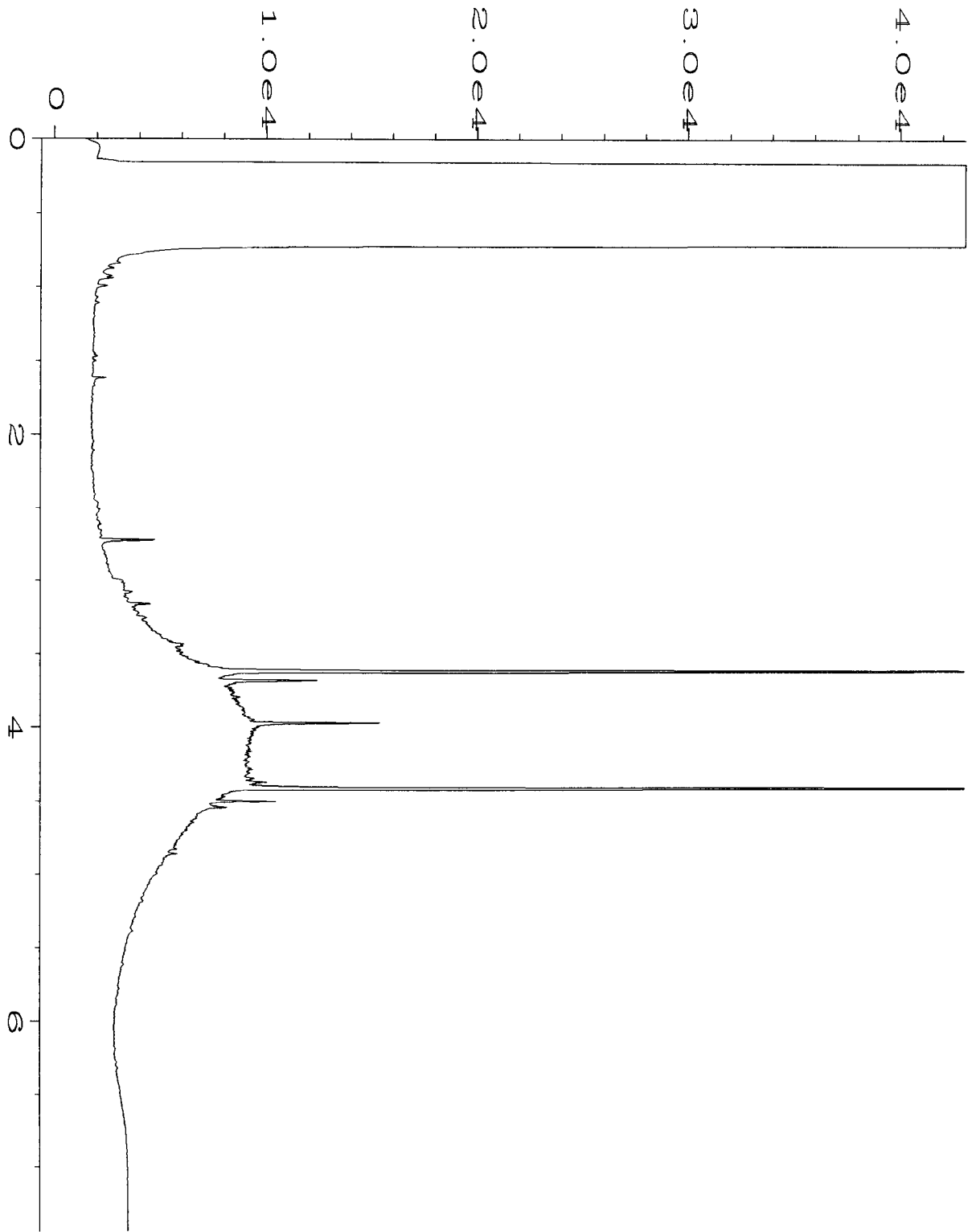
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

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

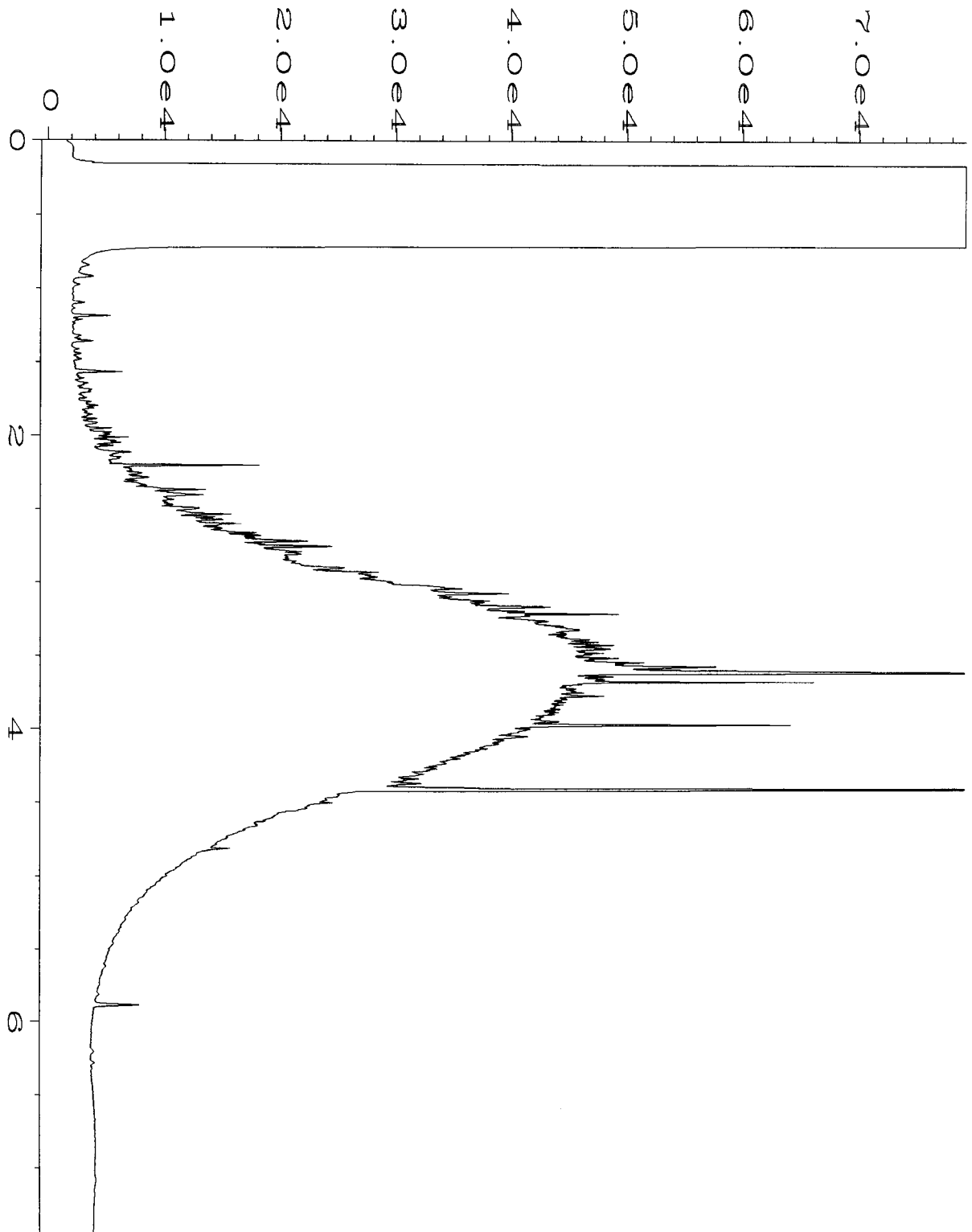
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



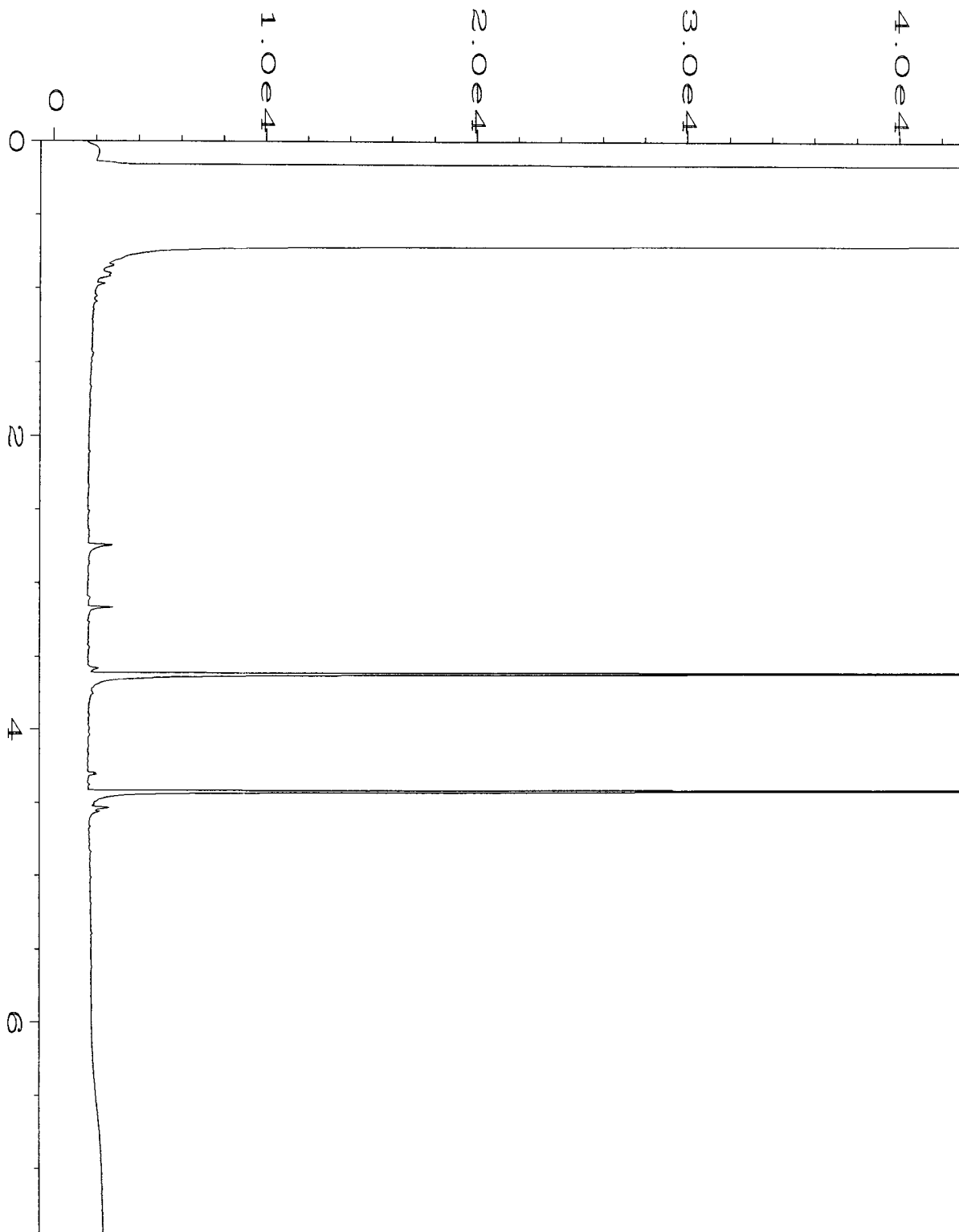
Data File Name	: C:\HPCHEM\4\DATA\05-16-16\025F0601.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 25
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 605197-02	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 May 16 01:29 PM	Analysis Method	: DX.MTH
Report Created on:	17 May 16 11:43 AM		



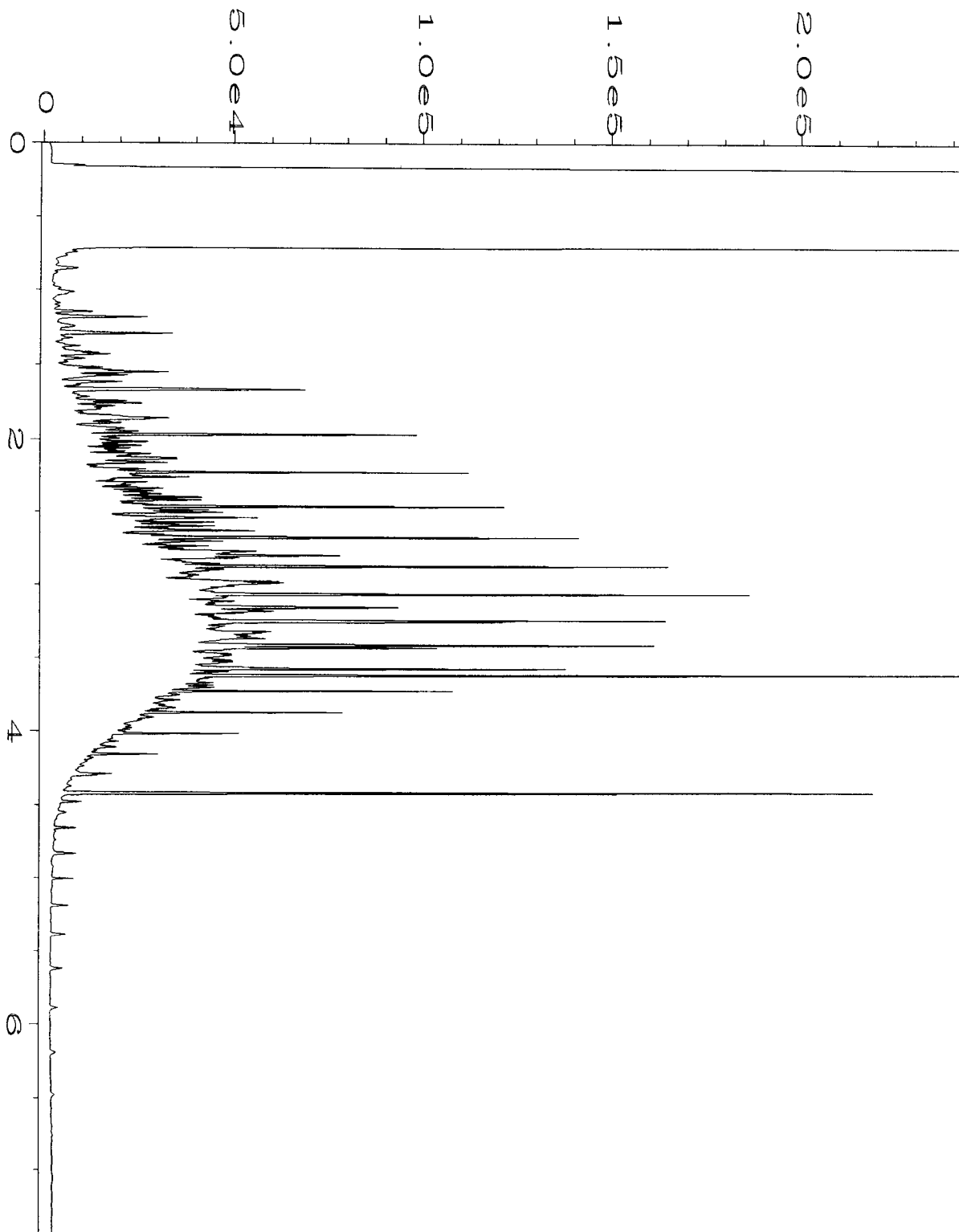
Data File Name	: C:\HPCHEM\4\DATA\05-16-16\026F0601.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 26
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 605197-03	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 May 16 01:40 PM	Analysis Method	: DX.MTH
Report Created on:	17 May 16 11:43 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-16-16\027F0601.D	Page Number	: 1
Operator	: mwd1	Vial Number	: 27
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 605197-04	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 May 16 01:52 PM	Analysis Method	: DX.MTH
Report Created on:	17 May 16 11:44 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-16-16\016F0601.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 16
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 06-980 mb	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 May 16 11:36 AM	Analysis Method	: DX.MTH
Report Created on:	17 May 16 11:44 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-16-16\003F0201.D	Page Number	: 1
Operator	: mwd1	Vial Number	: 3
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 500 Dx 45-182D	Sequence Line	: 2
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 16 May 16 07:03 AM	Analysis Method	: DX.MTH
Report Created on:	17 May 16 11:44 AM		



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 605197 project.

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

CLIENT ID	MATRIX	AMTEST ID	TEST
N7-20160511	Soil	16-A008318	MET
M5-20160511	Soil	16-A008319	MET

Your samples were received on Thursday, May 12, 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 #: 605197  
PO Number: D-964

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

Friedman & Bruya, Inc.  
3012 16th Avenue West  
Seattle, WA 98119-2029  
Attention: MICHAEL ERDAHL  
Project Name: 605197  
Project #: 605197  
PO Number: D-964  
All results reported on an as received basis.

Date Received: 05/12/16  
Date Reported: 5/19/16

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**AMTEST Identification Number**      16-A008318  
**Client Identification**                N7-20160511  
**Sampling Date**                         05/11/16, 10:53

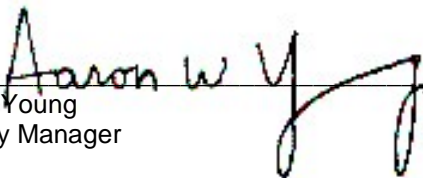
### Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	< 0.01	mg/l		0.01	SM 3500Fe D	MJ	05/12/16

**AMTEST Identification Number**      16-A008319  
**Client Identification**                M5-20160511  
**Sampling Date**                         05/11/16, 13:41

**Conventionals**

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	2.93	mg/l		0.01	SM 3500Fe D	MJ	05/12/16

  
Aaron W. Young  
Laboratory Manager

**QC Summary for sample numbers: 16-A008318 to 16-A008319**

**MATRIX SPIKES**

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
16-A008248	Ferrous Iron	mg/l	4.25	9.31	5.00	101.20 %
16-A008248	Ferrous Iron	mg/l	4.25	9.33	5.00	101.60 %

**MATRIX SPIKE DUPLICATES**

SAMPLE #	ANALYTE	UNITS	SAMPLE + SPK	MSD VALUE	RPD
Spike	Ferrous Iron	mg/l	9.31	9.33	0.21

**STANDARD REFERENCE MATERIALS**

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Ferrous Iron	mg/l	0.50	0.46	92.0 %

**BLANKS**

ANALYTE	UNITS	RESULT
Ferrous Iron	mg/l	< 0.01

## SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl  
 Company Friedman and Bruya, Inc.  
 Address 3012 16th Ave W  
 City, State, ZIP Seattle, WA 98119  
 Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER <i>Amtest.</i>	
PROJECT NAME/NO. <i>605197</i>	PO # <i>D-964</i>
REMARKS  <i>Please Email Results</i>	

Page # 1 of 1

**TURNAROUND TIME**

Standard (2 Weeks)  
 RUSH \_\_\_\_\_  
 Rush charges authorized by: \_\_\_\_\_

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**SAMPLE DISPOSAL**

Dispose after 30 days  
 Return samples  
 Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED										Notes		
						Total Fe	Hardness	Sulfate	Nitrate	Ferrous Ion Nitrite	Alkalinity	Sulfide	TKN	Total Phosphorus	Dissolved Gasses			
<i>N7-20160511</i>		<i>5/11/16</i>	<i>1053</i>	<i>water</i>														<i>23/8</i>
<i>M5-20160511</i>		<i>5/11/16</i>	<i>1341</i>	<i>water</i>														<i>19</i>

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
<i>Michael Erdahl</i>	Michael Erdahl	Friedman & Bruya	<i>5/12/16</i>	<i>0758</i>
<i>RH</i>	<i>T-1202 Redex</i>		<i>5/12/16</i>	<i>1105</i>

*16.2*



**IEH ANALYTICAL LABORATORIES**  
**LABORATORY & CONSULTING SERVICES**  
3927 AURORA AVENUE NORTH, SEATTLE, WA 98103  
PHONE: (206) 632-2715 FAX: (206) 632-2417

<b>CASE FILE NUMBER:</b>	<b>FBI014-65</b>	<b>PAGE 1</b>
<b>REPORT DATE:</b>	<b>06/07/16</b>	
<b>DATE SAMPLED:</b>	<b>05/11/16</b>	<b>DATE RECEIVED: 05/12/16</b>
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605197</b>		

**CASE NARRATIVE**

Three water samples were 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 these samples. Sample data follows while QA/QC data is contained on subsequent pages.

**SAMPLE DATA**

SAMPLE ID	ALKALINITY (mgCaCO3/l)	SULFATE (mg/L)	SULFIDE (mg/L)	TOTAL-P (mg/L)	TKN (mg/L)
N7-20160511	115	19.8	<0.05	0.067	0.436
M5-20160511	56.5	46.9	0.24	0.234	0.542
G10-20160511		128			

SAMPLE ID	NITRATE (mg/L)	NITRITE (mg/L)	HARDNESS (mgCaCO3/L)
N7-20160511	0.018	0.002	104
M5-20160511	0.012	0.002	78.4



**IEH ANALYTICAL LABORATORIES**  
**LABORATORY & CONSULTING SERVICES**  
 3927 AURORA AVENUE NORTH, SEATTLE, WA 98103  
 PHONE: (206) 632-2715 FAX: (206) 632-2417

<b>CASE FILE NUMBER:</b>	FBI014-65	<b>PAGE 2</b>
<b>REPORT DATE:</b>	06/07/16	
<b>DATE SAMPLED:</b>	05/11/16	<b>DATE RECEIVED:</b> 05/12/16
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605197</b>		

**QA/QC DATA**

QC PARAMETER	ALKALINITY (mgCaCO3/l)	SULFATE (mg/L)	SULFIDE (mg/L)	TOTAL-P (mg/L)	TKN (mg/L)
METHOD	SM18 2320B	SM184500SO4E	EPA 376.1	EPA 365.1	EPA 351.1
DATE ANALYZED	05/23/16	06/02/16	05/18/16	06/01/16	05/19/16
DETECTION LIMIT	1.00	1.00	0.05	0.002	0.200
DUPLICATE					
SAMPLE ID	BATCH	BATCH	BATCH	BATCH	M5-20160511
ORIGINAL	61.5	2.43	0.28	0.029	0.542
DUPLICATE	61.0	2.40	0.28	0.029	0.546
RPD	0.82%	1.27%	0.00%	2.01%	0.70%
SPIKE SAMPLE					
SAMPLE ID		BATCH		BATCH	M5-20160511
ORIGINAL		2.43		0.029	0.542
SPIKED SAMPLE		12.4		0.083	2.83
SPIKE ADDED		10.0		0.050	2.00
% RECOVERY	NA	100.08%	NA	107.56%	114.25%
QC CHECK					
FOUND	105	9.88		0.095	6.17
TRUE	100	10.0		0.094	6.70
% RECOVERY	105.00%	98.80%	NA	101.06%	92.09%
BLANK					
	NA	<1.00	<0.05	<0.002	<0.200

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

<b>CASE FILE NUMBER:</b>	<b>FBI014-65</b>	<b>PAGE 3</b>
<b>REPORT DATE:</b>	<b>06/07/16</b>	
<b>DATE SAMPLED:</b>	<b>05/11/16</b>	<b>DATE RECEIVED:</b> <b>05/12/16</b>
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605197</b>		

**QA/QC DATA**

QC PARAMETER	NITRATE (mg/L)	NITRITE (mg/L)	HARDNESS (mgCaCO3/L)
METHOD	SM184500N03F	EPA 353.2	SM18 2340C
DATE ANALYZED	05/12/16	05/12/16	06/07/16
DETECTION LIMIT	0.010	0.002	2.00
DUPLICATE			
SAMPLE ID	BATCH	BATCH	BATCH
ORIGINAL	0.012	0.002	131
DUPLICATE	0.011	0.002	134
RPD	2.33%	0.00%	2.26%
SPIKE SAMPLE			
SAMPLE ID	BATCH	BATCH	
ORIGINAL	0.012	0.002	
SPIKED SAMPLE	0.209	0.041	
SPIKE ADDED	0.200	0.040	
% RECOVERY	98.66%	97.50%	NA
QC CHECK			
FOUND	0.405	0.040	39.5
TRUE	0.408	0.040	40.0
% RECOVERY	99.26%	100.00%	98.75%
BLANK	<0.010	<0.002	<2.00

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.

SUBMITTED BY:

Damien Gadomski  
Project Manager

FB/01465

**SUBCONTRACT SAMPLE CHAIN OF CUSTODY**

Send Report To Michael Erdahl  
 Company Friedman and Bruya, Inc.  
 Address 3012 16th Ave W  
 City, State, ZIP Seattle, WA 98119  
 Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER <i>A.A. Research</i>	
PROJECT NAME/NO. <b>605197</b>	PO # <b>D-975</b>
REMARKS  Please Email Results	

Page # 1 of 1

**TURNAROUND TIME**  
 Standard (2 Weeks)  
 RUSH  
 Rush charges authorized by: \_\_\_\_\_

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED										Notes
						Total Fe	Hardness	Sulfate	Nitrate	Nitrite	Alkalinity	Sulfide	TKN	Total Phosphorus	Dissolved Gases	
N7-20160511		5/11/16	1053	water	4		X	X	X	X	X	X	X	X		
M5-20160511		5/11/16	1341	water	4		X	X	X	X	X	X	X	X		
G10-20160511		5/11/16	1457	water	1			X								

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
<i>[Signature]</i>	Michael Erdahl	Friedman & Bruya	5/12/16	0758
Relinquished by:	SINA SONN (total) 9 temp 11.4°C	RE: Aquatic	5/12/16	1430
Received by:				
Relinquished by:				
Received by:				



605197

SAMPLE CHAIN OF CUSTODY ME 05/11/16

Send Report To Tim Brown, cc: Jessica Brown, Courtney Schaumberg, Jonathan Loeffler, Jennifer Cyr

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature) Claire Tochim

PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal PO # 01-600

REMARKS low level detection limit of 0.219 ug/L for PCP. EIM Y / N

Page # 1 of 1 u2/ALD/Day

TURNAROUND TIME Standard (2 Weeks)  
RUSH \_\_\_\_\_  
Rush charges authorized by: \_\_\_\_\_

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+	Notes	
06-20160511	06	11	01	5/11/16	1013	H2O	1				X								
N7-20160511	N7	11	02A	5/11/16	1053	H2O	13	X	X	X	X		X	X	X	X	X	X	
M5-20160511	M5	14	03	5/11/16	1341	H2O	13	X	X	X	X		X	X	X	X	X	X	
G10-20160511	G10	11	04A	5/11/16	1451	H2O	6	X	X	X	X		X	X	X	X	X	X	
<del>GT 5/11/16</del>																			

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>Claire Tochim</u>	<u>Claire Tochim</u>	<u>SoundEarth</u>	<u>5/11/16</u>	<u>1620</u>
Received by: <u>M. Taylor</u>	<u>Nhan Phan</u>	<u>FE B T</u>	<u>5/11/16</u>	<u>1820</u>
Relinquished by:				
Received by:				

Samples received at 4 °C

***Friedman & Bruya, Inc. #605225 and amended***

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

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

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

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 605225 project. There are 20 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  
SOU0614R.DOC

FRIEDMAN & BRUYA, INC.

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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 605225 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
605225 -01	01MW67-20160512
605225 -02	01MW66-20160512
605225 -03	A6-20160512
605225 -04	01MW07-20160512

Samples 01MW66-20160512 and 01MW07-20160512 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 reports are enclosed.

The NWTPH-Dx surrogate of sample 01MW67-20160512 failed below the acceptance criteria. The results are flagged accordingly.

Phenol-d6 failed the laboratory acceptance criteria in samples 01MW66-20160512, A6-20160512 and the associated method blank. The surrogate is not associated with the analyte, therefore the results were acceptable.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/12/16

Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605225

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**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
01MW67-20160512 605225-01	<1	<1	<1	<3	<100	77
01MW66-20160512 605225-02	<1	<1	<1	<3	<100	81
01MW07-20160512 605225-04	<1	2.5	<1	<3	<100	81
Method Blank 06-945 MB	<1	<1	<1	<3	<100	97

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/12/16

Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605225

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	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> (% Recovery) (Limit 41-152)
01MW67-20160512 605225-01	<50	<250	33 vo
01MW66-20160512 605225-02	270 x	<250	109
01MW07-20160512 605225-04	180 x	<250	102
Method Blank 06-981 MB	<50	<250	104

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	01MW66-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512, F&BI 605225
Date Extracted:	05/23/16	Lab ID:	605225-02
Date Analyzed:	05/24/16	Data File:	605225-02.127
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	157
Manganese	1,510

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	01MW07-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512, F&BI 605225
Date Extracted:	05/23/16	Lab ID:	605225-04
Date Analyzed:	05/24/16	Data File:	605225-04.128
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	1,140
Manganese	693



FRIEDMAN & BRUYA, INC.

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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, F&BI 605225
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	<50
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	01MW67-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512, F&BI 605225
Date Extracted:	05/17/16	Lab ID:	605225-01
Date Analyzed:	05/18/16	Data File:	051815.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	67	50	150
Phenol-d6	53	50	150
2,4,6-Tribromophenol	128	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	01MW66-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512, F&BI 605225
Date Extracted:	05/17/16	Lab ID:	605225-02
Date Analyzed:	05/18/16	Data File:	051816.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	58	50	150
Phenol-d6	46 vo	50	150
2,4,6-Tribromophenol	133	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	0.54

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	A6-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512, F&BI 605225
Date Extracted:	05/17/16	Lab ID:	605225-03
Date Analyzed:	05/20/16	Data File:	052017.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	76	50	150
Phenol-d6	46 vo	50	150
2,4,6-Tribromophenol	109	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	01MW07-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512, F&BI 605225
Date Extracted:	05/17/16	Lab ID:	605225-04 1/10
Date Analyzed:	05/20/16	Data File:	052018.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	59 d	50	150
Phenol-d6	39 d	50	150
2,4,6-Tribromophenol	129 d	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	18

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	TOC_01-600_20160512, F&BI 605225
Date Extracted:	05/17/16	Lab ID:	06-982 mb
Date Analyzed:	05/18/16	Data File:	051806.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	53	50	150
Phenol-d6	33 vo	50	150
2,4,6-Tribromophenol	79	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	01MW66-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512, F&BI 605225
Date Extracted:	05/23/16	Lab ID:	605225-02
Date Analyzed:	05/23/16	Data File:	024F2401.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	36
Ethane	<10
Ethene	<10

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	01MW07-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512, F&BI 605225
Date Extracted:	05/23/16	Lab ID:	605225-04
Date Analyzed:	05/23/16	Data File:	025F2501.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	170
Ethane	<10
Ethene	<10



FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	TOC_01-600_20160512, F&BI 605225
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

Compounds:	Concentration ug/L (ppb)
Methane	<5
Ethane	<10
Ethene	<10

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/12/16

Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605225

**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: 605224-06 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (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

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	97	65-118
Toluene	ug/L (ppb)	50	99	72-122
Ethylbenzene	ug/L (ppb)	50	100	73-126
Xylenes	ug/L (ppb)	150	98	74-118
Gasoline	ug/L (ppb)	1,000	93	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/12/16

Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605225

**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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/12/16

Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605225

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

Laboratory Code: 605188-01 x10 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (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: Laboratory Control Sample

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/12/16

Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605225

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR SEMIVOLATILE PHENOLS BY EPA METHOD 8270D SIM**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 30)
Pentachlorophenol	ug/L (ppb)	2.5	56	62	56-114	10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/12/16

Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605225

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

Laboratory Code: 605344-03 (Duplicate)

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (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

**Data Qualifiers & Definitions**

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

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

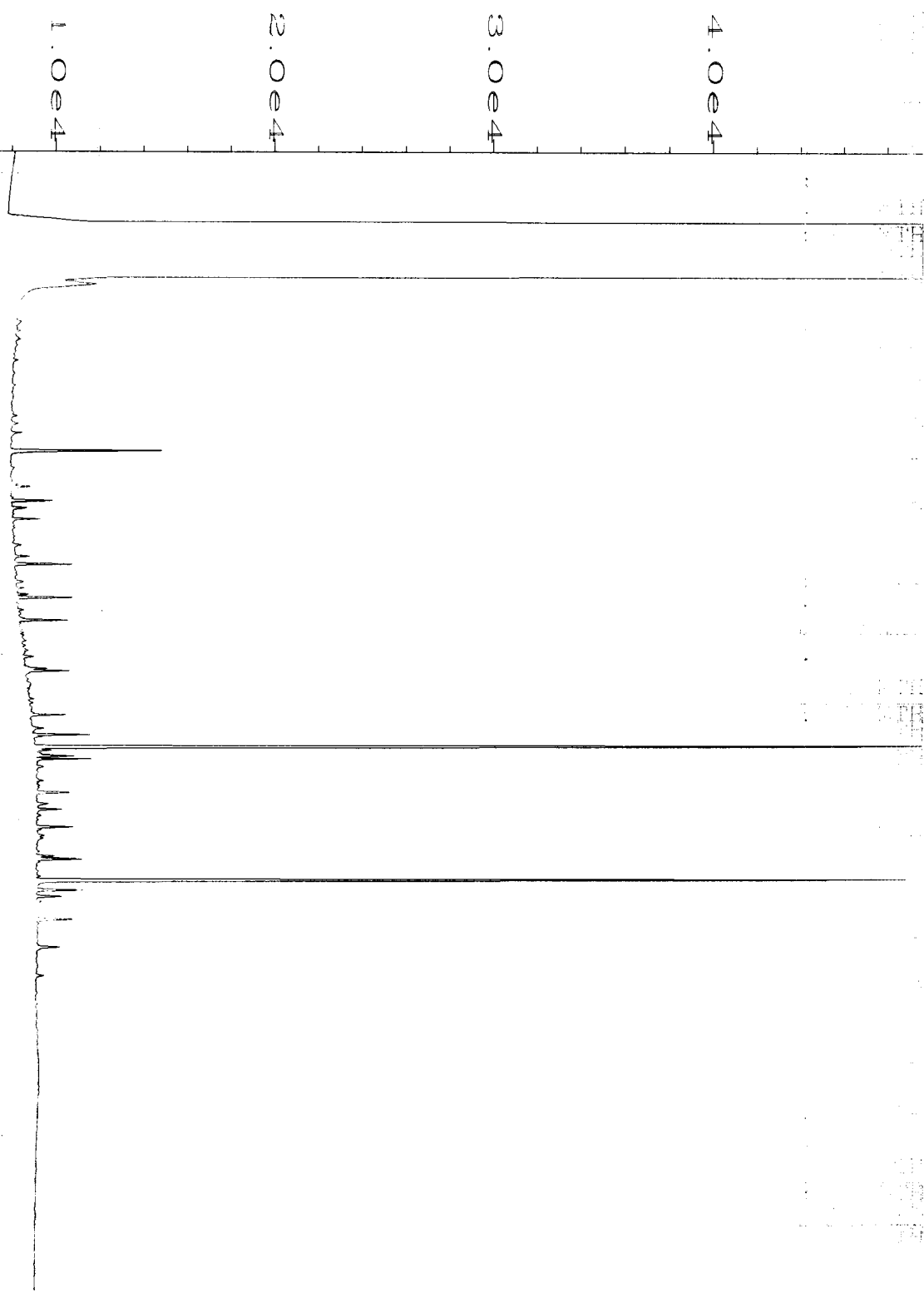
pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

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

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

Data File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code  
Acquired on  
Report Created on



Data File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code  
Acquired on  
Report Created on

Data File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code  
Acquired on  
Report Created on

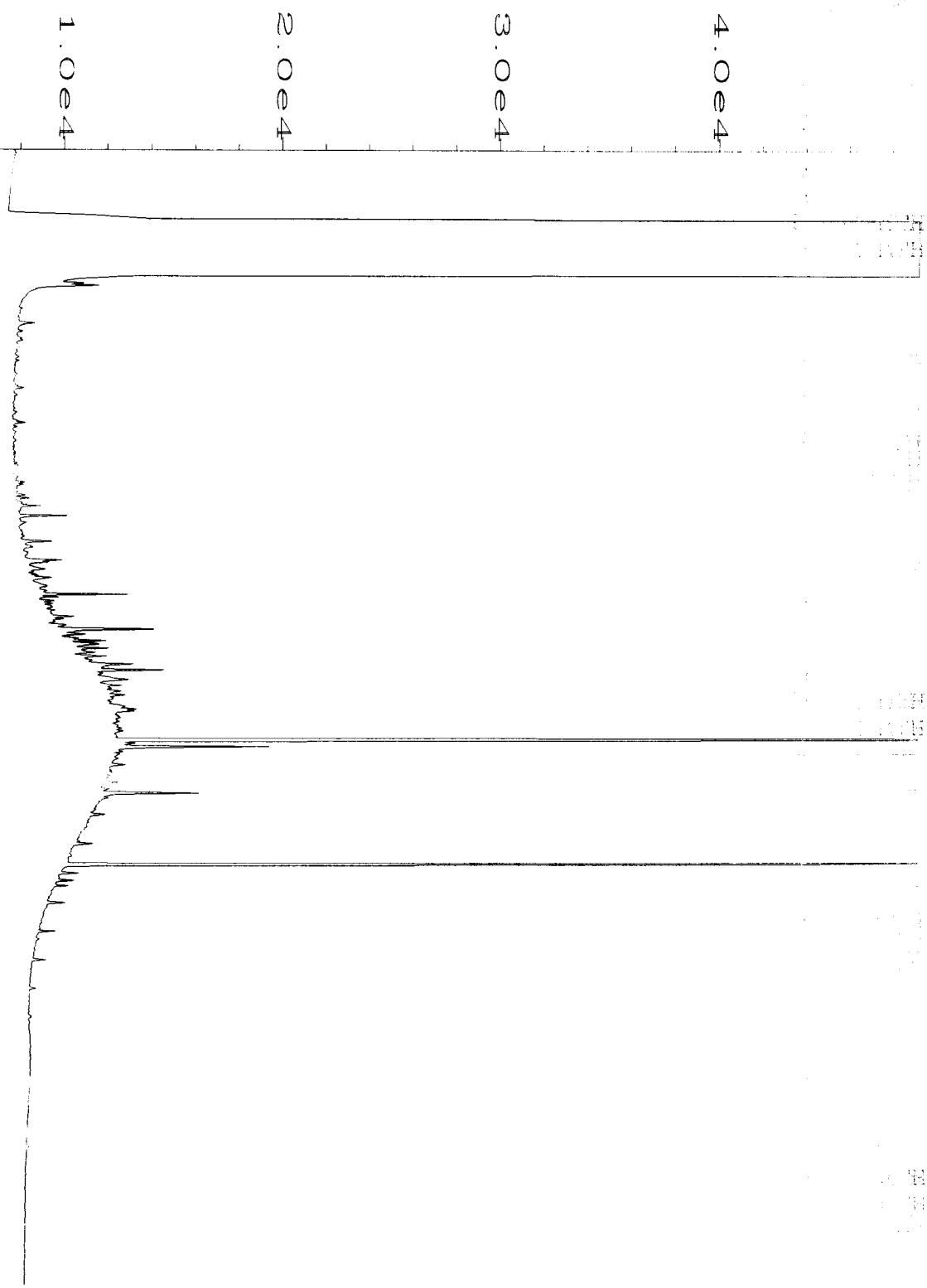
Data File Name	: C:\HPCHEM\1\DATA\05-16-16\044F1201.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 44
Instrument	: GC1	Injection Number	: 1
Sample Name	: 605225-01	Sequence Line	: 12
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 17 May 16 06:10 AM	Analysis Method	: DX.MTH
Report Created on:	17 May 16 11:31 AM		



Data File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code  
Acquired on  
Report Created on

Data File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code  
Acquired on  
Report Created on

Data File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code  
Acquired on  
Report Created on



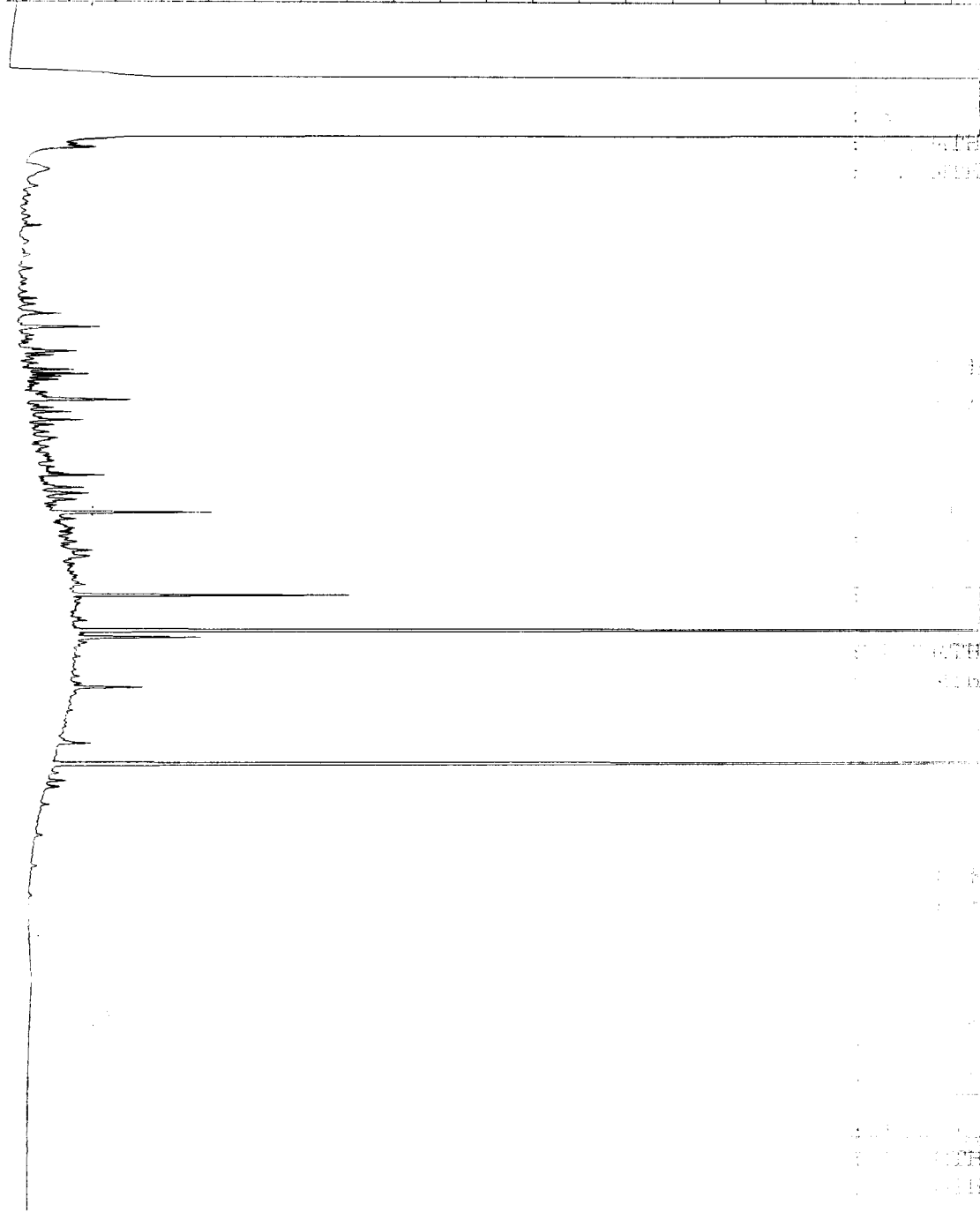
Data File Name : C:\HPCHEM\1\DATA\05-16-16\045F0901.D  
Operator : mwdl  
Instrument : GC1  
Sample Name : 605225-02  
Run Time Bar Code:  
Acquired on : 16 May 16 06:03 PM  
Report Created on: 17 May 16 11:31 AM

Page Number : 1  
Vial Number : 45  
Injection Number : 1  
Sequence Line : 9  
Instrument Method: DX.MTH  
Analysis Method : DX.MTH

Data File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code

Operator  
Instrument  
Sample Name  
Run Time Bar  
Acquired on  
Report Created

1.0e4  
2.0e4  
3.0e4  
4.0e4



Data File No  
Operator  
Instrument  
Sample Name  
Run Time Bar  
Acquired on  
Report Created

Data File No  
Operator  
Instrument  
Sample Name  
Run Time Bar  
Acquired on  
Report Created

Data File No  
Operator  
Instrument  
Sample Name  
Run Time Bar  
Acquired on  
Report Created

Data File No  
Operator  
Instrument  
Sample Name  
Run Time Bar  
Acquired on  
Report Created

Data File No  
Operator  
Instrument  
Sample Name  
Run Time Bar  
Acquired on  
Report Created

Data File Name	: C:\HPCHEM\1\DATA\05-16-16\046F0901.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 46
Instrument	: GC1	Injection Number	: 1
Sample Name	: 605225-04	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 May 16 06:14 PM	Analysis Method	: DX.MTH
Report Created on:	17 May 16 11:31 AM		

Data File No  
Operator  
Instrument

Date: 05-16-16  
Operator: mwdl  
Instrument: GC1  
Sample Name: 06-981 mb  
Run Time Code: 12:38 PM  
Acquired: 16 May 16 12:38 PM  
Report Created: 17 May 16 11:32 AM

1.0e4  
2.0e4  
3.0e4  
4.0e4

Date: 05-16-16  
Operator: mwdl  
Sample Name: 06-981 mb  
Run Time Code: 12:38 PM  
Acquired: 16 May 16 12:38 PM  
Report Created: 17 May 16 11:32 AM

Date: 05-16-16  
Operator: mwdl  
Sample Name: 06-981 mb  
Run Time Code: 12:38 PM  
Acquired: 16 May 16 12:38 PM  
Report Created: 17 May 16 11:32 AM

Date: 05-16-16  
Operator: mwdl  
Sample Name: 06-981 mb  
Run Time Code: 12:38 PM  
Acquired: 16 May 16 12:38 PM  
Report Created: 17 May 16 11:32 AM

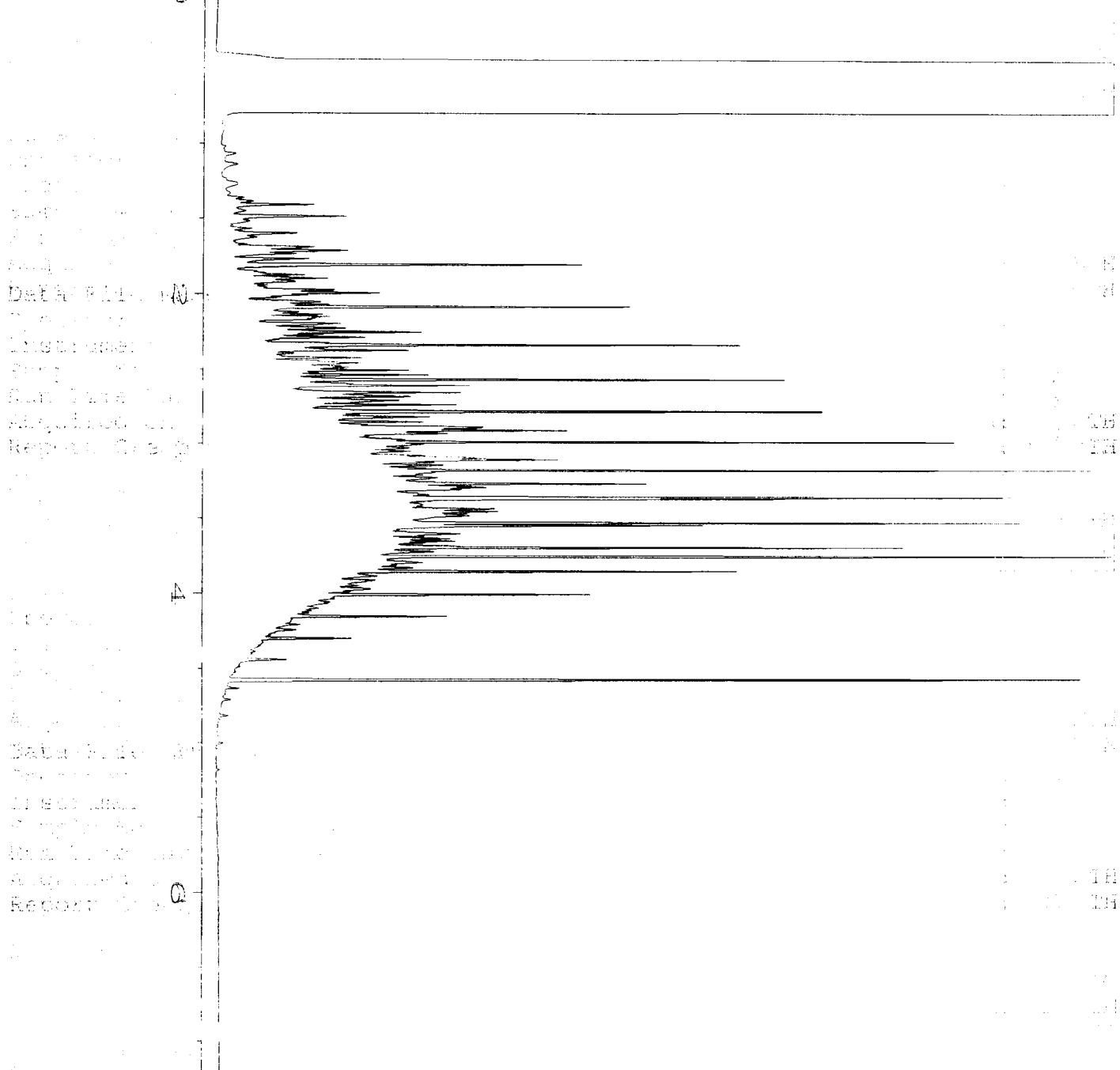
Date: 05-16-16  
Operator: mwdl  
Sample Name: 06-981 mb  
Run Time Code: 12:38 PM  
Acquired: 16 May 16 12:38 PM  
Report Created: 17 May 16 11:32 AM

Date: 05-16-16  
Operator: mwdl  
Sample Name: 06-981 mb  
Run Time Code: 12:38 PM  
Acquired: 16 May 16 12:38 PM  
Report Created: 17 May 16 11:32 AM

Data File Name : C:\HPCHEM\1\DATA\05-16-16\020F0501.D  
Operator : mwdl  
Instrument : GC1  
Sample Name : 06-981 mb  
Run Time Bar Code: 12:38 PM  
Acquired on : 16 May 16 12:38 PM  
Report Created on: 17 May 16 11:32 AM  
Page Number : 1  
Vial Number : 20  
Injection Number : 1  
Sequence Line : 5  
Instrument Method: DX.MTH  
Analysis Method : DX.MTH

Sample Name  
Data File Name  
Instrument  
Sample Name  
Run Time Bar Code  
Acquired on  
Report Created

2.0e4  
4.0e4  
6.0e4  
8.0e4  
1.0e5  
1.2e5  
1.4e5



Data File Name : C:\HPCHEM\1\DATA\05-16-16\003F0201.D  
Operator : mwdl  
Instrument : GC1  
Sample Name : 500 Dx 45-182D  
Run Time Bar Code:  
Acquired on : 16 May 16 06:59 AM  
Report Created on: 17 May 16 11:32 AM

Page Number : 1  
Vial Number : 3  
Injection Number : 1  
Sequence Line : 2  
Instrument Method: DX.MTH  
Analysis Method : DX.MTH



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 605225 project.

