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October 14, 2015

Eugene Radcliff
VCP Unit Manager, Washington State Department of Ecology
P.O. Box 47775
Olympia, WA 98504-7775

SUBJECT: PUGET SOUND TRUCK LINES LONGVIEW SITE
VCP SW1429
Longview, Washington

Dear Eugene:

Attached is a data report for the Puget Sound Truck Lines Longview site (Site) in Longview, Washington. The report is intended to summarize groundwater monitoring results from the past year, and establish next steps for the Site to meet cleanup requirements under the Voluntary Cleanup Program. Additional information is presented on required testing at petroleum sites, evaluation of the vapor intrusion pathway, and evaluation of terrestrial ecology.

Proposed next steps include a change in groundwater monitoring frequency, and a request for a partial sufficiency letter to document the adequacy of soil remediation. The requested response from the Washington State Department of Ecology is confirmation that the soil cleanup is sufficient to meet Model Toxics Control Act requirements, and that requirements have been met for required testing at petroleum sites, evaluation of the vapor intrusion pathway, and terrestrial ecological evaluation.

Once these issues have been addressed, it is our intent that the path to a "no further action" letter will be simplified, and consist of annual groundwater monitoring and reporting until groundwater compliance can be demonstrated. Please let me know how I can assist you with your review.

Sincerely yours,
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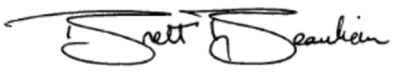

Brett Beaulieu, LHG
Senior Hydrogeologist

Encl.: Puget Sound Truck Lines Longview Site—VCP SW1429 Groundwater Monitoring Results

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Two Union Square
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Memorandum

To: Eugene Radcliff, VCP Unit Manager, Washington State Department of Ecology

Copies: Tom Lovejoy, Puget Sound Truck Lines

From: Brett Beaulieu, LHG

Date: October 14, 2015

Project No: PSTL Longview

Re: **Puget Sound Truck Lines Longview Site—VCP SW1429**
2014–2015 Groundwater Monitoring Results

OVERVIEW

This data report has been prepared to summarize the groundwater monitoring results for the Puget Sound Truck Lines Longview site (Site) in Longview, Washington (Figure 1) and to describe next steps proposed for the Site to meet cleanup requirements under the Voluntary Cleanup Program (VCP). Proposed next steps are a change in groundwater monitoring frequency and a request for a Partial Sufficiency letter to document the adequacy of soil remediation. Additional information is presented on required testing at petroleum sites, evaluation of the vapor intrusion pathway, and evaluation of terrestrial ecology.

The Site is an approximately 3.3-acre parcel located at 146 Industrial Way in Longview, Washington, in an industrial area between the Columbia and Cowlitz Rivers (Figure 1). The Site is currently used by a shipping company with truck storage and maintenance activities. A site investigation in late 2011 confirmed diesel impacts to soil and groundwater that were likely due to surface spills, leaks, and overfilling associated with a former 10,000-gallon diesel aboveground storage tank (AST). The AST was removed, and soil contaminated with diesel-range organics (DRO) at concentrations greater than Model Toxics Control Act (MTCA) Method A cleanup levels was excavated in 2012. Approximately 2,850 tons of soil was excavated and disposed of at a landfill (3 Kings Environmental, Inc. 2012).

The Site was entered into the VCP in October 2014 under the identifier SW1429. Groundwater impacted with DRO was detected following soil remediation activities. The Site is currently undergoing groundwater monitoring. Four monitoring wells were installed at the edges of the previously excavated area and a total of six quarterly groundwater monitoring events have been completed in accordance with the Groundwater Compliance Sampling and Analysis Plan (SAP; Floyd|Snider 2014a).

The objective of groundwater monitoring is to provide data for establishing compliance with the MTCA Method A groundwater standard for DRO, so that Ecology can issue a "No Further Action" (NFA) letter. This report summarizes groundwater sampling and analysis activities and results from the third and fourth quarter sampling events in 2014, and the first and second quarter sampling events in 2015. The results of the first and second quarterly events of 2014 were presented in a previous report (Floyd|Snider 2014b).

WORK COMPLETED

Four quarterly groundwater sampling events were conducted during this reporting period. These sampling events took place on September 24, 2014; December 22, 2014; March 17, 2015; and June 9, 2015. Work was completed in accordance with the SAP, as summarized below.

Water Level Measurement

During groundwater sampling events, water level measurements were collected from all four wells prior to well purging to provide an indication of the potentiometric surface.

Groundwater Sampling and Analysis

Groundwater samples were collected from all four monitoring wells for each sampling event. In accordance with the SAP, groundwater samples and field duplicates were collected using standard low-flow sampling methods, and submitted to Friedman and Bruya, Inc. (FBI) under standard chain-of-custody procedures and analyzed by NWTPH-Dx for total petroleum hydrocarbon (TPH).

Samples collected during the September and December 2014 events were analyzed by NWTPH-Dx twice, once following a silica gel cleanup step, and once without. Based on a review of chromatograms, the results do not clearly show that silica gel removes only non-toxic compounds. The use of silica gel cleanup was discontinued beginning in 2015.

Investigation-Derived Waste

All water generated during groundwater sampling was collected and transferred to a new, U.S. Department of Transportation-approved 55-gallon steel drum. The lidded, sealed, and labelled drum is being stored on-site for use in ongoing groundwater monitoring.

COMPLIANCE MONITORING RESULTS

Data Validation

For each sampling event in the reporting period, a compliance screening, Tier 1 data quality review was performed on TPH data resulting from laboratory analysis. The analytical data were validated in accordance with the U.S. Environmental Protection Agency (USEPA) *National*

Functional Guidelines for Superfund Organic Data Review (USEPA 2014). Data validation for the June 2014 results were reported in the prior data report (Floyd|Snider 2014b).

Five groundwater samples were submitted for each of the four events, in sample delivery groups FB409452, FB12371, FB503312, and FB506201, to FBI in Seattle, Washington for chemical analysis by NWTPH-Dx for TPH. For all sample delivery groups, the analytical holding times were met and the method blanks had no detections. The surrogate, matrix spike (MS), matrix spike duplicate (MSD), laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) recoveries and MS/MSD and LCS/LCSD relative percent differences all met USEPA requirements.

All data are determined to be of acceptable quality for use as qualified. Additional data validation details are provided below for each event.

September 2014 Event

As part of the validation of TPH data, the detectable hydrocarbons and/or organics within the diesel, gasoline, or residual hydrocarbon chromatogram ranges were reviewed relative to the appropriate laboratory standard. If the hydrocarbons were not identifiable based on a poor chromatographic match with the standards, the data were qualified "MP" to reflect a poor match, and the interpretive qualifier to be used for database entry and project reporting was a "JM" to indicate estimated concentrations due to the poor chromatographic match. Similarly, if the hydrocarbons provided a good chromatographic match with the standards, the data were qualified "MG" to reflect a good match, and no interpretive qualifier was used for database entry or project reporting.

The five samples were analyzed by NWTPH-Dx twice, once following a silica gel cleanup step, and once without. Chromatograms from both analysis were compared to the provided laboratory standard. Following chromatogram review, it was determined that all sample results showed the presence of a paraffin-like contaminant that was separable from the diesel signal and, per the laboratory, was not quantified as part of the diesel results. All detected results from the analysis without silica gel cleanup appeared to be weathered diesel, with the lighter, more soluble part of diesel being more prevalent than it would be in a fresh sample, and were qualified "J" as estimated. All of the samples that did undergo a silica gel cleanup had an adequate standard match and were reported without additional qualifiers.

December 2014 Event

As part of the validation of TPH data, the detectable hydrocarbons and/or organics within the diesel, gasoline, or residual hydrocarbon chromatogram ranges were reviewed relative to the appropriate laboratory standard. If the hydrocarbons were not identifiable based on a poor chromatographic match with the standards, the data were qualified "MP" to reflect a poor match, and the interpretive qualifier to be used for database entry and project reporting was a "JM" to indicate estimated concentrations due to the poor chromatographic match. Similarly, if the hydrocarbons provided a good chromatographic match with the standards, the data were

qualified “MG” to reflect a good match, and no interpretive qualifier was used for database entry or project reporting.

The five samples were analyzed by NWTPH-Dx twice, once following a silica gel cleanup step, and once without. Chromatograms from both analysis were compared to the provided laboratory standard and are considered to have an adequate match to the standards.

March 2015 Event

The analytical holding times were met and the method blanks had no detections. The surrogate, MS, MSD, LCS and LCSD recoveries and MS/MSD and LCS/LCSD relative percent differences all met USEPA requirements.

As part of the validation of TPH data the detectable hydrocarbons and/or organics within the diesel, gasoline, or residual hydrocarbon chromatogram ranges were reviewed relative to the appropriate laboratory standard. If the hydrocarbons were not identifiable based on a poor chromatographic match with the standards, the data were qualified “MP” to reflect a poor match, and the interpretive qualifier to be used for database entry and project reporting was a “JM” to indicate estimated concentrations due to the poor chromatographic match. Similarly, if the hydrocarbons provided a good chromatographic match with the standards, the data were qualified “MG” to reflect a good match, and no interpretive qualifier was used for database entry or project reporting.

Chromatograms were compared to the provided laboratory standard and are considered to have an adequate match to the standards.

June 2015 Event

As part of the validation of TPH data, the detectable hydrocarbons and/or organics within the diesel, gasoline, or residual hydrocarbon chromatogram ranges were reviewed relative to the appropriate laboratory standard. If the hydrocarbons were not identifiable based on a poor chromatographic match with the standards, the data were qualified “MP” to reflect a poor match, and the interpretive qualifier to be used for database entry and project reporting was a “JM” to indicate estimated concentrations due to the poor chromatographic match. Similarly, if the hydrocarbons provided a good chromatographic match with the standards, the data were qualified “MG” to reflect a good match, and no interpretive qualifier was used for database entry or project reporting.

Chromatograms were compared to the provided laboratory standard and are considered to have an adequate match to the standards.

Water Level Measurements and Potentiometric Surface

Water level measurements, elevations, and horizontal hydraulic gradients are reported in Table 1. Groundwater elevations and potentiometric surface contours for each event are illustrated in Figures 2, 3, 4, and 5. The results indicate an overall southerly groundwater flow direction that varied from southwesterly during the September and December events to southeasterly during the March and June events. Water level data indicate low horizontal gradients ranging from approximately 0.003 to 0.001 feet per foot (ft/ft), which is consistent with the flat topography in the vicinity.

Groundwater Results

Analytical results for DRO in groundwater are shown in Table 2. The complete analytical data packages are presented in Attachment 1. Analytical results presented in this data report are being submitted to Washington State Department of Ecology's (Ecology's) Environmental Information Management system. Results following silica gel cleanup are shown for those events for which it is available. Results following silica gel cleanup are not expected to be used for compliance and are not discussed in this section.

During the 1-year reporting period, results for all four monitoring wells fluctuated at concentrations close to the MTCA Method A cleanup level (CUL) for DRO of 500 micrograms per liter (µg/L). In the most recent event, June 2015, the results for all four monitoring wells exceeded the CUL, and DRO concentrations ranged from 530 to 660 µg/L. In the previous event, March 2015, the results for all four monitoring wells were less than the CUL, with DRO concentrations ranging from 310 to 460 µg/L. Based on these concentrations, the area of groundwater with DRO exceeding the CUL corresponds approximately with the former excavation and area defined by the four monitoring wells, and is considered stable.

OTHER REQUIRED INFORMATION

After the submittal of the previous groundwater monitoring report (Floyd|Snider 2014b), Ecology indicated that its review would include consideration of MTCA requirements for analytical testing for petroleum releases listed in Table 830-1 under Washington Administrative Code (WAC) 173-340-900, assessment of the vapor intrusion pathway, and terrestrial ecological evaluation.

Other Required Testing for Petroleum Releases (Table 830-1)

At sites with petroleum releases, MTCA requires testing for constituents associated with the petroleum product(s) released, as described in Table 830-1. Analytical testing completed at the Site meets these requirements, based on the known release of diesel fuel from the AST and the subsequent soil excavation.

Soil analyses conducted as part of investigation and excavation activities (3 Kings Environmental 2012) included TPH-Dx reported as both diesel-range and oil-range concentrations. These and

subsequent analyses (Floyd|Snider 2014b) were used to document removal of petroleum-impacted soil with contaminant concentrations greater than MTCA Method A CULs from the Site. Because contaminated soil was removed, groundwater remains the appropriate medium for assessing related constituents in accordance with Table 830-1. Groundwater samples from direct-push borings analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) indicate compliance with MTCA Method A CULs, based on the following greatest concentrations: benzene at < 0.3 µg/L, toluene at 0.9 µg/L, ethylbenzene at 1.4 µg/L, and total xylenes at 8.6 µg/L (3 Kings Environmental 2012). Groundwater analyses for ethylbenzene, toluene, and xylenes from site monitoring wells MW-2 and MW-4, sampled in June 2014, are reported in Table 3. These results indicate no detections of these constituents.

Testing for carcinogenic polycyclic aromatic hydrocarbons (cPAHs) and naphthalenes, which is not required for sites with releases of diesel #1 or diesel #2 for compliance with MTCA Method A CULs, was conducted as part of excavation (3 Kings Environmental 2012) and from site groundwater monitoring wells in June 2014, for potential use in calculating MTCA Method B CULs. As shown in Table 3, these compounds were found to be less than a detection limit of 0.1 µg/L for all four monitoring wells. Groundwater samples from direct-push borings were analyzed for selected cPAHs and naphthalene, and were found to be less than a detection limit of 0.05 µg/L.

Vapor Intrusion Pathway

Site data were reviewed according to the tiered approach given in the *Guidance for Evaluating Soil Intrusion in Washington State* (the Guidance; Ecology 2009), which calls for a preliminary assessment to determine whether sufficiently toxic and volatile substances are present at the Site in the vicinity of occupied buildings. Based on this review, there are no potential vapor intrusion concerns at the Site, and no need for further evaluation or data collection.

Because soil contaminated at concentrations greater than MTCA Method A CULs was excavated and removed from the Site, the soil-to-soil-vapor pathway is protective of indoor air. Groundwater data were reviewed relative to screening levels for groundwater given in the 2015 update to Table B-1 of the Guidance (Ecology 2015). Table B-1 lists six constituents analyzed for in site groundwater as potential sources of vapor intrusion concerns: benzene, toluene, ethylbenzene, xylene (m), xylene (o), and naphthalene. Site data (refer to Table 3 and *Remedial Investigation and Cleanup Report* [3 Kings Environmental 2012]) indicate that groundwater concentrations are substantially less than the lesser of the carcinogen- and non-carcinogen-based screening levels for all six constituents. Based on this comparison to these conservative screening levels, site constituents are not sufficiently toxic or volatile to present a concern for vapor intrusion.

In addition, the contamination is generally not close enough to occupied buildings to cause a concern for vapor intrusion, based on the 100-foot rule of thumb presented in the Guidance. The closest occupied building, an office structure, is located approximately 100 feet from the edge of

the excavation. The groundwater contamination extends a few feet closer to the building, but is still nearly 100 feet away. Monitoring well MW-2, which approximately defines the closest edge of the TPH contamination in groundwater, is located approximately 90 feet from the nearest occupied building. The parking lot is unpaved, so there is no continuous low permeability surface that would contribute to vapor transport. There are no utility lines or other backfilled trenches that could serve as preferential pathways between the area of contamination and the building.

Terrestrial Ecological Evaluation

Because soil contaminated at concentrations greater than MTCA Method A CULs was excavated and removed from the Site, no further terrestrial ecological evaluation is required at the Site, in accordance with WAC 173-340-7491.

NEXT STEPS

To support a future request for a NFA letter from Ecology, we propose to decrease monitoring frequency until the data support a compliance demonstration. In addition, to document the extensive soil removal activities already completed, we request a Partial Sufficiency letter for soil. These items are discussed further below.

Annual Groundwater Monitoring

Groundwater monitoring results at the Site indicate relatively stable concentrations, but are yet not suitable for demonstrating compliance in support of a request for a NFA letter. Therefore, groundwater monitoring from the four monitoring wells at the Site will be adjusted to an annual frequency, until a sufficient data set exists for a compliance determination. To be conservative, the monitoring event will be conducted during the second quarter, when DRO concentrations have typically been greatest.

It is expected that the results from approximately eight quarterly and/or annual monitoring events will be used to demonstrate compliance with the MTCA Method A CUL for DRO, and will support a request for a NFA letter from Ecology. A brief monitoring report summarizing annual monitoring results will be prepared and submitted to Ecology, and all data will be submitted to EIM.

Partial Sufficiency Request

To provide clarity and predictability regarding compliance status, we request that Ecology issue a Partial Sufficiency letter to document the adequacy of soil remediation, based on existing post-excavation soil data (3 Kings Environmental 2012; Floyd|Snider 2014b). It is our hope that this documentation will simplify future reporting and focus the compliance demonstration on groundwater contamination.

REFERENCES

3 Kings Environmental, Inc. 2012. *Remedial Investigation and Cleanup Report, Puget Sound Freight Lines Facility — 146 Industrial Way, Longview, Washington*. Prepared for Puget Sound Freight Lines. 24 December.

Floyd|Snider. 2014a. *Puget Sound Truck Lines, Longview Groundwater Compliance Sampling and Analysis Plan*. Memorandum to Tom Lovejoy, Puget Sound Freight Lines, from Brett Beaulieu, Floyd|Snider. 13 January.

_____. 2014b. *Puget Sound Truck Lines Longview Site—Groundwater Compliance Well Installation and Monitoring Results*. Memorandum to Scott Rose, VCP Unit Manager, Washington State Department of Ecology, from Brett Beaulieu, Floyd|Snider. 3 September.

U.S. Environmental Protection Agency (USEPA). 2014. *National Functional Guidelines for Superfund Organic Methods Data Review, OSWER 9355.0-132.* EPA-540-R-014-002. Office of Superfund Remediation and Technology Innovation (OSRTI), Washington, D.C. August.

Washington State Department of Ecology. 2009. Guidance for Evaluation of Soil Vapor Intrusion in Washington State: Investigation and Remedial Action. Publication No. 09-09-047. October.

_____. 2015. *Vapor Intrusion Table update April 6 2015*. http://www.ecy.wa.gov/programs/tcp/policies/VaporIntrusion/vig.html. Accessed September 23.

LIST OF ATTACHMENTS

Table 1	Water Level Elevations and Horizontal Gradients
Table 2	Groundwater Analytical Results for Diesel-Range Organics
Table 3	Other Groundwater Constituents and Vapor Intrusion Screening Levels
Figure 1	Vicinity Map
Figure 2	Potentiometric Surface and Groundwater Elevations September 24, 2014
Figure 3	Potentiometric Surface and Groundwater Elevations December 22, 2014
Figure 4	Potentiometric Surface and Groundwater Elevations March 17, 2015
Figure 5	Potentiometric Surface and Groundwater Elevations June 9, 2015
Attachment 1	Laboratory Analytical Data (Provided on Disc)

Geologist Certification

This document was prepared by Floyd|Snider under the professional supervision of Brett Beaulieu.

_____

Name: Brett Beaulieu, LHG
Title: Hydrogeologist
Date: 10/14/2015

Tables

Table 1
Water Level Elevations and Horizontal Gradients

Well	Total Depth (feet from top of casing)	Top of Well Casing (feet NAVD 88)	Depth to Water (feet)	Groundwater Elevation (feet NAVD 88)	Horizontal Gradient (feet/foot)
June 9, 2015					
MW-1	13.44	14.24	4.65	9.59	0.001
MW-2	13.35	14.08	4.54	9.54	
MW-3	14.12	14.05	4.56	9.49	
MW-4	14.42	14.24	4.67	9.57	
March 17, 2015					
MW-1	13.44	14.24	2.46	11.78	0.002
MW-2	13.35	14.08	2.37	11.71	
MW-3	14.12	14.05	2.41	11.64	
MW-4	14.42	14.24	2.49	11.75	
December 22, 2014					
MW-1	13.44	14.24	1.75	12.49	0.003
MW-2	13.35	14.08	1.64	12.44	
MW-3	14.12	14.05	1.76	12.29	
MW-4	14.42	14.24	1.84	12.40	
September 24, 2014					
MW-1	13.44	14.24	5.92	8.32	0.001
MW-2	13.35	14.08	5.74	8.34	
MW-3	14.12	14.05	5.76	8.29	
MW-4	14.42	14.24	5.99	8.25	
June 24, 2014					
MW-1	13.44	14.24	3.85	10.39	0.002
MW-2	13.35	14.08	3.76	10.32	
MW-3	14.12	14.05	3.80	10.25	
MW-4	14.42	14.24	3.93	10.31	
March 19, 2014					
MW-1	13.44	14.24	1.14	13.10	0.004
MW-2	13.35	14.08	1.06	13.02	
MW-3	14.12	14.05	1.20	12.85	
MW-4	14.42	14.24	1.23	13.01	

Abbreviation:

NAVD 88 North American Vertical Datum of 1988

Table 2
Groundwater Analytical Results for Diesel-Range Organics

Well	Date	Diesel-Range Organics (µg/L)	
		NWTPH-Dx	NWTPH-Dx with Silica Gel Cleanup
MW-1	3/19/2014	390	250
	3/19/2014 (Duplicate)	490	220
	6/24/2014	390 JM	210
	9/24/2014	380 J	230
	9/24/2014 (Duplicate)	430 J	230
	12/22/2014	410	210
	3/17/2015	350	NA
	6/9/2015	530	NA
MW-2	3/19/2014	700	370
	6/24/2014	540 JM	270
	6/24/2014 (Duplicate)	540 JM	270
	9/24/2014	620 J	340
	12/22/2014	480	280
	12/22/2014 (Duplicate)	520	310
	3/17/2015	390	NA
	3/17/2015 (Duplicate)	390	NA
	6/9/2015	660	NA
	6/9/2015 (Duplicate)	670	NA
MW-3	3/19/2014	560	180
	6/24/2014	470 JM	170
	9/24/2014	420 J	170
	12/22/2014	480	200
	3/17/2015	310	NA
	6/9/2015	530	NA
MW-4	3/19/2014	680	450
	6/24/2014	560 JM	360 JM
	9/24/2014	550 J	380
	12/22/2014	440	320
	3/17/2015	460	NA
	6/9/2015	580	NA

Abbreviations:

µg/L Micrograms per liter

NA Not analyzed

Qualifiers:

J Analyte was detected, the concentration is considered an estimate.

JM Analyte was detected, the concentration is considered an estimate due to poor chromatographic match to standard.

Table 3
Other Groundwater Constituents and Vapor Intrusion Screening Levels

Location		MW-1	MW-2		MW-3	MW-4	Greatest Detected Concentration in Direct-Push Groundwater Sampling[1]	Most Conservative Vapor Intrusion Screening Level from Table B-1[2] (µg/L)
Sample ID		MW-1-GW-4-14' 062514	MW-2-GW-4-14' 062514	MW-21-GW-4-14' 062514	MW-3-GW-4-14' 062514	MW-4-GW-4-14' 062514		
Sample Date		6/24/2014	6/24/2014	6/24/2014	6/24/2014	6/24/2014	2/10/2012 to 12/10/2012	
Analyte	Unit							
Volatile Organic Compounds by USEPA 8260C								
Benzene	µg/L	--	--	--	--	--	0.3 U	2.4
Ethylbenzene	µg/L	--	1 U	--	--	1 U	1.4	2,783
Toluene	µg/L	--	1 U	--	--	1 U	0.9	15,584
Xylene (meta & para)	µg/L	--	2 U	--	--	2 U	8.6	310
Xylene (ortho)	µg/L	--	1 U	--	--	1 U		440
Semivolatile Organic Compounds by USEPA 8270D-SIM								
1-Methylnaphthalene	µg/L	0.1 U	0.1 U	0.11	0.1 U	0.1 U	--	NA
2-Methylnaphthalene	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	--	NA
Benzo(a)anthracene	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	NA
Benzo(a)pyrene	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	NA
Benzo(b)fluoranthene	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	NA
Benzo(k)fluoranthene	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	NA
Chrysene	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	NA
Dibenzo(a,h)anthracene	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	NA
Indeno(1,2,3-cd)pyrene	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	NA
Naphthalene	µg/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	8.93

Notes:

-- Not analyzed for.

1 Sources: *Vapor Intrusion Update Table* (Ecology 2015) and *Guidance for Evaluation Soil Vapor Intrusion in Washington State* (Ecology 2009).

2 Source: *Remedial Investigation and Cleanup Report* (3 Kings Environmental, Inc. 2012). Screening level used is for meta-xylene, not meta-xylene and para-xylene.

Abbreviations:

NA Not applicable.

µg/L Micrograms per liter.

Qualifiers:

U Analyte was not detected at the given reporting limit.

Figures

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Groundwater Monitoring Results
Puget Sound Truck Lines Site
Longview, Washington

Figure 1
Vicinity Map

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Groundwater Monitoring Results
Puget Sound Truck Lines Site
Longview, Washington

Figure 2
Potentiometric Surface and Groundwater Elevations
September 24, 2014

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Groundwater Monitoring Results
Puget Sound Truck Lines Site
Longview, Washington

Figure 3
Potentiometric Surface and Groundwater Elevations
December 22, 2014

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Groundwater Monitoring Results
Puget Sound Truck Lines Site
Longview, Washington

Figure 4
Potentiometric Surface and Groundwater Elevations
March 17, 2015

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Groundwater Monitoring Results
Puget Sound Truck Lines Site
Longview, Washington

Figure 5
Potentiometric Surface and Groundwater Elevations
June 9, 2015

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Attachment 1
Laboratory Analytical Data

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
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October 1, 2014

Brett Beaulieu, Project Manager
Floyd/Snider
Two Union Square, Suite 600
601 Union St
Seattle, WA 98101

Dear Mr. Beaulieu:

Included are the results from the testing of material submitted on September 24, 2014 from the PSTL-Longview, F&BI 409452 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
FDS1001R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 24, 2014 by Friedman & Bruya, Inc. from the Floyd/Snider PSTL-Longview, F&BI 409452 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Floyd/Snider
409452 -01	MW-1-GW-4-14
409452 -02	MW-13-GW-4-14
409452 -03	MW-2-GW-4-14
409452 -04	MW-3-GW-4-14
409452 -05	MW-4-GW-4-14

All quality control requirements were acceptable.

Date of Report: 10/01/14
Date Received: 09/24/14
Project: PSTL-Longview, F&BI 409452
Date Extracted: 09/25/14
Date Analyzed: 09/26/14

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING METHOD NWTPH-Dx
Sample Extracts Passed Through a Silica Gel Column Prior to Analysis
Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Surrogate (% Recovery) (Limit 47-140)
MW-1-GW-4-14 409452-01	230	90
MW-13-GW-4-14 409452-02	230	100
MW-2-GW-4-14 409452-03	340	95
MW-3-GW-4-14 409452-04	170	86
MW-4-GW-4-14 409452-05	380	90
Method Blank 04-1958 MB	<50	96

Date of Report: 10/01/14
Date Received: 09/24/14
Project: PSTL-Longview, F&BI 409452
Date Extracted: 09/25/14
Date Analyzed: 09/26/14

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Surrogate (% Recovery) (Limit 47-140)
MW-1-GW-4-14 409452-01	380	87
MW-13-GW-4-14 409452-02	430	101
MW-2-GW-4-14 409452-03	620	104
MW-3-GW-4-14 409452-04	420	88
MW-4-GW-4-14 409452-05	550	97
Method Blank 04-1958 MB	<50	91

Date of Report: 10/01/14
Date Received: 09/24/14
Project: PSTL-Longview, F&BI 409452

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

Laboratory Code: 409452-03 (Matrix Spike) Silica Gel

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel	ug/L (ppb)	2,500	340	98	92	64-141	6

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel	ug/L (ppb)	2,500	93	89	61-133	4

Date of Report: 10/01/14
Date Received: 09/24/14
Project: PSTL-Longview, F&BI 409452

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

Laboratory Code: 409452-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel	ug/L (ppb)	2,500	620	102	95	64-141	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel	ug/L (ppb)	2,500	96	97	61-133	1

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.

409452

SAMPLE CHAIN OF CUSTODY

ME 09/24/14

EO3

Page # 1 of 1

Send Report To Brett Beaulieu
Company Floyd|Snider
Address 601 Union Street, Ste. 600
City, State, ZIP Seattle, WA 98101
Phone # 206-292-2078 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. PSTL-Longview

PO #

REMARKS

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

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

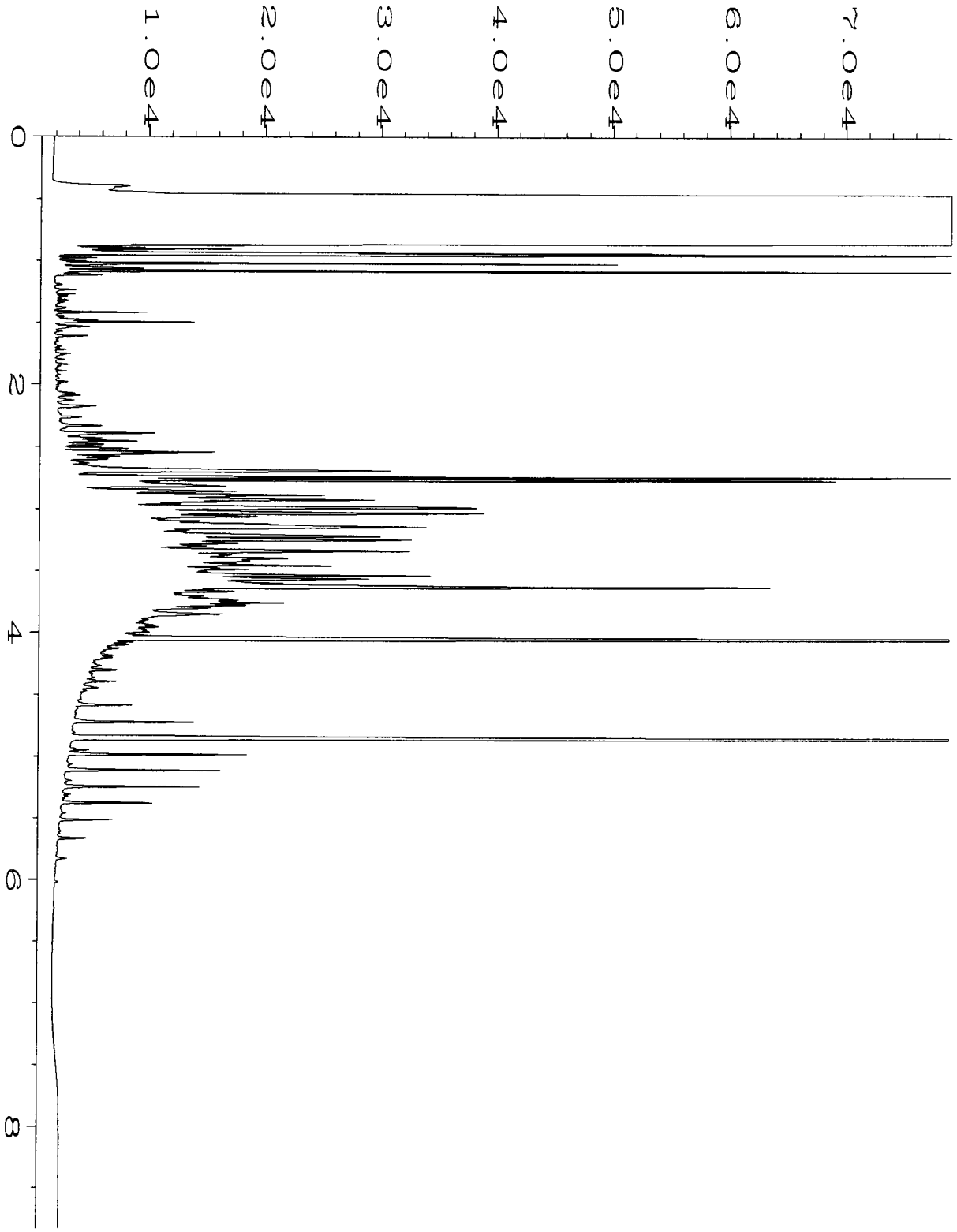
Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	See Notes	MS/MSD				Notes
MW-1-GW-4-14	01	9/24/14	1118	GW	1	X						X					Please only report diesel range organics. Conduct silica gel & without silica gel cleanup on all samples. Thanks
MW-13-GW-4-14	02		1150		1	X						X					
MW-2-GW-4-14	03A-C		1155		3	X						X	X				
MW-3-GW-4-14	04		1250		1	X						X					
MW-4-GW-4-14	05		1340		1	X						X					

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Gabriel Cisneros	Floyd|Snider	9/24/14	1750
Received by:	Jan Shimazu	FBT	9/24/14	1
Relinquished by:				
Received by:				

