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

August 29, 2011

Mr. Sam Farrazaino
Equinox Development Unlimited, LLC
6545 Fifth Avenue South
Seattle, Washington 98108

SUBJECT: SUMMARY OF SUBSURFACE INVESTIGATION ACTIVITIES
Former Mastermark Printing Property – DRPH in Soil
6545 Fifth Avenue South
Seattle, Washington
SoundEarth Project Number 0761-001

Dear Mr. Farrazaino:

SoundEarth Strategies, Inc. (SoundEarth) has prepared this summary letter to document the results of recent investigation activities at the Former Mastermark Printing Property, a rectangular-shaped parcel located at 6545 Fifth Avenue South in Seattle, Washington (hereinafter referred to as the Property). The Property location is shown on Figure 1. Based on a review of historical information, it appears that the Property was undeveloped until 1941, when the existing single-story commercial building originally occupied by Sulak Manufacturing Co., a machine shop, was constructed. Additions to the original building were constructed in 1945 and 1952. Mastermark Printing operated at the Property from 1970 to approximately 2000.

BACKGROUND

The results of a previous subsurface investigation performed by SoundEarth in August 2010 and reported in the *Summary of Findings-Subsurface Investigation* confirmed the presence of diesel-range petroleum hydrocarbons (DRPH) in soil in push-probe P05 boring in the Fifth Avenue right-of-way (ROW) near the northeast corner of the Property. The elevated concentration of DRPH in soil indicated an area of contamination that was likely limited in extent.

DRPH was not detected in groundwater sampled from the boring advanced in the ROW in August 2010 (boring P05). In addition, the distance between the depth of the contamination and the ground surface (7 feet) and the overlying right-of-way (Fifth Avenue South) provide a measure of protection against direct contact; therefore, the DRPH contamination in its current state does not appear to represent an immediate risk to human health or the environment.

The scope of work summarized in the following sections included advancing an additional eight borings in the vicinity of P05 to evaluate whether the Property was impacted by the release and to further evaluate the extent of DRPH impacts in soil.

SUBSURFACE INVESTIGATION

The following subsections describe the field activities conducted to meet the objective of the subsurface investigation conducted by SoundEarth in April 2011.

Field Program

The scope of work associated with the subsurface investigation included the following:

- Preparing a health and safety plan in accordance with the Washington State Model Toxics Control Act (MTCA) and Part 1910.120 of Title 29 of the Code of Federal Regulations prior to initiating field activities.
- Performing a utility locate at the proposed boring locations using a private utility location service and contacting the One-Call Center for utility location.
- Advancing eight soil borings (P06 through P13) near the northeast corner of the Property to further evaluate the source and extent of DRPH impacts in soil.
- Collecting three soil samples from each boring for laboratory analysis for DRPH and oil-range petroleum hydrocarbons (ORPH) by Northwest Total Petroleum Hydrocarbon Method NWTPH-Dx.
- Preparing this report.

A detailed description of the subsurface investigation activities is provided in the following subsections.

Field Activities

The activities conducted as part of this investigation were performed on April 5, 2011. Drilling activities were conducted under the supervision of a SoundEarth geologist. Prior to investigation activities, a private utility location survey was conducted by Underground Detection Services of Seattle, Washington. Drilling services were provided by Environmental Services Network Northwest of Olympia, Washington.

Soil Sample Collection

To further evaluate the lateral and vertical extent of DRPH contamination in soil near the northeast corner of the Property, eight soil borings (P06 through P13) were advanced to a maximum depth of 12 feet bgs (Figure 2). The borings were advanced near the northeastern corner of the Property, surrounding boring P05, where DRPH contamination was initially confirmed in soil.

The soil borings were advanced using a limited-access, direct-push probe drill rig. Each boring was sampled at approximately 4-foot intervals from ground surface to the total depth explored of 12 feet bgs. After the maximum depth was achieved in each sample interval, relatively undisturbed, discrete soil samples were collected. The soil was classified using the Unified Soil Classification System. Soil characteristics, including moisture content, relative density, texture, and color were recorded on the boring logs, which are provided as Attachment A. The depths at which changes in soil lithology were observed and where groundwater was first encountered are also included on the boring logs. Selected portions of recovered soil core samples were placed in a plastic bag so the presence or absence of volatile organic compounds could be quantified using a photoionization detector (PID).