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

CLIENT ID	MATRIX	AMTEST ID	TEST
01MW66-20160512	Water	16-A008428	MET
01MW01-20160512	Water	16-A008429	MET

Your samples were received on Friday, May 13, 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 #: 605225  
PO Number: D-933

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

Friedman & Bruya, Inc.  
3012 16th Avenue West  
Seattle, WA 98119-2029  
Attention: MICHAEL ERDAHL  
Project Name: 605225  
Project #: 605225  
PO Number: D-933  
All results reported on an as received basis.

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

---

**AMTEST Identification Number**      16-A008428  
**Client Identification**                01MW66-20160512  
**Sampling Date**                         05/12/16, 12:00

### Conventionals

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

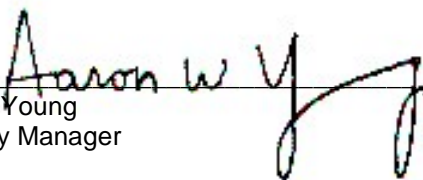
Friedman & Bruya, Inc.  
Project Name: 605225  
AmTest ID: 16-A008429

---

**AMTEST Identification Number**      16-A008429  
**Client Identification**                01MW01-20160512  
**Sampling Date**                         05/12/16, 14:49

**Conventionals**

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	1.09	mg/l		0.01	SM 3500Fe D	MJ	05/13/16

  
Aaron W. Young  
Laboratory Manager

**QC Summary for sample numbers: 16-A008428 to 16-A008429**

**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 SPIKE DUPLICATES**

SAMPLE #	ANALYTE	UNITS	SAMPLE + SPK	MSD VALUE	RPD
Spike	Ferrous Iron	mg/l	7.19	7.28	1.2

**STANDARD REFERENCE MATERIALS**

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 To Michael Erdahl  
 Company Friedman and Bruya, Inc.  
 Address 3012 16th Ave W  
 City, State, ZIP Seattle, WA 98119  
 Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER <i>Amtest</i>	
PROJECT NAME/NO.  <i>605225</i>	PO #  <i>D-933</i>
REMARKS  <i>Please Email Results</i>	

Page # 1 of 1 P. 5

TURNAROUND TIME
<input checked="" type="checkbox"/> Standard (2 Weeks) <input type="checkbox"/> RUSH _____ Rush charges authorized by: _____
SAMPLE DISPOSAL
<input type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED										Notes		
						<i>Ferrous Pen</i>	<i>Total Fe</i>	Hardness	Sulfate	Nitrate	Nitrite	Alkalinity	Sulfide	TKN	Total Phosphorus		Dissolved Gasses	
<i>01MW66-20160512</i>	<i>8428</i>	<i>5/12/16</i>	<i>1200</i>	<i>water.</i>	<i>1</i>	<i>X</i>												
<i>01MW01-20160512</i>	<i>29</i>	<i>5/12/16</i>	<i>1449</i>	<i>1</i>	<i>1</i>	<i>X</i>												

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
<i>Michael Erdahl</i>	<i>Michael Erdahl</i>	<i>Friedman &amp; Bruya</i>	<i>5/13/16</i>	<i>0803</i>
Relinquished by:	<i>T215.9</i>	<i>FedEx</i>	<i>5/13/16</i>	<i>1138</i>
Received by:				
Relinquished by:				
Received by:				



**IEH ANALYTICAL LABORATORIES**  
**LABORATORY & CONSULTING SERVICES**  
3927 AURORA AVENUE NORTH, SEATTLE, WA 98103  
PHONE: (206) 632-2715 FAX: (206) 632-2417

<b>CASE FILE NUMBER:</b>	<b>FBI014-69</b>	<b>PAGE 1</b>
<b>REPORT DATE:</b>	<b>06/10/16</b>	
<b>DATE SAMPLED:</b>	<b>05/12/16</b>	<b>DATE RECEIVED: 05/13/16</b>
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605225</b>		

**CASE NARRATIVE**

Two water samples were 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 these samples. Sample data follows while QA/QC data is contained on subsequent pages.

**SAMPLE DATA**

SAMPLE ID	ALKALINITY (mgCaCO <sub>3</sub> /l)	SULFATE (mg/L)	SULFIDE (mg/L)	TOTAL-P (mg/L)	TKN (mg/L)
01MW66-20160512	131	24.9	0.28	0.036	0.540
01MW01-20160512	51.5	21.5	0.28	0.089	0.508

SAMPLE ID	NITRATE (mg/L)	NITRITE (mg/L)	HARDNESS (mgCaCO <sub>3</sub> /L)
01MW66-20160512	0.045	<0.002	98.2
01MW01-20160512	0.014	0.004	40.3



**IEH ANALYTICAL LABORATORIES**  
**LABORATORY & CONSULTING SERVICES**  
 3927 AURORA AVENUE NORTH, SEATTLE, WA 98103  
 PHONE: (206) 632-2715 FAX: (206) 632-2417

**CASE FILE NUMBER:** FBI014-69 **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. 605225**

**QA/QC DATA**

QC PARAMETER	ALKALINITY (mgCaCO3/l)	SULFATE (mg/L)	SULFIDE (mg/L)	TOTAL-P (mg/L)	TKN (mg/L)
METHOD	SM18 2320B	SM184500SO4E	EPA 376.1	EPA 365.1	EPA 351.1
DATE ANALYZED	05/23/16	06/02/16	05/18/16	06/07/16	06/08/16
DETECTION LIMIT	1.00	1.00	0.05	0.002	0.200
DUPLICATE					
SAMPLE ID	BATCH	BATCH	01MW01- 20160512	01MW01- 20160512	01MW01- 20160512
ORIGINAL	61.5	2.43	0.28	0.089	0.508
DUPLICATE	61.0	2.40	0.28	0.090	0.509
RPD	0.82%	1.27%	0.00%	1.18%	0.17%
SPIKE SAMPLE					
SAMPLE ID		BATCH		01MW01- 20160512	01MW01- 20160512
ORIGINAL		2.43		0.089	0.508
SPIKED SAMPLE		12.4		0.139	2.46
SPIKE ADDED		10.0		0.050	2.00
% RECOVERY	NA	100.08%	NA	100.72%	97.59%
QC CHECK					
FOUND	105	9.88		0.095	6.74
TRUE	100	10.0		0.094	6.70
% RECOVERY	105.00%	98.80%	NA	101.06%	100.60%
BLANK					
	NA	<1.00	<0.05	<0.002	<0.200

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

<b>CASE FILE NUMBER:</b>	<b>FBI014-69</b>	<b>PAGE 3</b>
<b>REPORT DATE:</b>	<b>06/10/16</b>	
<b>DATE SAMPLED:</b>	<b>05/12/16</b>	<b>DATE RECEIVED: 05/13/16</b>
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605225</b>		

**QA/QC DATA**

QC PARAMETER	NITRATE (mg/L)	NITRITE (mg/L)	HARDNESS (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	BATCH	BATCH	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.  
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:

Damien Gadomski  
Project Manager

7B1014-69  
**SUBCONTRACT SAMPLE CHAIN OF CUSTODY**

Send Report To Michael Erdahl  
 Company Friedman and Bruya, Inc.  
 Address 3012 16th Ave W  
 City, State, ZIP Seattle, WA 98119  
 Phone # (206) 285-8282 Fax # (206) 283-5044


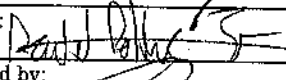

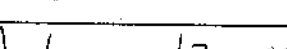
SUBCONTRACTOR <i>Aq. Research</i>	
PROJECT NAME/NO.  <b>605225</b>	PO #  <b>D-976</b>
REMARKS  Please Email Results	

Page # 1 of 1

<b>TURNAROUND TIME</b>
<input checked="" type="checkbox"/> Standard (2 Weeks) <input type="checkbox"/> RUSH Rush charges authorized by: _____
<b>SAMPLE DISPOSAL</b>
<input type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED										Notes
						Total Fe	Hardness	Sulfate	Nitrate	Nitrite	Alkalinity	Sulfide	TKN	Total Phosphorus	Dissolved Gases	
01MW66-20160512		5/12/16	1200	water.			X	X	X	X	X	X	X	X		
01MW01-20160512		5/12/16	1449	↓			X	X	X	X	X	X	X	X		

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Michael Erdahl	Friedman & Bruya	5/13/16	0803
Received by: 	David Polking Sr	IEH	5-13-16	1000
Relinquished by: 				
Received by: 				

(8) total 13.2<sup>oc</sup>

605225

SAMPLE CHAIN OF CUSTODY

ME 05/12/16

12/1/13

Send Report To Tim Brown, cc: Jessica Brown, Courtney Schaumberg, Jonathan Loeffler, Jennifer Cyr

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature)

*[Signature]*

Page # 1

PROJECT NAME/NO.

TOC Holdings Co. Facility No. 01-600  
Seattle Terminal

PO #

01-600

REMARKS

<sup>1</sup> low level detection limit of  
0.219 ug/L for PCP.

EIM Y / N

TURNAROUND TIME

Standard (2 Weeks)  
RUSH

Rush charges authorized by:

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+	Notes	
01Mw67-20160512	01Mw67	16	01 <sup>A</sup> E	5/12/16	1059	H <sub>2</sub> O	5	X	X	X	X								
01Mw66-20160512	01Mw66	17	02 <sup>A</sup> M	↓	1200	↓	13	X	X	X	X		X	X	X	X	X	X	
A6-20160512	A6	16.5	03	↓	1348	↓	1				X								
01Mw01-20160512	01Mw01	13.5	04 <sup>A</sup> M	↓	1449	↓	13	X	X	X	X		X	X	X	X	X	X	
<del>LAB 5/12/16</del>																			

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
<i>[Signature]</i>	Logan Schumacher	SoundEarth	5/12/16	1606
<i>[Signature]</i>	Matt Langston	FBI Inc	5/12/16	1606
Relinquished by:				
Received by:				
Samples received at <u>4</u> °C				

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

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

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

June 22, 2016

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

Dear Mr. Brown:

Included is the amended report from the testing of material submitted on May 12, 2016 from the TOC\_01-600\_20160512 WORFDB8, F&BI 605225 project. The sample ID 01MW07-20160512 has been corrected to 01MW01-20160512.

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  
SOU0614R.DOC

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

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

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

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 605225 project. There are 20 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  
SOU0614R.DOC



# FRIEDMAN & BRUYA, INC.

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## 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 605225 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
605225 -01	01MW67-20160512
605225 -02	01MW66-20160512
605225 -03	A6-20160512
605225 -04	01MW01-20160512

Samples 01MW66-20160512 and 01MW01-20160512 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 reports are enclosed.

The NWTPH-Dx surrogate of sample 01MW67-20160512 failed below the acceptance criteria. The results are flagged accordingly.

Phenol-d6 failed the laboratory acceptance criteria in samples 01MW66-20160512, A6-20160512 and the associated method blank. The surrogate is not associated with the analyte, therefore the results were acceptable.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/12/16

Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605225

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**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
01MW67-20160512 605225-01	<1	<1	<1	<3	<100	77
01MW66-20160512 605225-02	<1	<1	<1	<3	<100	81
01MW01-20160512 605225-04	<1	2.5	<1	<3	<100	81
Method Blank 06-945 MB	<1	<1	<1	<3	<100	97

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/12/16

Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605225

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	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> (% Recovery) (Limit 41-152)
01MW67-20160512 605225-01	<50	<250	33 vo
01MW66-20160512 605225-02	270 x	<250	109
01MW01-20160512 605225-04	180 x	<250	102
Method Blank 06-981 MB	<50	<250	104

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	01MW66-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512, F&BI 605225
Date Extracted:	05/23/16	Lab ID:	605225-02
Date Analyzed:	05/24/16	Data File:	605225-02.127
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	157
Manganese	1,510

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	01MW01-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512, F&BI 605225
Date Extracted:	05/23/16	Lab ID:	605225-04
Date Analyzed:	05/24/16	Data File:	605225-04.128
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	1,140
Manganese	693

FRIEDMAN & BRUYA, INC.

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, F&BI 605225
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	<50
Manganese	<1

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	01MW67-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512, F&BI 605225
Date Extracted:	05/17/16	Lab ID:	605225-01
Date Analyzed:	05/18/16	Data File:	051815.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	67	50	150
Phenol-d6	53	50	150
2,4,6-Tribromophenol	128	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	01MW66-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512, F&BI 605225
Date Extracted:	05/17/16	Lab ID:	605225-02
Date Analyzed:	05/18/16	Data File:	051816.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	58	50	150
Phenol-d6	46 vo	50	150
2,4,6-Tribromophenol	133	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	0.54



# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	A6-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512, F&BI 605225
Date Extracted:	05/17/16	Lab ID:	605225-03
Date Analyzed:	05/20/16	Data File:	052017.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	76	50	150
Phenol-d6	46 vo	50	150
2,4,6-Tribromophenol	109	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	01MW01-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512, F&BI 605225
Date Extracted:	05/17/16	Lab ID:	605225-04 1/10
Date Analyzed:	05/20/16	Data File:	052018.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	59 d	50	150
Phenol-d6	39 d	50	150
2,4,6-Tribromophenol	129 d	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	18

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	TOC_01-600_20160512, F&BI 605225
Date Extracted:	05/17/16	Lab ID:	06-982 mb
Date Analyzed:	05/18/16	Data File:	051806.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	53	50	150
Phenol-d6	33 vo	50	150
2,4,6-Tribromophenol	79	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	01MW66-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512, F&BI 605225
Date Extracted:	05/23/16	Lab ID:	605225-02
Date Analyzed:	05/23/16	Data File:	024F2401.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	36
Ethane	<10
Ethene	<10

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	01MW01-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512, F&BI 605225
Date Extracted:	05/23/16	Lab ID:	605225-04
Date Analyzed:	05/23/16	Data File:	025F2501.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	170
Ethane	<10
Ethene	<10

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	TOC_01-600_20160512, F&BI 605225
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

Compounds:	Concentration ug/L (ppb)
Methane	<5
Ethane	<10
Ethene	<10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/12/16

Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605225

**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: 605224-06 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (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

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	97	65-118
Toluene	ug/L (ppb)	50	99	72-122
Ethylbenzene	ug/L (ppb)	50	100	73-126
Xylenes	ug/L (ppb)	150	98	74-118
Gasoline	ug/L (ppb)	1,000	93	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/12/16

Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605225

**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

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



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/12/16

Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605225

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

Laboratory Code: 605188-01 x10 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (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: Laboratory Control Sample

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/12/16

Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605225

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR SEMIVOLATILE PHENOLS BY EPA METHOD 8270D SIM**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 30)
Pentachlorophenol	ug/L (ppb)	2.5	56	62	56-114	10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/12/16

Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605225

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

Laboratory Code: 605344-03 (Duplicate)

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (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

# FRIEDMAN & BRUYA, INC.

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## ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

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

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

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

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

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

***Friedman & Bruya, Inc. #605226***

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

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

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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 605226 project. There are 17 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl  
Project Manager

Enclosures

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

FRIEDMAN & BRUYA, INC.

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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 605226 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
605226 -01	01MW40-20160512
605226 -02	01MW75-20160512
605226 -03	01MW74-20160512
605226 -04	N10-20160512

Samples 01MW75-20160512 and 01MW74-20160512 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 reports are enclosed.

Several 8270D surrogates failed the laboratory acceptance criteria in sample N10-20160512 and the method blank. The surrogate is not associated with the analyte, therefore the results were acceptable.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/12/16

Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605226

Date Extracted: 05/13/16

Date Analyzed: 05/13/16 and 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**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
01MW40-20160512 605226-01	<1	<1	<1	<3	<100	94
01MW75-20160512 605226-02	<1	<1	1.7	<3	<100	97
01MW74-20160512 605226-03	<1	<1	<1	<3	<100	100
N10-20160512 605226-04	110	15	28	34	830	81
Method Blank 06-945 MB	<1	<1	<1	<3	<100	97



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/12/16

Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605226

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	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> (% Recovery) (Limit 47-140)
01MW40-20160512 605226-01	1,900 x	530 x	81
01MW75-20160512 605226-02	2,300 x	360 x	92
01MW74-20160512 605226-03	220 x	<250	103
N10-20160512 605226-04	5,600 x	1,600 x	83
Method Blank 06-980 MB	<50	<250	99

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	01MW75-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512 WORFDB8
Date Extracted:	05/23/16	Lab ID:	605226-02
Date Analyzed:	05/24/16	Data File:	605226-02.129
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	2,780
Manganese	2,600

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	01MW74-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512 WORFDB8
Date Extracted:	05/23/16	Lab ID:	605226-03
Date Analyzed:	05/24/16	Data File:	605226-03.131
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	423
Manganese	308

FRIEDMAN & BRUYA, INC.

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

Analyte:	Concentration ug/L (ppb)
Iron	<50
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	01MW74-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512 WORFDB8
Date Extracted:	05/17/16	Lab ID:	605226-03
Date Analyzed:	05/18/16	Data File:	051819.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	64	50	150
Phenol-d6	50	50	150
2,4,6-Tribromophenol	133	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	N10-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512 WORFDB8
Date Extracted:	05/17/16	Lab ID:	605226-04
Date Analyzed:	05/20/16	Data File:	052016.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	58	50	150
Phenol-d6	46 vo	50	150
2,4,6-Tribromophenol	103	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	TOC_01-600_20160512 WORFDB8
Date Extracted:	05/17/16	Lab ID:	06-982 mb
Date Analyzed:	05/18/16	Data File:	051806.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	53	50	150
Phenol-d6	33 vo	50	150
2,4,6-Tribromophenol	79	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	01MW75-20160512	Client:	SoundEarth Strategies
Date Received:	05/12/16	Project:	TOC_01-600_20160512 WORFDB8
Date Extracted:	05/23/16	Lab ID:	605226-02
Date Analyzed:	05/23/16	Data File:	026F2601.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	110
Ethane	<10
Ethene	<10



FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

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

Compounds:	Concentration ug/L (ppb)
Methane	<5
Ethane	<10
Ethene	<10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/12/16

Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605226

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

Laboratory Code: 605224-06 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (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

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	97	65-118
Toluene	ug/L (ppb)	50	99	72-122
Ethylbenzene	ug/L (ppb)	50	100	73-126
Xylenes	ug/L (ppb)	150	98	74-118
Gasoline	ug/L (ppb)	1,000	93	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/12/16

Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605226

**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

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	106	108	61-133	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/12/16

Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605226

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

Laboratory Code: 605188-01 x10 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (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: Laboratory Control Sample

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/12/16

Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605226

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR SEMIVOLATILE PHENOLS BY EPA METHOD 8270D SIM**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 30)
Pentachlorophenol	ug/L (ppb)	2.5	56	62	56-114	10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/14/16

Date Received: 05/12/16

Project: TOC\_01-600\_20160512 WORFDB8, F&BI 605226

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

Laboratory Code: 605344-03 (Duplicate)

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (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

**Data Qualifiers & Definitions**

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

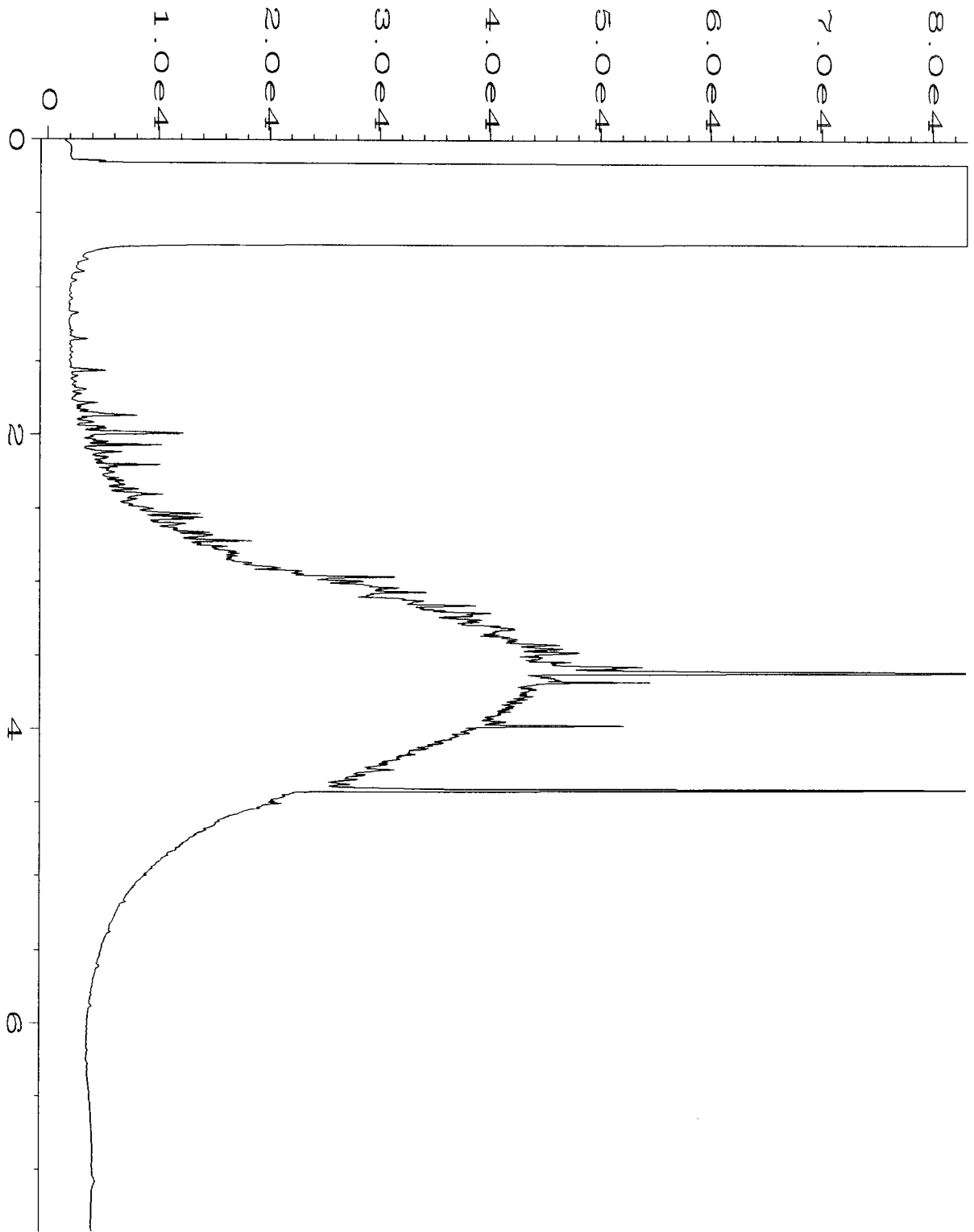
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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

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

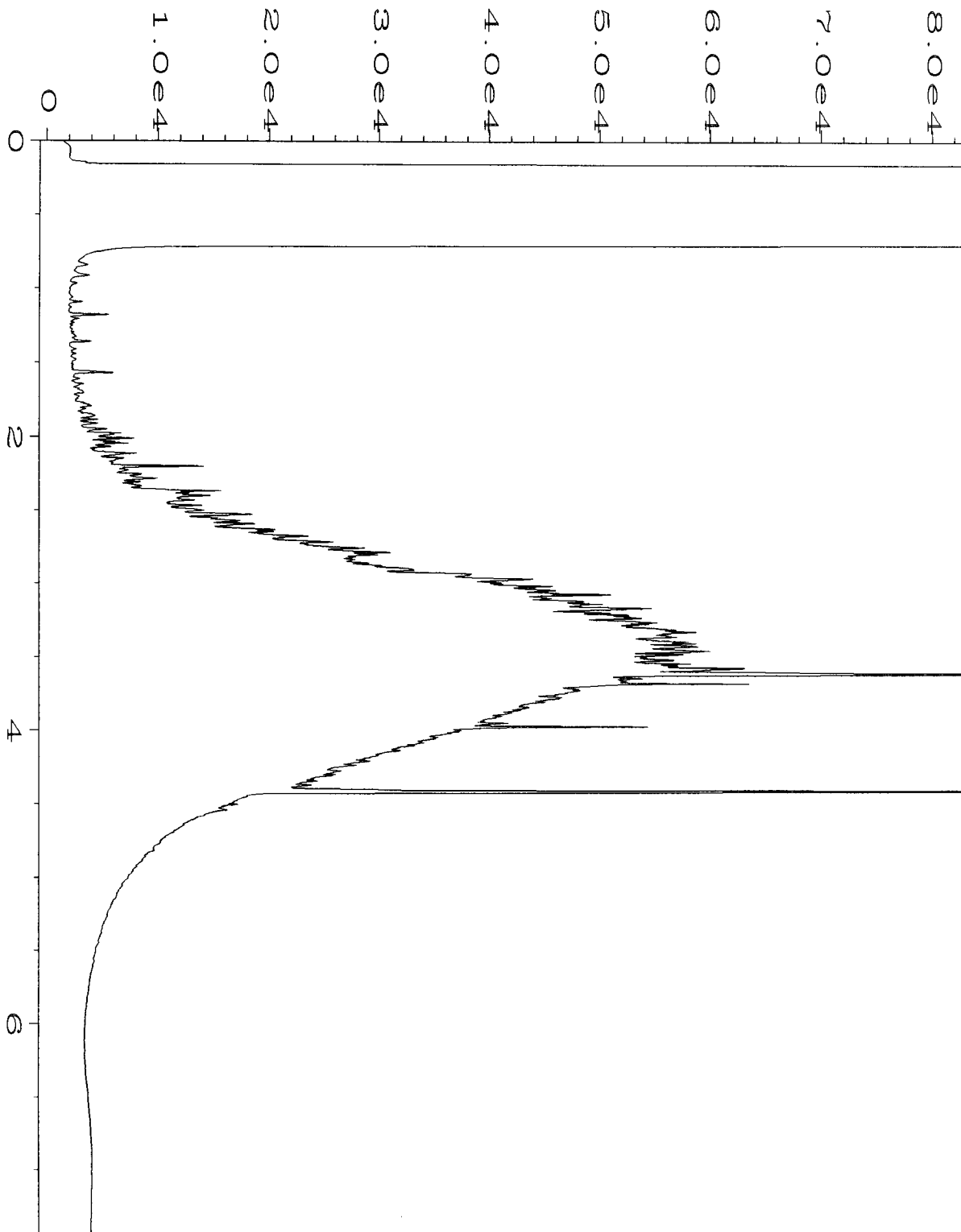
vo - The value reported fell outside the control limits established for this analyte.

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

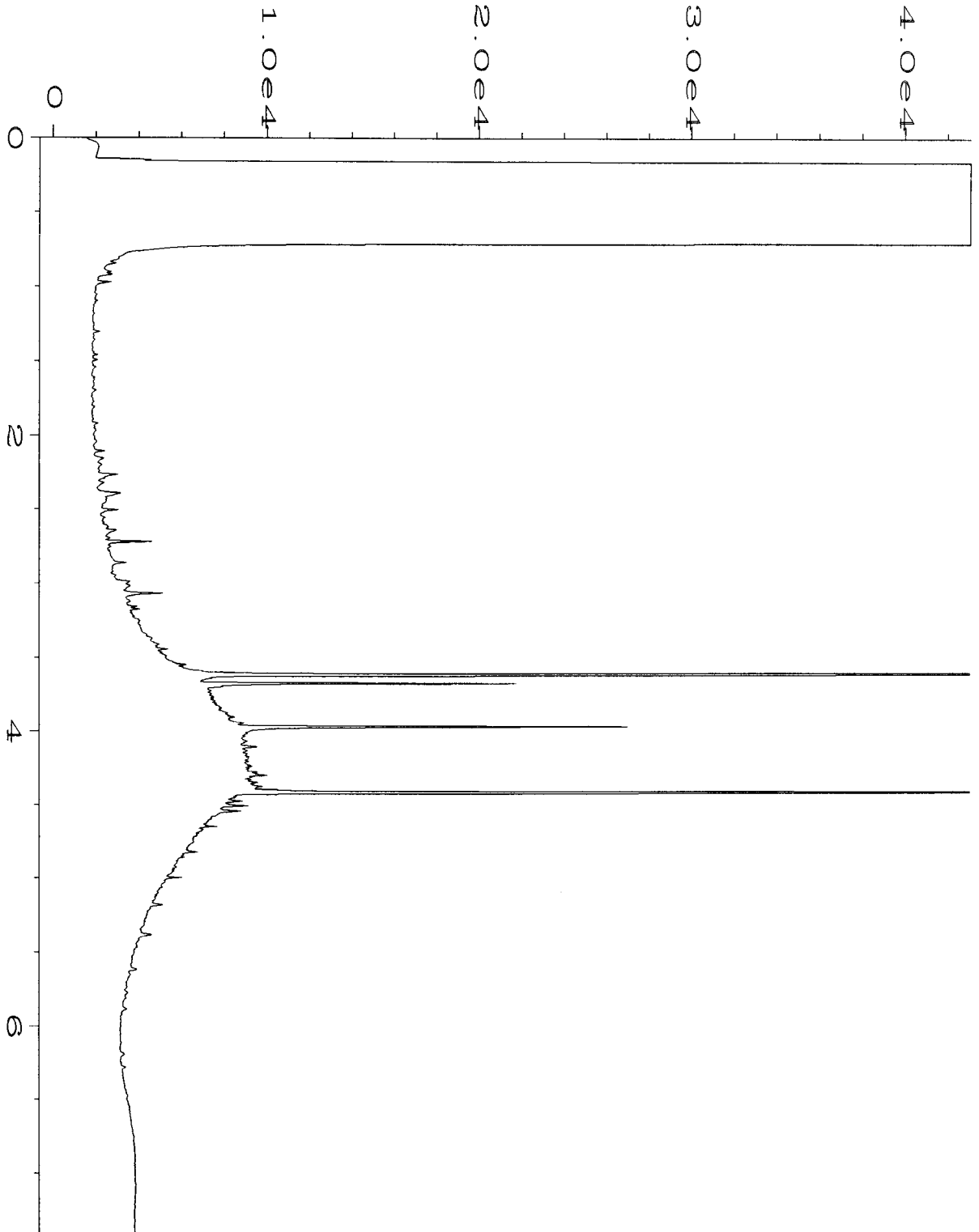


Data File Name	: C:\HPCHEM\4\DATA\05-16-16\028F0601.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 28
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 605226-01	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 May 16 02:04 PM	Analysis Method	: DX.MTH
Report Created on:	17 May 16 11:45 AM		

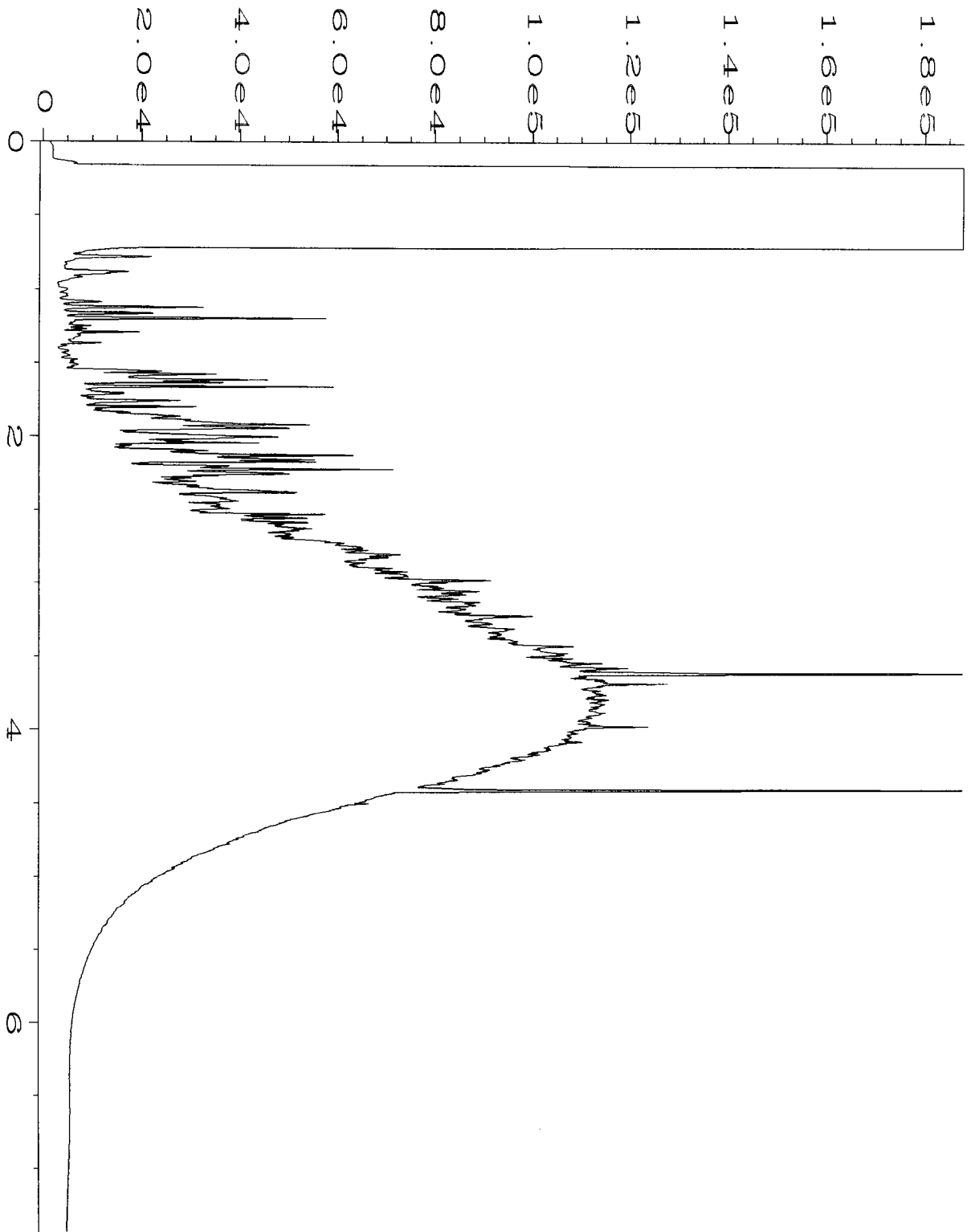




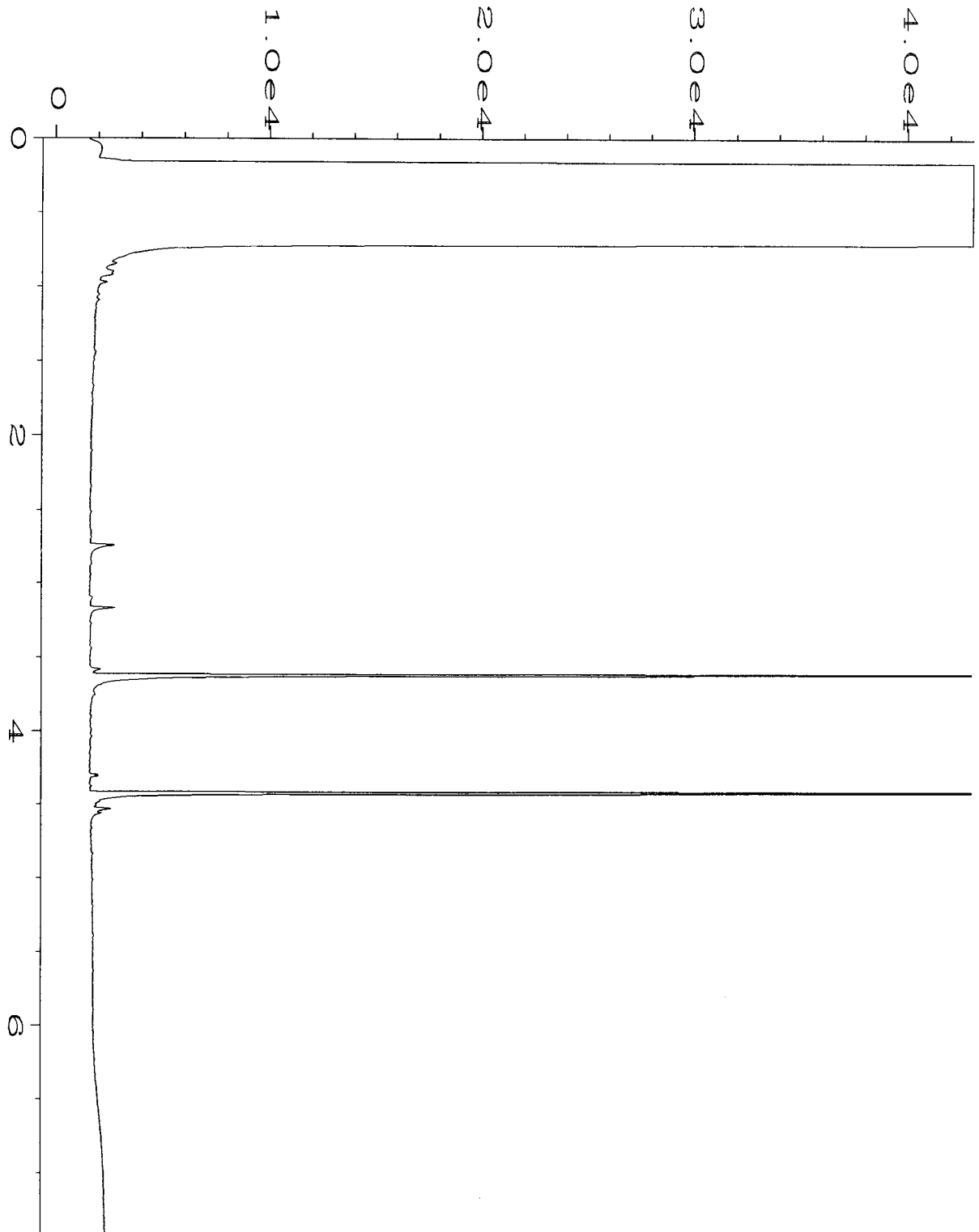
Data File Name	: C:\HPCHEM\4\DATA\05-16-16\029F0601.D	Page Number	: 1
Operator	: mwd1	Vial Number	: 29
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 605226-02	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 May 16 02:15 PM	Analysis Method	: DX.MTH
Report Created on:	17 May 16 11:45 AM		



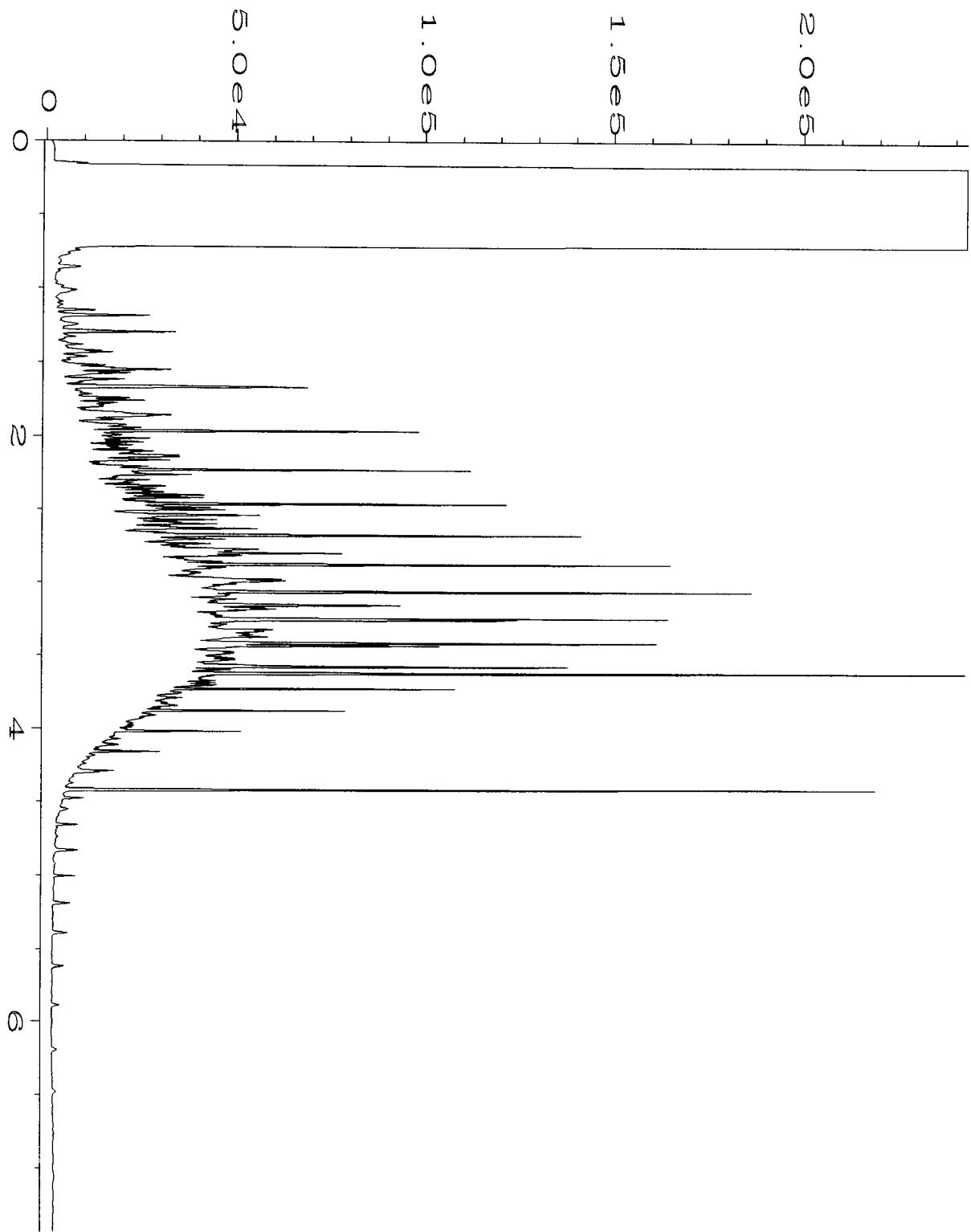
Data File Name	: C:\HPCHEM\4\DATA\05-16-16\030F0601.D	Page Number	: 1
Operator	: mwd1	Vial Number	: 30
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 605226-03	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 May 16 02:27 PM	Analysis Method	: DX.MTH
Report Created on:	17 May 16 11:46 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-16-16\031F0601.D	Page Number	: 1
Operator	: mwd1	Vial Number	: 31
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 605226-04	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 May 16 02:38 PM	Analysis Method	: DX.MTH
Report Created on:	17 May 16 11:46 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-16-16\016F0601.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 16
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 06-980 mb	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 May 16 11:36 AM	Analysis Method	: DX.MTH
Report Created on:	17 May 16 11:46 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-16-16\003F0201.D	Page Number	: 1
Operator	: mwd1	Vial Number	: 3
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 500 Dx 45-182D	Sequence Line	: 2
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 May 16 07:03 AM	Analysis Method	: DX.MTH
Report Created on:	17 May 16 11:46 AM		



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

*Professional  
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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 605226 project.

