



SoundEarth Strategies, Inc.  
2811 Fairview Avenue East, Suite 2000  
Seattle, Washington 98102

August 26, 2021

Mr. Dean Williams, General Manager  
Castle & Cooke Aviation  
9724 32nd Place West  
Everett, Washington 98204

**SUBJECT:      REMEDIAL EXCAVATION REPORT**  
**Castle & Cooke Aviation Property**  
**9724 32nd Place**  
**Everett, Washington 98204**  
**Project Number: 1295-001**

Dear Mr. Williams:

SoundEarth Strategies, Inc. (SoundEarth) has prepared this Remedial Excavation Report to document the field activities and results of the 2019 and 2021 remedial excavation activities completed at the Castle & Cooke Aviation Property located at 9724 32nd Place West in Everett, Washington (the Property; Figure 1). This report was developed to demonstrate compliance with the specific requirements of a cleanup action as defined by the Washington State Model Toxics Control Act (MTCA) Regulation Chapters 340-360 and 340-410 of Title 173 of the Washington Administrative Code (WAC 173-340-360 and WAC 173-340-410) and to obtain a No Further Action determination from the Washington State Department of Ecology (Ecology).

## **INTRODUCTION**

The Property consists of one tax parcel (Snohomish County Parcel No. 2667686) a subsection located on 28041500400102 of the Snohomish County Paine Field Airport that occupies approximately 82.93 acres of land. Castle & Cooke Aviation uses approximately 1.96 acres to provide aviation amenities, such as hangar and facility leasing, fuel, and ramp support.

The Washington State Department of Natural Resources Washington Interactive Geologic Map of Washington State indicates that the Property is underlain by Vashon Till, which was deposited during the glaciation of the region between 12,000 and 15,000 years ago. Vashon Till typically consists of a dense mixture of silt, sand, gravel, and clay, typically characterized by a relatively low vertical hydraulic conductivity.

## **BACKGROUND**

On March 16, 2019, a release of approximately 50 gallons of Jet A fuel occurred near the fuel farm on the northern portion of the Property. The release resulted in diesel-range petroleum hydrocarbon (DRPH) impacts to the ground that penetrated the soil extending approximately 75 feet along the northeastern edge of the grassy area located to the west of the fuel farm (Figure 2). NRC Environmental Services, Inc. (NRC) of Kent, Washington, mobilized to the Property on March 16, 2019, to conduct spill response and initial remedial excavation activities. During NRC's initial remedial excavation, soil was reportedly

removed using a vacuum truck to a depth of approximately 0.25 feet below ground surface (bgs) along the length of the area impacted by the release, extending approximately 75 feet northwest to southeast and 4 feet southwest to northeast. At the northwestern end of the excavation area, where impacts were observed by others to extend deeper than 0.25 feet bgs, soil was reportedly removed to a depth of approximately 0.75 feet bgs. Approximately 1 ton of impacted soil was removed during NRC's initial remedial excavation. SoundEarth was not present to observe the initial remedial excavation activities. The lateral and vertical extents of the 2019 remedial excavation area are shown on Figures 2 and 3.

## **SOUNDEARTH FIELD ACTIVITIES**

In May and August 2019, SoundEarth mobilized to the site to conduct soil sampling within the area impacted by the release of Jet A fuel. Sampling was conducted to evaluate the extent of petroleum-contaminated soil (PCS) remaining in place following NRC's spill response and initial remedial excavation. Additional remedial excavation activities were conducted by NRC in June 2021. Soil sampling and remedial excavation field activities and analytical results are described in the following sections.

### **2019 Soil Sampling**

On May 6, 2019, SoundEarth conducted soil sampling throughout the 2019 remedial excavation area to evaluate the extent of PCS remaining in place following the initial remedial excavation activities. Thirteen soil samples were collected from the bottom and sidewalls of the excavation area at depths between 0.25 and 0.75 feet bgs in the locations shown on Figure 2. Each sample was screened in the field for potential evidence of contamination using visual observations and notations of odor. Hydrocarbon odors and other evidence of contamination were not observed in any of the soil samples, with the exception of a faint hydrocarbon odor observed in sample EX02-NSW-0.25, collected from the north sidewall of the excavation at a depth of 0.25 feet bgs. Soil samples were placed directly into laboratory-supplied 4-ounce jars, labeled with a unique sample identifier, placed on ice in a cooler, and delivered to Friedman & Bruya, Inc. (F&B) of Seattle, Washington, under standard chain-of-custody protocols. Each sample was submitted for analysis of DRPH and oil-range petroleum hydrocarbons (ORPH) by Method Northwest Total Petroleum Hydrocarbon (NWTPH)-Dx.

The results of the initial soil sampling indicated that DRPH concentrations exceeding the MTCA Method A cleanup level were present in samples EX02-NSW-0.25 and EX02-WSW01-0.50, collected from the north and west sidewalls of the excavation area, respectively, SoundEarth returned to the Property on May 17 and May 23, 2019, to conduct additional sampling in these locations to further evaluate the extent of remaining PCS. Five additional soil samples were collected from the north and west sidewalls at the northwestern end of the excavation area at depths between 0.25 and 1 foot bgs. Each sample was screened in the field for potential evidence of contamination using visual observations and notations of odor, and by conducting headspace analysis using a photoionization detector (PID) to detect the presence of volatile organic vapors. Hydrocarbon odors were observed in all collected soil samples, with the exception of samples EX02-NSW01-0.25 and EX02-NSW-1, collected from the northwestern end of the excavation area. Elevated PID readings above 0.3 parts per million by volume (ppmv) were not observed in any of the soil samples. Soil samples were submitted to F&B for analysis of DRPH and ORPH by Method NWTPH-Dx.

### **Analytical Results**

Concentrations of DRPH exceeding the MTCA Method A cleanup level were detected in 4 of the 18 analyzed samples, including samples EX02-NSW-0.25 and EX02-NSW-0.5, collected from the north sidewall at the northwestern end of the excavation area, and samples EX02-WSW01-0.50 and EX02-WSW02-0.50, collected from the west sidewall at the northwestern end of the excavation area. DRPH concentrations in these samples ranged from 2,100 to 5,800 milligrams per kilogram (mg/kg). ORPH was not detected above laboratory reporting limits in any of the samples submitted for analysis, with the exception of sample EX02-NSW-0.25, which contained an ORPH concentration of 310 mg/kg. However, this detection was flagged by the laboratory as not representative of the standard used for quantitation and is likely the result of carryover from the diesel range. Analytical results are shown on Figure 2 and in Table 1. Laboratory analytical reports are provided in Attachment A.

### **2019 Direct-Push Soil Boring**

To evaluate the vertical extent of remaining PCS in the vicinity of samples EX02-WSW01-0.50 and EX02-WSW02-0.50, SoundEarth returned to the Property on August 15, 2019, to advance one direct-push soil boring (P01) in the location shown on Figure 2. Boring P01 was advanced by ESN Northwest of Renton, Washington, to a depth of 5 feet bgs using a truck-mounted direct-push drill rig. Soil samples were collected at 0.5-foot depth intervals and described in general accordance with the Unified Soil Classification System. Samples were screened in the field for potential evidence of contamination using visual observations and notations of odor, and by conducting headspace analysis using a PID to detect the presence of volatile organic vapors. The boring log for soil boring P01 is provided in Attachment B.

Soils observed in boring P01 consisted primarily of silty sand with trace gravel to the maximum depth of exploration of 5 feet bgs. Faint hydrocarbon odors were observed at depths of 0.5 to 2 feet bgs and 4 to 5 feet bgs. PID readings observed in this boring ranged from 1.9 to 622.0 ppmv. Groundwater was not observed in boring P01 at the time of drilling.

Soil samples were placed directly into laboratory-supplied 4-ounce jars, labeled with a unique sample identifier, placed on ice in a cooler, and delivered to F&B under standard chain-of-custody protocols. The sample collected at a depth of 1 foot bgs was submitted for analysis of DRPH and ORPH by Method NWTPH-Dx.

### **Analytical Results**

A DRPH concentration of 1,900 mg/kg, below the MTCA Method A cleanup level, was detected in the soil sample collected at a depth of 1 foot bgs in boring P01. ORPH was not detected above the laboratory reporting limit in this sample. Analytical results are shown on Figure 2 and in Table 1. The laboratory analytical report is provided in Attachment A.

### **2021 Remedial Excavation and Confirmation Soil Sampling**

The results of SoundEarth's 2019 soil sampling activities indicated that remaining PCS resulting from the release of Jet A fuel was limited to the northwesternmost portion of the release area. Confirmation soil sample results verified that DRPH concentrations throughout the remainder of the release area achieved

the MTCA Method A cleanup level for DRPH following NRC's 2019 remedial excavation. To remove the remaining PCS, additional remedial excavation activities were conducted by NRC under the observation of a SoundEarth geologist on June 8, 2021, using a vacuum truck and a track-mounted backhoe excavator. Prior to excavation, an asphalt cutter was used to remove the asphalt pavement in the northern portion of the planned excavation area for access to the underlying PCS..

Excavation activities were guided by visual observations of petroleum contamination, indications of hydrocarbon odor, and by conducting headspace analysis using a PID to detect the presence of volatile organic vapors. Soils were excavated to depths of approximately 0.75 to 1 foot bgs throughout the majority of the excavation area. In the central portion of the excavation area, soils were excavated to a depth of approximately 3 feet bgs based on observed hydrocarbon odors and PID readings of up to 826.6 ppmv. Soil conditions within the excavation area generally consisted of brown and gray silty sand with varying amounts of gravel. The final extents of the remedial excavation measured approximately 16 feet east to west by 8 feet north to south by 0.75 to 3 feet deep. Groundwater was not encountered during remedial excavation activities.

To supplement the confirmation soil samples collected in 2019, three additional confirmation soil samples were collected at the final extents of the excavation to verify that DRPH concentrations were below the MTCA Method A cleanup level. Soil sample EX02-BOT07-3.0 was collected at a depth of 3 feet bgs from the bottom of the excavation. Soil sample EX02-SS01-2.0 was collected from the southern sidewall at a depth of 2 feet bgs and sample EX02-NSW02-1.0 from the northern sidewall at a depth of 1 foot bgs. Moderate to strong hydrocarbon odors were observed in all three samples, and PID readings ranged from 5.2 ppmv in soil sample EX02-SS01-2.0 to 818.6 ppmv in soil sample EX02-NSW02-1.0. Soil samples were placed directly into laboratory-supplied 4-ounce jars, labeled with a unique sample identifier, placed on ice in a cooler, and delivered to F&B under standard chain-of-custody protocols for analysis of DRPH and ORPH by Method NWTPH-Dx.

### **Analytical Results**

The results of confirmation soil sampling indicated that DRPH concentrations were below the MTCA Method A cleanup level in all of the analyzed soil samples. DRPH concentrations of 1,300 and 1,600 mg/kg, below the cleanup level, were detected in samples EX02-BOT07-3.0 and EX02-NSW02-1.0, respectively. ORPH was not detected above the laboratory reporting limit in any of the samples submitted for analysis. Analytical results are shown on Figure 2 and in Table 1. Laboratory analytical reports are provided in Attachment A.

### **WASTE DISPOSAL**

PCS and wastewater generated during the 2019 remedial excavation and asphalt cleaning activities were transported to PRS Group, Inc. in Tacoma, Washington. One vacuum truck containing 1 ton of PCS and 850 gallons of wastewater was removed from the Property on March 16, 2019.

PCS, asphalt, and wastewater generated during the 2021 remedial excavation activities were transported to an Ecology disposal facility in Seattle, Washington, and Marine Vacuum Service, Inc. in Seattle, Washington. One dump truck containing 8 cubic yards of PCS and asphalt was removed from the Property and transported to an Ecology disposal facility on June 8, 2021. Two cubic yards of solid waste material

and 200 gallons of wastewater generated during asphalt cutting were removed from the Property and transported to Marine Vacuum Service, Inc. on June 9, 2021. Six cubic yards of asphalt were removed from the Property and transported to Marine Vacuum Service, Inc. on June 10, 2021.

## **CONCLUSIONS**

The remedial excavation activities conducted at the Property in March 2019 and June 2021 removed soil impacted with DRPH resulting from a 2019 release of Jet A fuel. PCS was excavated to depths of 0.25 to 3 feet bgs throughout the impacted area. Confirmation soil samples collected from the bottom and sidewalls of the final extents of the 2019 and 2021 remedial excavations demonstrate that soil contaminated with DRPH resulting from the Jet A fuel release has been removed. Based on confirmation soil sampling results, soil at the Property now meets compliance with applicable MTCA Method A cleanup levels and no additional investigation or soil remediation is warranted.

## **LIMITATIONS**

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, expressed or implied, is made. These services were performed consistent with the agreement with SoundEarth's client. This report is solely for the use and information of SoundEarth's client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report are derived, in part, from data gathered by others, and from conditions evaluated when services were performed, and are intended only for the client, purposes, locations, time frames, and project parameters indicated. SoundEarth does not warrant and is not responsible for the accuracy or validity of work performed by others, nor from the impacts of changes in environmental standards, practices, or regulations subsequent to performance of services. SoundEarth does not warrant the use of segregated portions of this report.

**CLOSING**

We appreciate the opportunity to provide you with technical services. If you have any questions, please contact us at 206-306-1900.

Respectfully,

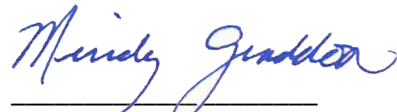
**SoundEarth Strategies, Inc.**

*Prepared by:*

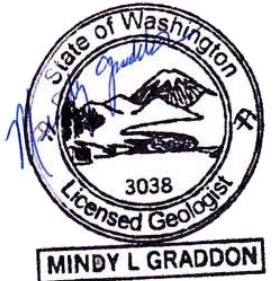


Clare Tochilin, LG  
Associate Geologist

*Prepared by:*



Mindy Graddon, LG, PMP  
Associate Geologist



*Reviewed by:*

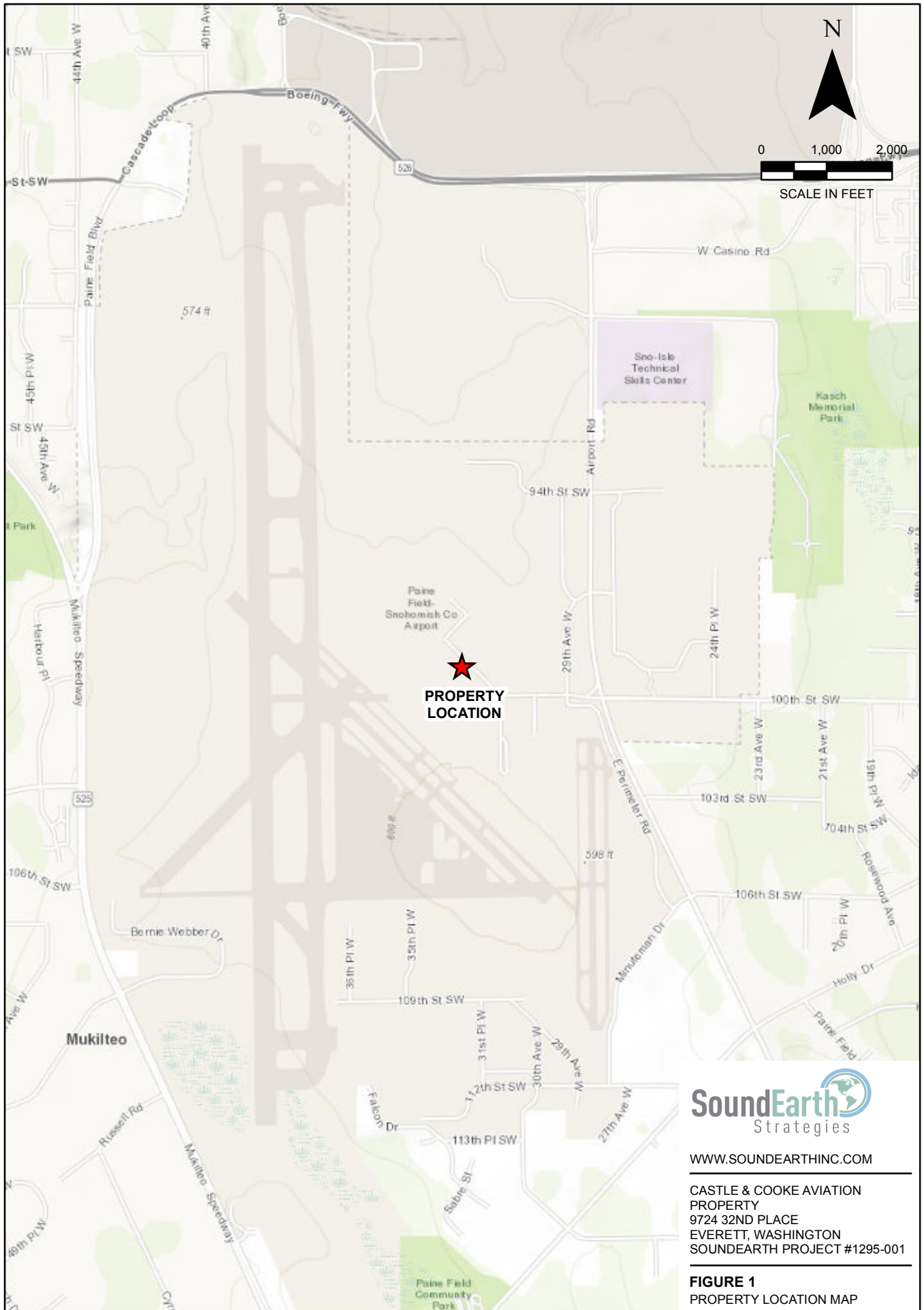


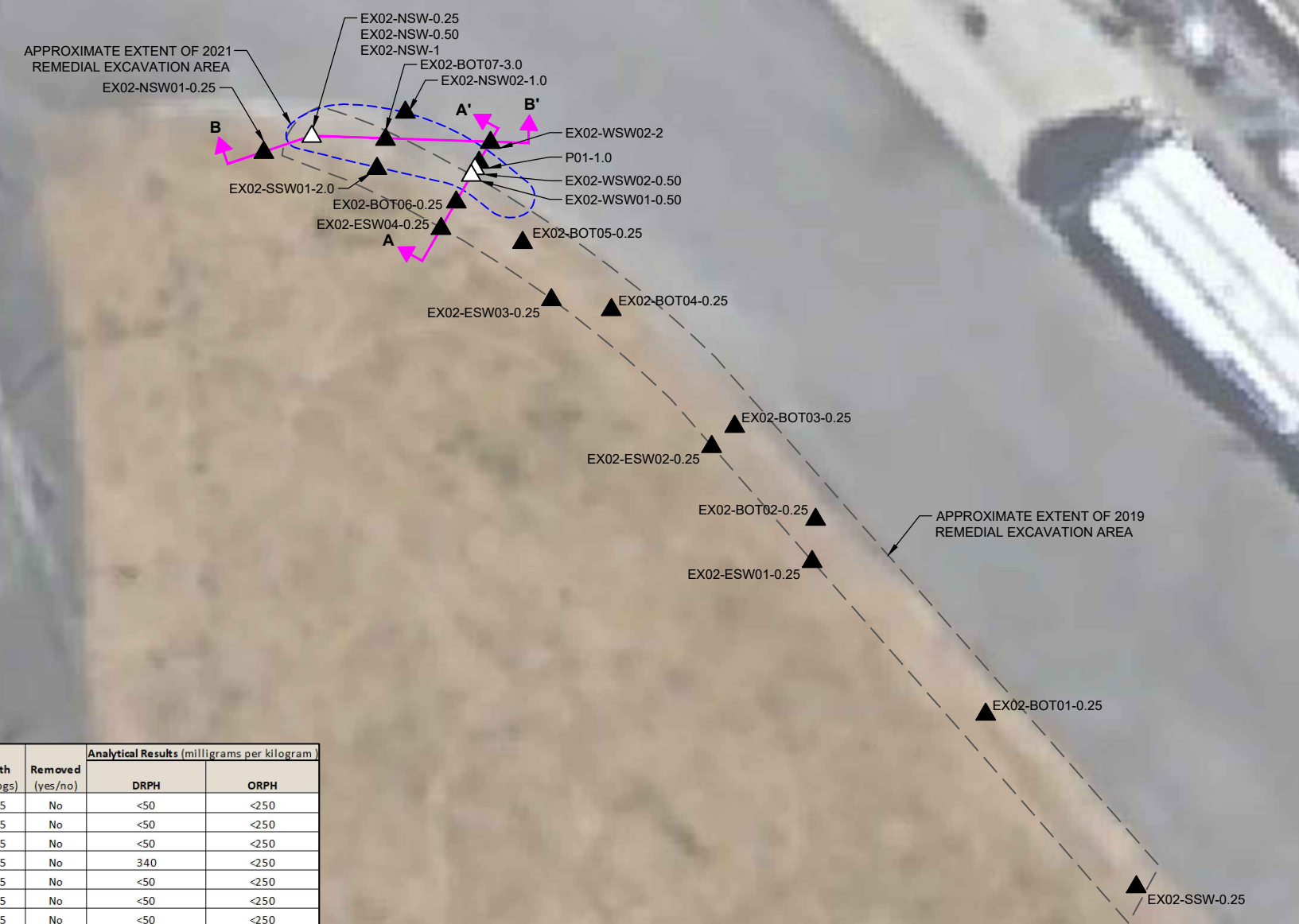
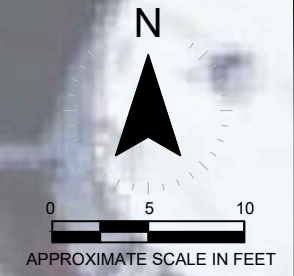
Chris Carter  
Managing Principal

Attachments: Figure 1, Property Location Map  
Figure 2, Remedial Excavation Extent and Soil Sample Analytical Results  
Figure 3, Cross Sections A-A' and B-B'  
Table 1, Soil Analytical Results for TPH and BTEX  
Attachment A, Laboratory Analytical Reports  
*Friedman & Bruya, Inc. #905117*  
*Friedman & Bruya, Inc. #905380 amended*  
*Friedman & Bruya, Inc. #905472*  
*Friedman & Bruya, Inc. #908301*  
*Friedman & Bruya, Inc. #106123*  
Attachment B, Boring Log  
Attachment C, Waste Disposal Documentation