Soil samples were placed into labeled laboratory-prepared glassware, placed on ice in a cooler, and delivered to Friedman & Bruya, Inc., of Seattle, Washington, under standard chain-of-custody protocols for laboratory analysis. All of the collected soil samples were submitted for laboratory analysis of DRPH and ORPH by Northwest Total Petroleum Hydrocarbon Method NWTPH-Dx.

All non-dedicated field sampling equipment was cleaned and decontaminated between uses and prior to leaving the Property. Soil cuttings and decontamination wash water were contained on the Property in labeled 55-gallon drums pending waste profiling and proper disposal.

RESULTS

The following sections summarize the results of the investigation conducted at the Site in April 2011. The analytical results for the soil samples collected during this investigation, along with the previous investigation in August 2010, are presented in Table 1. The laboratory analytical report for the soil samples is included as Attachment B.

Subsurface Conditions

Soil encountered during drilling activities generally consisted of an upper 6 to 7 feet of fine to medium sand (fill material), overlying silty sand to the maximum explored depth of 12 feet bgs. Elevated PID readings and hydrocarbon odors were observed in soil samples obtained from borings P10 (strong hydrocarbon odor at 7 feet bgs and moderate hydrocarbon odor at 8 feet bgs), P11 (moderate hydrocarbon odor at 7 feet bgs), P12 (slight hydrocarbon odor at 6 feet bgs), and P13 (slight hydrocarbon odor at 6 feet bgs). No hydrocarbon odors or elevated PID readings were observed for the soil samples recovered from borings P06, P07, P08, or P09.

Groundwater was encountered at depths ranging from approximately 6 to 7.5 feet bgs during drilling.

Soil

Soil analytical results for samples obtained from borings P06 through P013 on April 5, 2011, are presented on Figure 2 and in Table 1 and are summarized below:

- The concentration of DRPH in the soil sample collected from boring P10 at a depth of 7 feet bgs (3,000 milligrams per kilogram [mg/kg]) exceeded the MTCA Method A cleanup level for unrestricted land use of 2,000 mg/kg. Boring P10 was advanced within the ROW adjacent to former boring P05.
- Concentrations of DRPH below the MTCA Method A cleanup level were reported in the soil samples collected from boring P12 at 6 feet bgs (160 mg/km) and from boring P13 at 6 feet bgs (1,600 mg/kg). Both P12 and P13 are located on the Property.
- A low concentration of ORPH (530 mg/kg) was reported in the soil sample collected from boring P08 at a depth of 11 feet bgs, which is below the MTCA Method A cleanup level of 2,000 mg/kg.
- DRPH and ORPH were not detected above the laboratory reporting limits in the remaining soil samples.

The concentrations of DRPH reported in analyzed soil samples were evaluated in accordance with the 1992 Washington State Department of Ecology (Ecology) document *Statistical Guidance for Ecology Site*

Managers and Ecology's 2010 *Guidance for Remediation of Petroleum Contaminated Sites*. As detailed in the guidance documents, confirming whether the cleanup levels are achieved can be based on a comparison of the 95th percent upper confidence limit on the mean (UCL_{95}) with the defined cleanup level.

The data developed to date was tested for conformance with distributional assumptions (normal versus lognormal), and the UCL_{95} was calculated based on the methods described in Ecology's 1992 and 2010 guidance documents (Attachment C).

Review of the statistical analysis and laboratory data indicates that concentrations of DRPH in soil in the ROW are compliant with MTCA for the following reasons:

- The calculated UCL_{95} value of 753.7 mg/kg is below the MTCA Method A cleanup level of 2,000 mg/km for DRPH in soil.
- Less than 10 percent of the soil samples had reported DRPH concentrations exceeding the MTCA Method A Cleanup level.
- No single soil sample had a reported DRPH concentration of more than two times the MTCA Method A cleanup level.

Data Quality Review

SoundEarth reviewed laboratory quality control data provided with the Friedman & Bruya, Inc., reports to evaluate the usability of the analytical results. The analytical results for all soil samples are considered to be usable for the purposes intended. A copy of the laboratory analytical report is provided as Attachment B.

CONCLUSION

The results of the subsurface investigation indicate that a possible spill in the ROW may have resulted in a release of DRPH to soil in the ROW. Based on the findings of the subsurface investigation, the extent of the DRPH-impacted soil appears to be limited to the ROW at a depth of 7 feet bgs.