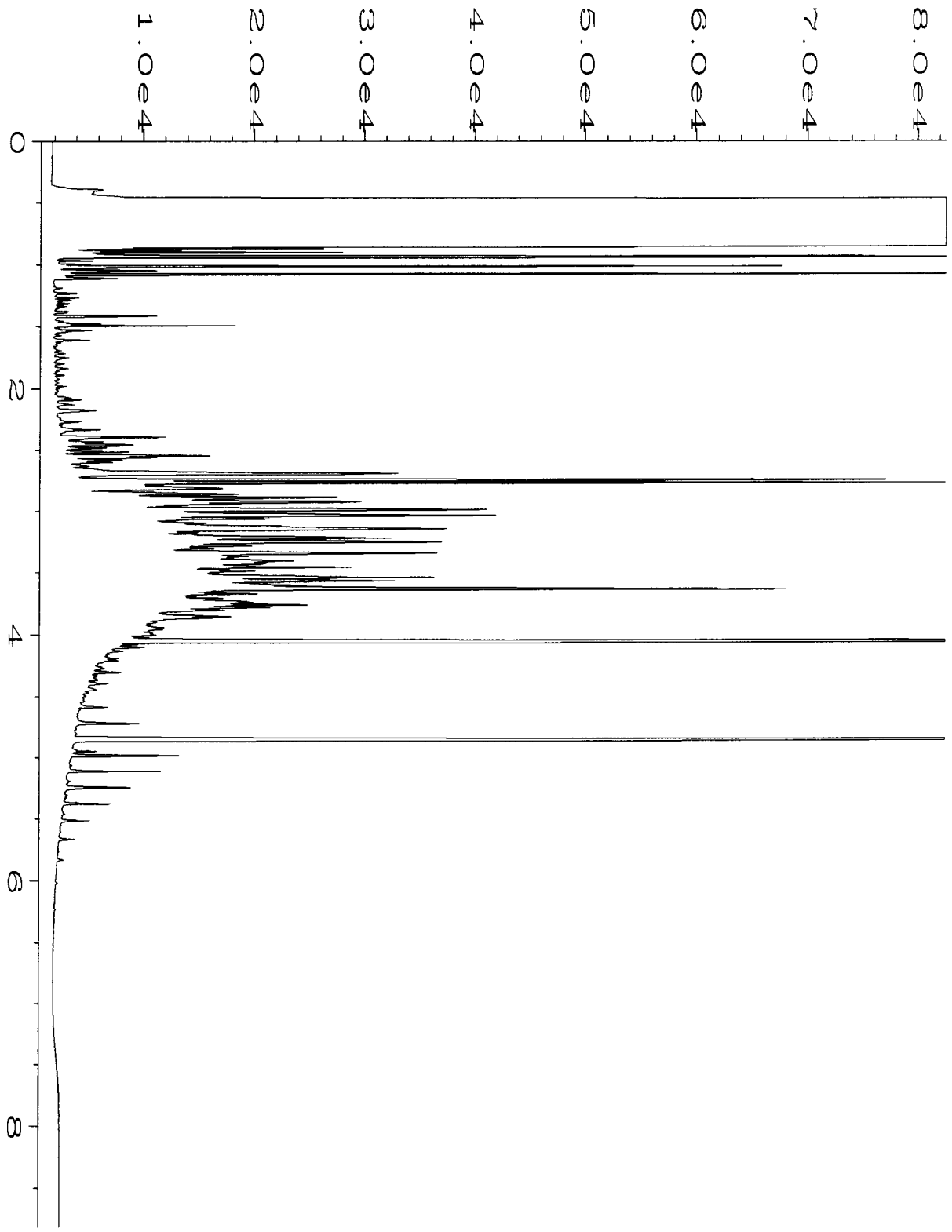
Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

Samples received at 4 °C



Data File Name	: C:\HPCHEM\4\DATA\09-26-14\022F0301.D		
Operator	: mwdl	Page Number	: 1
Instrument	: GC#4	Vial Number	: 22
Sample Name	: 409452-01	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 26 Sep 14 01:06 PM	Instrument Method	: DX.MTH
Report Created on	: 29 Sep 14 10:19 AM	Analysis Method	: DX.MTH



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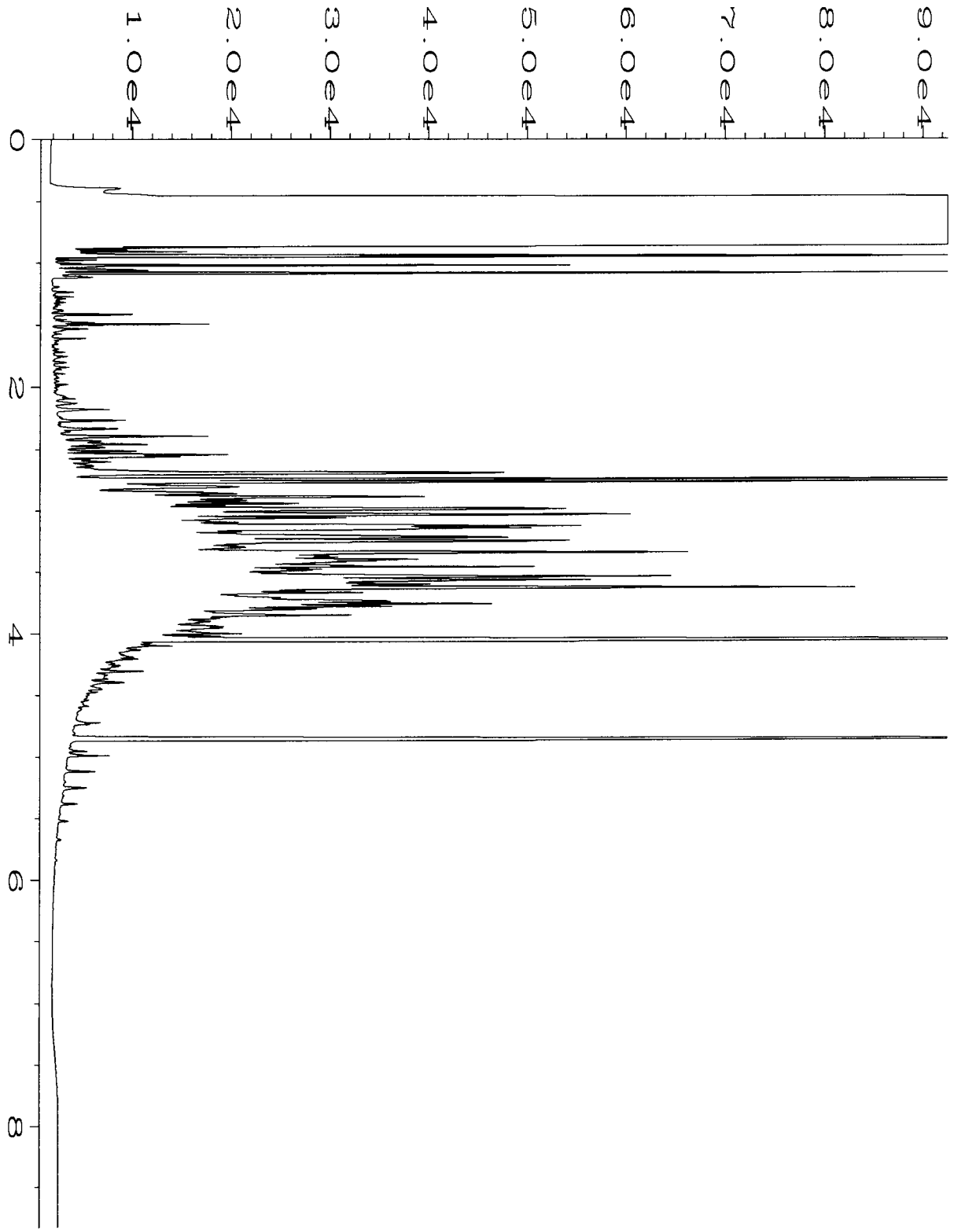
Operator : mwdl
Instrument : GC#4
Sample Name : 409452-02
Run Time Bar Code:
Acquired on : 26 Sep 14 01:20 PM
Report Created on: 29 Sep 14 10:19 AM

Page Number : 1
Vial Number : 23
Injection Number : 1
Sequence Line : 3
Instrument Method: DX.MTH
Analysis Method : DX.MTH



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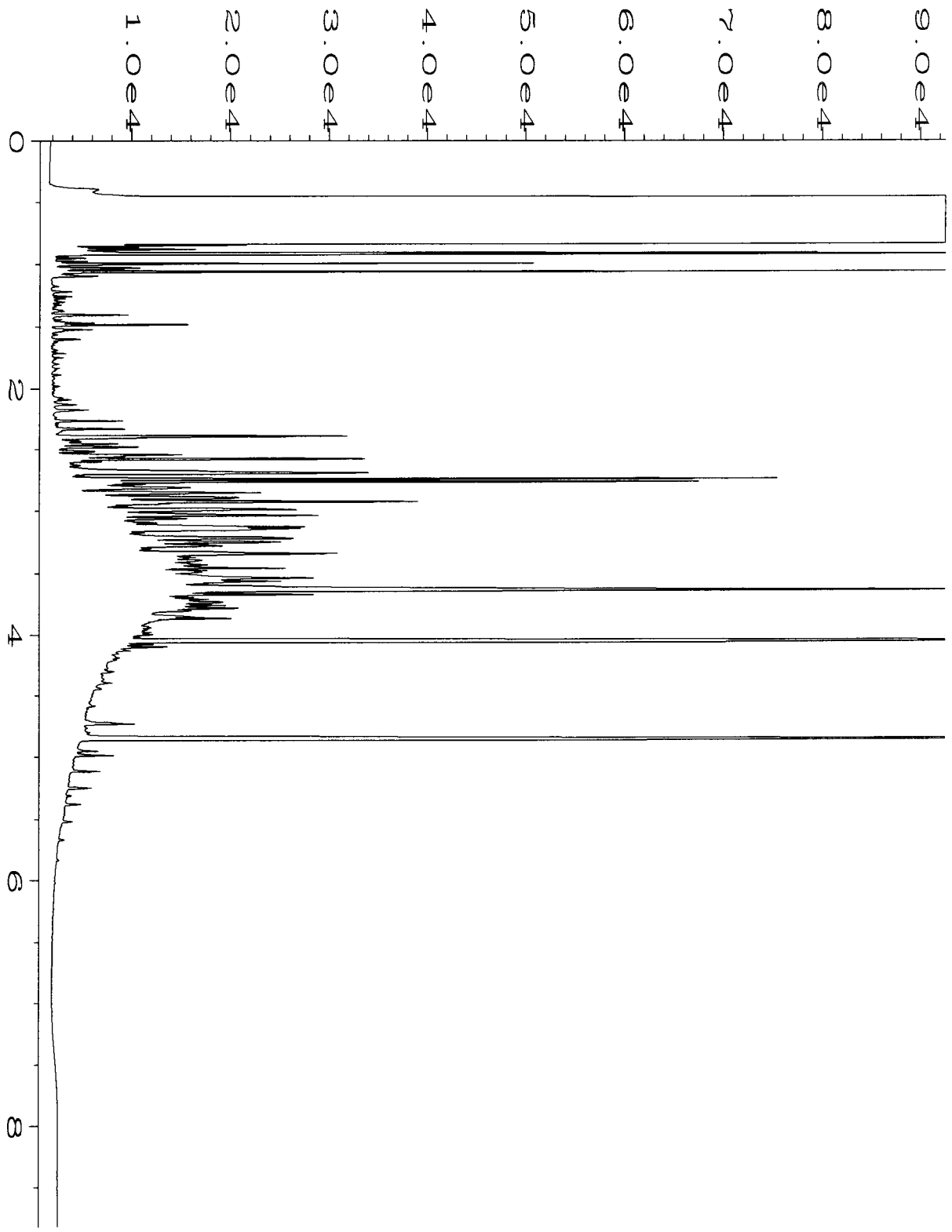
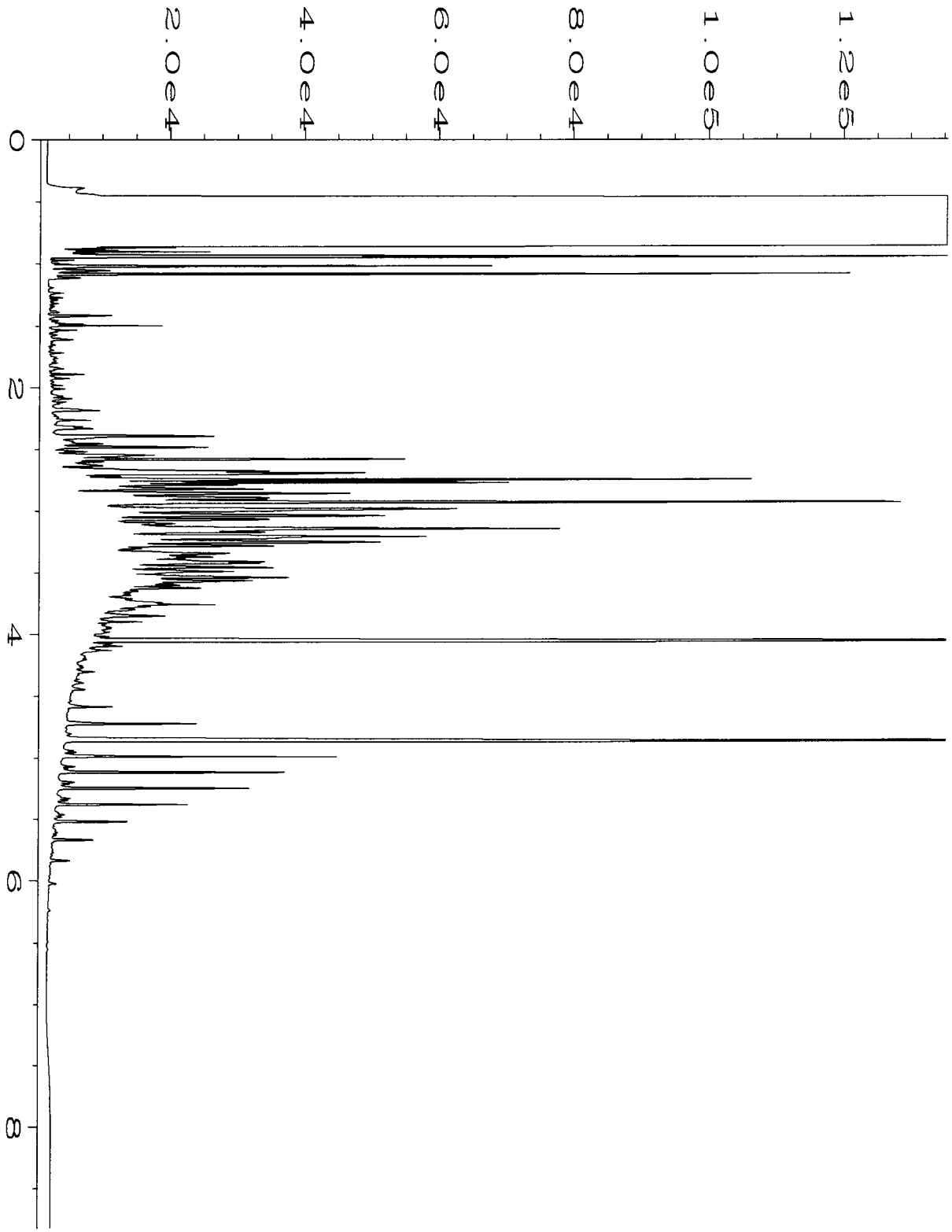
Operator	: mwdl	Page Number	: 1
Instrument	: GC#4	Vial Number	: 24
Sample Name	: 409452-03	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 26 Sep 14 01:34 PM	Instrument Method	: DX.MTH
Report Created on	: 29 Sep 14 10:19 AM	Analysis Method	: DX.MTH



Data File Name	: C:\HPCHEM\4\DATA\09-26-14\025F0301.D		
Operator	: mwdl	Page Number	: 1
Instrument	: GC#4	Vial Number	: 25
Sample Name	: 409452-04	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 26 Sep 14 01:49 PM	Instrument Method	: DX.MTH
Report Created on	: 29 Sep 14 10:20 AM	Analysis Method	: DX.MTH



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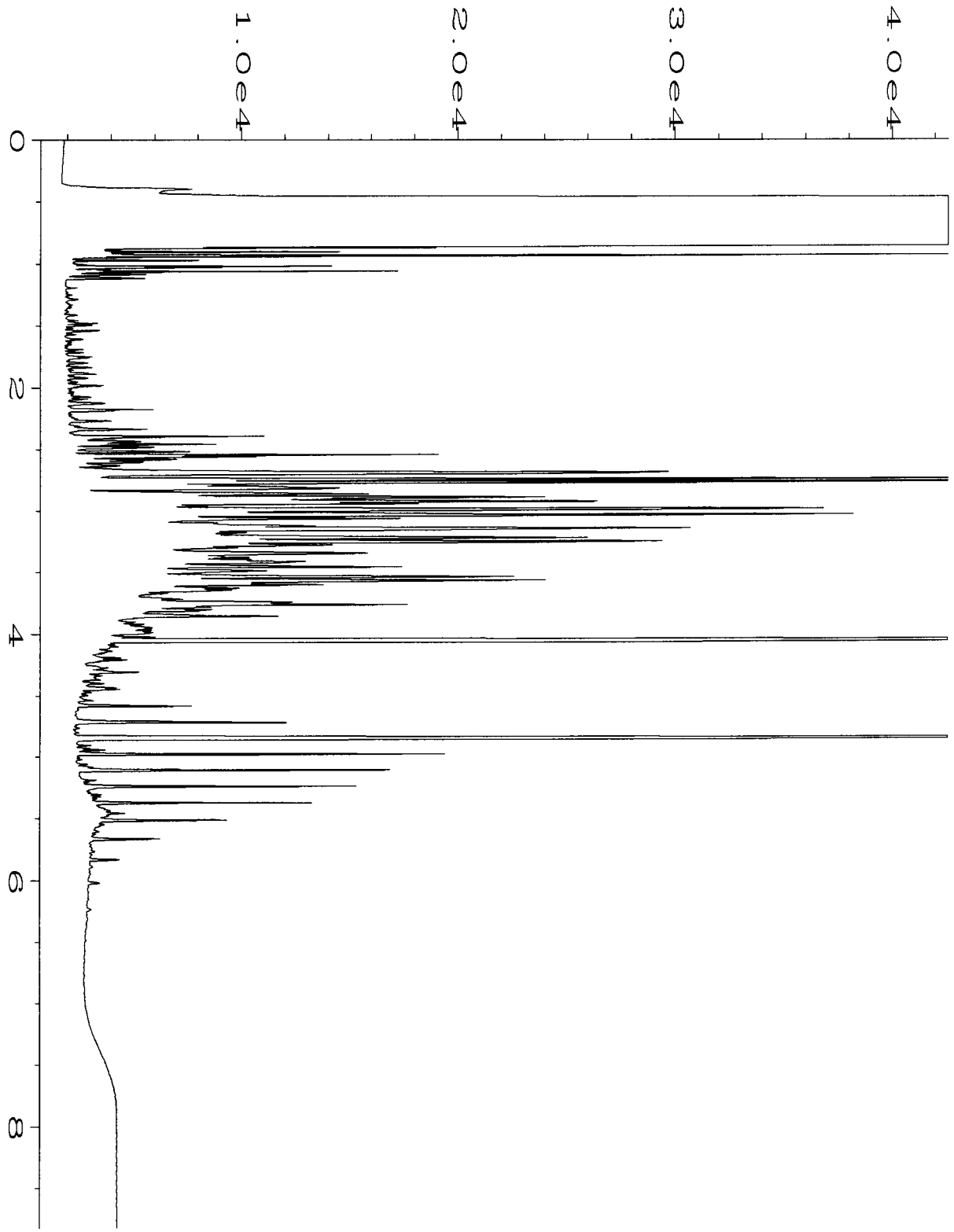
Operator	: mwdl	Page Number	: 1
Instrument	: GC#4	Vial Number	: 26
Sample Name	: 409452-05	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 26 Sep 14 02:03 PM	Instrument Method	: DX.MTH
Report Created on	: 29 Sep 14 10:20 AM	Analysis Method	: DX.MTH



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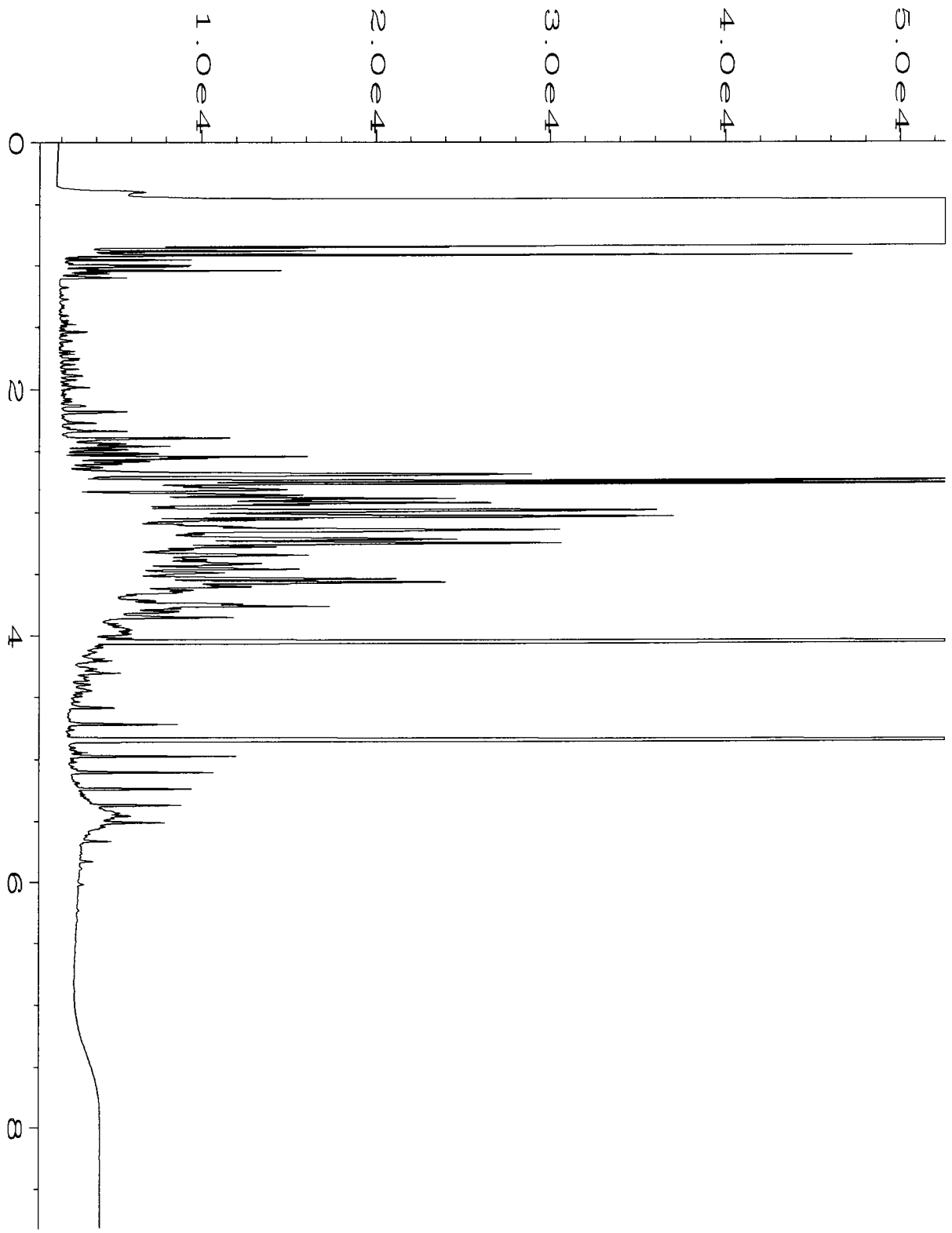
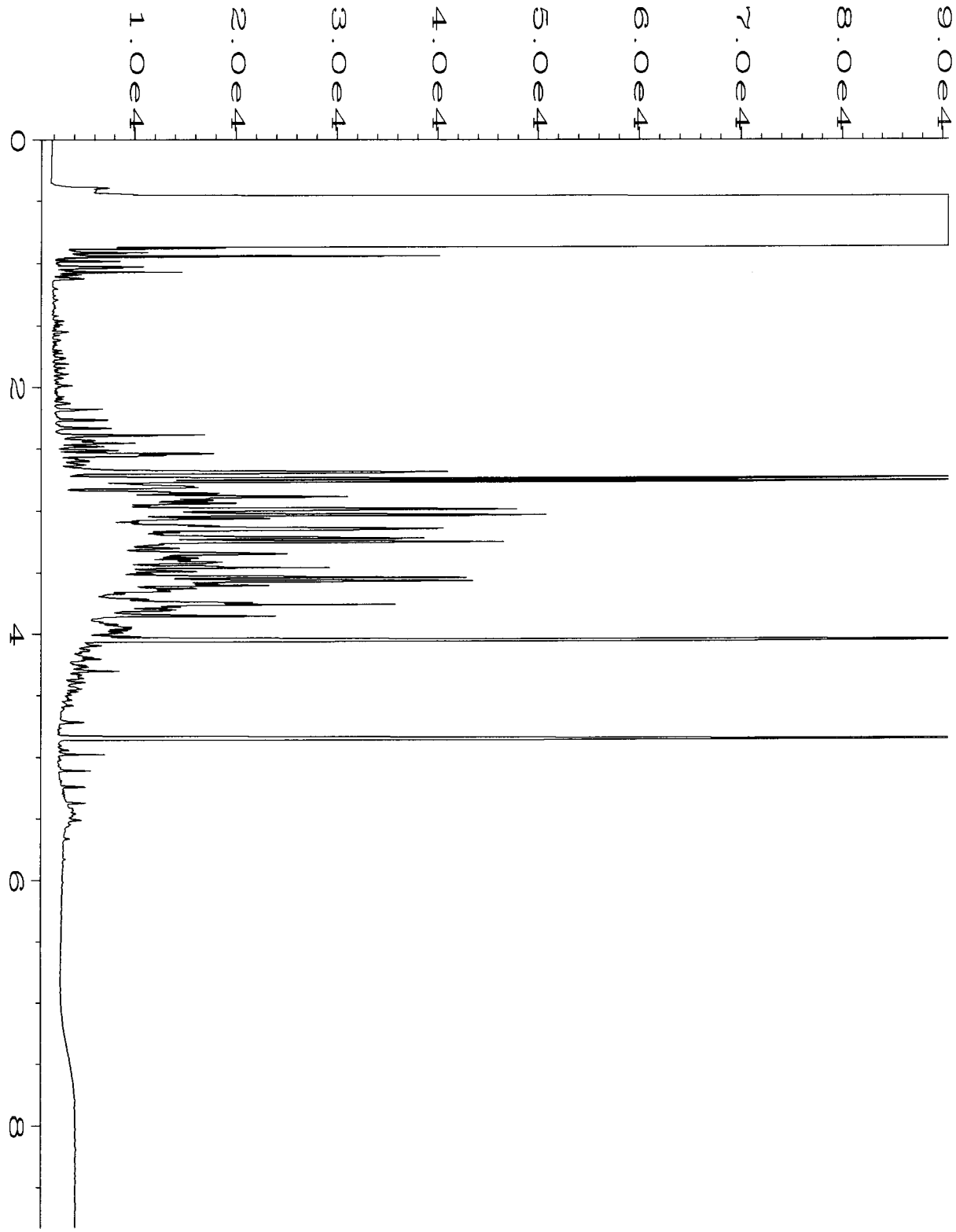
Operator	: mwdl	Page Number	: 1
Instrument	: GC#4	Vial Number	: 45
Sample Name	: 409452-01 sg	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 7
Acquired on	: 26 Sep 14 08:07 PM	Instrument Method	: DX.MTH
Report Created on	: 29 Sep 14 10:20 AM	Analysis Method	: DX.MTH

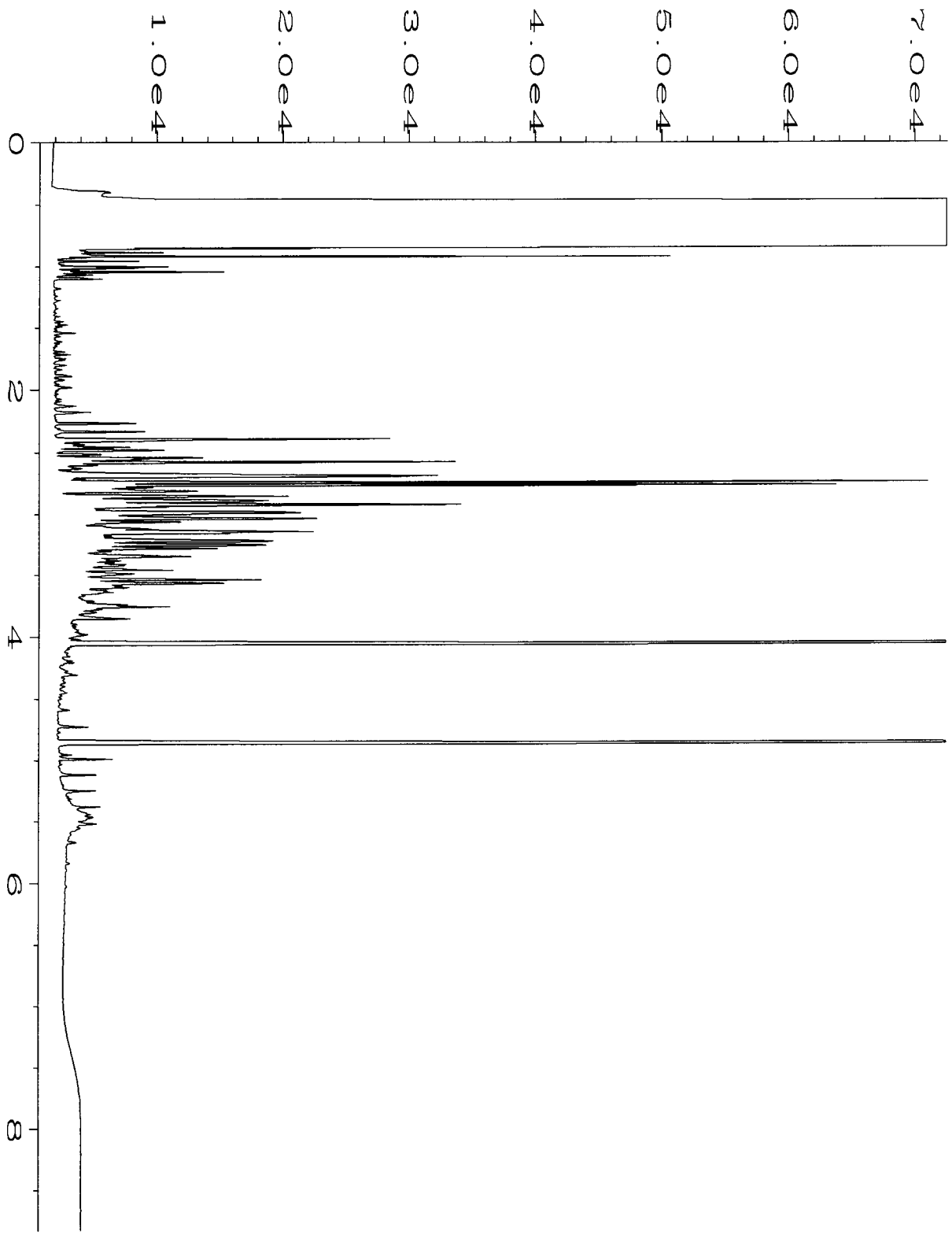


Data File Name : C:\HPCHEM\4\DATA\09-26-14\046F0701.D
Operator : mwdl
Instrument : GC#4
Sample Name : 409452-02 sg
Run Time Bar Code:
Acquired on : 26 Sep 14 08:22 PM
Report Created on: 29 Sep 14 10:20 AM

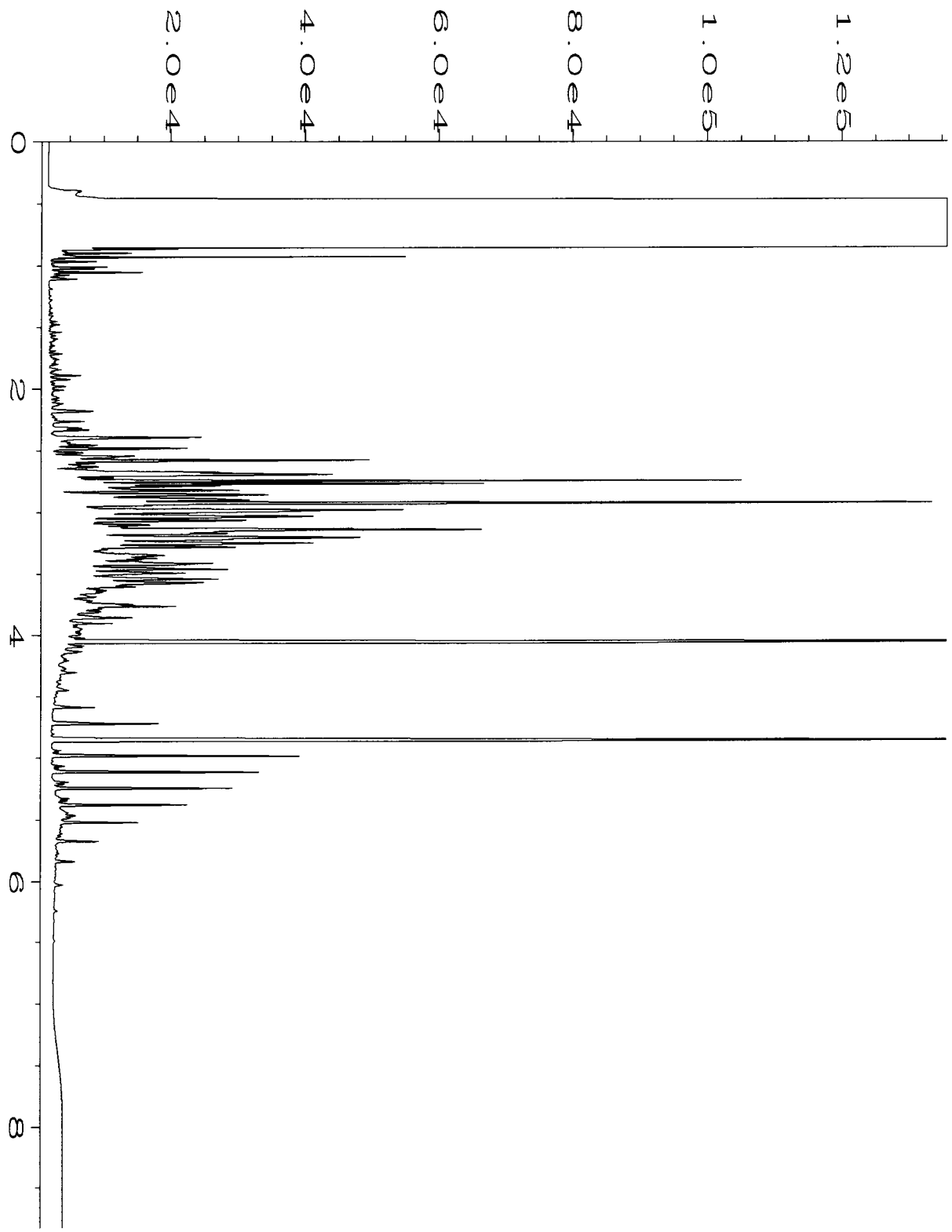
Page Number : 1
Vial Number : 46
Injection Number : 1
Sequence Line : 7
Instrument Method: DX.MTH
Analysis Method : DX.MTH