CJT/MLG:kgw

## FIGURES





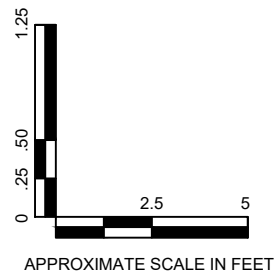
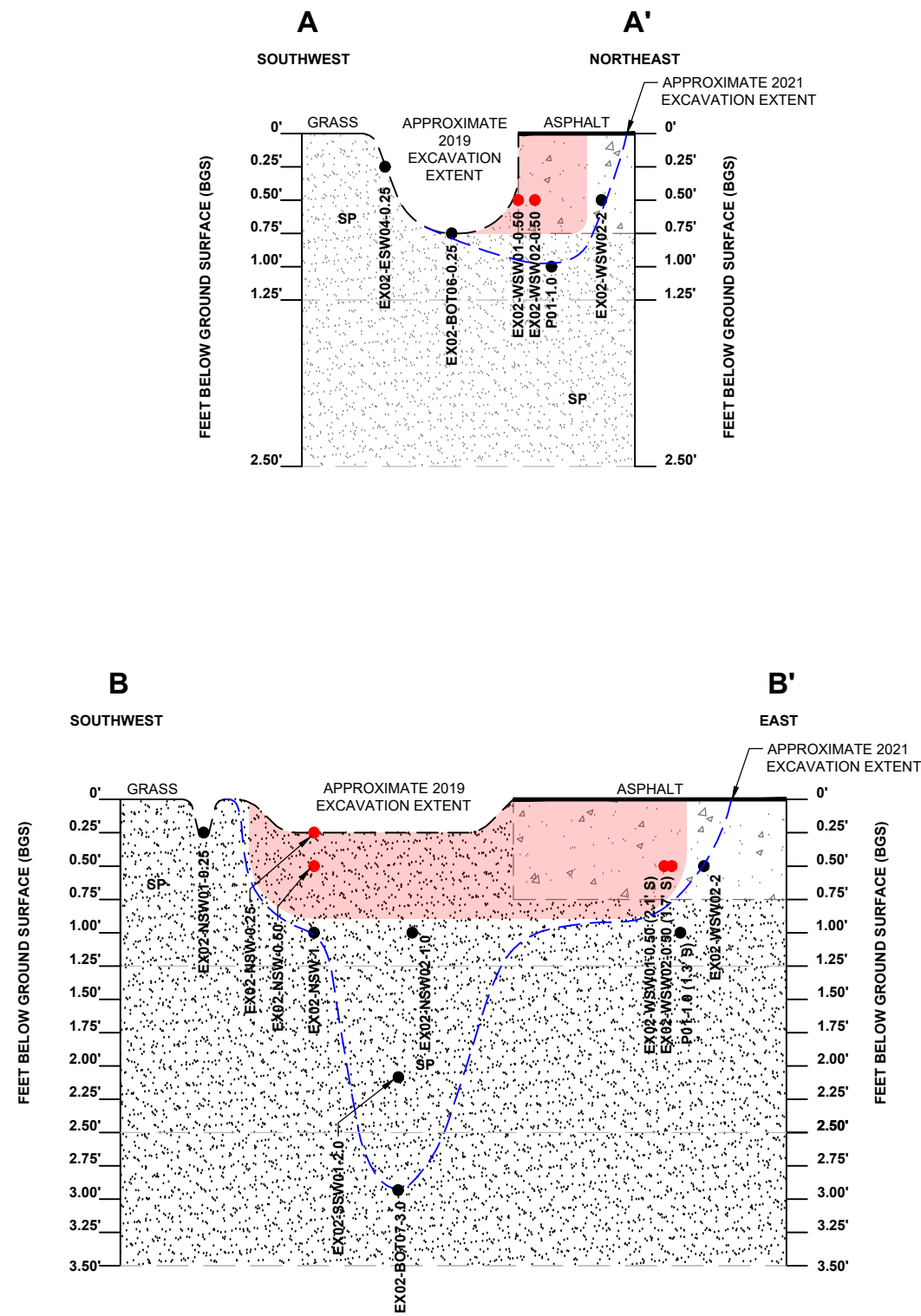
LEGEND	
	APPROXIMATE EXTENT OF 2019 REMEDIAL EXCAVATION AREA
	APPROXIMATE EXTENT OF 2021 REMEDIAL EXCAVATION AREA
	CATCH BASIN
	SOIL CONFIRMATION SAMPLE
	SOIL PERFORMANCE SAMPLE (REMOVED)
	CROSS SECTION LOCATION
bgs	BELOW GROUND SURFACE
DRPH	DIESEL-RANGE PETROLEUM HYDROCARBONS
MTCA	WASHINGTON STATE MODEL TOXICS CONTROL ACT
ORPH	OIL-RANGE PETROLEUM HYDROCARBONS

Sample ID	Date Sampled	Depth (feet bgs)	Removed (yes/no)	Analytical Results (milligrams per kilogram)	
				DRPH	ORPH
EX02-SSW-0.25	05/06/19	0.25	No	<50	<250
EX02-BOT01-0.25		0.25	No	<50	<250
EX02-ESW01-0.25		0.25	No	<50	<250
EX02-BOT02-0.25		0.25	No	340	<250
EX02-BOT03-0.25		0.25	No	<50	<250
EX02-ESW02-0.25		0.25	No	<50	<250
EX02-BOT04-0.25		0.25	No	<50	<250
EX02-ESW03-0.25		0.25	No	<50	<250
EX02-BOT05-0.25		0.25	No	<50	<250
EX02-ESW04-0.25		0.25	No	<50	<250
EX02-BOT06-0.25		0.75	No	650	<250
EX02-WSW01-0.50		0.50	Yes	3,900	<250
EX02-NSW-0.25		0.25	Yes	5,800	310
EX02-WSW02-0.50		0.50	Yes	5,200	<250
EX02-NSW-0.50	05/17/19	0.50	Yes	2,100	<250
EX02-NSW01-0.25		0.25	No	<50	<250
EX02-NSW-1	05/23/19	1.0	No	170	<250
EX02-WSW02-2		0.50	No	<50	<250
P01-1.0	08/15/19	1.0	No	1,990	<250
EX02-SSW01-2.0	06/08/21	2.0	No	<50	<250
EX02-BOT07-3.0		3.0	No	1,300	<250
EX02-NSW02-1.0		1.0	No	1,600	<250
MTCA Cleanup Level for Soil				2,000	2,000

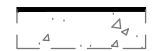



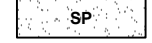



**SoundEarth Strategies**  
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CASTLE & COOKE AVIATION PROPERTY  
 9724 32ND PLACE  
 EVERETT, WASHINGTON  
 SOUNDEARTH PROJECT #1295-001

**FIGURE 2**  
 REMEDIAL EXCAVATION EXTENT AND SOIL SAMPLE ANALYTICAL RESULTS



**LEGEND**

-  APPROXIMATE EXTENT OF ASPHALT
-  CONFIRMATION SAMPLE LOCATION BELOW MTCA METHOD A CLEANUP LEVEL FOR DRPH IN SOIL
-  SAMPLE LOCATION ABOVE MTCA METHOD A CLEANUP LEVEL FOR DRPH IN SOIL (REMOVED)
-  DRPH IN SOIL REMOVED DURING 2021 EXCAVATION
-  SAND WITH VARYING AMOUNTS OF SILT AND GRAVEL
-  SAMPLE LOCATION PROJECTED FROM 3 FEET SOUTH OF CROSS SECTION PLAN
-  DIESEL-RANGE PETROLEUM HYDROCARBONS
-  WASHINGTON STATE MODEL TOXICS CONTROL ACT

- NOTES:**
1. GROUNDWATER NOT ENCOUNTERED DURING SAMPLING
  2. MTCA METHOD A CLEANUP LEVEL FOR DRPH = 2,000 MILLIGRAMS PER KILOGRAM

**FIGURE 3**  
 CROSS SECTIONS A-A' AND B-B'

## TABLE



**Table 1**  
**Soil Analytical Results for TPH and BTEX**  
**Castle & Cooke Aviation Property**  
**9724 32nd Place**  
**Everett, Washington**

Sample ID	Date Sampled	Depth (feet bgs)	Removed (yes/no)	Analytical Results (milligrams per kilogram )	
				DRPH <sup>(1)</sup>	ORPH <sup>(1)</sup>
EX02-SSW-0.25	05/06/19	0.25	No	<50	<250
EX02-BOT01-0.25		0.25	No	<50	<250
EX02-ESW01-0.25		0.25	No	<50	<250
EX02-BOT02-0.25		0.25	No	340	<250
EX02-BOT03-0.25		0.25	No	<50	<250
EX02-ESW02-0.25		0.25	No	<50	<250
EX02-BOT04-0.25		0.25	No	<50	<250
EX02-ESW03-0.25		0.25	No	<50	<250
EX02-BOT05-0.25		0.25	No	<50	<250
EX02-ESW04-0.25		0.25	No	<50	<250
EX02-BOT06-0.25		0.75	No	650	<250
EX02-WSW01-0.50		0.50	Yes	<b>3,900</b>	<250
EX02-NSW-0.25		0.25	Yes	<b>5,800</b>	310 <sup>x</sup>
EX02-WSW02-0.50		05/17/19	0.50	Yes	<b>5,200</b>
EX02-NSW-0.50	0.50		Yes	<b>2,100</b>	<250
EX02-NSW01-0.25	0.25		No	<50	<250
EX02-NSW-1	05/23/19	1.0	No	170	<250
EX02-WSW02-2		0.50	No	<50	<250
P01-1.0	08/15/19	1.0	No	1,990	<250
EX02-SSW01-2.0	06/08/21	2.0	No	<50	<250
EX02-BOT07-3.0		3.0	No	1,300	<250
EX02-NSW02-1.0		1.0	No	1,600	<250
<b>MTCA Cleanup Level for Soil<sup>(2)</sup></b>				<b>2,000</b>	<b>2,000</b>

**NOTES:**

**Red** denotes concentration exceeds MTCA cleanup level for soil.

Sample analyses conducted by Friedman & Bruya, Inc. of Seattle, Washington.

<sup>(1)</sup>Analyzed by Method NWTPH-Dx.

<sup>(2)</sup>MTCA Cleanup Regulation, Chapter 173-340-900 of WAC, Table 740-1 Method A Cleanup Levels for Soil, Unrestricted Land Uses, revised November 2007.

**Laboratory Notes:**

<sup>x</sup>The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

bgs = below ground surface

DRPH = diesel-range petroleum hydrocarbons

ORPH = oil-range petroleum hydrocarbons

MTCA = Washington State Model Toxics Control Act

SoundEarth = SoundEarth Strategies, Inc.

WAC = Washington Administrative Code

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

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 9, 2019

Mindy Graddon, Project Manager  
SoundEarth Strategies  
2811 Fairview Ave. East, Suite 2000  
Seattle, WA 98102

Dear Ms Graddon:

Included are the results from the testing of material submitted on May 6, 2019 from the SOU\_1295-001\_ 20190506, F&BI 905117 project. There are 5 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. 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: Chris Carter  
SOU0509R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 6, 2019 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_1295-001\_ 20190506, F&BI 905117 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
905117 -01	EX02-SSW-0.25
905117 -02	EX02-BOT01-0.25
905117 -03	EX02-ESW01-0.25
905117 -04	EX02-BOT02-0.25
905117 -05	EX02-BOT03-0.25
905117 -06	EX02-ESW02-0.25
905117 -07	EX02-BOT04-0.25
905117 -08	EX02-ESW03-0.25
905117 -09	EX02-BOT05-0.25
905117 -10	EX02-ESW04-0.25
905117 -11	EX02-BOT06-0.25
905117 -12	EX02-WSW01-0.50
905117 -13	EX02-NSW-0.25
905117 -14	EX02-SSW01-0.25

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/09/19

Date Received: 05/06/19

Project: SOU\_1295-001\_ 20190506, F&BI 905117

Date Extracted: 05/07/19

Date Analyzed: 05/07/19

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<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 48-168)
EX02-SSW-0.25 905117-01	<50	<250	91
EX02-BOT01-0.25 905117-02	<50	<250	89
EX02-ESW01-0.25 905117-03	<50	<250	92
EX02-BOT02-0.25 905117-04	340	<250	82
EX02-BOT03-0.25 905117-05	<50	<250	94
EX02-ESW02-0.25 905117-06	<50	<250	86
EX02-BOT04-0.25 905117-07	<50	<250	93
EX02-ESW03-0.25 905117-08	<50	<250	88
EX02-BOT05-0.25 905117-09	<50	<250	87
EX02-ESW04-0.25 905117-10	<50	<250	96

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/09/19  
Date Received: 05/06/19  
Project: SOU\_1295-001\_ 20190506, F&BI 905117  
Date Extracted: 05/07/19  
Date Analyzed: 05/07/19

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL AND MOTOR OIL  
USING METHOD NWTPH-D<sub>x</sub>**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<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 48-168)
EX02-BOT06-0.25 905117-11	650	<250	86
EX02-WSW01-0.50 905117-12	3,900	<250	93
EX02-NSW-0.25 905117-13	5,800	310 x	85
Method Blank 09-1052 MB	<50	<250	97

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/09/19

Date Received: 05/06/19

Project: SOU\_1295-001\_ 20190506, F&BI 905117

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL EXTENDED USING METHOD NWTPH-D<sub>x</sub>**

Laboratory Code: 905117-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	84	94	73-135	11

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	95	74-139

# 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 analyte 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 due to sample matrix effects.

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.

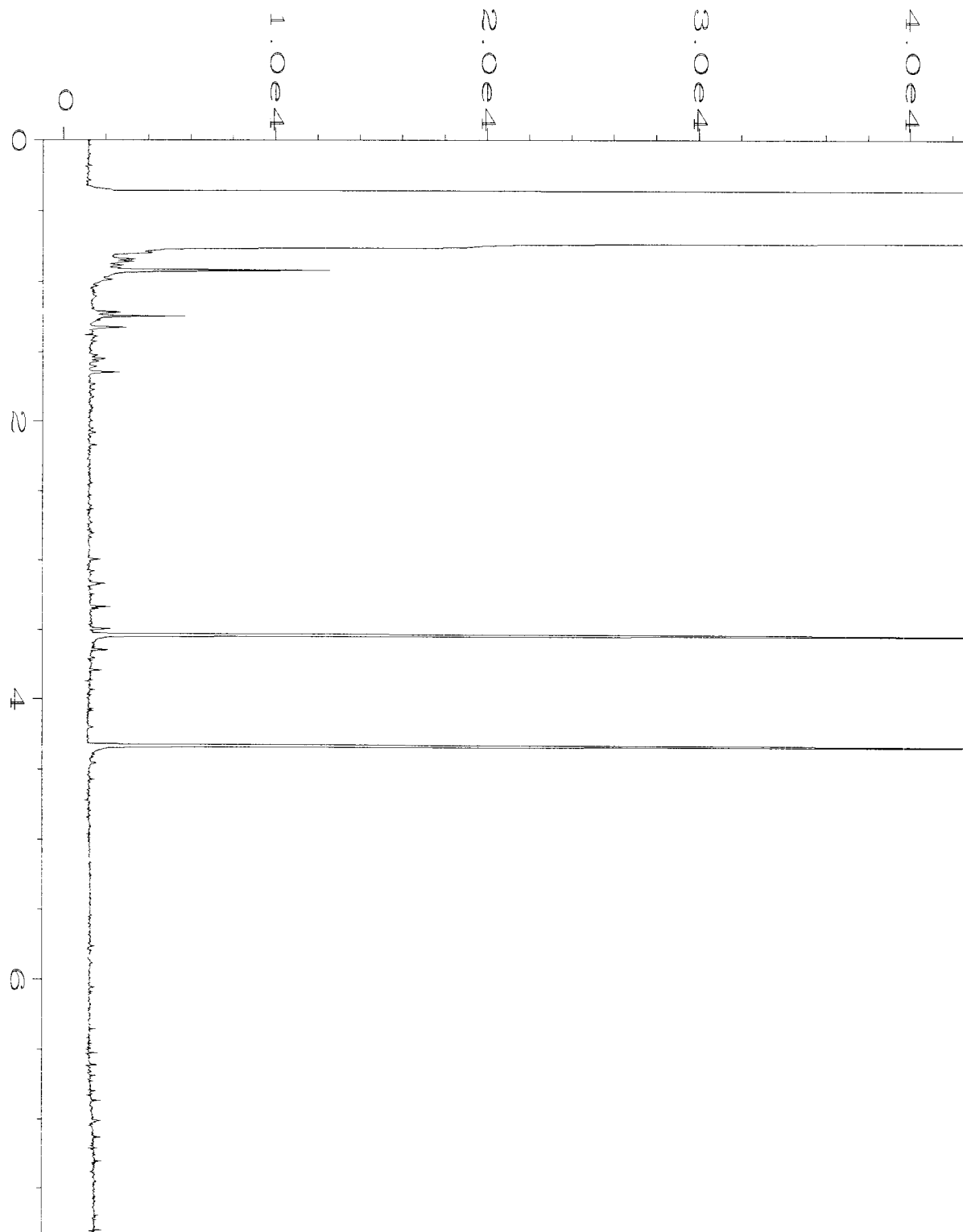
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.

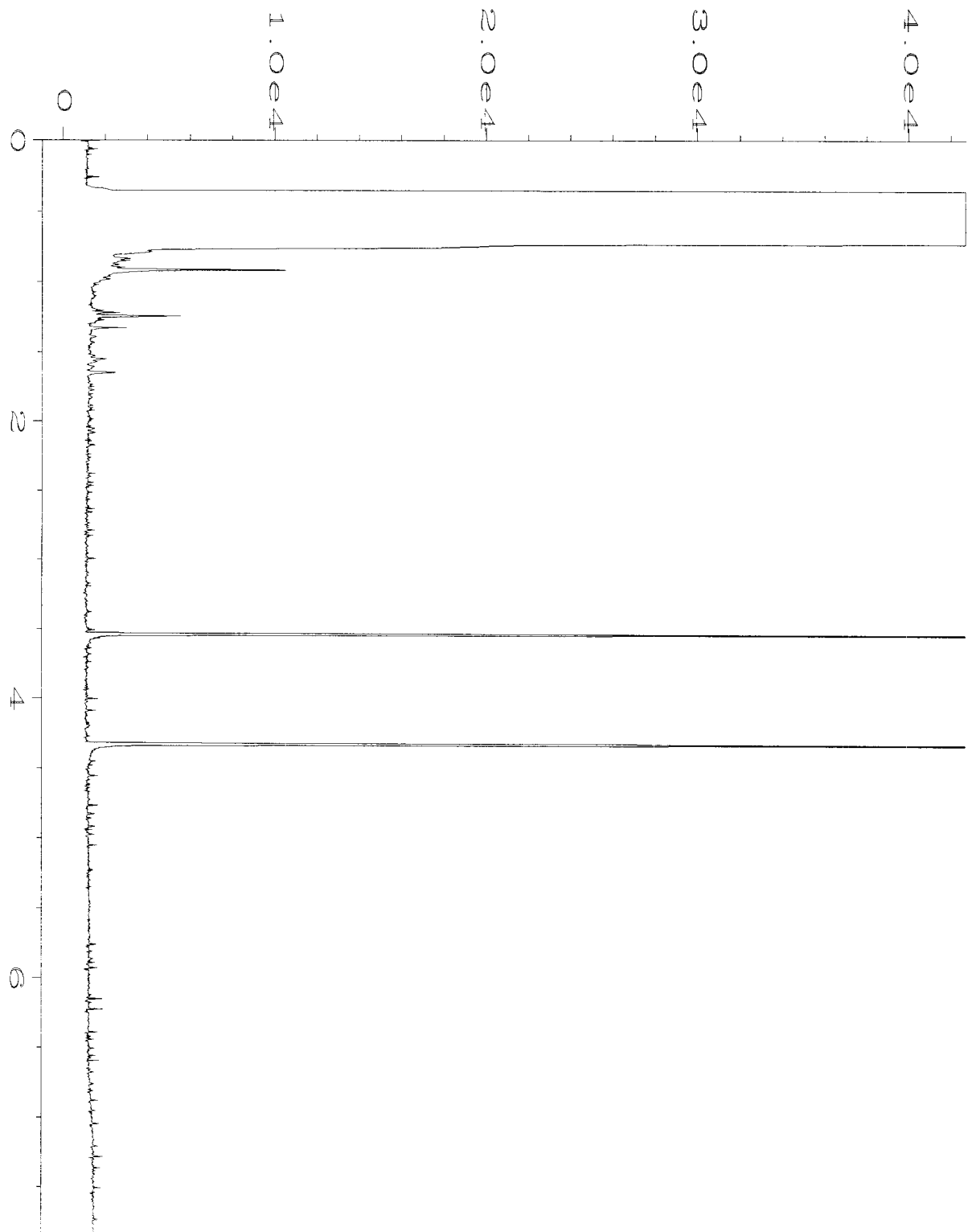
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

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

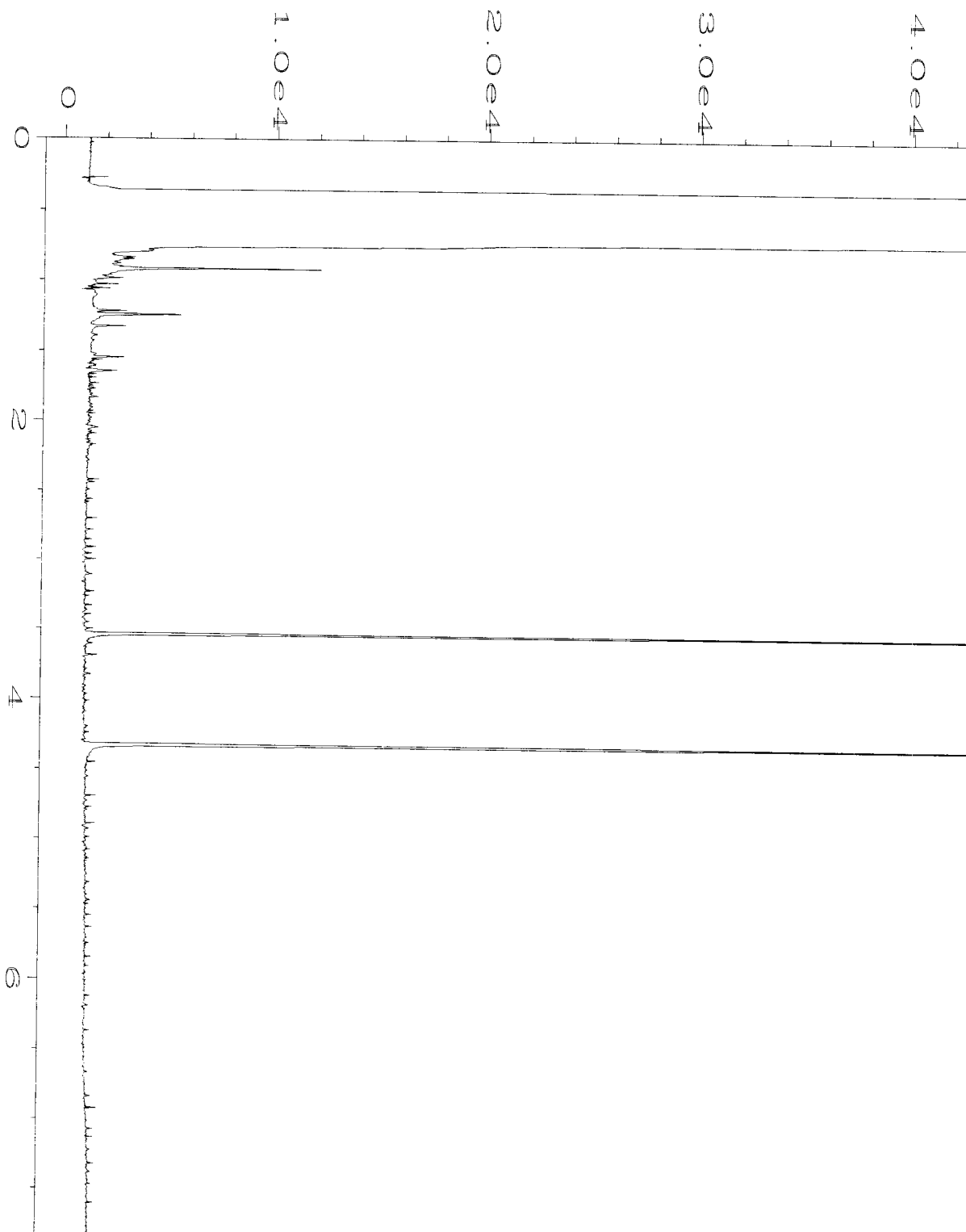
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