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

CLIENT ID	MATRIX	AMTEST ID	TEST
01MW75-20160512	Water	16-A008430	MET
01MW74-20160512	Water	16-A008431	MET

Your samples were received on Friday, May 13, 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 #: 605226  
PO Number: D-933

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



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## ANALYSIS REPORT

Friedman & Bruya, Inc.  
3012 16th Avenue West  
Seattle, WA 98119-2029  
Attention: MICHAEL ERDAHL  
Project Name: 605226  
Project #: 605226  
PO Number: D-933  
All results reported on an as received basis.

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

---

**AMTEST Identification Number**      16-A008430  
**Client Identification**                01MW75-20160512  
**Sampling Date**                         05/12/16, 11:51

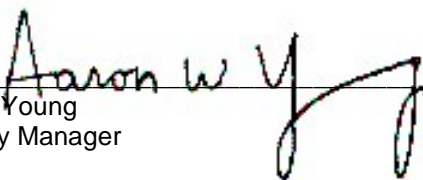
### Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	2.76	mg/l		0.01	SM 3500Fe D	MJ	05/13/16

**AMTEST Identification Number**      16-A008431  
**Client Identification**                01MW74-20160512  
**Sampling Date**                         05/12/16, 13:25

**Conventionals**

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	0.15	mg/l		0.01	SM 3500Fe D	MJ	05/13/16

  
Aaron W. Young  
Laboratory Manager



**QC Summary for sample numbers: 16-A008430 to 16-A008431**

**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 SPIKE DUPLICATES**

SAMPLE #	ANALYTE	UNITS	SAMPLE + SPK	MSD VALUE	RPD
Spike	Ferrous Iron	mg/l	7.19	7.28	1.2

**STANDARD REFERENCE MATERIALS**

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 To Michael Erdahl  
 Company Friedman and Bruya, Inc.  
 Address 3012 16th Ave W  
 City, State, ZIP Seattle, WA 98119  
 Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER <u>Amtest</u>	
PROJECT NAME/NO. <u>605 226</u>	PO # <u>D-933</u>
REMARKS <p style="text-align: center;">Please Email Results</p>	

Page # 1 of 1

<b>TURNAROUND TIME</b>
<input checked="" type="checkbox"/> Standard (2 Weeks)
<input type="checkbox"/> RUSH _____
Rush charges authorized by: _____
<b>SAMPLE DISPOSAL</b>
<input type="checkbox"/> Dispose after 30 days
<input type="checkbox"/> Return samples
<input type="checkbox"/> Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED										Notes		
						Total Fe	Total Iron	Hardness	Sulfate	Nitrate	Nitrite	Alkalinity	Sulfide	TKN	Total Phosphorus		Dissolved Gasses	
01MW75-20160512	2430	5/12/16	1151	water	1	X												
01MW74-20160512	31	↓	1325	↓	1	X												

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Michael Erdahl	Friedman & Bruya	5/13/16	0801
Received by: <u>MM</u>	T=15.9 <u>FedEx</u>		5/13/16	1138
Relinquished by:				
Received by:				



**IEH ANALYTICAL LABORATORIES**  
**LABORATORY & CONSULTING SERVICES**  
3927 AURORA AVENUE NORTH, SEATTLE, WA 98103  
PHONE: (206) 632-2715 FAX: (206) 632-2417

<b>CASE FILE NUMBER:</b>	<b>FBI014-68</b>	<b>PAGE 1</b>
<b>REPORT DATE:</b>	<b>06/10/16</b>	
<b>DATE SAMPLED:</b>	<b>05/12/16</b>	<b>DATE RECEIVED: 05/13/16</b>
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605226</b>		

**CASE NARRATIVE**

Two water samples were 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 these samples. Sample data follows while QA/QC data is contained on subsequent pages.

**SAMPLE DATA**

SAMPLE ID	ALKALINITY (mgCaCO <sub>3</sub> /l)	SULFATE (mg/L)	SULFIDE (mg/L)	TOTAL-P (mg/L)	TKN (mg/L)
01MW75-20160512	441	52.1	0.38	0.089	0.552
01MW74-20160512	189	15.0	0.18	0.062	0.529

SAMPLE ID	NITRATE (mg/L)	NITRITE (mg/L)	HARDNESS (mgCaCO <sub>3</sub> /L)
01MW75-20160512	0.026	0.002	408
01MW74-20160512	<0.010	0.002	171



**IEH ANALYTICAL LABORATORIES**  
**LABORATORY & CONSULTING SERVICES**  
 3927 AURORA AVENUE NORTH, SEATTLE, WA 98103  
 PHONE: (206) 632-2715 FAX: (206) 632-2417

<b>CASE FILE NUMBER:</b>	FBI014-68	<b>PAGE 2</b>
<b>REPORT DATE:</b>	06/10/16	
<b>DATE SAMPLED:</b>	05/12/16	<b>DATE RECEIVED:</b> 05/13/16
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605226</b>		

**QA/QC DATA**

QC PARAMETER	ALKALINITY (mgCaCO3/l)	SULFATE (mg/L)	SULFIDE (mg/L)	TOTAL-P (mg/L)	TKN (mg/L)
METHOD	SM18 2320B	SM184500SO4E	EPA 376.1	EPA 365.1	EPA 351.1
DATE ANALYZED	05/23/16	06/02/16	05/18/16	06/07/16	06/08/16
DETECTION LIMIT	1.00	1.00	0.05	0.002	0.200
DUPLICATE					
SAMPLE ID	BATCH	BATCH	BATCH	BATCH	BATCH
ORIGINAL	61.5	2.43	0.28	0.089	0.508
DUPLICATE	61.0	2.40	0.28	0.090	0.509
RPD	0.82%	1.27%	0.00%	1.18%	0.17%
SPIKE SAMPLE					
SAMPLE ID		BATCH		BATCH	BATCH
ORIGINAL		2.43		0.089	0.508
SPIKED SAMPLE		12.4		0.139	2.46
SPIKE ADDED		10.0		0.050	2.00
% RECOVERY	NA	100.08%	NA	100.72%	97.59%
QC CHECK					
FOUND	105	9.88		0.095	6.74
TRUE	100	10.0		0.094	6.70
% RECOVERY	105.00%	98.80%	NA	101.06%	100.60%
BLANK					
	NA	<1.00	<0.05	<0.002	<0.200

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:** FBI014-68 **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. 605226**

**QA/QC DATA**

QC PARAMETER	NITRATE (mg/L)	NITRITE (mg/L)	HARDNESS (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	BATCH	BATCH	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.  
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:

Damien Gadomski  
Project Manager

7B1014-68  
**SUBCONTRACT SAMPLE CHAIN OF CUSTODY**

Send Report To Michael Erdahl  
 Company Friedman and Bruya, Inc.  
 Address 3012 16th Ave W  
 City, State, ZIP Seattle, WA 98119  
 Phone # (206) 285-8282 Fax # (206) 283-5044

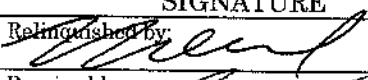
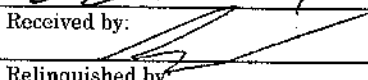
SUBCONTRACTER <u>Aa. Research</u>	
PROJECT NAME/NO. <u>605226</u>	PO # <u>D-976</u>
REMARKS  Please Email Results	

Page # 1 of 1

TURNAROUND TIME
<input checked="" type="checkbox"/> Standard (2 Weeks)
<input type="checkbox"/> RUSH
Rush charges authorized by: _____
SAMPLE DISPOSAL
<input type="checkbox"/> Dispose after 30 days
<input type="checkbox"/> Return samples
<input type="checkbox"/> Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED										Notes
						Total Fe	Hardness	Sulfate	Nitrate	Nitrite	Alkalinity	Sulfide	TKN	Total Phosphorus	Dissolved Gasses	
01MW75-20160512		5/12/16	1151	water			X	X	X	X	X	X	X	X		
01MW74-20160512		↓	1325	↓			X	X	X	X	X	X	X	X		

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Michael Erdahl	Friedman & Bruya	5/13/16	0801
Received by: 	David D. King	JEH	5-13-16	1000
Relinquished by:				
Received by:				

11.90C (8) John

605226

SAMPLE CHAIN OF CUSTODY

ME 05/12/16

1 12/1/16/1/13/1/10

Send Report To Tim Brown, cc: Jessica Brown, Courtney Schaumberg, Jonathan Loeffler, Jennifer Cyr

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature) <i>Jonathan Loeffler</i>	
PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal	PO # 01-600
REMARKS 1 low level detection limit of 0.219 ug/L for PCP.	EIM Y / N

Page # 1

TURNAROUND TIME 1D

Standard (2 Weeks)  
RUSH \_\_\_\_\_  
Rush charges authorized by: \_\_\_\_\_

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	DRPHORPH 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+	Notes	
01MW40-20160512	01MW40	—	01 <sup>A</sup>	5/12/16	1100	H <sub>2</sub> O	4	X	X	X									
01MW75-20160512	01MW75	—	02 <sup>A</sup> L	5/12/16	1151	H <sub>2</sub> O	12	X	X	X			X	X	X	X	X	X	
01MW74-20160512	01MW74	—	03 <sup>A</sup> K	5/12/16	1325	H <sub>2</sub> O	11	X	X	X	X		X		X	X	X	X	
N10-20160512	N10	—	04 <sup>A</sup> E	5/12/16	1433	H <sub>2</sub> O	5	X	X	X	X								
<i>JLL</i> 5/12/16																			

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <i>Jonathan Loeffler</i>	JONATHAN LOEFFLER	SOUNDEARTH	5/12/16	1606
Received by: <i>Matt Langston</i>	Matt Langston	FB Inc	5/12/16	1606
Relinquished by:				
Received by:		Samples received at	4 °C	

***Friedman & Bruya, Inc. #605257***



FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

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

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

May 20, 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 605257 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl  
Project Manager

Enclosures

c: Jessica Brown, Courtney Schaumberg, Jennifer Cyr, Jonathan Loeffler  
SOU0520R.DOC

FRIEDMAN & BRUYA, INC.

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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 605257 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID  
605257 -01

SoundEarth Strategies  
01MW11-20160513

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/20/16

Date Received: 05/13/16

Project: TOC\_01-600\_20160513 WORFDB8, F&BI 605257

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**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
01MW11-20160513 605257-01	<1	<1	<1	<3	<100	99
Method Blank 06-948 MB	<1	<1	<1	<3	<100	99

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/20/16

Date Received: 05/13/16

Project: TOC\_01-600\_20160513 WORFDB8, F&BI 605257

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	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 41-152)
01MW11-20160513 605257-01	550 x	<250	114
Method Blank 06-981 MB	<50	<250	104

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/20/16

Date Received: 05/13/16

Project: TOC\_01-600\_20160513 WORFDB8, F&BI 605257

**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)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (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

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance 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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/20/16

Date Received: 05/13/16

Project: TOC\_01-600\_20160513 WORFDB8, F&BI 605257

**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

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

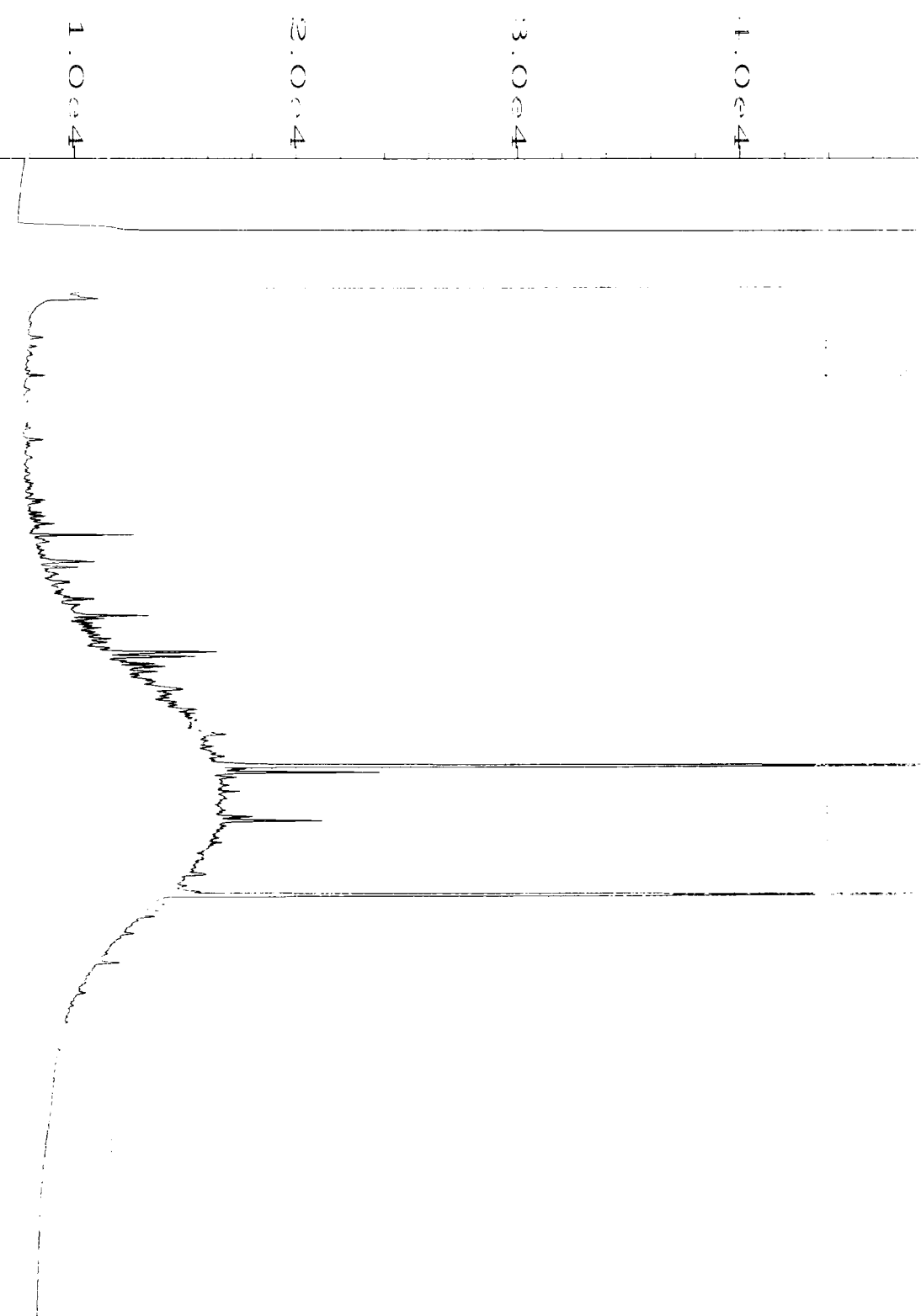
# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

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

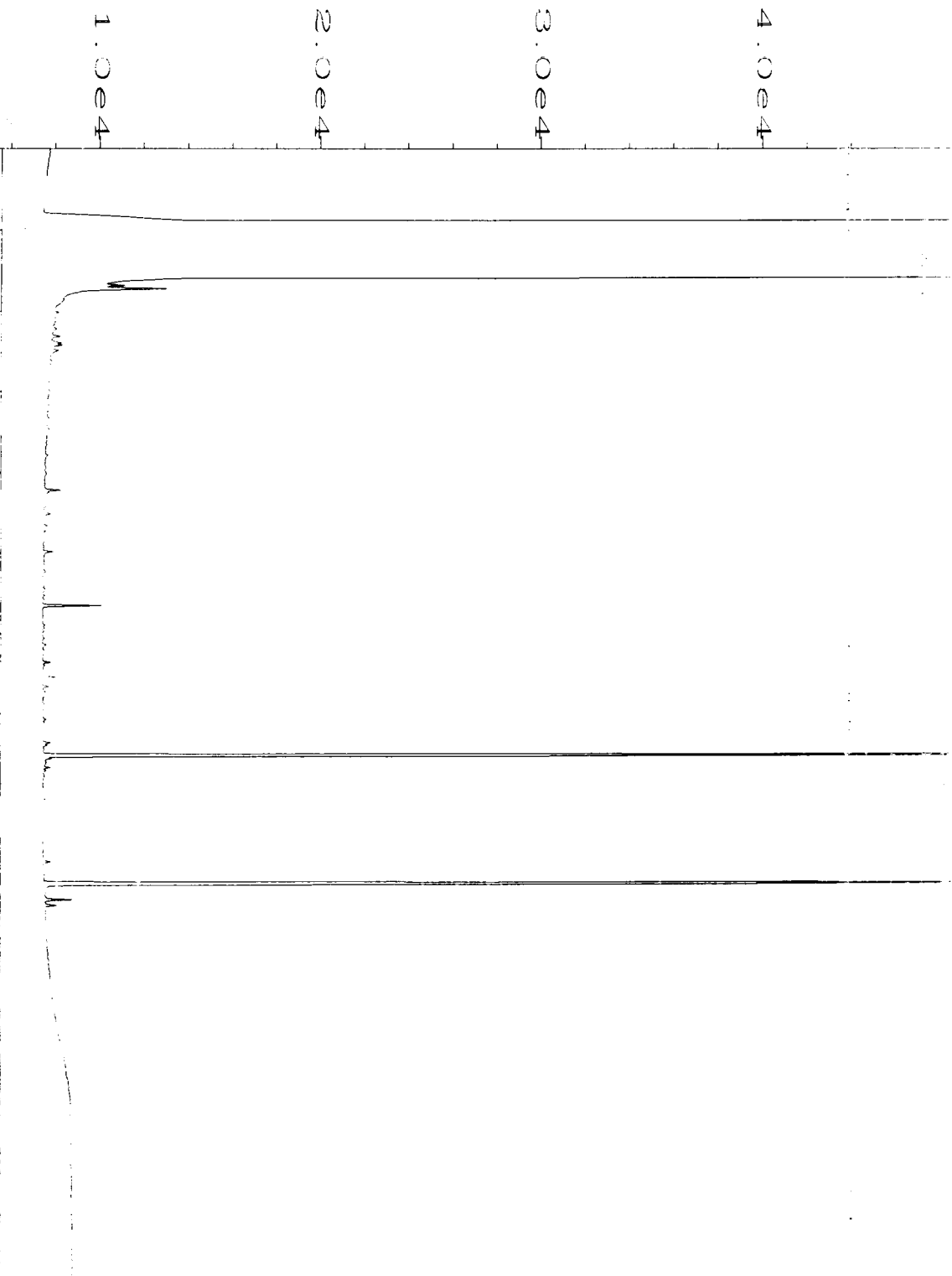
Data File Name :  
 Operator :  
 Instrument :  
 Sample Name :  
 Run Time Bar Code :  
 Acquired on :  
 Report Created on :



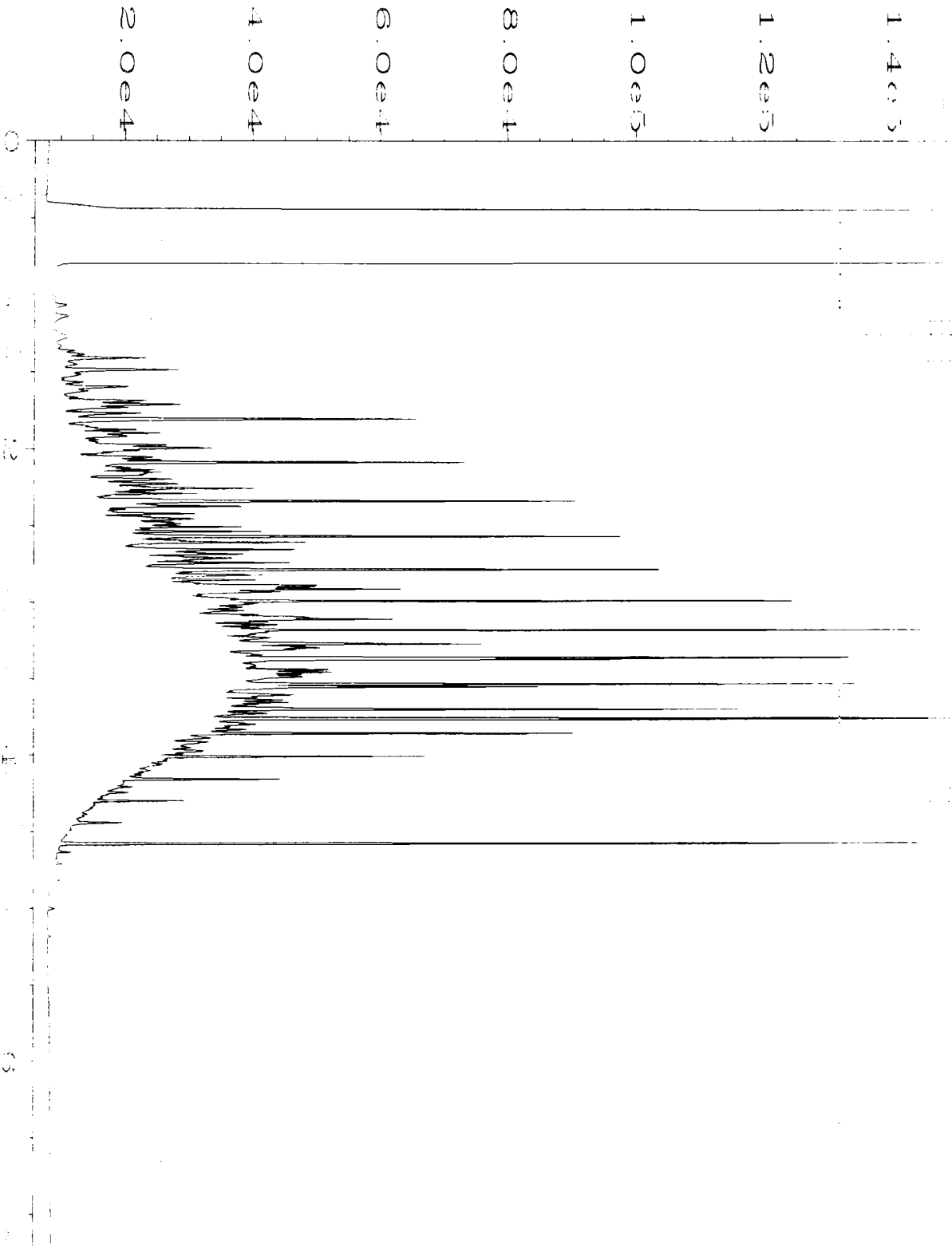
Data File Name	: C:\HPCHEM\1\DATA\05-16-16\057F0901.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 57
Instrument	: GC1	Injection Number	: 1
Sample Name	: 605257-01	Sequence Line	: 9
Run Time Bar Code	:	Instrument Method	: DX.MT
Acquired on	: 16 May 16 08:16 PM	Analysis Method	: DX.MT
Report Created on	: 17 May 16 11:35 AM		



Sample Name :  
Injection Volume :  
Sample Name :  
Injection Volume :  
Sample Name :  
Injection Volume :  
Sample Name :  
Injection Volume :  
Sample Name :  
Injection Volume :  
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Injection Volume :  
Sample Name :  
Injection Volume :  
Sample Name :  
Injection Volume :



Sample File Name : C:\HPCHEM\1\DATA\05-16-16\020F0501.D  
Injection : mwd1  
Instrument : GC1  
Sample Name : 06-981 mb  
Run Time Bar Code :  
Acquired on : 16 May 16 12:38 PM  
Report Created on: 17 May 16 11:35 AM  
Page Number : 1  
Vial Number : 20  
Injection Number : 1  
Sequence Line : 5  
Instrument Method: DX.METHOD  
Analysis Method : DX.METHOD



Data File Name	: C:\HPCHEM\1\DATA\05-16-16\003F0201.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 3
Instrument	: GC1	Injection Number	: 1
Sample Name	: 500 Dx 45-182D	Sequence Line	: 2
Run Time Bar Code:		Instrument Method	: DX.MT
Acquired on	: 16 May 16 06:59 AM	Analysis Method	: DX.MT
Report Created on:	17 May 16 11:36 AM		

605257

SAMPLE CHAIN OF CUSTODY

ME 5/13/16

VI/D03

Send Report To Tim Brown, cc: Jessica Brown, Courtney Schaumberg, Jonathan Loeffler, Jennifer Cyr

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature) <i>Jonathan Loeffler</i>	
PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal	PO # 01-600
REMARKS 1 low level detection limit of 0.219 ug/L for PCP.	EIM Y / N

Page # 1

TURNAROUND TIME

Standard (2 Weeks)  
RUSH \_\_\_\_\_  
Rush charges authorized by: \_\_\_\_\_

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	DRPHORPH 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+	Notes	
01MW11-20160513	01MW11	—	015	5/13/16	1408	H <sub>2</sub> O	4	X	X	X									
<i>[Signature]</i> 5/13/16																			

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <i>Jonathan Loeffler</i>	JONATHAN LOEFFLER	SOUNDEARTH	5/13/16	1555
Received by: <i>Elizabeth Radford</i>	Elizabeth Radford	F&B	5/13/16	1555
Relinquished by:				
Received by:		Samples received at <u>3</u> °C		

***Friedman & Bruya, Inc. #605269***

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

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

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

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 13, 2016 from the TOC\_01-600\_20160513 WORFDB8, F&BI 605269 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, Jonathan Loeffler  
SOU0525R.DOC

FRIEDMAN & BRUYA, INC.

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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 605269 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
605269 -01	01MW30-20160513
605269 -02	01MW32-20160513
605269 -03	01MW88-20160513

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/25/16

Date Received: 05/13/16

Project: TOC\_01-600\_20160513 WORFDB8, F&BI 605269

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**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
01MW30-20160513 605269-01	<1	<1	<1	<3	<100	100
01MW32-20160513 605269-02	<1	<1	<1	<3	<100	98
Method Blank 06-948 MB	<1	<1	<1	<3	<100	99

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/25/16

Date Received: 05/13/16

Project: TOC\_01-600\_20160513 WORFDB8, F&BI 605269

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	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 41-152)
01MW30-20160513 605269-01	410 x	<250	97
01MW32-20160513 605269-02	<50	<250	104
Method Blank 06-992 MB	<50	<250	107



# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	01MW30-20160513	Client:	SoundEarth Strategies
Date Received:	05/13/16	Project:	TOC_01-600_20160513 WORFDB8
Date Extracted:	05/16/16	Lab ID:	605269-01
Date Analyzed:	05/16/16	Data File:	051632.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	106	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	TOC_01-600_20160513 WORFDB8
Date Extracted:	05/16/16	Lab ID:	06-967 mb
Date Analyzed:	05/16/16	Data File:	051626.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	106	63	127
4-Bromofluorobenzene	102	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/25/16

Date Received: 05/13/16

Project: TOC\_01-600\_20160513 WORFDB8, F&BI 605269

**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)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (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

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance 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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/25/16

Date Received: 05/13/16

Project: TOC\_01-600\_20160513 WORFDB8, F&BI 605269

**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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/25/16

Date Received: 05/13/16

Project: TOC\_01-600\_20160513 WORFDB8, F&BI 605269

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

Laboratory Code: 605227-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance 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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (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-Dichloroethene	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

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

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

05/18/16 07:31

Instrument : GC1

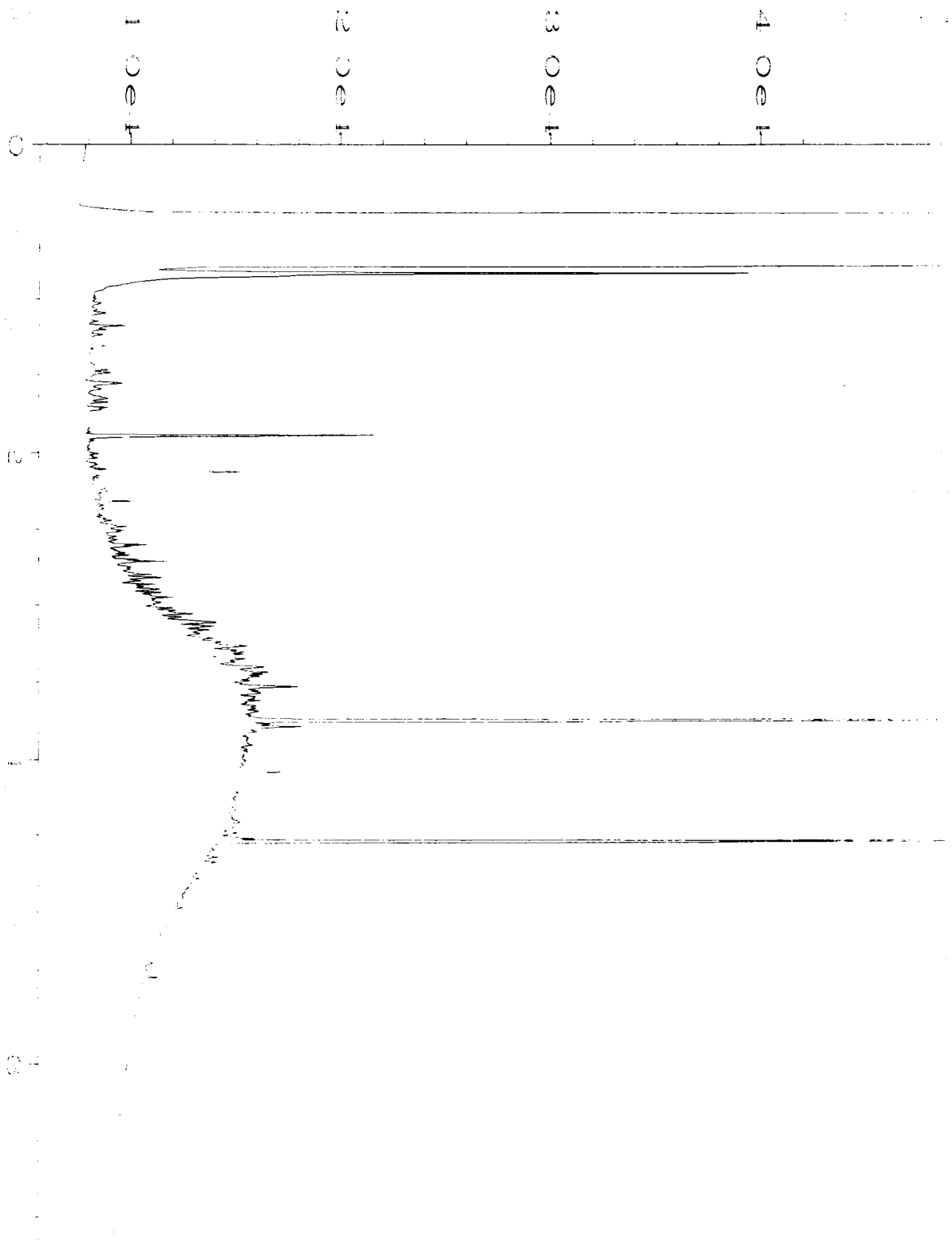
Sample Name : 605269-01

Injection Number : 1

Sequence Line : 9

Acquired on : 18 May 16 07:31 PM

Report Created on : 19 May 16 09:52 AM



Data File Name : C:\HPCHEM\1\DATA\05-18-16\043F0901.D

Operator : mwdl

Instrument : GC1

Sample Name : 605269-01

Run Time Bar Code:

Acquired on : 18 May 16 07:31 PM

Report Created on: 19 May 16 09:52 AM

Page Number : 1

Vial Number : 43

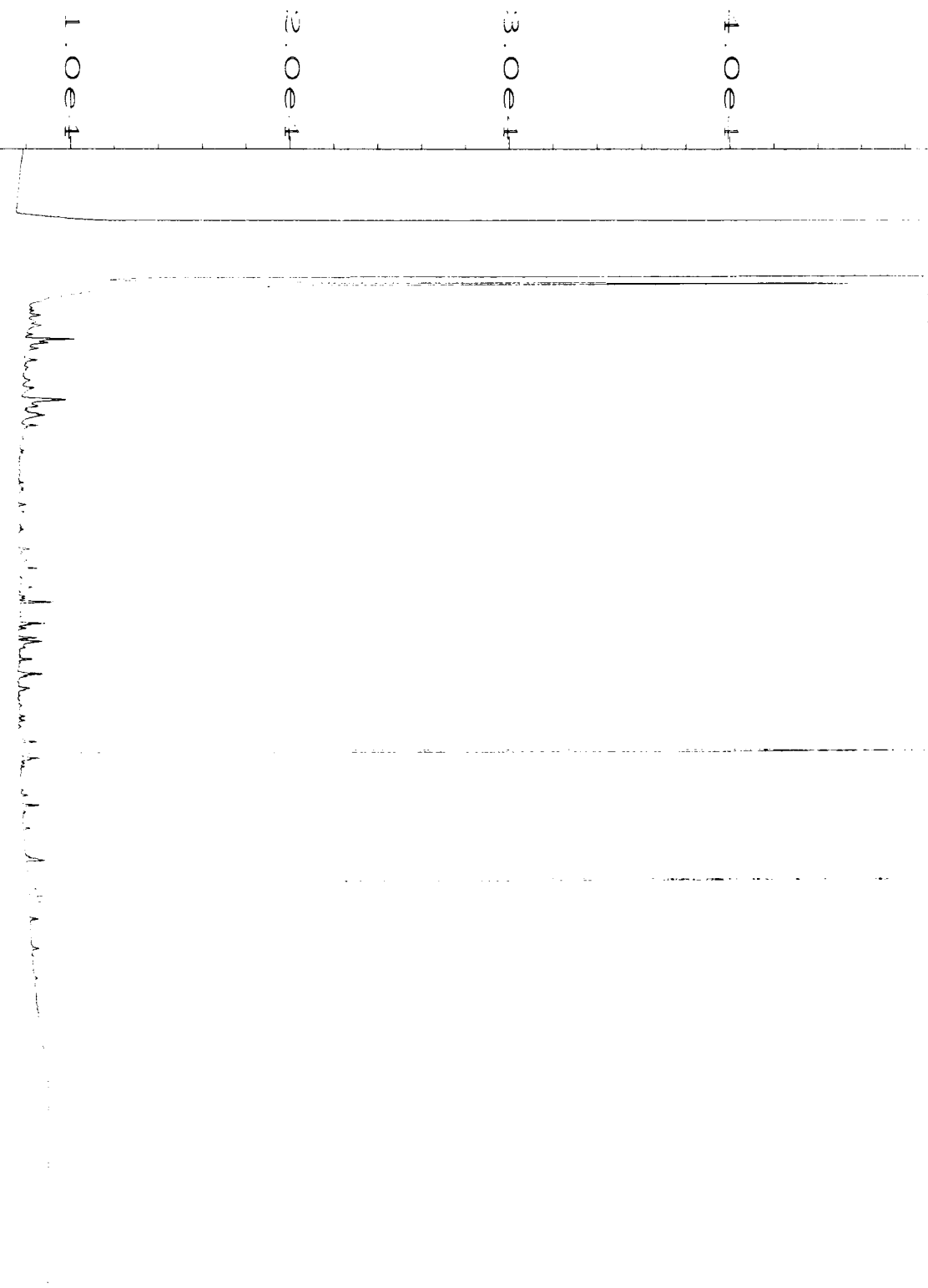
Injection Number : 1

Sequence Line : 9

Instrument Method: DX.MT

Analysis Method : DX.MT

0  
10  
20  
30  
40  
50  
60  
70  
80  
90  
100



Data File Name	: C:\HPCHEM\1\DATA\05-18-16\044F0901.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 44
Instrument	: GC1	Injection Number	: 1
Sample Name	: 605269-02	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	DX.MT
Acquired on	: 18 May 16 07:42 PM	Analysis Method	: DX.MT
Report Created on:	19 May 16 09:53 AM		



Operator  
Instrument  
Sample Name  
Run Time Bar  
Acquired on  
Report Date

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2.0e4

3.0e4

4.0e4

Operator  
Instrument  
Sample Name  
Run Time Bar  
Acquired on  
Report Date

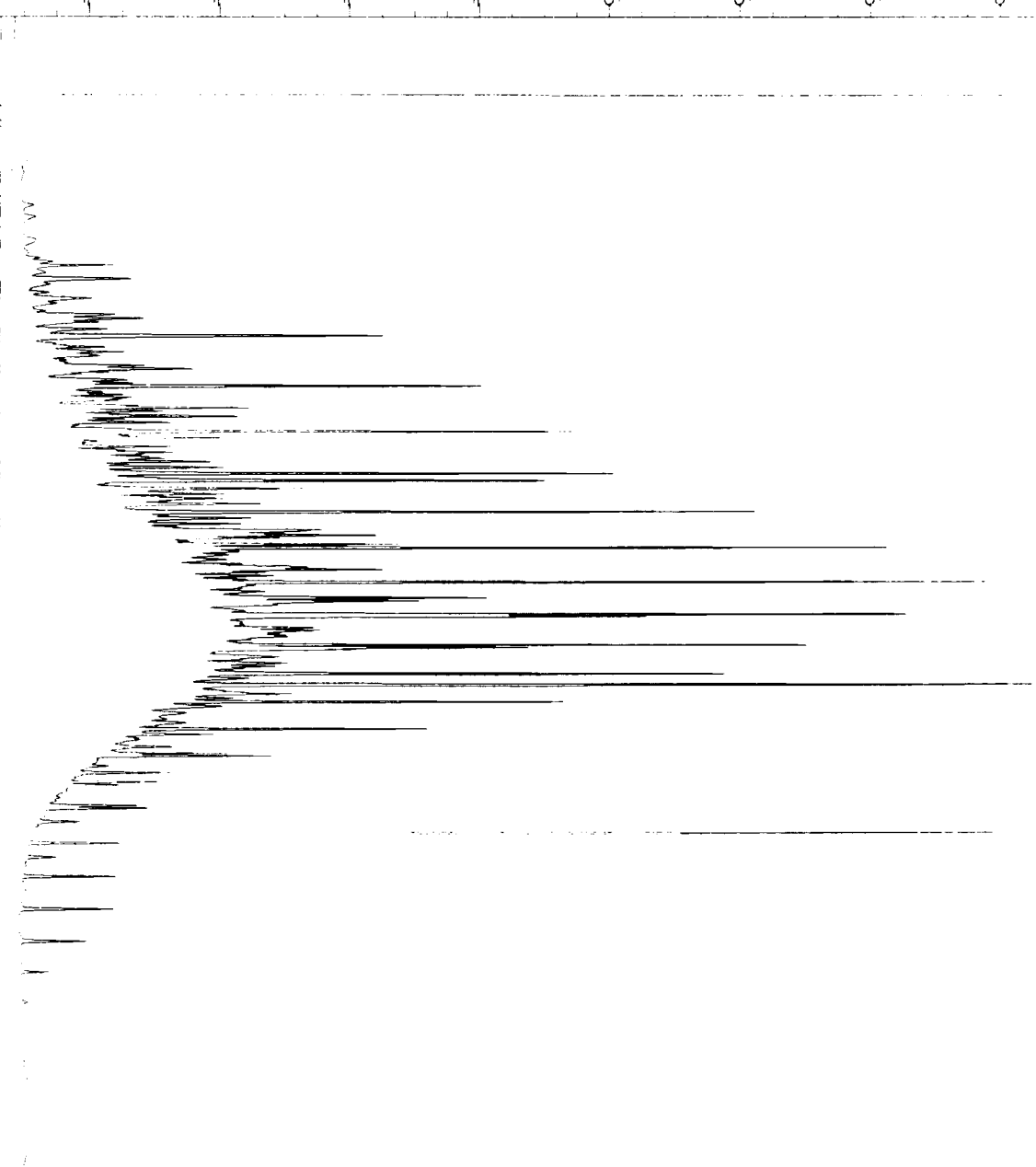
Sample Name  
Run Time Bar  
Acquired on  
Report Date

Data File Name	: C:\HPCHEM\1\DATA\05-18-16\030F0701.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 30
Instrument	: GC1	Injection Number	: 1
Sample Name	: 06-992 mb	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	: DX.ME
Acquired on	: 18 May 16 04:44 PM	Analysis Method	: DX.ME
Report Created on:	: 19 May 16 09:53 AM		

File Name :  
Sample Name :  
Data File :

1.6e5

1.6e5  
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1.2e5  
1.0e5  
8.0e4  
6.0e4  
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2.0e4



File Name : C:\HPCHEM\1\DATA\05-18-16\003F0201.D  
Operator : mwdl  
Method : GC1  
Sample Name : 500 Dx 45-182D  
Run Time Bar Code :  
Acquired on : 18 May 16 06:13 AM  
Report Created on: 19 May 16 09:54 AM  
Page Number : 1  
Vial Number : 3  
Injection Number : 1  
Sequence Line : 2  
Instrument Method: DX.MT  
Analysis Method : DX.MT

605269

**SAMPLE CHAIN OF CUSTODY**

ME 05/13/16

Send Report to Tim Brown, cc: Jessica Brown, Courtney Schaumberg, Jonathan Loeffler, Jennifer Cyr

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature) 	
PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal	PO # 01-600
REMARKS 1 low level detection limit of 0.219 ug/L for PCP.	EIM Y / N

Page # 1

TURNAROUND TIME 200  
Standard (2 Weeks)  
 RUSH  
 Rush charges authorized by:

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+	Notes
01MW30-20160513	01MW30		0A	5/13/16	1045	GW	6	X	X	X		X						
01MW32-20160513	01MW32		0A	5/13/16	1305	GW	4	X	X	X								
01MW88-20160513	01MW88		0B	5/13/16	1421	GW	4	X	X	X			- Hold per JB 5/11/16 MS.					
Samples received at <u>3</u> °C																		

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
	Kevin Bartlett	SES	5/13/16	1555
	Elizabeth Radford	FJB	5/13/16	1555

***Friedman & Bruya, Inc. #605271***

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

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

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

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 13, 2016 from the TOC\_01-600\_20160513 WORFDB8, F&BI 605271 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  
SOU0615R.DOC

FRIEDMAN & BRUYA, INC.

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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 605271 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
605271 -01	01MW06-20160513
605271 -02	01MW08-20160513
605271 -03	01MW04-20160513

Sample 01MW04-20160513 was sent to Aquatic Research for sulfate analysis. Review of the enclosed report indicates that all quality assurance were acceptable.