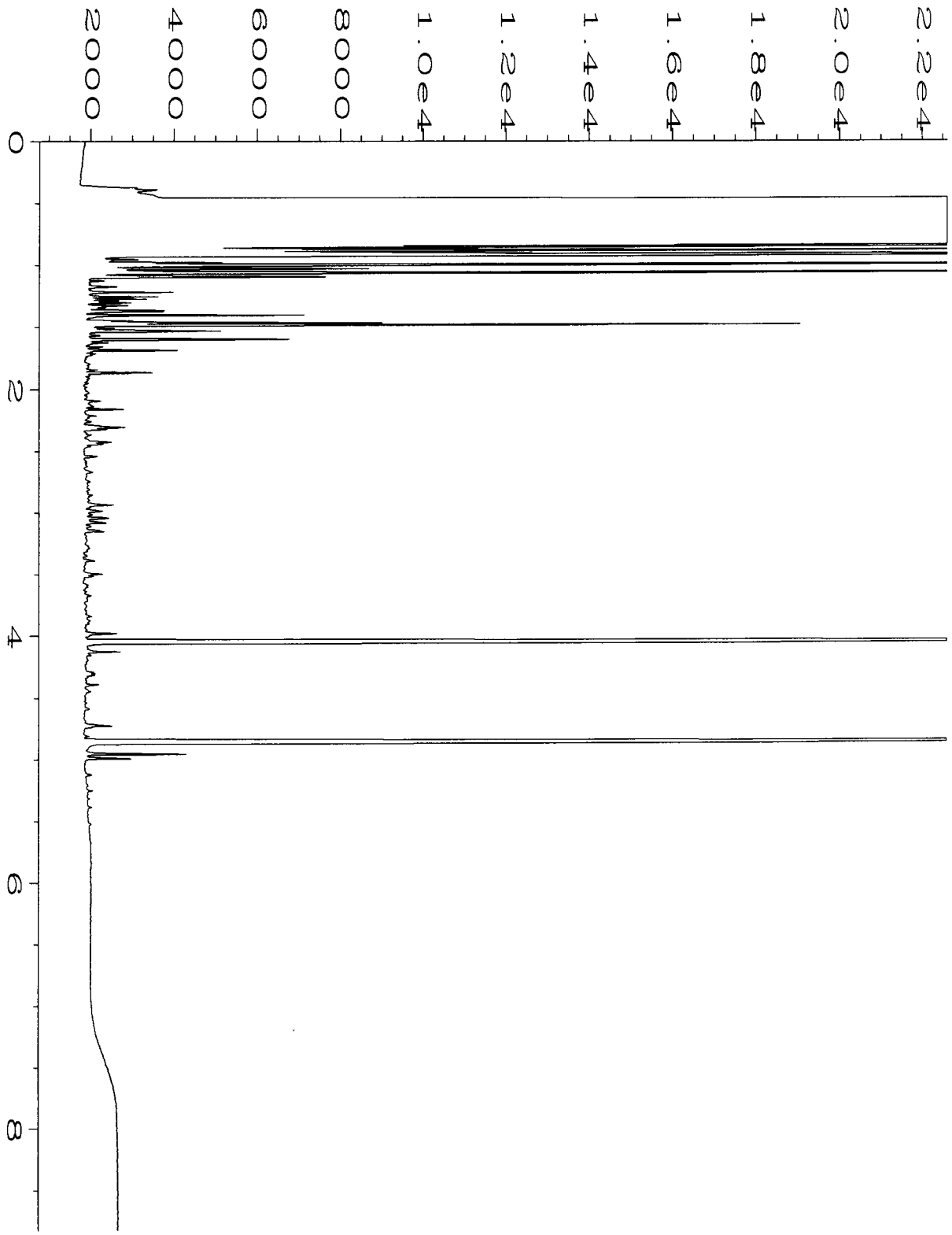
Data File Name	: C:\HPCHEM\4\DATA\09-26-14\047F0701.D		
Operator	: mwdl	Page Number	: 1
Instrument	: GC#4	Vial Number	: 47
Sample Name	: 409452-03 sg	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 7
Acquired on	: 26 Sep 14 08:36 PM	Instrument Method	: DX.MTH
Report Created on	: 29 Sep 14 10:21 AM	Analysis Method	: DX.MTH



Data File Name	: C:\HPCHEM\4\DATA\09-26-14\048F0701.D		
Operator	: mwdl	Page Number	: 1
Instrument	: GC#4	Vial Number	: 48
Sample Name	: 409452-04 sg	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 7
Acquired on	: 26 Sep 14 08:50 PM	Instrument Method	: DX.MTH
Report Created on	: 29 Sep 14 10:21 AM	Analysis Method	: DX.MTH

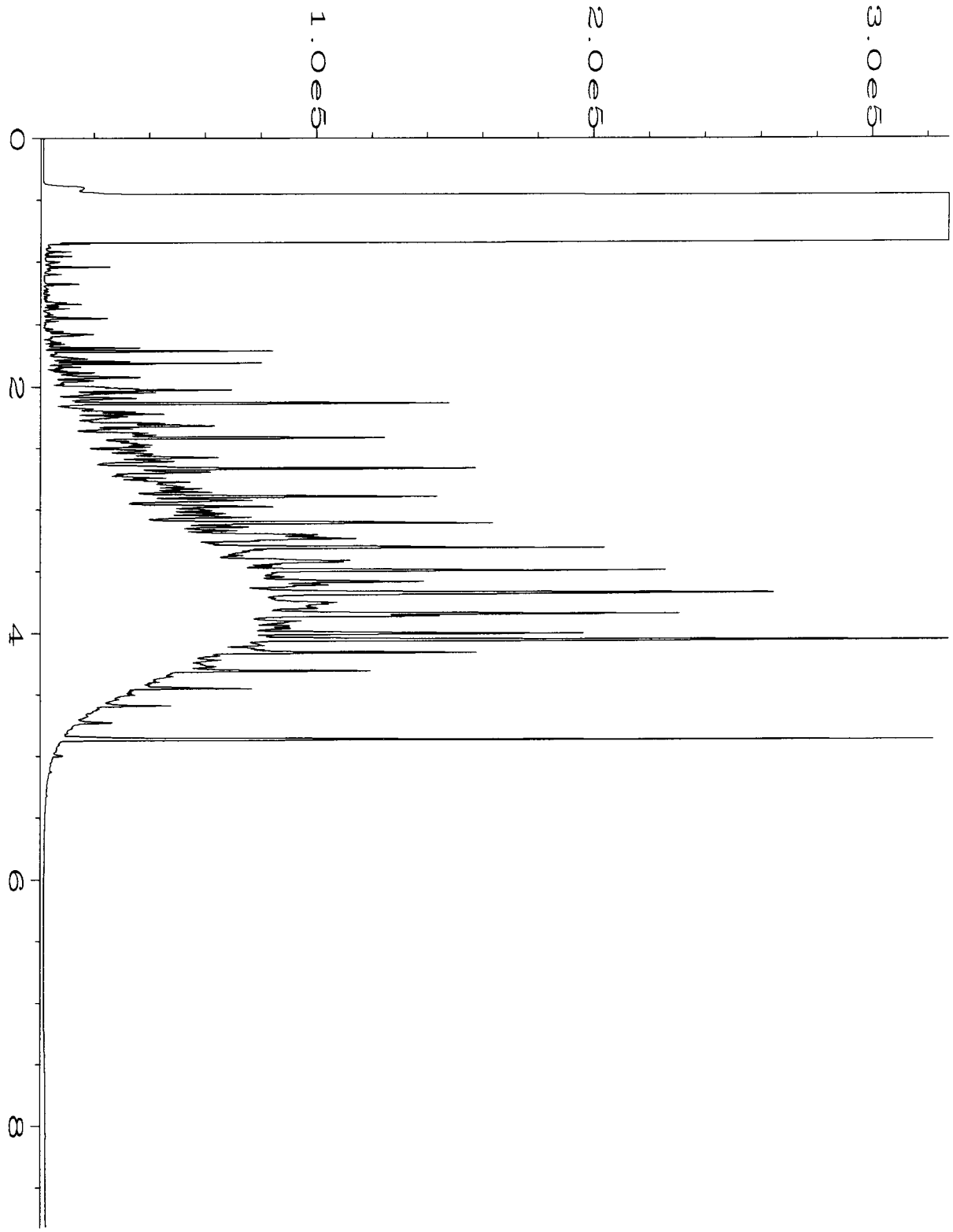


Data File Name	: C:\HPCHEM\4\DATA\09-26-14\049F0701.D		
Operator	: mwdl	Page Number	: 1
Instrument	: GC#4	Vial Number	: 49
Sample Name	: 409452-05 sg	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 7
Acquired on	: 26 Sep 14 09:05 PM	Instrument Method	: DX.MTH
Report Created on	: 29 Sep 14 10:21 AM	Analysis Method	: DX.MTH



Data File Name : C:\HPCHEM\4\DATA\09-26-14\017F0301.D
Operator : mwdl
Instrument : GC#4
Sample Name : 04-1958 mb
Run Time Bar Code:
Acquired on : 26 Sep 14 11:53 AM
Report Created on: 29 Sep 14 10:21 AM

Page Number : 1
Vial Number : 17
Injection Number : 1
Sequence Line : 3
Instrument Method: DX.MTH
Analysis Method : DX.MTH



Data File Name	: C:\HPCHEM\4\DATA\09-26-14\003F0201.D		
Operator	: mwdl	Page Number	: 1
Instrument	: GC#4	Vial Number	: 3
Sample Name	: 500 Dx 42-113D	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 26 Sep 14 08:52 AM	Instrument Method	: DX.MTH
Report Created on	: 29 Sep 14 10:21 AM	Analysis Method	: DX.MTH

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

December 30, 2014

Brett Beaulieu, Project Manager
Floyd-Snider
Two Union Square, Suite 600
601 Union St
Seattle, WA 98101

Dear Mr. Beaulieu:

Included are the results from the testing of material submitted on December 22, 2014 from the PSTL-Longview, F&BI 412371 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
FDS1230R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on December 22, 2014 by Friedman & Bruya, Inc. from the Floyd-Snider PSTL-Longview, F&BI 412371 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Floyd-Snider
412371 -01	MW-1-GW-4-14
412371 -02	MW-21-GW-4-14
412371 -03	MW-2-GW-4-14
412371 -04	MW-3-GW-4-14
412371 -05	MW-4-GW-4-14

All quality control requirements were acceptable.

Date of Report: 12/30/14
Date Received: 12/22/14
Project: PSTL-Longview, F&BI 412371
Date Extracted: 12/23/14
Date Analyzed: 12/26/14

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Surrogate (% Recovery) (Limit 41-152)
MW-1-GW-4-14 412371-01	410	108
MW-21-GW-4-14 412371-02	520	121
MW-2-GW-4-14 412371-03	480	107
MW-3-GW-4-14 412371-04	480	114
MW-4-GW-4-14 412371-05	440	104
Method Blank 04-2550 MB2	<50	110

Date of Report: 12/30/14
Date Received: 12/22/14
Project: PSTL-Longview, F&BI 412371
Date Extracted: 12/23/14
Date Analyzed: 12/24/14 and 12/26/14

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING METHOD NWTPH-Dx
Sample Extracts Passed Through a Silica Gel Column Prior to Analysis
Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Surrogate (% Recovery) (Limit 41-152)
MW-1-GW-4-14 412371-01	210	103
MW-21-GW-4-14 412371-02	310	104
MW-2-GW-4-14 412371-03	280	99
MW-3-GW-4-14 412371-04	200	106
MW-4-GW-4-14 412371-05	320	104
Method Blank 04-2550 MB2	<50	104

Date of Report: 12/30/14
Date Received: 12/22/14
Project: PSTL-Longview, F&BI 412371

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

Laboratory Code: 412371-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel	ug/L (ppb)	2,500	480	90	94	50-150	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel	ug/L (ppb)	2,500	91	101	63-142	10

Date of Report: 12/30/14
Date Received: 12/22/14
Project: PSTL-Longview, F&BI 412371

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

Laboratory Code: 412371-03 (Matrix Spike) Silica Gel

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel	ug/L (ppb)	2,500	280	76	87	50-150	13

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel	ug/L (ppb)	2,500	85	95	63-142	11

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.

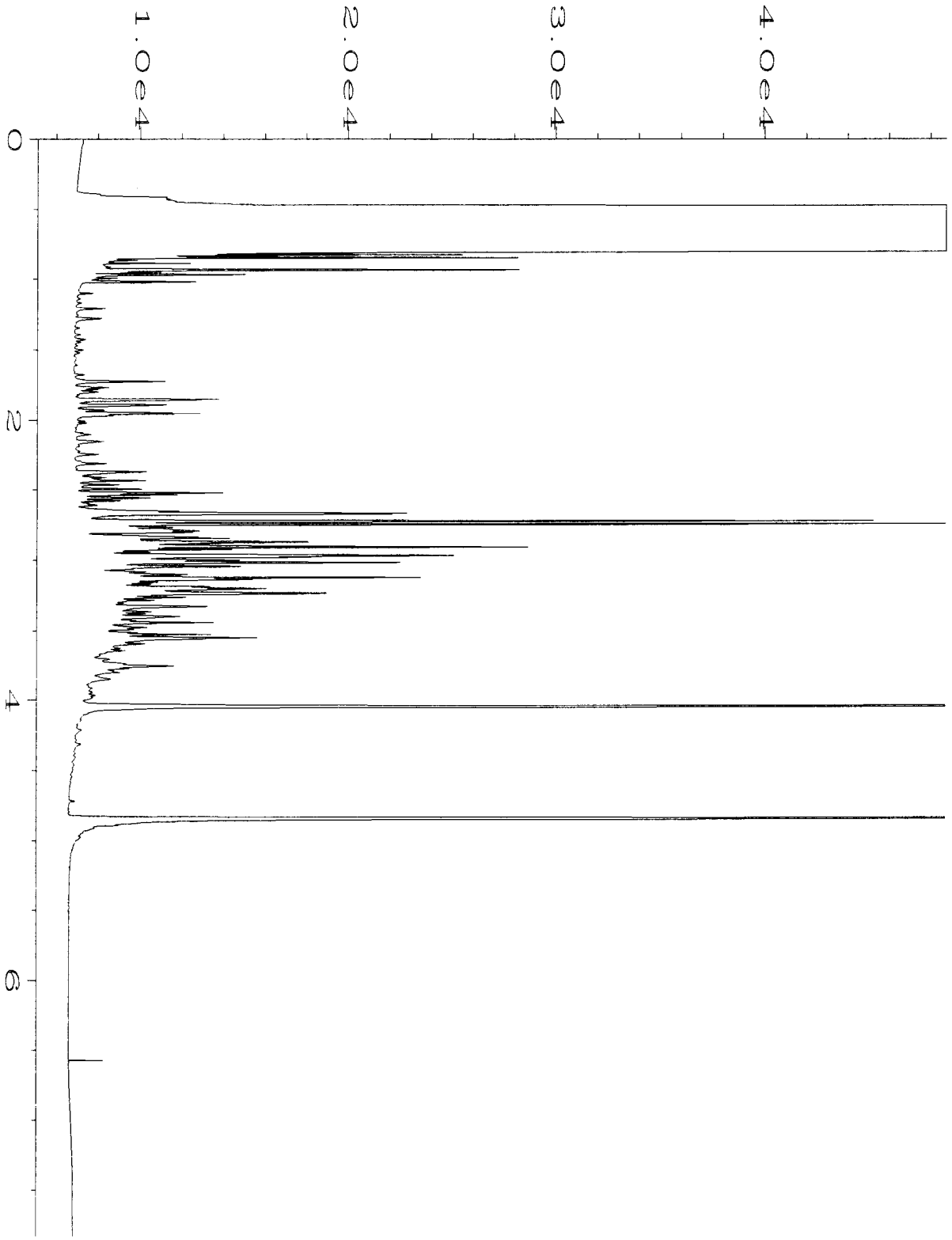
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.

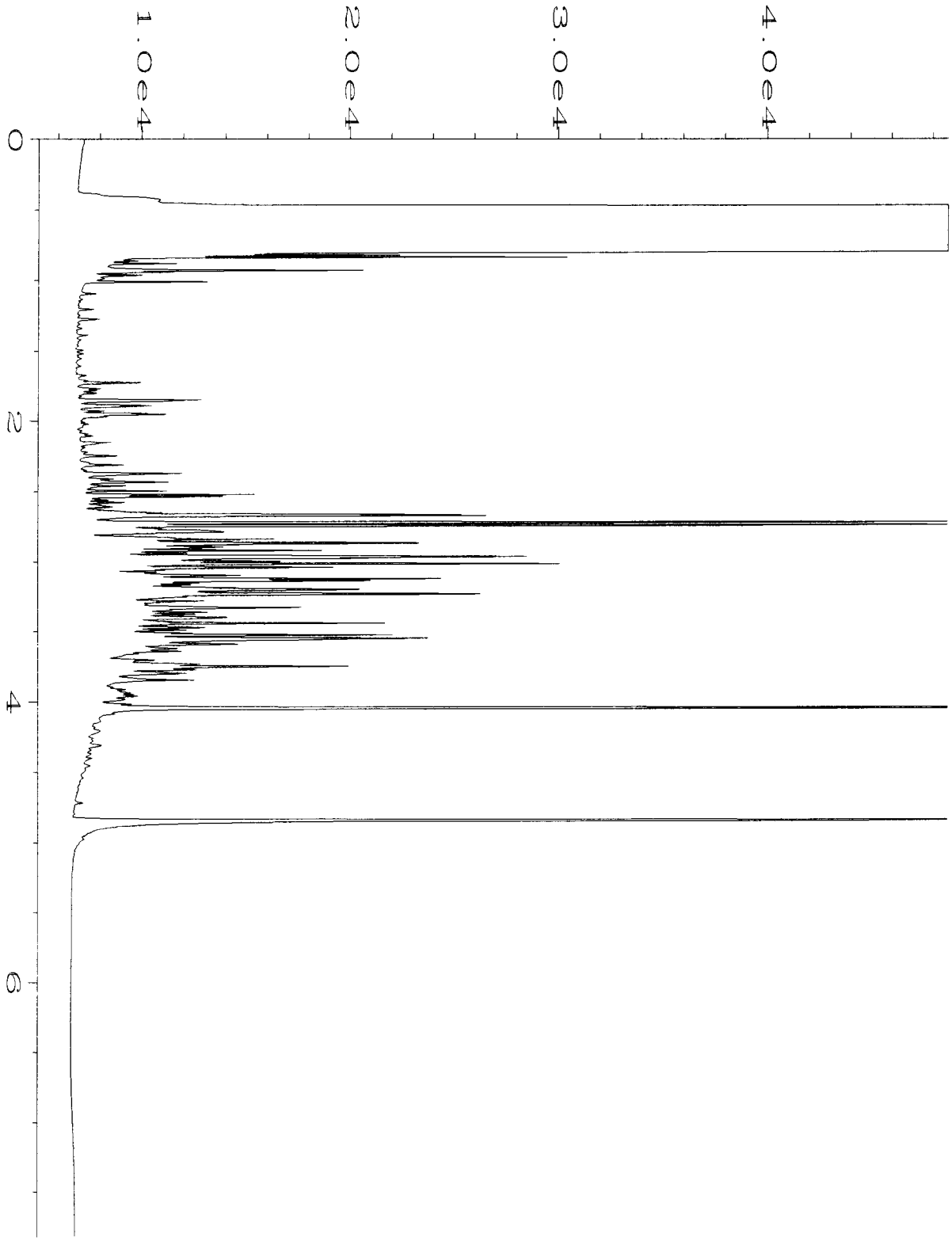
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

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

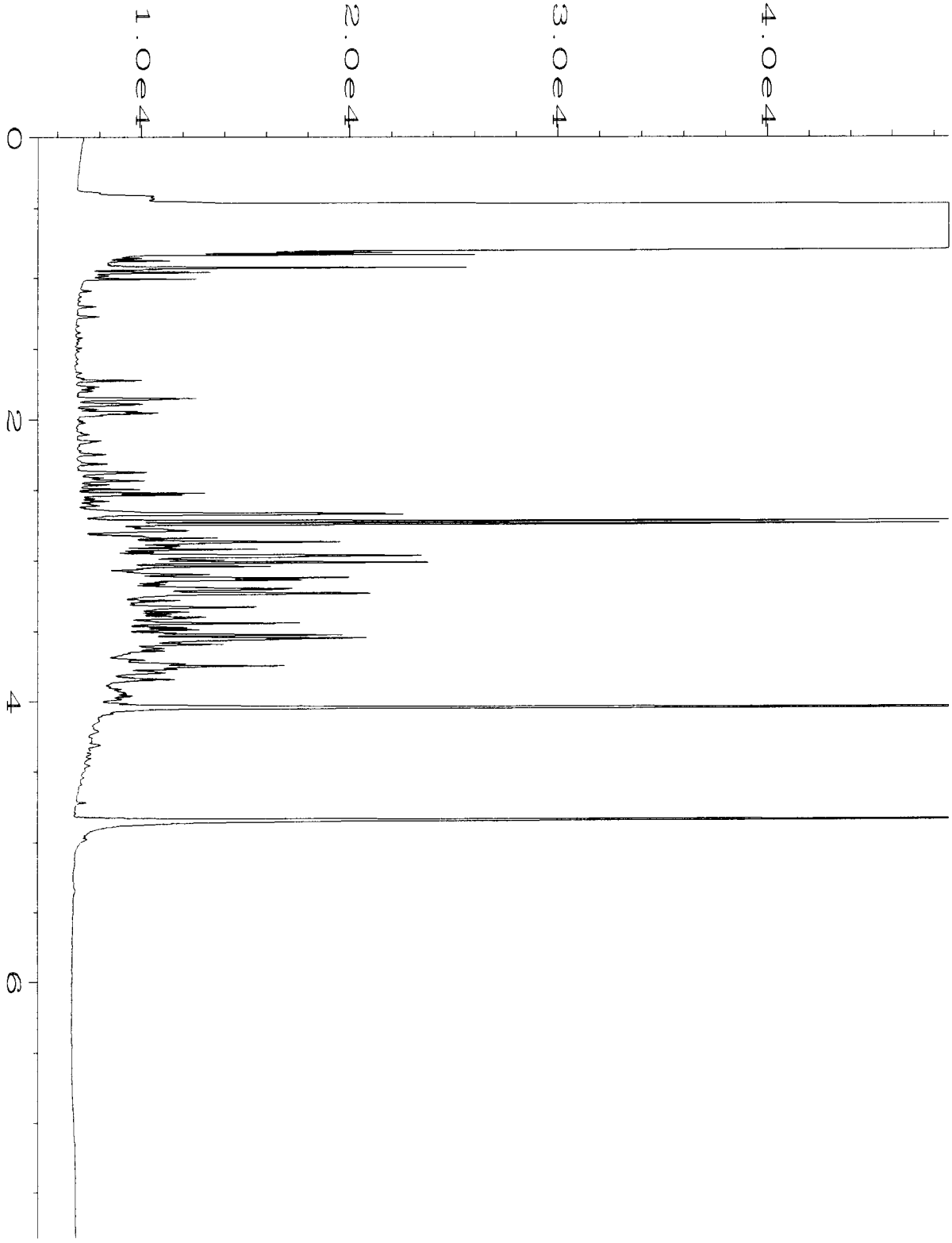
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



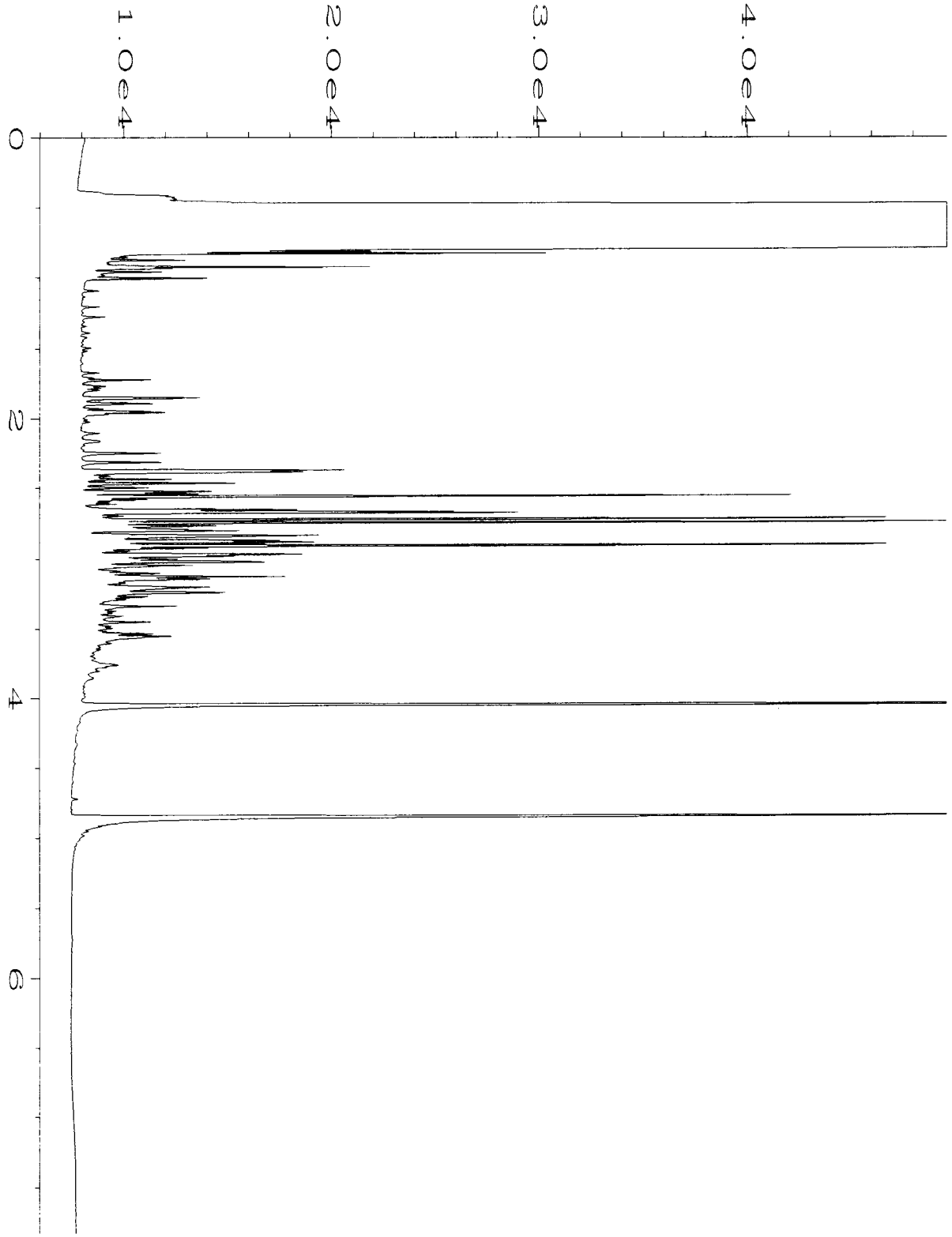
Data File Name	: C:\HPCHEM\1\DATA\12-24-14\038F0501.D		
Operator	: mwdl	Page Number	: 1
Instrument	: GC1	Vial Number	: 38
Sample Name	: 412371-01 sg	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 5
Acquired on	: 24 Dec 14 04:14 PM	Instrument Method	: DX.MTH
Report Created on	: 26 Dec 14 09:38 AM	Analysis Method	: END.MTH



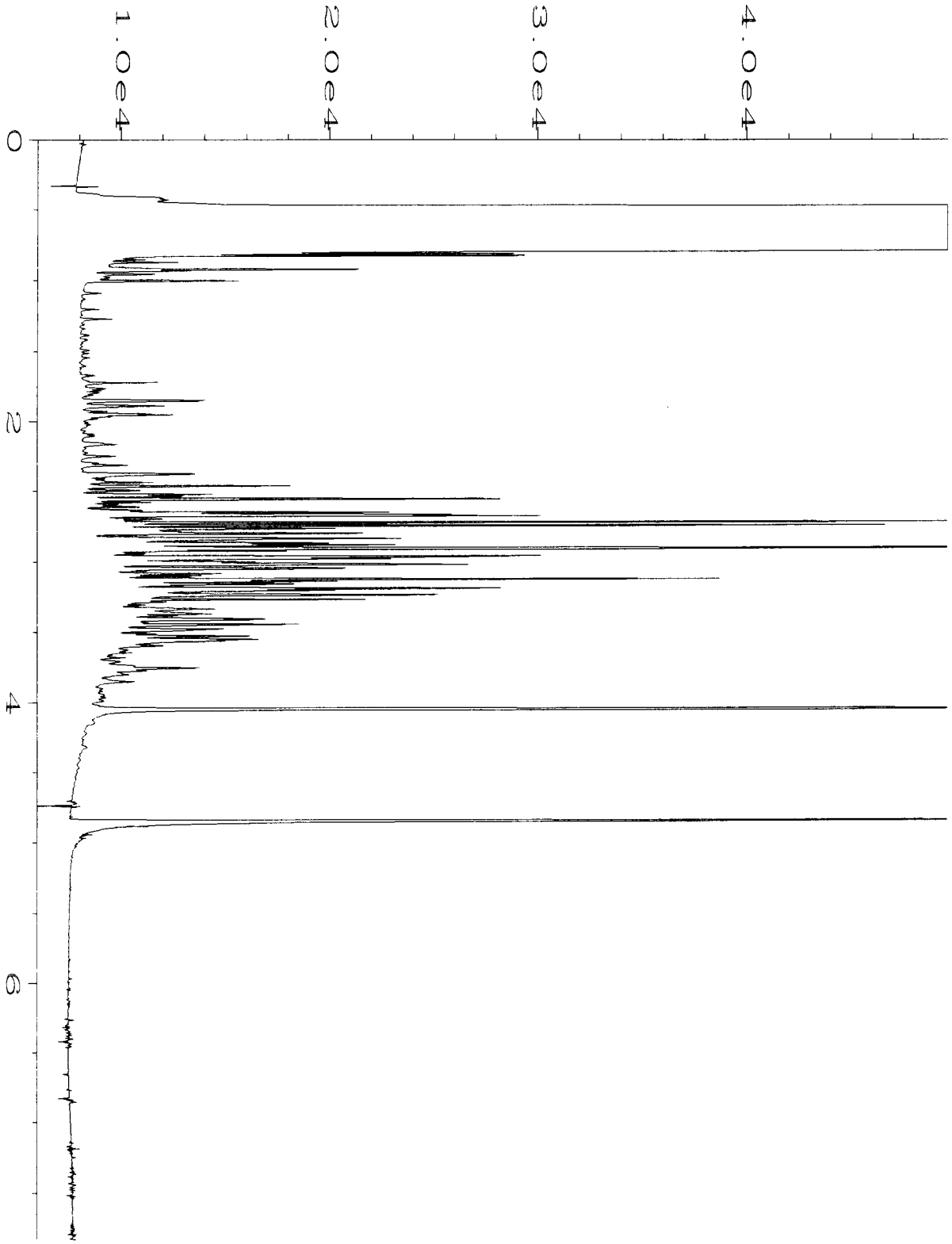
Data File Name	: C:\HPCHEM\1\DATA\12-24-14\039F0501.D		
Operator	: mwdl	Page Number	: 1
Instrument	: GC1	Vial Number	: 39
Sample Name	: 412371-02 sg	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 5
Acquired on	: 24 Dec 14 04:26 PM	Instrument Method	: DX.MTH
Report Created on	: 26 Dec 14 09:38 AM	Analysis Method	: END.MTH



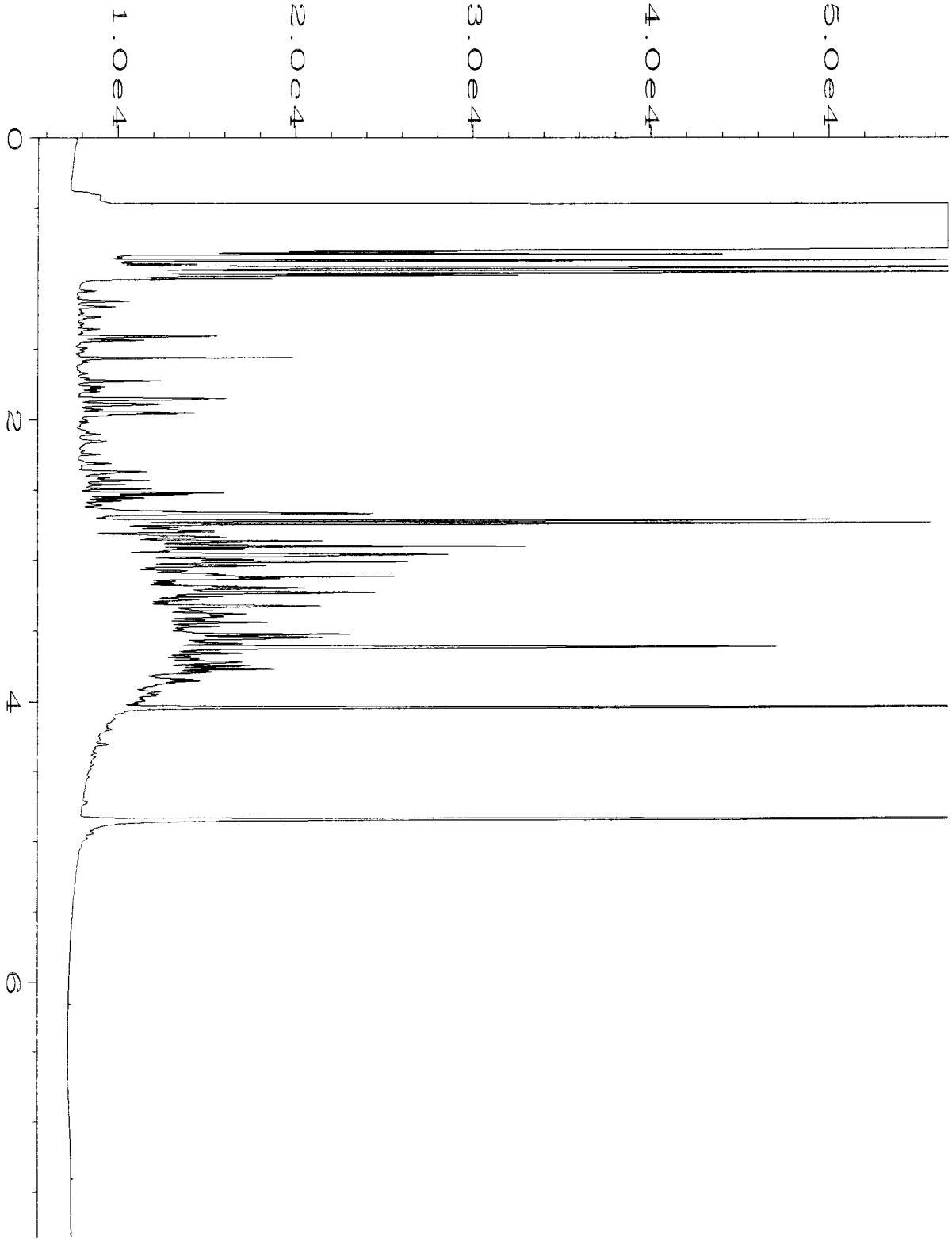
Data File Name	: C:\HPCHEM\1\DATA\12-24-14\040F0501.D		
Operator	: mwdl	Page Number	: 1
Instrument	: GC1	Vial Number	: 40
Sample Name	: 412371-03 sg	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 5
Acquired on	: 24 Dec 14 04:39 PM	Instrument Method	: DX.MTH
Report Created on	: 26 Dec 14 09:38 AM	Analysis Method	: END.MTH