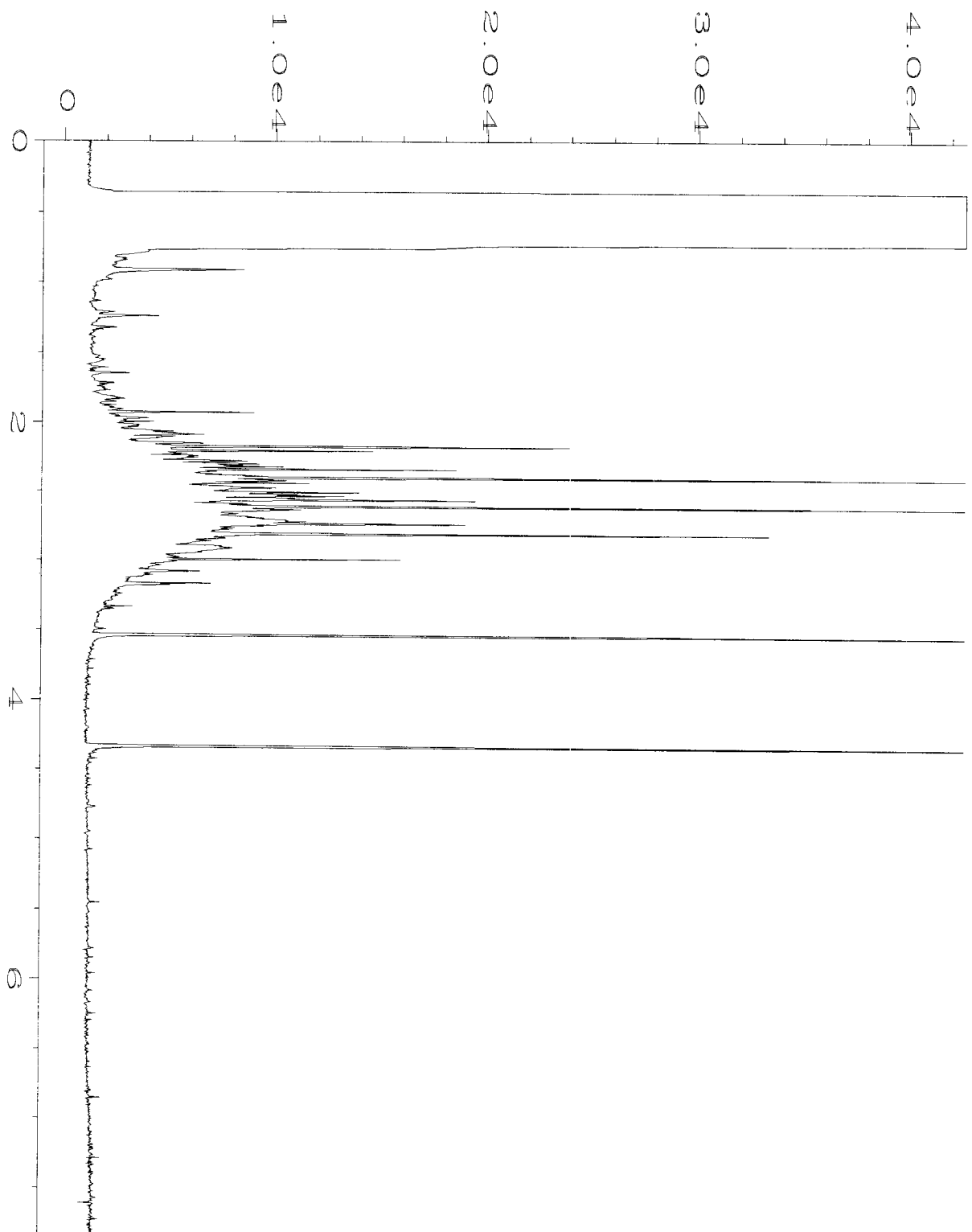
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Operator	: TL	Vial Number	: 15
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 905117-01	Sequence Line	: 3
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 07 May 19 11:20 AM	Analysis Method	: DX.MTH
Report Created on:	08 May 19 08:19 AM		



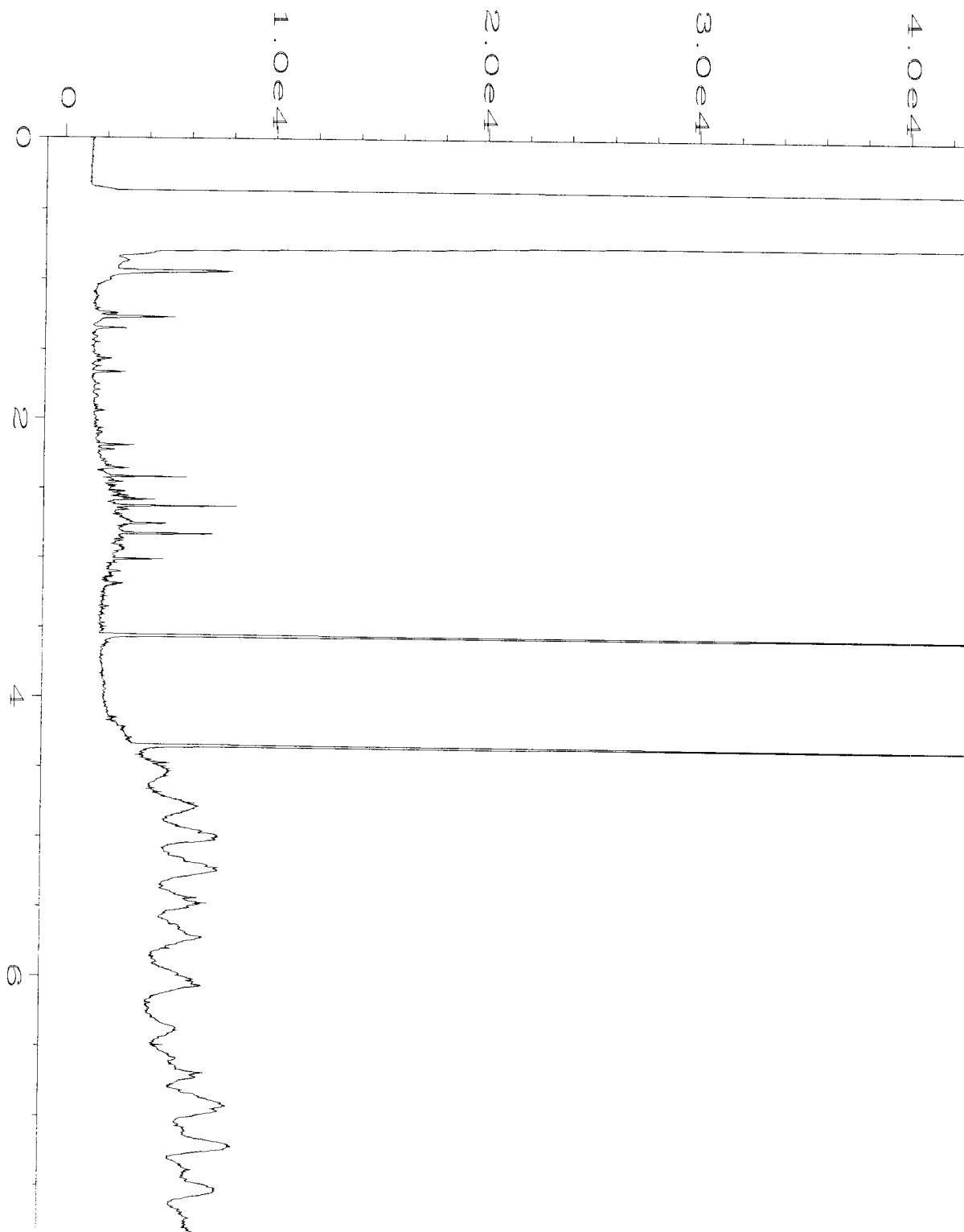
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Operator	: TL	Vial Number	: 16
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 905117-02	Sequence Line	: 3
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 07 May 19 11:33 AM	Analysis Method	: DX.MTH
Report Created on:	08 May 19 08:19 AM		



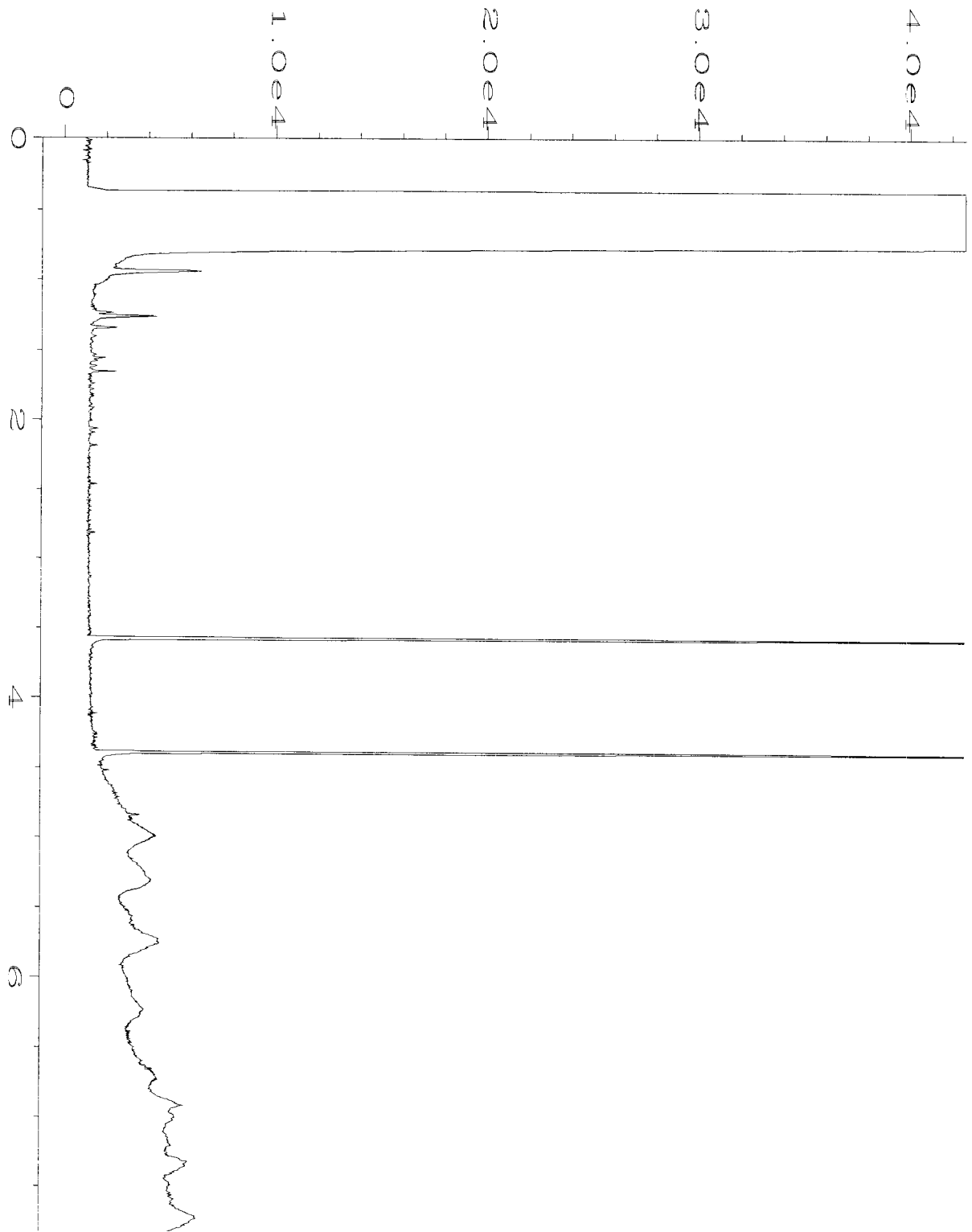
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Operator	: TL	Vial Number	: 17
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 905117-03	Sequence Line	: 3
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 07 May 19 11:45 AM	Analysis Method	: DX.MTH
Report Created on:	08 May 19 08:19 AM		



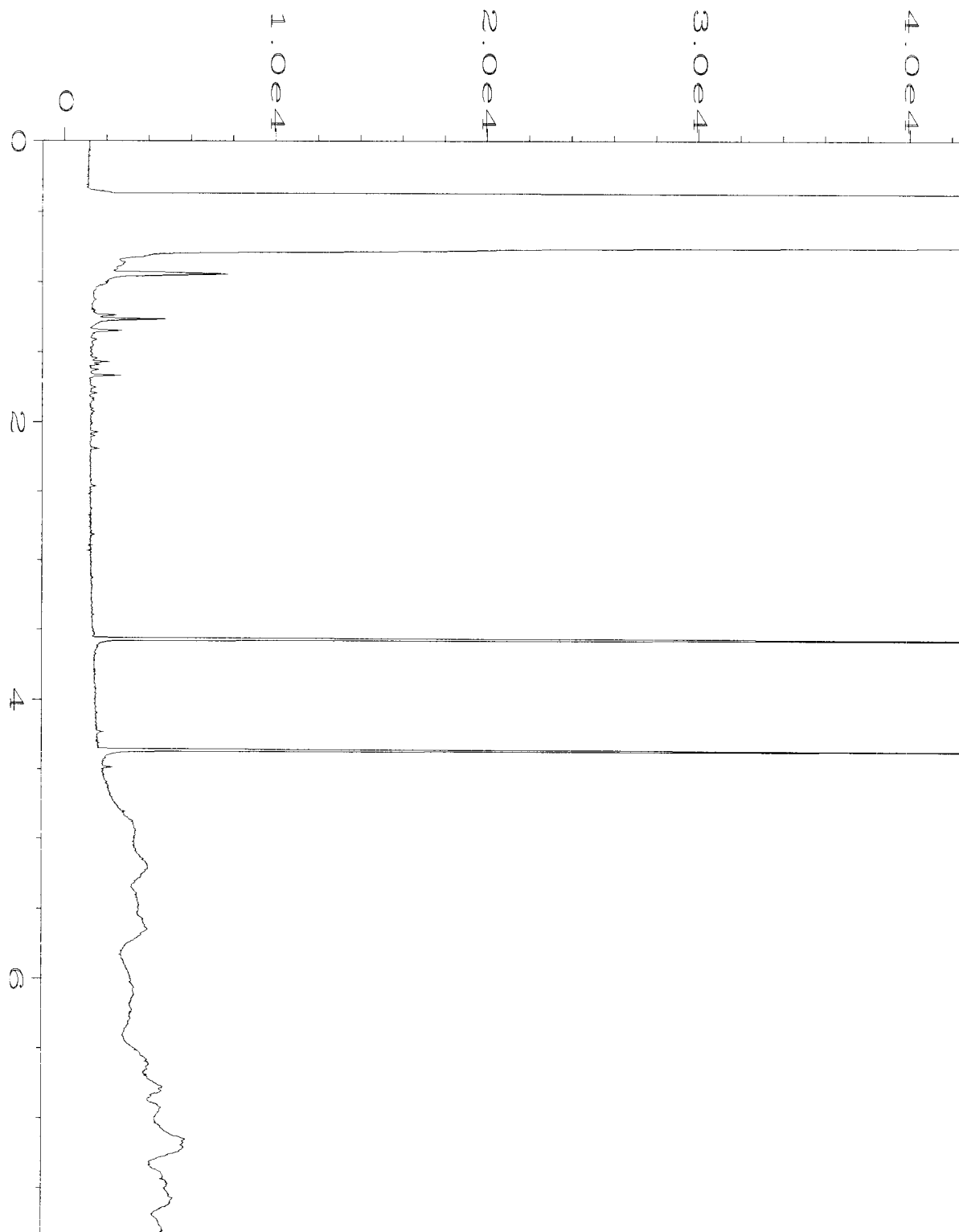
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Operator	: TL	Vial Number	: 18
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 905117-04	Sequence Line	: 3
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 07 May 19 11:57 AM	Analysis Method	: DX.MTH
Report Created on:	08 May 19 08:19 AM		



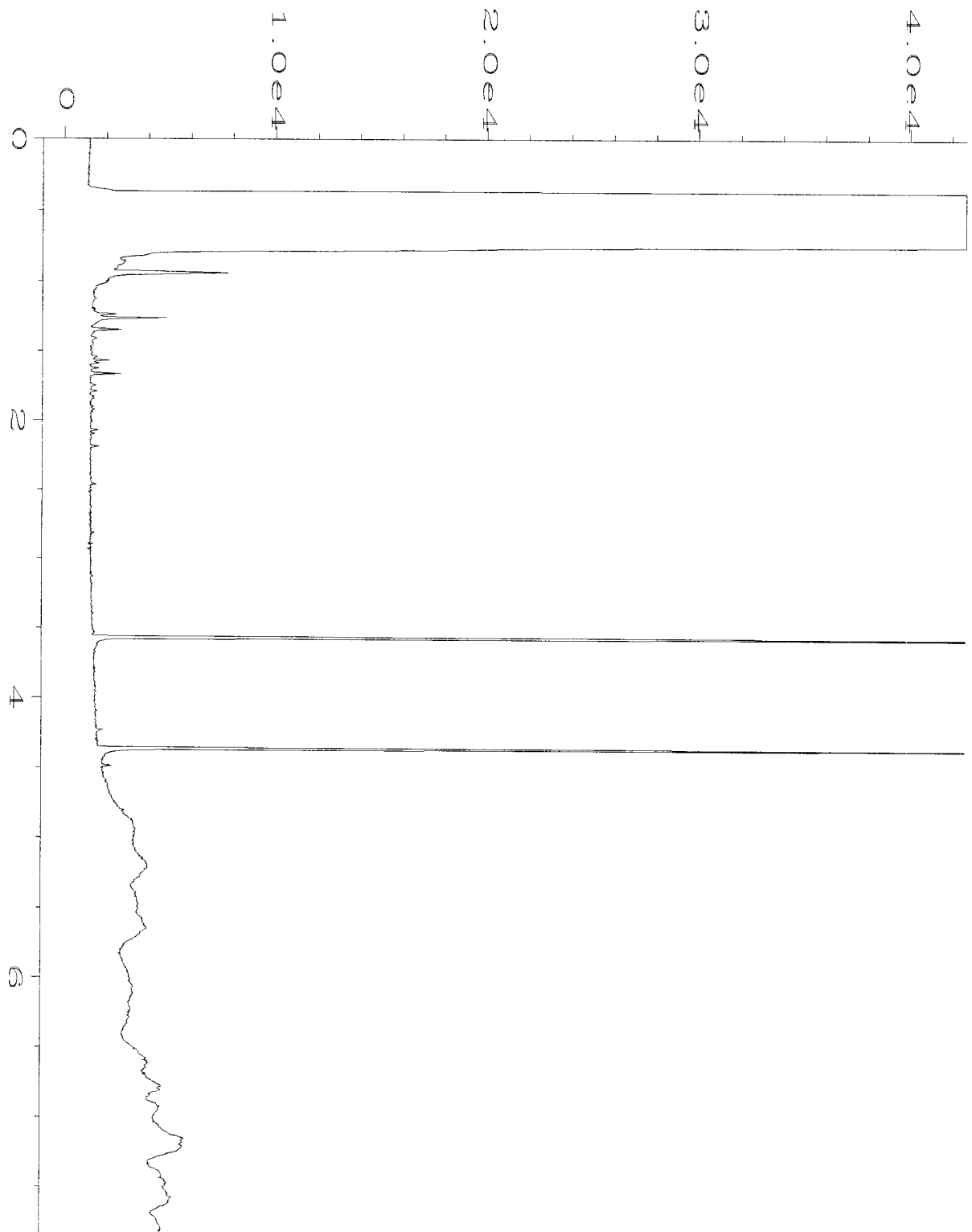
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Operator	: TL	Vial Number	: 19
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 905117-05	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 07 May 19 01:27 PM	Analysis Method	: DX.MTH
Report Created on:	08 May 19 08:19 AM		



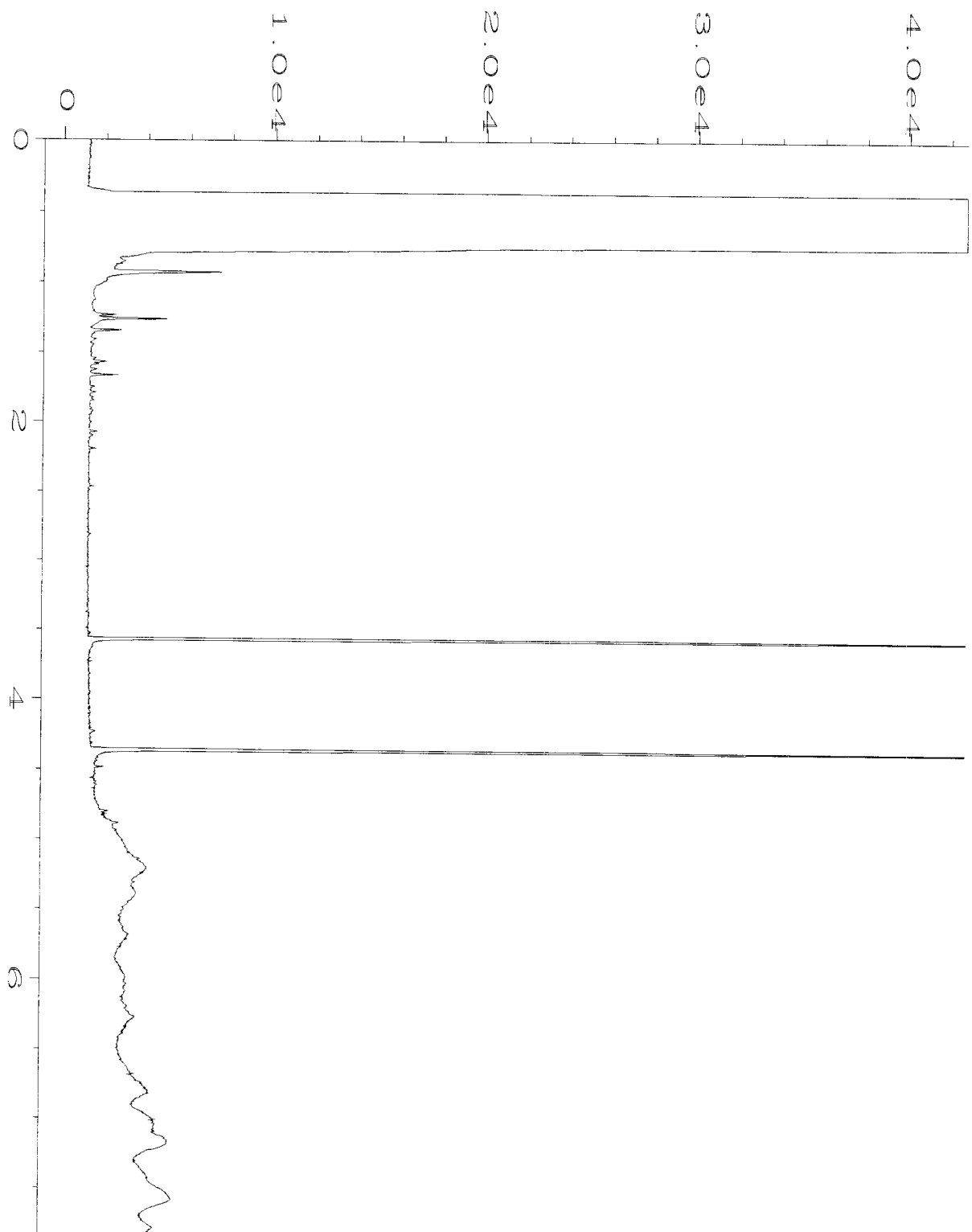
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Operator	: TL	Vial Number	: 20
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 905117-06	Sequence Line	: 6
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 07 May 19 01:55 PM	Analysis Method	: DX.MTH
Report Created on:	08 May 19 08:20 AM		