Several 8270D surrogates failed the laboratory acceptance criteria in sample 01MW04-20160513 and the method blank. The surrogate is not associated with the analyte, therefore the results were acceptable.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/13/16

Project: TOC\_01-600\_20160513 WORFDB8, F&BI 605271

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**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
01MW06-20160513 605271-01	<1	<1	<1	<3	<100	78
01MW08-20160513 605271-02	<1	<1	<1	<3	<100	81
01MW04-20160513 605271-03	<1	<1	<1	<3	<100	82
Method Blank 06-948 MB	<1	<1	<1	<3	<100	99

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/13/16

Project: TOC\_01-600\_20160513 WORFDB8, F&BI 605271

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	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> (% Recovery) (Limit 41-152)
01MW06-20160513 605271-01	250 x	<250	104
01MW08-20160513 605271-02	360 x	<250	100
01MW04-20160513 605271-03	67 x	<250	101
Method Blank 06-992 MB	<50	<250	107



# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	01MW06-20160513	Client:	SoundEarth Strategies
Date Received:	05/13/16	Project:	TOC_01-600_20160513 WORFDB8
Date Extracted:	05/16/16	Lab ID:	605271-01
Date Analyzed:	05/16/16	Data File:	051633.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	57	121
Toluene-d8	106	63	127
4-Bromofluorobenzene	103	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	TOC_01-600_20160513 WORFDB8
Date Extracted:	05/16/16	Lab ID:	06-967 mb
Date Analyzed:	05/16/16	Data File:	051626.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	106	63	127
4-Bromofluorobenzene	102	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	01MW04-20160513	Client:	SoundEarth Strategies
Date Received:	05/13/16	Project:	TOC_01-600_20160513 WORFDB8
Date Extracted:	05/17/16	Lab ID:	605271-03
Date Analyzed:	05/20/16	Data File:	052015.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	57	50	150
Phenol-d6	34 vo	50	150
2,4,6-Tribromophenol	86	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	TOC_01-600_20160513 WORFDB8
Date Extracted:	05/17/16	Lab ID:	06-982 mb
Date Analyzed:	05/18/16	Data File:	051806.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	53	50	150
Phenol-d6	33 vo	50	150
2,4,6-Tribromophenol	79	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/13/16

Project: TOC\_01-600\_20160513 WORFDB8, F&BI 605271

**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)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (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

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance 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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/13/16

Project: TOC\_01-600\_20160513 WORFDB8, F&BI 605271

**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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/13/16

Project: TOC\_01-600\_20160513 WORFDB8, F&BI 605271

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

Laboratory Code: 605227-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance 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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (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-Dichloroethene	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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/13/16

Project: TOC\_01-600\_20160513 WORFDB8, F&BI 605271

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR SEMIVOLATILE PHENOLS BY EPA METHOD 8270D SIM**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 30)
Pentachlorophenol	ug/L (ppb)	2.5	56	62	56-114	10



# FRIEDMAN & BRUYA, INC.

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## ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

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

Data File Name  
Operator

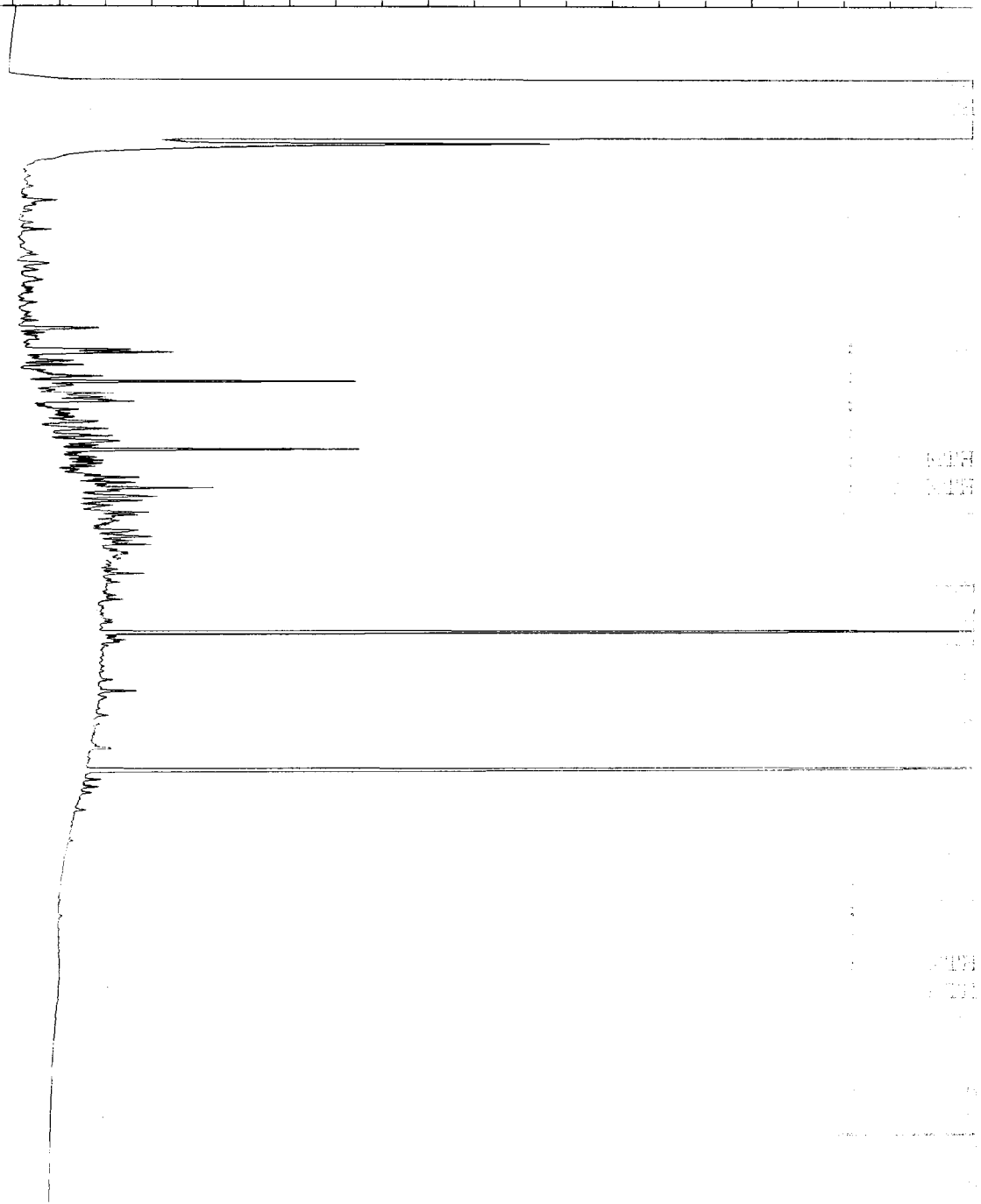
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Report Created

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Sample Name  
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Report Created

Data File No.  
Operator  
Sample Name  
Acquired  
Report Created

Data File No.  
Operator  
Sample Name  
Acquired  
Report Created



Data File Name : C:\HPCHEM\1\DATA\05-18-16\046F1201.D  
Operator : mwdl  
Instrument : GC1  
Sample Name : 605271-01  
Run Time Bar Code :  
Acquired on : 19 May 16 06:07 AM  
Report Created on: 19 May 16 09:53 AM  
Page Number : 1  
Vial Number : 46  
Injection Number : 1  
Sequence Line : 12  
Instrument Method: DX.MTH  
Analysis Method : DX.MTH

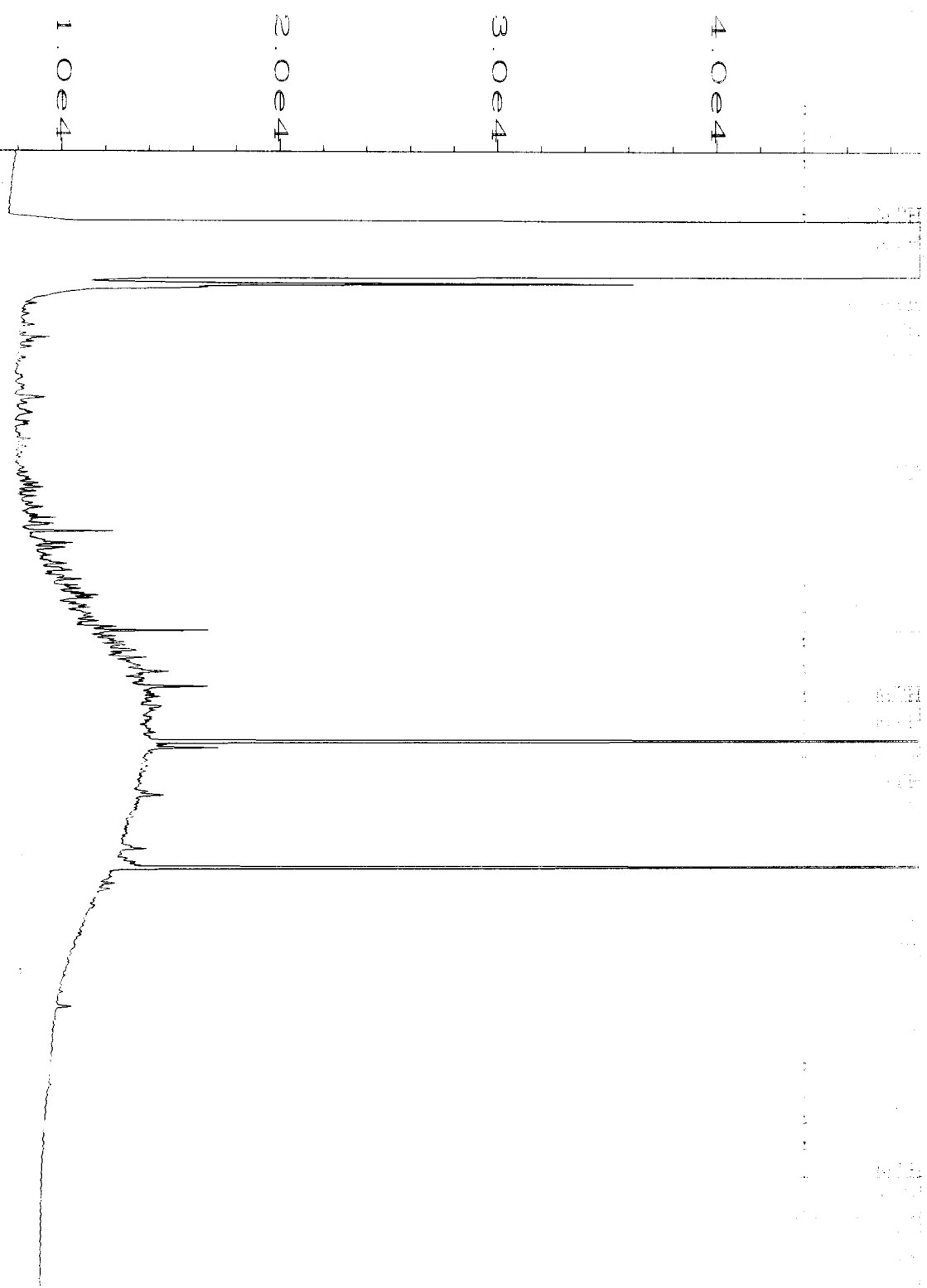
Date: 05/18/16  
Operator: mwd1  
Instrument: GC1  
Sample Name: 605271-02  
Run Time Bar Code: 18 May 16 08:16 PM  
Acquired on: 18 May 16 08:16 PM

Date: 05/19/16  
Operator: mwd1  
Instrument: GC1  
Sample Name: 605271-02  
Run Time Bar Code: 19 May 16 09:53 AM  
Acquired on: 19 May 16 09:53 AM

Date: 05/19/16  
Operator: mwd1  
Instrument: GC1  
Sample Name: 605271-02  
Run Time Bar Code: 19 May 16 09:53 AM  
Acquired on: 19 May 16 09:53 AM

Data File Name : C:\HPCHEM\1\DATA\05-18-16\047F0901.D  
Operator : mwd1  
Instrument : GC1  
Sample Name : 605271-02  
Run Time Bar Code: 18 May 16 08:16 PM  
Report Created on: 19 May 16 09:53 AM

Page Number : 1  
Vial Number : 47  
Injection Number : 1  
Sequence Line : 9  
Instrument Method: DX.MTH  
Analysis Method : DX.MTH



Date: 05/19/16  
Operator: mwd1  
Instrument: GC1  
Sample Name: 605271-02  
Run Time Bar Code: 19 May 16 09:53 AM

Sample Name  
Run Time  
Operator  
Instrument  
Acquired on  
Report Created

Data File Name  
Operator  
Instrument  
Acquired on  
Report Created

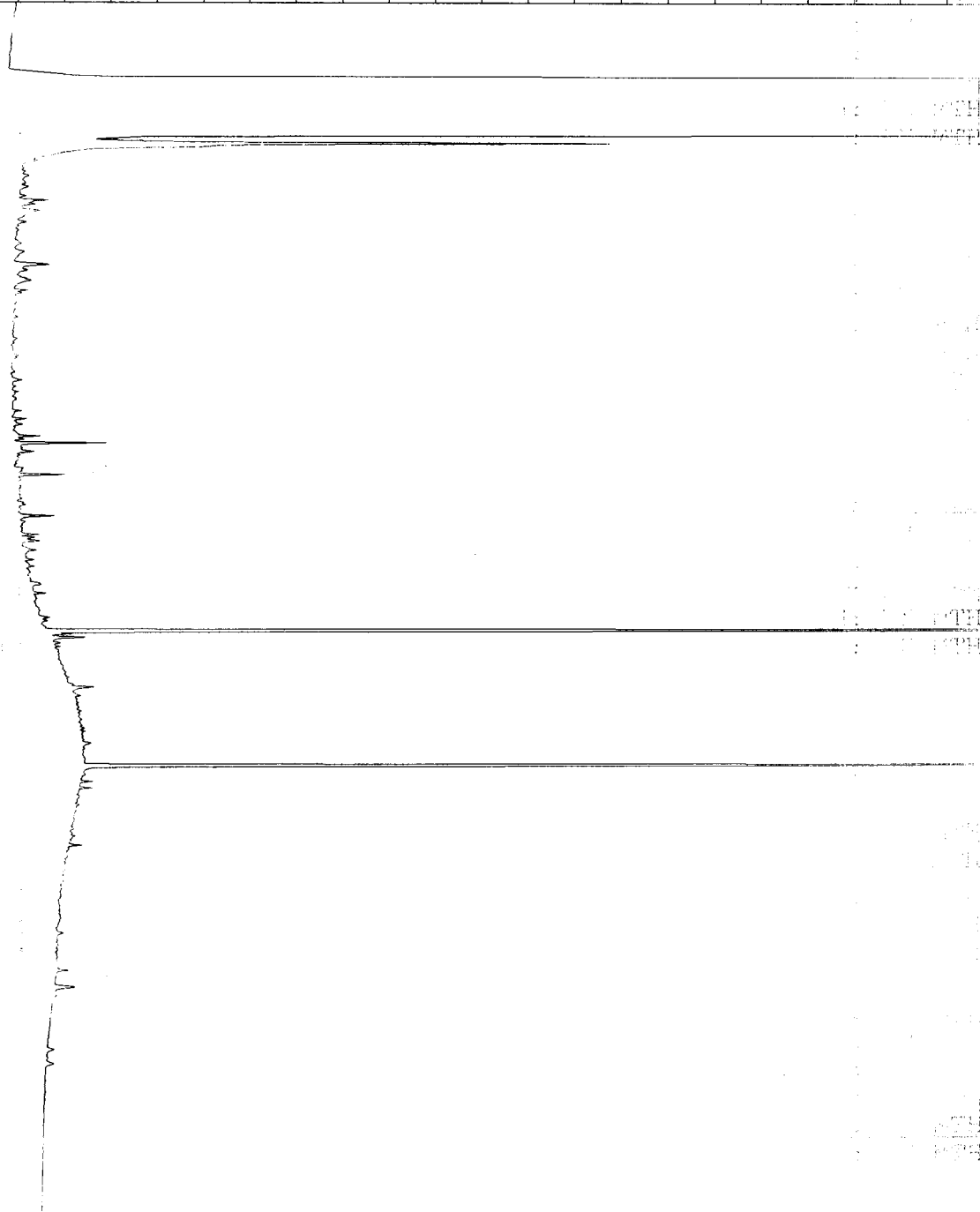
Data File Name  
Operator  
Instrument  
Acquired on  
Report Created

Data File Name  
Operator  
Instrument  
Acquired on  
Report Created

Data File Name  
Operator  
Instrument  
Acquired on  
Report Created

Data File Name  
Operator  
Instrument  
Acquired on  
Report Created

1.0e4  
2.0e4  
3.0e4  
4.0e4

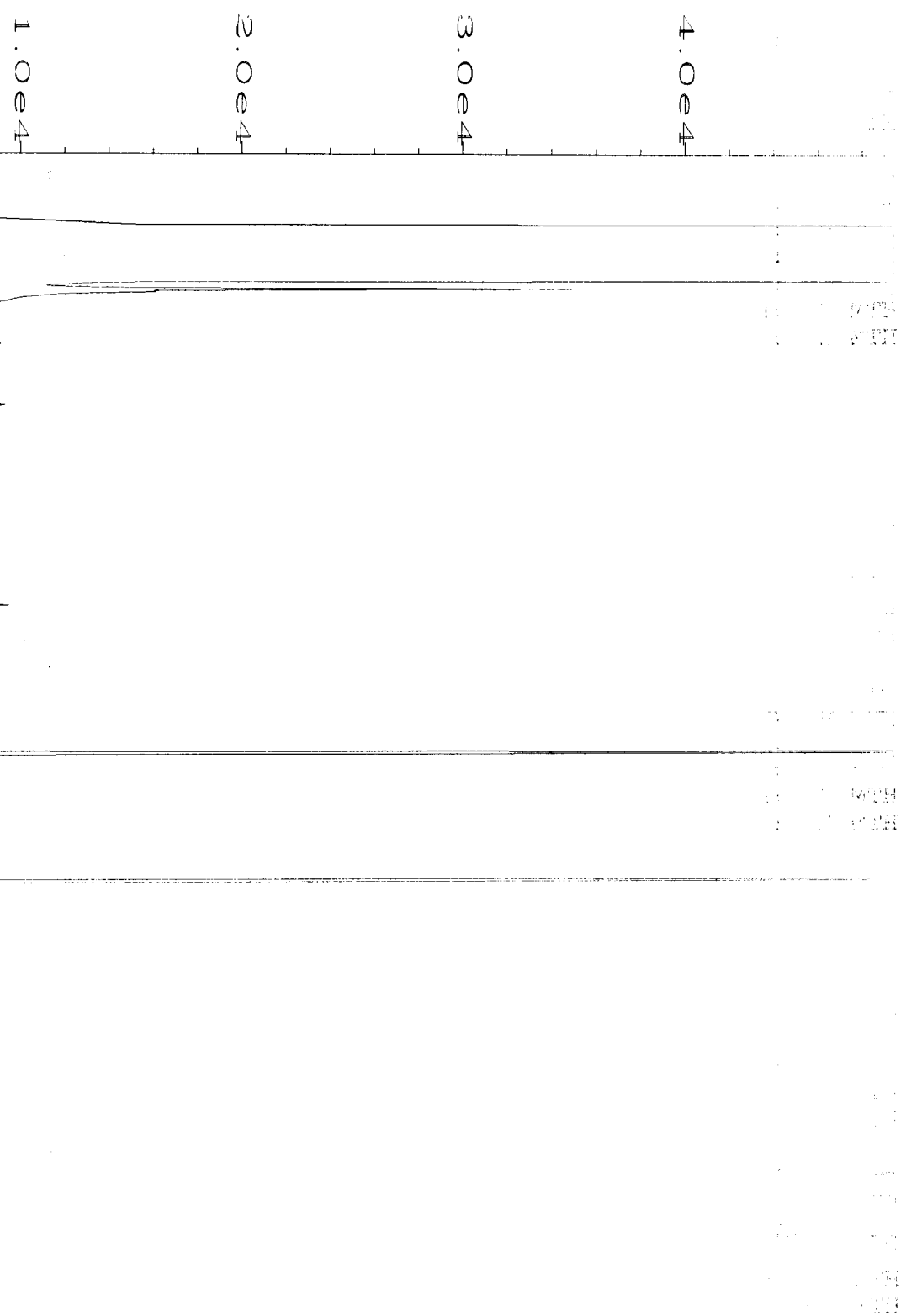


Data File Name : C:\HPCHEM\1\DATA\05-18-16\048F0901.D  
Operator : mwdl  
Instrument : GC1  
Sample Name : 605271-03  
Run Time Bar Code:  
Acquired on : 18 May 16 08:27 PM  
Report Created on: 19 May 16 09:53 AM

Page Number : 1  
Vial Number : 48  
Injection Number : 1  
Sequence Line : 9  
Instrument Method: DX.MTE  
Analysis Method : DX.MTE

Operator  
Instrument  
Acquired on  
Report Created

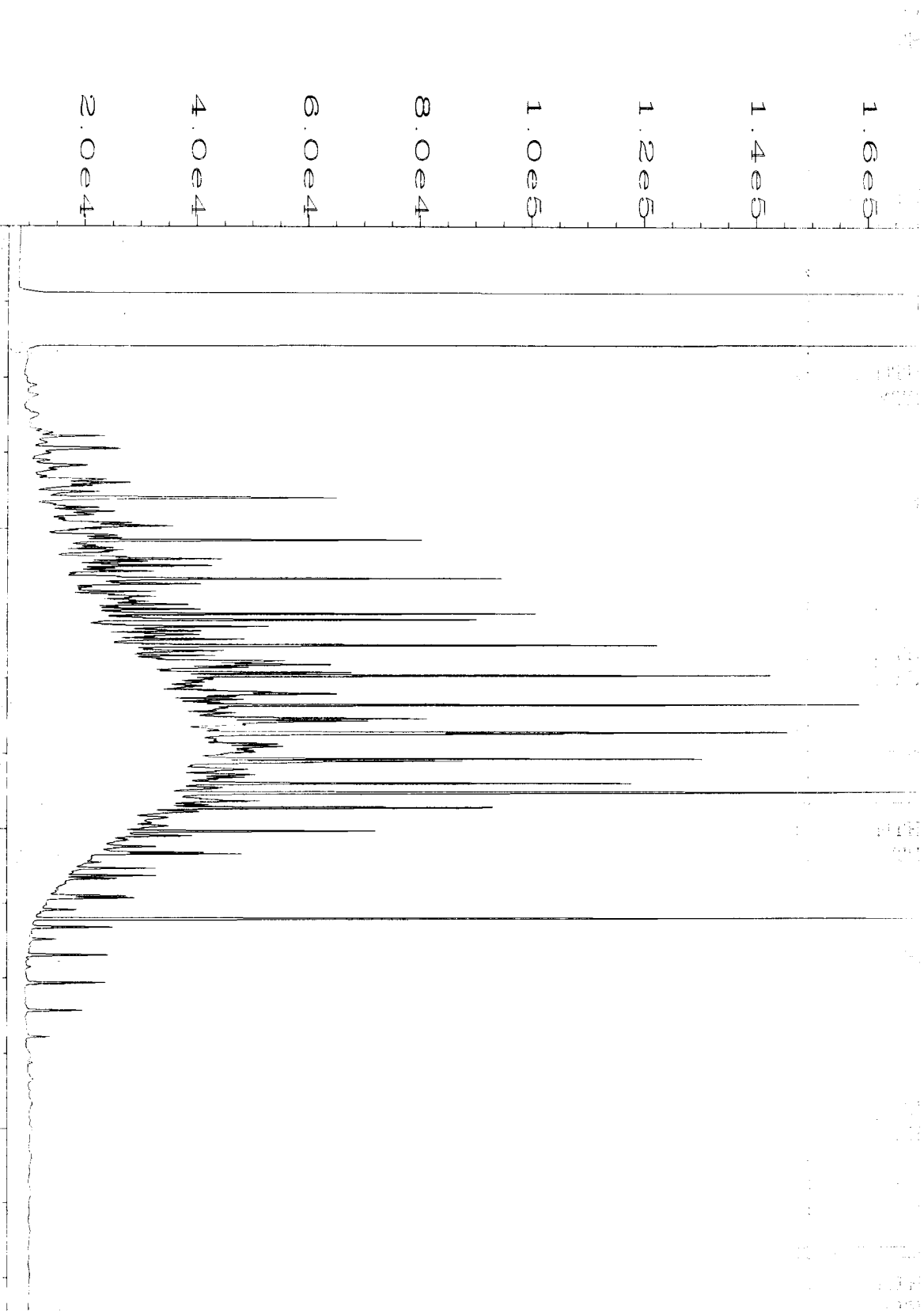
Date:   
 Time:   
 Operator:   
 Instrument:   
 Sample Name:   
 Run Time Bar Code:   
 Acquired on:   
 Report Created on:   
 Data File Name:   
 Operator:   
 Instrument:   
 Sample Name:   
 Run Time Bar Code:   
 Acquired on:   
 Report Created on:   
 Data File Name:   
 Operator:   
 Instrument:   
 Sample Name:   
 Run Time Bar Code:   
 Acquired on:   
 Report Created on:



Data File Name	: C:\HPCHEM\1\DATA\05-18-16\030F0701.D	Page Number	: 1
Operator	: mwd1	Vial Number	: 30
Instrument	: GC1	Injection Number	: 1
Sample Name	: 06-992 mb	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 18 May 16 04:44 PM	Analysis Method	: DX.MTH
Report Created on:	19 May 16 09:54 AM		

Date:   
 Time:   
 Operator:   
 Instrument:   
 Sample Name:   
 Run Time Bar Code:   
 Acquired on:   
 Report Created on:

Quantity  
 Sample Name  
 Run Time Bar  
 Acquired on  
 Report Created  
 Operator  
 Instrument  
 Sample No.  
 Run Time Bar  
 Acquired on  
 Report Created  
 Operator  
 Instrument  
 Sample No.  
 Run Time Bar  
 Acquired on  
 Report Created  
 Operator



Data File Name	: C:\HPCHEM\1\DATA\05-18-16\003F0201.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 3
Instrument	: GC1	Injection Number	: 1
Sample Name	: 500 Dx 45-182D	Sequence Line	: 2
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 18 May 16 06:13 AM	Analysis Method	: DX.MTH
Report Created on:	19 May 16 09:54 AM		

Operator



**IEH ANALYTICAL LABORATORIES**  
**LABORATORY & CONSULTING SERVICES**  
3927 AURORA AVENUE NORTH, SEATTLE, WA 98103  
PHONE: (206) 632-2715 FAX: (206) 632-2417

<b>CASE FILE NUMBER:</b>	<b>FBI014-70</b>	<b>PAGE 1</b>
<b>REPORT DATE:</b>	<b>06/14/16</b>	
<b>DATE SAMPLED:</b>	<b>05/13/16</b>	<b>DATE RECEIVED: 05/17/16</b>
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605271</b>		

**CASE NARRATIVE**

One water sample was received by the laboratory in good condition and analyzed according to the chain of custody. No other 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**

SAMPLE ID	SULFATE (mg/L)
01MW04-20160513	1.70



**IEH ANALYTICAL LABORATORIES**  
**LABORATORY & CONSULTING SERVICES**  
3927 AURORA AVENUE NORTH, SEATTLE, WA 98103  
PHONE: (206) 632-2715 FAX: (206) 632-2417

<b>CASE FILE NUMBER:</b>	<b>FBI014-70</b>	<b>PAGE 2</b>
<b>REPORT DATE:</b>	<b>06/14/16</b>	
<b>DATE SAMPLED:</b>	<b>05/13/16</b>	<b>DATE RECEIVED: 05/17/16</b>
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605271</b>		

**QA/QC DATA**

QC PARAMETER	SULFATE (mg/L)
METHOD	SM184500SO4E
DATE ANALYZED	06/01/16
DETECTION LIMIT	1.00
DUPLICATE	
SAMPLE ID	BATCH
ORIGINAL	2.43
DUPLICATE	2.40
RPD	1.27%
SPIKE SAMPLE	
SAMPLE ID	BATCH
ORIGINAL	2.43
SPIKED SAMPLE	12.4
SPIKE ADDED	10.0
% RECOVERY	100.08%
QC CHECK	
FOUND	9.88
TRUE	10.0
% RECOVERY	98.80%
BLANK	<1.00

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 TO LOW RELATIVE TOO SAMPLE CONCENTRATION.

SUBMITTED BY:

Damien Gadomski  
Project Manager



FB1014-70

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl  
 Company Friedman and Bruya, Inc.  
 Address 3012 16th Ave W  
 City, State, ZIP Seattle, WA 98119  
 Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER Aq. Research.

PROJECT NAME/NO. 605271 PO# D-974.

REMARKS  
 Please Email Results

Page # 1 of 1

TURNAROUND TIME  
 Standard (2 Weeks)  
 RUSH  
 Rush charges authorized by: \_\_\_\_\_

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED							Notes	
						Dioxins/Furans	EPH	VPH	Nitrate	Sulfate	Alkalinity	TOC-9060M		
01MW04-20160513		5/13/16	1408	water	1					X				

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
	Michael Erdahl	Friedman and Bruya	5/10/16	
	SNA SANA (1) temp-KT	1st Analytic	5/17/16	1030
Relinquished by:				
Received by:				

**SAMPLE CHAIN OF CUSTODY**

ME 05/13/16

605271

Send Report To Tim Brown, cc: Jessica Brown, Courtney Schaumberg, Jonathan Loeffler, Jennifer Cyr

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature) <i>[Signature]</i>	
PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal	PO # 01-600
REMARKS 1 low level detection limit of 0.219 ug/L for PCP.	EIM Y / N

TURNAROUND TIME Standard (8 Weeks) RUSH Rush charges authorized by: <i>[Signature]</i>
SAMPLE DISPOSAL <input checked="" type="checkbox"/> 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	DRPHORPH 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+	Notes	
<del>SiMw06-20160513</del>	<del>OIMW06</del>	<del>15.5</del>	<del>01A-P</del>	<del>5/13/16</del>	<del>1123</del>	<del>H<sub>2</sub>O</del>	<del>6</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del></del>	<del>X</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>
<del>SiMw08-20160513</del>	<del>OIMW08</del>	<del>17</del>	<del>02A-P</del>	<del>↓</del>	<del>1240</del>	<del>↓</del>	<del>4</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>
<del>SiMw04-20160513</del>	<del>OIMW04</del>	<del>15</del>	<del>03A-P</del>	<del>↓</del>	<del>1408</del>	<del>↓</del>	<del>6</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del></del>	<del>X</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>
<del>LOGS 5/13/16</del>																			

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
<i>[Signature]</i>	Logan Schumacher	SES	5/13/16	1555
<i>[Signature]</i>	Elizabeth Radford	F&B	5/13/16	1555
Relinquished by:				
Received by:				
Samples received at: <u>3</u> °C				

***Friedman & Bruya, Inc. #605285***

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

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

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

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 16, 2016 from the TOC\_01-600\_20160516 WORFDB8, F&BI 605285 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  
SOU0615R.DOC

FRIEDMAN & BRUYA, INC.

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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 605285 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
605285 -01	01MW59-20160516
605285 -02	01MW20-20160516
605285 -03	01MW18-20160516
605285 -04	01MW19-20160516
605285 -05	FD03-20160516

Sample 01MW59-20160516 was sent to Aquatic Research for sulfate analysis. Review of the enclosed report indicates that all quality assurance were acceptable.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/16/16

Project: TOC\_01-600\_20160516 WORFDB8, F&BI 605285

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)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
01MW59-20160516 605285-01	<1	<1	<1	<3	<100	93
01MW20-20160516 605285-02	2.2	3.8	47	25	750	102
01MW18-20160516 605285-03	73	27	160	510	4,700	115
01MW19-20160516 605285-04 1/40	2,600	110	820	920	16,000	94
FD03-20160516 605285-05 1/40	2,500	110	770	860	14,000	99
Method Blank 06-950 MB	<1	<1	<1	<3	<100	92

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/16/16

Project: TOC\_01-600\_20160516 WORFDB8, F&BI 605285

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>	<u>Diesel Range</u>	<u>Motor Oil Range</u>	<u>Surrogate</u>
Laboratory ID	(C <sub>10</sub> -C <sub>25</sub> )	(C <sub>25</sub> -C <sub>36</sub> )	(% Recovery)
			(Limit 41-152)
01MW59-20160516 605285-01	980 x	430 x	101
01MW20-20160516 605285-02	600 x	<250	103
01MW18-20160516 605285-03	2,500 x	<250	104
01MW19-20160516 605285-04	2,900 x	280 x	98
FD03-20160516 605285-05	3,000 x	270 x	95
Method Blank 06-994 MB	<50	<250	98

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	01MW59-20160516	Client:	SoundEarth Strategies
Date Received:	05/16/16	Project:	TOC_01-600_20160516 WORFDB8
Date Extracted:	05/17/16	Lab ID:	605285-01
Date Analyzed:	05/17/16	Data File:	051720.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	85	117
Toluene-d8	100	91	108
4-Bromofluorobenzene	98	76	126

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1



# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	01MW19-20160516	Client:	SoundEarth Strategies
Date Received:	05/16/16	Project:	TOC_01-600_20160516 WORFDB8
Date Extracted:	05/17/16	Lab ID:	605285-04
Date Analyzed:	05/17/16	Data File:	051721.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	85	117
Toluene-d8	101	91	108
4-Bromofluorobenzene	100	76	126

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	FD03-20160516	Client:	SoundEarth Strategies
Date Received:	05/16/16	Project:	TOC_01-600_20160516 WORFDB8
Date Extracted:	05/17/16	Lab ID:	605285-05
Date Analyzed:	05/17/16	Data File:	051722.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	85	117
Toluene-d8	102	91	108
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	TOC_01-600_20160516 WORFDB8
Date Extracted:	05/17/16	Lab ID:	06-969 mb
Date Analyzed:	05/17/16	Data File:	051707.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	107	85	117
Toluene-d8	100	91	108
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/16/16

Project: TOC\_01-600\_20160516 WORFDB8, F&BI 605285

**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)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (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

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance 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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/16/16

Project: TOC\_01-600\_20160516 WORFDB8, F&BI 605285

**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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/16/16

Project: TOC\_01-600\_20160516 WORFDB8, F&BI 605285

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

Laboratory Code: 605258-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance 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

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (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

# FRIEDMAN & BRUYA, INC.

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## ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

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

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.

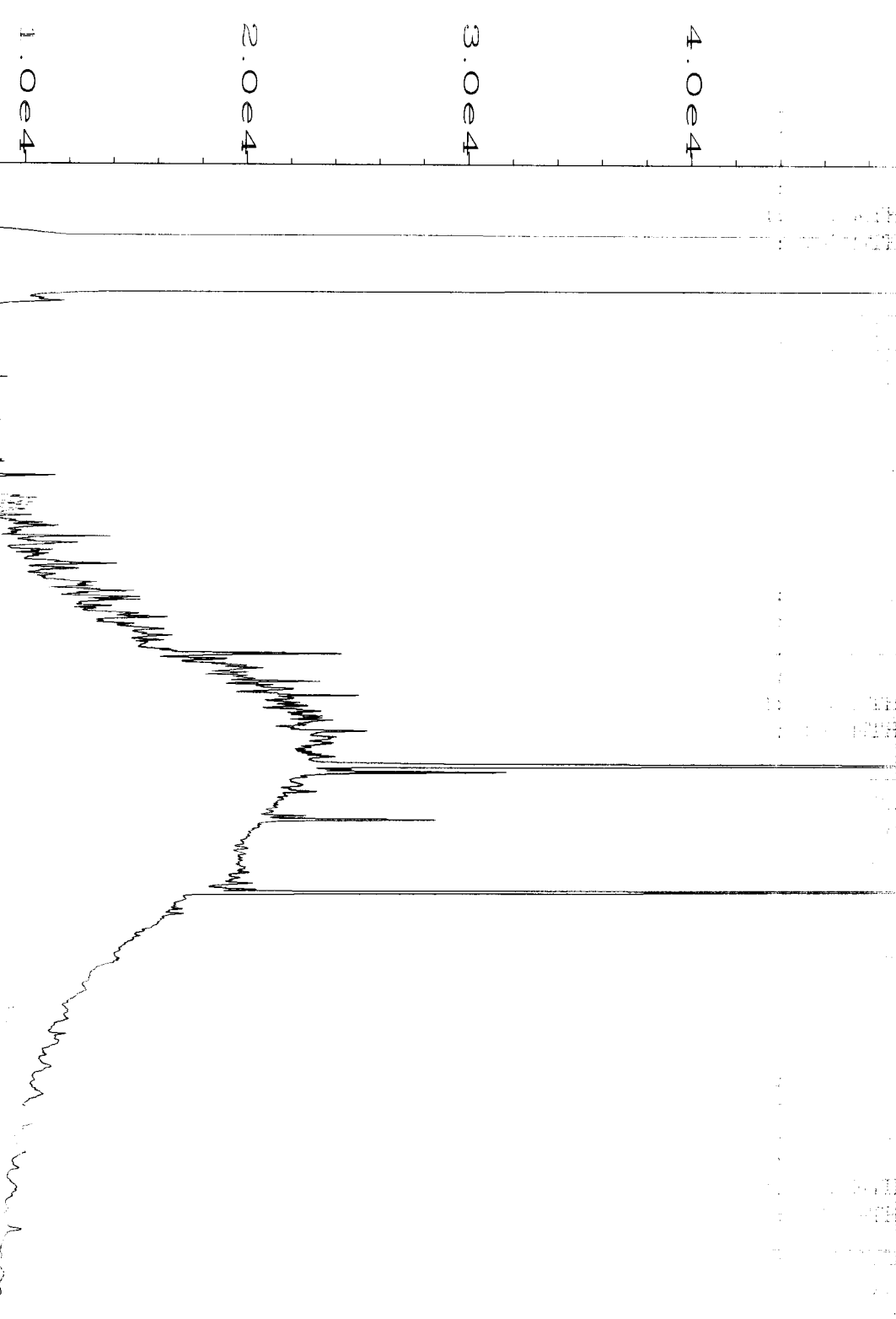
pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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.

Date File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code  
Acquired on  
Report Created on



Date File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code  
Acquired on  
Report Created on

Date File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code  
Acquired on  
Report Created on

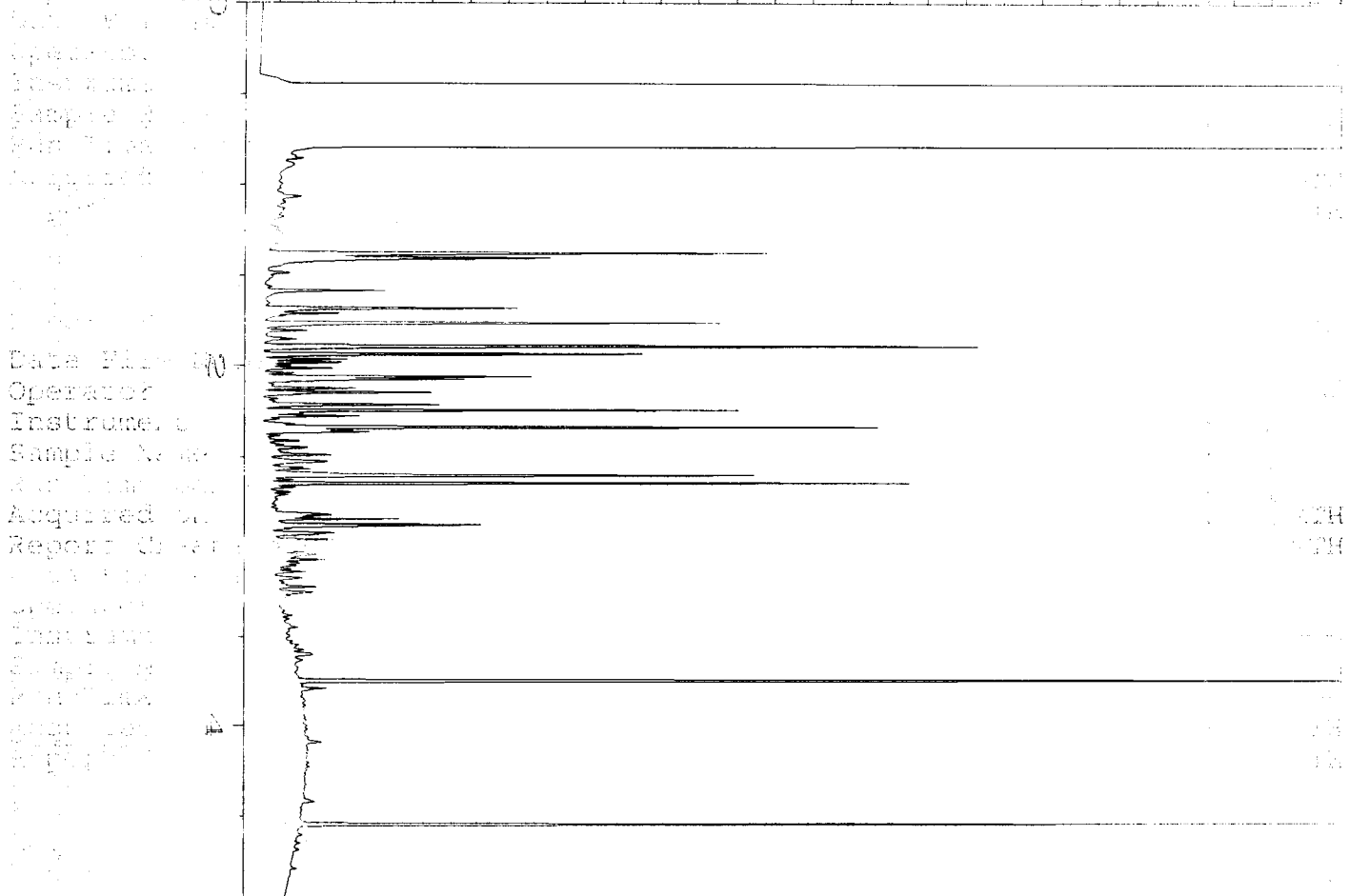
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Operator	: mwdl	Vial Number	: 32
Instrument	: GC1	Injection Number	: 1
Sample Name	: 605285-01	Sequence Line	: 9
Run Time Bar Code	:	Instrument Method	: DX.MTH
Acquired on	: 17 May 16 05:10 PM	Analysis Method	: DX.MTH
Report Created on	: 18 May 16 12:39 PM		

Date File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code  
Acquired on  
Report Created on



Date File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code  
Acquired on  
Report Created on

2.0e4  
1.0e4  
3.0e4  
3.0e4  
1.0e5  
1.2e5  
1.4e5



Data File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code  
Acquired on  
Report Created on

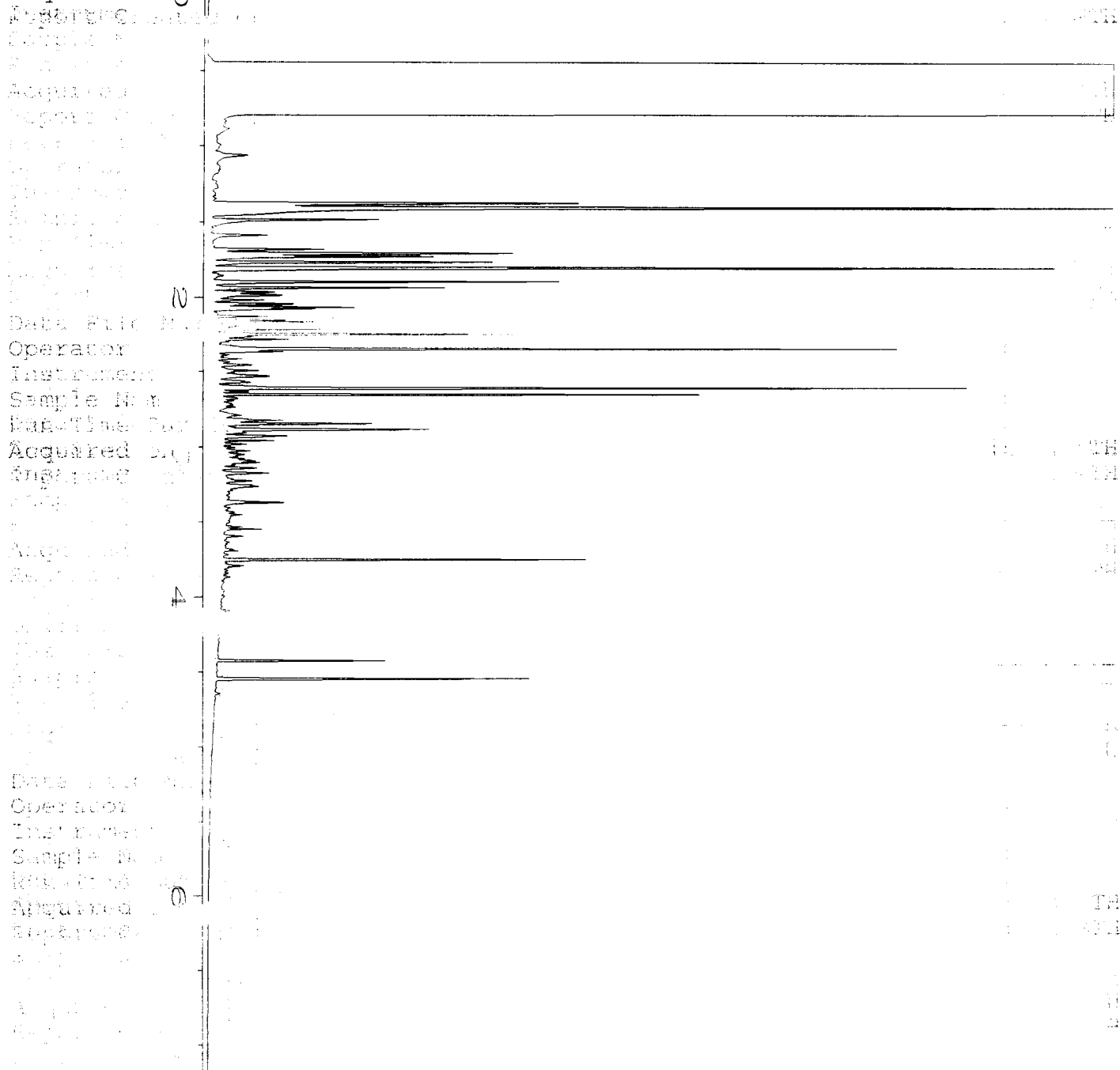
Data File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code  
Acquired on  
Report Created on

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Operator : mwdl  
Instrument : GC1  
Sample Name : 605285-02  
Run Time Bar Code :  
Acquired on : 17 May 16 05:21 PM  
Report Created on : 18 May 16 12:39 PM  
Page Number : 1  
Vial Number : 33  
Injection Number : 1  
Sequence Line : 9  
Instrument Method : DX.MTH  
Analysis Method : DX.MTH

Sample Name  
Run Time Bar Code  
Acquired on  
Report Created on

Sample Name  
 Operator  
 Instrument  
 Sample Name  
 Raw Time Bar Code  
 Acquired on  
 Report Created on