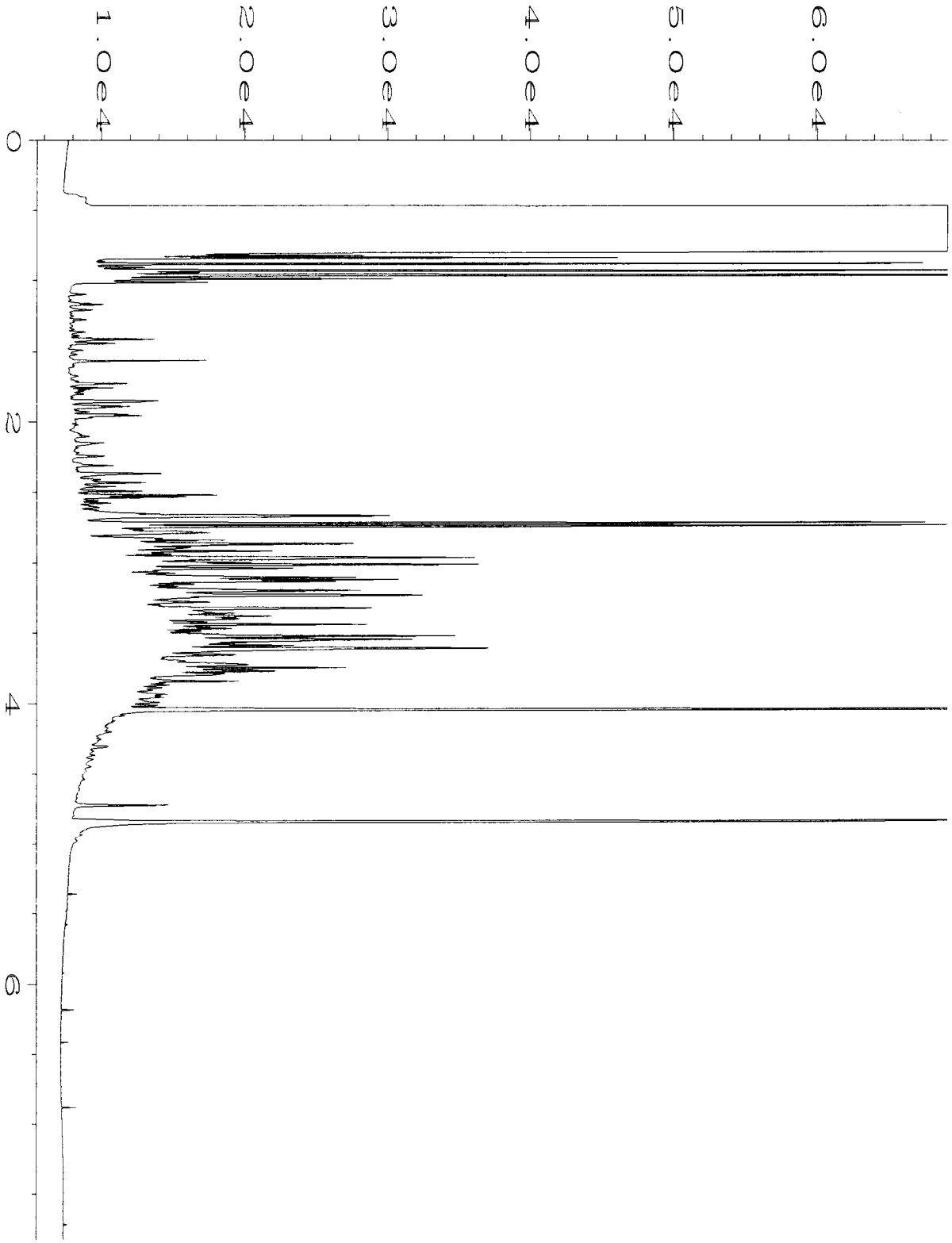
Data File Name	: C:\HPCHEM\1\DATA\12-26-14\007F0401.D		
Operator	: ml	Page Number	: 1
Instrument	: GC1	Vial Number	: 7
Sample Name	: 412371-04 sg rr	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 4
Acquired on	: 26 Dec 14 11:26 AM	Instrument Method	: DX.MTH
Report Created on	: 29 Dec 14 09:35 AM	Analysis Method	: DX.MTH



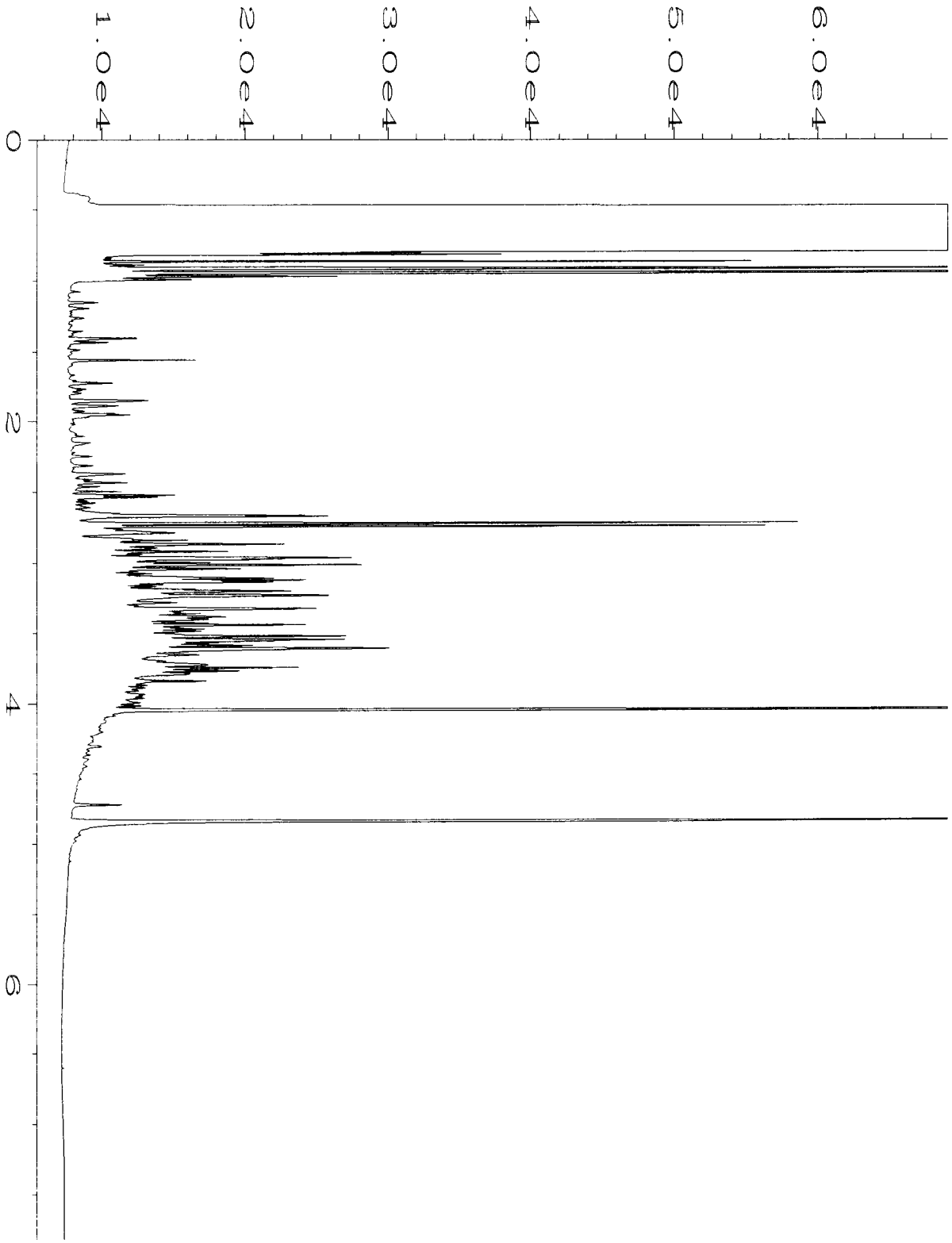
Data File Name	: C:\HPCHEM\1\DATA\12-26-14\008F0401.D		
Operator	: ml	Page Number	: 1
Instrument	: GC1	Vial Number	: 8
Sample Name	: 412371-05 sg rr	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 4
Acquired on	: 26 Dec 14 11:38 AM	Instrument Method	: DX.MTH
Report Created on	: 29 Dec 14 09:35 AM	Analysis Method	: DX.MTH



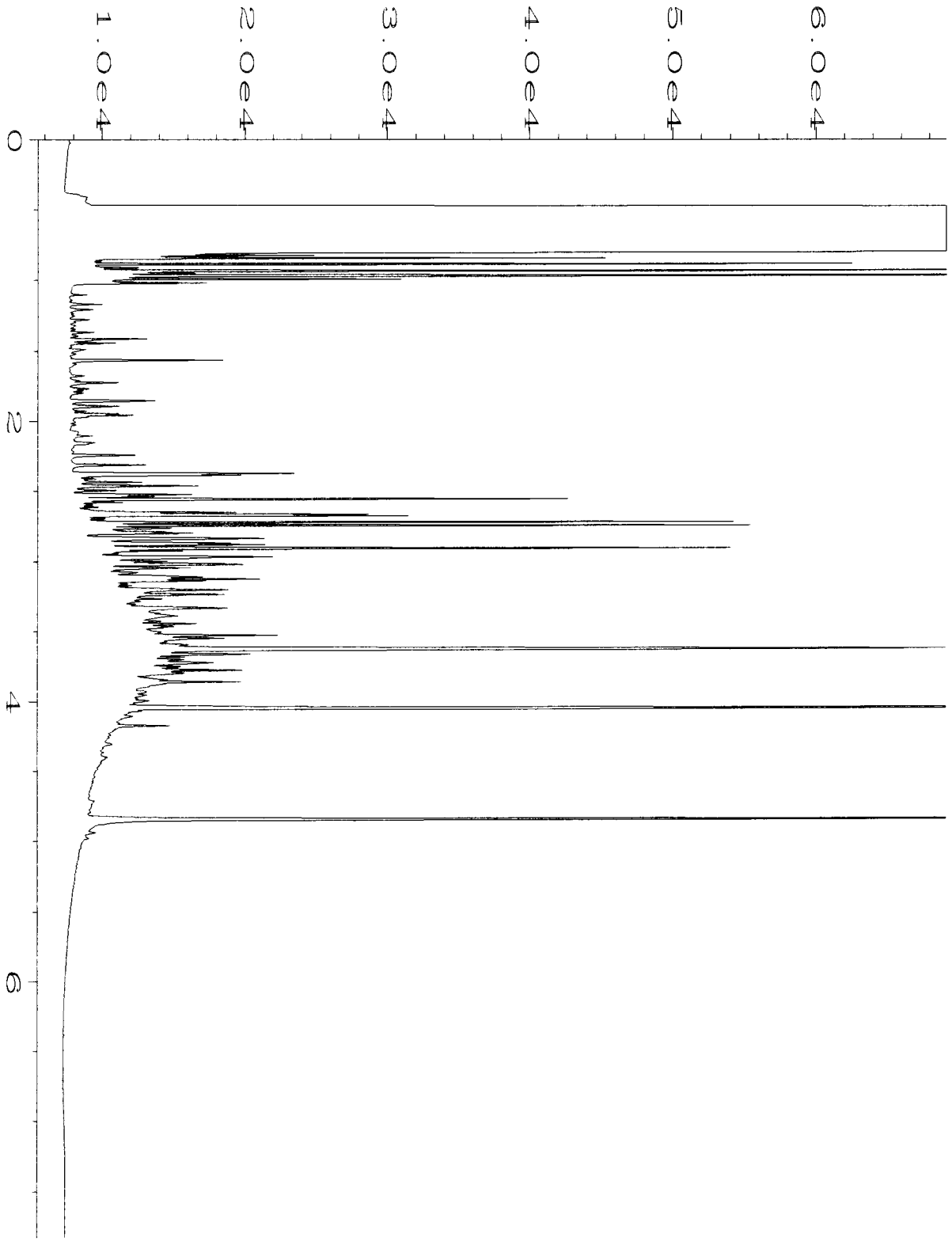
Data File Name	: C:\HPCHEM\1\DATA\12-26-14\017F0401.D		
Operator	: ml	Page Number	: 1
Instrument	: GC1	Vial Number	: 17
Sample Name	: 412371-01	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 4
Acquired on	: 26 Dec 14 01:27 PM	Instrument Method	: DX.MTH
Report Created on	: 29 Dec 14 09:36 AM	Analysis Method	: DX.MTH



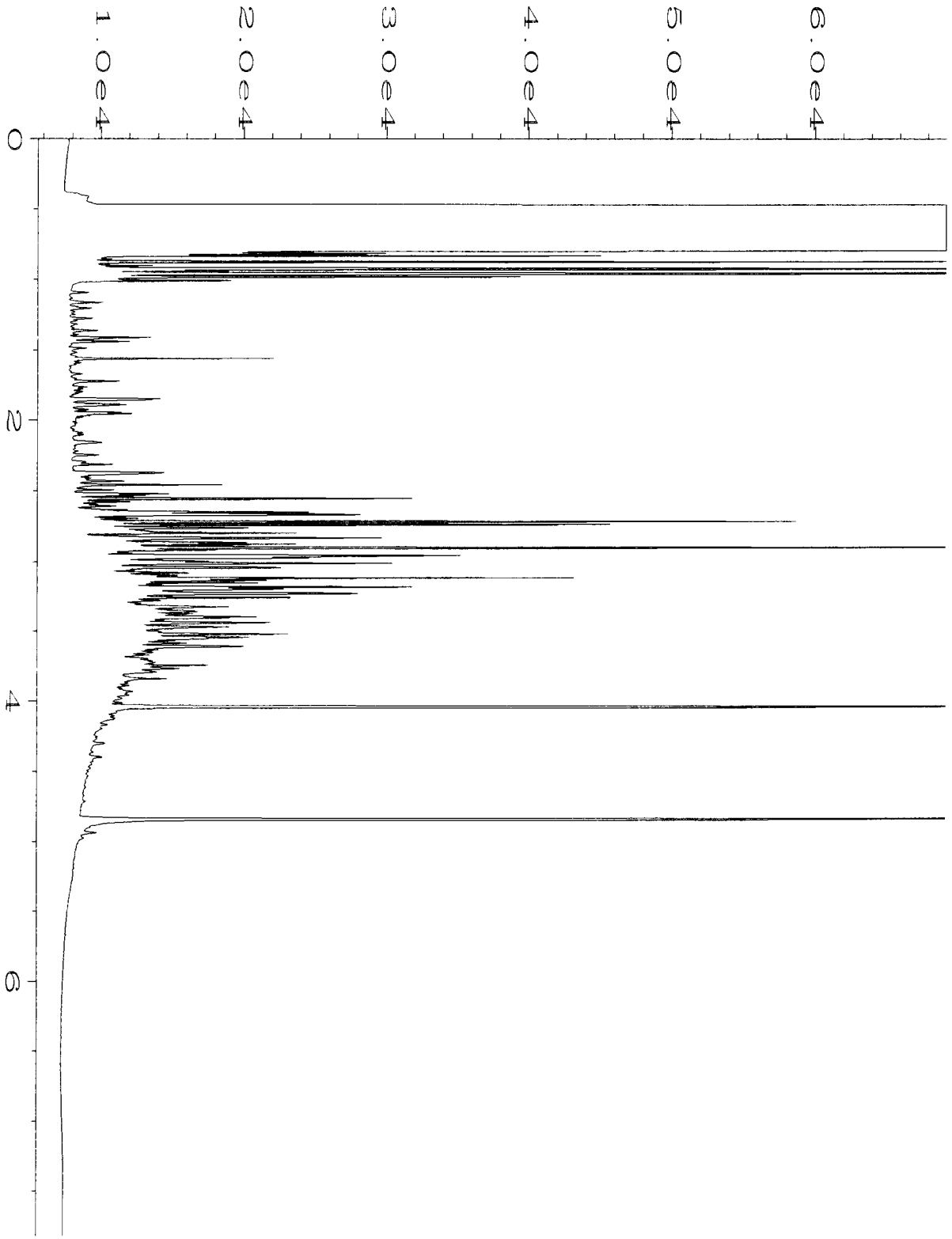
Data File Name	: C:\HPCHEM\1\DATA\12-26-14\018F0401.D		
Operator	: ml	Page Number	: 1
Instrument	: GC1	Vial Number	: 18
Sample Name	: 412371-02	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 4
Acquired on	: 26 Dec 14 01:39 PM	Instrument Method	: DX.MTH
Report Created on	: 29 Dec 14 09:36 AM	Analysis Method	: DX.MTH



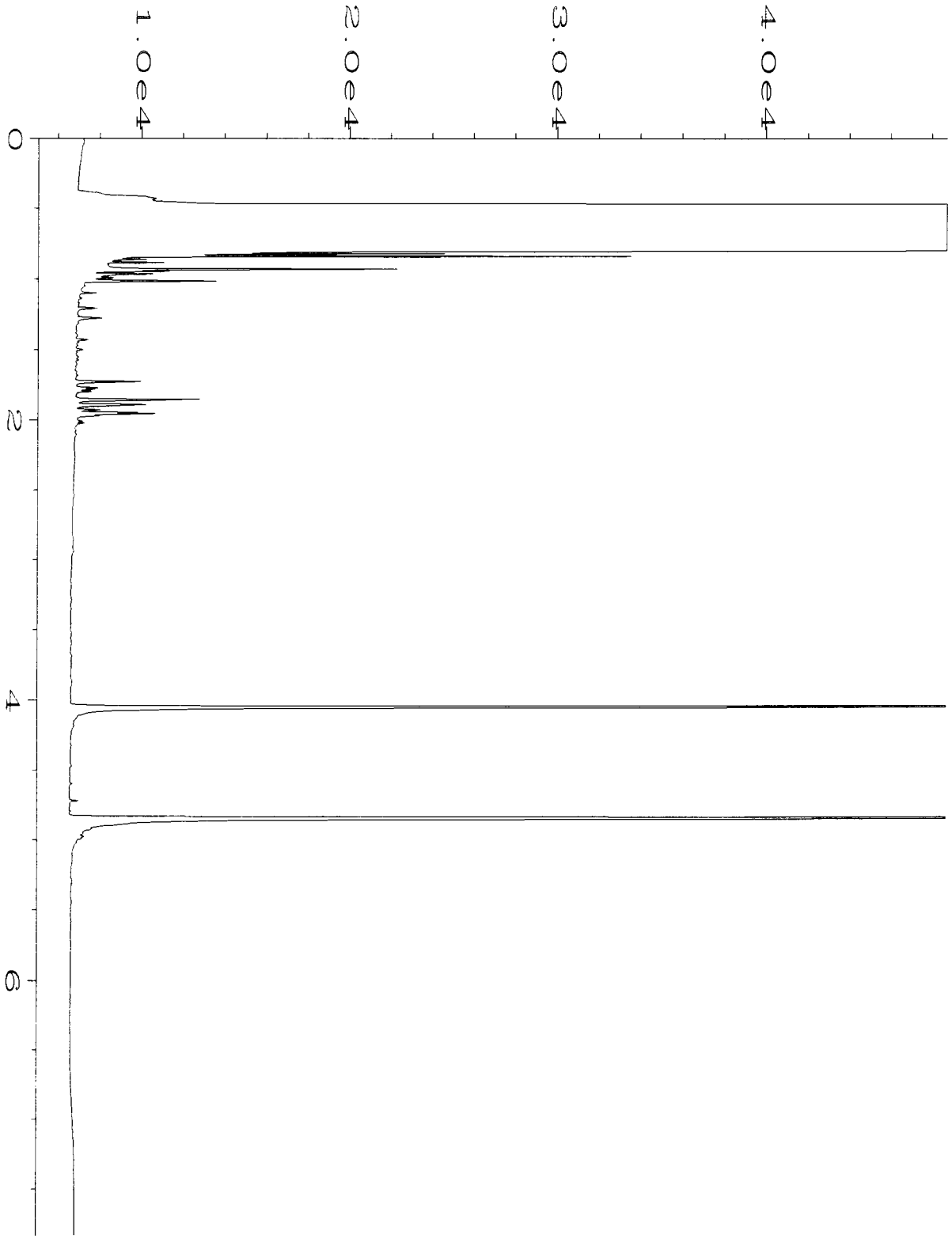
Data File Name	: C:\HPCHEM\1\DATA\12-26-14\019F0401.D		
Operator	: ml	Page Number	: 1
Instrument	: GC1	Vial Number	: 19
Sample Name	: 412371-03	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 4
Acquired on	: 26 Dec 14 01:52 PM	Instrument Method	: DX.MTH
Report Created on	: 29 Dec 14 09:36 AM	Analysis Method	: DX.MTH



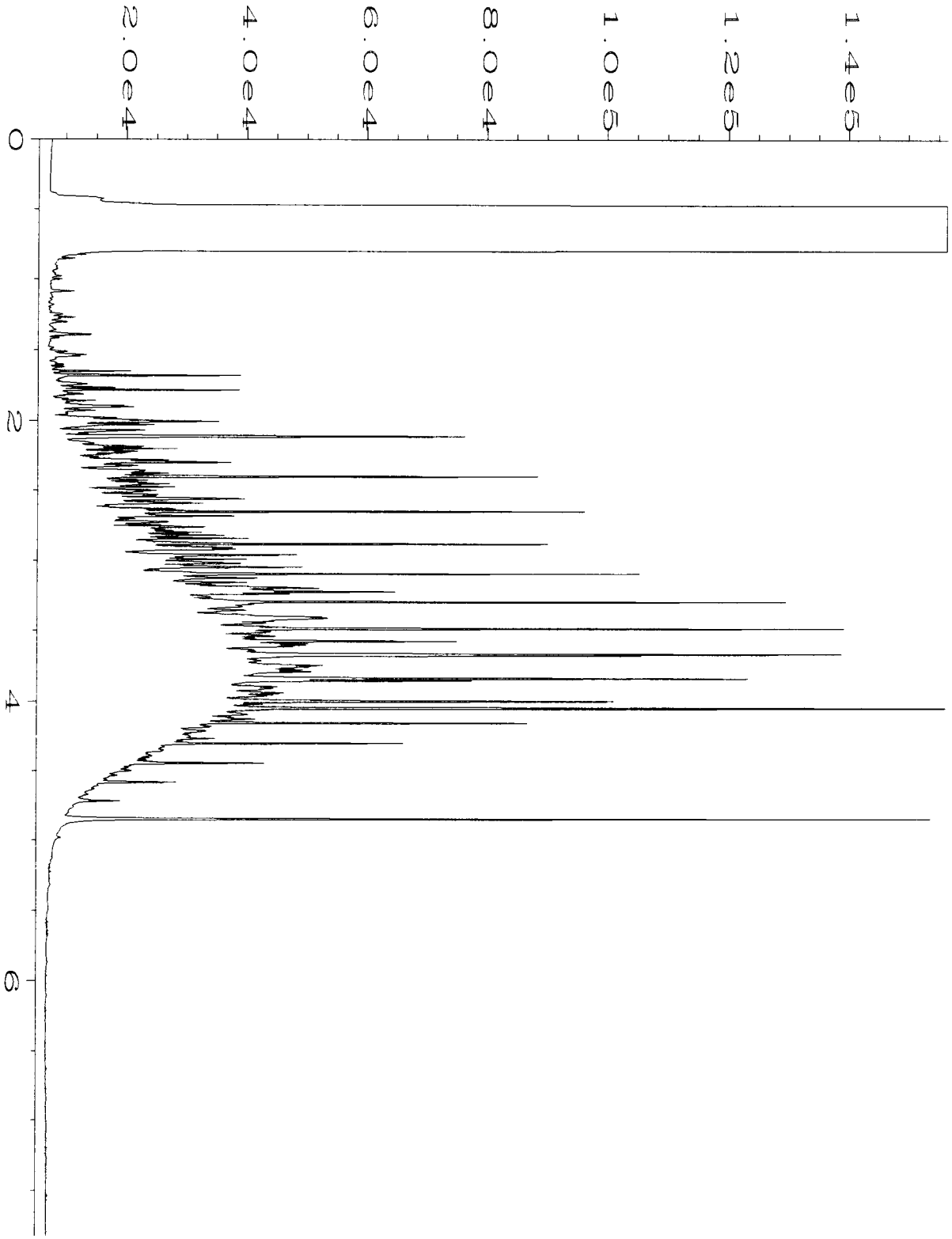
Data File Name	: C:\HPCHEM\1\DATA\12-26-14\020F0401.D		
Operator	: ml	Page Number	: 1
Instrument	: GC1	Vial Number	: 20
Sample Name	: 412371-04	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 4
Acquired on	: 26 Dec 14 02:04 PM	Instrument Method	: DX.MTH
Report Created on	: 29 Dec 14 09:36 AM	Analysis Method	: DX.MTH



Data File Name	: C:\HPCHEM\1\DATA\12-26-14\021F0401.D		
Operator	: ml	Page Number	: 1
Instrument	: GC1	Vial Number	: 21
Sample Name	: 412371-05	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 4
Acquired on	: 26 Dec 14 02:18 PM	Instrument Method	: DX.MTH
Report Created on	: 29 Dec 14 09:36 AM	Analysis Method	: DX.MTH



Data File Name	: C:\HPCHEM\1\DATA\12-24-14\033F0501.D		
Operator	: mwdl	Page Number	: 1
Instrument	: GC1	Vial Number	: 33
Sample Name	: 04-2550 mb2 sg	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 5
Acquired on	: 24 Dec 14 03:12 PM	Instrument Method	: DX.MTH
Report Created on	: 26 Dec 14 09:38 AM	Analysis Method	: END.MTH



Data File Name	: C:\HPCHEM\1\DATA\12-24-14\003F0201.D		
Operator	: mwdl	Page Number	: 1
Instrument	: GC1	Vial Number	: 3
Sample Name	: 500 Dx 43-199B	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 24 Dec 14 08:51 AM	Instrument Method	: DX.MTH
Report Created on	: 26 Dec 14 09:37 AM	Analysis Method	: END.MTH

412371

SAMPLE CHAIN OF CUSTODY

ME 12/22/14

A04

Send Report To Brett Beaulieu

Company Floyd | Snider

Address 601 Union Street, Ste. 600

City, State, ZIP Seattle, WA 98101

Phone # 206-292-2078 Fax #

SAMPLERS *(signature)*

PROJECT NAME/NO. PSTL-Longview

PO#

REMARKS

Page ___ of ___

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	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Silica Gel	ms/msd					Notes
MW-1-GW-4-14	01	12/22	1055	GW	1	X						X						Please only report diesel range organics. Conduct Silica-gel & without silica gel cleanup on all samples. Thanks
MW-21-GW-4-14	02		1100		1	X						X						
MW-2-GW-4-14	03 A C		1125		3	X						X	X					
MW-3-GW-4-14	04		1200		1	X						X						
MW-4-GW-4-14	05		1230		1	X						X						

12/23/14

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Gabriel Cisneros	Floyd | Snider	12/23/14	1556
Received by:	A. Podmozora	FBI	12/24/14	4 PM
Relinquished by:				
Received by:		Samples received at 3 °C		

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

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

March 24, 2015

Brett Beaulieu, Project Manager
Floyd-Snider
Two Union Square, Suite 600
601 Union St
Seattle, WA 98101

Dear Mr. Beaulieu:

Included are the results from the testing of material submitted on March 17, 2015 from the PSTL-Longview, F&BI 503312 project. There are 4 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
FDS0324R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 17, 2015 by Friedman & Bruya, Inc. from the Floyd-Snider PSTL-Longview, F&BI 503312 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Floyd-Snider
503312 -01	MW-1-GW-4-14
503312 -02	MW-2-GW-4-14
503312 -03	MW-21-GW-4-14
503312 -04	MW-3-GW-4-14
503312 -05	MW-4-GW-4-14

All quality control requirements were acceptable.

Date of Report: 03/24/15
Date Received: 03/17/15
Project: PSTL-Longview, F&BI 503312
Date Extracted: 03/18/15
Date Analyzed: 03/19/15

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Surrogate (% Recovery) (Limit 47-140)
MW-1-GW-4-14 503312-01	350	91
MW-2-GW-4-14 503312-02	390	93
MW-21-GW-4-14 503312-03	390	86
MW-3-GW-4-14 503312-04	310	84
MW-4-GW-4-14 503312-05	460	79
Method Blank 05-551 MB2	<50	82

Date of Report: 03/24/15
Date Received: 03/17/15
Project: PSTL-Longview, F&BI 503312

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

Laboratory Code: 503312-02 (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	400	96	96	64-141	0

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	110	63-142	2

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.

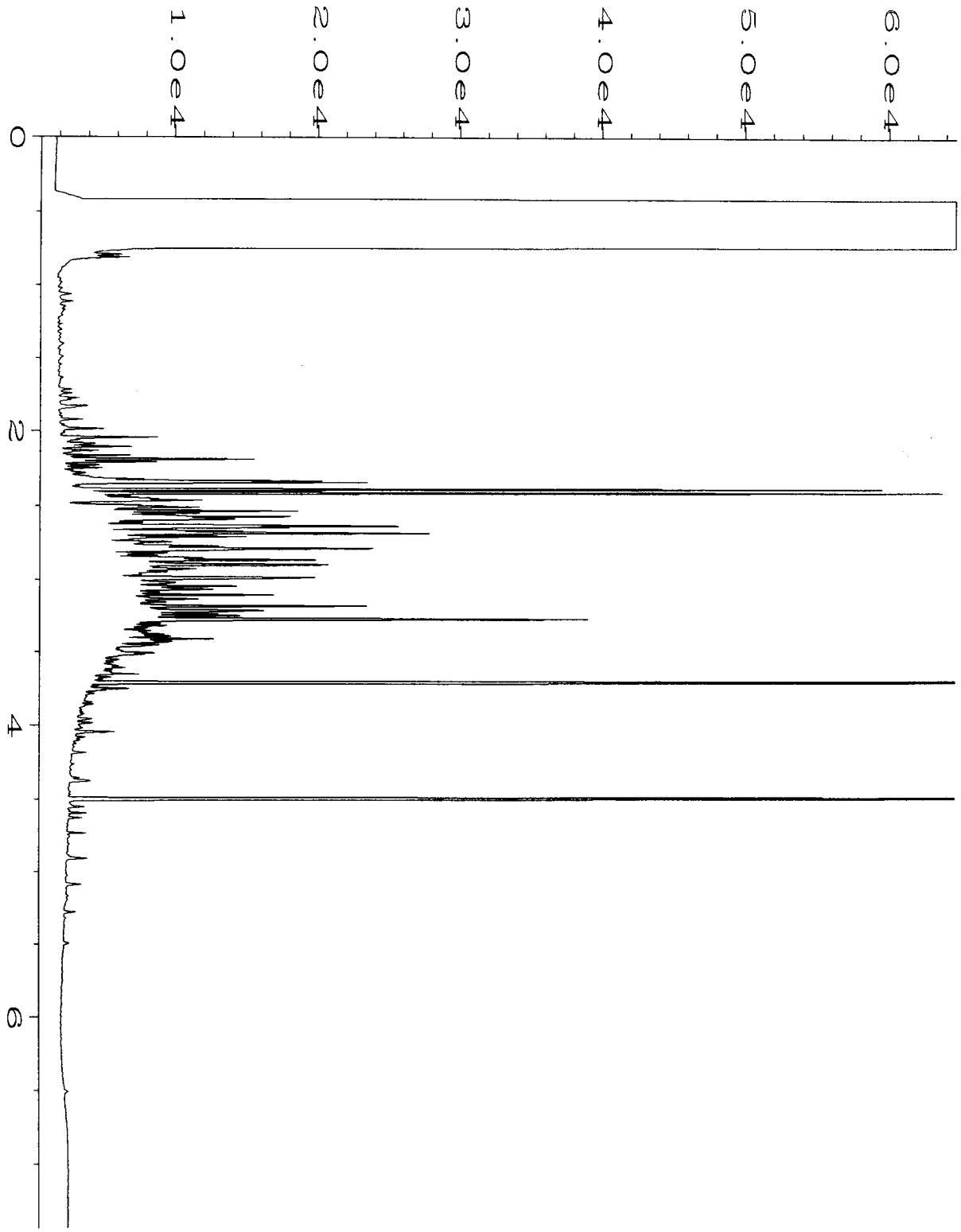
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.