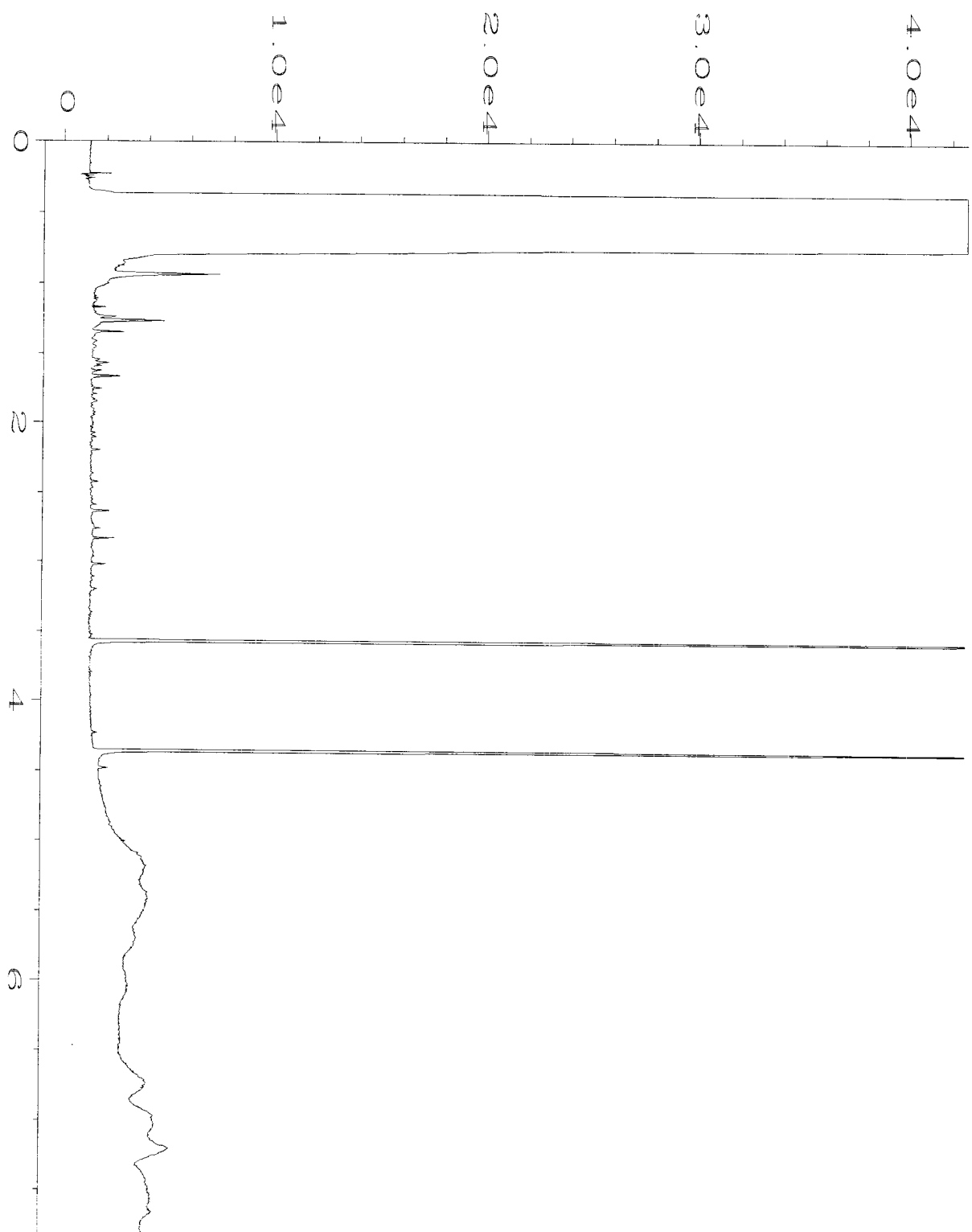
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Operator	: TL	Vial Number	: 21
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 905117-07	Sequence Line	: 6
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 07 May 19 02:05 PM	Analysis Method	: DX.MTH
Report Created on:	08 May 19 08:20 AM		



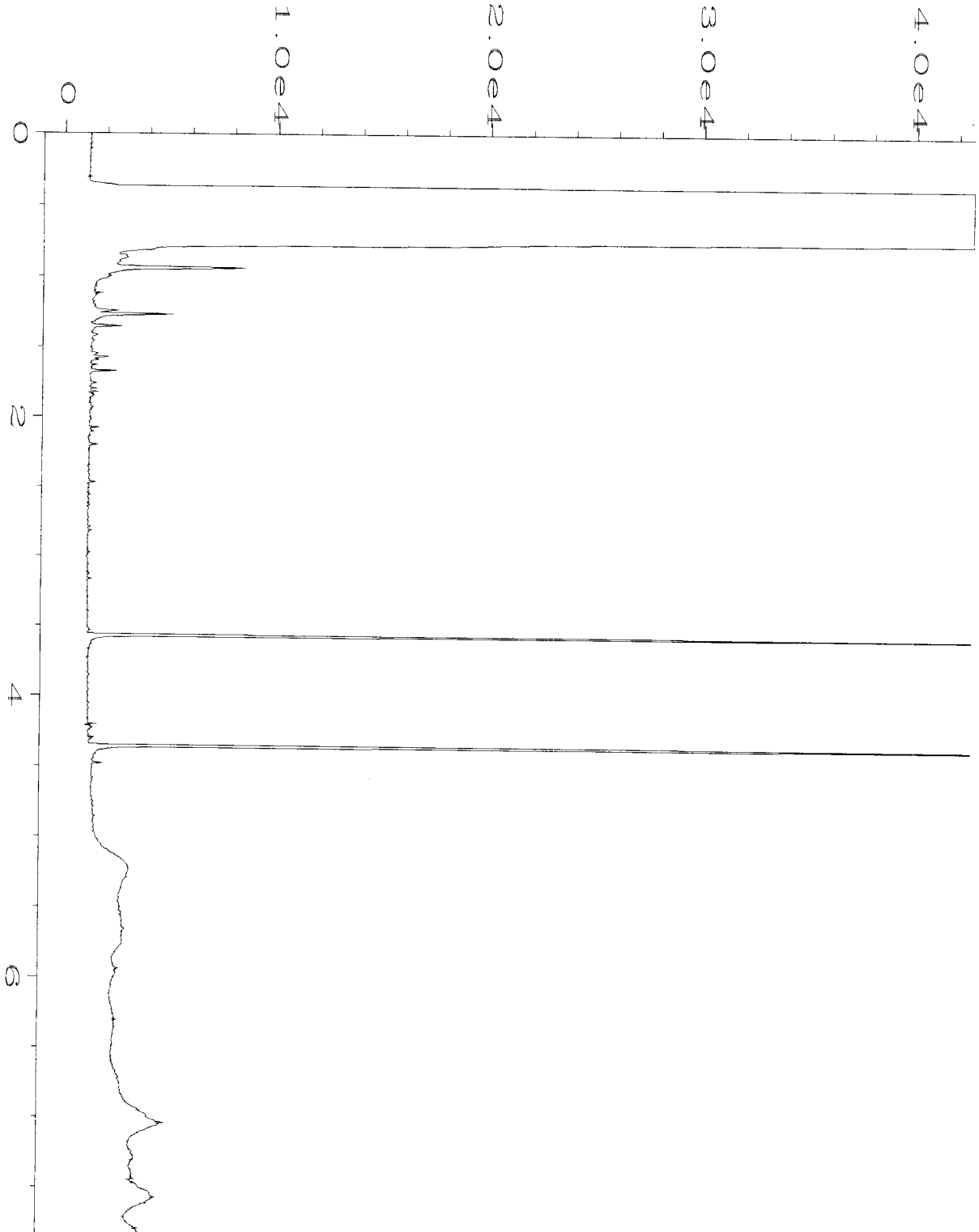
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Instrument	: GC#4	Injection Number	: 1
Sample Name	: 905117-07	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 07 May 19 02:05 PM	Analysis Method	: DX.MTH
Report Created on:	08 May 19 08:21 AM		



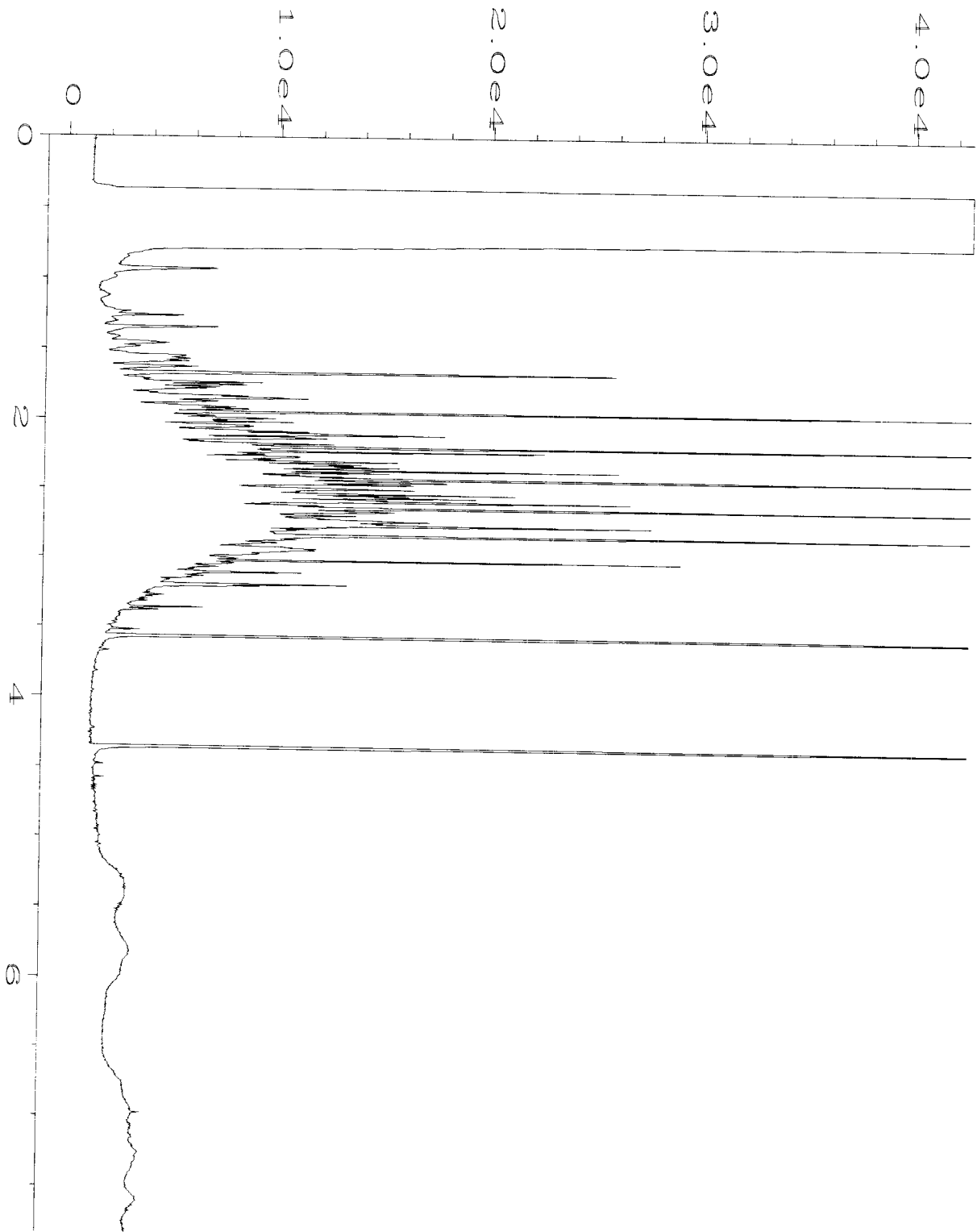
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Instrument	: GC#4	Injection Number	: 1
Sample Name	: 905117-08	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 07 May 19 02:17 PM	Analysis Method	: DX.MTH
Report Created on:	08 May 19 08:21 AM		



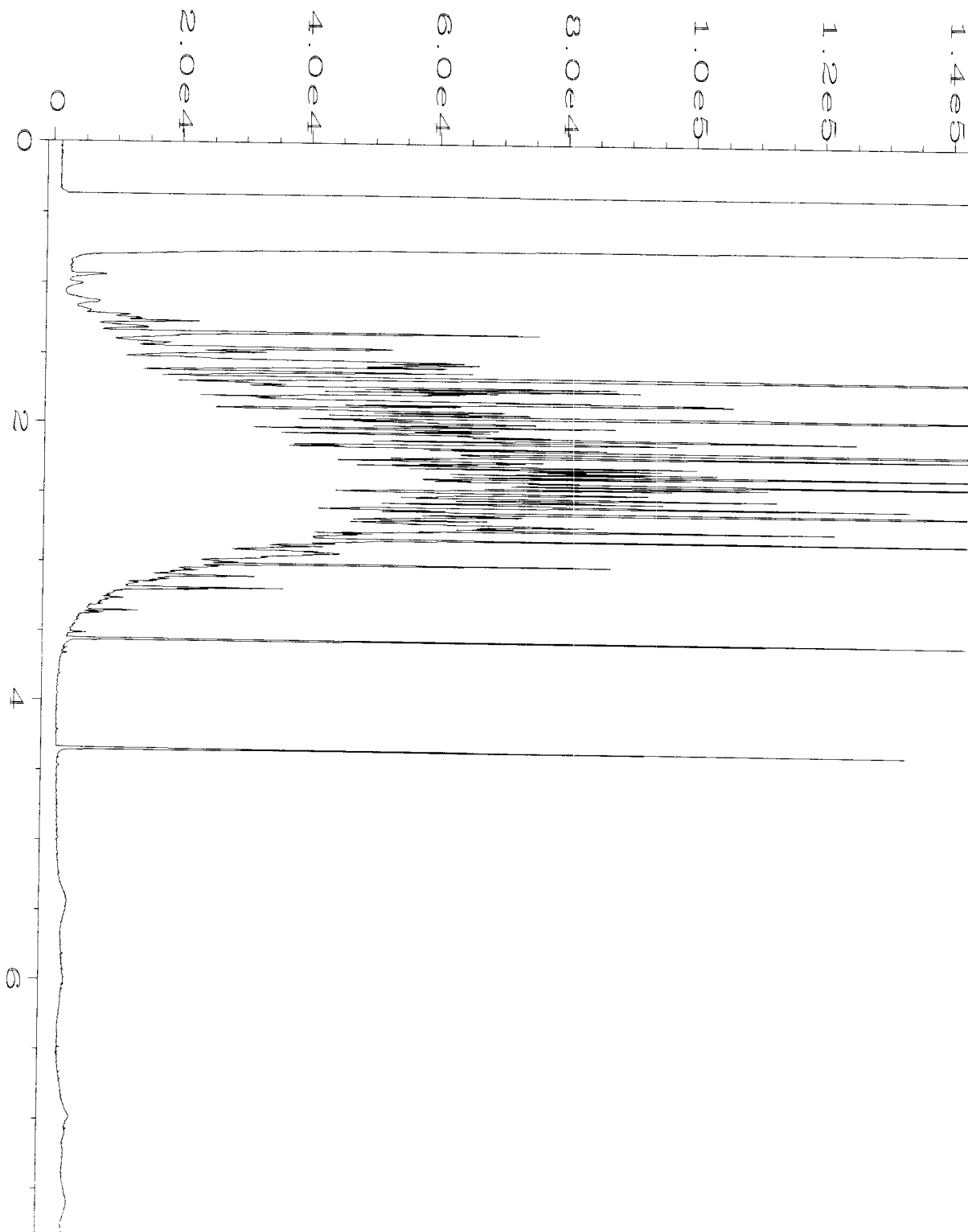
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Operator	: TL	Vial Number	: 23
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 905117-09	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 07 May 19 02:29 PM	Analysis Method	: DX.MTH
Report Created on:	08 May 19 08:21 AM		



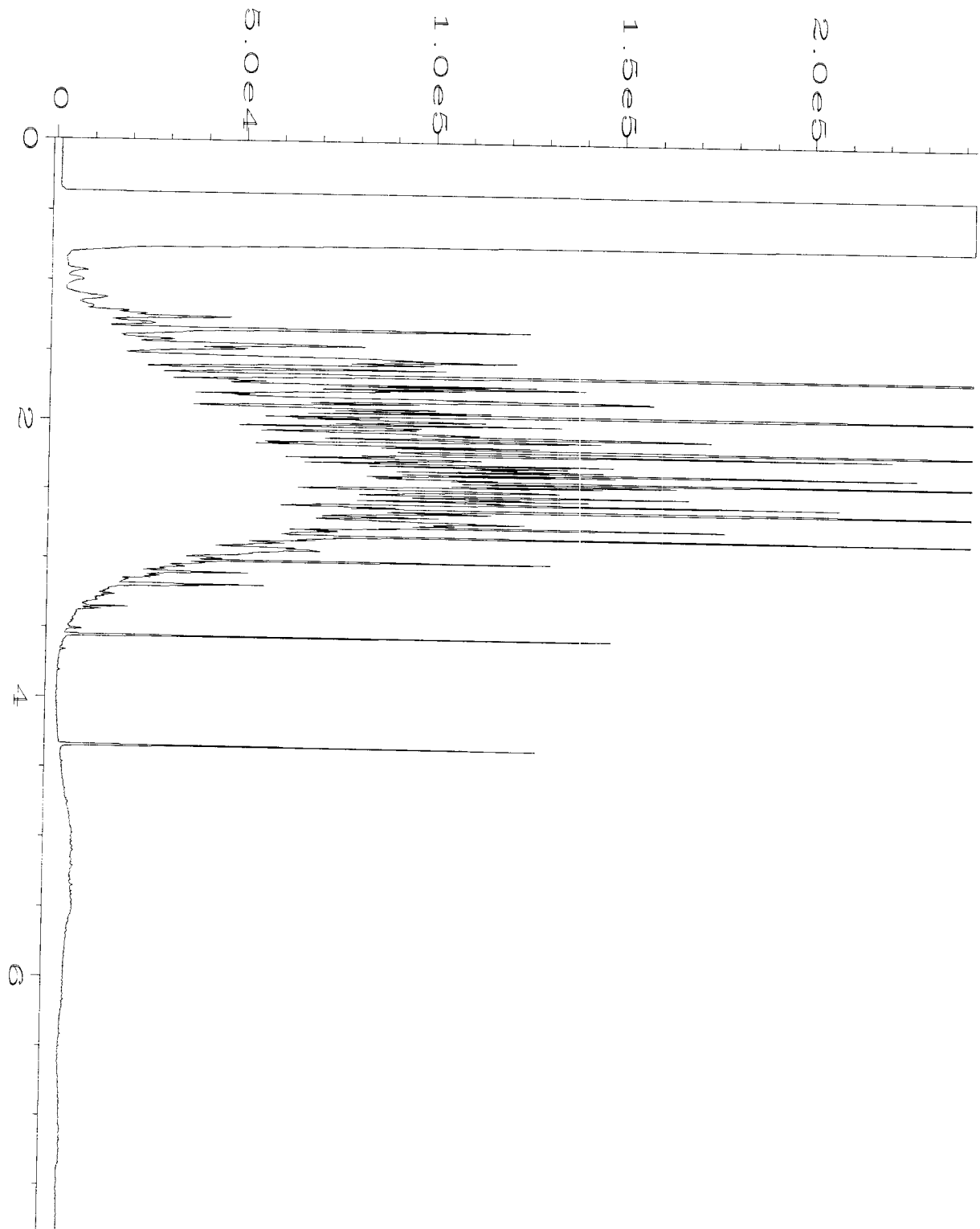
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Operator	: TL	Vial Number	: 24
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 905117-10	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 07 May 19 02:42 PM	Analysis Method	: DX.MTH
Report Created on:	08 May 19 08:21 AM		



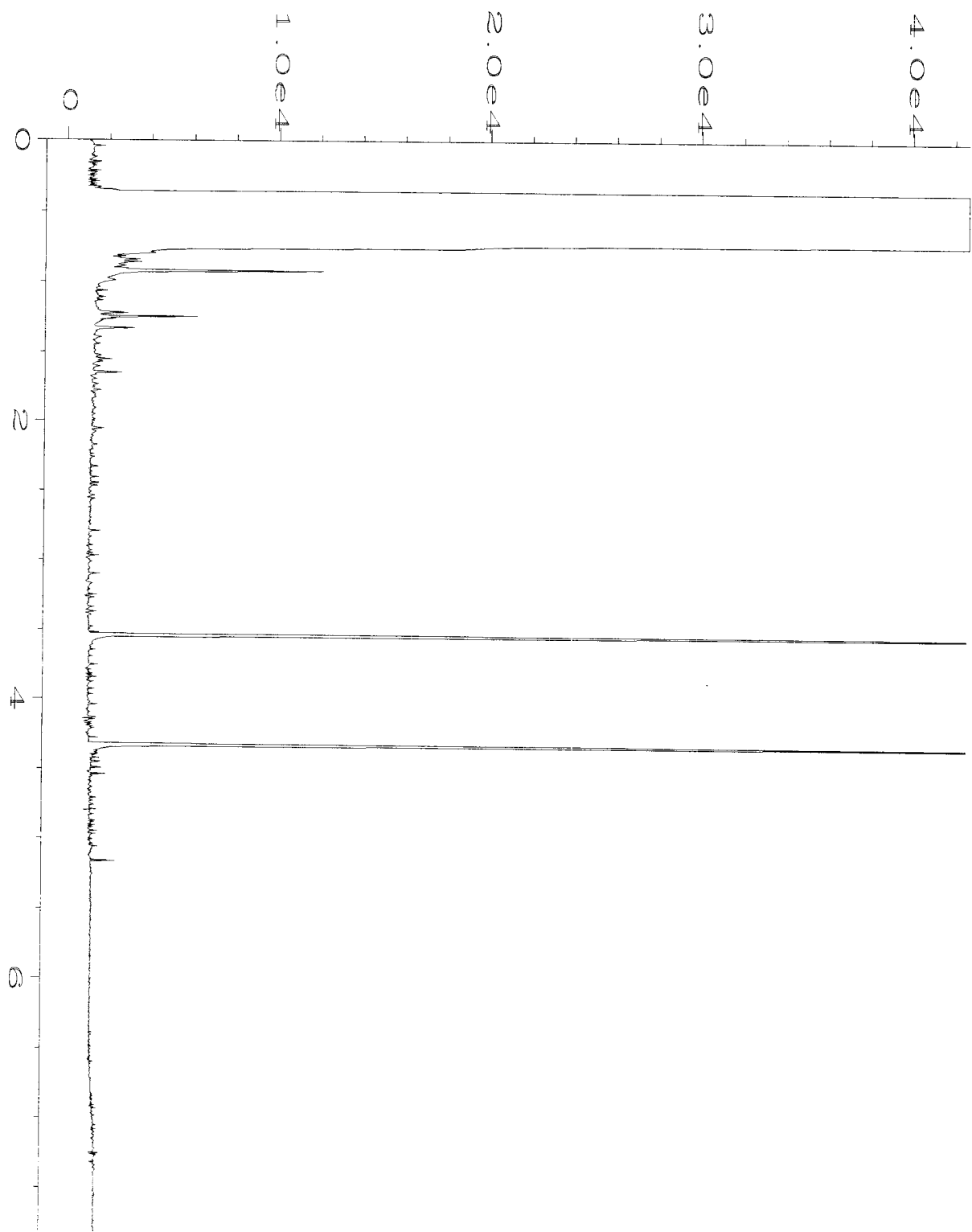
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Instrument	: GC#4	Injection Number	: 1
Sample Name	: 905117-11	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 07 May 19 02:54 PM	Analysis Method	: DX.MTH
Report Created on:	08 May 19 08:21 AM		