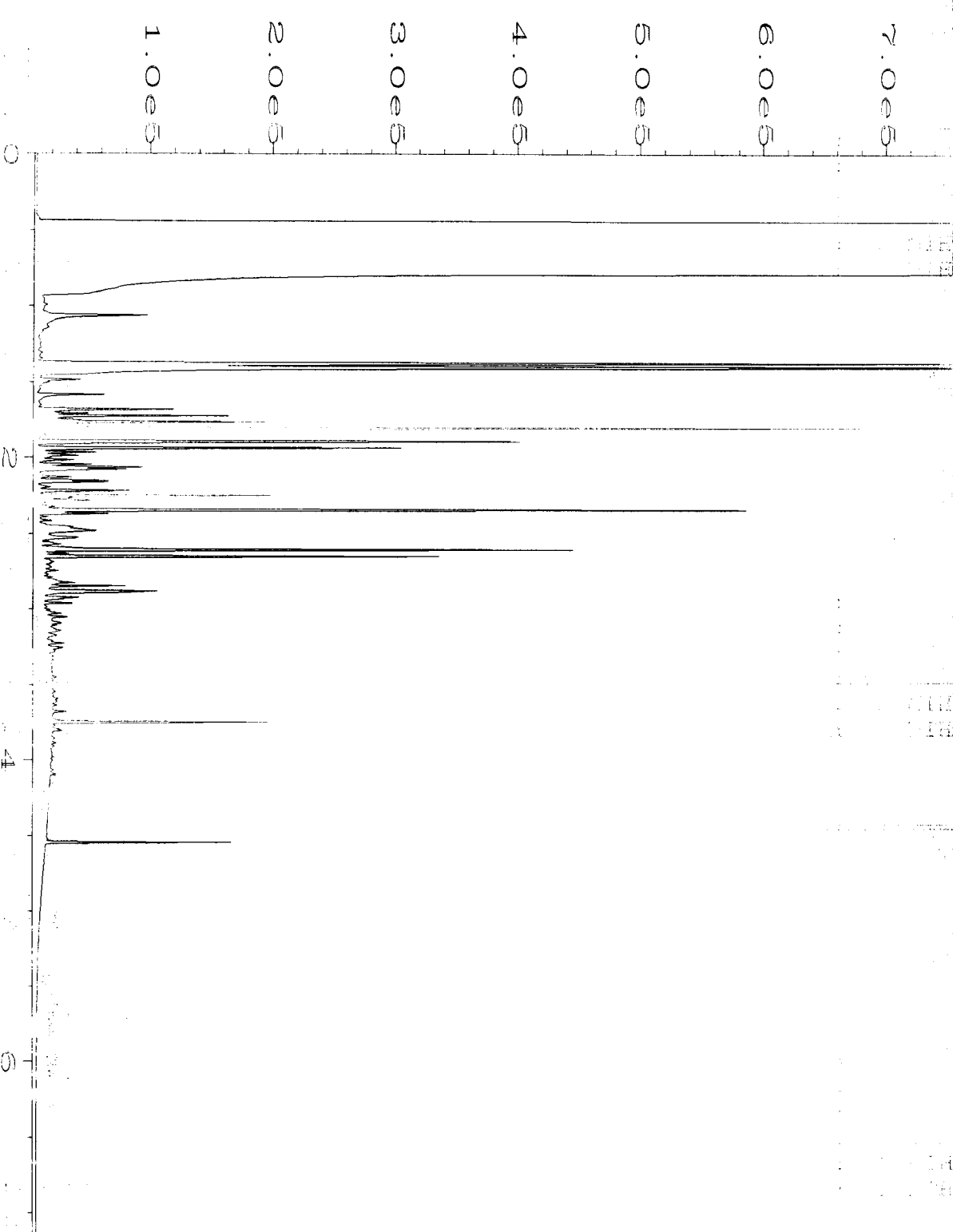
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 3.0e5  
 4.0e5



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 Operator : mwd1  
 Instrument : GC1  
 Sample Name : 605285-03  
 Raw Time Bar Code :  
 Acquired on : 17 May 16 05:33 PM  
 Report Created on : 18 May 16 12:40 PM  
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 Injection Number : 1  
 Sequence Line : 9  
 Instrument Method : DX.MTH  
 Analysis Method : DX.MTH

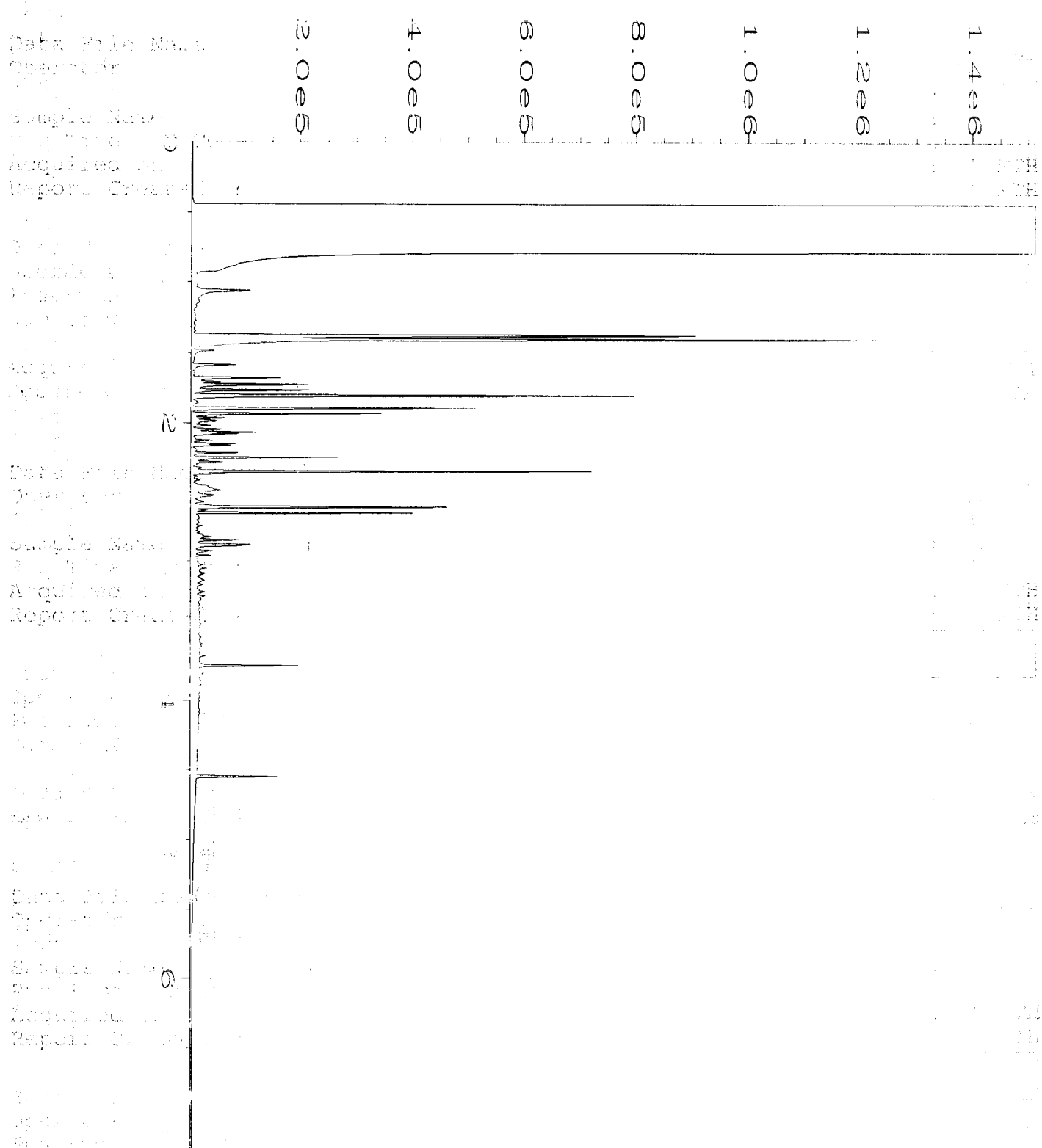
Sample Name  
 Operator  
 Instrument  
 Sample Name  
 Raw Time Bar Code  
 Acquired on  
 Report Created on

Sample Name  
 710-001  
 Acquired on  
 Report Date  
 17 May 16 05:44 PM  
 Report Created on  
 18 May 16 12:41 PM  
 Data File Name  
 Operator  
 Instrument  
 Sample Name  
 Run Time Bar Code  
 Acquired on  
 Report Created on



Data File Name : C:\HPCHEM\1\DATA\05-17-16\035F0901.D  
 Operator : mwdl  
 Instrument : GC1  
 Sample Name : 605285-04  
 Run Time Bar Code:  
 Acquired on : 17 May 16 05:44 PM  
 Report Created on: 18 May 16 12:41 PM  
 Page Number : 1  
 Vial Number : 35  
 Injection Number : 1  
 Sequence Line : 9  
 Instrument Method: DX.MTH  
 Analysis Method : DX.MTH

Data File Name  
 Operator  
 Instrument  
 Sample Name



Data File Name	: C:\HPCHEM\1\DATA\05-17-16\036F0901.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 36
Instrument	: GC1	Injection Number	: 1
Sample Name	: 605285-05	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 17 May 16 05:55 PM	Analysis Method	: DX.MTH
Report Created on:	18 May 16 12:42 PM		

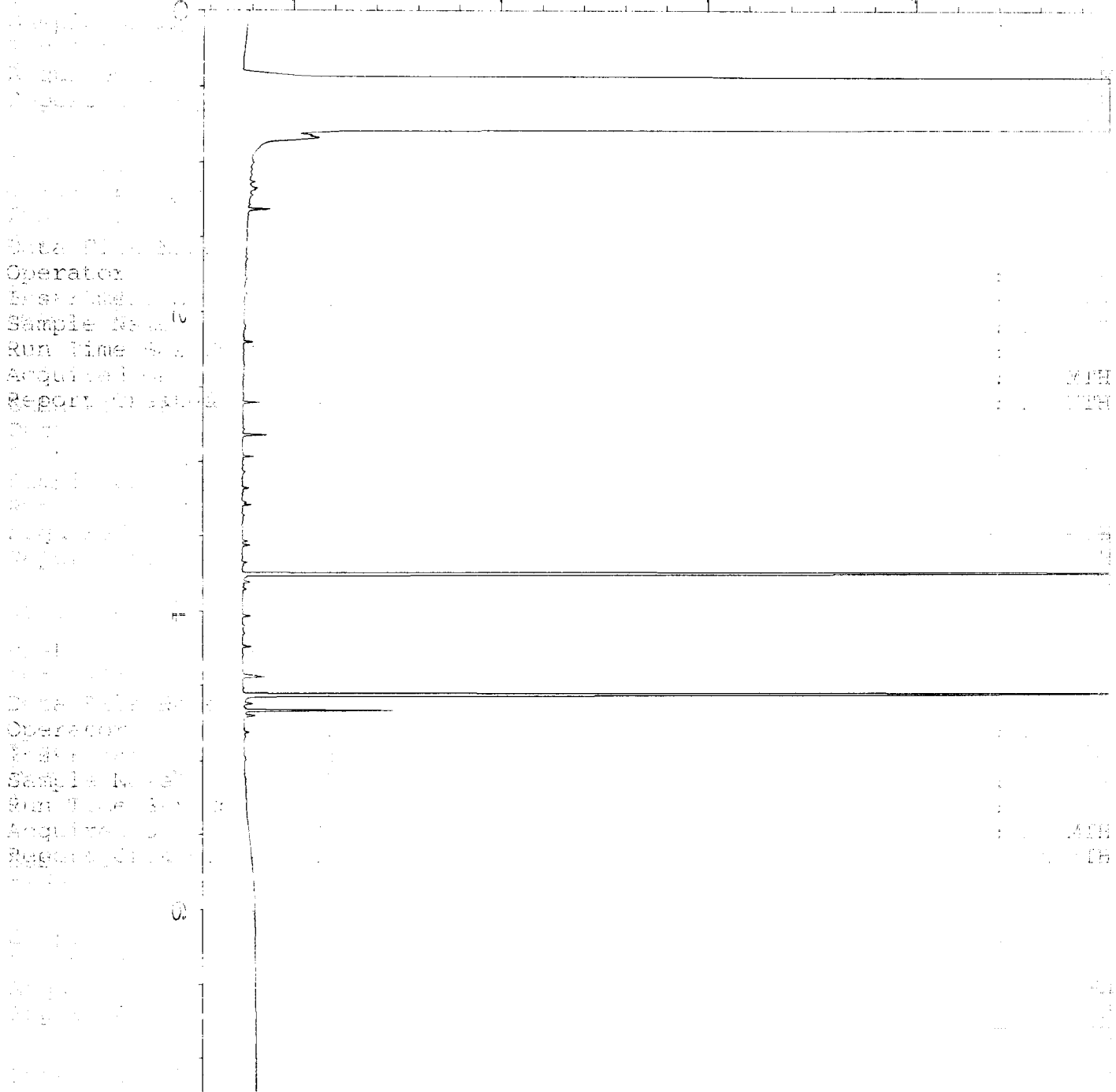
Data File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code  
Acquired on  
Report Created on

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2.0e4

3.0e4

4.0e4



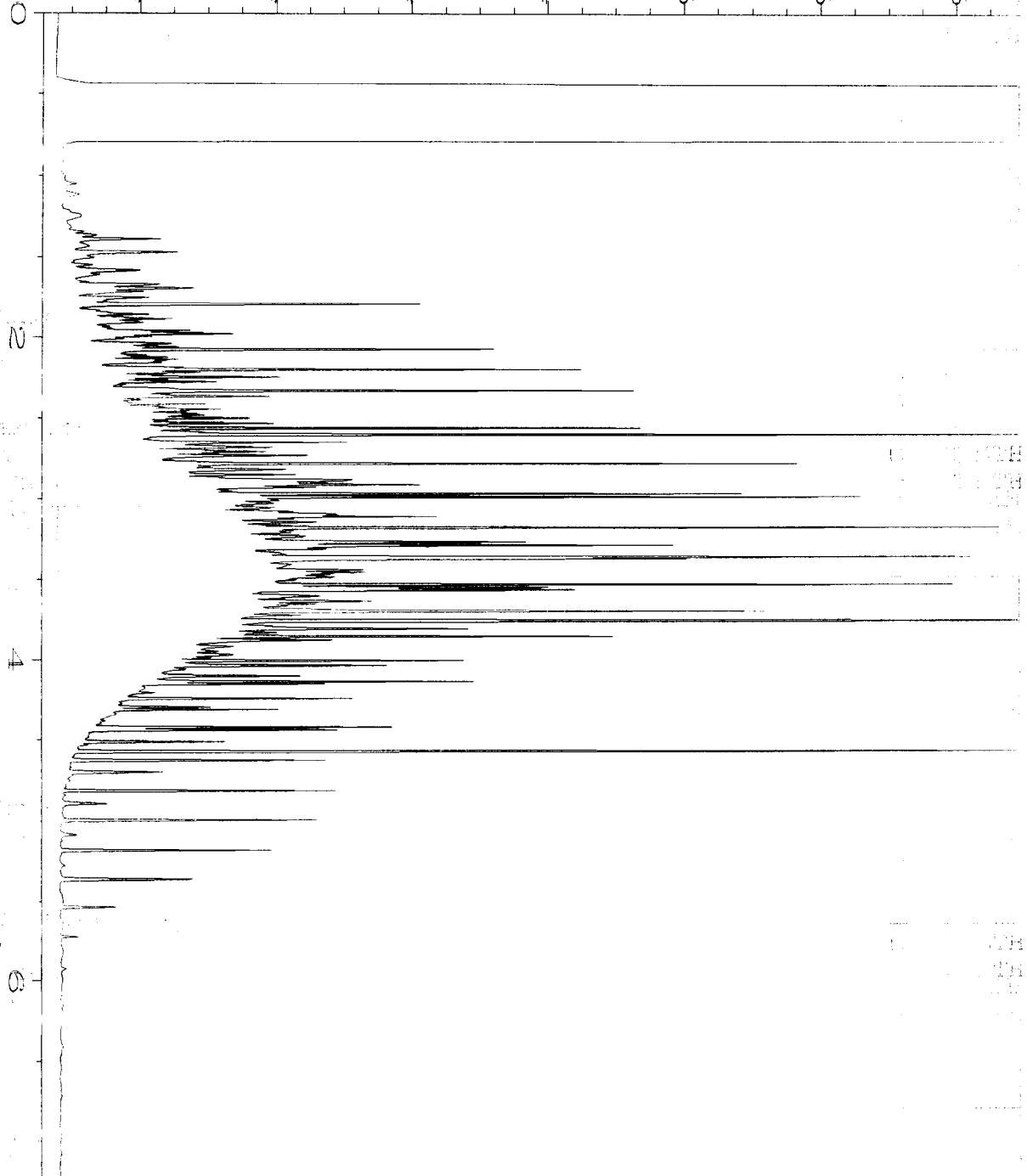
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Operator  
Instrument  
Sample Name  
Run Time Bar Code  
Acquired on  
Report Created on

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Operator : mwdl  
Instrument : GC1  
Sample Name : 06-994 mb  
Run Time Bar Code :  
Acquired on : 17 May 16 04:06 PM  
Report Created on : 18 May 16 12:42 PM

Page Number : 1  
Vial Number : 26  
Injection Number : 1  
Sequence Line : 9  
Instrument Method : DX.MTH  
Analysis Method : DX.MTH

Data File Name  
Operator  
Instrument  
Run Time Bar Code  
Acquired  
Report Created

2.0e4  
4.0e4  
6.0e4  
8.0e4  
1.0e5  
1.2e5  
1.4e5



Data File Name  
Operator  
Instrument  
Run Time Bar Code  
Acquired  
Report Created

Data File Name  
Operator  
Instrument  
Run Time Bar Code  
Acquired  
Report Created

Data File Name : C:\HPCHEM\1\DATA\05-17-16\003F0201.D  
Operator : mwdl  
Instrument : GC1  
Sample Name : 500 Dx 45-182D  
Run Time Bar Code :  
Acquired on : 17 May 16 07:08 AM  
Report Created on: 18 May 16 12:42 PM  
Page Number : 1  
Vial Number : 3  
Injection Number : 1  
Sequence Line : 2  
Instrument Method: DX.MTH  
Analysis Method : DX.MTH



**IEH ANALYTICAL LABORATORIES**  
**LABORATORY & CONSULTING SERVICES**  
3927 AURORA AVENUE NORTH, SEATTLE, WA 98103  
PHONE: (206) 632-2715 FAX: (206) 632-2417

<b>CASE FILE NUMBER:</b>	<b>FBI014-71</b>	<b>PAGE 1</b>
<b>REPORT DATE:</b>	<b>06/14/16</b>	
<b>DATE SAMPLED:</b>	<b>05/16/16</b>	<b>DATE RECEIVED: 05/17/16</b>
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605285</b>		

**CASE NARRATIVE**

One water sample was received by the laboratory in good condition and analyzed according to the chain of custody. No other 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**

SAMPLE ID	SULFATE (mg/L)
01MW59-20160516	4.13



**IEH ANALYTICAL LABORATORIES**  
**LABORATORY & CONSULTING SERVICES**  
3927 AURORA AVENUE NORTH, SEATTLE, WA 98103  
PHONE: (206) 632-2715 FAX: (206) 632-2417

<b>CASE FILE NUMBER:</b>	<b>FBI014-71</b>	<b>PAGE 2</b>
<b>REPORT DATE:</b>	<b>06/14/16</b>	
<b>DATE SAMPLED:</b>	<b>05/16/16</b>	<b>DATE RECEIVED: 05/17/16</b>
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605285</b>		

**QA/QC DATA**

QC PARAMETER	SULFATE (mg/L)
METHOD	SM184500SO4E
DATE ANALYZED	06/14/16
DETECTION LIMIT	1.00
DUPLICATE	
SAMPLE ID	BATCH
ORIGINAL	5.20
DUPLICATE	5.30
RPD	1.91%
SPIKE SAMPLE	
SAMPLE ID	BATCH
ORIGINAL	5.20
SPIKED SAMPLE	15.3
SPIKE ADDED	10.0
% RECOVERY	100.54%
QC CHECK	
FOUND	9.79
TRUE	10.0
% RECOVERY	97.90%
BLANK	<1.00

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 TO LOW RELATIVE TOO SAMPLE CONCENTRATION.

SUBMITTED BY:

Damien Gadomski  
Project Manager



# SUBCONTRACT SAMPLE CHAIN OF CUSTODY

FB1014-71

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

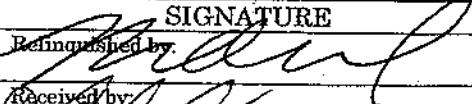
SUBCONTRACTER <u>Aq. Research</u>	
PROJECT NAME/NO. <u>605285</u>	PO # <u>D-982</u>
REMARKS  <u>Please Email Results</u>	

Page # 1 of 1

<b>TURNAROUND TIME</b>
<input checked="" type="checkbox"/> Standard (2 Weeks) <input type="checkbox"/> RUSH Rush charges authorized by: _____
<b>SAMPLE DISPOSAL</b>
<input type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED								Notes	
						Dioxins/Furans	EPH	VPH	Nitrate	Sulfate	Alkalinity	TOC-9060M			
<u>01MWSA-20160516</u>		<u>5/16/16</u>	<u>1131</u>	<u>water</u>	<u>1</u>					<u>X</u>					

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
	Michael Erdahl	Friedman and Bruya	<u>5/17/16</u>	<u>0915</u>
Relinquished by:	<u>SINA SONN</u>	<u>ppal(i) temp. 4LC next Aquatic</u>	<u>5/17/16</u>	<u>1020</u>
Received by:				
Relinquished by:				
Received by:				

**SAMPLE CHAIN OF CUSTODY**

ME 05/16/16

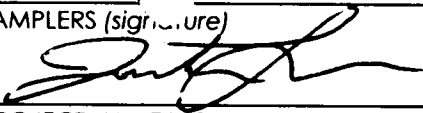
605 285

Send Report To Tim Brown, cc: Jessica Brown, Courtney Schaumberg, Jonathan Loeffler, Jennifer Cyr

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature) 	
PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal	PO # 01-600
REMARKS 1 low level detection limit of 0.219 ug/L for PCP.	EIM Y / N

Page # 1 of 1

TURNAROUND TIME 1 Day

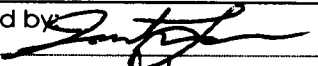
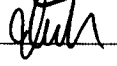
Standard (2 Weeks)  
RUSH \_\_\_\_\_  
Rush charges authorized by: \_\_\_\_\_

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)	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+	Notes	
01MW59-20160516	01MW59	—	01A-6	5/16/16	1131	H <sub>2</sub> O	7	X	X	X		X	X						
01MW20-20160516	01MW20	—	02A-7	5/16/16	1237	H <sub>2</sub> O	4	X	X	X									
01MW18-20160516	01MW18	—	03-1	5/16/16	1300	H <sub>2</sub> O	4	X	X	X									
01MW19-20160516	01MW19	—	04A-9	5/16/16	1450	H <sub>2</sub> O	6	X	X	X		X							
FDO3-20160516	FDO3	—	05-1	5/16/16	1520	H <sub>2</sub> O	6	X	X	X		X							

Samples received at 7 °C

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	JONATHAN LOEFFLER	SOUNDEARTH	5/16/16	1702
Received by: 	VIN H	FBI	5/16/16	1700
Relinquished by:				
Received by:				

***Friedman & Bruya, Inc. #605315***

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

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

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

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 17, 2016 from the TOC\_01-600\_20160517 WORFDB8, F&BI 605315 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  
SOU0615R.DOC

FRIEDMAN & BRUYA, INC.

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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 605315 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
605315 -01	01MW69-20160517
605315 -02	01MW27-20160517
605315 -03	FD01-20160517

Sample 01MW69-20160517 was sent to Aquatic Research for sulfate, nitrate, nitrite, total phosphorus, hardness, alkalinity, TKN, and sulfide analyses and sample 01MW27-20160517 was sent to AR for sulfate analysis. In addition, sample 01MW69-20160517 was sent to Amtest for ferrous iron analysis. The report from Amtest is enclosed. The report from Aquatic Research will be forwarded upon receipt.

Several 8270D surrogates failed the laboratory acceptance criteria in the pentachlorophenol and the method blank. The surrogate is not associated with the analyte, therefore the results were acceptable.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/17/16

Project: TOC\_01-600\_20160517 WORFDB8, F&BI 605315

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**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
01MW69-20160517 605315-01	69	4.1	23	100	1,100	106
01MW27-20160517 605315-02	41	<1	1.7	<3	170	95
FD01-20160517 605315-03	41	<1	2.4	<3	180	93
Method Blank 06-951 MB	<1	<1	<1	<3	<100	88

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/17/16

Project: TOC\_01-600\_20160517 WORFDB8, F&BI 605315

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	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> (% Recovery) (Limit 47-140)
01MW69-20160517 605315-01 1/1.2	800 x	<300	118
01MW27-20160517 605315-02	1,200 x	<250	111
FD01-20160517 605315-03	1,400 x	<250	122
Method Blank 06-1014 MB	<50	<250	98

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	01MW69-20160517	Client:	SoundEarth Strategies
Date Received:	05/17/16	Project:	TOC_01-600_20160517 WORFDB8
Date Extracted:	05/24/16	Lab ID:	605315-01
Date Analyzed:	05/24/16	Data File:	052407.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	69	50	150
Phenol-d6	47 vo	50	150
2,4,6-Tribromophenol	123	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2



# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	01MW27-20160517	Client:	SoundEarth Strategies
Date Received:	05/17/16	Project:	TOC_01-600_20160517 WORFDB8
Date Extracted:	05/24/16	Lab ID:	605315-02
Date Analyzed:	05/24/16	Data File:	052408.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	65	50	150
Phenol-d6	44 vo	50	150
2,4,6-Tribromophenol	128	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	FD01-20160517	Client:	SoundEarth Strategies
Date Received:	05/17/16	Project:	TOC_01-600_20160517 WORFDB8
Date Extracted:	05/24/16	Lab ID:	605315-03
Date Analyzed:	05/24/16	Data File:	052409.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	63	50	150
Phenol-d6	45 vo	50	150
2,4,6-Tribromophenol	126	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	TOC_01-600_20160517 WORFDB8
Date Extracted:	05/24/16	Lab ID:	06-1047 mb
Date Analyzed:	05/24/16	Data File:	052406.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	62	50	150
Phenol-d6	47 vo	50	150
2,4,6-Tribromophenol	92	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophend	<0.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	01MW69-20160517	Client:	SoundEarth Strategies
Date Received:	05/17/16	Project:	TOC_01-600_20160517 WORFDB8
Date Extracted:	05/23/16	Lab ID:	605315-01
Date Analyzed:	05/24/16	Data File:	605315-01.133
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	3,290
Manganese	2,240

FRIEDMAN & BRUYA, INC.

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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_20160517 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	<50
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/17/16

Project: TOC\_01-600\_20160517 WORFDB8, F&BI 605315

**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)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance 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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/17/16

Project: TOC\_01-600\_20160517 WORFDB8, F&BI 605315

**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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/17/16

Project: TOC\_01-600\_20160517 WORFDB8, F&BI 605315

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR SEMIVOLATILE PHENOLS BY EPA METHOD 8270D SIM**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 30)
Pentachlorophenol	ug/L (ppb)	2.5	74	76	56-114	3



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/17/16

Project: TOC\_01-600\_20160517 WORFDB8, F&BI 605315

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

Laboratory Code: 605188-01 x10 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (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: Laboratory Control Sample

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

# FRIEDMAN & BRUYA, INC.

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## ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

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

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.

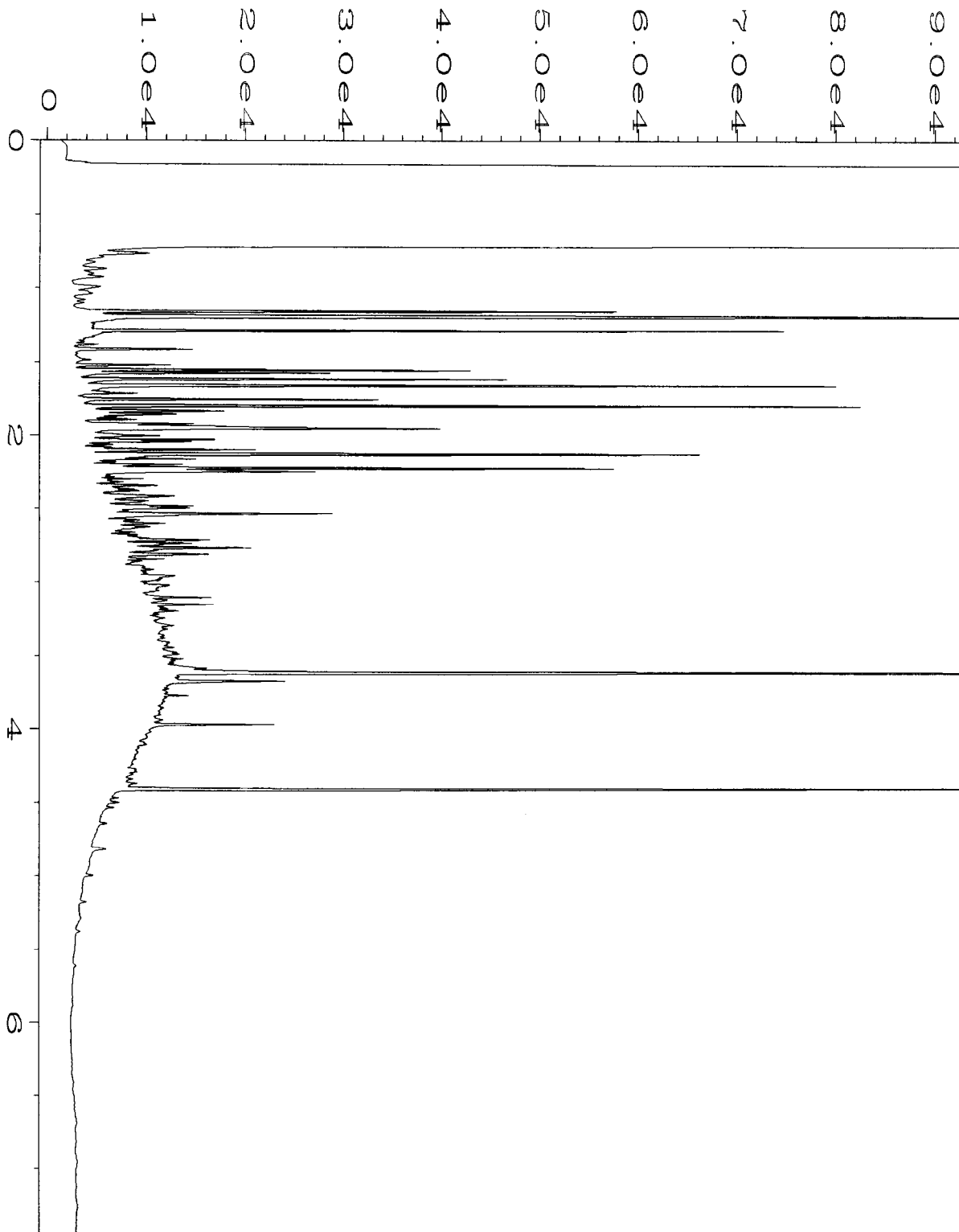
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.

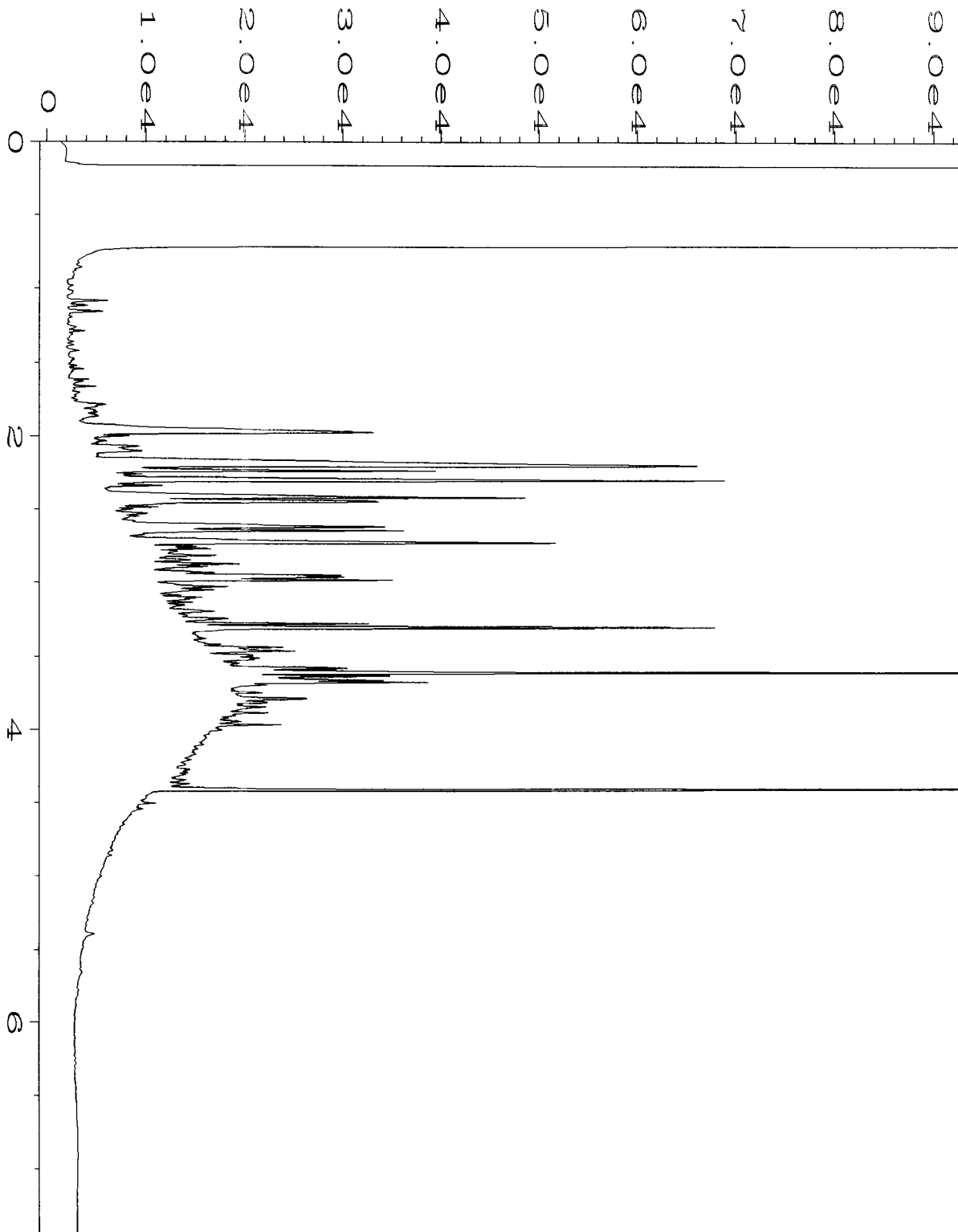
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

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

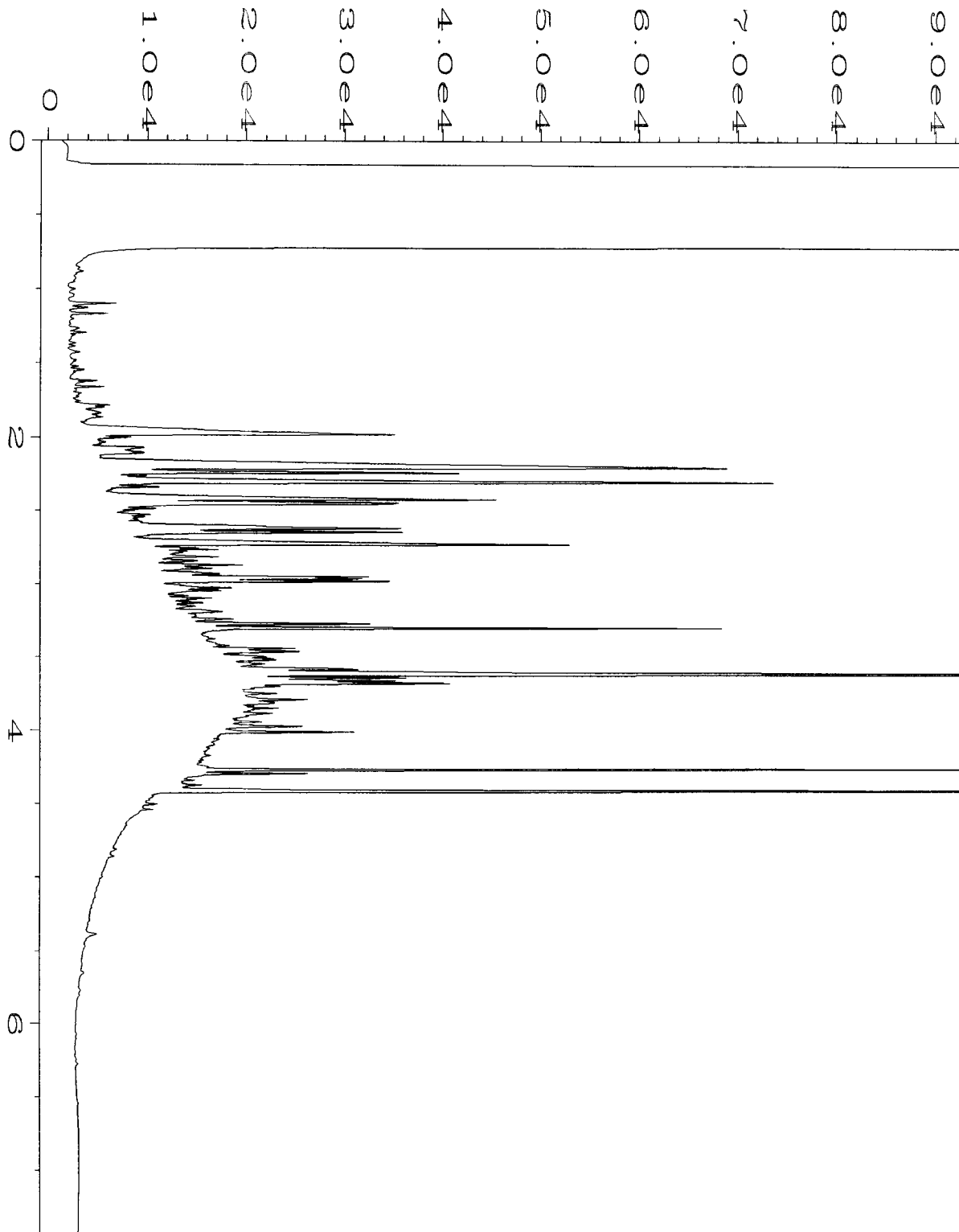
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



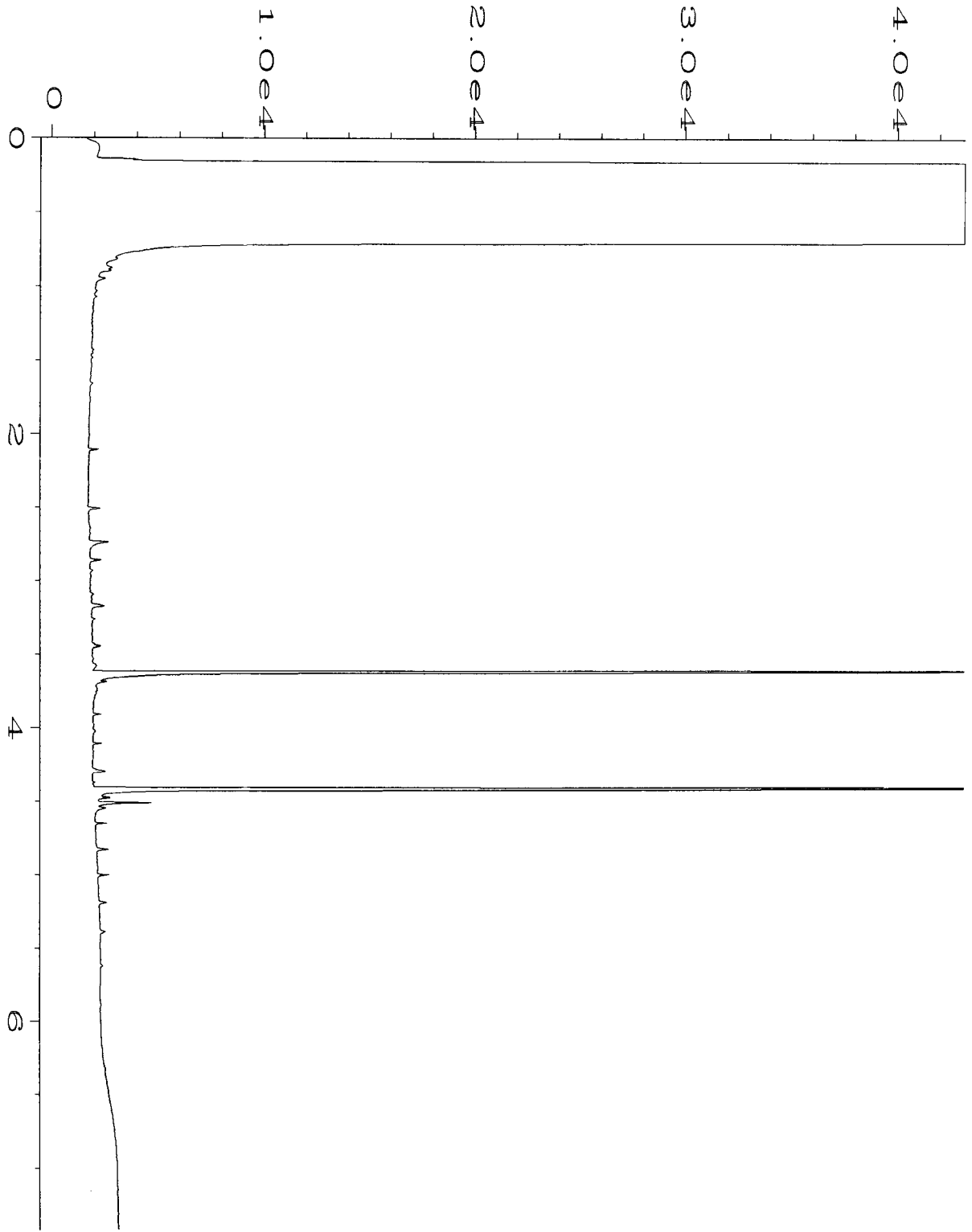
Data File Name	: C:\HPCHEM\4\DATA\05-19-16\025F0701.D	Page Number	: 1
Operator	: mwd1	Vial Number	: 25
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 605315-01	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 19 May 16 03:56 PM	Analysis Method	: DX.MTH
Report Created on:	23 May 16 09:32 AM		



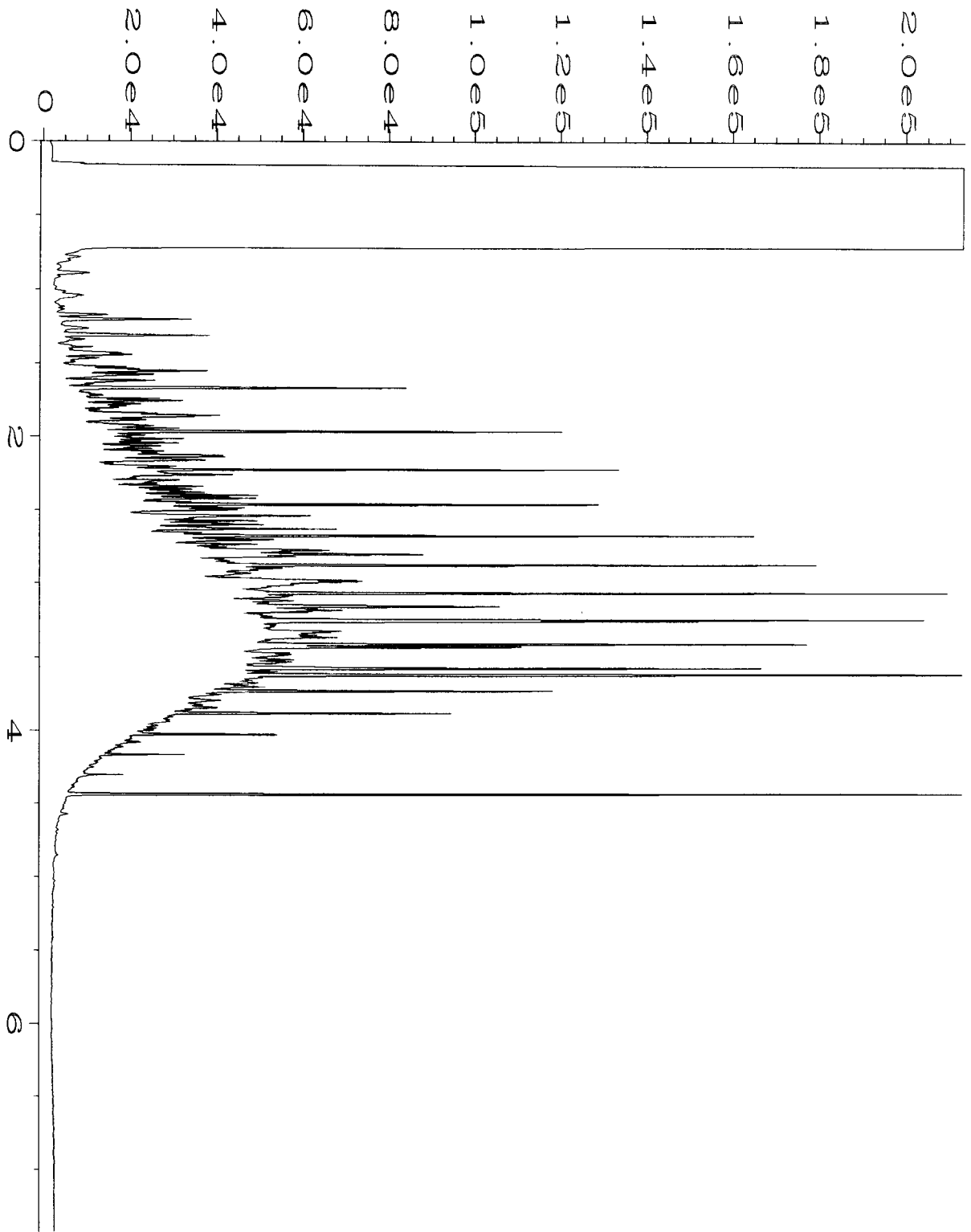
Data File Name	: C:\HPCHEM\4\DATA\05-19-16\026F0701.D	Page Number	: 1
Operator	: mwd1	Vial Number	: 26
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 605315-02	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 19 May 16 04:08 PM	Analysis Method	: DX.MTH
Report Created on:	23 May 16 09:32 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-19-16\027F0701.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 27
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 605315-03	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 19 May 16 04:19 PM	Analysis Method	: DX.MTH
Report Created on:	23 May 16 09:32 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-19-16\019F0401.D	Page Number	: 1
Operator	: mwd1	Vial Number	: 19
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 06-1014 mb	Sequence Line	: 4
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 19 May 16 01:07 PM	Analysis Method	: DX.MTH
Report Created on:	23 May 16 09:35 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-19-16\003F0201.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 3
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 500 Dx 45-182D	Sequence Line	: 2
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 19 May 16 06:53 AM	Analysis Method	: DX.MTH
Report Created on:	23 May 16 09:36 AM		



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 project.