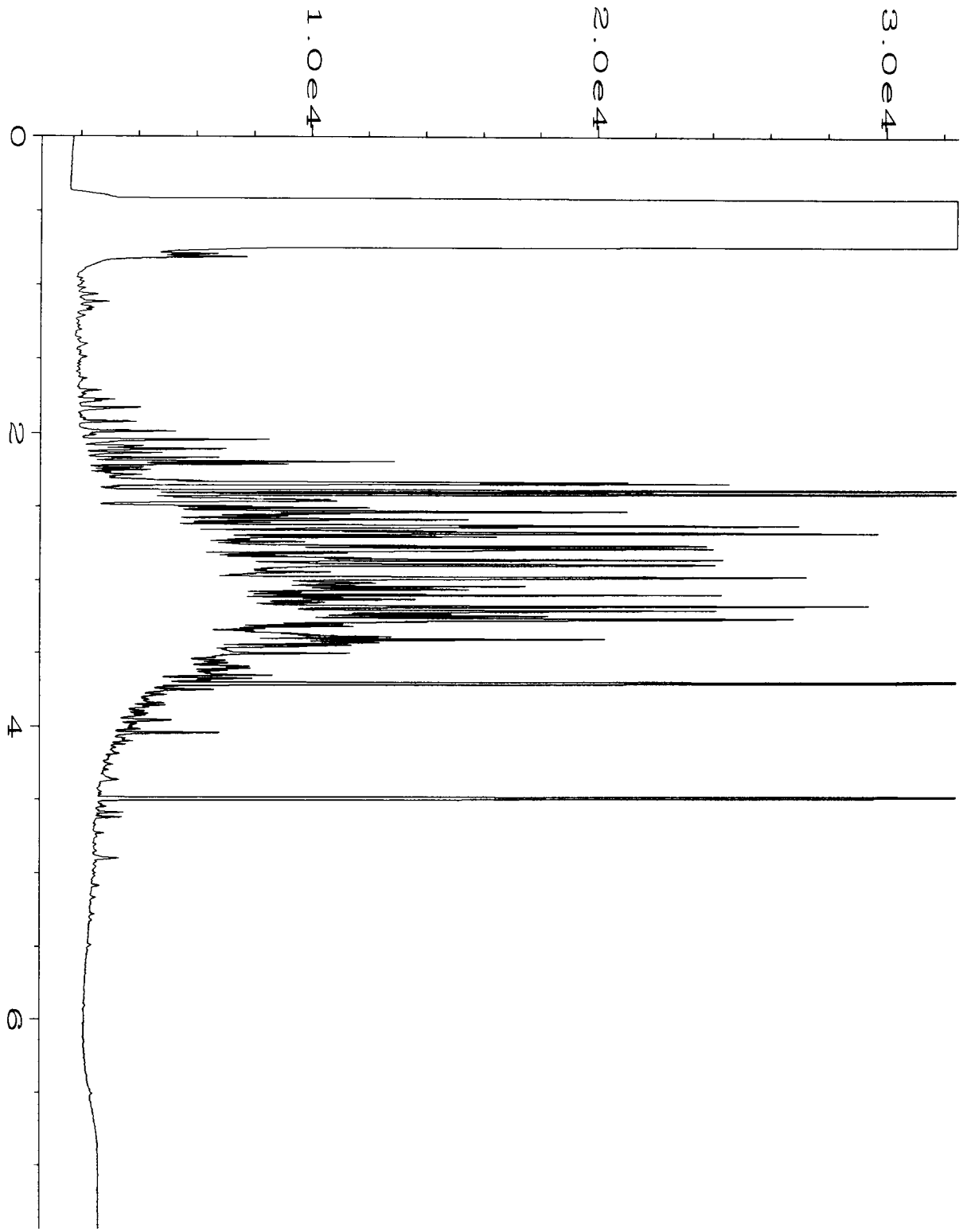
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

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

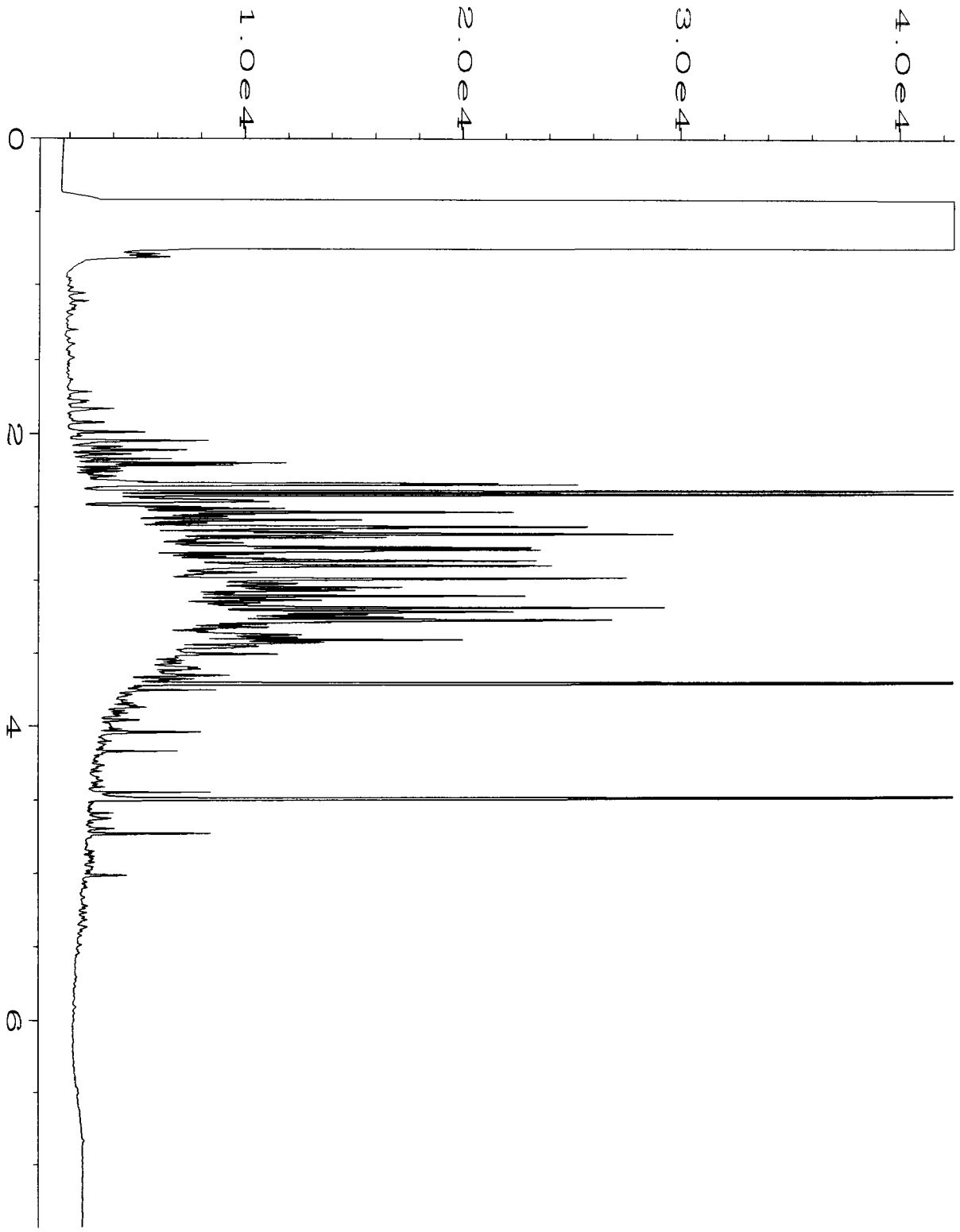
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



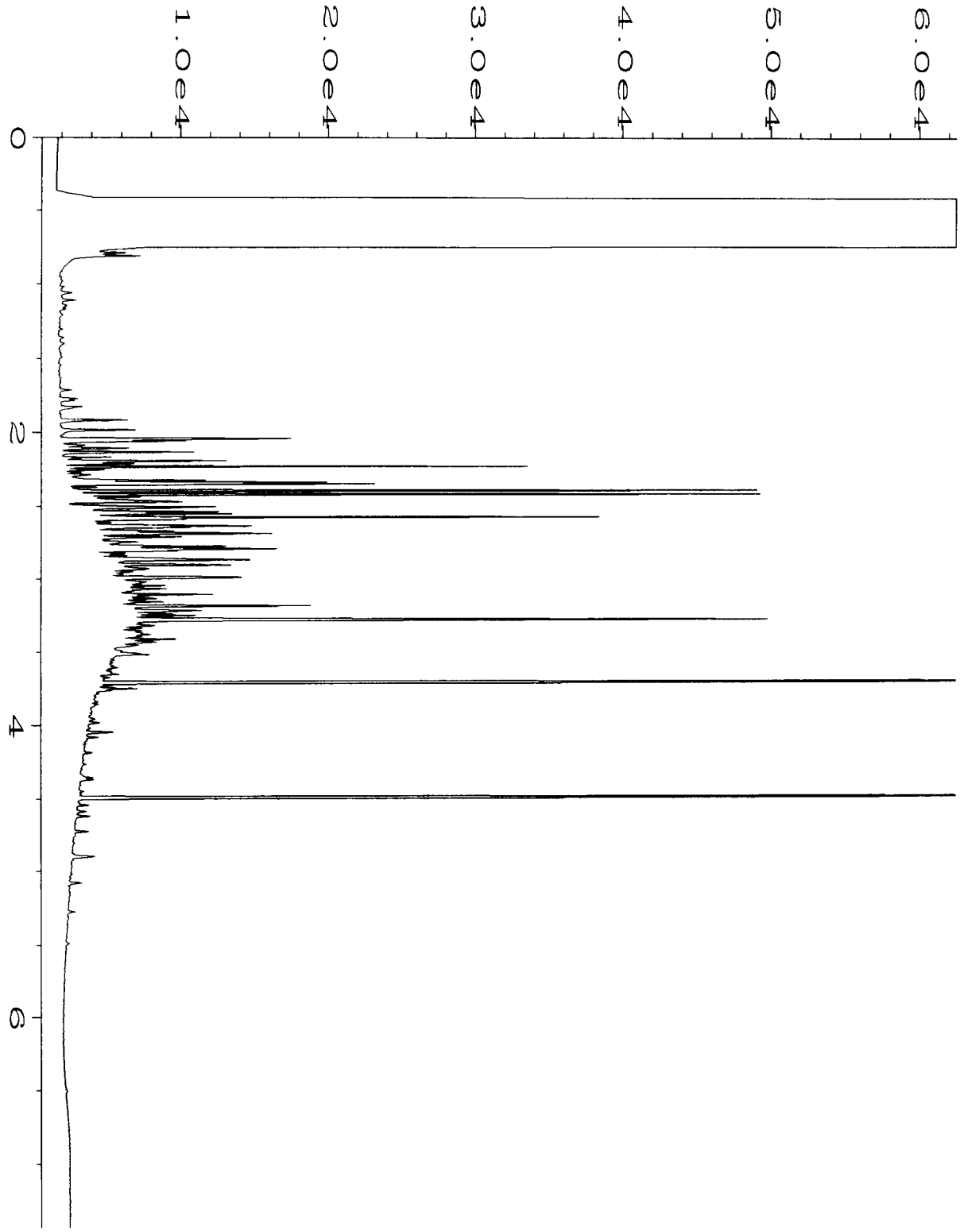
Data File Name	: C:\HPCHEM\4\DATA\03-19-15\036F1001.D		
Operator	: sp	Page Number	: 1
Instrument	: GC#4	Vial Number	: 36
Sample Name	: 503312-01	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 10
Acquired on	: 19 Mar 15 08:29 PM	Instrument Method	: DX.MTH
Report Created on	: 20 Mar 15 12:20 PM	Analysis Method	: DX.MTH



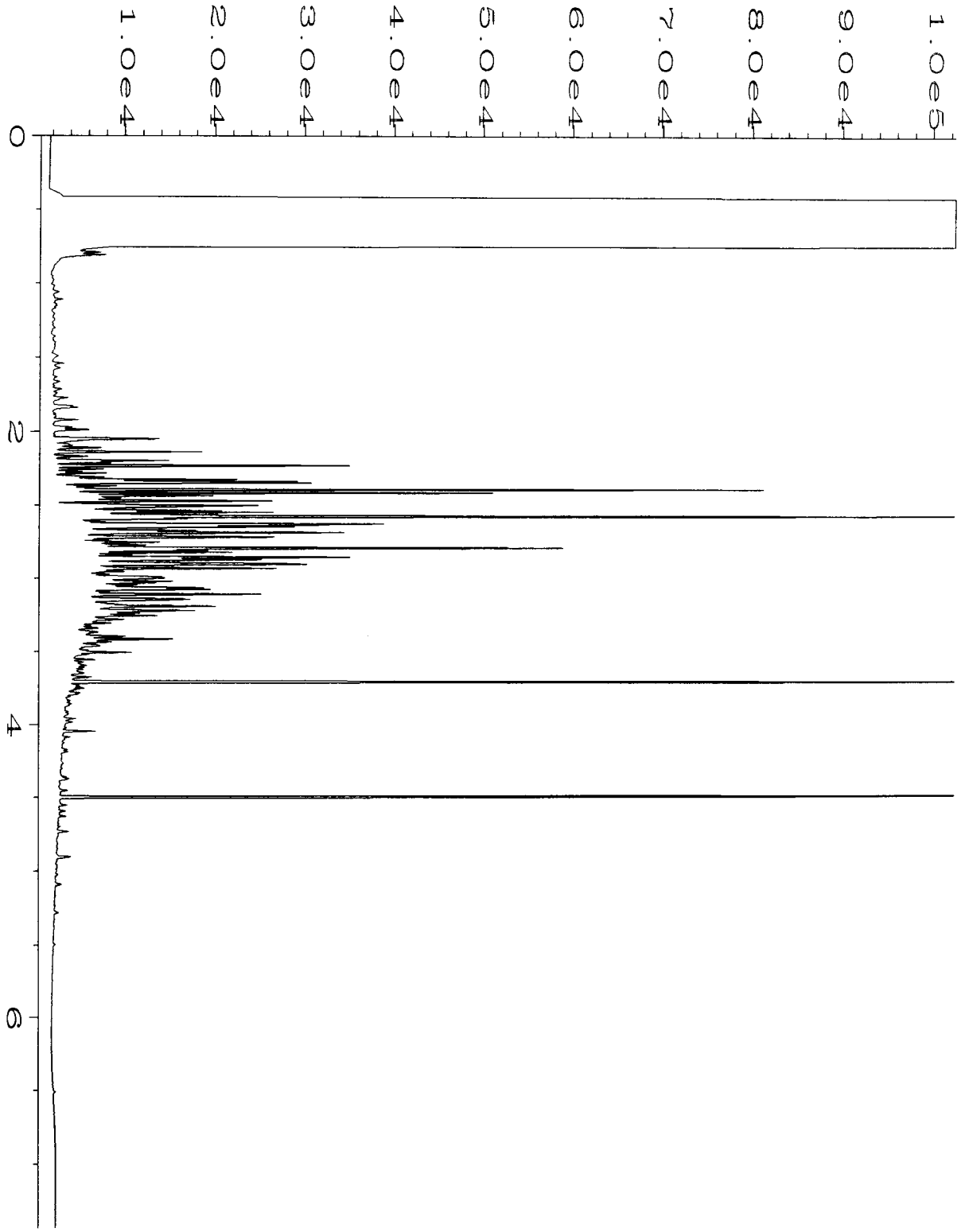
Data File Name	: C:\HPCHEM\4\DATA\03-19-15\037F1001.D		
Operator	: sp	Page Number	: 1
Instrument	: GC#4	Vial Number	: 37
Sample Name	: 503312-02	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 10
Acquired on	: 19 Mar 15 08:40 PM	Instrument Method	: DX.MTH
Report Created on	: 20 Mar 15 12:20 PM	Analysis Method	: DX.MTH



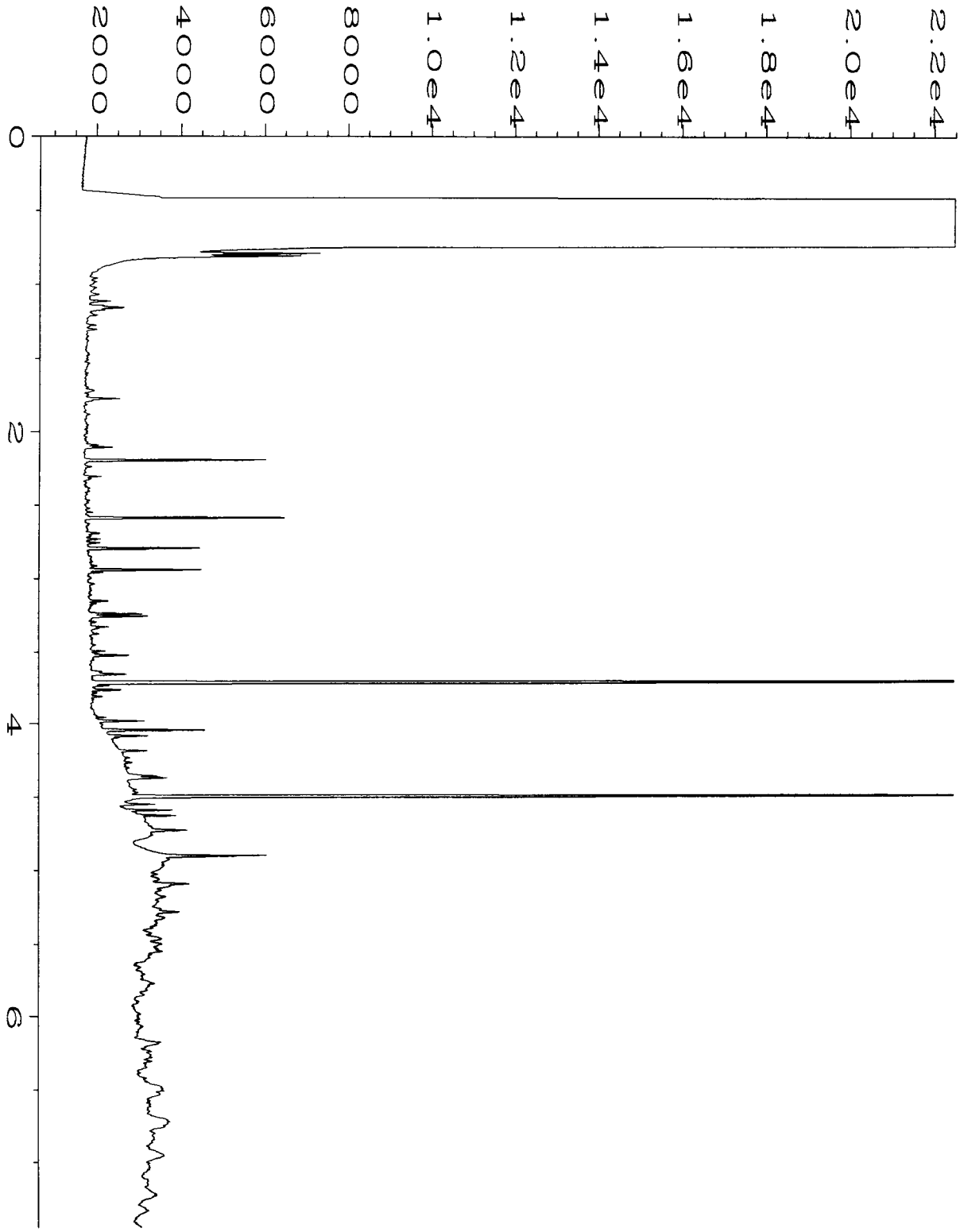
Data File Name	: C:\HPCHEM\4\DATA\03-19-15\040F1001.D		
Operator	: sp	Page Number	: 1
Instrument	: GC#4	Vial Number	: 40
Sample Name	: 503312-03	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 10
Acquired on	: 19 Mar 15 09:15 PM	Instrument Method	: DX.MTH
Report Created on	: 20 Mar 15 12:20 PM	Analysis Method	: DX.MTH



Data File Name	: C:\HPCHEM\4\DATA\03-19-15\041F1001.D		
Operator	: sp	Page Number	: 1
Instrument	: GC#4	Vial Number	: 41
Sample Name	: 503312-04	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 10
Acquired on	: 19 Mar 15 09:27 PM	Instrument Method	: DX.MTH
Report Created on	: 20 Mar 15 12:21 PM	Analysis Method	: DX.MTH

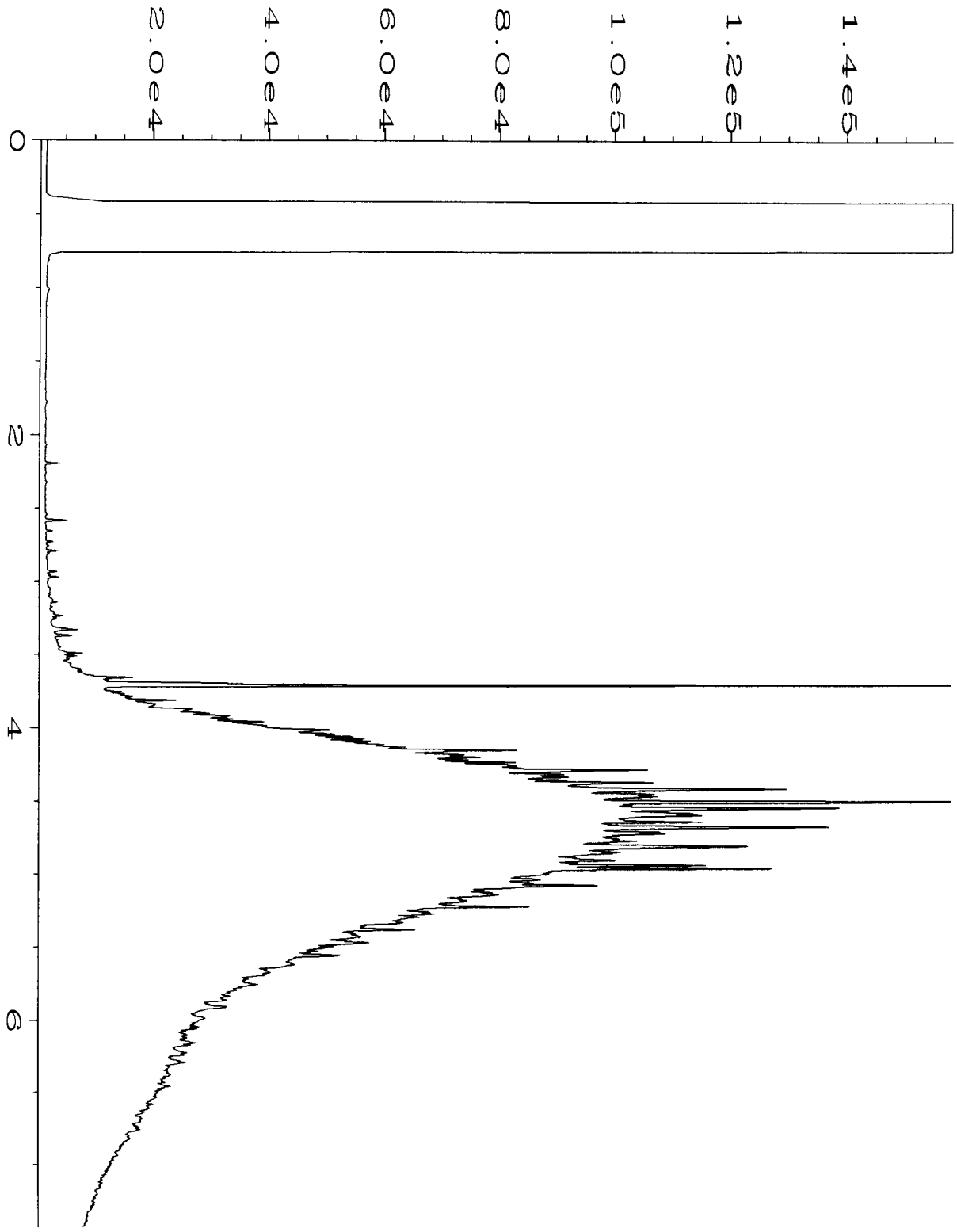


Data File Name	: C:\HPCHEM\4\DATA\03-19-15\042F1001.D		
Operator	: sp	Page Number	: 1
Instrument	: GC#4	Vial Number	: 42
Sample Name	: 503312-05	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 10
Acquired on	: 19 Mar 15 09:38 PM	Instrument Method	: DX.MTH
Report Created on	: 20 Mar 15 12:24 PM	Analysis Method	: DX.MTH

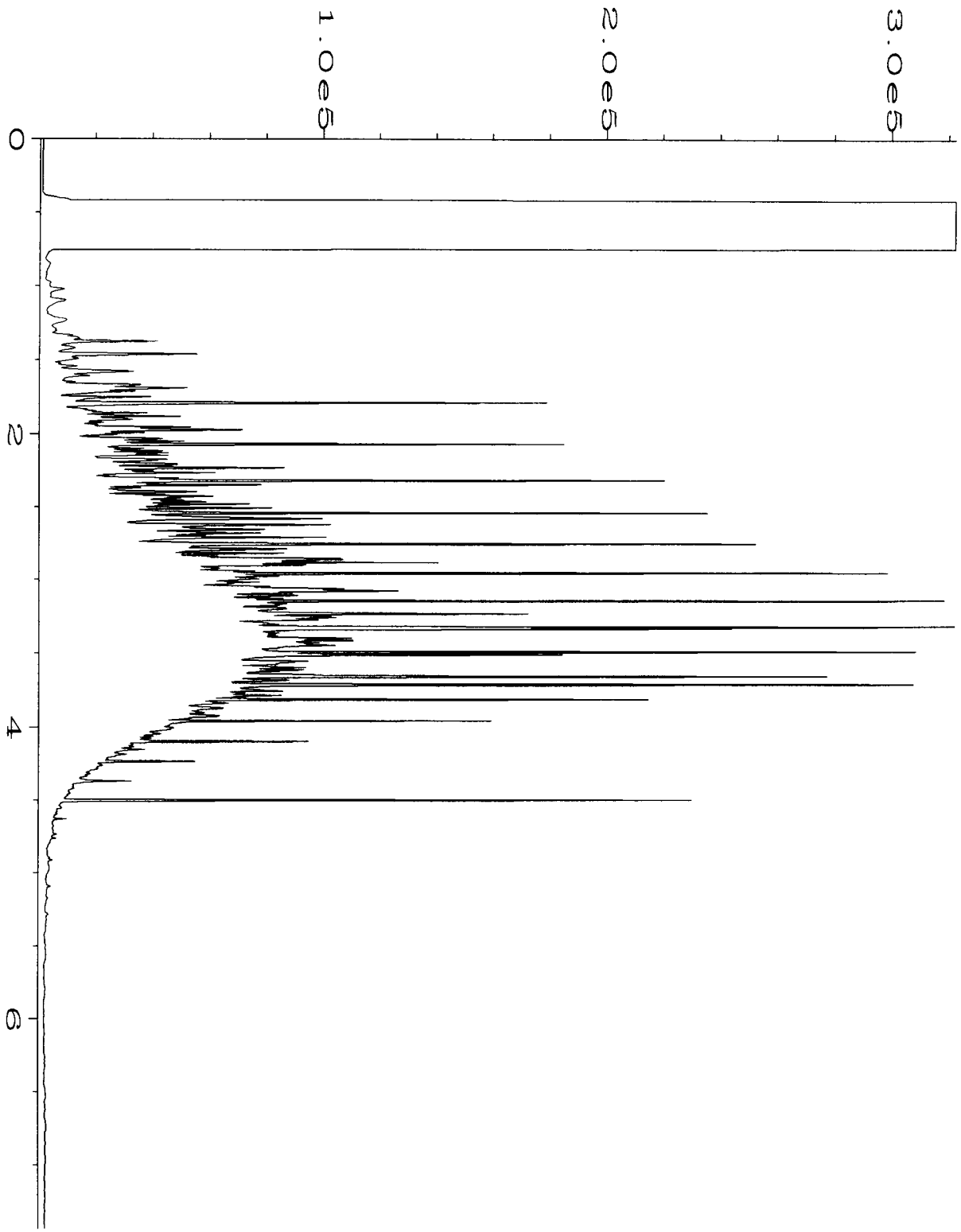


Data File Name : C:\HPCHEM\4\DATA\03-19-15\026F0601.D
Operator : sp
Instrument : GC#4
Sample Name : 05-551 mb2
Run Time Bar Code:
Acquired on : 19 Mar 15 05:47 PM
Report Created on: 20 Mar 15 12:19 PM

Page Number : 1
Vial Number : 26
Injection Number : 1
Sequence Line : 6
Instrument Method: DX.MTH
Analysis Method : DX.MTH



Data File Name	: C:\HPCHEM\4\DATA\03-19-15\004F0901.D		
Operator	: sp	Page Number	: 1
Instrument	: GC#4	Vial Number	: 4
Sample Name	: 1000 MO 44-151B	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 9
Acquired on	: 19 Mar 15 08:06 PM	Instrument Method	: DX.MTH
Report Created on	: 20 Mar 15 12:18 PM	Analysis Method	: DX.MTH



Data File Name	: C:\HPCHEM\4\DATA\03-19-15\005F0901.D		
Operator	: sp	Page Number	: 1
Instrument	: GC#4	Vial Number	: 5
Sample Name	: 1000 Dx 44-172C	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 9
Acquired on	: 19 Mar 15 08:17 PM	Instrument Method	: DX.MTH
Report Created on	: 20 Mar 15 12:19 PM	Analysis Method	: DX.MTH

503812

SAMPLE CHAIN OF CUSTODY

ME 03-17-15

A05

Page # _____ of _____

Send Report To Brett Beaulieu
Company Floyd|Snider
Address 601 Union St. Ste. 600
City, State, ZIP Seattle, WA 98101
Phone # 206-292-2078 Fax # _____

SAMPLERS (signature)
PROJECT NAME/NO. PSTL-Longview
PO#
REMARKS

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	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Notes
MW-1-GW-4-14	01	3/17/15	1005	GW	1	X						
MW-2-GW-4-14	02	"	1040	"	3	X						MS/MSD
MW-21-GW-4-14	03	"	1100	"	1	X						Dup
MW-3-GW-4-14	04	"	1130	"	1	X						
MW-4-GW-4-14	05	"	1240	"	1	X						
												* No Silica gel.

Samples received at 3 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Gabriel Cisneros	Floyd|Snider	3/17/15	1600
Received by:	DO VO	FedEx	11	1610
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\COC.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 18, 2015

Brett Beaulieu, Project Manager
Floyd-Snider
Two Union Square, Suite 600
601 Union St
Seattle, WA 98101

Dear Mr. Beaulieu:

Included are the results from the testing of material submitted on June 9, 2015 from the PSTL-Longview, F&BI 506201 project. There are 4 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
FDS0618R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on June 9, 2015 by Friedman & Bruya, Inc. from the Floyd-Snider PSTL-Longview, F&BI 506201 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Floyd-Snider
506201 -01	MW-1-GW-4-14
506201 -02	MW-2-GW-4-14
506201 -03	MW-21-GW-4-14
506201 -04	MW-3-GW-4-14
506201 -05	MW-4-GW-4-14

All quality control requirements were acceptable.

Date of Report: 06/18/15
Date Received: 06/09/15
Project: PSTL-Longview, F&BI 506201
Date Extracted: 06/10/15
Date Analyzed: 06/10/15

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Surrogate (% Recovery) (Limit 47-140)
MW-1-GW-4-14 506201-01	530	110
MW-2-GW-4-14 506201-02	660	109
MW-21-GW-4-14 506201-03	670	111
MW-3-GW-4-14 506201-04	530	108
MW-4-GW-4-14 506201-05	580	105
Method Blank 05-1076 MB	<50	96

Date of Report: 06/18/15
Date Received: 06/09/15
Project: PSTL-Longview, F&BI 506201

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

Laboratory Code: 506201-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel	ug/L (ppb)	2,500	660	99 b	129 b	64-141	26 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel	ug/L (ppb)	2,500	112	108	61-133	4

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.