The concentrations of DRPH reported in analyzed soil samples were statistically evaluated in accordance with Ecology's 1992 and 2010 guidance documents; based on the results of the analysis, the concentrations of DRPH beneath the ROW are compliant with MTCA.

In addition, DRPH contamination in soil is located beyond the Property boundary and below the conditional point of compliance of 6 feet bgs (WAC 173-340-7490[4][a]), the impacted soil is capped by Fifth Avenue South, and groundwater is not affected by the release. Therefore, no additional action is warranted on behalf of the Property owner.

LIMITATIONS

The findings and conclusions documented in this report have been prepared for the specific application to this project and have been developed in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area. Sampling was conducted at widely spaced boring locations and depths, and a

potential always remains for unknown, unidentified, or unforeseen subsurface contamination to exist on portions of the Property that were not accessed in the course of this investigation. No warranty, expressed or implied, is made. This report is intended for the exclusive use of Equinox Development Unlimited, LLC.

CLOSING

SoundEarth appreciates the opportunity to work with you on this project. Please contact the undersigned at (206) 306-1900 if you have any questions or require additional information.

Respectfully,
SoundEarth Strategies, Inc.

Chris G. Cass, LG
Project Geologist

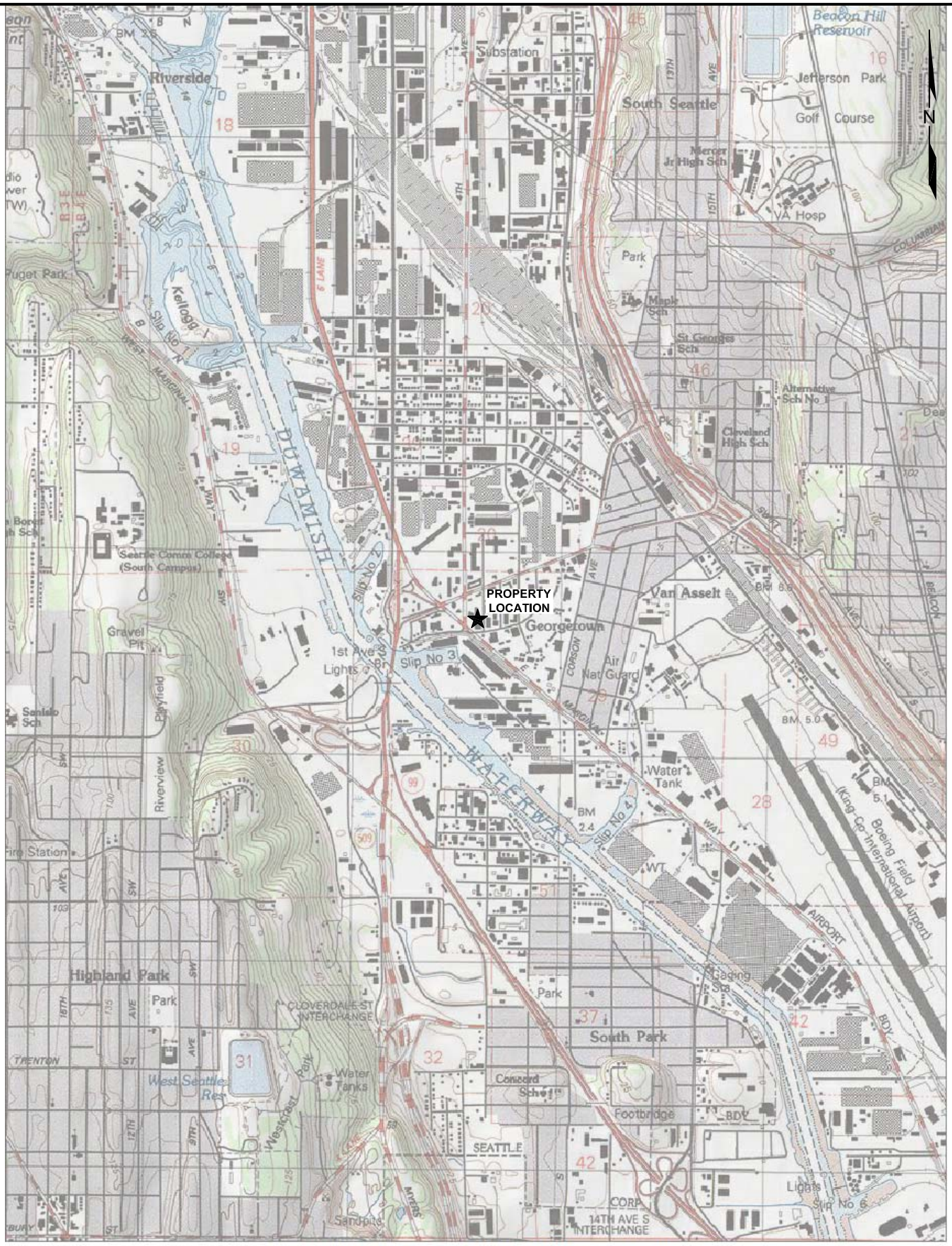
Erin K. Rothman, MS
Senior Scientist

John R. Funderburk, MSPH
Principal

Attachments: Figure 1, Property Location Map
Figure 2, Soil Analytical Results for Diesel and Heavy Oil
Table 1, Summary of Soil Analytical Results
Attachment A, Boring Logs
Attachment B, Laboratory Analytical Report
Friedman & Bruya, Inc. # 104047
Attachment C, UCL Statistical Analysis