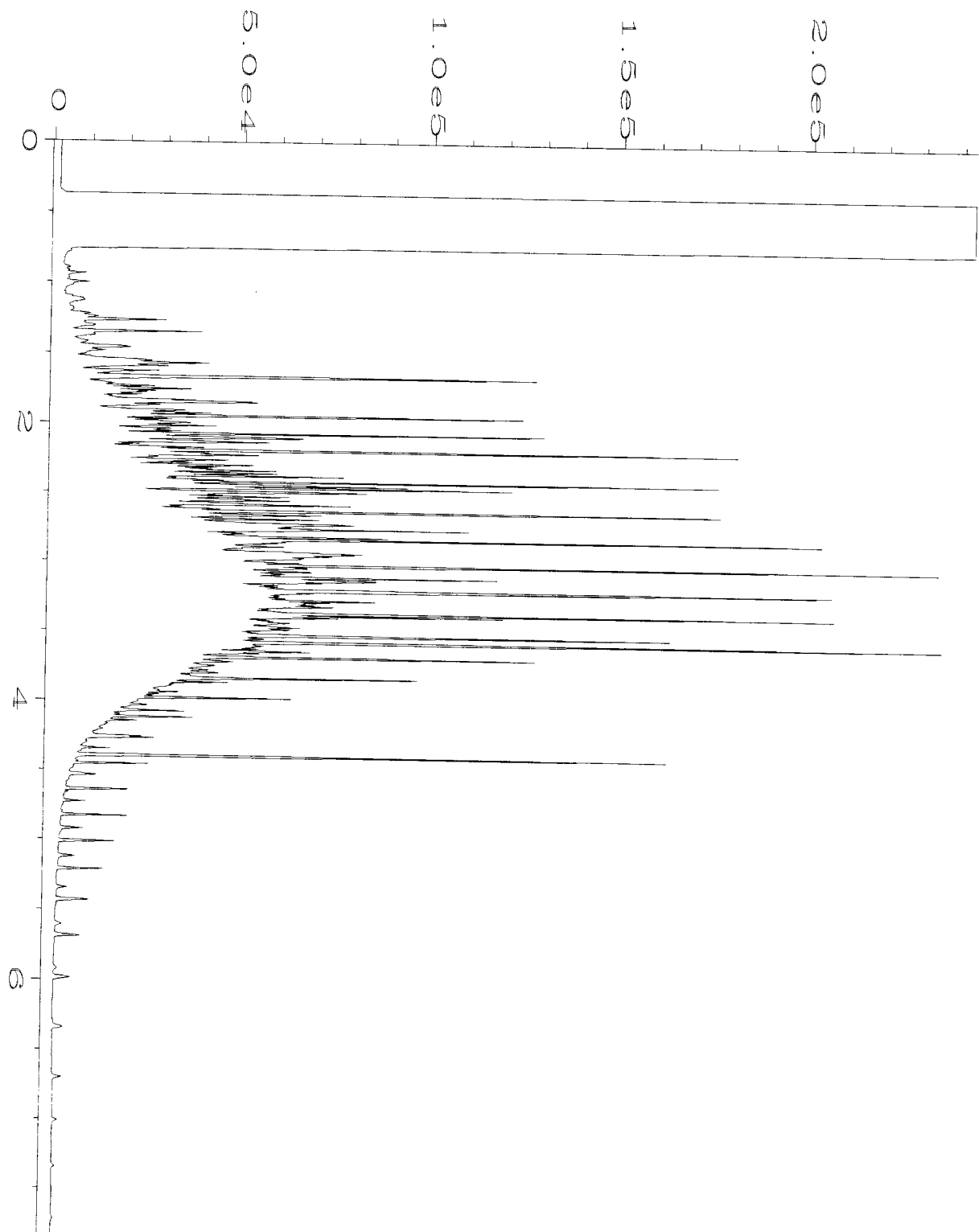
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Operator	: TL	Vial Number	: 26
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 905117-12	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 07 May 19 03:06 PM	Analysis Method	: DX.MTH
Report Created on:	08 May 19 08:22 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-07-19\027F0601.D	Page Number	: 1
Operator	: TL	Vial Number	: 27
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 905117-13	Sequence Line	: 6
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 07 May 19 03:19 PM	Analysis Method	: DX.MTH
Report Created on:	08 May 19 08:22 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-07-19\011F0301.D	Page Number	: 1
Operator	: TL	Vial Number	: 11
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 09-1052 mb	Sequence Line	: 3
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 07 May 19 10:32 AM	Analysis Method	: DX.MTH
Report Created on:	08 May 19 08:19 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-07-19\005F1201.D	Page Number	: 1
Operator	: TL	Vial Number	: 5
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 1000 Dx 57-31B	Sequence Line	: 12
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 07 May 19 09:55 PM	Analysis Method	: DX.MTH
Report Created on:	08 May 19 08:22 AM		

QDS117

SAMPLE CHAIN OF CUSTODY

ME 05-06-19

203

Send Report to Mindy Graddon, Chris Carter

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Avenue E, Suite 2000

City, State, ZIP Seattle, Washington 98102

Phone # 206-306-1900 Fax # 206-306-1907

SAMPLERS (signature) [Signature]  
PROJECT NAME/NO. 1295-001  
PO #

REMARKS

REMARKS

Page # 1 of 2  
RETURN/ROUND 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	ANALYSES REQUESTED						Notes	
								NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	Dissolved Lead		
EX02-SSW-0.25	EX02-SSW	0.25	01	5/6/19	1117	S:1	1	X							
EX02-BOT01-0.25	EX02-BOT		02		1122			X							
EX02-ESWB1-0.25	EX02-ESW		03		1126			X							
EX02-BOT02-0.25	EX02-BOT		04		1132			X							
EX02-BOT03-0.25	EX02-BOT		05		1137			X							
EX02-ESW07-0.25	EX02-ESW		06		1143			X							
EX02-BOT04-0.25	EX02-BOT		07		1148			X							
EX02-ESW03-0.25	EX02-ESW		08		1153			X							
EX02-BOT05-0.25	EX02-BOT		09		1158			X							
EX02-ESW04-0.25	EX02-ESW		10		1207			X							

Samples received at 4 °C

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\GOC\COC.DOC

SIGNATURE		PRINT NAME		COMPANY		DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>[Signature]</u>	Andrew Michnik		SES		5/6/19	1355
Received by: <u>[Signature]</u>	<u>[Signature]</u>	Liz Webber-Bruya		F?B1		5/6/19	1855
Relinquished by:							
Received by:							

905117  
SES

**SAMPLE CHAIN OF CUSTODY**

W@ 05-06-19

D03

Report To \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City, State, ZIP \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

SAMPLERS (signature)

PROJECT NAME

1295-001

PO #

REMARKS

INVOICE TO

Page # 7 of 2

TURNAROUND TIME

- Standard Turnaround
- RUSH

Rush charges authorized by: \_\_\_\_\_

SAMPLE DISPOSAL

- Dispose after 30 days
- Archive Samples
- Other

**ANALYSES REQUESTED**

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	Notes
EX02-B6166-0.25	11	5/6/19	1209	Soil	1	X							
EX02-WSW01-0.50	12	5/6/19	1217			X	X						
EX02-NSW-0.25	13	5/6/19	1226										
EX 62-SSW01-0.25	14	5/6/19	1232										HOLD
ALVIN 05/06/19													

**SIGNATURE**

Relinquished by: \_\_\_\_\_

Received by: \_\_\_\_\_

Relinquished by: \_\_\_\_\_

Received by: \_\_\_\_\_

**PRINT NAME**

Andrew Mikhal

Liz Weber-Bruga

**COMPANY**

SES

ESB1

DATE

5/6/19

5/6/19

TIME

1355

1355

Friedman & Bruga, Inc.

3012 16<sup>th</sup> Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

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 23, 2019

Mindy Graddon, Project Manager  
SoundEarth Strategies  
2811 Fairview Ave. East, Suite 2000  
Seattle, WA 98102

Dear Ms Graddon:

Included is the amended report from the testing of material submitted on May 17, 2019 from the SOU\_1295-001\_20190517, F&BI 905380 project. Sample ID Ex02-WSW02-0.80 has been amended to Ex02-WSW02-0.50.

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: Chris Carter  
SOU0522R.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

May 22, 2019

Mindy Graddon, Project Manager  
SoundEarth Strategies  
2811 Fairview Ave. East, Suite 2000  
Seattle, WA 98102

Dear Ms Graddon:

Included are the results from the testing of material submitted on May 17, 2019 from the SOU\_1295-001\_ 20190517, F&BI 905380 project. There are 4 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. 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: Chris Carter  
SOU0522R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 17, 2019 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_1295-001\_ 20190517, F&BI 905380 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
905380 -01	Ex02-WSW02-0.50
905380 -02	Ex02-WSW03-0.50
905380 -03	Ex02-WSW04-0.50
905380 -04	Ex02-NSW-0.50
905380 -05	Ex02-NSW01-0.25

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/22/19

Date Received: 05/17/19

Project: SOU\_1295-001\_ 20190517, F&BI 905380

Date Extracted: 05/20/19

Date Analyzed: 05/20/19

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<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 53-144)
Ex02-WSW02-0.50 905380-01	5,200	<250	84
Ex02-NSW-0.50 905380-04	2,100	<250	84
Ex02-NSW01-0.25 905380-05	<50	<250	73
Method Blank 09-1168 MB	<50	<250	89

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/22/19

Date Received: 05/17/19

Project: SOU\_1295-001\_ 20190517, F&BI 905380

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL EXTENDED USING METHOD NWTPH-D<sub>x</sub>**

Laboratory Code: 905393-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	108	128	64-133	17

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	124	58-147

# 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 analyte 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 due to sample matrix effects.

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.

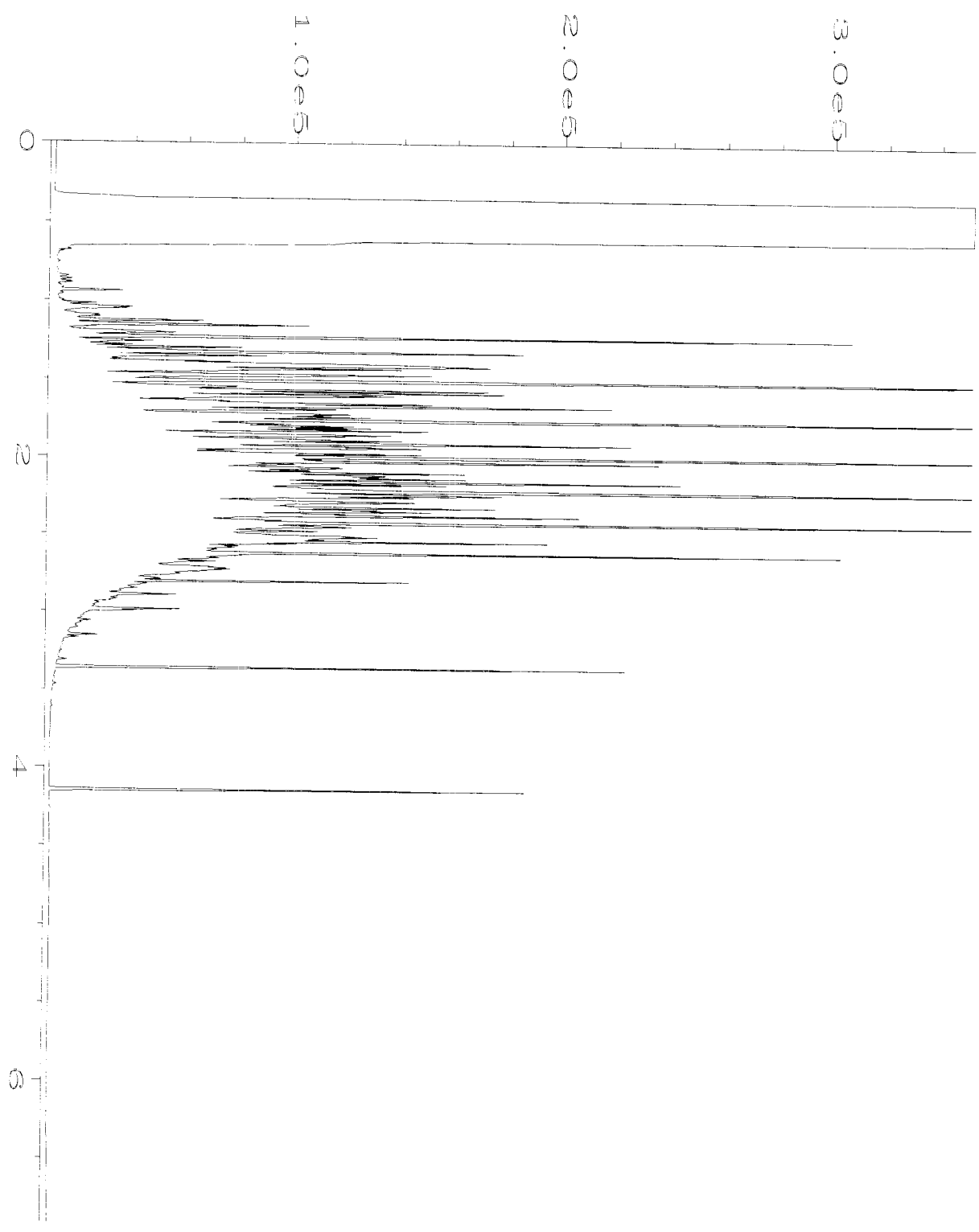
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.

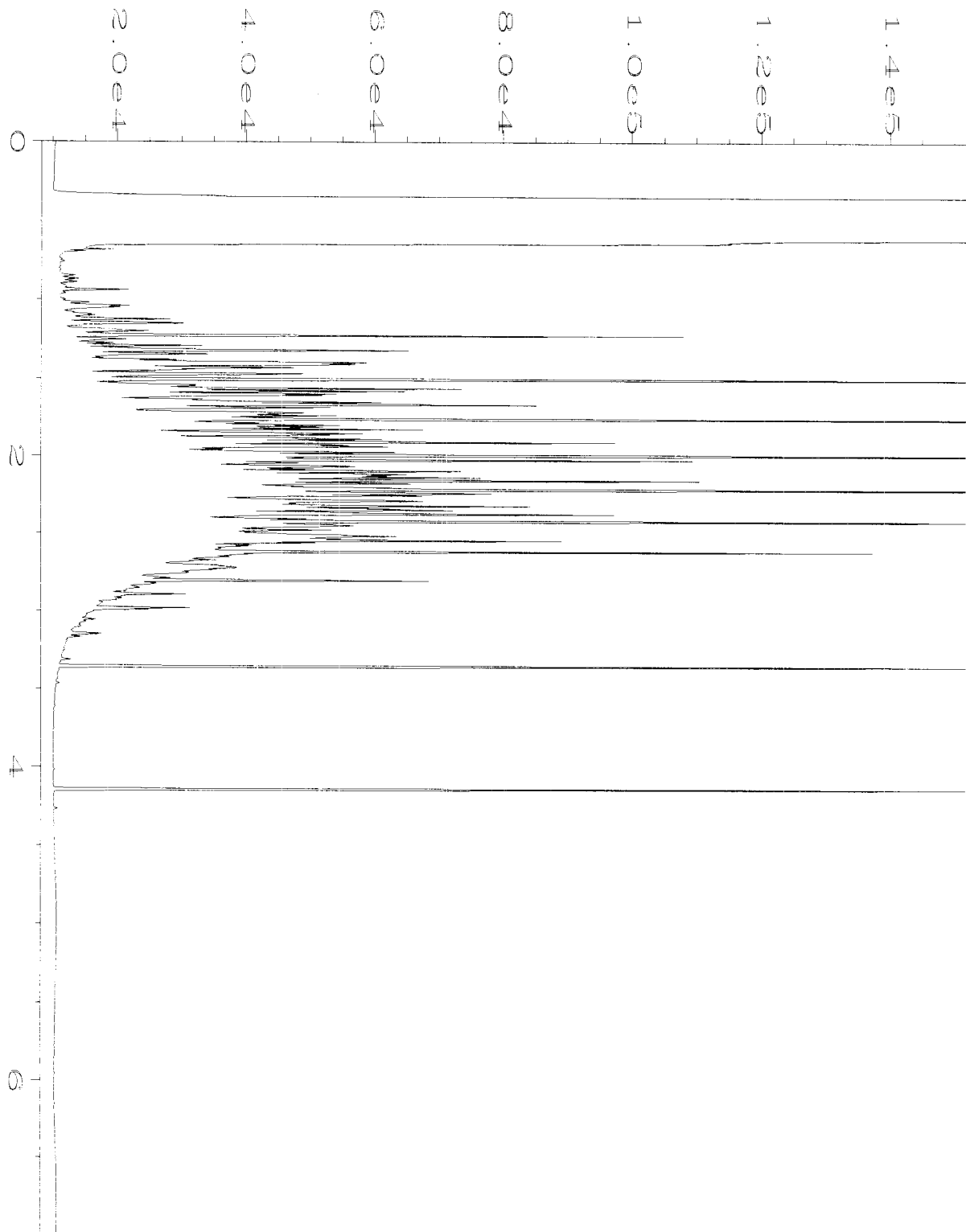
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

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

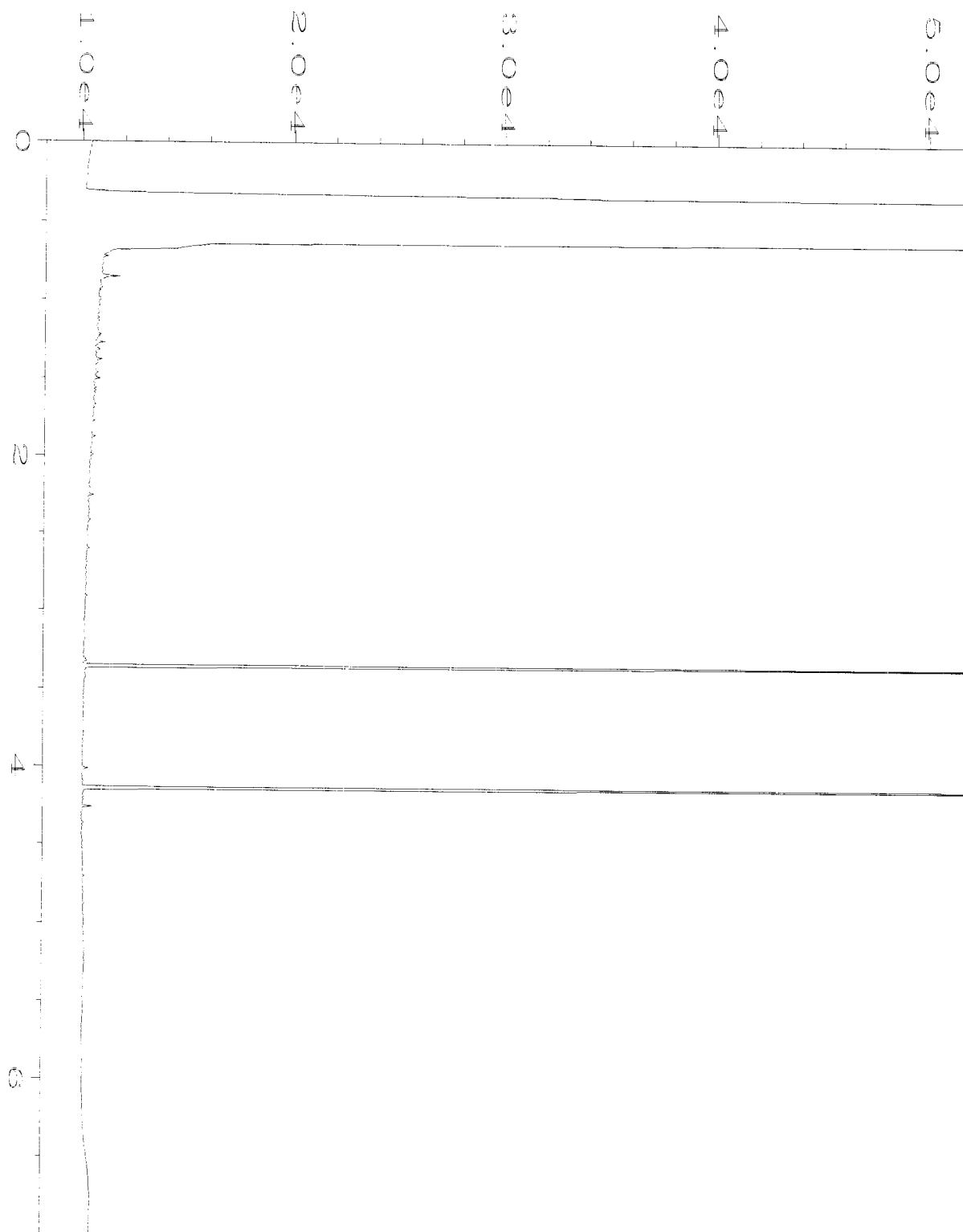
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



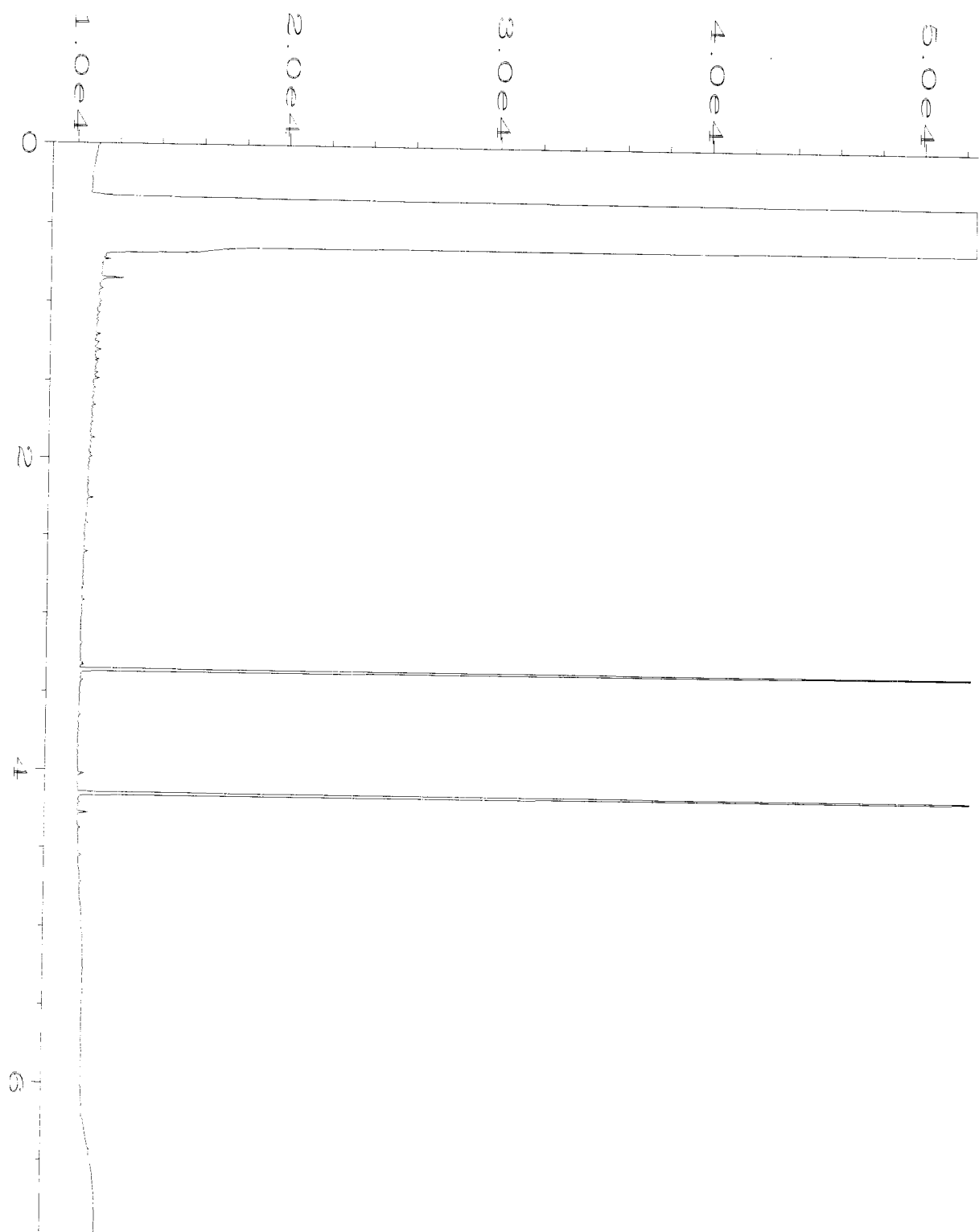
Data File Name	: C:\HPCHEM\6\DATA\05-20-19\027F0501.D	Page Number	: 1
Operator	: TL	Vial Number	: 27
Instrument	: GC6	Injection Number	: 1
Sample Name	: 905380-01	Sequence Line	: 5
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 20 May 19 12:02 PM	Analysis Method	: DX.MTH
Report Created on:	21 May 19 07:21 AM		