506 201

SAMPLE CHAIN OF CUSTODY

ME 06-09-15 B04

Send Report To Brett Beaulieu
Company Floyd|Snider
Address 601 Union Street Ste. 600
City, State, ZIP Seattle, WA 98101
Phone # 206-292-2078 Fax #

SAMPLERS (signature) [signature]
PROJECT NAME/NO. PSTL-Longview
PO#
REMARKS

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	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
MW-1-GW-4-14	01	6/9/15	0950	GW	1	X												
MW-2-GW-4-14	02A-C	↓	1025	↓	3	X												ms/msD
MW-21-GW-4-14	03	↓	1100	↓	1	X												Dup
MW-3-GW-4-14	04	↓	1110	↓	1	X												
MW-4-GW-4-14	05	↓	1150	↓	1	X												

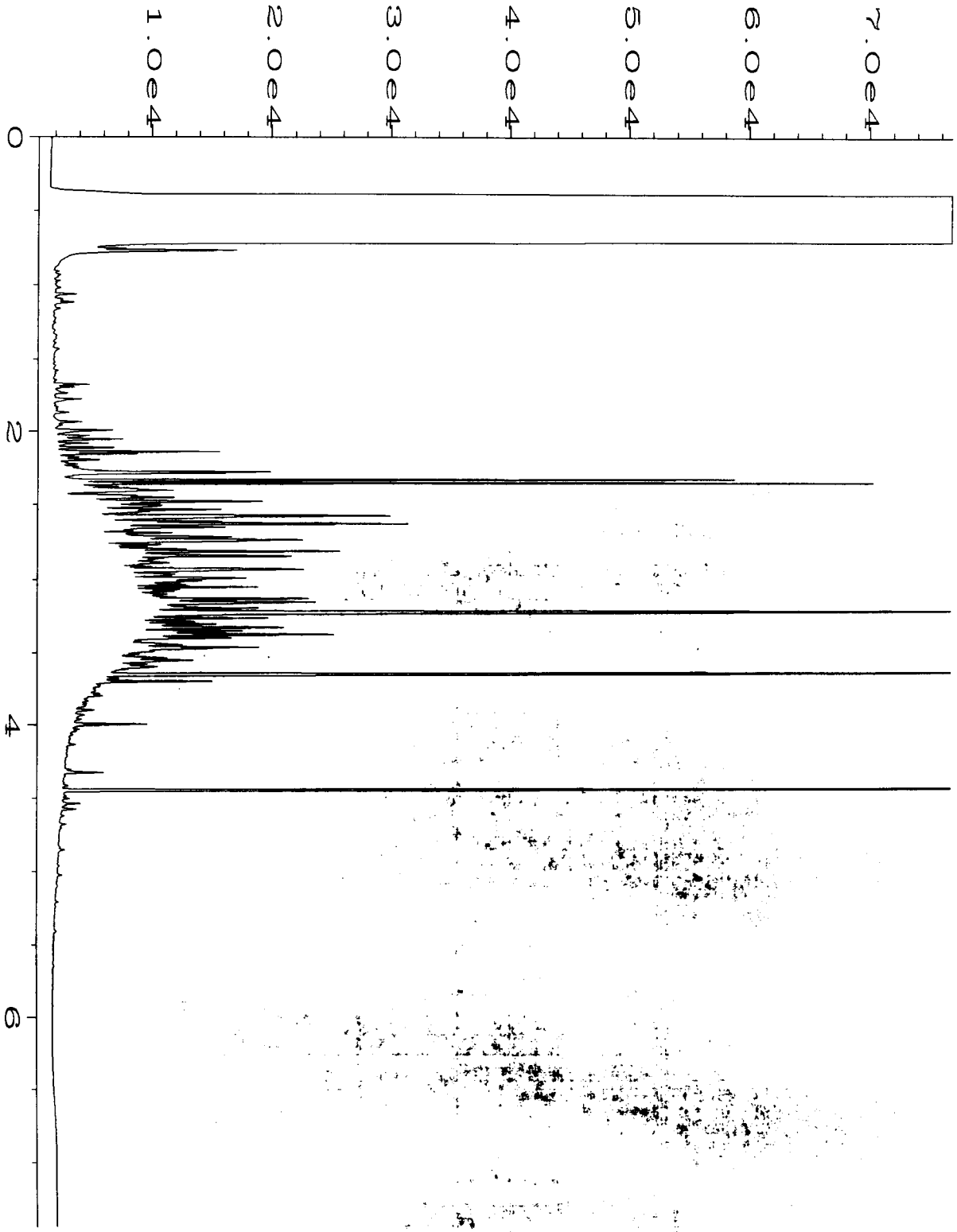
Samples received at 4.8 °C

* No Silica Gel

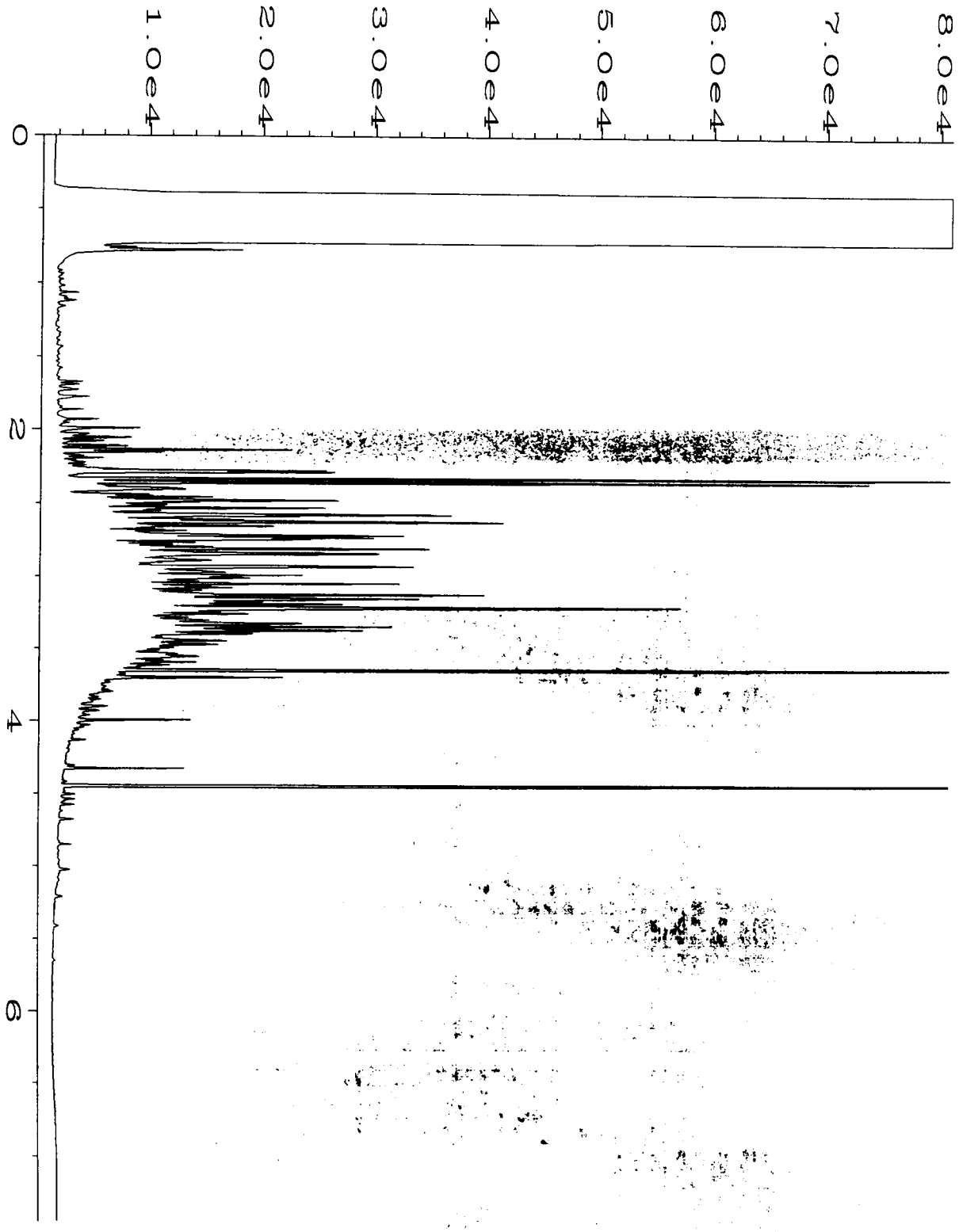
Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[signature]	Gabriel Cisneros	Floyd/Snider	6/9/15	1535
Received by:	[signature]	Eric Young	F&B	6/9/15	1535
Relinquished by:					
Received by:					

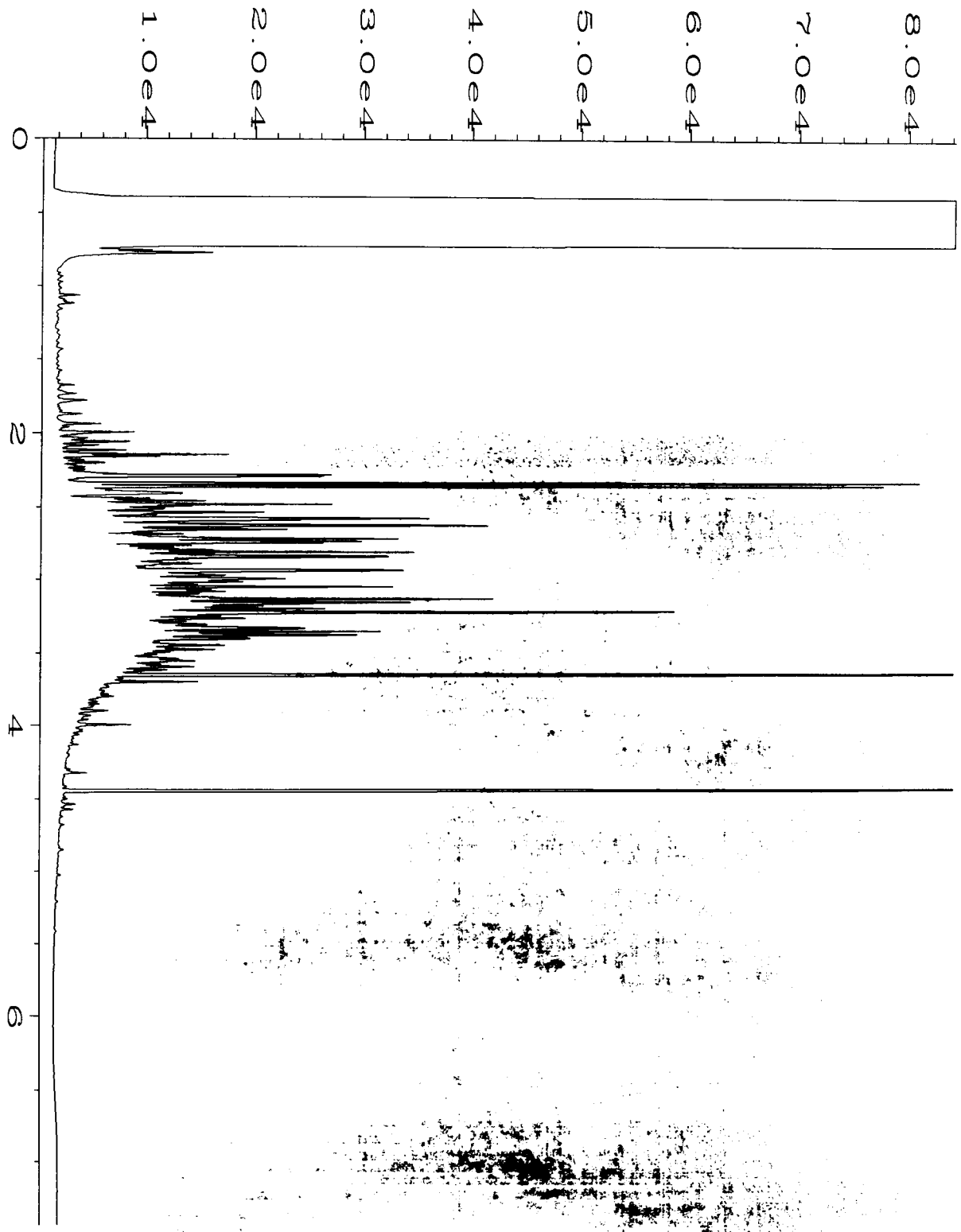
FORMS\COC\COC.DOC



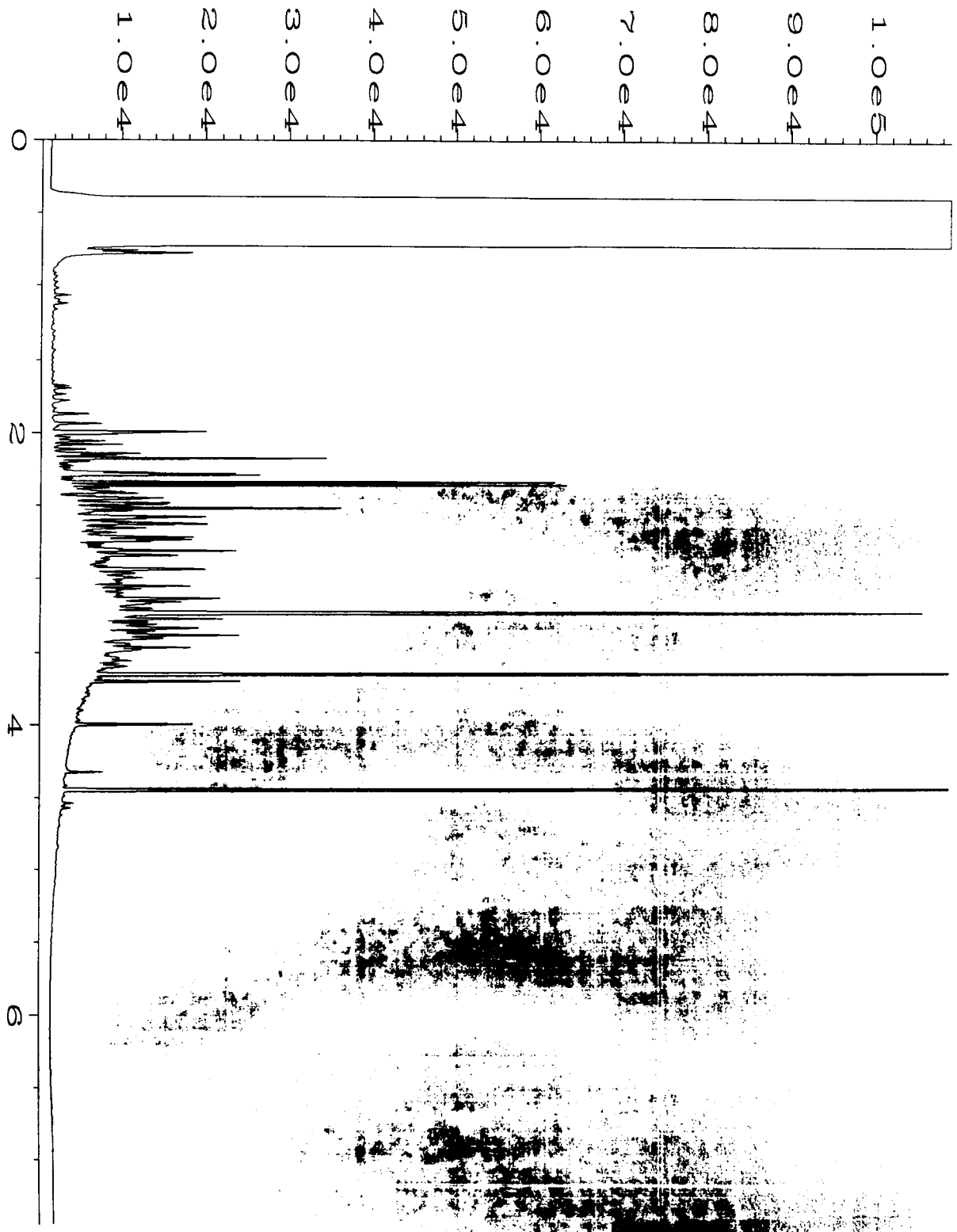
Data File Name	: C:\HPCHEM\4\DATA\06-10-15\023F0301.D		
Operator	: mwdl	Page Number	: 1
Instrument	: GC#4	Vial Number	: 23
Sample Name	: 506201-01	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 10 Jun 15 01:30 PM	Instrument Method	: DX.MTH
Report Created on	: 22 Jun 15 02:20 PM	Analysis Method	: DX.MTH



Data File Name	: C:\HPCHEM\4\DATA\06-10-15\022F0301.D		
Operator	: mwdl	Page Number	: 1
Instrument	: GC#4	Vial Number	: 22
Sample Name	: 506201-02	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 10 Jun 15 01:18 PM	Instrument Method	: DX.MTH
Report Created on	: 22 Jun 15 02:20 PM	Analysis Method	: DX.MTH

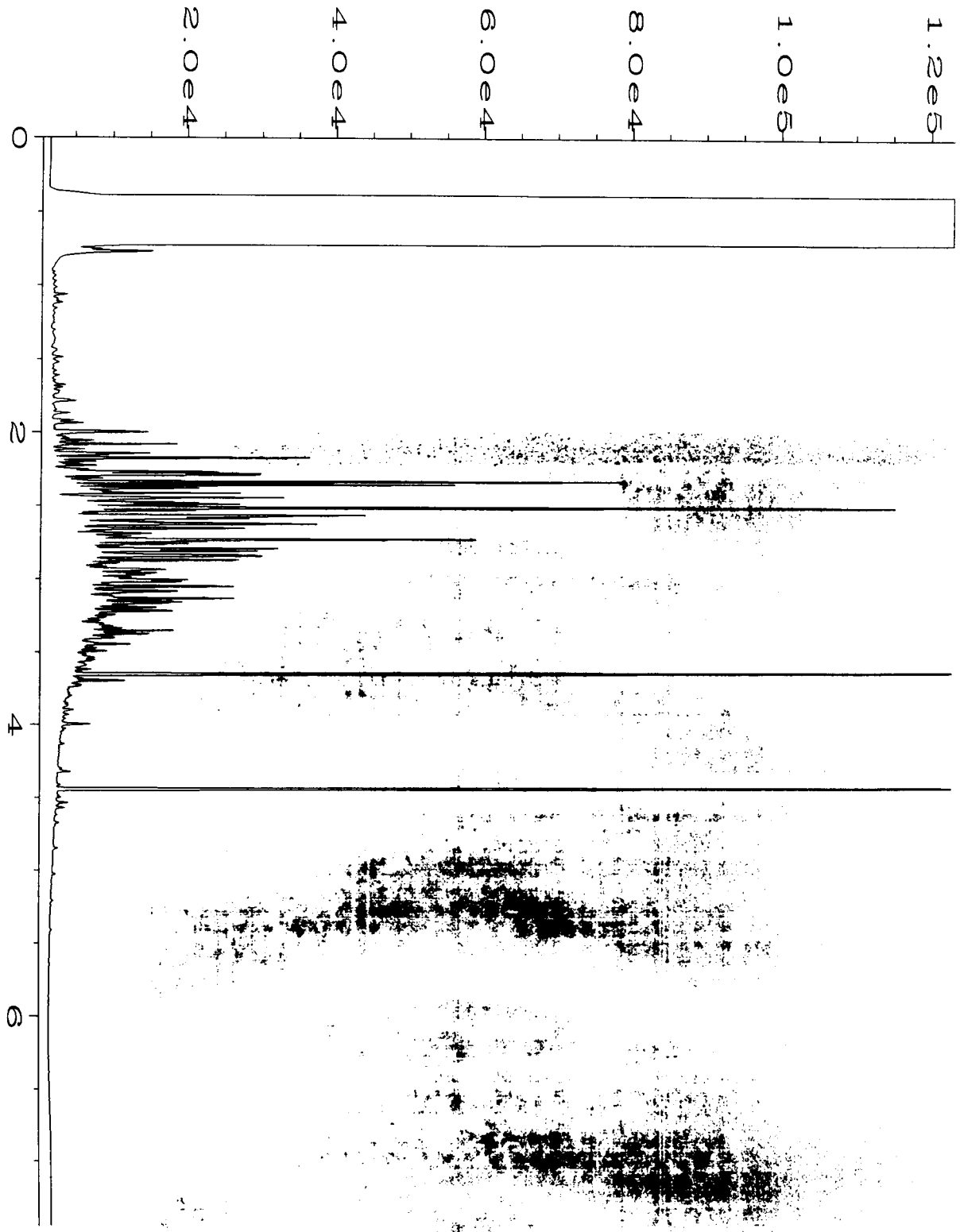


Data File Name	: C:\HPCHEM\4\DATA\06-10-15\024F0301.D		
Operator	: mwdl	Page Number	: 1
Instrument	: GC#4	Vial Number	: 24
Sample Name	: 506201-03	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 10 Jun 15 01:42 PM	Instrument Method	: DX.MTH
Report Created on	: 22 Jun 15 02:20 PM	Analysis Method	: DX.MTH



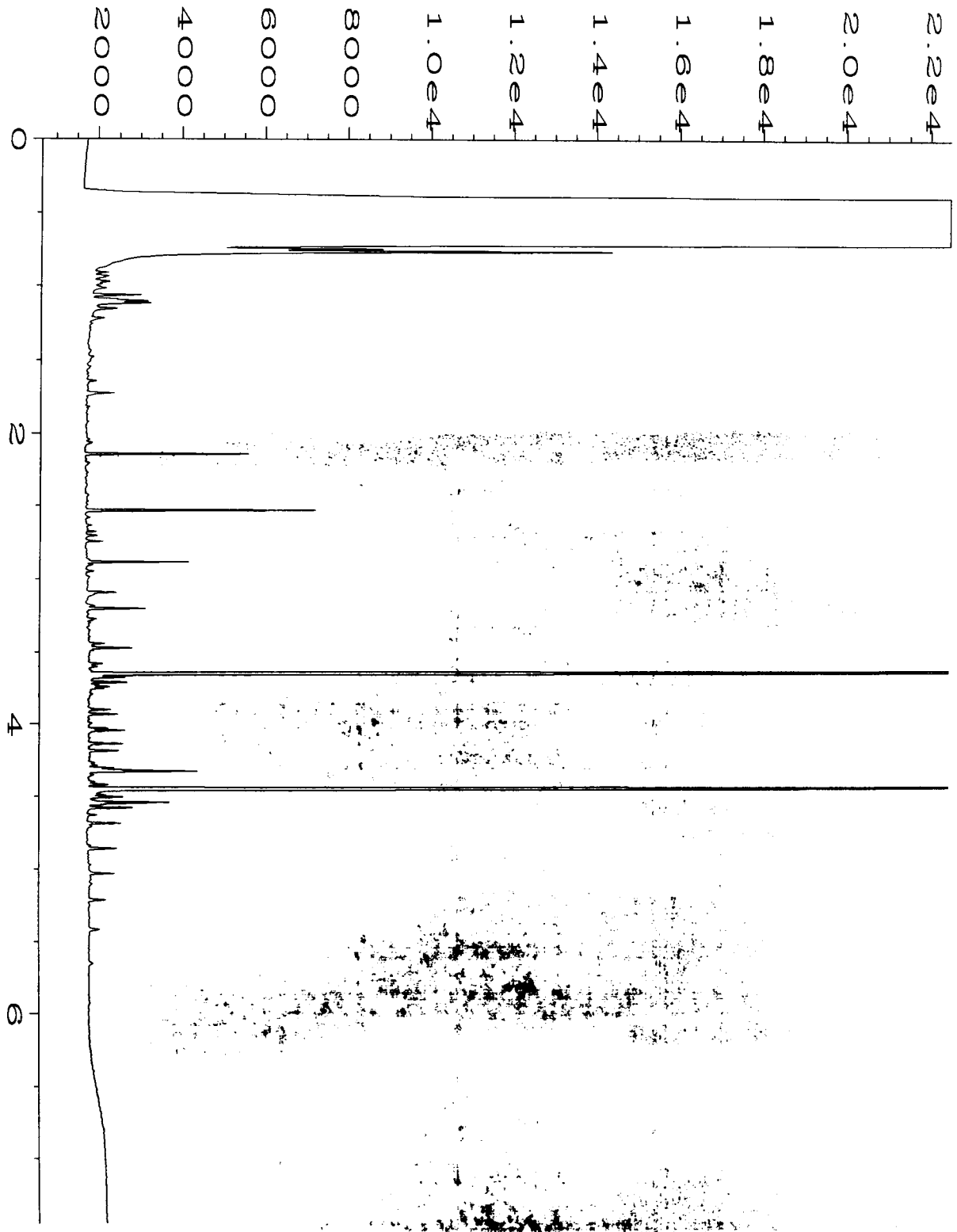
Data File Name : C:\HPCHEM\4\DATA\06-10-15\025F0301.D
Operator : mwdl
Instrument : GC#4
Sample Name : 506201-04
Run Time Bar Code:
Acquired on : 10 Jun 15 [illegible]
Report Created on: 22 Jun 15 02:20 PM

Page Number : 1
Vial Number : 25
Injection Number : 1
Sequence Line : 3
Instrument Method: DX.MTH
Analysis Method : DX.MTH



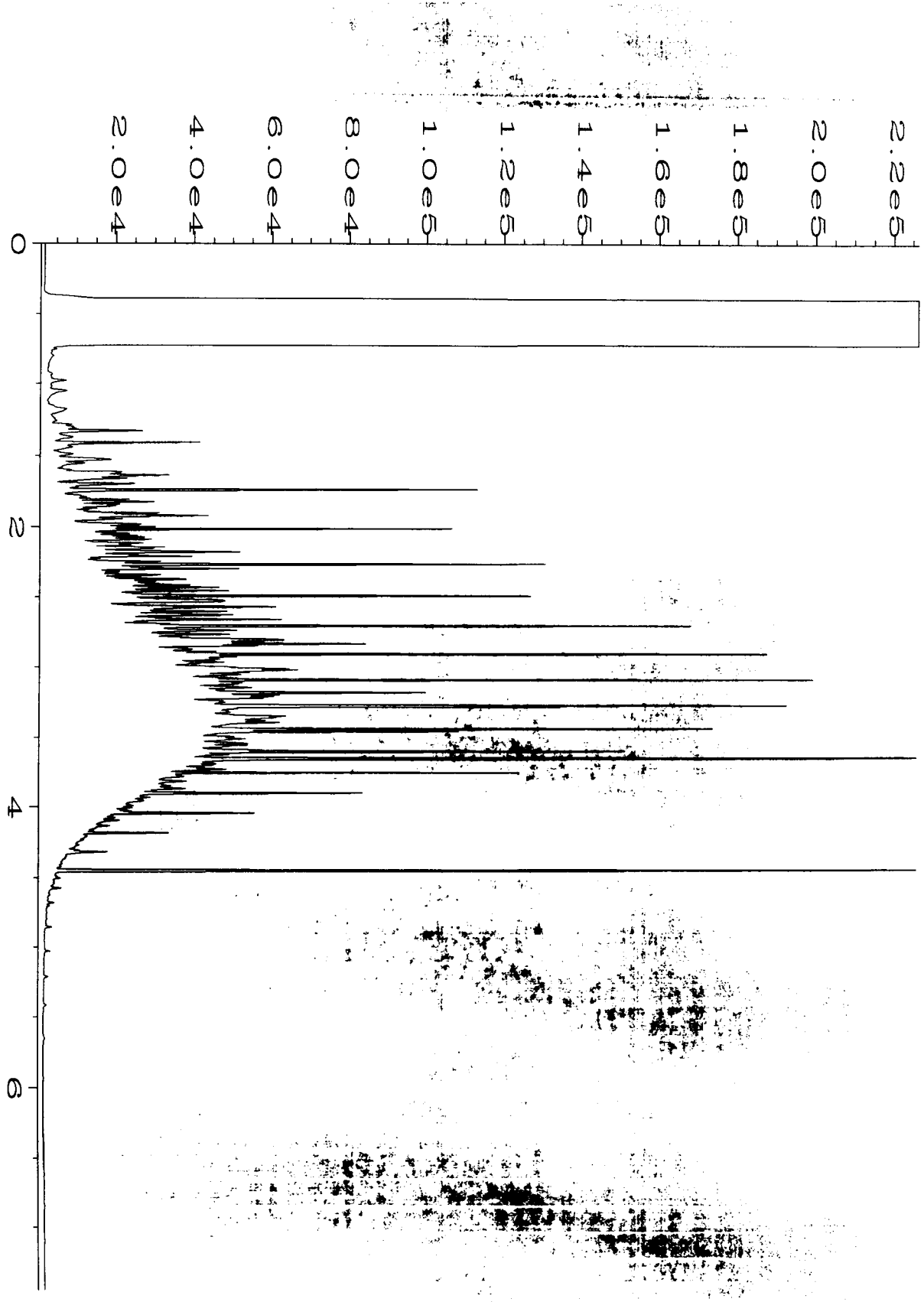
Data File Name : C:\HPCHEM\4\DATA\06-10-15\026F0301.D
Operator : mwdl
Instrument : GC#4
Sample Name : 506201-05
Run Time Bar Code:
Acquired on : 10 Jun 15 02:05 PM
Report Created on: 22 Jun 15 02:21 PM

Page Number : 1
Vial Number : 26
Injection Number : 1
Sequence Line : 3
Instrument Method: DX.MTH
Analysis Method : DX.MTH



Data File Name : C:\HPCHEM\4\DATA\06-10-15\01F0301.D
Operator : mwdl
Instrument : GC#4
Sample Name : 05-1076 mb
Run Time Bar Code:
Acquired on : 10 Jun 15 12:18 PM
Report Created on: 22 Jun 15 02:21 PM

Page Number : 1
Vial Number : 17
Injection Number : 1
Sequence Line : 3
Instrument Method: DX.MTH
Analysis Method : DX.MTH



Data File Name	: C:\HPCHEM\4\DATA\06-10-15\003F0201.D		
Operator	: mwdl	Page Number	: 1
Instrument	: GC#4	Vial Number	: 3
Sample Name	: 500 Dx 44-94C	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 10 Jun 15 09:57 AM	Instrument Method	: DX.MTH
Report Created on	: 22 Jun 15 02:21 PM	Analysis Method	: DX.MTH

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

July 14, 2014

Brett Beaulieu, Project Manager
Floyd/Snider
Two Union Square, Suite 600
601 Union St
Seattle, WA 98101

Dear Mr. Beaulieu:

Included are the results from the testing of material submitted on June 25, 2014 from the PSTL-Longview, F&BI 406442 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
FDS0714R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on June 25, 2014 by Friedman & Bruya, Inc. from the Floyd/Snider PSTL-Longview, F&BI 406442 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Floyd/Snider
406442 -01	MW-1-GW-4-14'
406442 -02	MW-2-GW-4-14'
406442 -03	MW-21-GW-4-14'
406442 -04	MW-3-GW-4-14'
406442 -05	MW-4-GW-4-14'

The samples were sent to Fremont for EPH analysis. Review of the enclosed report indicates that all quality assurance were acceptable.

All quality control requirements were acceptable.

Date of Report: 07/14/14
Date Received: 06/25/14
Project: PSTL-Longview, F&BI 406442
Date Extracted: 06/26/14
Date Analyzed: 07/07/14 and 07/08/14

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx
Sample Extracts Passed Through a Silica Gel Column Prior to Analysis
Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 41-152)
MW-1-GW-4-14' 406442-01	210	<250	82
MW-2-GW-4-14' 406442-02	350	<250	80
MW-21-GW-4-14' 406442-03	270	<250	68
MW-3-GW-4-14' 406442-04	170	<250	73
MW-4-GW-4-14' 406442-05	360	<250	81
Method Blank 04-1317 MB	<50	<250	83

Date of Report: 07/14/14
Date Received: 06/25/14
Project: PSTL-Longview, F&BI 406442
Date Extracted: 06/26/14
Date Analyzed: 06/30/14

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)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 41-152)
MW-1-GW-4-14' 406442-01	390 x	<250	90
MW-2-GW-4-14' 406442-02	540 x	<250	84
MW-21-GW-4-14' 406442-03	540 x	<250	88
MW-3-GW-4-14' 406442-04	470 x	<250	91
MW-4-GW-4-14' 406442-05	560 x	<250	96
Method Blank 04-1317 MB	<50	<250	94

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-2-GW-4-14'	Client:	Floyd/Snider
Date Received:	06/25/14	Project:	PSTL-Longview, F&BI 406442
Date Extracted:	07/02/14	Lab ID:	406442-02
Date Analyzed:	07/02/14	Data File:	070212.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	97	60	133

Compounds:	Concentration ug/L (ppb)
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-4-GW-4-14'	Client:	Floyd/Snider
Date Received:	06/25/14	Project:	PSTL-Longview, F&BI 406442
Date Extracted:	07/02/14	Lab ID:	406442-05
Date Analyzed:	07/02/14	Data File:	070214.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Floyd/Snider
Date Received:	Not Applicable	Project:	PSTL-Longview, F&BI 406442
Date Extracted:	07/02/14	Lab ID:	04-1357 mb
Date Analyzed:	07/02/14	Data File:	070207.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	99	60	133

Compounds:	Concentration ug/L (ppb)
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-1-GW-4-14'	Client:	Floyd/Snider
Date Received:	06/25/14	Project:	PSTL-Longview, F&BI 406442
Date Extracted:	06/26/14	Lab ID:	406442-01 1/2
Date Analyzed:	06/27/14	Data File:	062729.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	85	50	150
Benzo(a)anthracene-d12	102	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
2-Methylnaphthalene	<0.1
1-Methylnaphthalene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-2-GW-4-14'	Client:	Floyd/Snider
Date Received:	06/25/14	Project:	PSTL-Longview, F&BI 406442
Date Extracted:	06/26/14	Lab ID:	406442-02 1/2
Date Analyzed:	06/28/14	Data File:	062734.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	88	50	150
Benzo(a)anthracene-d12	99	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
2-Methylnaphthalene	<0.1
1-Methylnaphthalene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-21-GW-4-14'	Client:	Floyd/Snider
Date Received:	06/25/14	Project:	PSTL-Longview, F&BI 406442
Date Extracted:	06/26/14	Lab ID:	406442-03 1/2
Date Analyzed:	06/28/14	Data File:	062735.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	87	50	150
Benzo(a)anthracene-d12	97	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
2-Methylnaphthalene	<0.1
1-Methylnaphthalene	0.11
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-3-GW-4-14'	Client:	Floyd/Snider
Date Received:	06/25/14	Project:	PSTL-Longview, F&BI 406442
Date Extracted:	06/26/14	Lab ID:	406442-04 1/2
Date Analyzed:	06/27/14	Data File:	062730.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	86	50	150
Benzo(a)anthracene-d12	103	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
2-Methylnaphthalene	<0.1
1-Methylnaphthalene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-4-GW-4-14'	Client:	Floyd/Snider
Date Received:	06/25/14	Project:	PSTL-Longview, F&BI 406442
Date Extracted:	06/26/14	Lab ID:	406442-05 1/2
Date Analyzed:	06/27/14	Data File:	062731.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	87	50	150
Benzo(a)anthracene-d12	107	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
2-Methylnaphthalene	<0.1
1-Methylnaphthalene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Floyd/Snider
Date Received:	Not Applicable	Project:	PSTL-Longview, F&BI 406442
Date Extracted:	06/26/14	Lab ID:	04-1315 mb 1/2
Date Analyzed:	06/27/14	Data File:	062726A.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	88	50	150
Benzo(a)anthracene-d12	104	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
2-Methylnaphthalene	<0.1
1-Methylnaphthalene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1

Date of Report: 07/14/14
Date Received: 06/25/14
Project: PSTL-Longview, F&BI 406442

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

Laboratory Code: 406442-05 (Matrix Spike) Silica Gel

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	108	99	50-150	9

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	94	93	63-142	1

Date of Report: 07/14/14
Date Received: 06/25/14
Project: PSTL-Longview, F&BI 406442

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

Laboratory Code: 406442-05 (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	570	116	110	50-150	5

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	106	63-142	1

Date of Report: 07/14/14
Date Received: 06/25/14
Project: PSTL-Longview, F&BI 406442

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

Laboratory Code: 406442-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Toluene	ug/L (ppb)	50	<1	93	76-122
Ethylbenzene	ug/L (ppb)	50	<1	94	69-135
m,p-Xylene	ug/L (ppb)	100	<2	95	69-135
o-Xylene	ug/L (ppb)	50	<1	98	60-140

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Toluene	ug/L (ppb)	50	94	96	72-122	2
Ethylbenzene	ug/L (ppb)	50	95	97	77-124	2
m,p-Xylene	ug/L (ppb)	100	97	98	83-125	1
o-Xylene	ug/L (ppb)	50	101	103	81-121	2

Date of Report: 07/14/14
Date Received: 06/25/14
Project: PSTL-Longview, F&BI 406442

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

Laboratory Code: 406442-05 1/2 (Matrix Spike) 1/2

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	1	<0.1	96	111	23-153	14
2-Methylnaphthalene	ug/L (ppb)	1	<0.1	91	91	48-124	0
1-Methylnaphthalene	ug/L (ppb)	1	<0.1	99	100	10-214	1
Benz(a)anthracene	ug/L (ppb)	1	<0.1	86	89	60-93	3
Chrysene	ug/L (ppb)	1	<0.1	92	93	60-102	1
Benzo(b)fluoranthene	ug/L (ppb)	1	<0.1	89	95 vo	62-91	7
Benzo(k)fluoranthene	ug/L (ppb)	1	<0.1	87	85	51-98	2
Benzo(a)pyrene	ug/L (ppb)	1	<0.1	86	94 vo	60-86	9
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	1	<0.1	83	101 vo	10-98	20
Dibenz(a,h)anthracene	ug/L (ppb)	1	<0.1	78	75	10-97	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	1	83	83	67-116	0
2-Methylnaphthalene	ug/L (ppb)	1	88	87	63-122	1
1-Methylnaphthalene	ug/L (ppb)	1	88	87	65-122	1
Benz(a)anthracene	ug/L (ppb)	1	83	85	60-118	2
Chrysene	ug/L (ppb)	1	91	94	66-125	3
Benzo(b)fluoranthene	ug/L (ppb)	1	90	94	55-135	4
Benzo(k)fluoranthene	ug/L (ppb)	1	88	92	62-125	4
Benzo(a)pyrene	ug/L (ppb)	1	86	88	58-127	2
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	1	90	94	36-142	4
Dibenz(a,h)anthracene	ug/L (ppb)	1	84	86	37-133	2

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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Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 406442
Lab ID: 1406255

July 10, 2014

Attention Michael Erdahl:

Fremont Analytical, Inc. received 5 sample(s) on 6/25/2014 for the analyses presented in the following report.