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

CLIENT ID	MATRIX	AMTEST ID	TEST
01MW69-20160517	Water	16-A008950	MET

Your sample was received on Wednesday, May 18, 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 #: 605315  
PO Number: D-983

BACT = Bacteriological  
CONV = Conventional

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

Friedman & Bruya, Inc.  
3012 16th Avenue West  
Seattle, WA 98119-2029  
Attention: MICHAEL ERDAHL  
Project #: 605315  
PO Number: D-983  
All results reported on an as received basis.

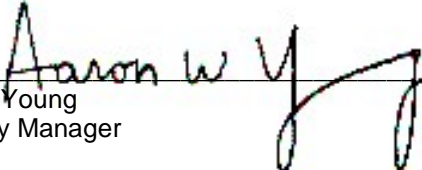
Date Received: 05/18/16  
Date Reported: 5/19/16

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AMTEST Identification Number      16-A008950  
Client Identification                01MW69-20160517  
Sampling Date                         05/17/16, 11:27

### Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	4.56	mg/l		0.01	SM 3500Fe D	MJ	05/18/16

  
\_\_\_\_\_  
Aaron W. Young  
Laboratory Manager

**QC Summary for sample number: 16-A008950**

**MATRIX SPIKES**

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
16-A008950	Ferrous Iron	mg/l	4.56	14.2	10.0	96.40 %
16-A008950	Ferrous Iron	mg/l	4.56	14.1	10.0	95.40 %

**MATRIX SPIKE DUPLICATES**

SAMPLE #	ANALYTE	UNITS	SAMPLE + SPK	MSD VALUE	RPD
Spike	Ferrous Iron	mg/l	14.2	14.1	0.71

**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 To Michael Erdahl  
 Company Friedman and Bruya, Inc.  
 Address 3012 16th Ave W  
 City, State, ZIP Seattle, WA 98119  
 Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER <u>Amtest</u>	
PROJECT NAME/NO. <u>605315</u>	PO # <u>D-983</u>
REMARKS  Please Email Results	

Page # 1 of 1 P.4

TURNAROUND TIME
<input checked="" type="checkbox"/> Standard (2 Weeks) <input type="checkbox"/> RUSH _____ Rush charges authorized by: _____
SAMPLE DISPOSAL
<input type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED										Notes		
						Total Fe	Hardness	Sulfate	Nitrate	Ferrous Iron Nitrite	Alkalinity	Sulfide	TKN	Total Phosphorus	Dissolved Gasses			
<u>01MW69-20160517</u>	<u>8950</u>	<u>5/17/16</u>	<u>1127</u>	<u>water</u>	<u>1</u>						<u>X</u>							

Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282 Fax (206) 283-5044	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
	Relinquished by: 	Michael Erdahl	Friedman & Bruya	<u>5/18/16</u>	<u>0725 AM</u>
	Received by: <u>ERT</u>	<u>FedEx T=0.8</u>		<u>5/18/16</u>	<u>1020</u>
	Relinquished by:				
	Received by:				

605315

**SAMPLE CHAIN OF CUSTODY**

ME 05/17/16

Page # 1 of 1  
TURNAROUND TIME  
 Standard (2 Weeks)  
RUSH \_\_\_\_\_  
Rush charges authorized by: \_\_\_\_\_  
SAMPLE DISPOSAL  
 Dispose after 30 days  
Return samples  
Will call with instructions

Send Report To Tim Brown, cc: Jessica Brown, Courtney Schaumberg, Jonathan Loeffler, Jennifer Cyr

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature) 	
PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal	PO # 01-600
REMARKS 1 low level detection limit of 0.219 ug/L for PCP.	EIM Y / N

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+	Notes
01MW69-20160517	01MW69	—	01 <sup>A</sup> K	5/17/16	1127	H <sub>2</sub> O	11	X	X	X	X		X		X	X	X	
01MW27-20160517	01MW27	—	02 <sup>F</sup> F	5/17/16	1314	H <sub>2</sub> O	6	X	X	X	X		X					
FD01-20160517	—	—	03 <sup>E</sup> E	5/17/16	1344	H <sub>2</sub> O	5	X	X	X	X							
5/17/16																		
Samples received at <u>4</u> °C																		

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	JONATHAN LOEFFLER	SOUNDEARTH	5/17/16	1811
Received by:	Jon Shimazu	FB & I	↓	6
Relinquished by:				
Received by:				

***Friedman & Bruya, Inc. #605348***

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

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

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

June 2, 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 605348 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, Jonathan Loeffler  
SOU0602R.DOC

FRIEDMAN & BRUYA, INC.

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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 605348 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID  
605348 -01

SoundEarth Strategies  
B3-20160518

The 8270D surrogate phenol-d6 failed the laboratory acceptance criteria in the method blank. The surrogate is not associated with the analyte, therefore the results were acceptable.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/02/16

Date Received: 05/18/16

Project: TOC\_01-600\_20160518 WORFDB8, F&BI 605348

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**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
B3-20160518 605348-01 1/100	6,600	<100	<100	<300	19,000	83
Method Blank 06-999 MB	<1	<1	<1	<3	<100	93



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/02/16

Date Received: 05/18/16

Project: TOC\_01-600\_20160518 WORFDB8, F&BI 605348

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	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> (% Recovery) (Limit 47-140)
B3-20160518 605348-01	8,100 x	1,200 x	ip
Method Blank 06-1014 MB	<50	<250	98

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B3-20160518	Client:	SoundEarth Strategies
Date Received:	05/18/16	Project:	TOC_01-600_20160518 WORFDB8
Date Extracted:	05/24/16	Lab ID:	605348-01 1/10
Date Analyzed:	05/25/16	Data File:	052507.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	67 d	50	150
Phenol-d6	59 d	50	150
2,4,6-Tribromophenol	153 d	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	21

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

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:	06-1047 mb
Date Analyzed:	05/24/16	Data File:	052406.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	62	50	150
Phenol-d6	47 vo	50	150
2,4,6-Tribromophenol	92	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/02/16

Date Received: 05/18/16

Project: TOC\_01-600\_20160518 WORFDB8, F&BI 605348

**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)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (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

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance 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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/02/16

Date Received: 05/18/16

Project: TOC\_01-600\_20160518 WORFDB8, F&BI 605348

**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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/02/16

Date Received: 05/18/16

Project: TOC\_01-600\_20160518 WORFDB8, F&BI 605348

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR SEMIVOLATILE PHENOLS BY EPA METHOD 8270D SIM**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 30)
Pentachlorophenol	ug/L (ppb)	2.5	74	76	56-114	3

# FRIEDMAN & BRUYA, INC.

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## ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

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

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.

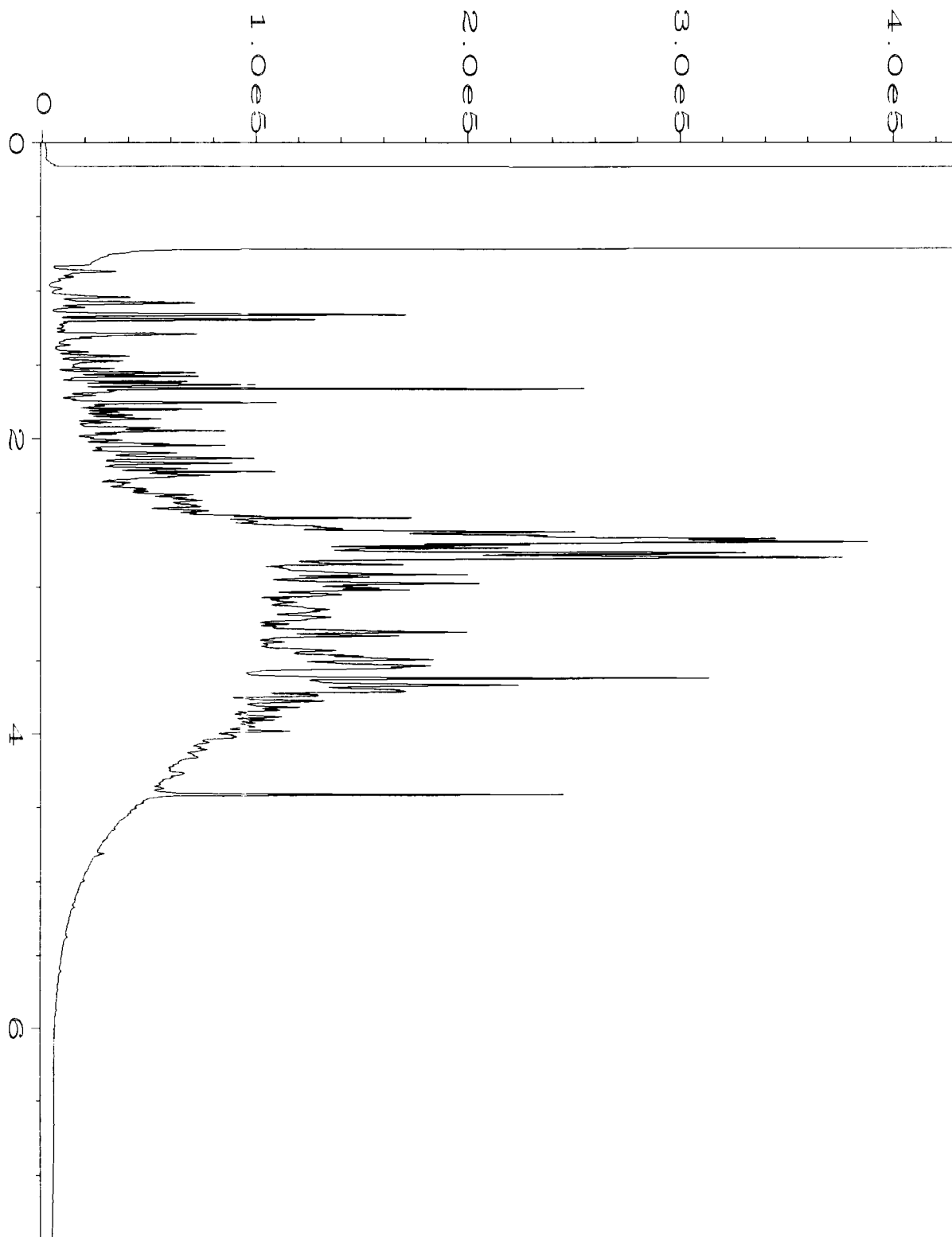
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.

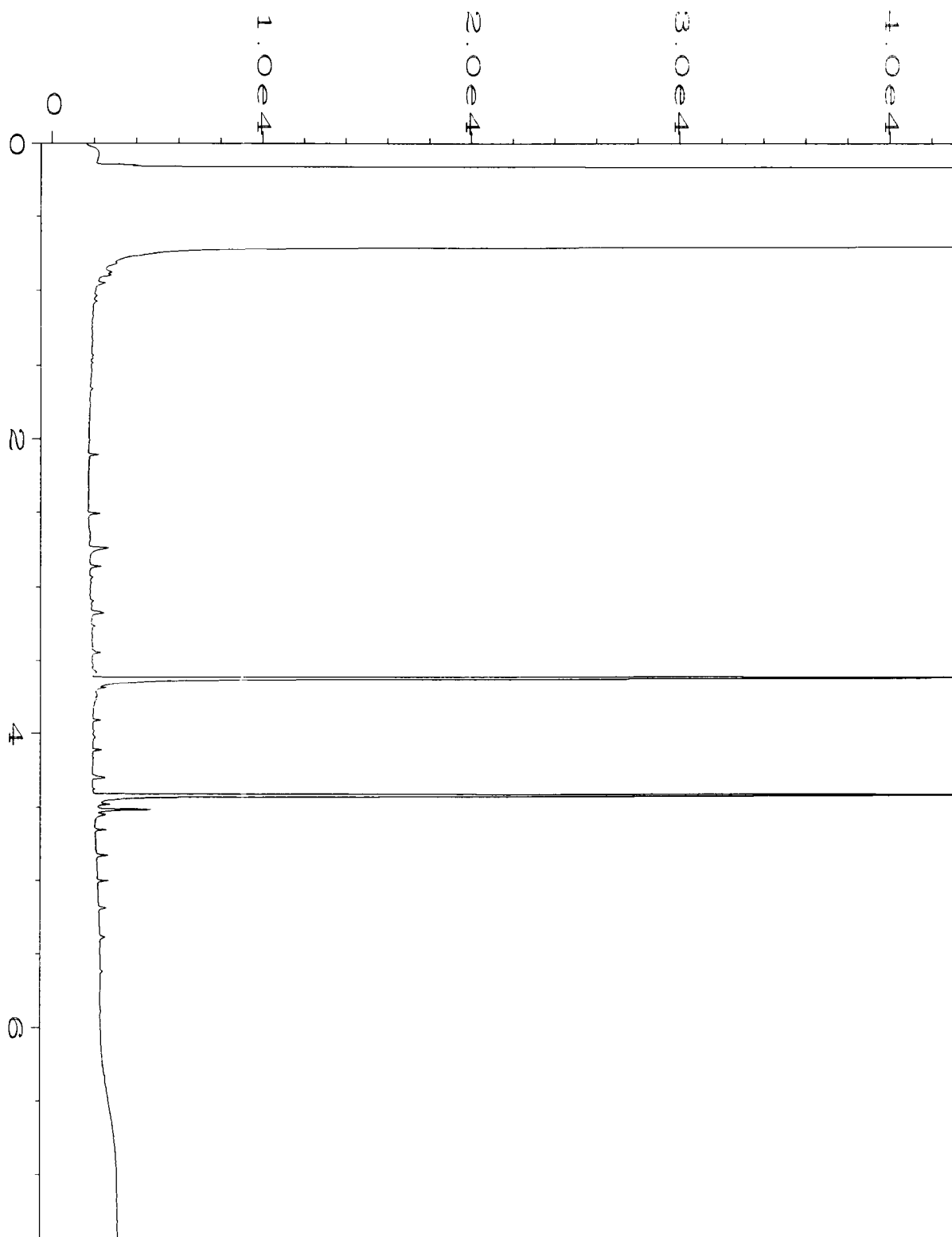
vo - The value reported fell outside the control limits established for this analyte.

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

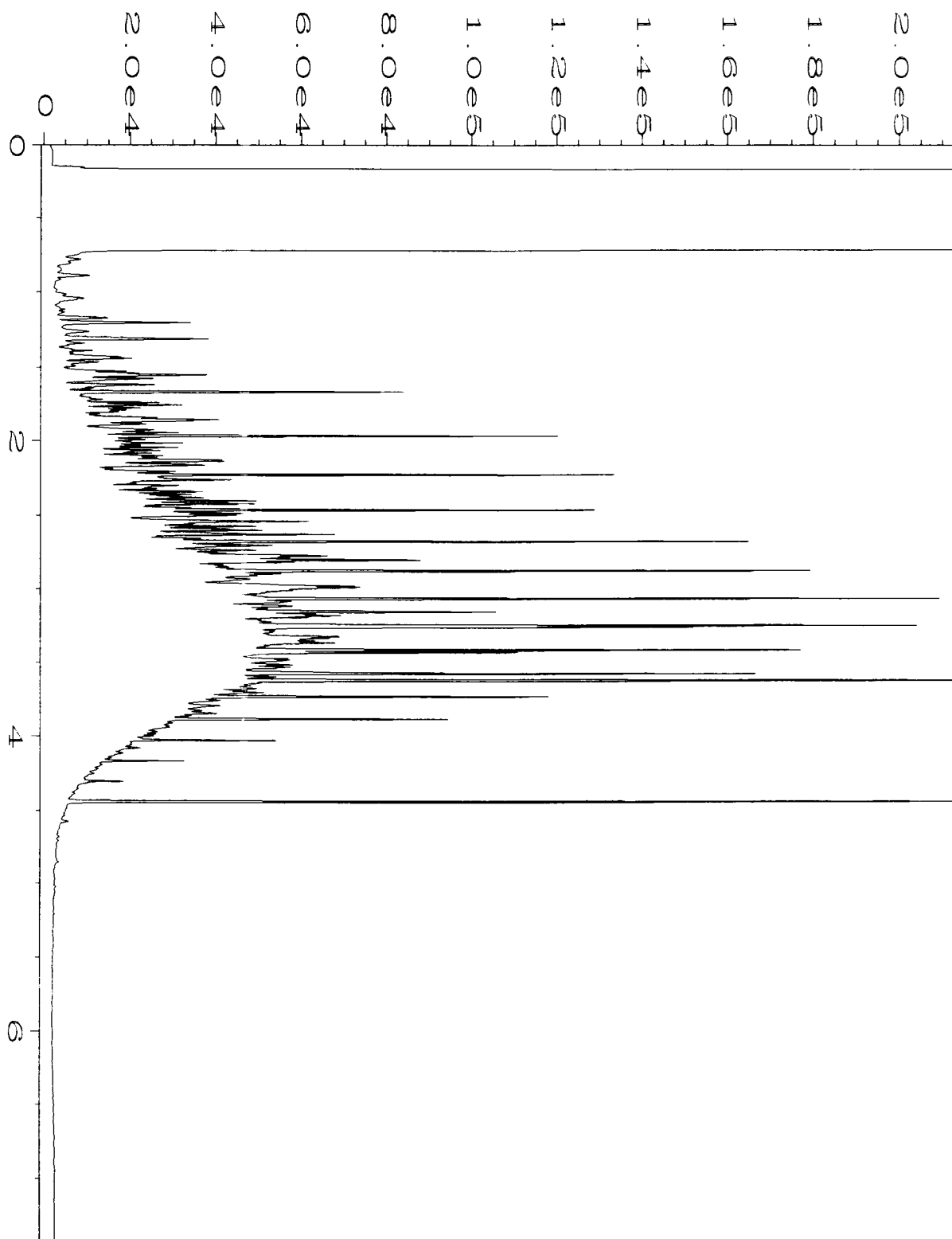


Data File Name	: C:\HPCHEM\4\DATA\05-19-16\039F0701.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 39
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 605348-01	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 19 May 16 06:40 PM	Analysis Method	: DX.MTH
Report Created on:	23 May 16 09:34 AM		





Data File Name	: C:\HPCHEM\4\DATA\05-19-16\019F0401.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 19
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 06-1014 mb	Sequence Line	: 4
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 19 May 16 01:07 PM	Analysis Method	: DX.MTH
Report Created on:	23 May 16 09:35 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-19-16\003F0201.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 3
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 500 Dx 45-182D	Sequence Line	: 2
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 19 May 16 06:53 AM	Analysis Method	: DX.MTH
Report Created on:	23 May 16 09:36 AM		

**SAMPLE CHAIN OF CUSTODY**

ME 05/18/16

11/03

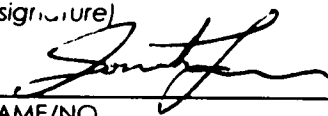
605348

Send Report To Tim Brown, Jessica Brown, Courtney Schaumberg, Jonathan Loeffler, Jennifer Cyr

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature) 	
PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal	PO # 01-600
REMARKS 1 low level detection limit of 0.219 ug/L for PCP.	EIM Y / N

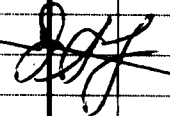
Page # 1 of 1

TURNAROUND TIME

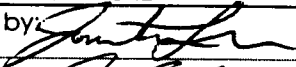
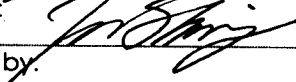
Standard (2 Weeks)  
RUSH \_\_\_\_\_  
Rush charges authorized by: \_\_\_\_\_

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	DRPHORPH 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+	Notes	
B3-20160518	B3	—	01E <sup>A</sup>	5/18/16	1144	H <sub>2</sub> O	5	X	X	X	X								
 5/18/16																			
Samples received at <u>4</u> °C																			

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	JONATHAN LOEFFLER	SOUNDEARTH	5/18/16	1720
Received by: 	Jan Shimazu	FB&I	t	t
Relinquished by:				
Received by:				

***Friedman & Bruya, Inc. #605369***

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

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

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

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 605369 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl  
Project Manager

Enclosures

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

FRIEDMAN & BRUYA, INC.

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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 605369 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
605369 -01	01MW03-20160519
605369 -02	01MW09-20160519
605369 -03	01MW02-20160519

Sample 01MW03-20160519 was sent to Aquatic Research for sulfate analysis. Review of the enclosed report indicates that all quality assurance were acceptable.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/19/16

Project: TOC\_01-600\_20160519 WORFDB8, F&BI 605369

Date Extracted: 05/20/16

Date Analyzed: 05/20/16 and 05/23/16

**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)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
01MW03-20160519 605369-01	32	2.5	1.1	5.4	420	96
01MW09-20160519 605369-02 1/5	110	6.2	33	42	890	91
01MW02-20160519 605369-03 1/100	1,600	39	130	160	5,900	88
Method Blank 06-1001 MB	<1	<1	<1	<3	<100	92

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/19/16

Project: TOC\_01-600\_20160519 WORFDB8, F&BI 605369

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	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> (% Recovery) (Limit 47-140)
01MW03-20160519 605369-01	620 x	<250	111
01MW09-20160519 605369-02	690 x	<250	108
01MW02-20160519 605369-03	2,800 x	380 x	102
Method Blank 06-1038 MB	<50	<250	122



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/19/16

Project: TOC\_01-600\_20160519 WORFDB8, F&BI 605369

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

Laboratory Code: 605375-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (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

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance 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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/19/16

Project: TOC\_01-600\_20160519 WORFDB8, F&BI 605369

**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

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

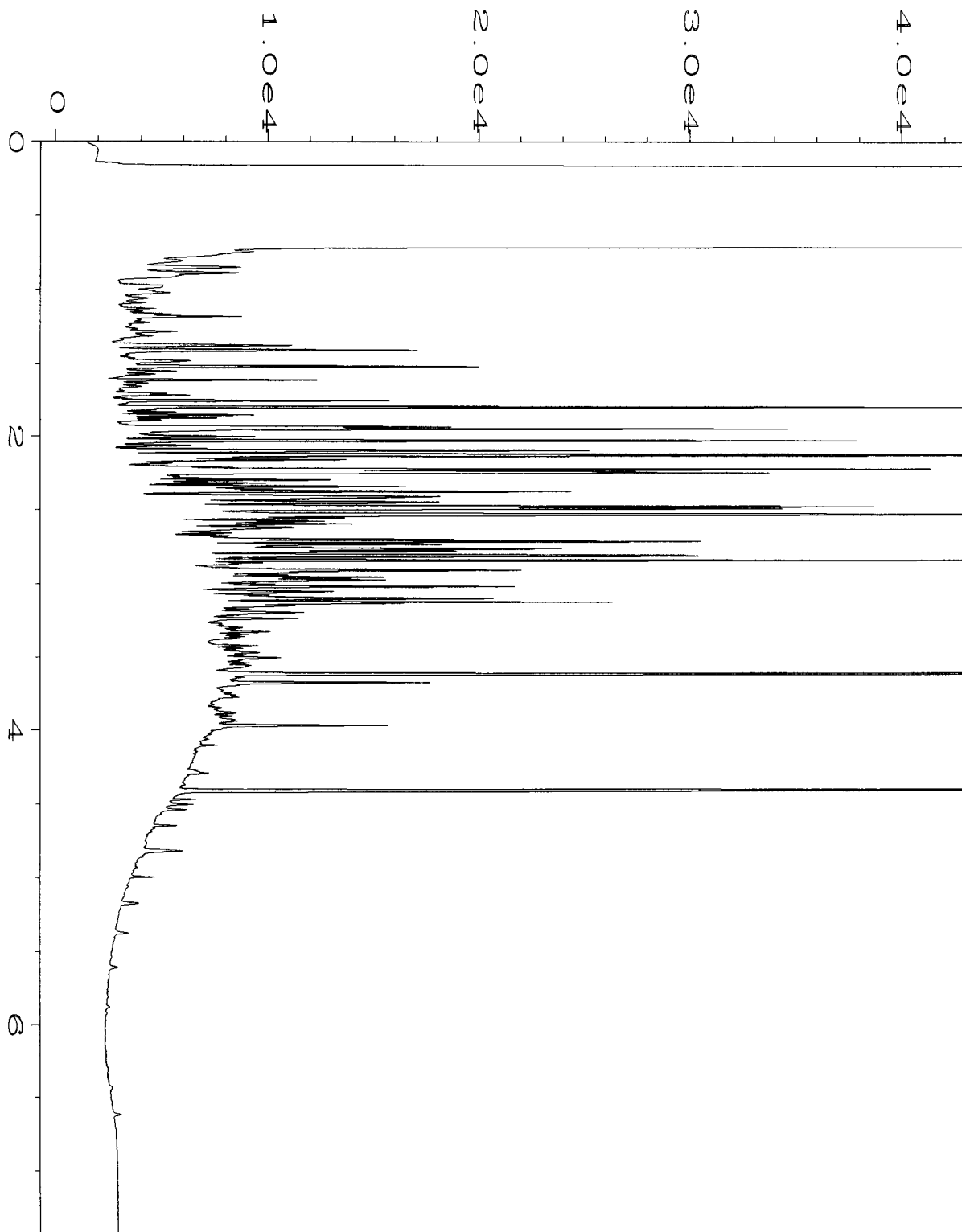
# FRIEDMAN & BRUYA, INC.

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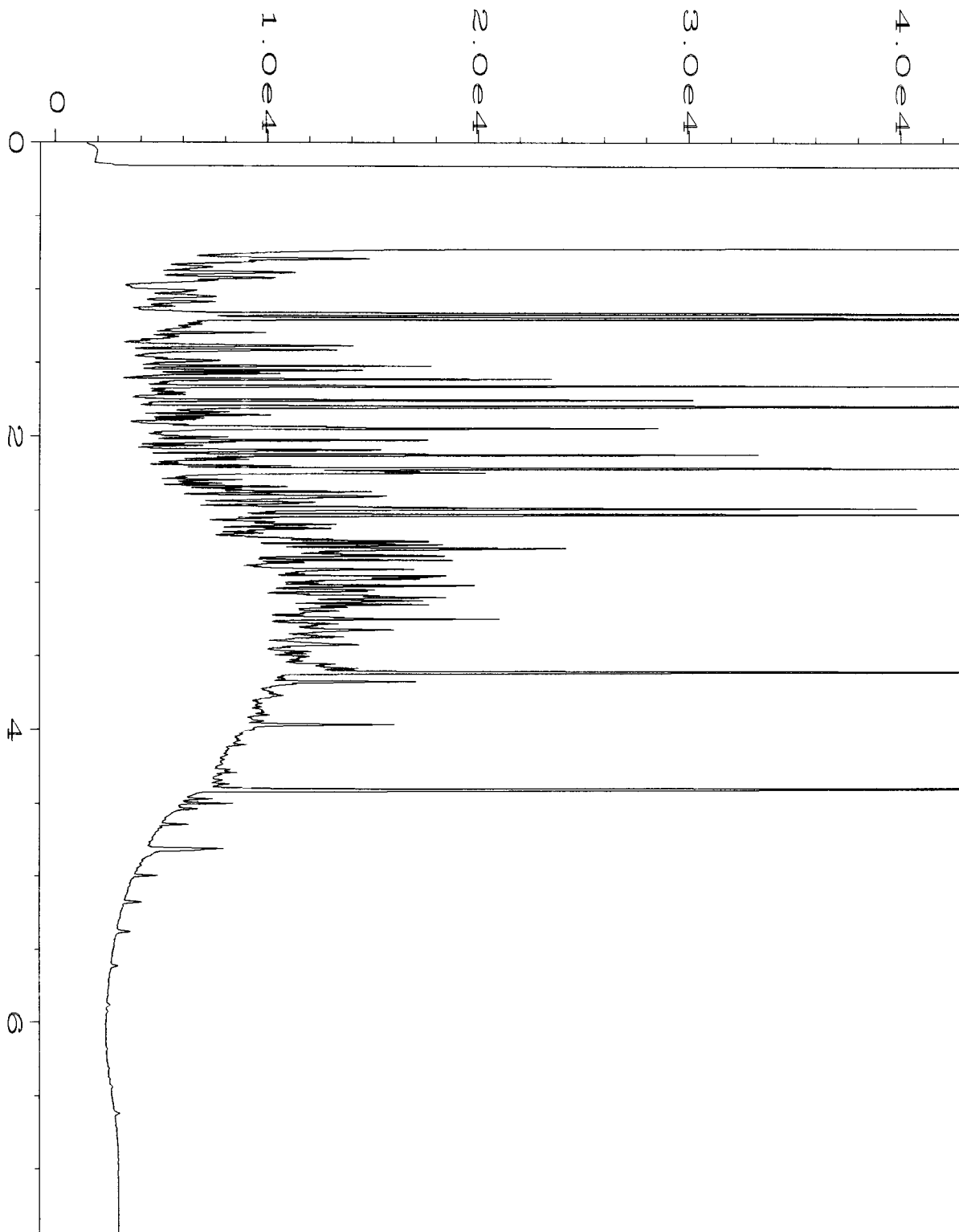
## ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

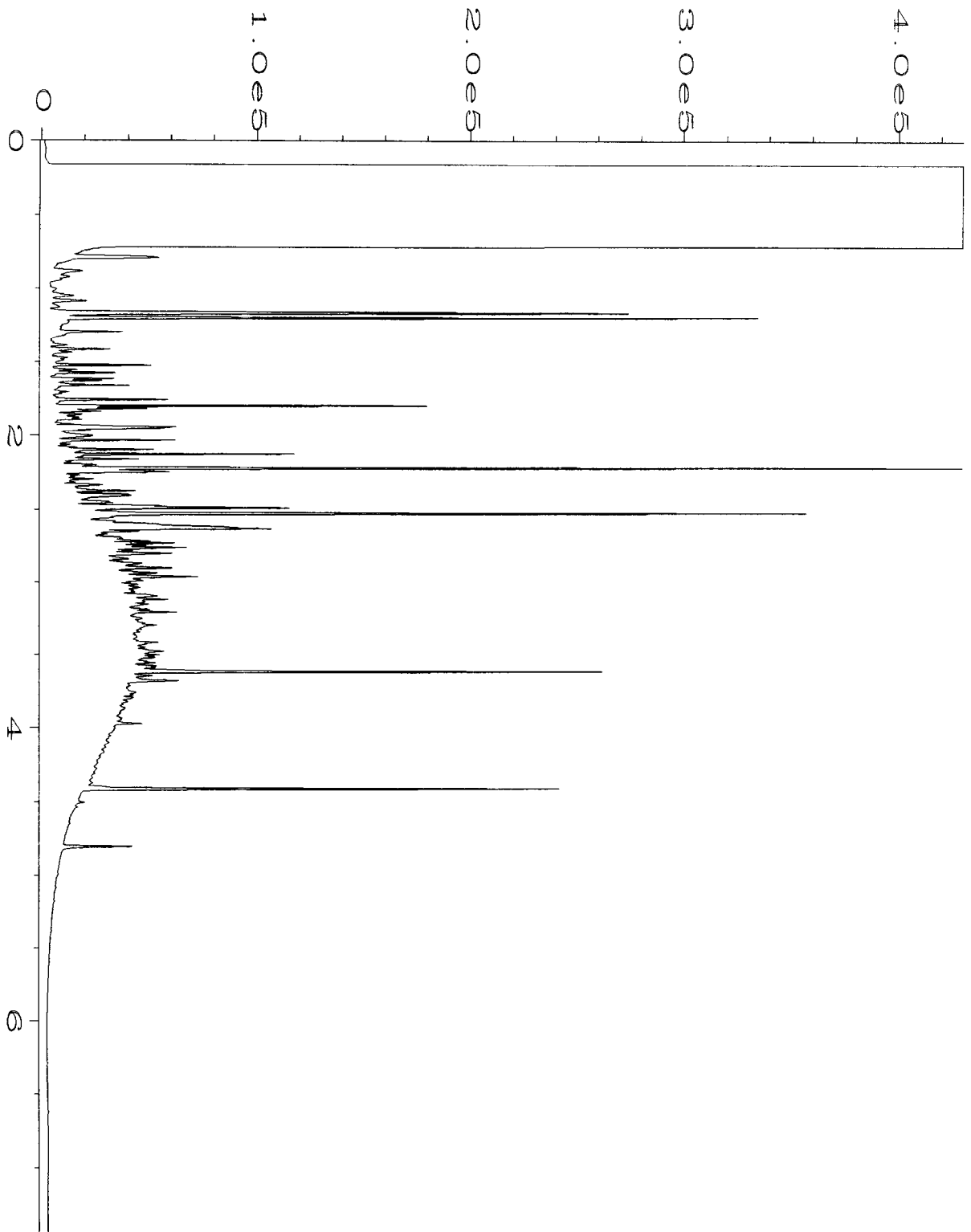
- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not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



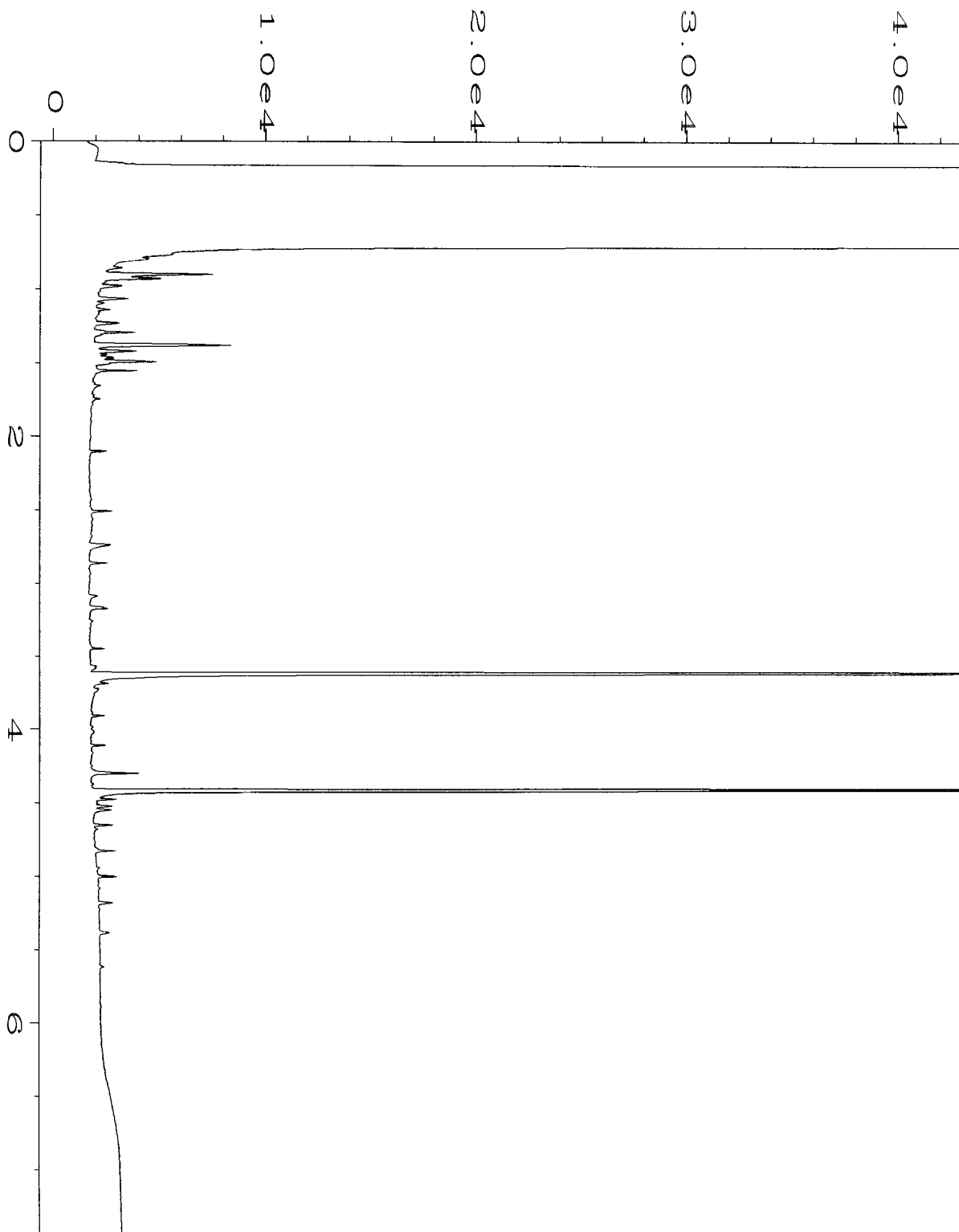
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Operator	: mwdl	Vial Number	: 35
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 605369-01	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 20 May 16 05:09 PM	Analysis Method	: DX.MTH
Report Created on:	23 May 16 09:22 AM		



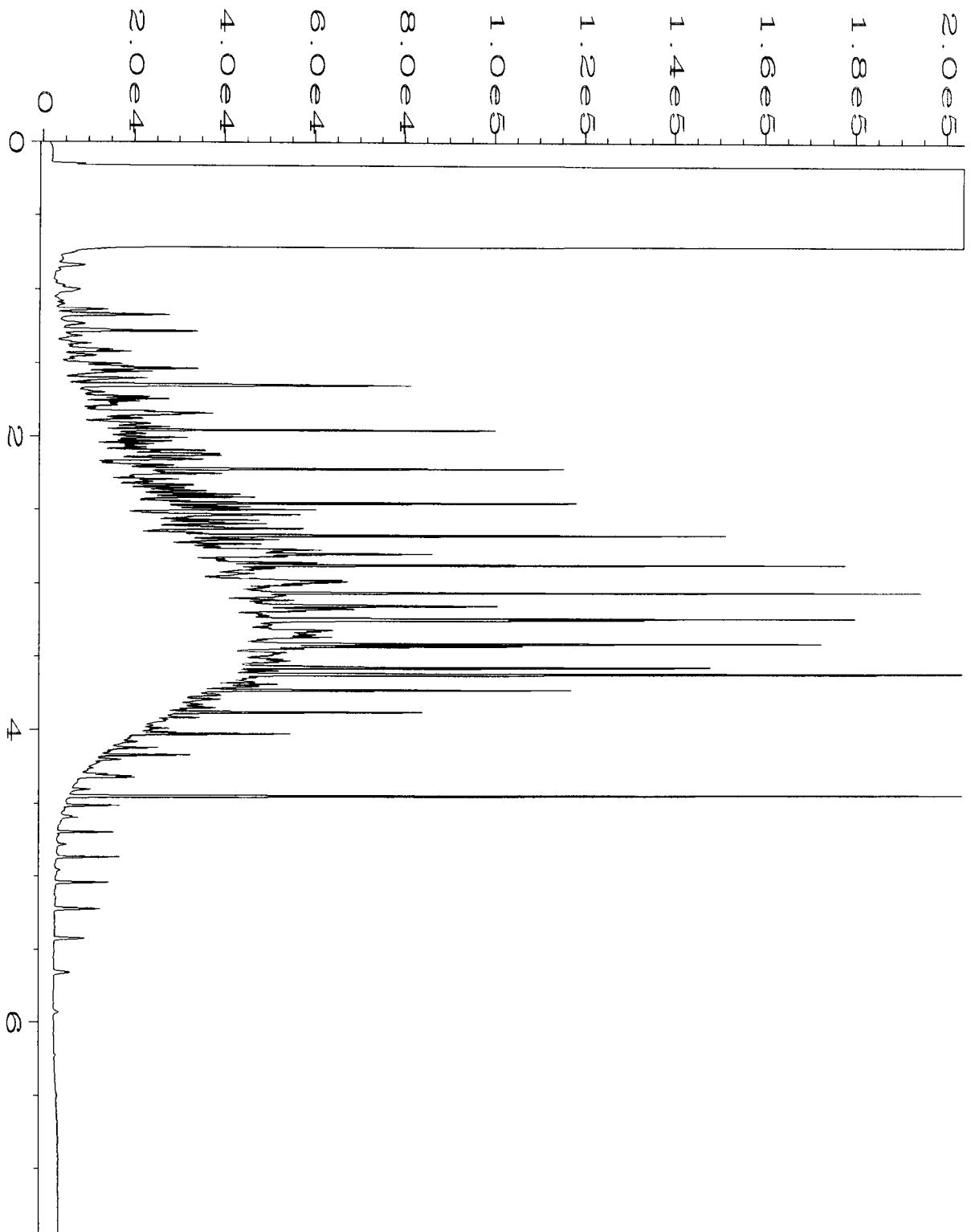
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Operator	: mwd1	Vial Number	: 36
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 605369-02	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 20 May 16 05:21 PM	Analysis Method	: DX.MTH
Report Created on:	23 May 16 09:22 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-20-16\037F0601.D	Page Number	: 1
Operator	: mwd1	Vial Number	: 37
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 605369-03	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 20 May 16 05:33 PM	Analysis Method	: DX.MTH
Report Created on:	23 May 16 09:22 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-20-16\024F0401.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 24
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 06-1038 mb	Sequence Line	: 4
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 20 May 16 02:38 PM	Analysis Method	: DX.MTH
Report Created on:	23 May 16 09:23 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-20-16\003F0201.D	Page Number	: 1
Operator	: mwd1	Vial Number	: 3
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 500 Dx 45-182D	Sequence Line	: 2
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 20 May 16 06:54 AM	Analysis Method	: DX.MTH
Report Created on:	23 May 16 09:23 AM		





**IEH ANALYTICAL LABORATORIES**  
**LABORATORY & CONSULTING SERVICES**  
3927 AURORA AVENUE NORTH, SEATTLE, WA 98103  
PHONE: (206) 632-2715 FAX: (206) 632-2417

<b>CASE FILE NUMBER:</b>	<b>FBI014-76</b>	<b>PAGE 1</b>
<b>REPORT DATE:</b>	<b>06/14/16</b>	
<b>DATE SAMPLED:</b>	<b>05/19/16</b>	<b>DATE RECEIVED: 05/20/16</b>
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605369</b>		

**CASE NARRATIVE**

One water sample was received by the laboratory in good condition and analyzed according to the chain of custody. No other 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**

SAMPLE ID	SULFATE (mg/L)
01MW03-20160519	3.21



**IEH ANALYTICAL LABORATORIES**  
**LABORATORY & CONSULTING SERVICES**  
3927 AURORA AVENUE NORTH, SEATTLE, WA 98103  
PHONE: (206) 632-2715 FAX: (206) 632-2417

<b>CASE FILE NUMBER:</b>	<b>FBI014-76</b>	<b>PAGE 2</b>
<b>REPORT DATE:</b>	<b>06/14/16</b>	
<b>DATE SAMPLED:</b>	<b>05/19/16</b>	<b>DATE RECEIVED: 05/20/16</b>
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605369</b>		

**QA/QC DATA**

QC PARAMETER	SULFATE (mg/L)
METHOD	SM184500SO4E
DATE ANALYZED	06/14/16
DETECTION LIMIT	1.00
DUPLICATE	
SAMPLE ID	BATCH
ORIGINAL	5.20
DUPLICATE	5.30
RPD	1.91%
SPIKE SAMPLE	
SAMPLE ID	BATCH
ORIGINAL	5.20
SPIKED SAMPLE	15.3
SPIKE ADDED	10.0
% RECOVERY	100.54%
QC CHECK	
FOUND	9.79
TRUE	10.0
% RECOVERY	97.90%
BLANK	<1.00

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 TO LOW RELATIVE TOO SAMPLE CONCENTRATION.

SUBMITTED BY:

Damien Gadomski  
Project Manager

FB1014-76  
SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119


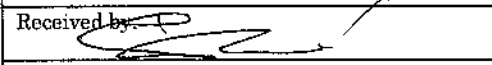
Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER <i>Ag. Research</i>	
PROJECT NAME/NO. <i>605369</i>	PO # <i>D-998</i>
REMARKS  Please Email Results	

Page # 1 of 1

TURNAROUND TIME
<input checked="" type="checkbox"/> Standard (2 Weeks)
<input type="checkbox"/> RUSH
Rush charges authorized by: _____
SAMPLE DISPOSAL
<input type="checkbox"/> Dispose after 30 days
<input type="checkbox"/> Return samples
<input type="checkbox"/> Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED										Notes		
						Total Fe	Hardness	Sulfate	Nitrate	Nitrite	Alkalinity	Sulfide	TKN	Total Phosphorus	Dissolved Gasses			
<i>01MW03-20160519</i>		<i>5/19/16</i>	<i>1035</i>	<i>Water</i>	<i>1</i>				<i>X</i>									

Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282 Fax (206) 283-5044	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME	
	Relinquished by: 	Michael Erdahl	Friedman & Bruya	<i>5/20/16</i>	<i>0735</i>	
	Received by: 	<i>SIMASANN</i>	<i>10/4/16 4.2°C</i>	<i>1511</i>	<i>5/20/16</i>	<i>1025</i>
	Relinquished by:					
Received by:						

605369

SAMPLE CHAIN OF CUSTODY ME 05/19/16

Page # 1 of 1/1003

Send Report To Tim Brown, Cori Jessica Brown, Courtney Schaumberg, Jonathan Loeffler, Jennifer Cyr

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature)	
PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal	PO # 01-600
REMARKS 1 low level detection limit of 0.219 ug/L for PCP.	EIM Y / N

TURNAROUND TIME <input checked="" type="checkbox"/> Standard (2 Weeks) RUSH _____ Rush charges authorized by: _____
SAMPLE DISPOSAL <input checked="" type="checkbox"/> 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+	Notes
C1MWD3-20160519	C1MWD3	15	ORA-E	5/11/16	1055	H <sub>2</sub> O	5	X	X	X			X					
C1MWD1-20160519	C1MWD1	17	ORA-D	↓	1118	↓	4	X	X	X								
C1MWD2-20160519	C1MWD2	16	ORA-I	↓	1207	↓	4	X	X	X								

Samples received at 3 °C

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Liz Farkes	SES	5/17/16	1650
Received by:	Elizabeth Redford	F&B	5/19/16	1650
Relinquished by:				
Received by:				

***Friedman & Bruya, Inc. #605373***

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

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

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

May 24, 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 605373 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl  
Project Manager

Enclosures

c: Jessica Brown, Courtney Schaumberg, Jennifer Cyr, Jonathan Loeffler  
SOU0524R.DOC

FRIEDMAN & BRUYA, INC.