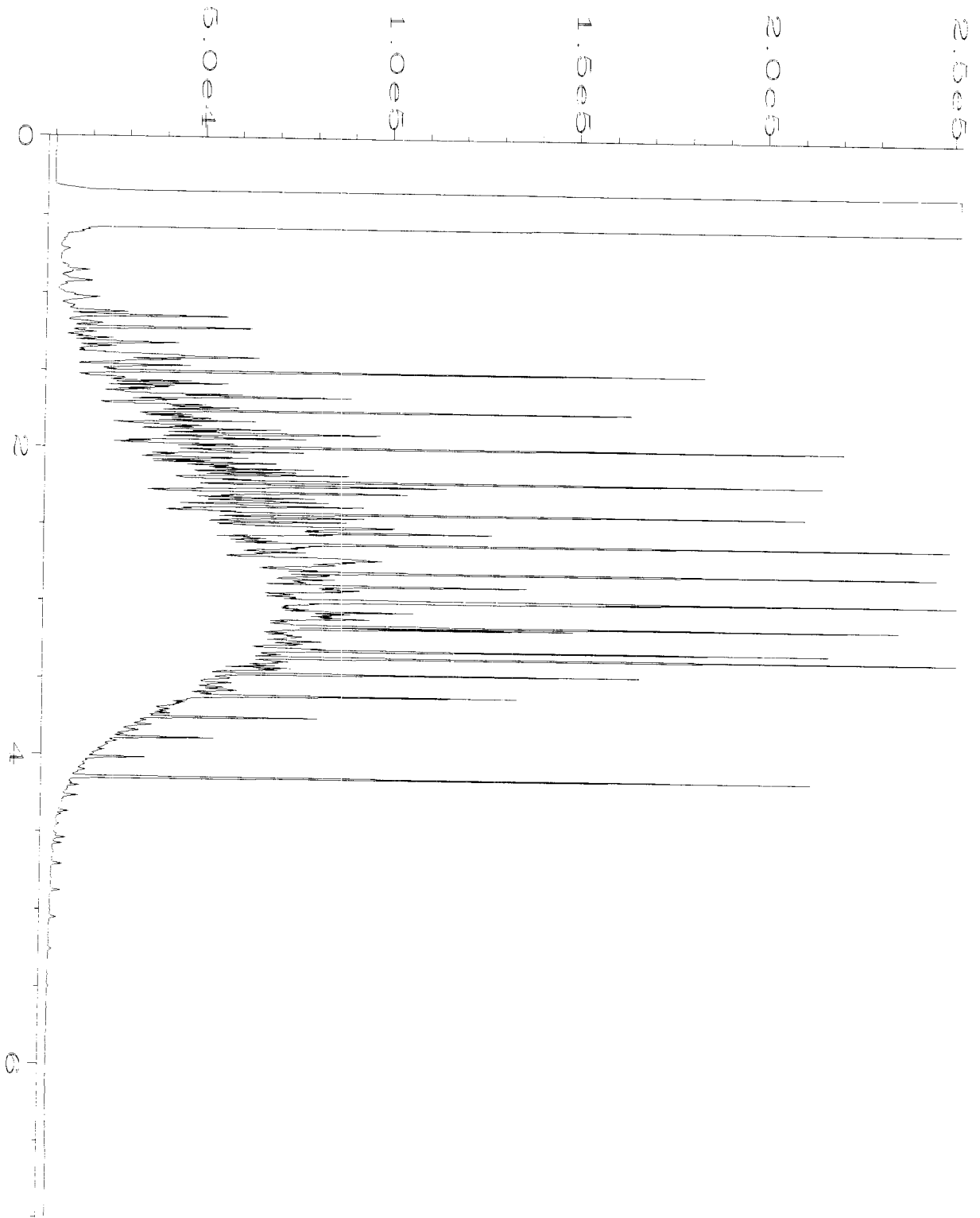
Data File Name	: C:\HPCHEM\6\DATA\05-20-19\028F0501.D	Page Number	: 1
Operator	: TL	Vial Number	: 28
Instrument	: GC6	Injection Number	: 1
Sample Name	: 905380-04	Sequence Line	: 5
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 20 May 19 12:11 PM	Analysis Method	: DX.MTH
Report Created on:	21 May 19 07:21 AM		



Data File Name	: C:\HPCHEM\6\DATA\05-20-19\029F0701.D	Page Number	: 1
Operator	: TL	Vial Number	: 29
Instrument	: GC6	Injection Number	: 1
Sample Name	: 905380-05	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 20 May 19 12:44 PM	Analysis Method	: DX.MTH
Report Created on:	21 May 19 07:21 AM		



Data File Name	: C:\HPCHEM\6\DATA\05-20-19\006F0301.D	Page Number	: 1
Operator	: TL	Vial Number	: 6
Instrument	: GC6	Injection Number	: 1
Sample Name	: 09-1168 mb	Sequence Line	: 3
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 20 May 19 08:02 AM	Analysis Method	: DX.MTH
Report Created on:	21 May 19 07:20 AM		



Data File Name	: C:\HPCHEM\6\DATA\05-20-19\005F1201.D	Page Number	: 1
Operator	: TL	Vial Number	: 5
Instrument	: GC6	Injection Number	: 1
Sample Name	: 1000 Dx 57-31B	Sequence Line	: 12
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 20 May 19 06:57 PM	Analysis Method	: DX.MTH
Report Created on:	21 May 19 07:22 AM		

905380

SAMPLE CHAIN OF CUSTODY

ME 05-17-19

E02

Send Report To Mindy Gradson, Chris Carter

Company Sound Earth Strategies

Address 2811 Fairview Ave E #2000

City, State, ZIP Seattle WA 98102

Phone # 206 306 1900 Fax # \_\_\_\_\_

Email Address \_\_\_\_\_

SAMPLERS (signature) <u>[Signature]</u>	PO # <u>1295-001</u>
PROJECT NAME/NO. <u>Castle and Cooke Aviation</u>	
PROJECT ADDRESS <u>3224 104th St SW Everett WA</u>	
* ELECTRONIC DATA REQUESTED	

TURNAROUND TIME <u>1</u> of <u>1</u>
Standard Turnaround
RUSH
Rush charges authorized by: _____
SAMPLE DISPOSAL
• Dispose after 30 days
• Return samples
• Will call with instructions
Samples Received at _____ °C

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED					Notes	
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270		HFS
EX02-WSW02-080	01	5/17/19	0947	Soil	1	X						HOLD
EX02-WSW03-050	02		1048									HOLD
EX02-WSW04-050	03		1036			X						
EX02-NSW-0.50	04		1017			X						
EX02-NSW01-025	05		1008			X						

SIGNATURE

Relinquished by: [Signature]

PRINT NAME Andrew Michniak

COMPANY SES

DATE 5/17/19

TIME 1200

Received by: [Signature]

PRINT NAME WJ Weber

COMPANY FIBER

DATE 5/17/19

TIME 1200

Relinquished by: \_\_\_\_\_

PRINT NAME \_\_\_\_\_

COMPANY \_\_\_\_\_

DATE \_\_\_\_\_

TIME \_\_\_\_\_

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

Temperature received at \_\_\_\_\_ °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

May 28, 2019

Mindy Graddon, Project Manager  
SoundEarth Strategies  
2811 Fairview Ave. East, Suite 2000  
Seattle, WA 98102

Dear Ms Graddon:

Included are the results from the testing of material submitted on May 23, 2019 from the SOU\_1295-001\_ 20190523, F&BI 905472 project. There are 4 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. 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: Chris Carter  
SOU0528R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 23, 2019 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_1295-001\_ 20190523, F&BI 905472 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
905472 -01	Ex02-NSW-1
905472 -02	Ex02-BOT07-1
905472 -03	Ex02-BOT07-2
905472 -04	Ex02-BOT07-3
905472 -05	Ex02-WSW02-1
905472 -06	Ex02-WSW02-2
905472 -07	Ex02-WSW02-3

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/28/19

Date Received: 05/23/19

Project: SOU\_1295-001\_ 20190523, F&BI 905472

Date Extracted: 05/23/19

Date Analyzed: 05/23/19

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<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 53-144)
Ex02-NSW-1 905472-01	170	<250	67
Ex02-WSW02-2 905472-06	<50	<250	66
Method Blank 09-1196 MB	<50	<250	82

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/28/19

Date Received: 05/23/19

Project: SOU\_1295-001\_ 20190523, F&BI 905472

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL EXTENDED USING METHOD NWTPH-D<sub>x</sub>**

Laboratory Code: 905460-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	200	113	111	64-133	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	109	58-147

# 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 analyte 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 due to sample matrix effects.

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.

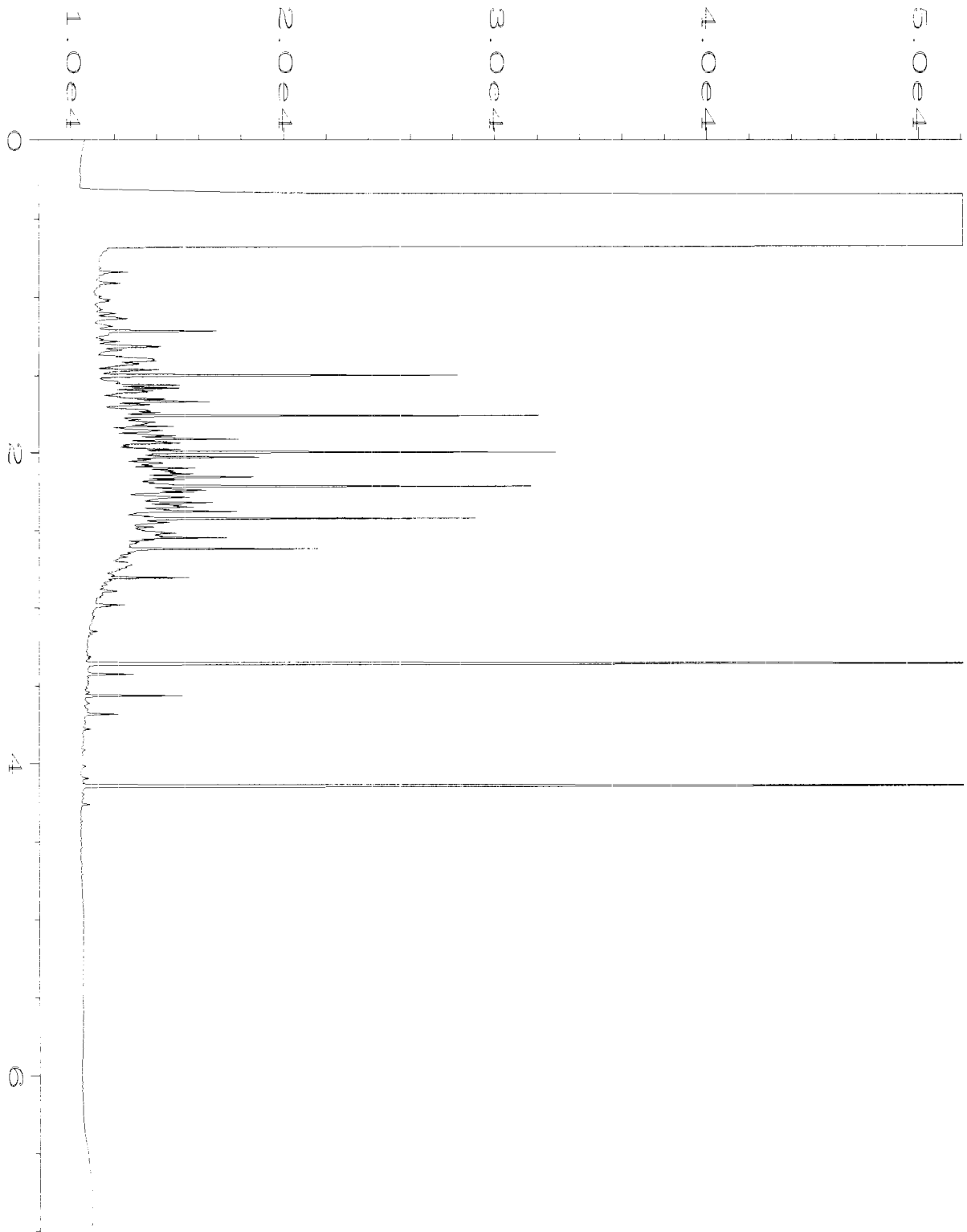
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.

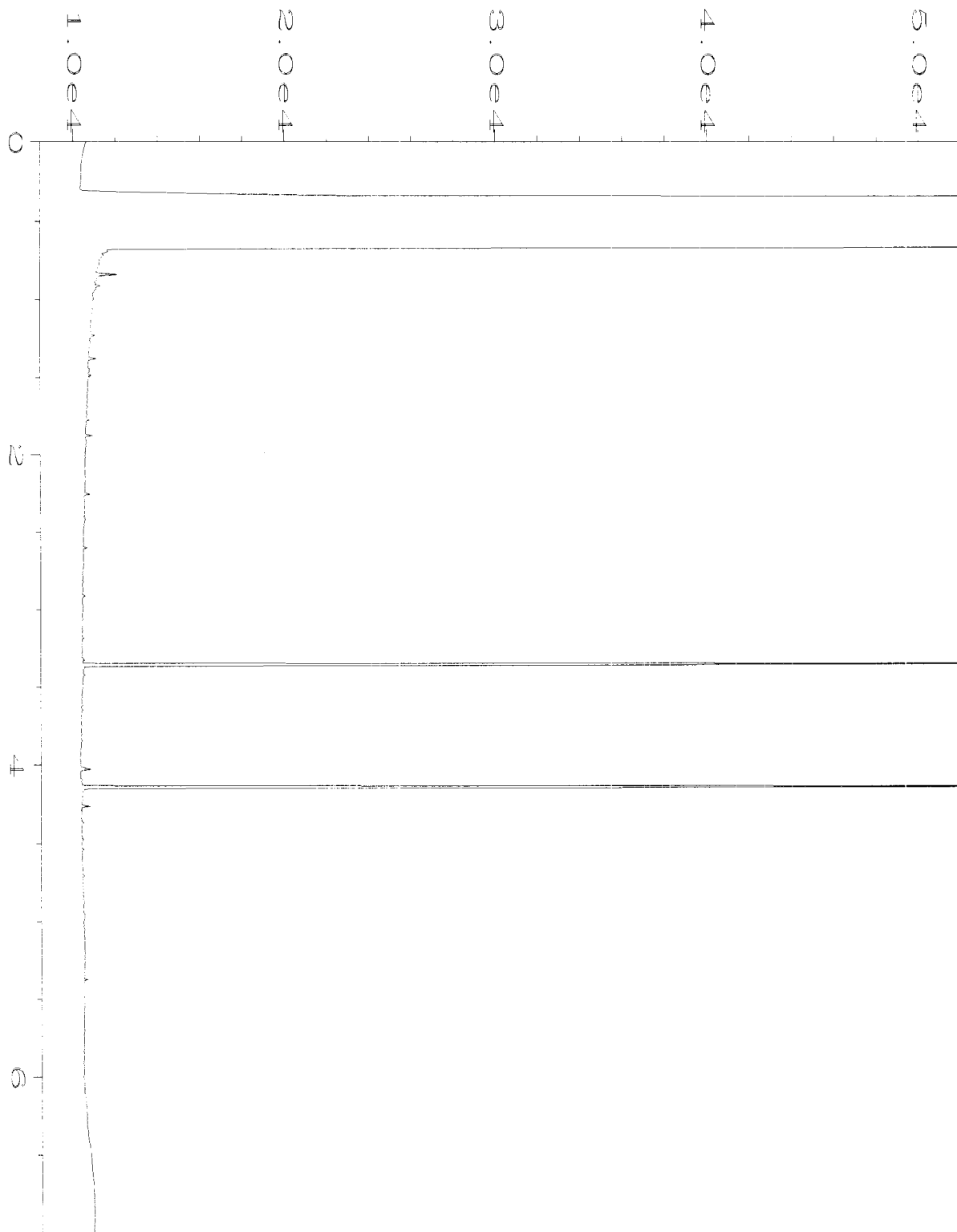
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

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

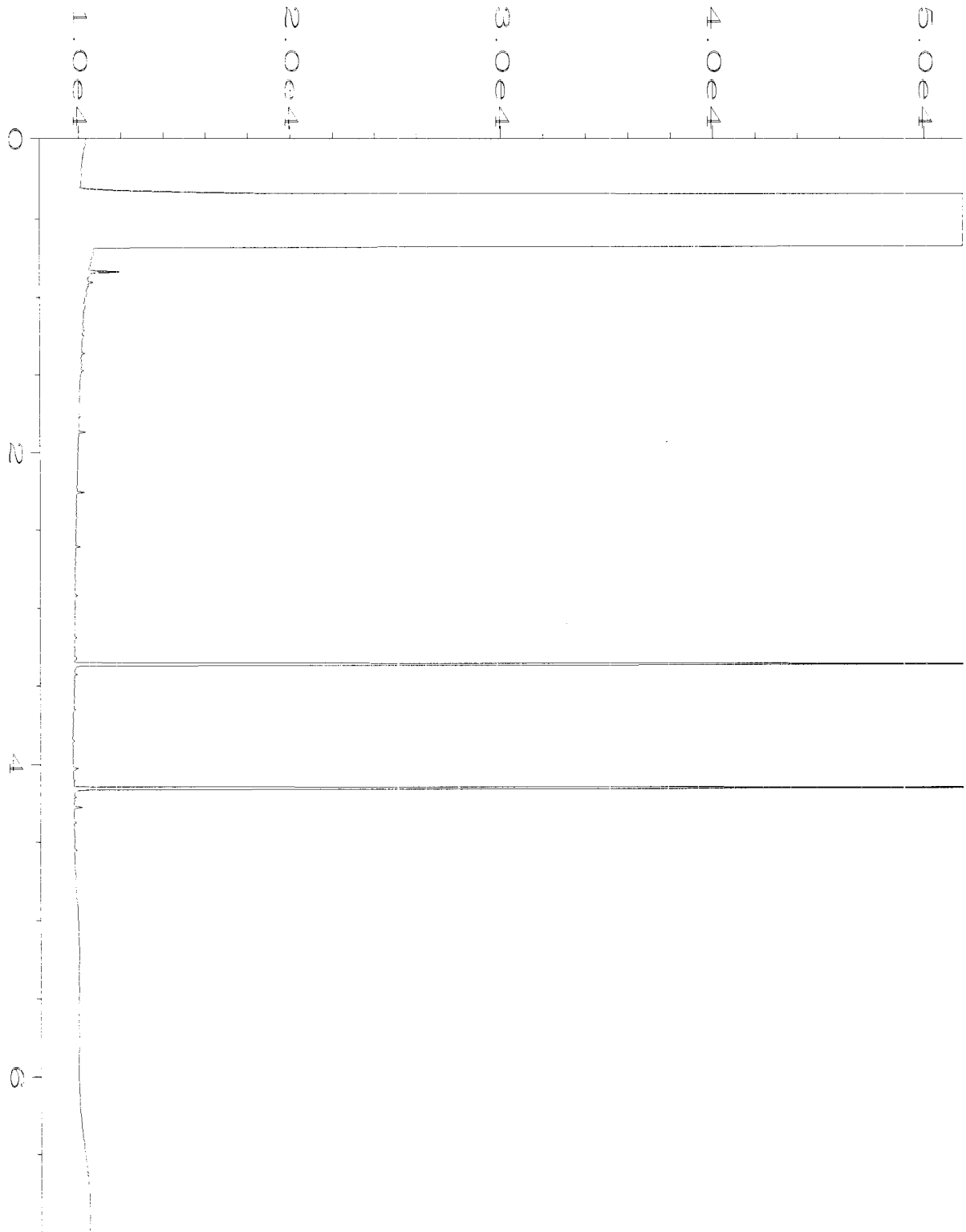
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



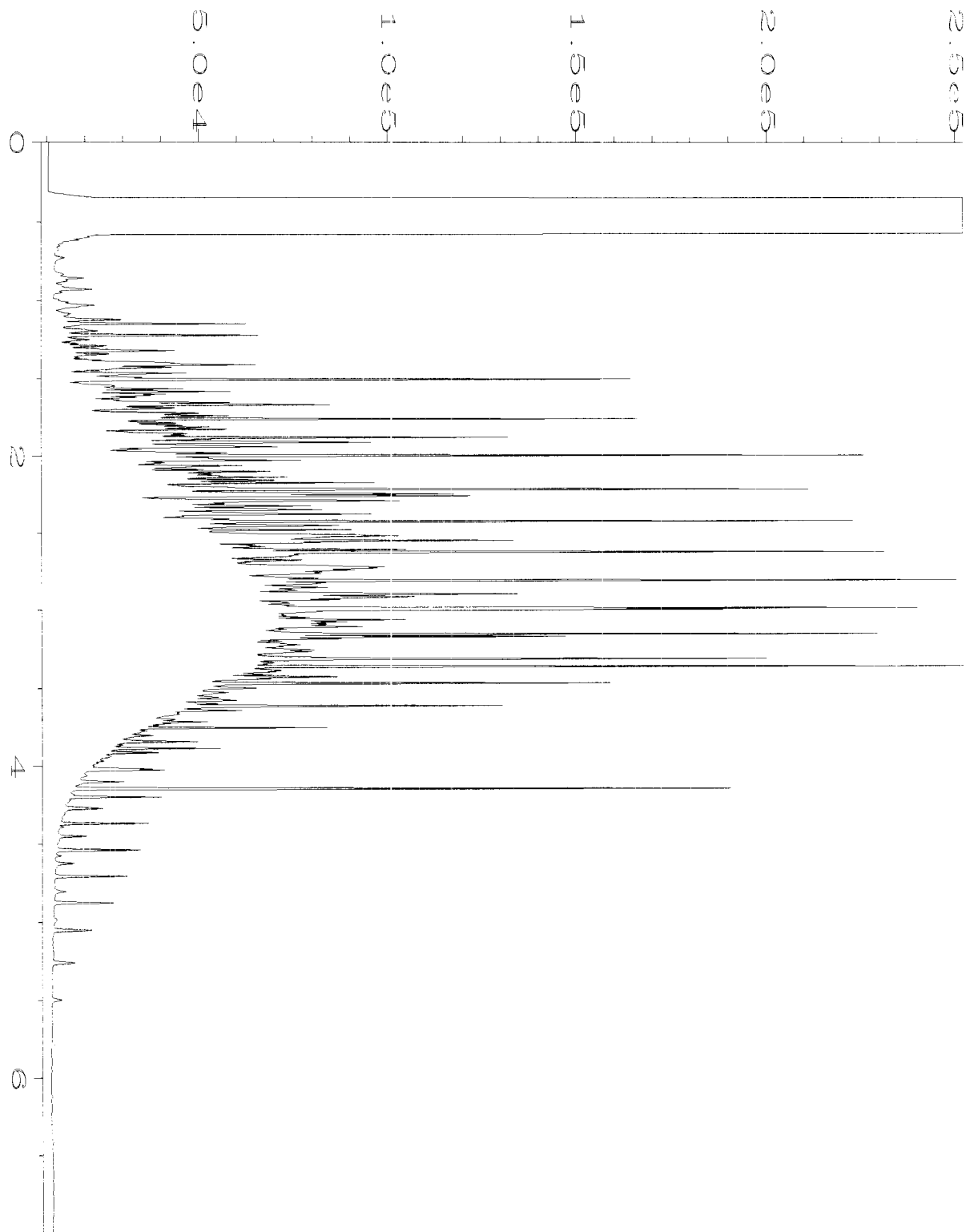
Data File Name	: C:\HPCHEM\6\DATA\05-23-19\035F0701.D	Page Number	: 1
Operator	: TL	Vial Number	: 35
Instrument	: GC6	Injection Number	: 1
Sample Name	: 905472-01	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 23 May 19 05:23 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	24 May 19 07:41 AM		



Data File Name	: C:\HPCHEM\6\DATA\05-23-19\036F0701.D	Page Number	: 1
Operator	: TL	Vial Number	: 36
Instrument	: GC6	Injection Number	: 1
Sample Name	: 905472-06	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 23 May 19 05:34 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	24 May 19 07:41 AM		



Data File Name	: C:\HPCHEM\6\DATA\05-23-19\006F0301.D	Page Number	: 1
Operator	: TL	Vial Number	: 6
Instrument	: GC6	Injection Number	: 1
Sample Name	: 09-1196 mb	Sequence Line	: 3
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 23 May 19 07:58 AM	Analysis Method	: DEFAULT.MTH
Report Created on:	24 May 19 07:40 AM		



Data File Name	: C:\HPCHEM\6\DATA\05-23-19\005F0801.D	Page Number	: 1
Operator	: TL	Vial Number	: 5
Instrument	: GC6	Injection Number	: 1
Sample Name	: 1000 Dx 57-31B	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 23 May 19 05:56 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	24 May 19 07:42 AM		

905472

SAMPLE CHAIN OF CUSTODY

ME 05/23/19

E02

Send Report to Mindy Graddon, Chris Carter

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Avenue F, Suite 2000

City, State, ZIP Seattle, Washington 98102

Phone # 206-306-1900 Fax # 206-306-1907

SAMPLERS (signature)

PROJECT NAME/NO. Castle and Locke Avadhya

1295-001

*Mindy Graddon*

PO #

REMARKS

Hold Samples

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	ANALYSES REQUESTED				Notes		
								NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOCs by 8260		SVOCs by 8270	Dissolved Lead
EX02-NSW-1	EX02-NSW	1	01	5/23/19	0926	Soil	1	X						Hold
EX02-B&T07-1	EX02-B&T07	1	02		0945		1							Hold
EX02-B&T07-2	EX02-B&T07	2	03		1005		1							Hold
EX02-B&T07-3	EX02-B&T07	3	04		1013		1							Hold
EX02WSW02-1	EX02-WSW02	1	05		1024		1							Hold
EX02WSW02-2	EX02-WSW02	2	06		1041		1	X						Hold
EX02WSW02-3	EX02-WSW02	3	07		1057		1							Hold

Friedman & Bryna, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS.COC.COC.DOC

SIGNATURE

Relinquished by:

Received by:

Relinquished by:

Received by:

PRINT NAME

Andrew Michniak

*Andrew Michniak*

COMPANY

SES

*SES*

DATE

5/23/19

*5/23/19*

TIME

1215

*1215*

Samples received at 5 °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

August 21, 2019

Mindy Graddon, Project Manager  
SoundEarth Strategies  
2811 Fairview Ave. East, Suite 2000  
Seattle, WA 98102

Dear Ms Graddon:

Included are the results from the testing of material submitted on August 15, 2019 from the SOU\_1295-001\_20190815, F&BI 908301 project. There are 4 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. 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: Chris Carter  
SOU0821R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on August 15, 2019 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_ 1295-001\_ 20190815, F&BI 908301 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
908301 -01	P01-1.0
908301 -02	P01-1.5
908301 -03	P01-2.0
908301 -04	P01-2.5
908301 -05	P01-3.0
908301 -06	P01-3.5
908301 -07	P01-4.0
908301 -08	P01-4.5
908301 -09	P01-5.0

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/21/19

Date Received: 08/15/19

Project: SOU\_1295-001\_20190815, F&BI 908301

Date Extracted: 08/16/19

Date Analyzed: 08/16/19

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<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 48-168)
P01-1.0 908301-01	1,990	<250	92
Method Blank 09-2012 MB2	<50	<250	91

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/21/19

Date Received: 08/15/19

Project: SOU\_ 1295-001\_ 20190815, F&BI 908301

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL EXTENDED USING METHOD NWTPH-D<sub>x</sub>**

Laboratory Code: 908281-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	1000	132	148 b	64-133	11

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	106	58-147

# 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 analyte 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 due to sample matrix effects.