Extractable Petroleum Hydrocarbons by NWEPH

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Michael Dee
Sr. Chemist / Principal

Date: *07/10/2014*

CLIENT: Friedman & Bruya
Project: 406442
Lab Order: 1406255

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1406255-001	MW-1-GW-4-14'	06/24/2014 12:18 PM	06/25/2014 12:02 PM
1406255-002	MW-2-GW-4-14'	06/24/2014 1:00 PM	06/25/2014 12:02 PM
1406255-003	MW-21-GW-4-14'	06/24/2014 11:25 AM	06/25/2014 12:02 PM
1406255-004	MW-3-GW-4-14'	06/24/2014 1:55 PM	06/25/2014 12:02 PM
1406255-005	MW-4-GW-4-14'	06/24/2014 2:40 PM	06/25/2014 12:02 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1406255**
Date: **7/10/2014**

CLIENT: Friedman & Bruya
Project: 406442

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Analytical Report

WO#: **1406255**
Date Reported: **7/10/2014**

Client: Friedman & Bruya
Collection Date: 6/24/2014 12:18:00 PM
Project: 406442
Lab ID: 1406255-001
Matrix: Groundwater
Client Sample ID: **MW-1-GW-4-14'**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarbons by NWEPH				Batch ID: 7964		Analyst: EC
Aliphatic Hydrocarbon (C10-C12)	15.9	0.0200		µg/L	1	7/2/2014 5:20:00 AM
Aliphatic Hydrocarbon (C12-C16)	27.3	0.0200		µg/L	1	7/2/2014 5:20:00 AM
Aliphatic Hydrocarbon (C16-C21)	23.5	0.0200		µg/L	1	7/2/2014 5:20:00 AM
Aliphatic Hydrocarbon (C21-C34)	47.6	0.0200		µg/L	1	7/2/2014 5:20:00 AM
Aliphatic Hydrocarbon (C8-C10)	71.1	0.0200		µg/L	1	7/2/2014 5:20:00 AM
Aromatic Hydrocarbon (C10-C12)	ND	0.0200		µg/L	1	7/2/2014 2:54:00 PM
Aromatic Hydrocarbon (C12-C16)	109	0.0200		µg/L	1	7/2/2014 2:54:00 PM
Aromatic Hydrocarbon (C16-C21)	8.66	0.0200		µg/L	1	7/2/2014 2:54:00 PM
Aromatic Hydrocarbon (C21-C34)	ND	0.0200		µg/L	1	7/2/2014 2:54:00 PM
Aromatic Hydrocarbon (C8-C10)	ND	0.0200		µg/L	1	7/2/2014 2:54:00 PM
Surr: 1-Chlorooctadecane	34.6	65-140	S	%REC	1	7/2/2014 5:20:00 AM
Surr: o-Terphenyl	94.1	65-140		%REC	1	7/2/2014 2:54:00 PM

NOTES:
Low Recovery for Surrogate 1-Chlorooctadecane.

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Analytical Report

WO#: **1406255**
Date Reported: **7/10/2014**

Client: Friedman & Bruya
Collection Date: 6/24/2014 1:00:00 PM
Project: 406442
Lab ID: 1406255-002
Matrix: Groundwater
Client Sample ID: **MW-2-GW-4-14'**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarbons by NWEPH				Batch ID: 7964		Analyst: EC
Aliphatic Hydrocarbon (C10-C12)	18.4	0.0200		µg/L	1	7/2/2014 6:04:00 AM
Aliphatic Hydrocarbon (C12-C16)	36.2	0.0200		µg/L	1	7/2/2014 6:04:00 AM
Aliphatic Hydrocarbon (C16-C21)	28.7	0.0200		µg/L	1	7/2/2014 6:04:00 AM
Aliphatic Hydrocarbon (C21-C34)	34.8	0.0200		µg/L	1	7/2/2014 6:04:00 AM
Aliphatic Hydrocarbon (C8-C10)	74.7	0.0200		µg/L	1	7/2/2014 6:04:00 AM
Aromatic Hydrocarbon (C10-C12)	ND	0.0200		µg/L	1	7/2/2014 3:41:00 PM
Aromatic Hydrocarbon (C12-C16)	146	0.0200		µg/L	1	7/2/2014 3:41:00 PM
Aromatic Hydrocarbon (C16-C21)	35.9	0.0200		µg/L	1	7/2/2014 3:41:00 PM
Aromatic Hydrocarbon (C21-C34)	ND	0.0200		µg/L	1	7/2/2014 3:41:00 PM
Aromatic Hydrocarbon (C8-C10)	ND	0.0200		µg/L	1	7/2/2014 3:41:00 PM
Surr: 1-Chlorooctadecane	68.3	65-140		%REC	1	7/2/2014 6:04:00 AM
Surr: o-Terphenyl	108	65-140		%REC	1	7/2/2014 3:41:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Analytical Report

WO#: **1406255**
Date Reported: **7/10/2014**

Client: Friedman & Bruya
Collection Date: 6/24/2014 11:25:00 AM
Project: 406442
Lab ID: 1406255-003
Matrix: Groundwater
Client Sample ID: **MW-21-GW-4-14'**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarbons by NWEPH				Batch ID: 7964		Analyst: EC
Aliphatic Hydrocarbon (C10-C12)	32.2	0.0200		µg/L	1	7/2/2014 6:49:00 AM
Aliphatic Hydrocarbon (C12-C16)	58.9	0.0200		µg/L	1	7/2/2014 6:49:00 AM
Aliphatic Hydrocarbon (C16-C21)	32.7	0.0200		µg/L	1	7/2/2014 6:49:00 AM
Aliphatic Hydrocarbon (C21-C34)	39.3	0.0200		µg/L	1	7/2/2014 6:49:00 AM
Aliphatic Hydrocarbon (C8-C10)	78.5	0.0200		µg/L	1	7/2/2014 6:49:00 AM
Aromatic Hydrocarbon (C10-C12)	51.4	0.0200		µg/L	1	7/2/2014 4:28:00 PM
Aromatic Hydrocarbon (C12-C16)	147	0.0200		µg/L	1	7/2/2014 4:28:00 PM
Aromatic Hydrocarbon (C16-C21)	55.9	0.0200		µg/L	1	7/2/2014 4:28:00 PM
Aromatic Hydrocarbon (C21-C34)	51.8	0.0200		µg/L	1	7/2/2014 4:28:00 PM
Aromatic Hydrocarbon (C8-C10)	70.8	0.0200		µg/L	1	7/2/2014 4:28:00 PM
Surr: 1-Chlorooctadecane	86.5	65-140		%REC	1	7/2/2014 6:49:00 AM
Surr: o-Terphenyl	136	65-140		%REC	1	7/2/2014 4:28:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Analytical Report

WO#: **1406255**
Date Reported: **7/10/2014**

Client: Friedman & Bruya
Collection Date: 6/24/2014 1:55:00 PM
Project: 406442
Lab ID: 1406255-004
Matrix: Groundwater
Client Sample ID: **MW-3-GW-4-14'**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarbons by NWEPH				Batch ID: 7964		Analyst: EC
Aliphatic Hydrocarbon (C10-C12)	32.2	0.0200		µg/L	1	7/2/2014 7:33:00 AM
Aliphatic Hydrocarbon (C12-C16)	32.2	0.0200		µg/L	1	7/2/2014 7:33:00 AM
Aliphatic Hydrocarbon (C16-C21)	30.8	0.0200		µg/L	1	7/2/2014 7:33:00 AM
Aliphatic Hydrocarbon (C21-C34)	31.4	0.0200		µg/L	1	7/2/2014 7:33:00 AM
Aliphatic Hydrocarbon (C8-C10)	72.6	0.0200		µg/L	1	7/2/2014 7:33:00 AM
Aromatic Hydrocarbon (C10-C12)	5.15	0.0200		µg/L	1	7/3/2014 8:19:00 PM
Aromatic Hydrocarbon (C12-C16)	129	0.0200		µg/L	1	7/3/2014 8:19:00 PM
Aromatic Hydrocarbon (C16-C21)	22.3	0.0200		µg/L	1	7/3/2014 8:19:00 PM
Aromatic Hydrocarbon (C21-C34)	19.7	0.0200		µg/L	1	7/3/2014 8:19:00 PM
Aromatic Hydrocarbon (C8-C10)	1.72	0.0200		µg/L	1	7/3/2014 8:19:00 PM
Surr: 1-Chlorooctadecane	67.0	65-140		%REC	1	7/2/2014 7:33:00 AM
Surr: o-Terphenyl	98.4	65-140		%REC	1	7/3/2014 8:19:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Analytical Report

WO#: **1406255**
Date Reported: **7/10/2014**

Client: Friedman & Bruya
Collection Date: 6/24/2014 2:40:00 PM
Project: 406442
Lab ID: 1406255-005
Matrix: Groundwater
Client Sample ID: **MW-4-GW-4-14'**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarbons by NWEPH				Batch ID: 7964		Analyst: EC
Aliphatic Hydrocarbon (C10-C12)	29.5	0.0200		µg/L	1	7/2/2014 8:17:00 AM
Aliphatic Hydrocarbon (C12-C16)	46.5	0.0200		µg/L	1	7/2/2014 8:17:00 AM
Aliphatic Hydrocarbon (C16-C21)	33.9	0.0200		µg/L	1	7/2/2014 8:17:00 AM
Aliphatic Hydrocarbon (C21-C34)	36.7	0.0200		µg/L	1	7/2/2014 8:17:00 AM
Aliphatic Hydrocarbon (C8-C10)	66.6	0.0200		µg/L	1	7/2/2014 8:17:00 AM
Aromatic Hydrocarbon (C10-C12)	ND	0.0200		µg/L	1	7/3/2014 9:03:00 PM
Aromatic Hydrocarbon (C12-C16)	144	0.0200		µg/L	1	7/3/2014 9:03:00 PM
Aromatic Hydrocarbon (C16-C21)	19.4	0.0200		µg/L	1	7/3/2014 9:03:00 PM
Aromatic Hydrocarbon (C21-C34)	ND	0.0200		µg/L	1	7/3/2014 9:03:00 PM
Aromatic Hydrocarbon (C8-C10)	ND	0.0200		µg/L	1	7/3/2014 9:03:00 PM
Surr: 1-Chlorooctadecane	81.0	65-140		%REC	1	7/2/2014 8:17:00 AM
Surr: o-Terphenyl	97.9	65-140		%REC	1	7/3/2014 9:03:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1406255
CLIENT: Friedman & Bruya
Project: 406442

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **LCS-7964 ALI** SampType: **LCS** Units: **µg/L** Prep Date: **7/2/2014** RunNo: **15467**
Client ID: **LCSW** Batch ID: **7964** Analysis Date: **7/2/2014** SeqNo: **313169**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C10-C12)	78.4	0.0200	200.0	0	78.4	70	130				
Aliphatic Hydrocarbon (C12-C16)	185	0.0200	200.0	0	92.3	70	130				
Aliphatic Hydrocarbon (C16-C21)	224	0.0200	200.0	0	112	70	130				
Aliphatic Hydrocarbon (C21-C34)	179	0.0200	200.0	0	89.7	70	130				
Aliphatic Hydrocarbon (C8-C10)	399	0.0200	400.0	0	99.8	70	130				
Surr: 1-Chlorooctadecane	51.3		50.00		103	65	140				

Sample ID: **LCSD-7964 ALI** SampType: **LCSD** Units: **µg/L** Prep Date: **7/2/2014** RunNo: **15467**
Client ID: **LCSW02** Batch ID: **7964** Analysis Date: **7/2/2014** SeqNo: **313170**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C10-C12)	194	0.0200	200.0	0	96.9	70	130	156.7	21.1	20	R
Aliphatic Hydrocarbon (C12-C16)	184	0.0200	200.0	0	92.0	70	130	184.6	0.334	20	
Aliphatic Hydrocarbon (C16-C21)	232	0.0200	200.0	0	116	70	130	224.2	3.23	20	
Aliphatic Hydrocarbon (C21-C34)	185	0.0200	200.0	0	92.5	70	130	179.5	3.03	20	
Aliphatic Hydrocarbon (C8-C10)	433	0.0200	400.0	0	108	70	130	399.3	8.10	20	
Surr: 1-Chlorooctadecane	56.7		50.00		113	65	140		0		

NOTES:
R - High RPD noted. Recoveries were within range.

Sample ID: **MB-7964 ALI** SampType: **MBLK** Units: **µg/L** Prep Date: **7/2/2014** RunNo: **15467**
Client ID: **MBLKW** Batch ID: **7964** Analysis Date: **7/2/2014** SeqNo: **313171**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C10-C12)	ND	0.0200		0	0						
Aliphatic Hydrocarbon (C12-C16)	ND	0.0200		0	0						
Aliphatic Hydrocarbon (C16-C21)	ND	0.0200		0	0						
Aliphatic Hydrocarbon (C21-C34)	ND	0.0200		0	0						

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1406255
CLIENT: Friedman & Bruya
Project: 406442

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **MB-7964 ALI**	SampType: **MBLK**			Units: **µg/L**		Prep Date: **7/2/2014**		RunNo: **15467**			
Client ID: **MBLKW**	Batch ID: **7964**					Analysis Date: **7/2/2014**		SeqNo: **313171**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	ND	0.0200		0	0						
Surr: 1-Chlorooctadecane	30.0		40.00		75.0	65	140				

Sample ID: **1406255-001ADUP**	SampType: **DUP**			Units: **µg/L**		Prep Date: **7/3/2014**		RunNo: **15467**			
Client ID: **MW-1-GW-4-14'**	Batch ID: **7964**					Analysis Date: **7/3/2014**		SeqNo: **313338**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C10-C12)	15.4	0.0200		0	0			0	200	30	
Aromatic Hydrocarbon (C12-C16)	156	0.0200		0	0			0	200	30	
Aromatic Hydrocarbon (C16-C21)	29.8	0.0200		0	0			0	200	30	
Aromatic Hydrocarbon (C21-C34)	ND	0.0200		0	0			0		30	
Aromatic Hydrocarbon (C8-C10)	ND	0.0200		0	0			0		30	
Surr: o-Terphenyl	45.1		50.00		90.2	65	140		0		

Sample ID: **LCS-7964 ARO**	SampType: **LCS**			Units: **µg/L**		Prep Date: **7/2/2014**		RunNo: **15467**			
Client ID: **LCSW**	Batch ID: **7964**					Analysis Date: **7/2/2014**		SeqNo: **313352**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C10-C12)	36.9	0.0200	100.0	0	73.8	70	130				
Aromatic Hydrocarbon (C12-C16)	44.1	0.0200	100.0	0	88.2	70	130				
Aromatic Hydrocarbon (C16-C21)	35.7	0.0200	100.0	0	71.3	70	130				
Aromatic Hydrocarbon (C21-C34)	46.8	0.0200	100.0	0	93.6	70	130				
Aromatic Hydrocarbon (C8-C10)	37.5	0.0200	100.0	0	75.0	70	130				
Surr: o-Terphenyl	57.5		50.00		115	65	140				

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1406255
CLIENT: Friedman & Bruya
Project: 406442

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **LCSD-7964 ARO** SampType: **LCSD** Units: **µg/L** Prep Date: **7/2/2014** RunNo: **15467**
Client ID: **LCSW02** Batch ID: **7964** Analysis Date: **7/2/2014** SeqNo: **313353**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C10-C12)	40.1	0.0200	100.0	0	80.2	70	130	73.79	8.28	20	
Aromatic Hydrocarbon (C12-C16)	39.5	0.0200	100.0	0	79.1	70	130	88.20	10.9	20	
Aromatic Hydrocarbon (C16-C21)	88.6	0.0200	100.0	0	88.6	70	130	71.32	21.6	20	R
Aromatic Hydrocarbon (C21-C34)	41.9	0.0200	100.0	0	83.8	70	130	93.56	11.0	20	
Aromatic Hydrocarbon (C8-C10)	34.6	0.0200	100.0	0	69.3	70	130	75.04	8.00	20	S
Surr: o-Terphenyl	38.5		50.00		76.9	65	140		0		

NOTES:
Low Recovery for EPH Carbon Range C8-C10 Aromatic Hydrocarbons. The LCS was within range.
R - High RPD noted. Recoveries were within range.

Sample ID: **MB-7964 ARO** SampType: **MBLK** Units: **µg/L** Prep Date: **7/2/2014** RunNo: **15467**
Client ID: **MBLKW** Batch ID: **7964** Analysis Date: **7/2/2014** SeqNo: **313354**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C10-C12)	ND	0.0200		0	0						
Aromatic Hydrocarbon (C12-C16)	ND	0.0200		0	0						
Aromatic Hydrocarbon (C16-C21)	ND	0.0200		0	0						
Aromatic Hydrocarbon (C21-C34)	ND	0.0200		0	0						
Aromatic Hydrocarbon (C8-C10)	ND	0.0200		0	0						
Surr: o-Terphenyl	46.7		50.00		93.3	65	140				

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Sample Log-In Check List

Client Name:	**FB**	Work Order Number:	**1406255**
Logged by:	**Erica Silva**	Date Received:	**6/25/2014 12:02:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Required ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all coolers received at a temperature of >0°C to 10.0°C	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is the headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

19. Additional remarks:

Item Information

Item #	Temp °C	Condition
Cooler	11.2	Good
Sample	7.3	Good

1406233

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Page # 1 of 1

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 Fremont

PROJECT NAME/NO. 406442

PO # C-993

REMARKS

Please Email Results

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	Dioxins and Furans by 8290	EPH	VPH	Nitrate	Sulfate	Alkalinity					Notes
MW-1-GW-4-14'		6/24/14	1218	GW	1		X									
MW-2-GW-4-14'			1300		1		X									
MW-21-GW-4-14'			1125		1		X									
MW-3-GW-4-14'			1355		1		X									
MW-4-GW-4-14'			1440		3		X									MS/MD

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	6/25/14	10:48
Received by:		Kerra Ziegler	FAI	6/25/14	12:02
Relinquished by:					
Received by:					

406442

SAMPLE CHAIN OF CUSTODY

ME 06/25/14 V4/C04

Page # 1 of 1

Send Report To Brett Beaulieu
Company Floyd/Snider
Address 601 Union St. Ste 600
City, State, ZIP Seattle, WA 98101
Phone # 206-292-2078 Fax #

SAMPLERS (signature)
PROJECT NAME/NO. PSTL - Longview
PO#
REMARKS
PX with & w/o sg.
per BB 07/01 @

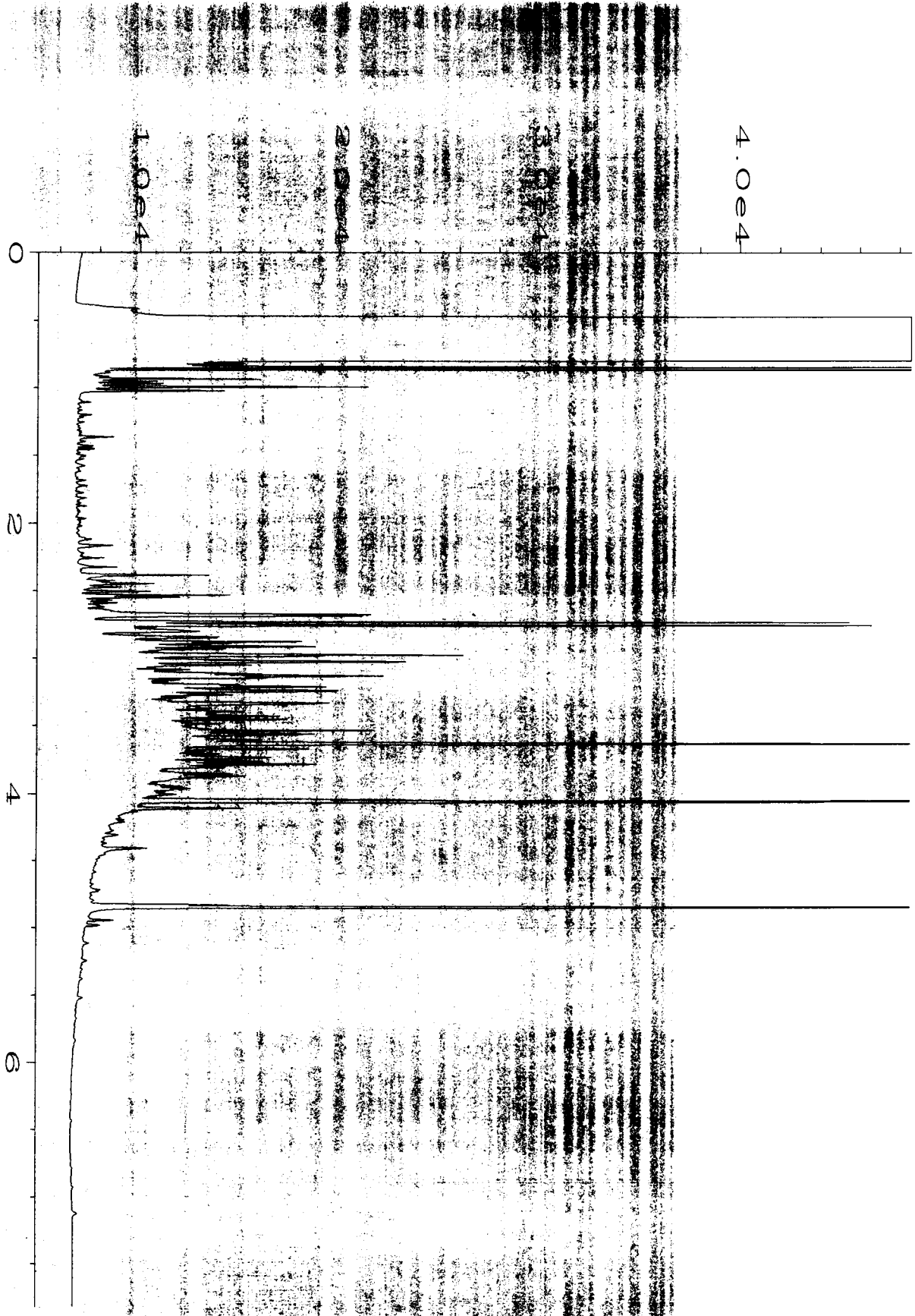
TURNAROUND TIME
☑ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	EPH TPH Policy Method	TEX by 8260	CPAHs				Notes
						ANALYSES REQUESTED												(K) - per BB 07/01 @
MW-1-GW-4-14'	01 A-F	6/24/14	1218	GW	6	✓				~~Naphthalene~~ EM		✓		(X)				~~Hold BTEX~~ @ 07/01
MW-2-GW-4-14'	02		1300	GW	6	✓				✓		✓	(X)	(X)				" "
MW-21-GW-4-14'	03		1125	GW	6	✓				✓		✓		(X)				" "
MW-3-GW-4-14'	04		1355	GW	6	✓				✓		✓	(K)	(X)				" "
MW-4-GW-4-14'	05 R-A		1440	GW	18	✓				✓		✓	(K)	(X)				MS/MSD ~~Hold BTEX~~ @ 07/01
													Samples received at	2 °C				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Erin Murray	Floyd/Snider	6/25/14	0845
Received by:	Eric Yonts	FTS	6/25/14	0845
Relinquished by:				
Received by:				

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



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Operator : mwdl
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Acquired on : 30 Jun 14 07:36 PM
Report Created on: 01 Jul 14 08:50 AM

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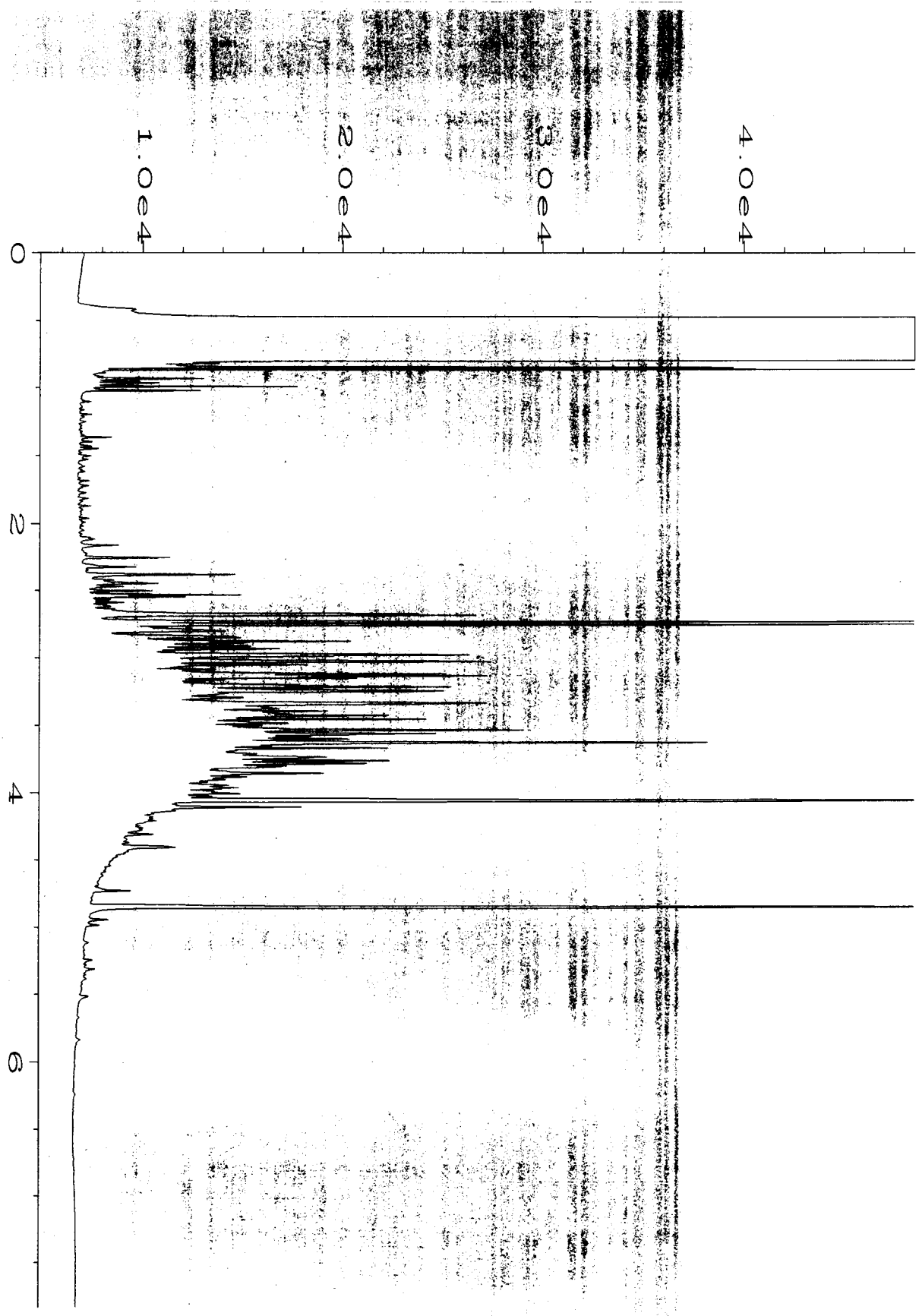
Vial Number : 49
Injection Number : 1
Sequence Line : 8
Instrument Method: DX.MTH
Analysis Method : END.MTH



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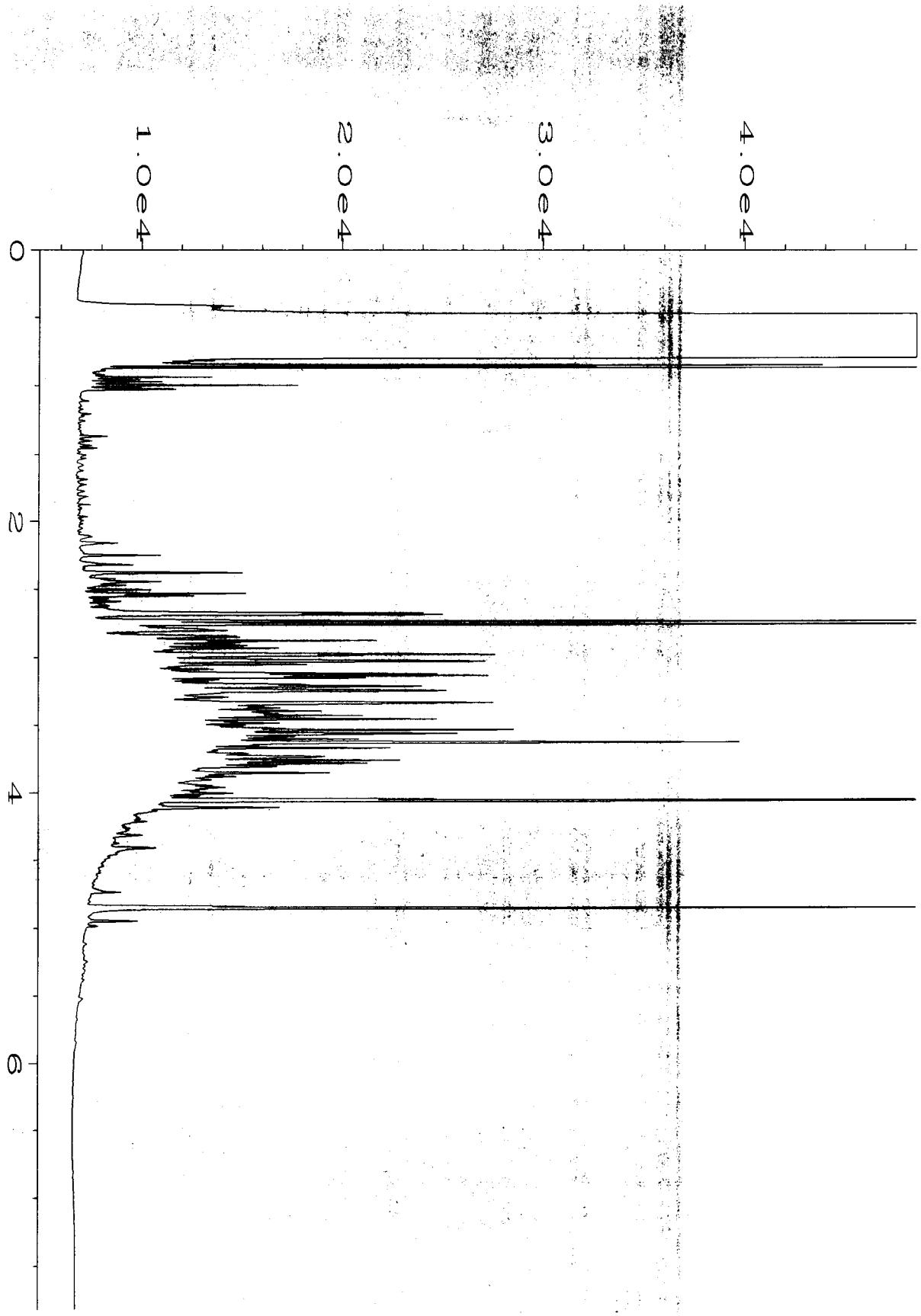
Run Time Bar Code:		Sequence Line	: 8
Acquired on	: 30 Jun 14 07:49 PM	Instrument Method	: DX.MTH
Report Created on:	01 Jul 14 08:50 AM	Analysis Method	: END.MTH



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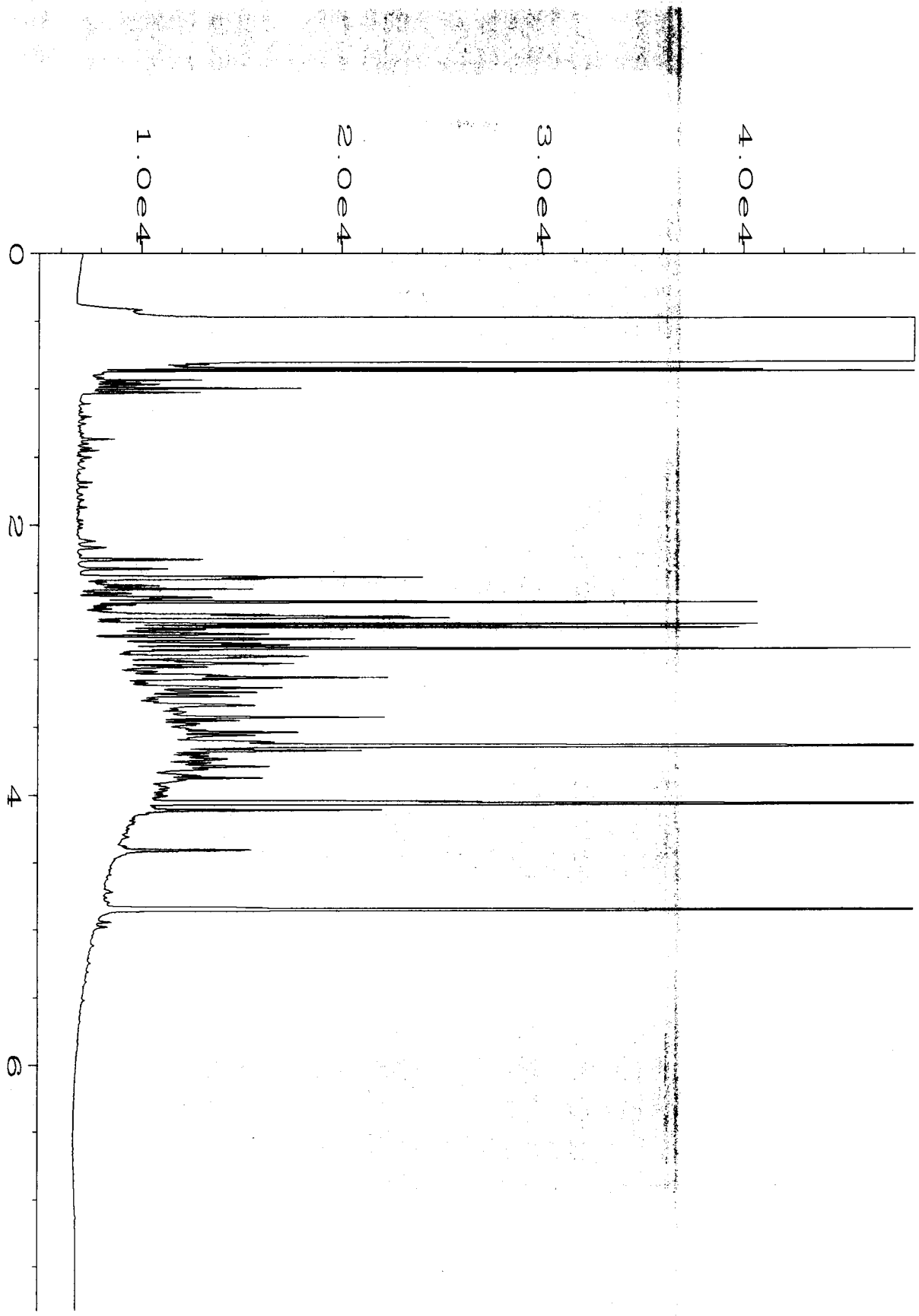
Operator	: mwdl	Page Number	: 1
Instrument	: GC1	Vial Number	: 51
Sample Name	: 406442-03	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 8
Acquired on	: 30 Jun 14 08:02 PM	Instrument Method	: DX.MTH
Report Created on	: 01 Jul 14 08:50 AM	Analysis Method	: END.MTH