CGC/EKR:syh

FIGURES



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APPROXIMATE SCALE: 1:24,000

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DATE: 04/29/11
DRAWN BY: V. BACHMANN
CHECKED BY: E. ROTHMAN
CAD FILE: 0761-001_FIG 1

PROJECT NAME: FORMER MASTERMARK PRINTING
PROJECT NUMBER: 0761-001
STREET ADDRESS: 6545 5TH AVENUE SOUTH
CITY, STATE: SEATTLE, WASHINGTON

FIGURE 1
PROPERTY LOCATION MAP

P:\0761 EQUINOX DEVELOPMENT UNLIMITED\0761-001 FORMER MASTERMARK PRINTING\TECHNICAL\CAD\2011Q1\0761-001_FIG 1_F.DWG

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5/23/2011

P:\0761 EQUINOX DEVELOPMENT UNLIMITED\0761-001 FORMER MASTERMARK PRINTING\TECHNICAL\CAD\2011Q1\0761-001-03_2011Q1_SD_F.DWG

Soil Sample	Sample Date	Depth (feet bgs)	DRPH	ORPH
P09-04	04/05/11	4	<50	<250
P09-07	04/05/11	7	<50	<250
P09-11	04/05/11	11	<50	<250

Soil Sample	Sample Date	Depth (feet bgs)	DRPH	ORPH
P08-04	04/05/11	4	<50	<250
P08-07	04/05/11	7	<50	<250
P08-11	04/05/11	11	<50	530

Soil Sample	Sample Date	Depth (feet bgs)	DRPH	ORPH
P07-04	04/05/11	4	<50	<250
P07-07	04/05/11	7	<50	<250
P07-11	04/05/11	11	<50	<250

Soil Sample	Sample Date	Depth (feet bgs)	DRPH	ORPH
P06*-04	04/05/11	4	<50	<250
P06*-07	04/05/11	7	<50	<250
P06*-11	04/05/11	11	<50	<250

Soil Sample	Sample Date	Depth (feet bgs)	DRPH	ORPH
P13-04	04/05/11	4	<50	<250
P13-06	04/05/11	6	1,600	<250
P13-11	04/05/11	11	<50	<250

Soil Sample	Sample Date	Depth (feet bgs)	DRPH	ORPH
P05-07	08/20/10	7	**2,900**	<250

Soil Sample	Sample Date	Depth (feet bgs)	DRPH	ORPH
P10-04	04/05/11	4	<50	<250
P10-07	04/05/11	7	**3,000**	<250
P10-10	04/05/11	10	<50	<250

Soil Sample	Sample Date	Depth (feet bgs)	DRPH	ORPH
P11-04	04/05/11	4	<50	<250
P11-07	04/05/11	7	<50	<250
P11-10	04/05/11	10	<50	<250

Soil Sample	Sample Date	Depth (feet bgs)	DRPH	ORPH
P12-04	04/05/11	4	<50	<250
P12-06	04/05/11	6	160	<250
P12-11	04/05/11	11	<50	<250