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.

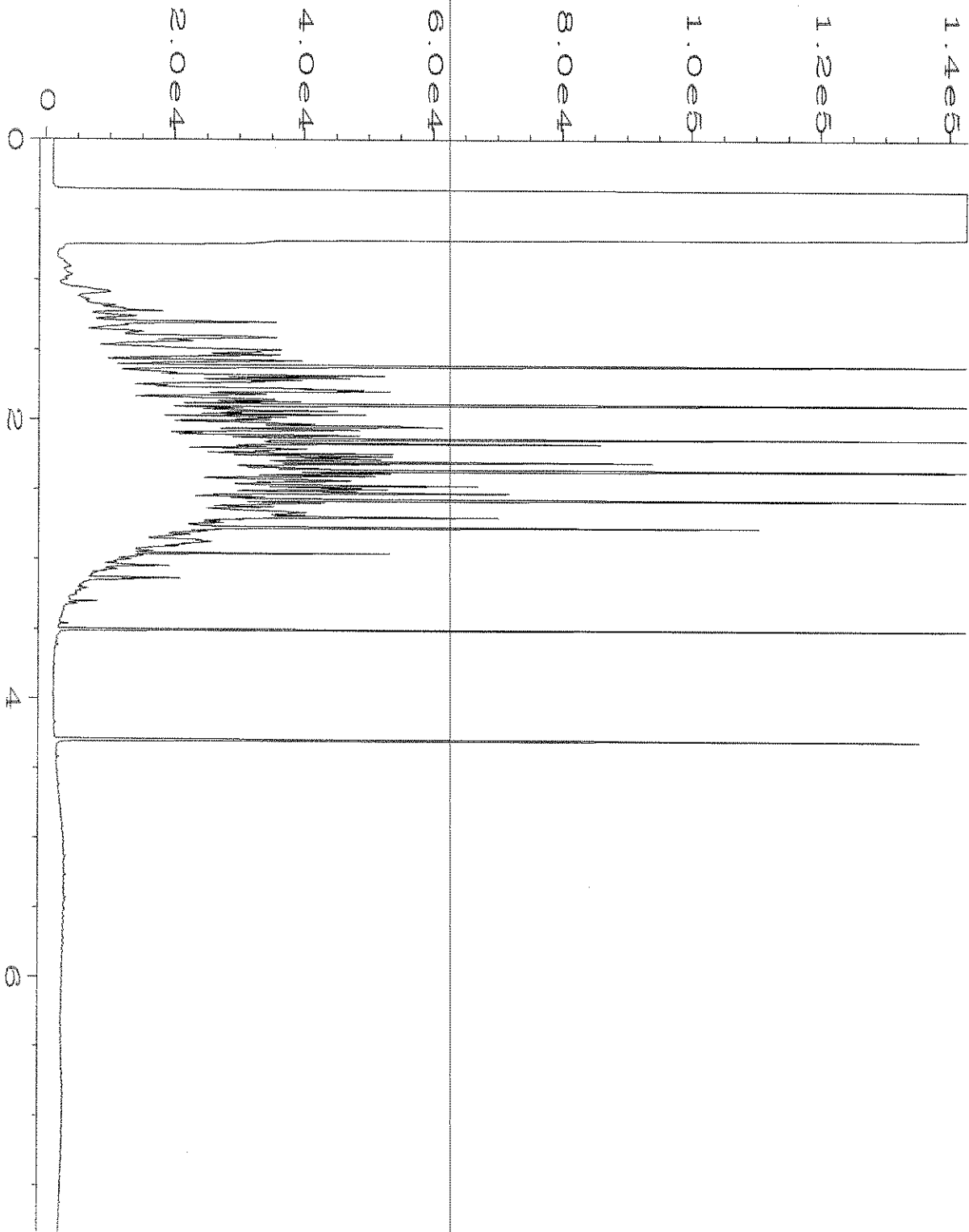
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.

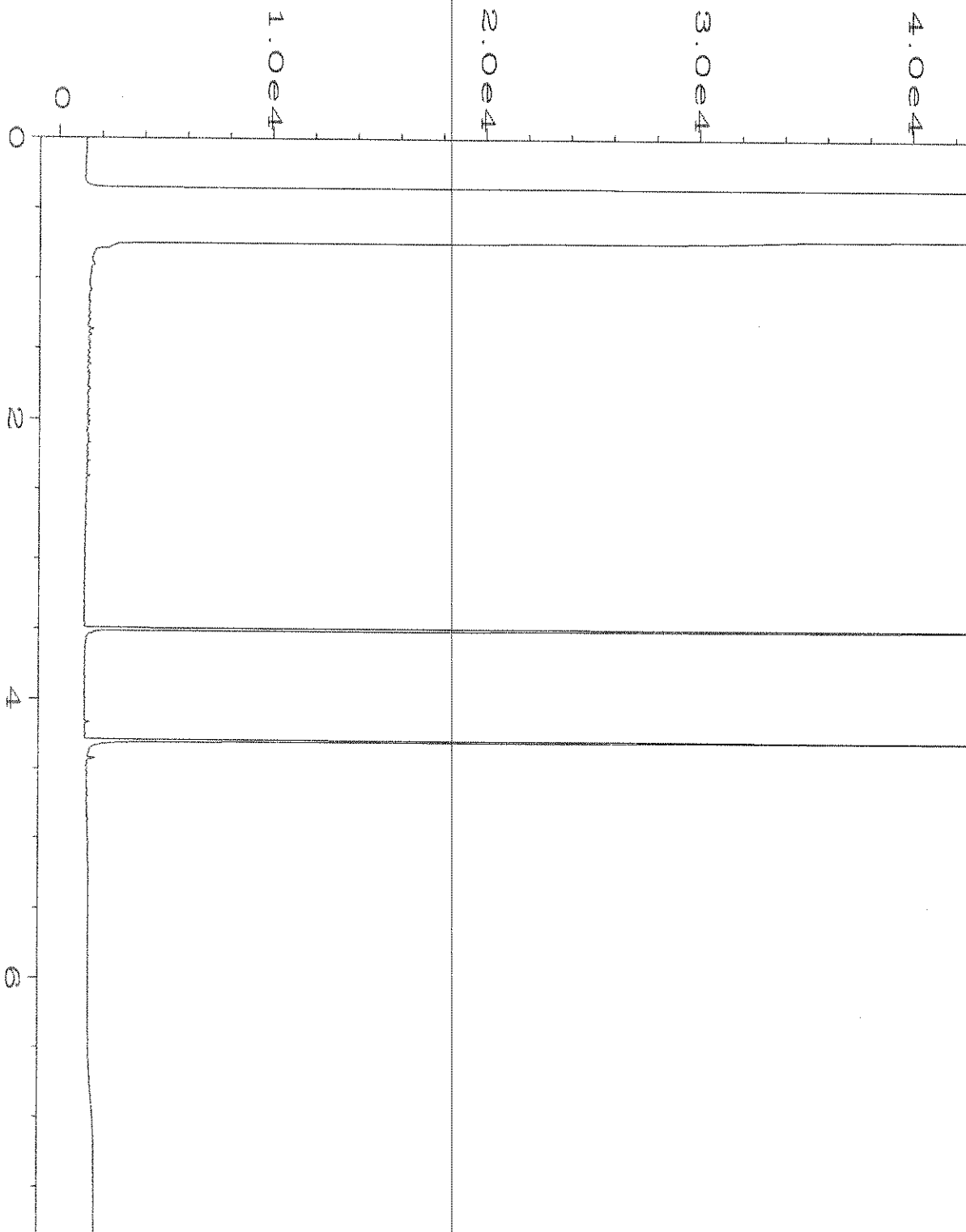
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

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

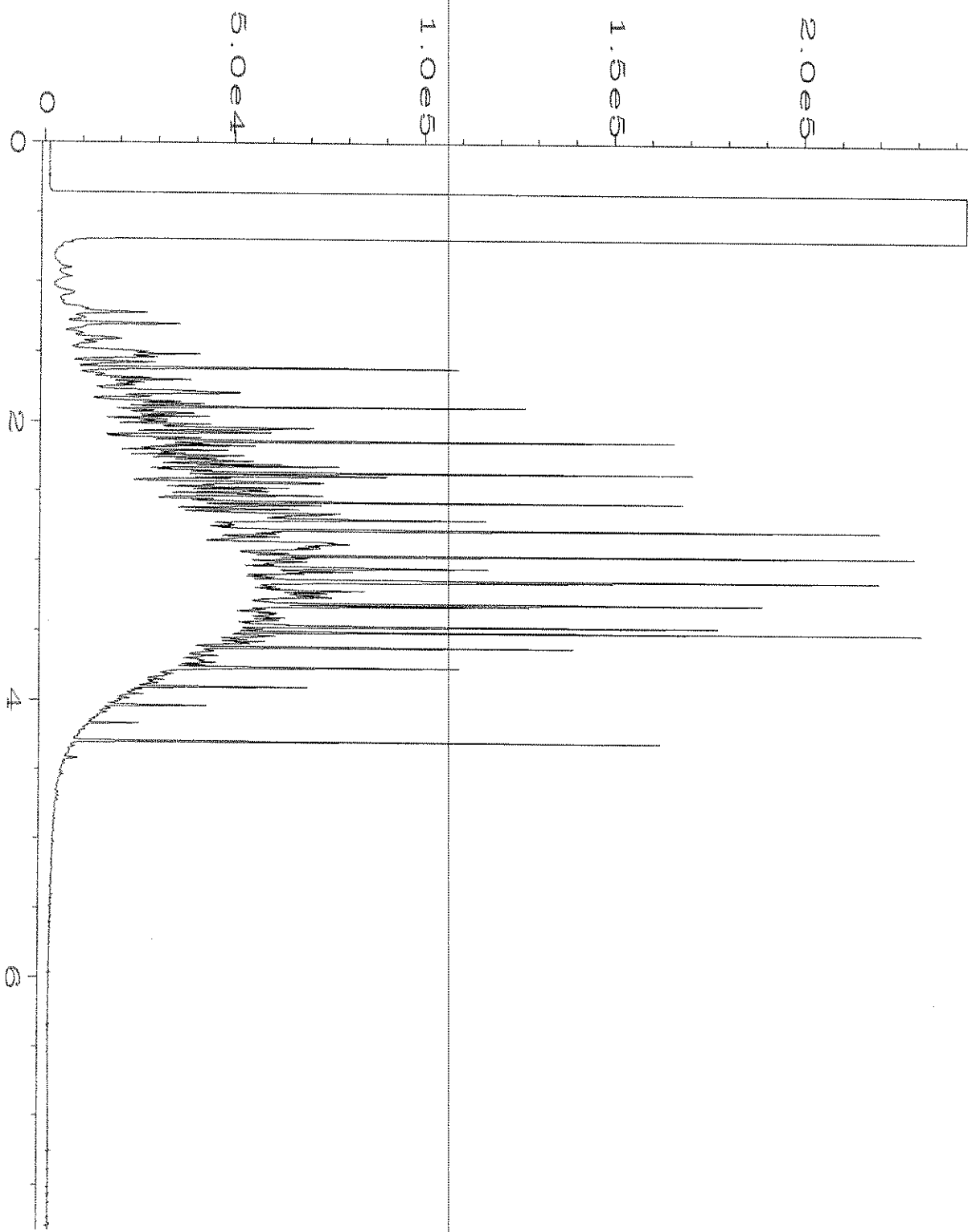
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



Data File Name	: C:\HPCHEM\4\DATA\08-16-19\016F0501.D	Page Number	: 1
Operator	: TL	Vial Number	: 16
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 908301-01	Sequence Line	: 5
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 Aug 19 10:12 AM	Analysis Method	: DEFAULT.MTH
Report Created on:	19 Aug 19 08:04 AM		



Data File Name	: C:\HPCHEM\4\DATA\08-16-19\015F0501.D	Page Number	: 1
Operator	: TL	Vial Number	: 15
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 09-2012 mb2	Sequence Line	: 5
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 Aug 19 10:00 AM	Analysis Method	: DEFAULT.MTH
Report Created on:	19 Aug 19 08:03 AM		



Data File Name	: C:\HPCHEM\4\DATA\08-16-19\005F0901.D	Page Number	: 1
Operator	: TL	Vial Number	: 5
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 1000 Dx 57-78B	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 16 Aug 19 03:03 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	19 Aug 19 08:03 AM		

908301

SAMPLE CHAIN OF CUSTODY ME 08-15-11

Page # 102 of 1

SAMPLERS (signature) Sarah M. Williams  
PROJECT NAME/NO. 1295-001  
PO #

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

REMARKS

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

Send Report to Mindy Graddon, Chris Carter  
Company SoundEarth Strategies, Inc.  
Address 2811 Fairview Avenue E, Suite 2000  
City, State, ZIP Seattle, Washington 98102  
Phone # 206-306-1900 Fax # 206-306-1907

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	ANALYSES REQUESTED					Notes	
								NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOCs by 8260	SVOCs by 8270		Dissolved Lead
POI-1.0	POI	1.0	01	8/15/11	0916	S	1	X						HGLD
POI-1.5		1.5	02		0912									
POI-2.0		2.0	03		0916									
POI-2.5		2.5	04		0920									
POI-3.0		3.0	05		0925									
POI-3.5		3.5	06		0927									
POI-4.0		4.0	07		0930									
POI-4.5		4.5	08		0935									
POI-5.0		5.0	09		0938									

Samples received at 6:00

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Sarah M. Williams	Sarah M. Williams	SES	8/15/11	
Received by: Nhan Phan	Nhan Phan	FERBI	8/15/11	1105
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.  
3012 16th Avenue West  
Seattle, WA 98119-2029  
Ph. (206) 285-8282  
Fax (206) 283-5044  
FORMS \COC\COCC.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 10, 2021

Mindy Graddon, Project Manager  
SoundEarth Strategies  
2811 Fairview Ave. East, Suite 2000  
Seattle, WA 98102

Dear Ms Graddon:

Included are the results from the testing of material submitted on June 9, 2021 from the SOU\_1295-001\_ 20210609, F&BI 106123 project. There are 4 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. 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: Chris Carter  
SOU0610R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on June 9, 2020 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_1295-001\_ 20210609, F&BI 106123 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
106123 -01	EX02-SSW01-2.0
106123 -02	EX02-BOT07-3.0
106123 -03	EX02-NSW02-1.0

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/10/21

Date Received: 06/09/21

Project: SOU\_1295-001\_ 20210609, F&BI 106123

Date Extracted: 06/09/21

Date Analyzed: 06/09/21

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL AND MOTOR OIL  
USING METHOD NWTPH-D<sub>x</sub>**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<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 48-168)
EX02-SSW01-2.0 106123-01	<50	<250	115
EX02-BOT07-3.0 106123-02	1,300	<250	101
EX02-NSW02-1.0 106123-03	1,600	<250	106
Method Blank 01-1370 MB	<50	<250	113

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/10/21

Date Received: 06/09/21

Project: SOU\_1295-001\_ 20210609, F&BI 106123

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL EXTENDED USING METHOD NWTPH-D<sub>x</sub>**

Laboratory Code: 106118-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	23,000	120 b	60 b	73-135	67 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	106	74-139

# 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 analyte 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 due to sample matrix effects.

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.

106123

SAMPLE CHA OF CUSTODY

ME 06/09/21

Page # 1 of 1 COI

SAMPLERS (signature) *Hyd Murray*

PROJECT NAME/NO. 1295-001

PO #

REMARKS

*HOLD*

TURNAROUND TIME  
Standard (2 Weeks)  
 RUSH Same Day per ME 6/9/21  
Kush charges authorized by: ME

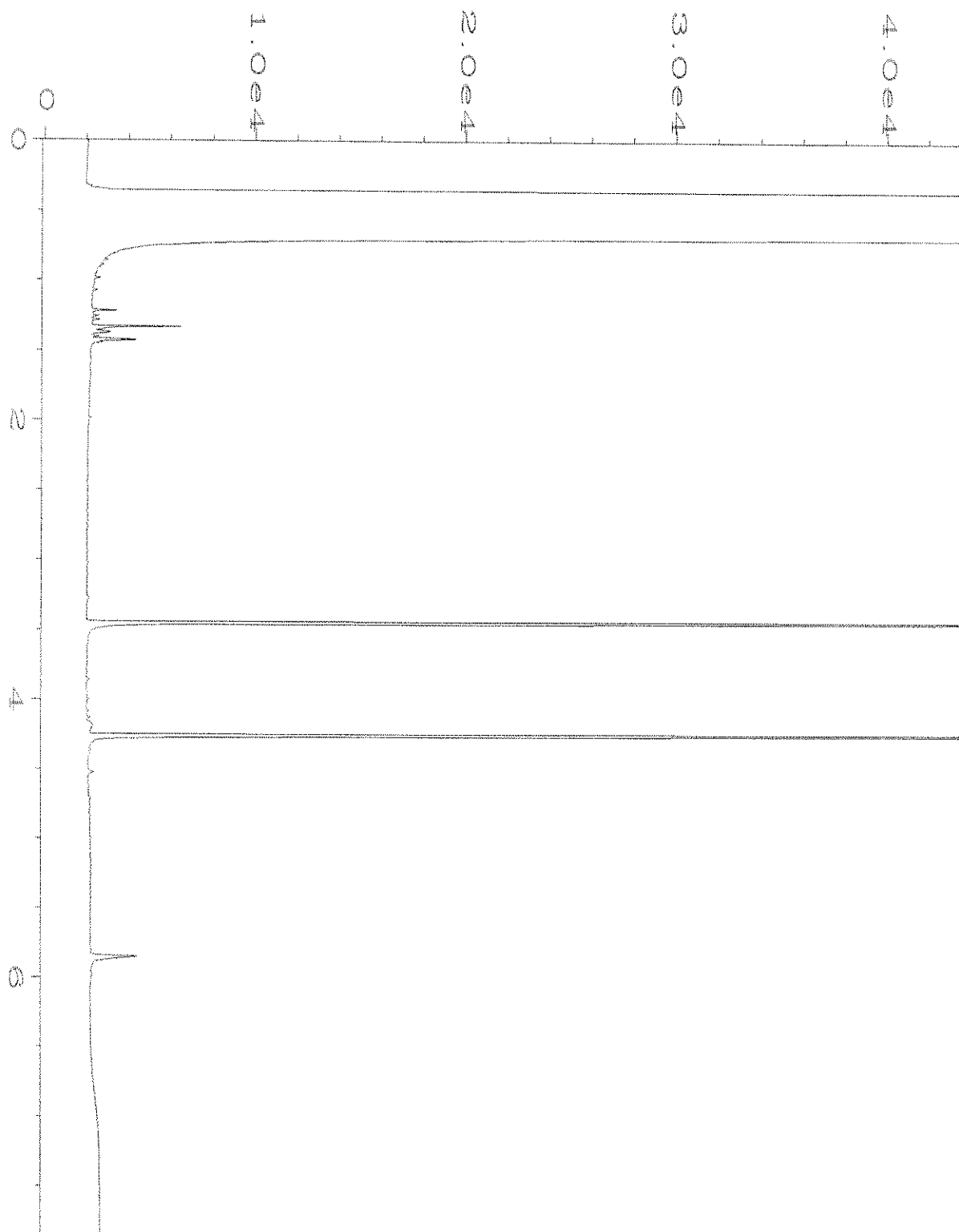
SAMPLE DISPOSAL  
Dispose after 30 days  
Return samples  
Will call with instructions

Send Report to Mindy Graddon, Chris Carter  
Company SoundEarth Strategies, Inc.  
Address 2811 Fairview Avenue E, Suite 2000  
City, State, ZIP Seattle, Washington 98102  
Phone # 206-306-1900 Fax # 206-306-1907