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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 605373 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
605373 -01	01MW36-20160519
605373 -02	01MW84-20160519

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/16

Date Received: 05/19/16

Project: TOC\_01-600\_20160519 WORFDB8, F&BI 605373

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**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
01MW36-20160519 605373-01	<1	<1	<1	<3	<100	91
01MW84-20160519 605373-02 1/5	6.5	17	570	1,600	12,000	105
Method Blank 06-1001 MB	<1	<1	<1	<3	<100	92



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/16

Date Received: 05/19/16

Project: TOC\_01-600\_20160519 WORFDB8, F&BI 605373

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	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> (% Recovery) (Limit 47-140)
01MW36-20160519 605373-01	440 x	<250	116
01MW84-20160519 605373-02	1,700 x	<250	121
Method Blank 06-1038 MB	<50	<250	122

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/16

Date Received: 05/19/16

Project: TOC\_01-600\_20160519 WORFDB8, F&BI 605373

**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 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (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

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance 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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/16

Date Received: 05/19/16

Project: TOC\_01-600\_20160519 WORFDB8, F&BI 605373

**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

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

**Data Qualifiers & Definitions**

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

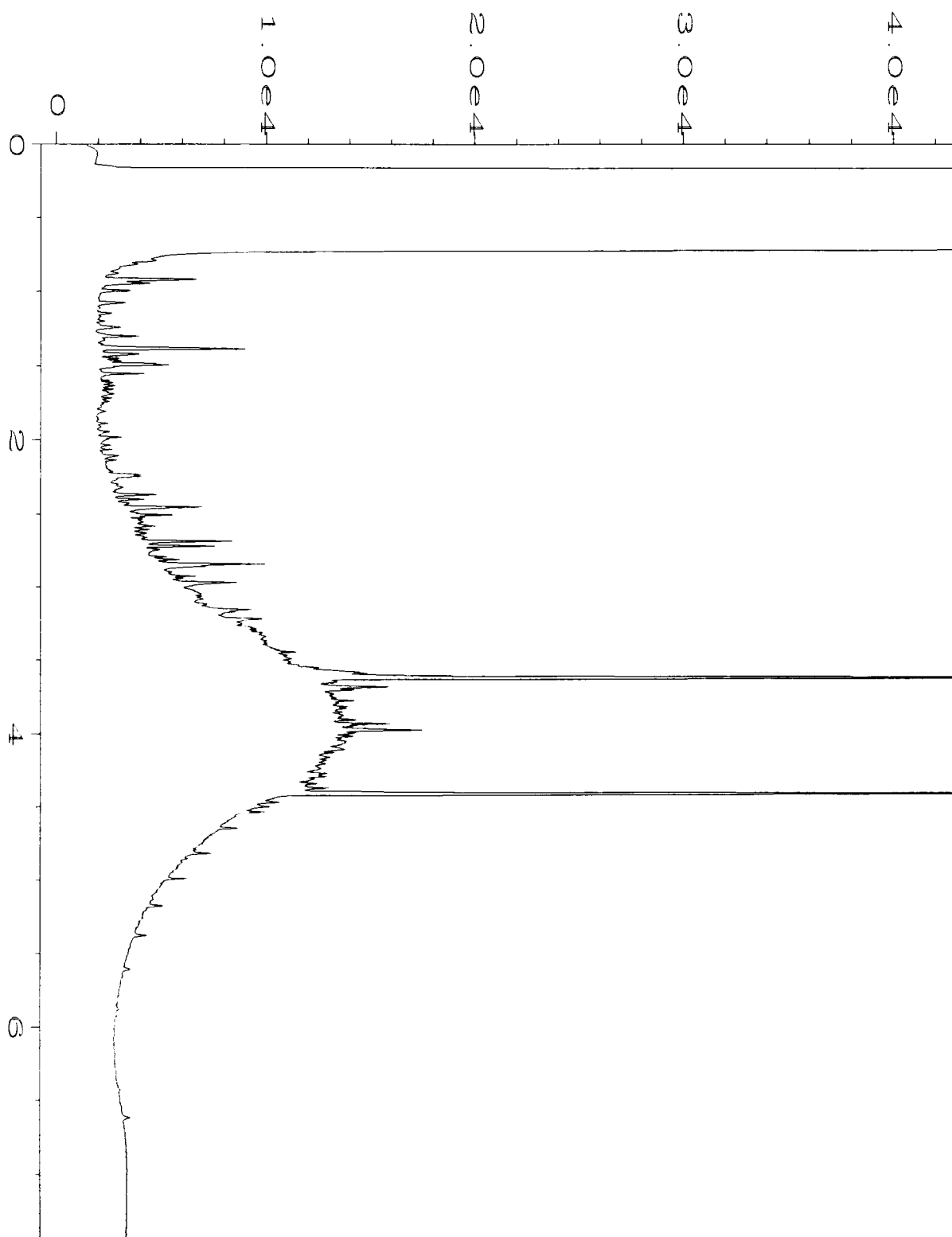
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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

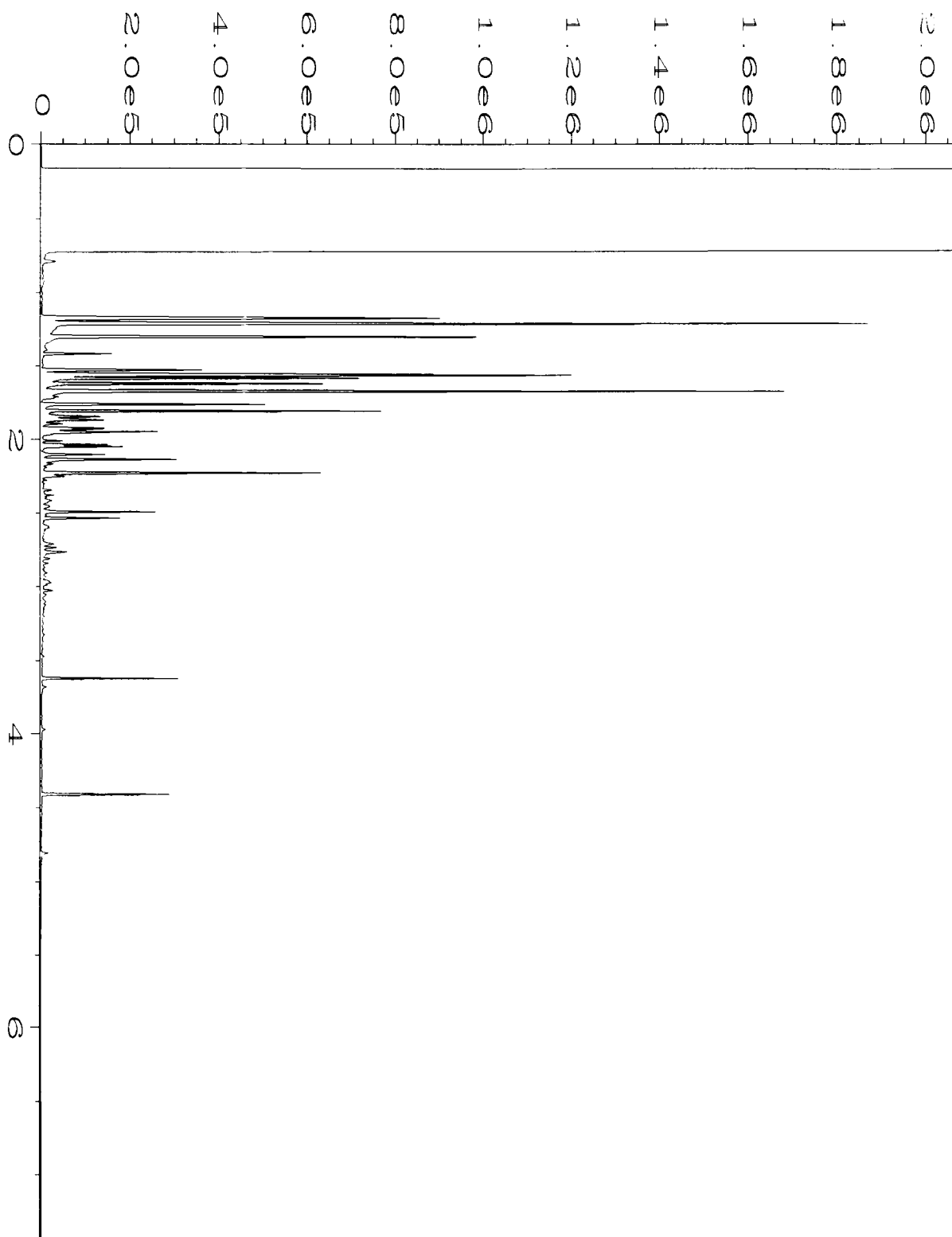
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

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

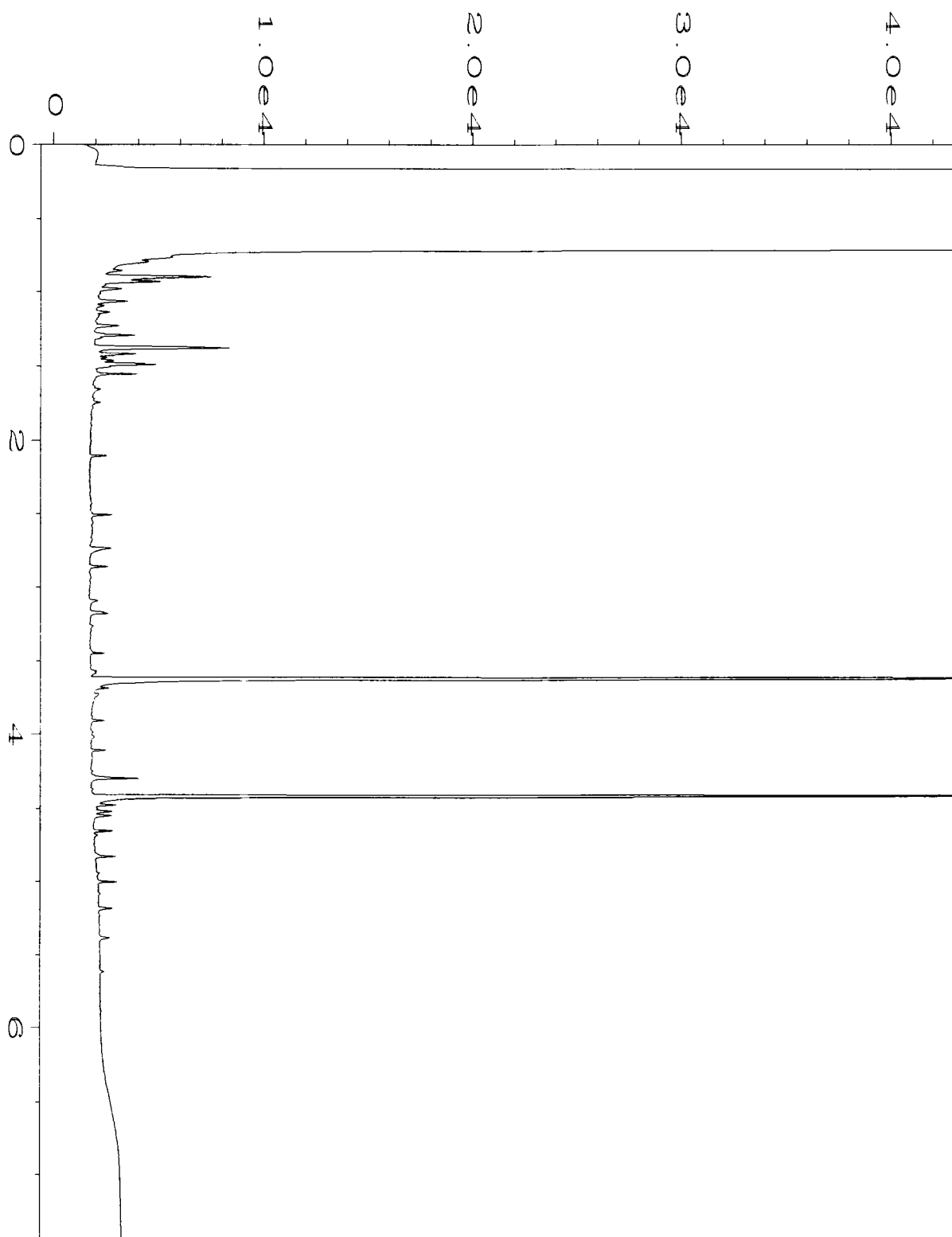
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



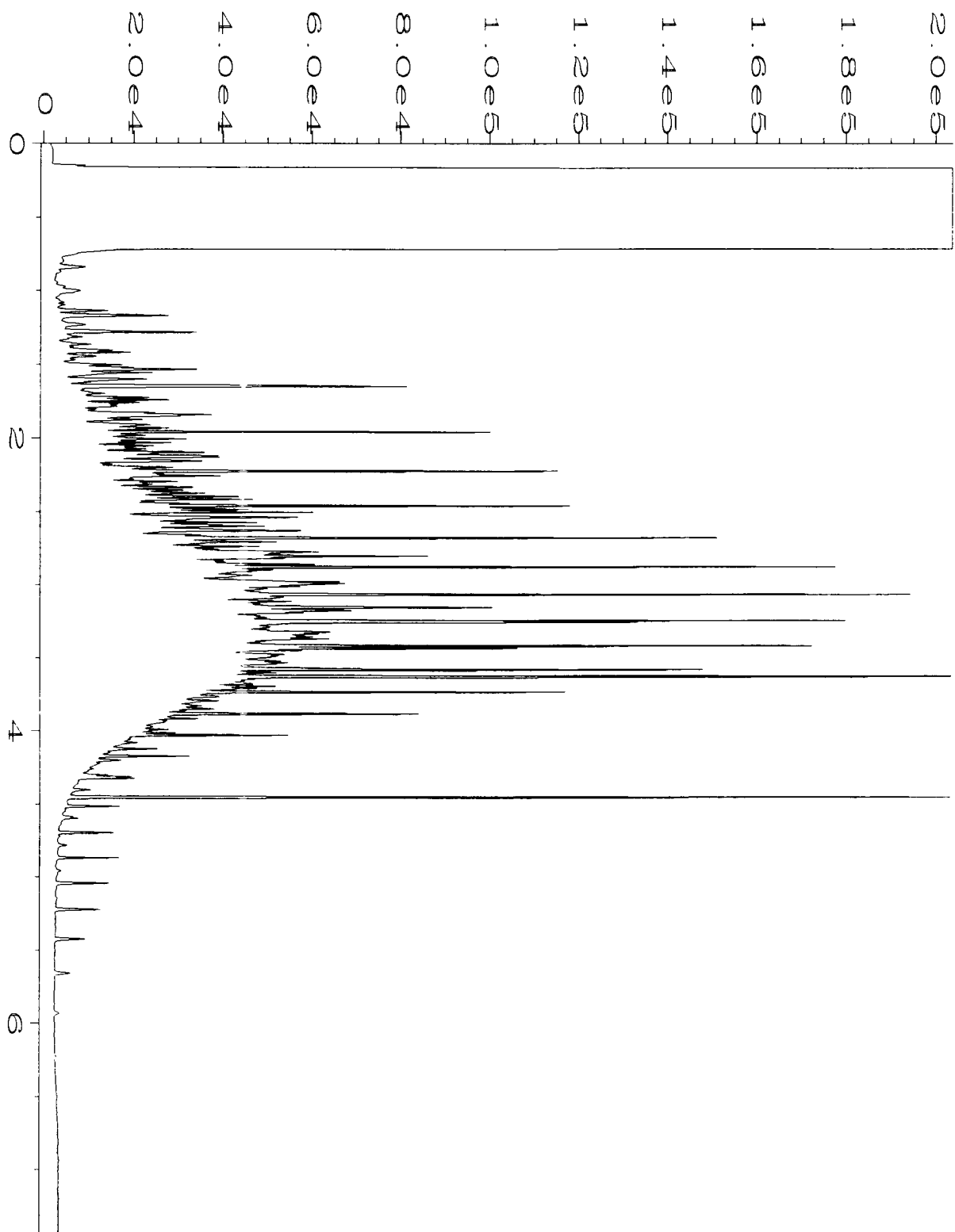
Data File Name	: C:\HPCHEM\4\DATA\05-20-16\039F0601.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 39
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 605373-01	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 20 May 16 05:56 PM	Analysis Method	: DX.MTH
Report Created on:	23 May 16 09:22 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-20-16\040F0601.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 40
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 605373-02	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 20 May 16 06:08 PM	Analysis Method	: DX.MTH
Report Created on:	23 May 16 09:22 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-20-16\024F0401.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 24
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 06-1038 mb	Sequence Line	: 4
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 20 May 16 02:38 PM	Analysis Method	: DX.MTH
Report Created on:	23 May 16 09:23 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-20-16\003F0201.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 3
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 500 Dx 45-182D	Sequence Line	: 2
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 20 May 16 06:54 AM	Analysis Method	: DX.MTH
Report Created on:	23 May 16 09:24 AM		



**SAMPLE CHAIN OF CUSTODY**

ME 05/19/16

605373

Send Report To Tim Brown, Jessica Brown, Courtney Schaumberg, Jonathan Loeffler, Jennifer Cyr

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature) <i>Jonathan Loeffler</i>	
PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal	PO # 01-600
REMARKS 1 low level detection limit of 0.219 ug/L for PCP.	EIM Y / N

Page # 1 of 1

TURNAROUND TIME 10/23

Standard (2 Weeks)  
RUSH \_\_\_\_\_  
Rush charges authorized by: \_\_\_\_\_

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+	Notes
01MW36-20160519	01MW36	—	QA-D	5/19/16	1141	H <sub>2</sub> O	4	X	X	X								
01MW84-20160519	01MW84	—	QA-1	5/19/16	1414	H <sub>2</sub> O	4	X	X	X								
<i>[Signature]</i> 5/19/16																		
Samples received at <u>3</u> °C																		

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <i>Jonathan Loeffler</i>	JONATHAN LOEFFLER	SOUNDEARTH	5/19/16	1650
Received by: <i>Elizabeth Redford</i>	Elizabeth Redford	EF&B	5/19/16	1650
Relinquished by:				
Received by:				

***Friedman & Bruya, Inc. #605506***

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

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

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

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 26, 2016 from the TOC\_01-600\_20160526 WORFDB8, F&BI 605506 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, Jonathan Loeffler  
SOU0615R.DOC

FRIEDMAN & BRUYA, INC.

---

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 605506 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
605506 -01	01MW47-20160526
605506 -02	01MW87-20160526

Sample 01MW87-20160526 was sent to Aquatic Research for sulfate analysis. Review of the enclosed report indicates that all quality assurance were acceptable.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/26/16

Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605506

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**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
01MW47-20160526 605506-01 1/10	390	12	25	<30	2,900	92
01MW87-20160526 605506-02	<1	<1	<1	<3	<100	93
Method Blank 06-1063 MB	<1	<1	<1	<3	<100	94

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/26/16

Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605506

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**

Results Reported as ug/L (ppb)

<u>Sample ID</u>	<u>Diesel Range</u>	<u>Motor Oil Range</u>	<u>Surrogate</u>
Laboratory ID	(C <sub>10</sub> -C <sub>25</sub> )	(C <sub>25</sub> -C <sub>36</sub> )	(% Recovery)
			(Limit 41-152)
01MW47-20160526 605506-01 1/1.2	2,800	<300	90
01MW87-20160526 605506-02	<50	<250	86
Method Blank 06-1104 MB	<50	<250	81

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	01MW87-20160526	Client:	SoundEarth Strategies
Date Received:	05/26/16	Project:	TOC_01-600_20160526 WORFDB8
Date Extracted:	06/02/16	Lab ID:	605506-02
Date Analyzed:	06/06/16	Data File:	060614.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	69	17	97
Phenol-d6	47	10	62
2,4,6-Tribromophenol	109	33	166

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	TOC_01-600_20160526 WORFDB8
Date Extracted:	06/02/16	Lab ID:	06-1122 mb
Date Analyzed:	06/06/16	Data File:	060613.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	72	17	97
Phenol-d6	47	10	62
2,4,6-Tribromophenol	75	33	166

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/26/16

Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605506

**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)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (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

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance 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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/26/16

Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605506

**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)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	<350	83	89	50-150	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	87	95	63-142	9

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/26/16

Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605506

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR SEMIVOLATILE PHENOLS BY EPA METHOD 8270D SIM**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 30)
Pentachlorophenol	ug/L (ppb)	2.5	70	70	23-185	0

# FRIEDMAN & BRUYA, INC.

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## ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

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

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

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

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

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

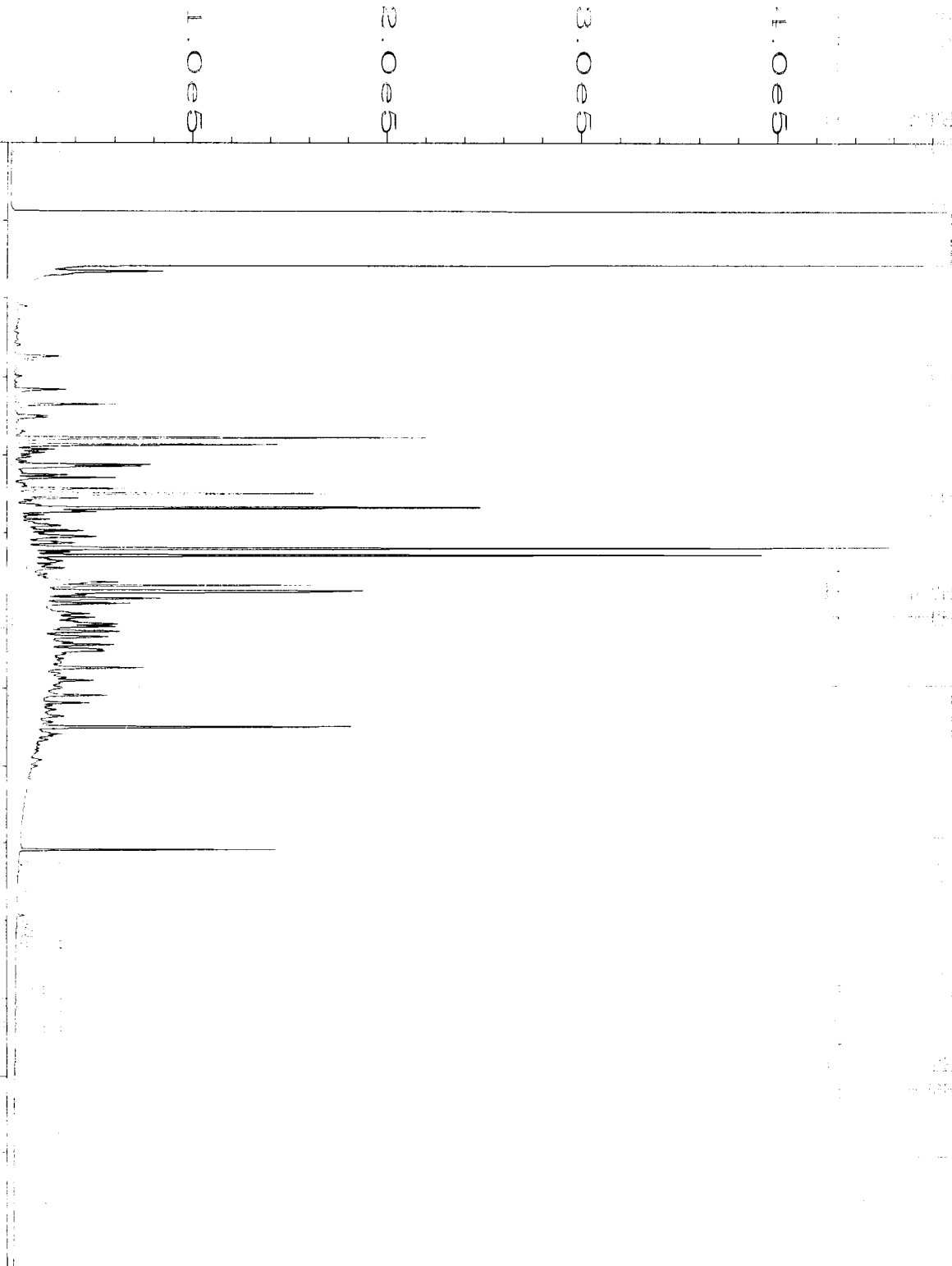
Sample Name  
Run Time  
Acquired on

Sample Name  
Run Time  
Acquired on

Sample Name  
Run Time  
Acquired on

Sample Name  
Run Time  
Acquired on

Sample Name  
Run Time  
Acquired on



Data File Name	: C:\HPCHEM\1\DATA\05-31-16\050F0801.D	Page Number	: 1
Operator	: mwd1	Vial Number	: 50
Instrument	: GC1	Injection Number	: 1
Sample Name	: 605506-01	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 31 May 16 06:24 PM	Analysis Method	: DX.MTH
Report Created on:	01 Jun 16 11:56 AM		

Sample Name  
Run Time  
Acquired on

Instrument  
Data File Name  
Operator  
Sample Name  
Run Time Bar Code

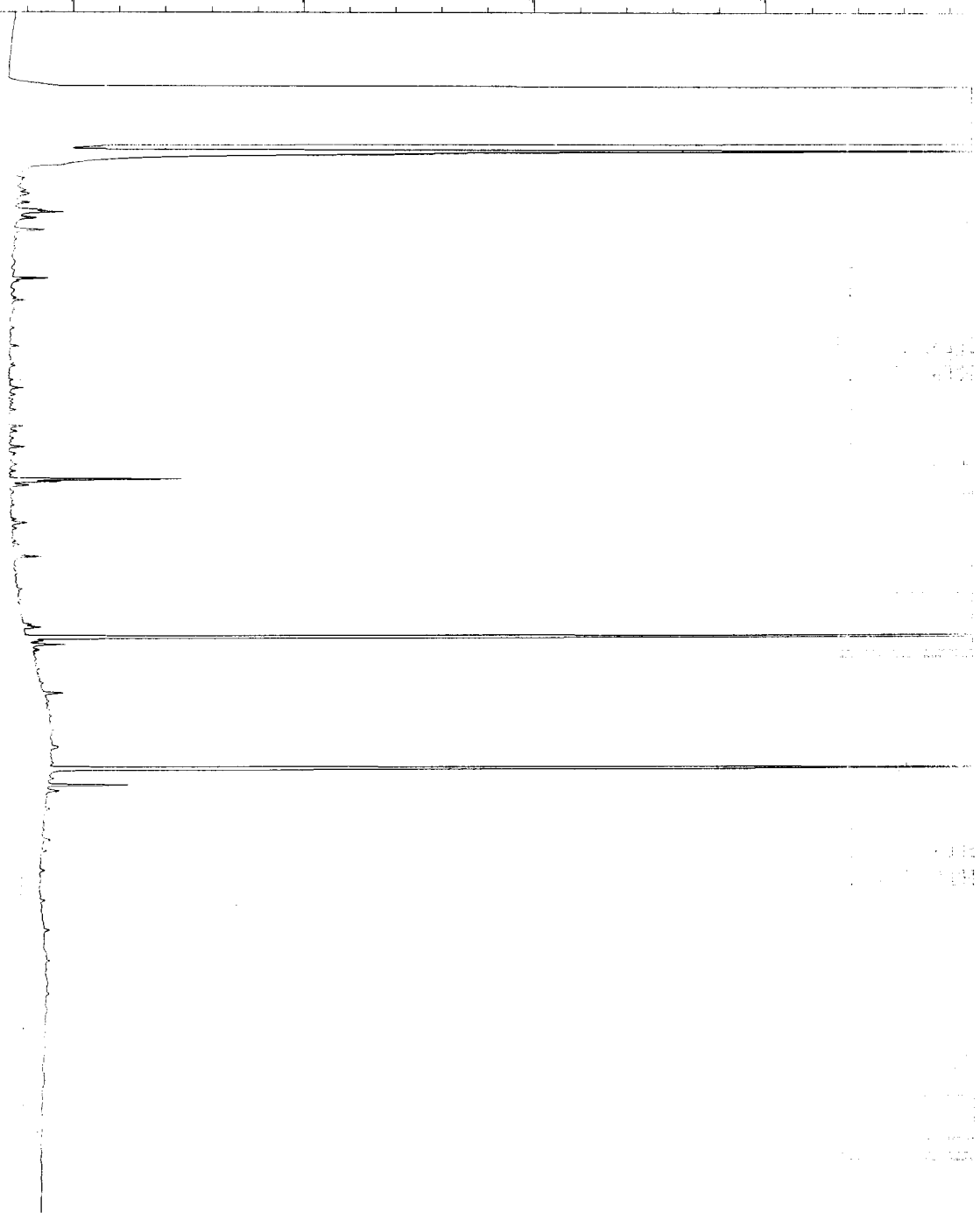
1.0e4  
2.0e4  
3.0e4  
4.0e4

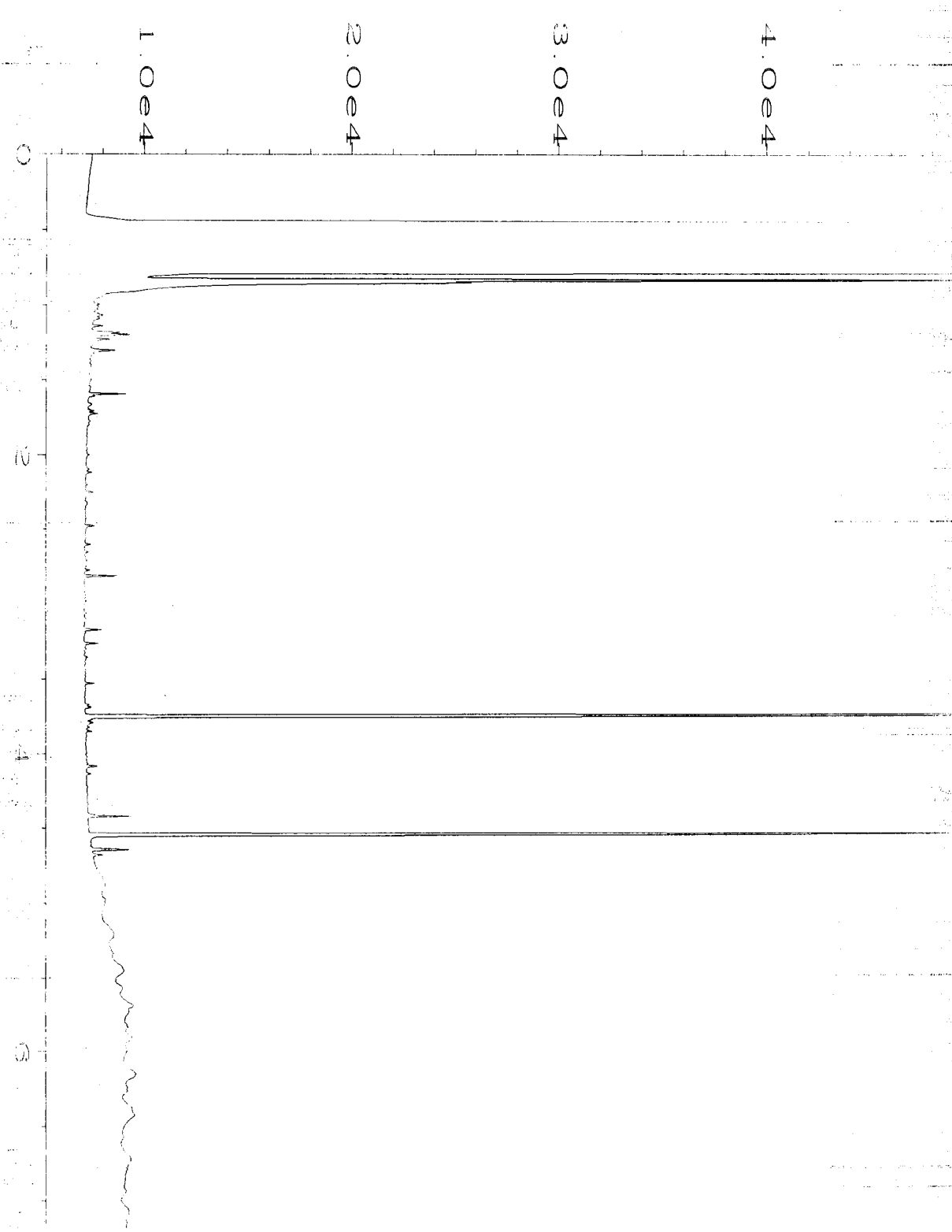
Data File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code

Data File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code

Data File Name  
Data File Name : C:\HPCHEM\1\DATA\05-31-16\051F0801.D  
Operator : mwdl  
Instrument : GC1  
Sample Name : 605506-02  
Run Time Bar Code :  
Acquired on : 31 May 16 06:35 PM  
Report Created on: 01 Jun 16 11:56 AM

Page Number : 1  
Vial Number : 51  
Injection Number : 1  
Sequence Line : 8  
Instrument Method: DX.MTH  
Analysis Method : DX.MTH

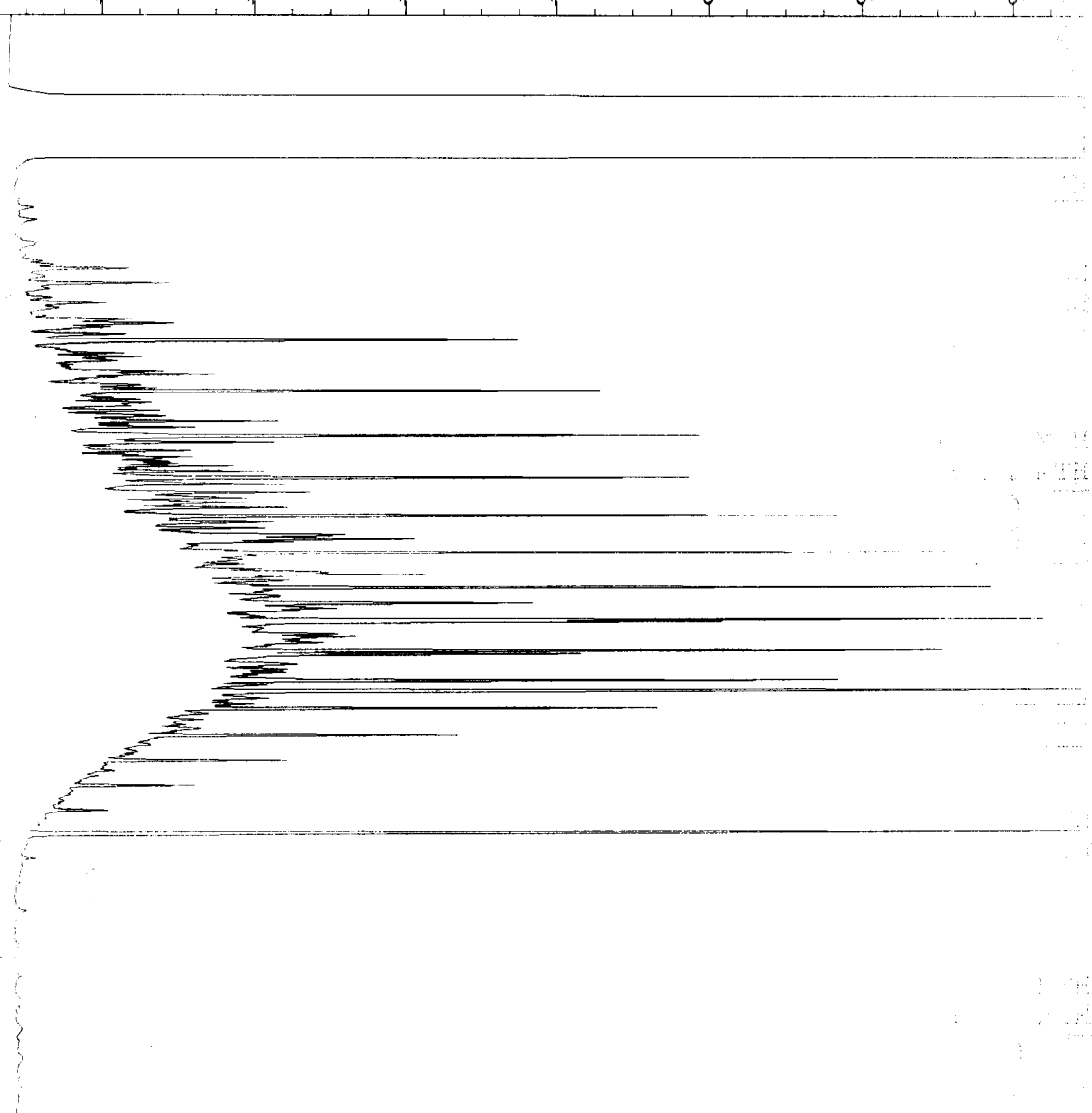




Sample File Name	: C:\HPCHEM\1\DATA\05-31-16\045F0801.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 45
Instrument	: GC1	Injection Number	: 1
Sample Name	: 06-1104 mb	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 31 May 16 05:27 PM	Analysis Method	: DX.MTH
Report Created on:	01 Jun 16 11:57 AM		

Date File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code  
Acquired on  
Report Created on

2.0e4  
4.0e4  
6.0e4  
8.0e4  
1.0e5  
1.2e5  
1.4e5



Data File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code  
Acquired on  
Report Created on

Data File Name : C:\HPCHEM\1\DATA\05-31-16\003F0201.D  
Operator : mwdl  
Instrument : GC1  
Sample Name : 500 Dx 45-182D  
Run Time Bar Code :  
Acquired on : 31 May 16 06:29 AM  
Report Created on: 01 Jun 16 11:57 AM

Page Number : 1  
Vial Number : 3  
Injection Number : 1  
Sequence Line : 2  
Instrument Method: DX.MTH  
Analysis Method : DX.MTH





**IEH ANALYTICAL LABORATORIES**  
**LABORATORY & CONSULTING SERVICES**  
3927 AURORA AVENUE NORTH, SEATTLE, WA 98103  
PHONE: (206) 632-2715 FAX: (206) 632-2417

<b>CASE FILE NUMBER:</b>	<b>FBI014-77</b>	<b>PAGE 1</b>
<b>REPORT DATE:</b>	<b>06/14/16</b>	
<b>DATE SAMPLED:</b>	<b>05/26/16</b>	<b>DATE RECEIVED: 05/31/16</b>
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605506</b>		

**CASE NARRATIVE**

One water sample was received by the laboratory in good condition and analyzed according to the chain of custody. No other 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**

SAMPLE ID	SULFATE (mg/L)
01MW87-20160526	6.18



**IEH ANALYTICAL LABORATORIES**  
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3927 AURORA AVENUE NORTH, SEATTLE, WA 98103  
PHONE: (206) 632-2715 FAX: (206) 632-2417

<b>CASE FILE NUMBER:</b>	<b>FBI014-77</b>	<b>PAGE 2</b>
<b>REPORT DATE:</b>	<b>06/14/16</b>	
<b>DATE SAMPLED:</b>	<b>05/26/16</b>	<b>DATE RECEIVED: 05/31/16</b>
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605506</b>		

**QA/QC DATA**

QC PARAMETER	SULFATE (mg/L)
METHOD	SM184500SO4E
DATE ANALYZED	06/14/16
DETECTION LIMIT	1.00
DUPLICATE	
SAMPLE ID	BATCH
ORIGINAL	5.20
DUPLICATE	5.30
RPD	1.91%
SPIKE SAMPLE	
SAMPLE ID	BATCH
ORIGINAL	5.20
SPIKED SAMPLE	15.3
SPIKE ADDED	10.0
% RECOVERY	100.54%
QC CHECK	
FOUND	9.79
TRUE	10.0
% RECOVERY	97.90%
BLANK	<1.00

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 TO LOW RELATIVE TOO SAMPLE CONCENTRATION.

SUBMITTED BY:

Damien Gadowski  
Project Manager

FBI/004-77

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl  
 Company Friedman and Bruya, Inc.  
 Address 3012 16th Ave W  
 City, State, ZIP Seattle, WA 98119  
 Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER <u>Aquatic Research</u>	
PROJECT NAME/NO. <u>605506</u>	PO # <u>D-998</u>
REMARKS <u>Please Email Results</u>	

Page # 1 of 1

**TURNAROUND TIME**  
 Standard (2 Weeks)  
 RUSH  
 Rush charges authorized by: \_\_\_\_\_

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED							Notes	
						Dioxins/Furans	EPH	VPH	Nitrate	Sulfate	Alkalinity	TOC-9060M		
<u>01MW87-20160526</u>		<u>5/26/16</u>		<u>water</u>						<u>X</u>				

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
<u>[Signature]</u>	Michael Erdahl	Friedman and Bruya	5/31/16	0920
Received by: <u>[Signature]</u>	SINA SOMN to A(1) 0.3°C TET		5/31/16	1055
Relinquished by:				
Received by:				

605506

SAMPLE CHAIN OF CUSTODY

ME 05/26/16

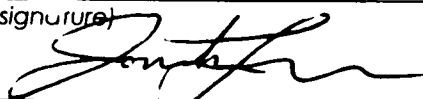
Page # 1 of 1

Send Report To Tim Brown, cc: Jessica Brown, Courtney Schaumberg, Jonathan Loeffler, Jennifer Cyr


Company SoundEarth Strategies, Inc.

Address 2811 Fairview Ave E, Suite 2000

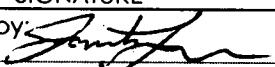
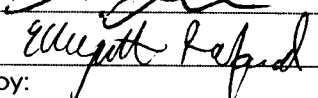
City, State, ZIP Seattle, WA 98102

SAMPLERS (signature) 	
PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal	PO # 01-600
REMARKS 1 low level detection limit of 0.219 ug/L for PCP.	EIM Y / N

TURNAROUND TIME <input checked="" type="checkbox"/> Standard (2 Weeks) RUSH Rush charges authorized by:
SAMPLE DISPOSAL <input checked="" type="checkbox"/> 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+	Notes	
O1MW47-20160526	O1MW47	—	01AD	5/26/16	1211	H <sub>2</sub> O	4	X	X	X									
O1MW87-20160526	O1MW87	—	02AF	5/26/16	1317	H <sub>2</sub> O	6	X	X	X	X		X						
<del> 5/26/16</del>																			
														Samples received at 3 °C					

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	JONATHAN LOEFFLER	SOUNDEARTH	5/26/16	1535
Received by: 	Elizabeth Radford	F&B	5/26/16	3:35
Relinquished by:				
Received by:				

***Friedman & Bruya, Inc. #605507***

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

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

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

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 26, 2016 from the TOC\_01-600\_20160526 WORFDB8, F&BI 605507 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, Jonathan Loeffler  
SOU0615R.DOC

FRIEDMAN & BRUYA, INC.