Soil Sample	Sample Date	Depth (feet bgs)	DRPH	ORPH
P01-10	08/20/10	10	<50	<250

Soil Sample	Sample Date	Depth (feet bgs)	DRPH	ORPH
P03-07	08/20/10	7	<50	<250

Soil Sample	Sample Date	Depth (feet bgs)	DRPH	ORPH
P04-07	08/20/10	7	<50	<250

Soil Sample	Sample Date	Depth (feet bgs)	DRPH	ORPH
P02-07	08/20/10	7	<50	<250

Soil Sample	Sample Date	Depth (feet bgs)	DRPH	ORPH
P06-10	08/20/10	10	<50	<250

5TH AVENUE SOUTH

SOUTH RIVER STREET

EAST MARGINAL WAY SOUTH

24" P.S. (SANITARY)

SUPERIOR TRANSMISSION
(FORMER GASOLINE STATION)

FORMER OIL AND GAS STORAGE

STEEL-COVERED VAULT

BLACKSMITH AND METAL FABRICATION

FORMER MASTERMARK PRINTING AND MACHINE SHOP

TIRE REPAIR SERVICE

FORMER BOILER

DELI

FORMER GASOLINE STATION

P01 P02 P03 P04 P05 P06 P06* P07 P08 P09 P10 P11 P12 P13

N

LEGEND

P01	SOIL BORING
	PROPERTY BOUNDARY
	PARCEL BOUNDARY
SS	SEWER LINE
bgs	BELOW GROUND SURFACE
DRPH	DIESEL-RANGE PETROLEUM HYDROCARBONS
ORPH	OIL-RANGE PETROLEUM HYDROCARBONS
RED	CONCENTRATION OF DRPH EXCEEDS MTCA METHOD A CLEANUP LEVEL FOR SOIL
MTCA A	WASHINGTON STATE MODEL TOXICS CONTROL ACT METHOD A CLEANUP LEVEL
<	CONCENTRATION IS BELOW THE LABORATORY REPORTING LIMIT
*	BORING DATA APRIL 5, 2011; SEPARATE FROM AUGUST 20, 2010 BORING

NOTE: ALL RESULTS ARE PRESENTED IN MILLIGRAMS PER KILOGRAM

	DRPH	ORPH
MTCA Cleanup Level for	2,000	2,000

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DATE: 04/29/11
DRAWN BY: VPB/JQC
CHECKED BY: CGC
CAD FILE: 0761-001_2011Q1_SD

PROJECT NAME: FORMER MASTERMARK PRINTING
PROJECT NUMBER: 0761-001
STREET ADDRESS: 6545 5TH AVENUE SOUTH
CITY, STATE: SEATTLE, WASHINGTON

REGION:

0 15 30 60
APPROXIMATE SCALE IN FEET

FIGURE 2
SOIL ANALYTICAL RESULTS FOR DIESEL AND HEAVY OIL

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TABLE

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Table 1
Summary of Soil Analytical Results
Former Mastermark Printing
6545 Fifth Avenue South
Seattle, Washington

Boring ID	Soil Sample ID	Date Sampled	Depth (feet bgs)	Analytical Results (mg/kg) DRPH	ORPH
P01	P01-10	08/20/10	10	<50	<250
P02	P02-07	08/20/10	7	<50	<250
P03	P03-07	08/20/10	7	<50	<250
P04	P04-07	08/20/10	7	<50	<250
P05	P05-07	08/20/10	7	**2,900**	<250
P06	P06-10	08/20/10	10	<50	<250
P06*	P06-04	04/05/11	4	.<50	<250
P06*	P06-07	04/05/11	7	<50	<250
P06*	P06-11	04/05/11	11	<50	<250
P07	P07-04	04/05/11	4	<50	<250
P07	P07-07	04/05/11	7	<50	<250
P07	P07-11	04/05/11	11	<50	<250
P08	P08-04	04/05/11	4	<50	<250
P08	P08-07	04/05/11	7	<50	<250
P08	P08-11	04/05/11	11	<50	530
P09	P09-04	04/05/11	4	<50	<250
P09	P09-07	04/05/11	7	<50	<250
P09	P09-11	04/05/11	11	<50	<250
P10	P10-04	04/05/11	4	<50	<250
P10	P10-07	04/05/11	7	**3,000**	<250
P10	P10-10	04/05/11	10	<50	<250
P11	P11-04	04/05/11	4	<50	<250
P11	P11-07	04/05/11	7	<50	<250
P11	P11-10	04/05/11	10	<50	<250
P12	P12-04	04/05/11	4	<50	<250
P12	P12-06	04/05/11	6	160	<250
P12	P12-11	04/05/11	11	<50	<250
P13	P13-04	04/05/11	4	<50	<250
P13	P13-06	04/05/11	6	1,600	<250
P13	P13-11	04/05/11	11	<50	<250
MTCA Method A Soil Cleanup Levels[1]				**2,000**	**2,000**