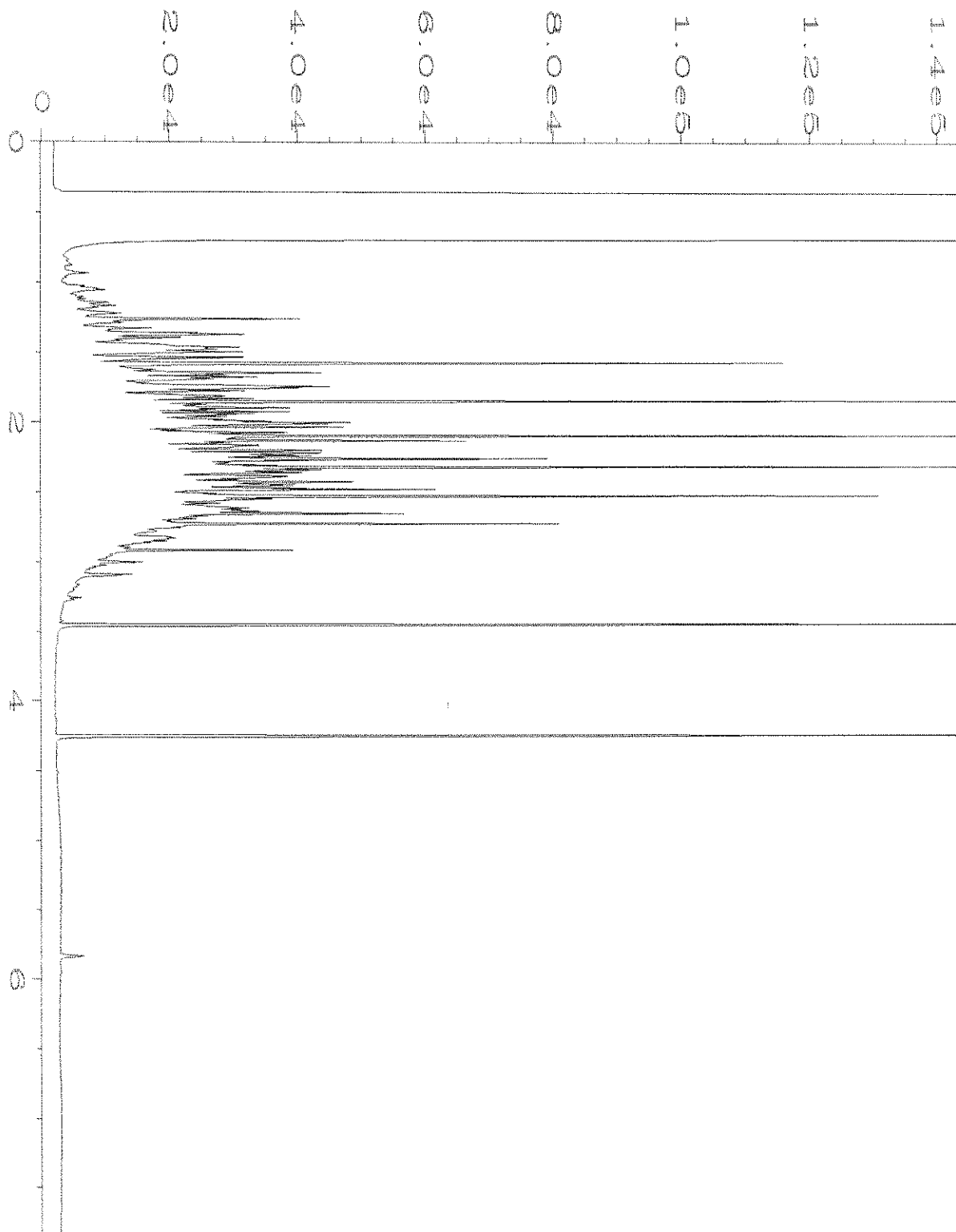
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	ANALYSES REQUESTED					Notes		
								NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOCs by 8260	SVOCs by 8270		Dissolved Lead	
EX02-SW01-2.0	EX02	2	01	06/09/21	1755	Soil	1	X							
EX02-BOT07-3.0	EX02	3	02	↓	1800	↓	1	X							
EX02-NSW02-1.0	EX02	1	03	↓	1805	↓	1	X							
<i>K12 06/09/21</i>															

Friedman & Bruya, Inc.  
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FORMS-COC-COC.DOC

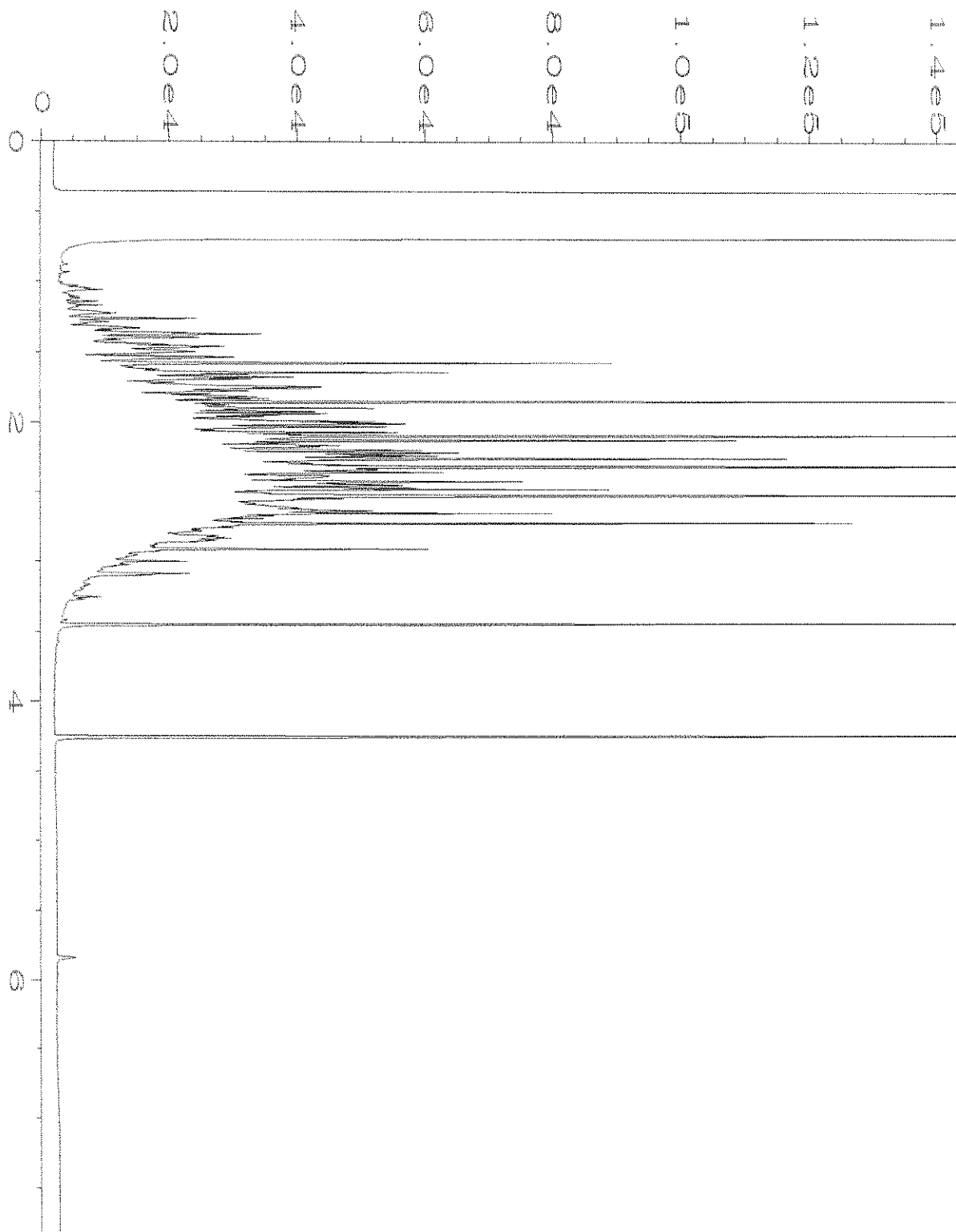
SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
<i>Hyd Murray</i>	Hyd Murray	SES	06/09/21	0915
<i>William Radford</i>	William Radford	FBI	06/09/21	0915
Received by:		Samples received at		



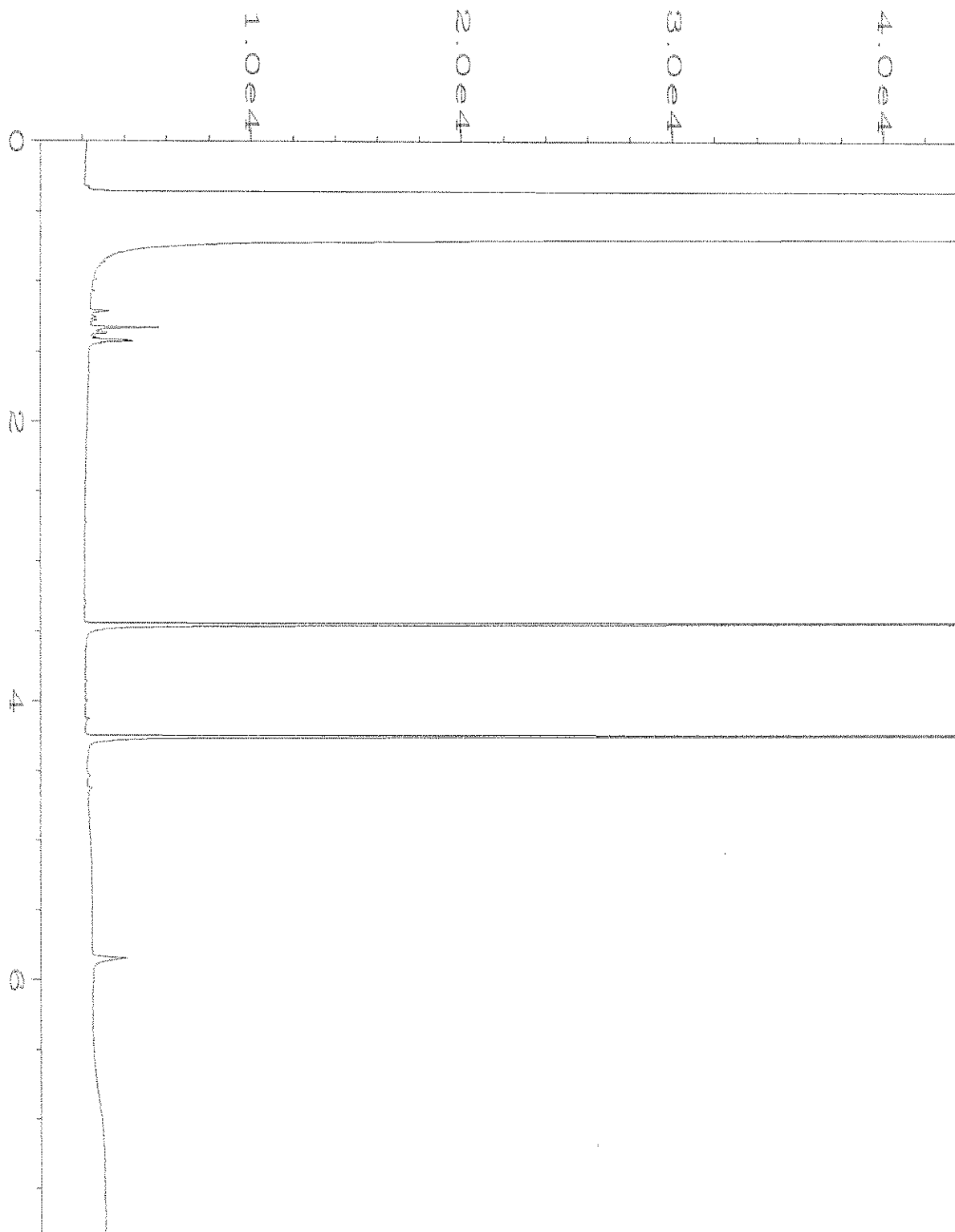
Data File Name	: C:\HPCHEM\4\DATA\06-09-21\020F0401.D	Page Number	: 1
Operator	: TL	Vial Number	: 20
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 106123-01	Sequence Line	: 4
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 09 Jun 21 12:30 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	09 Jun 21 01:40 PM		



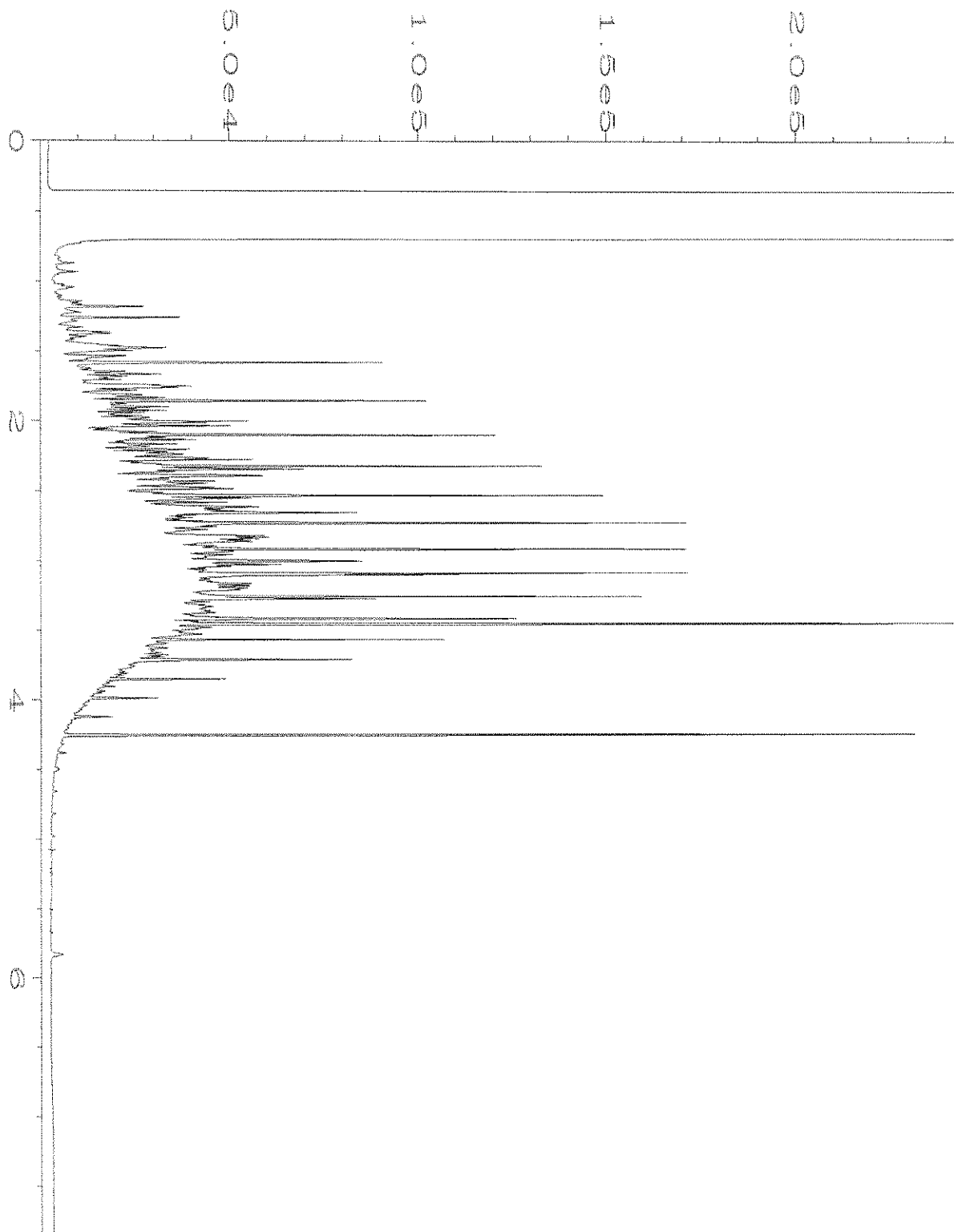
Data File Name	: C:\HPCHEM\4\DATA\06-09-21\021F0401.D	Page Number	: 1
Operator	: TL	Vial Number	: 21
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 106123-02	Sequence Line	: 4
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 09 Jun 21 12:43 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	09 Jun 21 01:36 PM		



Data File Name	: C:\HPCHEM\4\DATA\06-09-21\022F0401.D	Page Number	: 1
Operator	: TL	Vial Number	: 22
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 106123-03	Sequence Line	: 4
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 09 Jun 21 12:56 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	09 Jun 21 01:36 PM		



Data File Name	: C:\HPCHEM\4\DATA\06-09-21\008F0401.D	Page Number	: 1
Operator	: TL	Vial Number	: 8
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 01-1370 mb	Sequence Line	: 4
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 09 Jun 21 08:31 AM	Analysis Method	: DEFAULT.MTH
Report Created on:	09 Jun 21 01:41 PM		



Data File Name	: C:\HPCHEM\4\DATA\06-09-21\003F0201.D	Page Number	: 1
Operator	: TL	Vial Number	: 3
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 500 Dx 63-79C	Sequence Line	: 2
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 09 Jun 21 05:39 AM	Analysis Method	: DEFAULT.MTH
Report Created on:	09 Jun 21 01:41 PM		

**ATTACHMENT B  
BORING LOG**



**Project:** Castle & Cooke Aviation Property  
**Project Number:** 1295-001  
**Logged by:** SNW  
**Date Started:** 08/14/19  
**Surface Conditions:** Asphalt  
**Location N/S:** 17' S of NW concrete pad corner  
**Location E/W:** 17' W of NW concrete pad corner  
**Reviewed by:** CJT  
**Date Completed:** 08/14/19

**BORING LOG | P01**

**Site Address:** 9724 32nd Place  
 Everett, Washington

Water Depth At Time of Drilling -- feet bgs  
 Water Depth After Completion -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppm)	Sample ID	Sample Analyzed	Group Symbol	Graphic	Lithologic Description (ASTM texture, density, color, odor, moisture, supplemental descriptors, estimated grain size distribution) Field-estimated grain size distribution by volume (% Fines - % Sand - % Gravel)	Well Detail/ Water Depth
0									<b>0.0-0.5 feet bgs: 6 inches of asphalt at surface.</b>	
				399.1	P01-1.0	X	SM		<b>0.5-2.0 feet bgs: Silty fine to medium SAND, brown, faint hydrocarbon odor, moist (25-75-0).</b>	
				9.0	P01-1.5					
				44.0	P01-2.0		SM		<b>2.0-3.0 feet bgs: Silty fine to medium SAND, brown and gray, no hydrocarbon odor, moist (25-75-0).</b>	
			100	1.9	P01-2.5					
				50.0	P01-3.0		SM		<b>3.0-4.0 feet bgs: Silty fine to medium SAND, trace gravel, brown, no hydrocarbon odor, (25-70-5).</b>	
				289.0	P01-3.5					
				3.2	P01-4.0		SM		<b>4.0-5.0 feet bgs: Silty fine to medium SAND, trace gravel, brown, faint hydrocarbon odor (25-70-5).</b>	
				622.0	P01-4.5					
5				422.0	P01-5.0					
									<b>Boring terminated at 5 feet bgs, backfilled with bentonite.</b>	
10										

**Drilling Co./Driller:** ESN / Cole  
**Drilling Equipment:** Truck-mounted push probe  
**Sampler Type:** Liner  
**Hammer Type/Weight:** -- lbs  
**Total Boring Depth:** 5 feet bgs  
**Total Well Depth:** -- feet bgs  
**State Well ID No.:** --

**Well/Auger Diameter:** -- inches  
**Well Screened Interval:** -- feet bgs  
**Screen Slot Size:** -- inches  
**Filter Pack Used:** --  
**Surface Seal:** --  
**Annular Seal:** --  
**Monument Type:** --

**Notes/Comments:**  
 bgs = below ground surface

**ATTACHMENT C**  
**WASTE DISPOSAL DOCUMENTATION**

**STRAIGHT BILL OF LADING - ORIGINAL - NOT NEGOTIABLE**



9520 10th Avenue S. Suite 150  
Seattle, WA 98108

Tracking No. 73514

Carrier \_\_\_\_\_ SCAC \_\_\_\_\_ Carrier's No. 136736

RECEIVED, subject to individually determined rates or contracts that have been agreed upon in writing between the carrier and shipper, if applicable, otherwise to the rates, classifications and rules that have been established by the carrier and are available to the shipper, on request; and all applicable state and federal regulations:

at Paine Field Airport, date 3/16/2019 from Castle and Cooke Aviation

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below which said company (the word company being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to delivery at said destination, if on its route, or otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said Property over all or any portion of said route to destination and as to each party at any time interested in all or any of said Property that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained, including the conditions on the back hereof, which are hereby agreed to by the shipper and accepted for himself and his assigns.

<b>TO:</b> Consignee Street Destination	<u>PRS</u> <u>3003 Taylor Way</u> <u>Tacoma WA</u> Zip <u>98421</u>	<b>FROM:</b> Shipper Street Origin	<u>Castle &amp; Cooke Aviation</u> <u>9724 32nd Pl W</u> <u>Everett WA</u> Zip <u>98204</u>
--	---	---	---

Route Any  
Delivering Carrier NRC Vehicle Number 2269 U.S. DOT Hazmat Reg. Number \_\_\_\_\_

Number and Type of Packages	HM	I.D. Number	Description of Articles	Hazard Class	Pkg. Grp.	Total Quantity (mass, volume, or activity)	Weight (subject to correction)	Class or Rate
<u>1 VT</u>			<u>Materials not regulated by DOT</u> <u>(Water and soil impacted with VFA)</u>			<u>Gallons</u> <u>Tons</u>	<u>850</u> <u>1</u>	
			<u>JOB: CCA31619RG PRO: 6744-6</u> <u>PI: CCA31619RG.01 SUP: Guerrero</u>					

Remit COD to:  
Address:  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:  
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

**COD AMT:** \$ \_\_\_\_\_  
**COD FEE:** Prepaid  Collect  \$ \_\_\_\_\_

NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding \$ \_\_\_\_\_ Per \_\_\_\_\_

(Signature of Consignor)

**TOTAL CHARGES:** \$ \_\_\_\_\_  
**FREIGHT CHARGES:**  Prepaid  Collect

NOTE: Liability Limitation for loss or damage in this shipment may be applicable. See 49 U.S.C. 14706 (c)(1)(A) and (B).

**PLACARDS REQUIRED**

**PLACARDS SUPPLIED**  BY SHIPPER  BY CARRIER

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. Per \_\_\_\_\_

DRIVER'S SIGNATURE: \_\_\_\_\_

SHIPPER: Castle & Cooke  
PER: Alexander DATE: 3/16/19

CARRIER: NRC  
PER: Alexander DATE: 3-16-19

**EMERGENCY RESPONSE TELEPHONE NUMBER:** ( ) \_\_\_\_\_ **Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (172.604).**

*Handwritten signature and number 2*

**BILL OF LADING**  
**PRODUCT TRANSPORT MANIFEST**  
**MARINE VACUUM SERVICE, INC.**  
 24 HOUR EMERGENCY PHONE NUMBER (206) 762-0240  
 FAX NUMBER 206-763-8084  
 TRUCK NUMBER 2183 DATE 06-09-21

**N° 30518**

Prof. # NRC 010320  
 Job. # 166940  
 Carr. # Car00003114

TO  
 DESTINATION  
 NAME Marine Vacuum Service, Inc.  
 STREET 1516 South Graham Street  
 CITY/STATE Seattle, WA 98108

FROM  
 SHIPPER  
 NAME NRC / Castle + Cooke  
 STREET 9724 32nd Ave. SW  
 CITY/STATE Everett, WA 98204

QUANTITY	PROPER SHIPPING NAME	UN (PLACARD) NUMBER
<u>200gls</u>	<u>Waste Water</u>	
<u>2 yds</u>	<u>Solids</u> SLUDGE	

RECEIVER Carl Hirschner DATE \_\_\_\_\_ SHIPPER [Signature] DATE 6/9/21

NOTE: Wash out RICARDO

Customer warrants that the waste petroleum products being transferred by the above collector do not contain any contaminants including without limitations, pesticides, chlorinated solvents at concentrations greater than 1000 PPM, any detectable levels of PCBs, or any other material classified as dangerous or hazardous waste by 40 CFR Part 261, Subpart C and D (implementing the Federal Resource Conservation and Recover Act), or by any equivalent state dangerous or hazardous substance classification programs. Should laboratory tests find this waste not in compliance with 40 CFR Part 261, customer (generator) agrees to pay for all disposal costs incurred.

**BILL OF LADING**  
**PRODUCT TRANSPORT MANIFEST**  
**MARINE VACUUM SERVICE, INC.**  
 24 HOUR EMERGENCY PHONE NUMBER (206) 762-0240  
 FAX NUMBER 206-763-8084  
 TRUCK NUMBER 2188 DATE 06-10-21

**N° 30519**

*Job #166940*

TO  
 DESTINATION  
 NAME Marine Vacuum Service, Inc.  
 STREET 1516 South Graham Street  
 CITY/STATE Seattle, WA 98108

FROM  
 SHIPPER  
 NAME NRC / Castle + Cooke  
 STREET 9724 32 W AVE. SW  
 CITY/STATE Everett, WA.

QUANTITY	PROPER SHIPPING NAME	UN (PLACARD) NUMBER
<u>6 YDS</u>	<u>ASPHALT SOIL SLUDGE</u>	

RECEIVER Carl Kirchner DATE 6/14/2021 SHIPPER [Signature] DATE 6/14/2021

NOTE:  
 \_\_\_\_\_  
 \_\_\_\_\_

Customer warrants that the waste petroleum products being transferred by the above collector do not contain any contaminants including without limitations, pesticides, chlorinated solvents at concentrations greater than 1000 PPM, any detectable levels of PCBs, or any other material classified as dangerous or hazardous waste by 40 CFR Part 261, Subpart C and D (implementing the Federal Resource Conservation and Recover Act), or by any equivalent state dangerous or hazardous substance classification programs. Should laboratory tests find this waste not in compliance with 40 CFR Part 261, customer (generator) agrees to pay for all disposal costs incurred.