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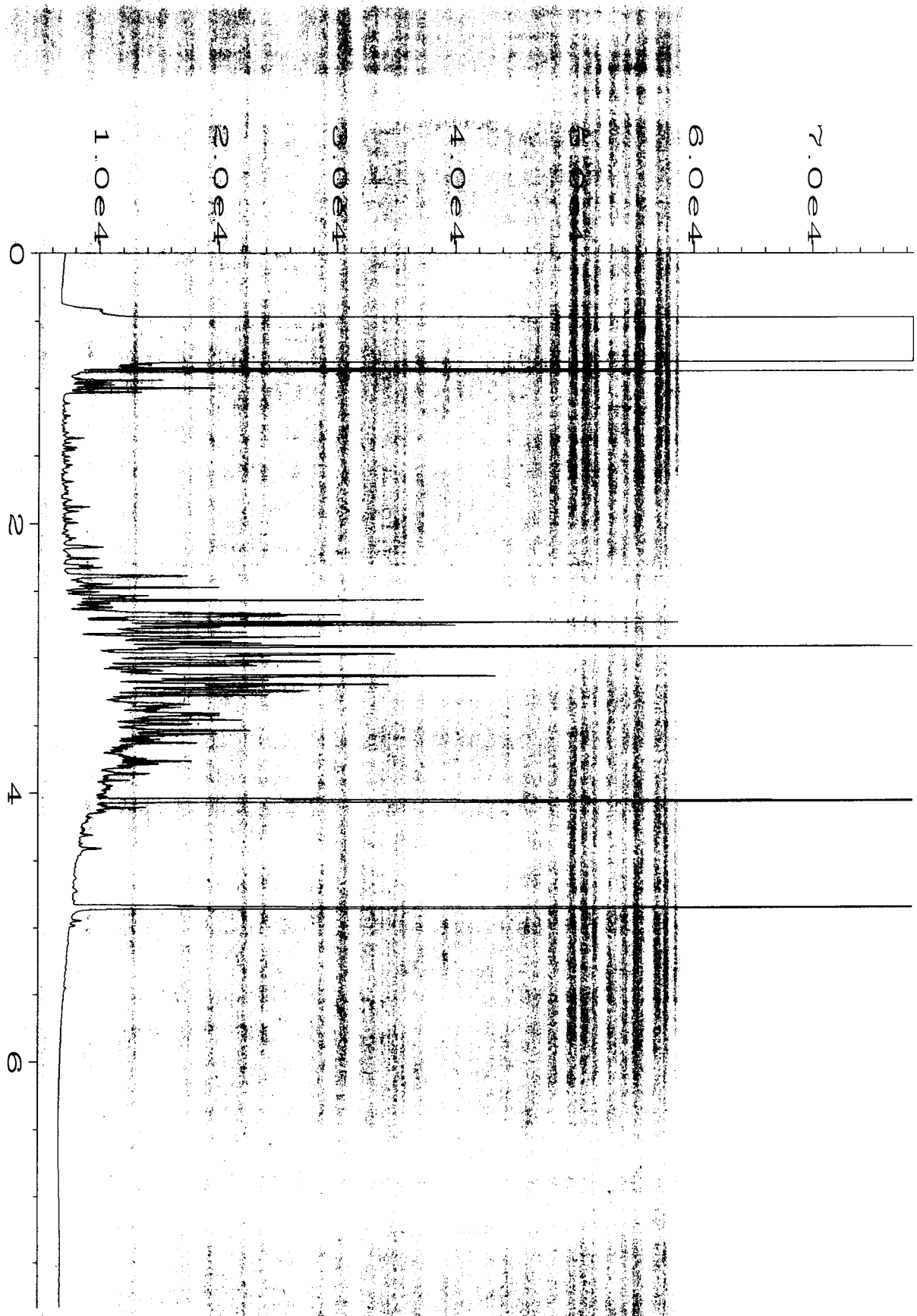
Operator : mwdl
Instrument : GC1
Sample Name : 406442-04
Run Time Bar Code:
Acquired on : 30 Jun 14 08:15 PM
Report Created on: 01 Jul 14 08:50 AM

Page Number : 1
Vial Number : 52
Injection Number : 1
Sequence Line : 8
Instrument Method: DX.MTH
Analysis Method : END.MTH



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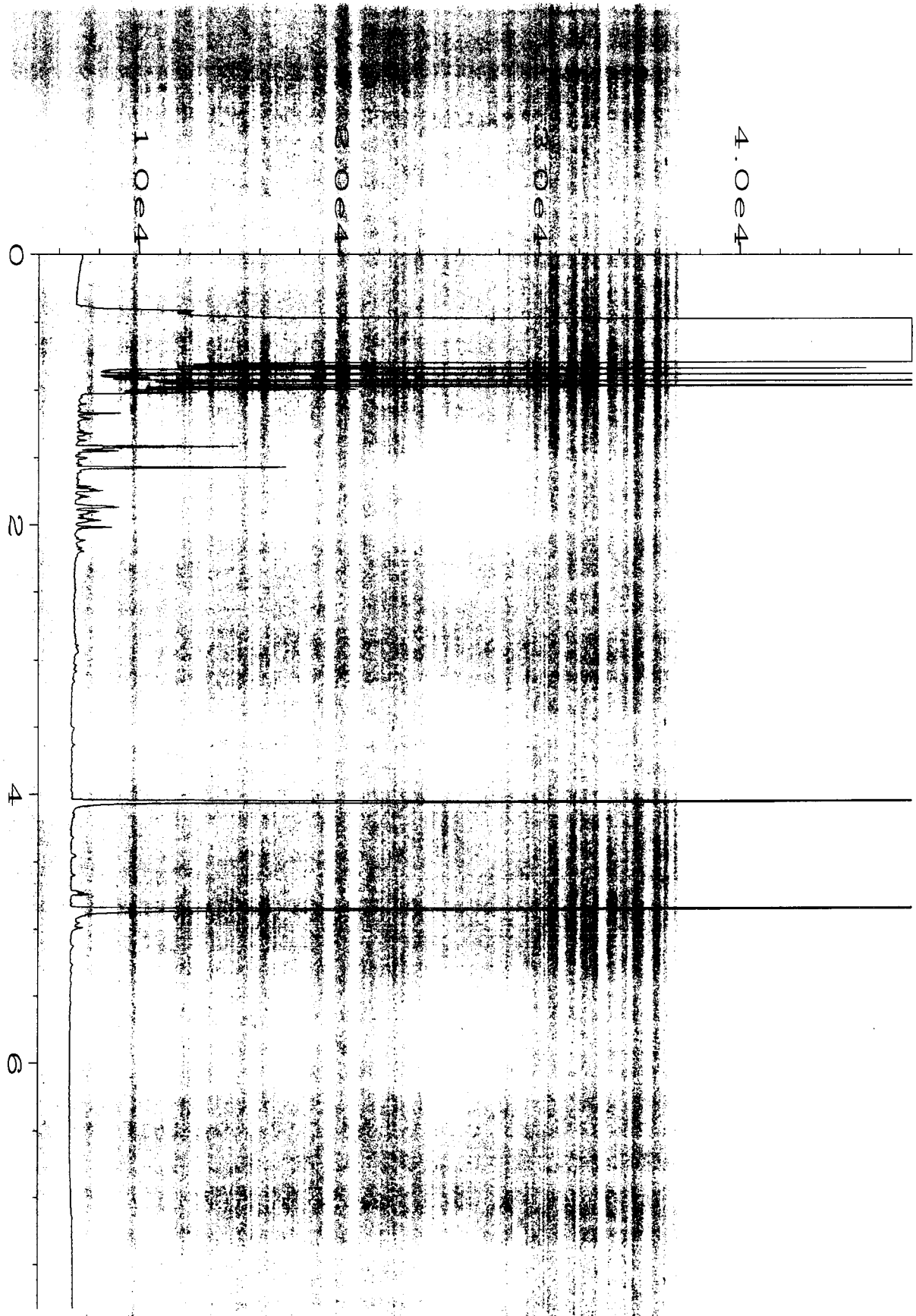
Operator : mwdl
Instrument : GC1
Sample Name : 406442-05
Run Time Bar Code:
Acquired on : 30 Jun 14 08:28 PM
Report Created on: 01 Jul 14 08:50 AM

Page Number : 1
Vial Number : 53
Injection Number : 1
Sequence Line : 8
Instrument Method: DX.MTH
Analysis Method : END.MTH



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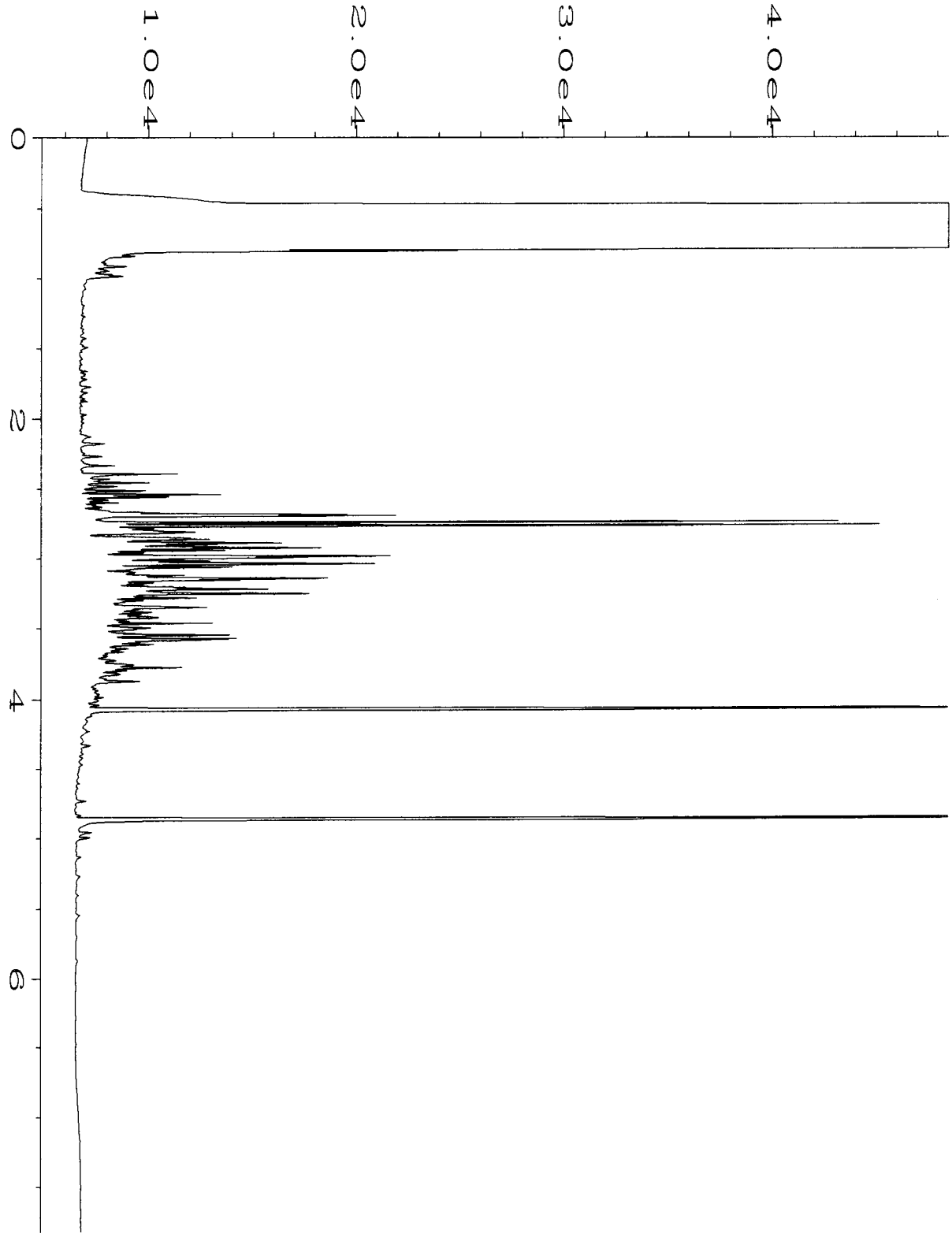
Instrument : [illegible] Vial Number : 21
Sample Name : [illegible] Injection Number : 1
Run Time Bar Code: [illegible] Sequence Line : 4
Acquired on : [illegible] Quantitation Method: DX.MTH
Report Created on: 01 Jul [illegible] Analysis Method : END.MTH



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Instrument	: GC1	Vial Number	: 38
Sample Name	: 406442-01 sg	Injection Number	: 1
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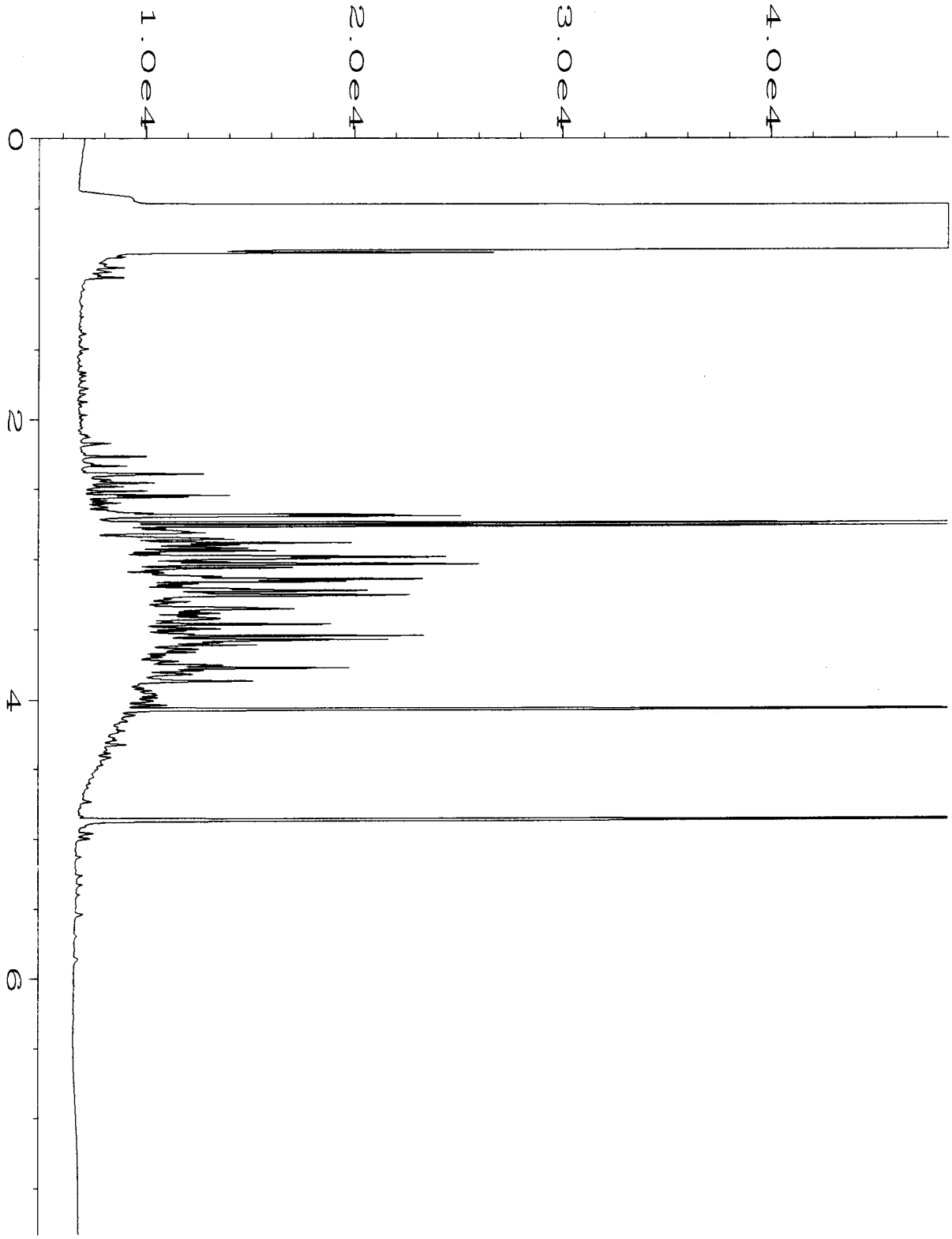
Acquired on	: 07 Jul 14 07:11 PM	Instrument Method	: DX.MTH
Report Created on	: 08 Jul 14 09:48 AM	Analysis Method	: END.MTH



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Operator	: mwdl	Page Number	: 1
Instrument	: GC1	Vial Number	: 39
Sample Name	: 406442-02 sg	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 6
Acquired on	: 07 Jul 14 07:24 PM	Instrument Method	: DX.MTH
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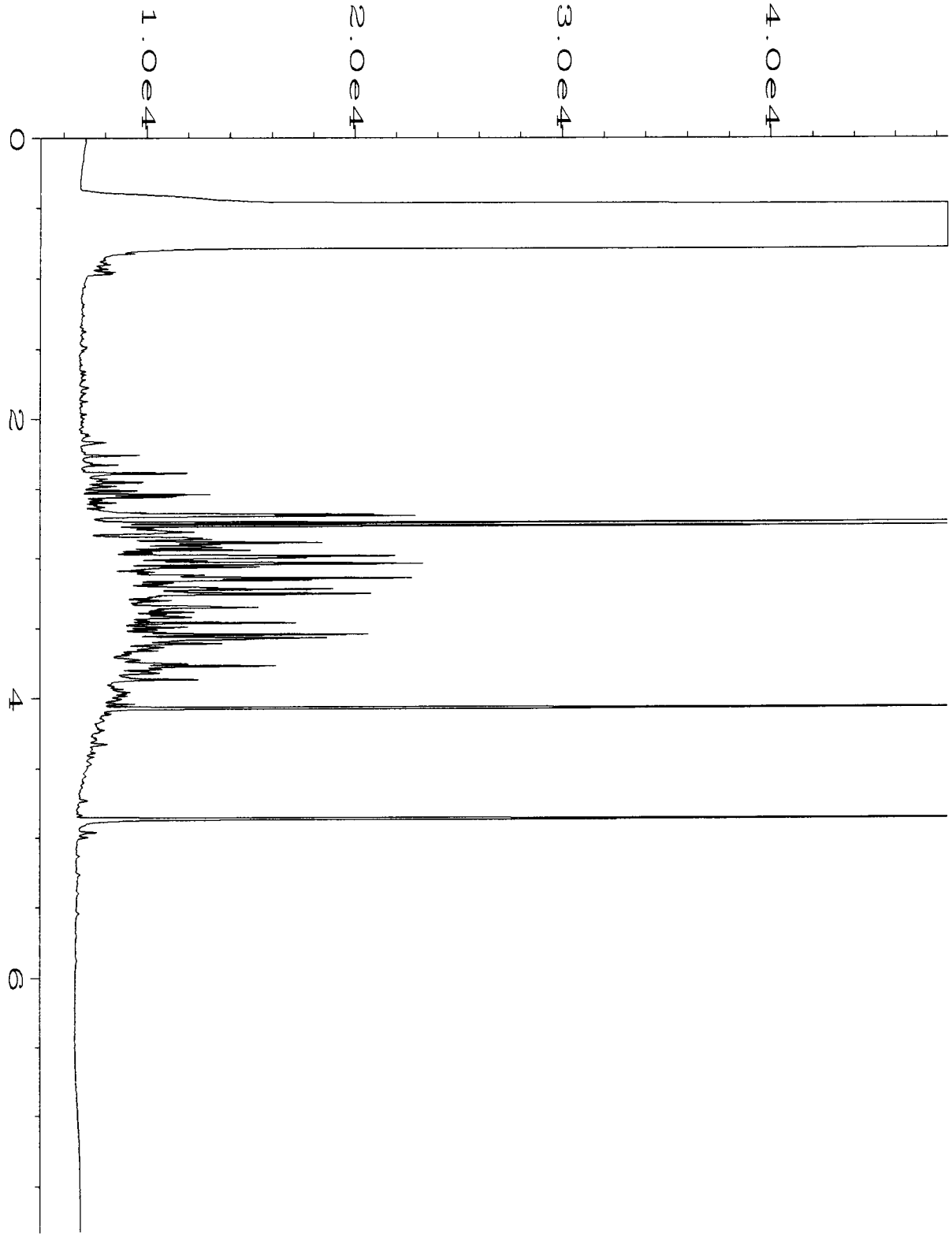

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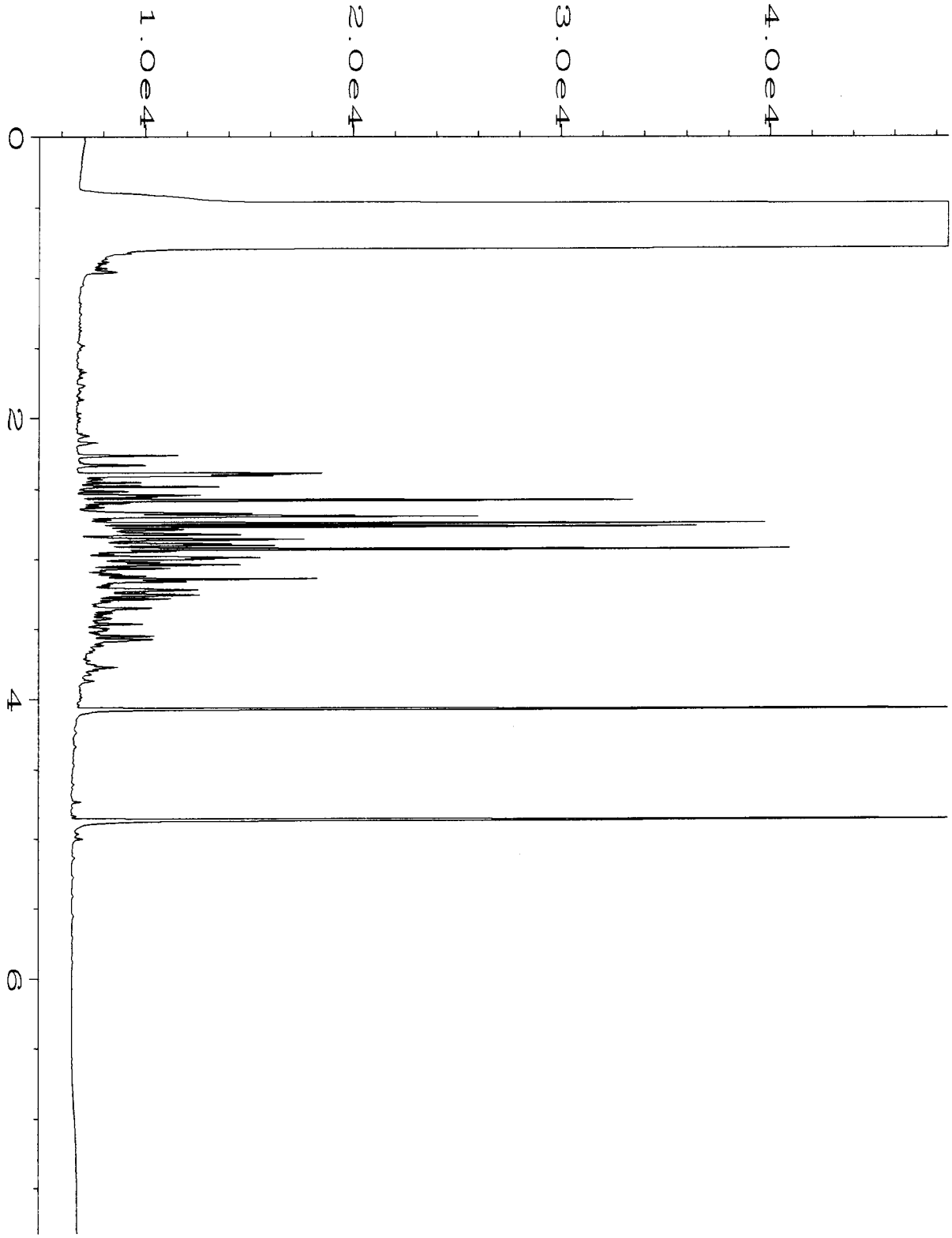
Operator	: mwdl	Page Number	: 1
Instrument	: GC1	Vial Number	: 40
Sample Name	: 406442-03 sg	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 6
Acquired on	: 07 Jul 14 07:37 PM	Instrument Method	: DX.MTH
Report Created on	: 08 Jul 14 09:49 AM	Analysis Method	: END.MTH



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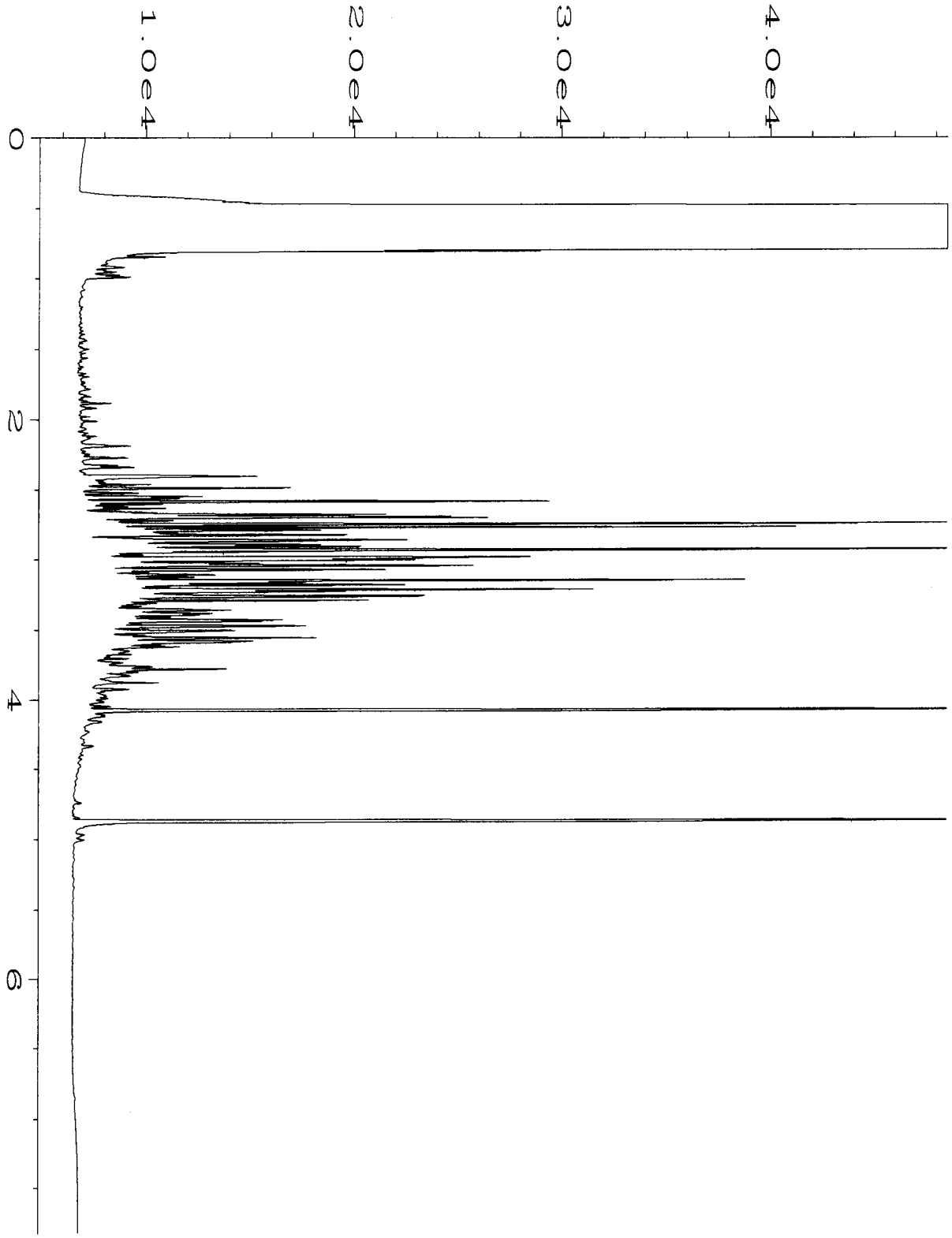
Operator	: mwdl	Page Number	: 1
Instrument	: GC1	Vial Number	: 41
Sample Name	: 406442-04 sg	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 8
Acquired on	: 07 Jul 14 08:17 PM	Instrument Method	: DX.MTH
Report Created on	: 08 Jul 14 09:49 AM	Analysis Method	: END.MTH



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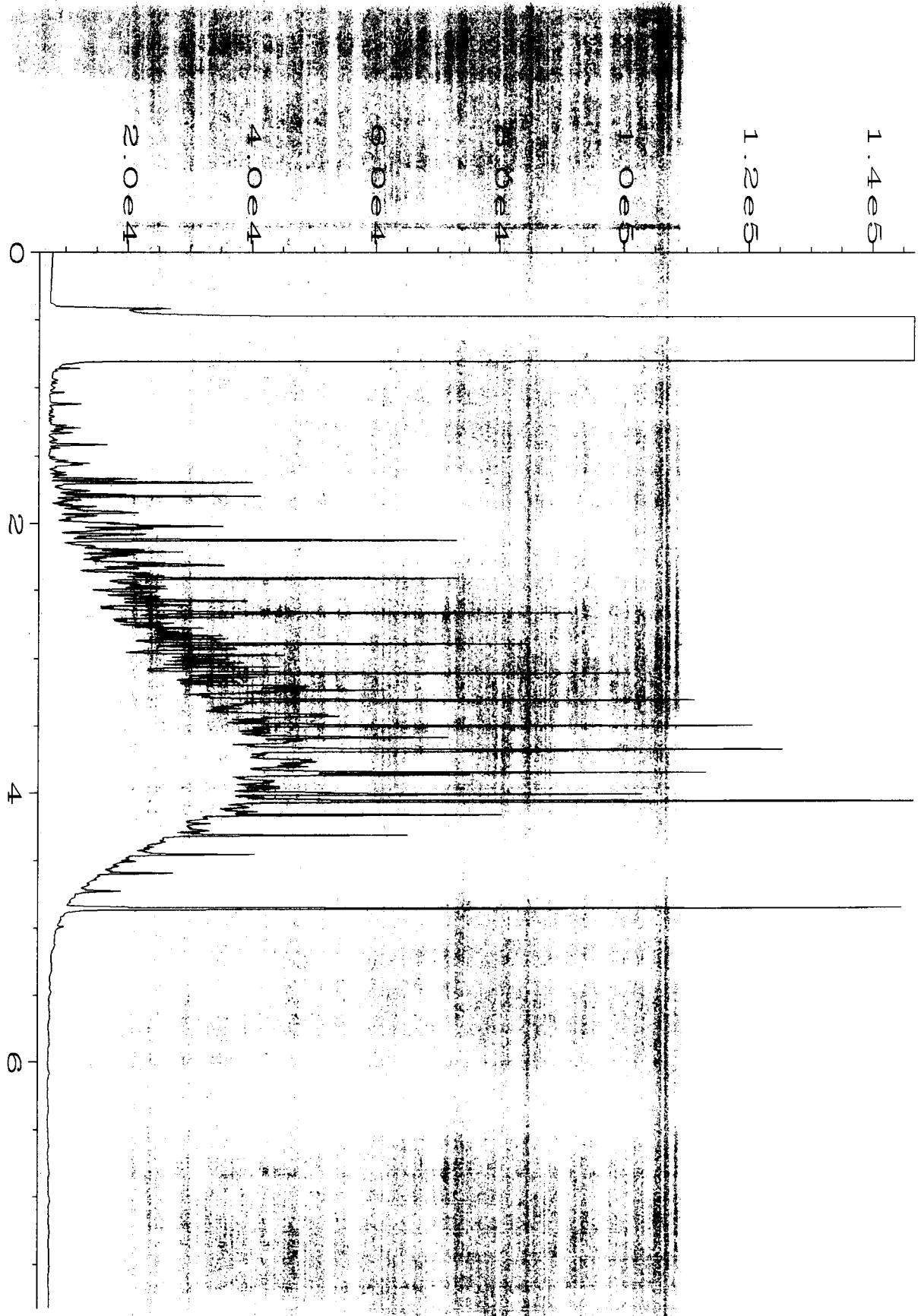
Operator	: mwdl	Page Number	: 1
Instrument	: GC1	Vial Number	: 6
Sample Name	: 406442-05 sg	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 08 Jul 14 09:02 AM	Instrument Method	: DX.MTH
Report Created on	: 08 Jul 14 09:49 AM	Analysis Method	: END.MTH



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Operator : mwdl
Instrument : GC1
Sample Name : 500 Dx 42-27B
Run Time Bar Code:
Acquired on : 30 Jun 14 08:40 AM
Report Created on: 01 Jul 14 08:51 AM

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