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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 605507 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
605507 -01	01MW48-20160526
605507 -02	01MW86-20160526

Sample 01MW86-20160526 was sent to Aquatic Research for sulfate analysis. Review of the enclosed report indicates that all quality assurance were acceptable.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/26/16

Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605507

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**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
01MW48-20160526 605507-01	<1	<1	<1	<3	<100	98
01MW86-20160526 605507-02 1/10	840	<10	130	69	4,000	96
Method Blank 06-1063 MB	<1	<1	<1	<3	<100	94



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/26/16

Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605507

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**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> (% Recovery) (Limit 41-152)
01MW48-20160526 605507-01	690 x	280 x	84
01MW86-20160526 605507-02	3,800 x	580 x	96
Method Blank 06-1104 MB	<50	<250	81

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	01MW86-20160526	Client:	SoundEarth Strategies
Date Received:	05/26/16	Project:	TOC_01-600_20160526 WORFDB8
Date Extracted:	06/02/16	Lab ID:	605507-02
Date Analyzed:	06/06/16	Data File:	060616.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	83	17	97
Phenol-d6	53	10	62
2,4,6-Tribromophenol	99	33	166

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	TOC_01-600_20160526 WORFDB8
Date Extracted:	06/02/16	Lab ID:	06-1122 mb
Date Analyzed:	06/06/16	Data File:	060613.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	72	17	97
Phenol-d6	47	10	62
2,4,6-Tribromophenol	75	33	166

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/26/16

Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605507

**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)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (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

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance 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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/26/16

Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605507

**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)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	<350	83	89	50-150	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	87	95	63-142	9

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/15/16

Date Received: 05/26/16

Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605507

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR SEMIVOLATILE PHENOLS BY EPA METHOD 8270D SIM**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 30)
Pentachlorophenol	ug/L (ppb)	2.5	70	70	23-185	0

# FRIEDMAN & BRUYA, INC.

---

## ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

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

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

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

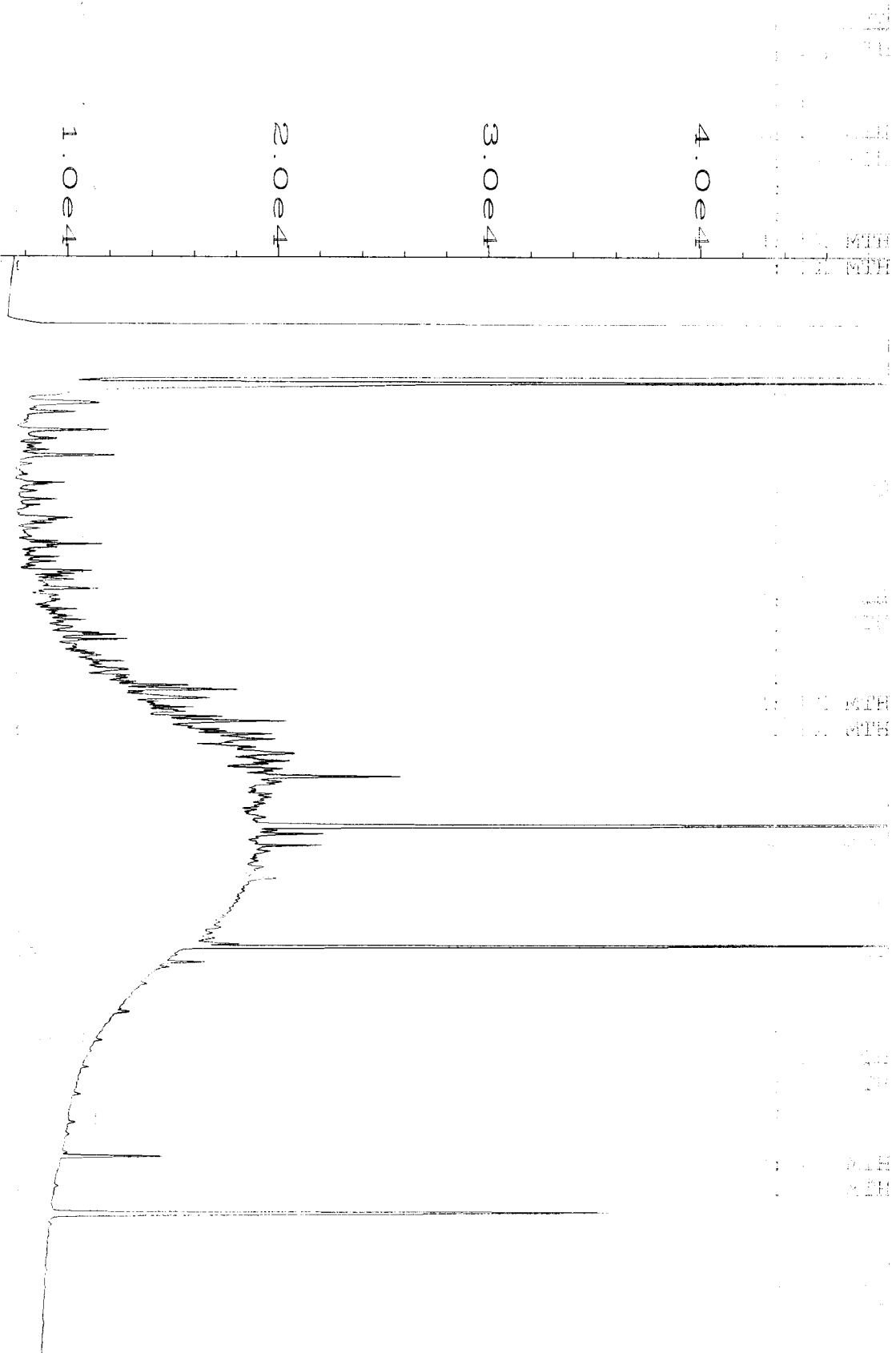
vo - The value reported fell outside the control limits established for this analyte.

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

Operator  
Data File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code  
Acquired on  
Report Created on

Operator  
Data File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code  
Acquired on  
Report Created on

Data File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code  
Acquired on  
Report Created on



Date File Name	: C:\HPCHEM\1\DATA\05-31-16\052F0801.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 52
Instrument	: GC1	Injection Number	: 1
Sample Name	: 605507-01	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 31 May 16 06:46 PM	Analysis Method	: DX.MTH
Report Created on:	01 Jun 16 11:54 AM		

Operator  
Data File Name



Operator

Instrument

Sample Name

Run Time Bar Code

Acquired on

Report Created on

Data File Name

Operator

Instrument

Sample Name

Run Time Bar Code

Acquired on

Report Created on

Operator

Instrument

Sample Name

Run Time Bar Code

Acquired on

Report Created on

Operator

Instrument

Sample Name

Run Time Bar Code

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Sample Name

Run Time Bar Code

Acquired on

Report Created on

Operator

Instrument

Sample Name

Run Time Bar Code

Acquired on

Report Created on

Operator

Instrument

Sample Name

Run Time Bar Code

Acquired on

Report Created on

Operator

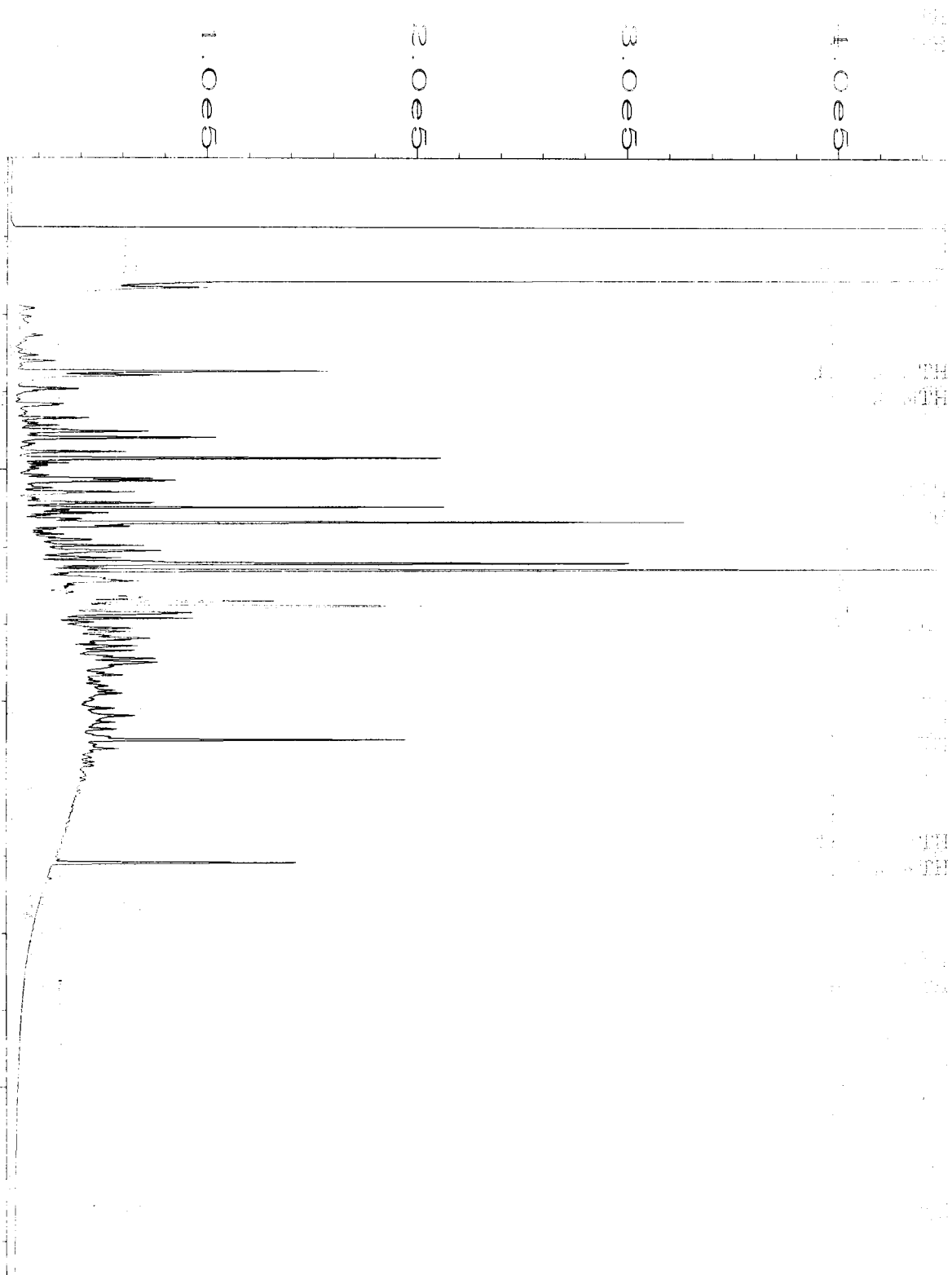
Instrument

Sample Name

Run Time Bar Code

Acquired on

Report Created on



Data File Name : C:\HPCHEM\1\DATA\05-31-16\053F0801.D

Operator : mwd1

Page Number : 1

Instrument : GC1

Vial Number : 53

Sample Name : 605507-02

Injection Number : 1

Run Time Bar Code :

Sequence Line : 8

Acquired on : 31 May 16 06:58 PM

Instrument Method : DX.MTH

Report Created on : 01 Jun 16 11:55 AM

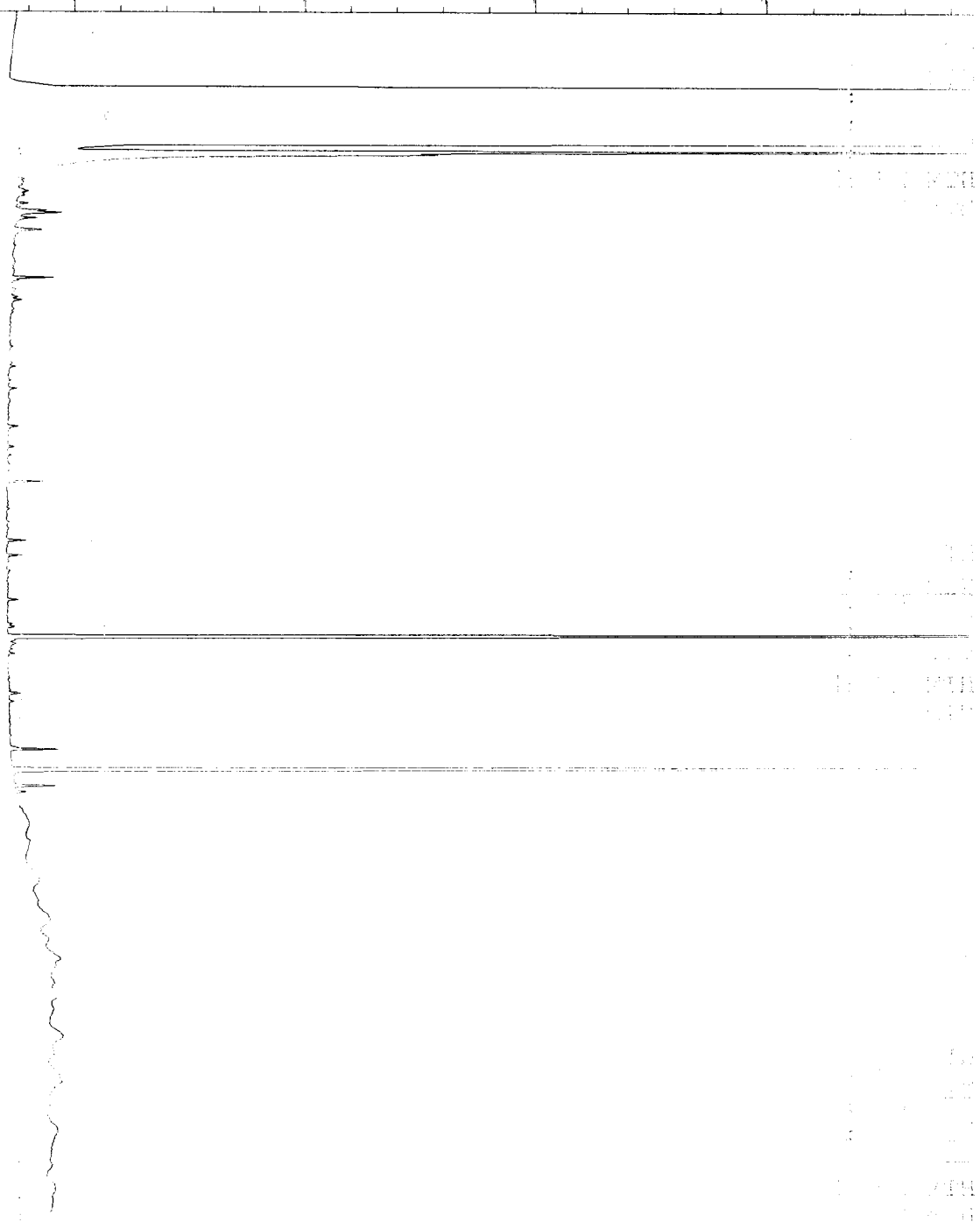
Analysis Method : DX.MTH

1.0e4  
2.0e4  
3.0e4  
4.0e4

Data File Name  
Operator  
Sample Name  
Run Time Code  
Acquired on  
Report Created on

Data File Name  
Operator  
Sample Name  
Run Time Code  
Acquired on  
Report Created on

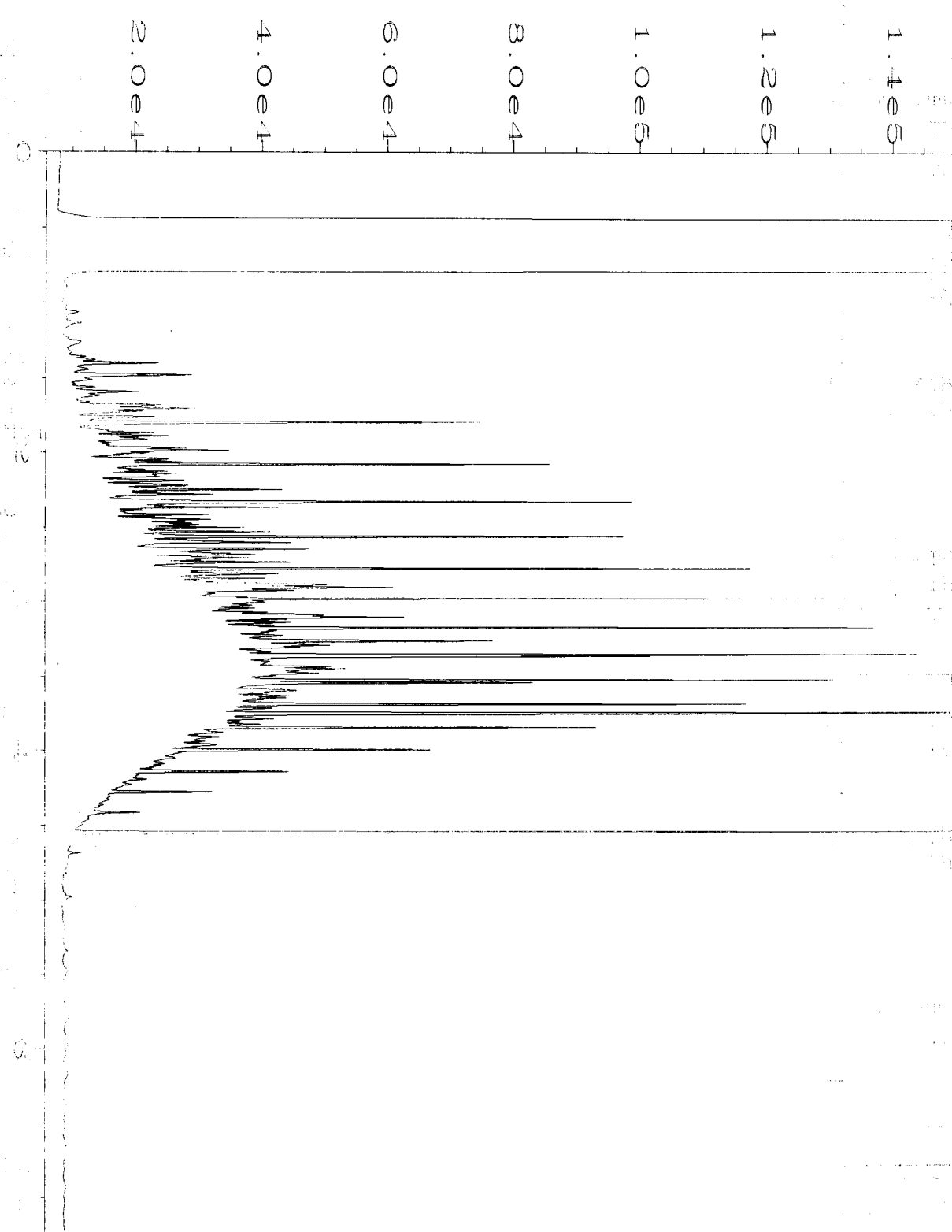
Data File Name  
Operator  
Sample Name  
Run Time Code  
Acquired on  
Report Created on



Data File Name : C:\HPCHEM\1\DATA\05-31-16\045F0801.D  
Operator : mwdl  
Instrument : GC1  
Sample Name : 06-1104 mb  
Run Time Code :  
Acquired on : 31 May 16 05:27 PM  
Report Created on: 01 Jun 16 11:55 AM

Page Number : 1  
Vial Number : 45  
Injection Number : 1  
Sequence Line : 8  
Instrument Method: DX.MTH  
Analysis Method : DX.MTH

Application: GC1  
Report: 11  
Data File: 003F0201.D  
Operator: mwdl  
Sample Name: 500 Dx 45-182D  
Run Time Bar Code: 31 May 16 06:29 AM  
Acquired on: 31 May 16 06:29 AM  
Report Created on: 01 Jun 16 11:55 AM



Sample File Name	: C:\HPCHEM\1\DATA\05-31-16\003F0201.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 3
Instrument	: GC1	Injection Number	: 1
Sample Name	: 500 Dx 45-182D	Sequence Line	: 2
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 31 May 16 06:29 AM	Analysis Method	: DX.MTH
Report Created on:	01 Jun 16 11:55 AM		



**IEH ANALYTICAL LABORATORIES**  
**LABORATORY & CONSULTING SERVICES**  
3927 AURORA AVENUE NORTH, SEATTLE, WA 98103  
PHONE: (206) 632-2715 FAX: (206) 632-2417

<b>CASE FILE NUMBER:</b>	<b>FBI014-78</b>	<b>PAGE 1</b>
<b>REPORT DATE:</b>	<b>06/14/16</b>	
<b>DATE SAMPLED:</b>	<b>05/26/16</b>	<b>DATE RECEIVED: 05/31/16</b>
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605507</b>		

**CASE NARRATIVE**

One water sample was received by the laboratory in good condition and analyzed according to the chain of custody. No other 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**

SAMPLE ID	SULFATE (mg/L)
01MW86-20160526	<1.00



**IEH ANALYTICAL LABORATORIES**  
**LABORATORY & CONSULTING SERVICES**  
3927 AURORA AVENUE NORTH, SEATTLE, WA 98103  
PHONE: (206) 632-2715 FAX: (206) 632-2417

<b>CASE FILE NUMBER:</b>	<b>FBI014-78</b>	<b>PAGE 2</b>
<b>REPORT DATE:</b>	<b>06/14/16</b>	
<b>DATE SAMPLED:</b>	<b>05/26/16</b>	<b>DATE RECEIVED: 05/31/16</b>
<b>FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON WATER</b>		
<b>SAMPLES FROM FRIEDMAN &amp; BRUYA, INC. / PROJECT NO. 605507</b>		

**QA/QC DATA**

QC PARAMETER	SULFATE (mg/L)
METHOD	SM184500SO4E
DATE ANALYZED	06/14/16
DETECTION LIMIT	1.00
DUPLICATE	
SAMPLE ID	BATCH
ORIGINAL	5.20
DUPLICATE	5.30
RPD	1.91%
SPIKE SAMPLE	
SAMPLE ID	BATCH
ORIGINAL	5.20
SPIKED SAMPLE	15.3
SPIKE ADDED	10.0
% RECOVERY	100.54%
QC CHECK	
FOUND	9.79
TRUE	10.0
% RECOVERY	97.90%
BLANK	<1.00

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 TO LOW RELATIVE TOO SAMPLE CONCENTRATION.

SUBMITTED BY:

Damien Gadomski  
Project Manager

FBI014-79

**SUBCONTRACT SAMPLE CHAIN OF CUSTODY**

Send Report To Michael Erdahl  
 Company Friedman and Bruya, Inc.  
 Address 3012 16th Ave W  
 City, State, ZIP Seattle, WA 98119  
 Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER <i>Aquatic Research</i>	
PROJECT NAME/NO. <i>605507</i>	PO# <i>D-998</i>
REMARKS  <i>Please Email Results</i>	

Page # 1 of 1

**TURNAROUND TIME**  
 Standard (2 Weeks)  
 RUSH  
 Rush charges authorized by: \_\_\_\_\_

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED							Notes	
						Dioxins/Furans	EPH	VPH	Nitrate	Sulfate	Alkalinity	TOC-9060M		
<i>01MW86-20160526</i>		<i>5/26/16</i>		<i>water</i>						<i>X</i>				

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

SIGNATURE		PRINT NAME		COMPANY		DATE	TIME
<i>[Signature]</i>		Michael Erdahl		Friedman and Bruya		<i>5/31/16</i>	<i>0920</i>
Received by:		<i>[Signature]</i>		<i>SINA SONN-THAL(1) 836 TEH</i>		<i>5/31/16</i>	<i>1055</i>
Relinquished by:							
Received by:							

605507

**SAMPLE CHAIN OF CUSTODY**

ME 05/26/16

12/26/16

Send Report To Tim Brown, cc: Jessica Brown, Courtney Schaumberg, Jonathan Loeffler, Jennifer Cyr

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature) <i>Chris Cess</i>	
PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal	PO # 01-600
REMARKS 1 low level detection limit of 0.219 ug/L for PCP.	EIM Y / N

Page # 1 of 1

TURNAROUND TIME  
Standard (2 Weeks)  
RUSH  
Rush charges authorized by:

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+	Notes	
01MW48-20160526	01MW48	-	01A-D	05/26/16	1209	Water	4	X	X	X									
01MW86-20160526	01MW86	-	02A-F	05/26/16	1323	Water	6	X	X	X	X		X						
<p>05/26/16</p> <p>Samples received at <u>3</u> °C</p>																			

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <i>Chris Cess</i>	Chris Cess	SoundEarth	05/26/16	1535
Received by: <i>Elizabeth Radford</i>	Elizabeth Radford	F&B	5/26/16	3:35
Relinquished by:				
Received by:				

***Friedman & Bruya, Inc. #605510***



FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

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

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

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 605510 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl  
Project Manager

Enclosures

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

FRIEDMAN & BRUYA, INC.

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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 605510 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
605510 -01	01MW50-20160526
605510 -02	01MW49-20160526
605510 -03	01MW51-20160526

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/07/16

Date Received: 05/26/16

Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605510

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**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
01MW50-20160526 605510-01	<1	<1	<1	<3	<100	95
01MW49-20160526 605510-02	<1	<1	<1	<3	<100	94
01MW51-20160526 605510-03	<1	<1	1.7	4.7	370	98
Method Blank 06-1063 MB	<1	<1	<1	<3	<100	94

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/07/16

Date Received: 05/26/16

Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605510

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**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> (% Recovery) (Limit 41-152)
01MW50-20160526 605510-01	200 x	<250	100
01MW49-20160526 605510-02	77 x	<250	98
01MW51-20160526 605510-03	1,300 x	460 x	101
Method Blank 06-1104 MB	<50	<250	81

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/07/16

Date Received: 05/26/16

Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605510

**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)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (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

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance 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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/07/16

Date Received: 05/26/16

Project: TOC\_01-600\_20160526 WORFDB8, F&BI 605510

**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)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	<350	83	89	50-150	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	87	95	63-142	9

ENVIRONMENTAL CHEMISTS

**ata Qualifiers & Definitions**

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

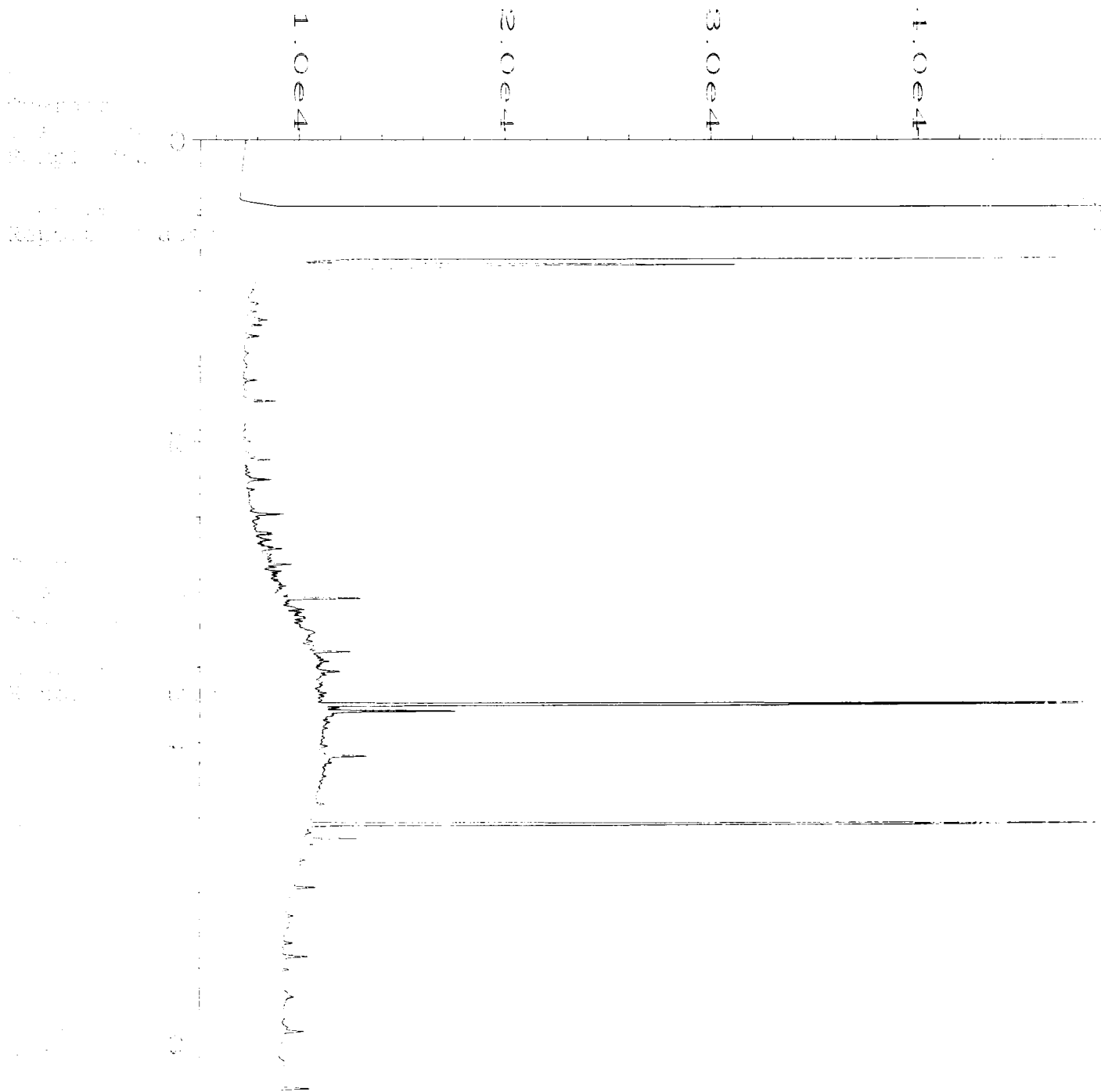
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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

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

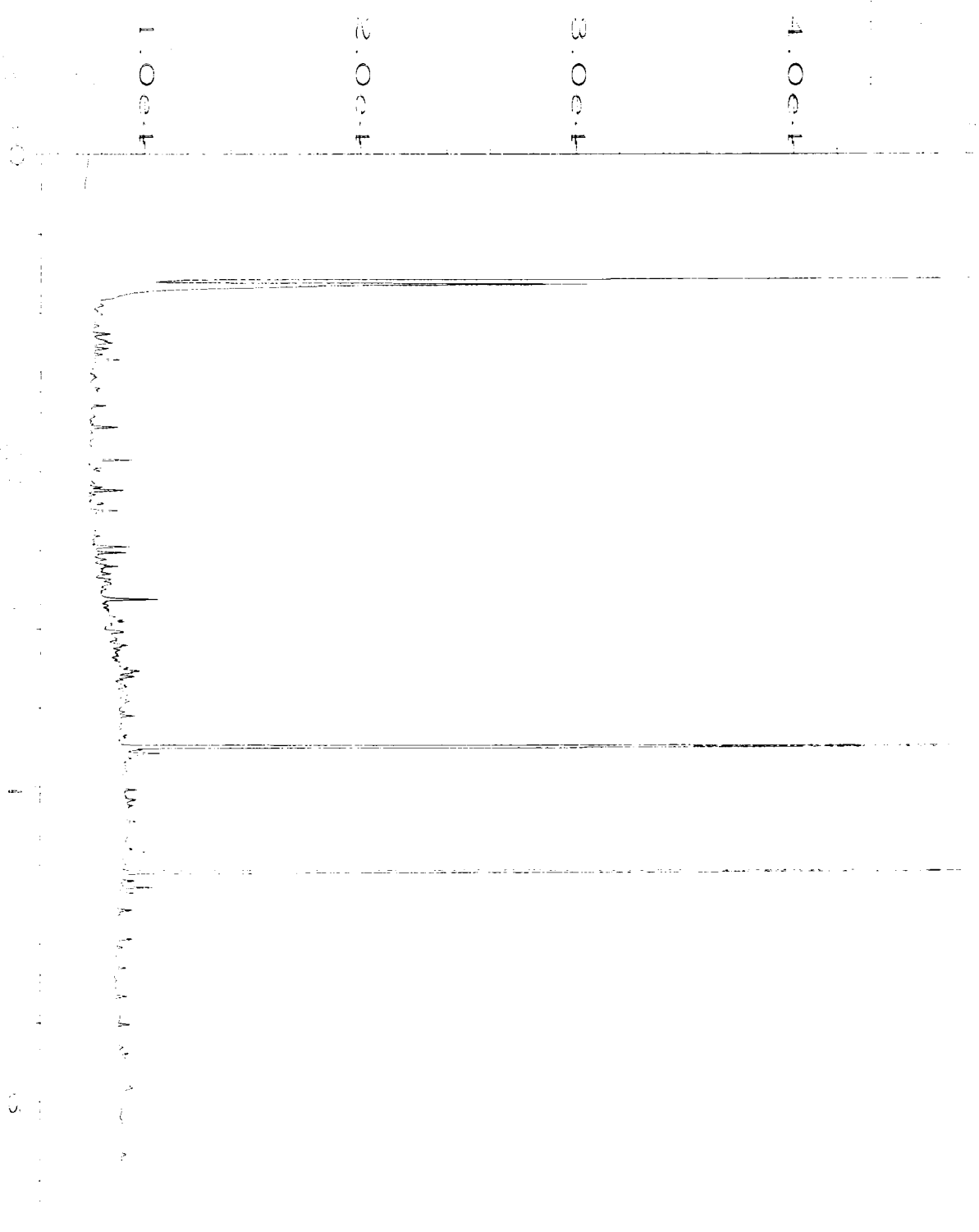
vo - The value reported fell outside the control limits established for this analyte.

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



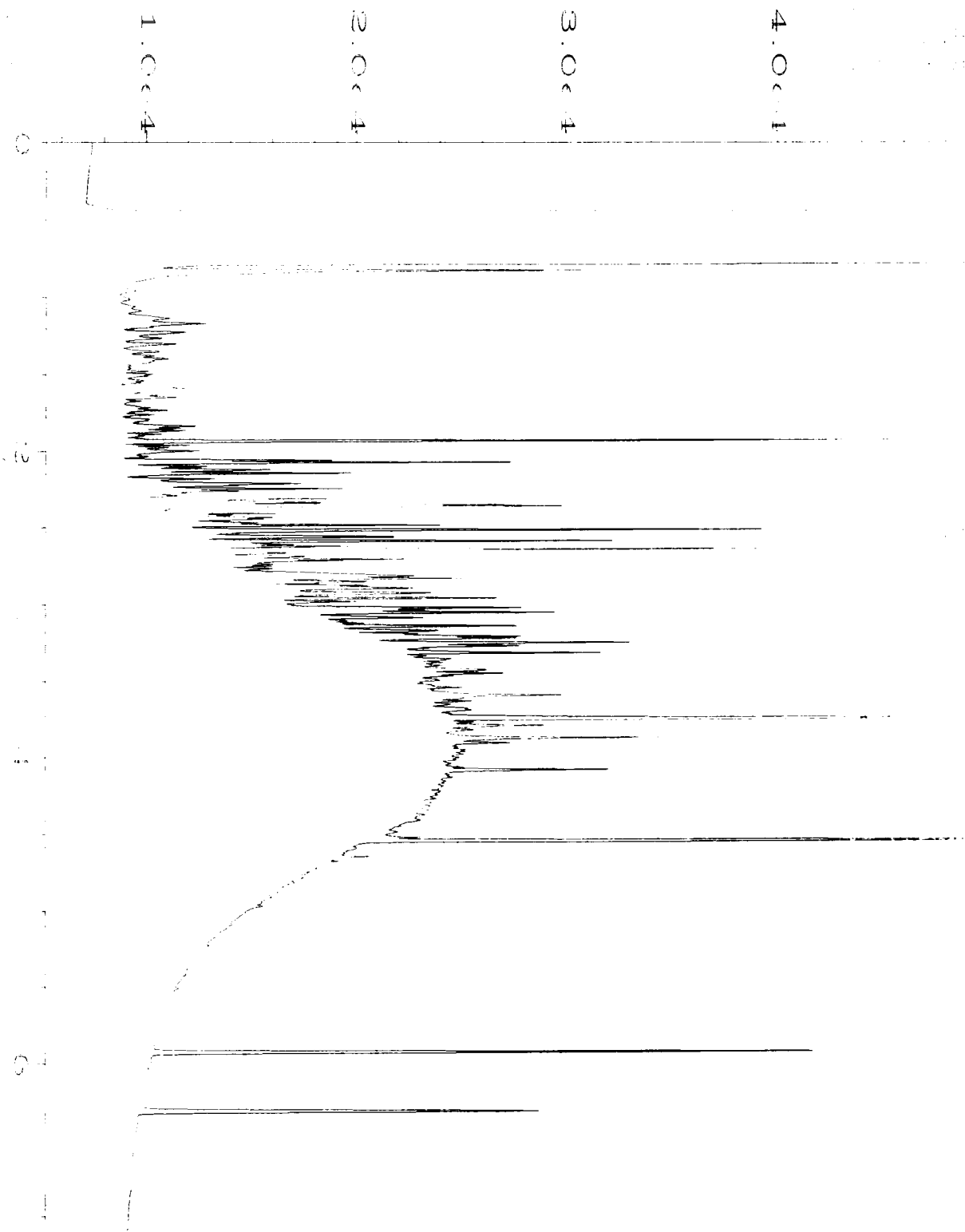
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Operator	: mwdl	Vial Number	: 56
Instrument	: GC1	Injection Number	: 1
Sample Name	: 605510-01	Sequence Line	: 10
Run Time Bar Code:		Instrument Method:	DX.MTE
Acquired on	: 31 May 16 07:54 PM	Analysis Method	: DX.MTE
Report Created on:	01 Jun 16 11:51 AM		





Data File Name	: C:\HPCHEM\1\DATA\05-31-16\057F1001.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 57
Instrument	: GC1	Injection Number	: 1
Sample Name	: 605510-02	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 31 May 16 08:06 PM	Analysis Method	: DX.MTH
Report Created on:	: 01 Jun 16 11:51 AM		

Data File Name  
Operator  
Instrument  
Sample Name  
Run Time Bar Code  
Acquired on  
Report Created on



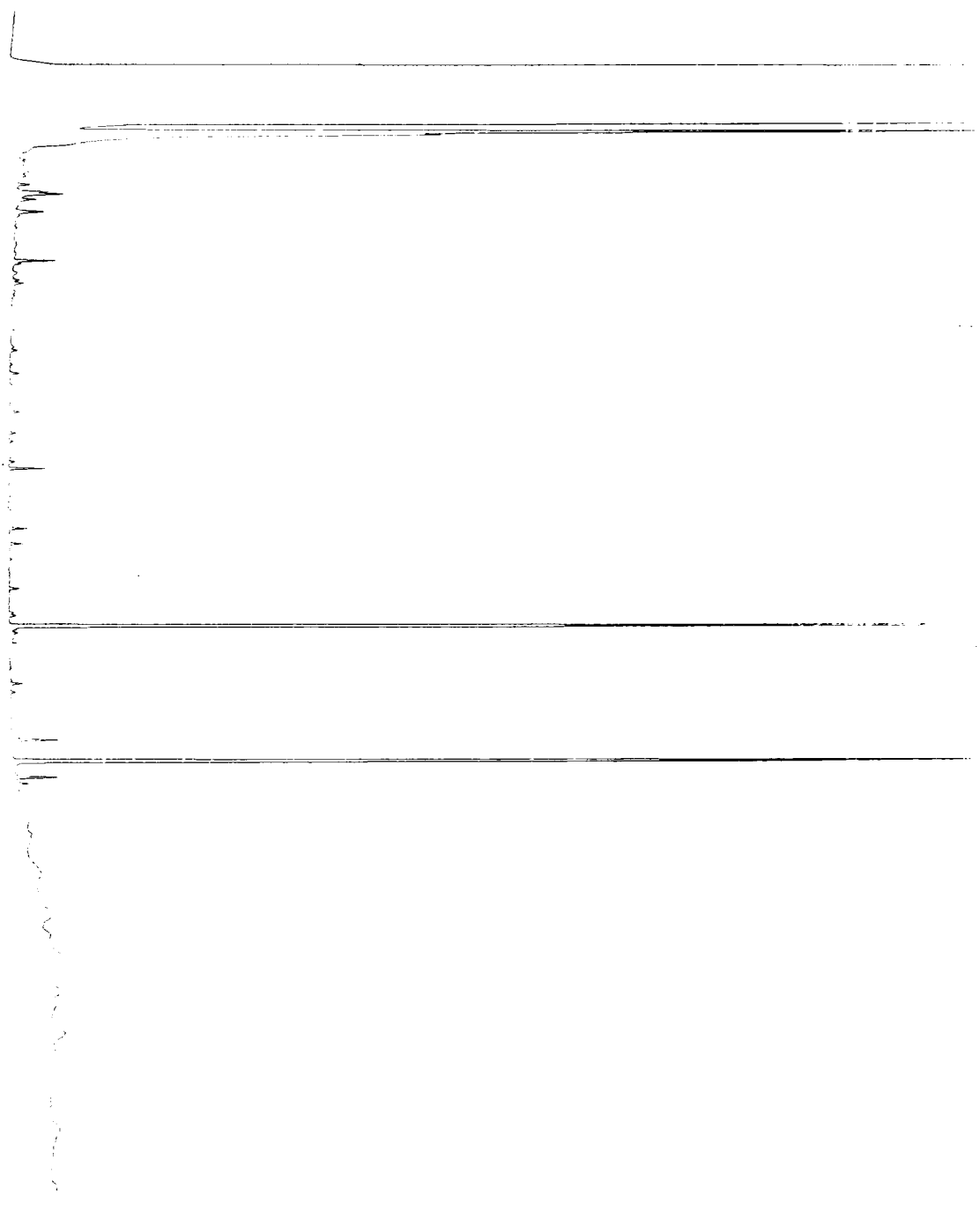
Data File Name	: C:\HPCHEM\1\DATA\05-31-16\058F1001.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 58
Instrument	: GC1	Injection Number	: 1
Sample Name	: 605510-03	Sequence Line	: 10
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 31 May 16 08:17 PM	Analysis Method	: DX.MTH
Report Created on:	01 Jun 16 11:51 AM		

Sample Name  
Run Time Method  
Acquired on  
Reported on

DX.MTH  
DX.MTH

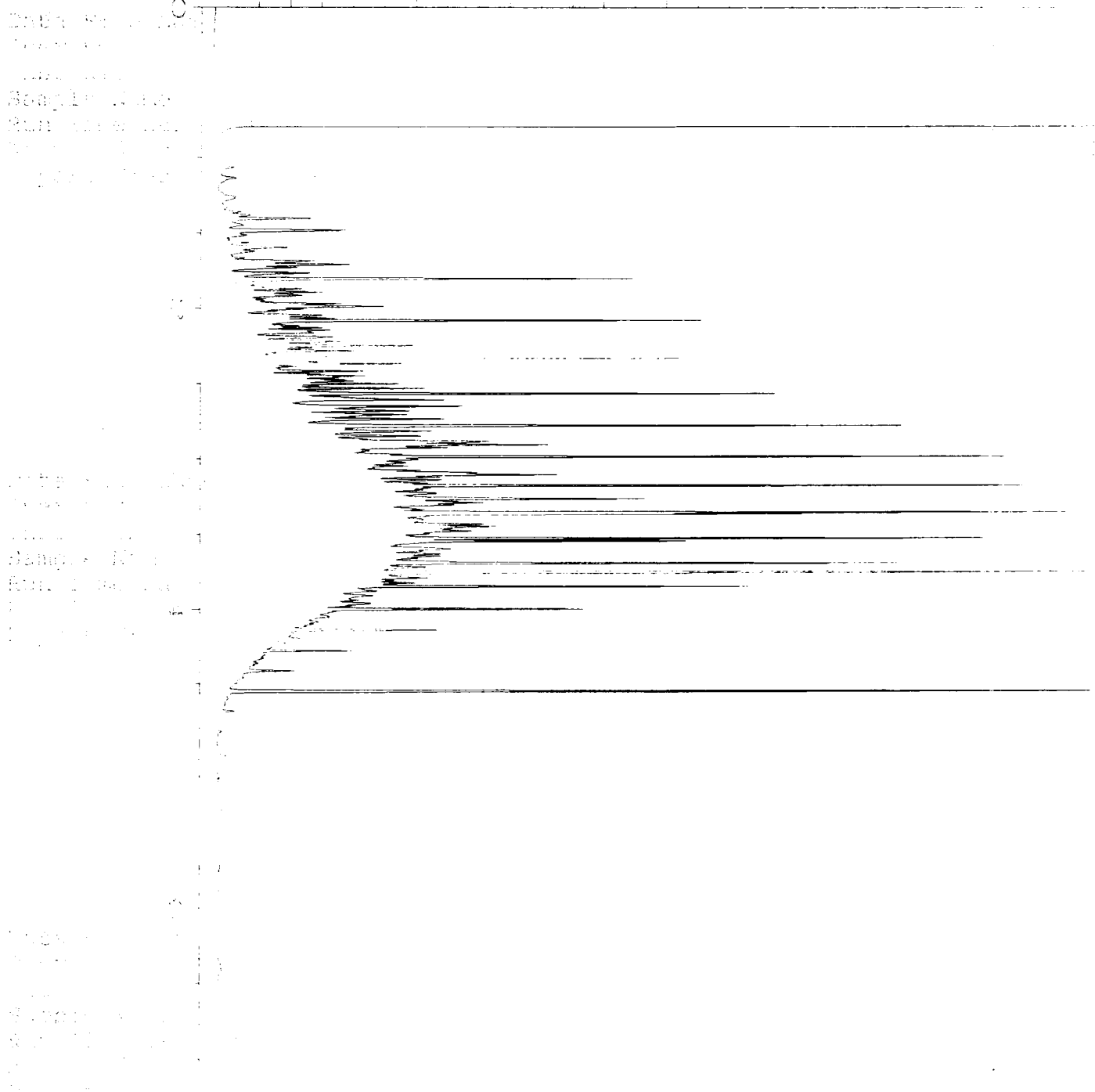
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3.0e4  
4.0e4

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-500000  
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-1500000  
-2000000  
-2500000  
-3000000  
-3500000  
-4000000  
-4500000  
-5000000  
-5500000  
-6000000  
-6500000  
-7000000  
-7500000  
-8000000  
-8500000  
-9000000  
-9500000  
-10000000



Data File Name : C:\HPCHEM\1\DATA\05-31-16\045F0801.D  
Operator : mwdl  
Instrument : GC1  
Sample Name : 06-1104 mb  
Run Time Bar Code:  
Acquired on : 31 May 16 05:27 PM  
Report Created on: 01 Jun 16 11:51 AM  
Page Number : 1  
Vial Number : 45  
Injection Number : 1  
Sequence Line : 8  
Instrument Method: DX.MTH  
Analysis Method : DX.MTH

1.405  
 1.205  
 1.005  
 8.004  
 6.004  
 4.004  
 2.004



Data File Name	: C:\HPCHEM\1\DATA\05-31-16\003F0201.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 3
Instrument	: GC1	Injection Number	: 1
Sample Name	: 500 Dx 45-182D	Sequence Line	: 2
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 31 May 16 06:29 AM	Analysis Method	: DX.MTH
Report Created on:	01 Jun 16 11:51 AM		

605510

SAMPLE CHAIN OF CUSTODY

ME 5/26/16


v2/DOY

Send Report To Tim Brown, cc: Jessica Brown, Courtney Schaumberg, Jonathan Loeffler, Jennifer Cyr

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature) 	
PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal	PO # 01-600
REMARKS low level detection limit of 0.219 ug/L for PCP.	EIM Y / N

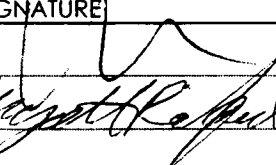
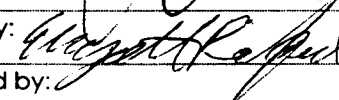
Page # 1 of 1

TURNAROUND TIME  
 Standard (2 Weeks)  
 RUSH \_\_\_\_\_  
 Rush charges authorized by: \_\_\_\_\_

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)	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+	Notes
<del>01MW50-20160526</del>	<del>01MW50</del>	<del>24</del>	<del>01A5</del>	<del>5/26/16</del>	<del>1635</del>	<del>water</del>	<del>4</del>	<del>X</del>	<del>X</del>	<del>X</del>								
01MW47-20160526	01MW49	25.4	02	5/26/16	1150	water	4	X	X	X								
01MW51-20160526	01MW51	21.9	03	5/26/16	1310	water	4	X	X	X								
<del>CS 5/26/16</del>																		

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Courtney Schaumberg	SoundEarth	5/26/16	1835
Received by: 	Elizabeth Rodford	F&B	5/26/16	3:35
Relinquished by:				
Received by:		Samples received at	5 °C	