NOTES:

Samples analyzed by Friedman & Bruya, Inc. of Seattle, Washington.

Red denotes concentration in excess of MTCA Method A Cleanup Level for Soil.

Analyzed by NWTPH-HCID and/or NWTPH-Dx.

* Separate boring from P06 drilled on 08/20/10.

[1]MTCA Method A Cleanup Levels, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, revised November 2007.

< = not detected at a concentration exceeding the laboratory reporting limit

bgs = below ground surface

DRPH = diesel-range petroleum hydrocarbons

mg/kg = milligrams per kilogram

MTCA = Washington State Model Toxics Control Act

NWTPH = Northwest Total Petroleum Hydrocarbon

ORPH = oil-range petroleum hydrocarbons

ATTACHMENT A
BORING LOGS

Log of Exploratory Boring:

Notes
Sampler Type Split Spoon

Drilling Co./Driller:	ESN / Nole
Drilling Method:	LAR DIRECT PUSH
Location:	Inside warehouse former prining and machine shop south and central location.
Surface Condition:	Concrete
Total Depth:	10
First GW Depth:	10

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0							CONC	Concrete 1" thick		
1		1.5	100				SP	Damp, loose, fine to medium SAND, brown. No hydrocarbon odor. Fill material.		
2										
3		1.5	50				ML	Damp, loose, SILT with trace fine sand, brown. No hydrocarbon odor. Fill material.		
4					P01-04					
5		1.8	50				ML	Moist, loose, SILT with trace fine sand, brown. No hydrocarbon odor. Fill material.		
6										
7		1.4	50				SM	Moist, loose silty SAND, dark brown. No hydrocarbon odor. Fill material.		
8										
9		1.4	50				SP	Wet, loose, medium to fine SAND, black. No hydrocarbon odor. Native material.		
10		0.0			P01-10				▽	
11								Temporary screen 7' to 10' bgs. Boring backfilled with bentonite and finished with concrete at ground surface.		
12										
13										
14										
15										

SOUND ENVIRONMENTAL STRATEGIES
www.soundenvironmental.com

6545 5th Avenue South
Former Mastermark Property
Seattle, Washington

Date Started: 8/20/2010
Date Finished: 8/20/2010
Logged By: RAH
Chk By: EKR
SES Project No.: 0761-001-01

BORING LOG
P01

Log of Exploratory Boring:

Notes
Sampler Type Split Spoon

Drilling Co./Driller:	ESN / Nole
Drilling Method:	LAR DIRECT PUSH
Location:	Inside warehouse metal fabrication shop south western location
Surface Condition:	Concrete 3 inch thick
Total Depth:	12
First GW Depth:	7.5

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0							CONC	Concrete 3" thick.		
1							SP	Damp, loose, fine to medium SAND, brown. No hydrocarbon odor. Fill material.		
2		0.0	100							
3										
4					P02-04					
5										
6		0.0	100				SM	Moist, loose, silty SAND, dark brown. No hydrocarbon odor. Fill material.		
7		0.0			P02-07			Wet, loose, silty SAND, dark brown. No hydrocarbon odor. Native material.	▽	
8										
9							SM			
10		0.0	100							
11		0.0			P02-11					
12								Temporary screen 7' to 11' bgs. Boring backfilled with bentonite and finished with concrete at ground surface.		
13										
14										
15										

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6545 5th Avenue South
Former Mastermark Property
Seattle, Washington

Date Started: 8/20/2010
Date Finished: 8/20/2010
Logged By: RAH
Chk By: EKR
SES Project No.: 0761-001-01

BORING LOG
P02

Log of Exploratory Boring:

Notes
Sampler Type Split Spoon

Drilling Co./Driller:	ESN / Nole
Drilling Method:	LAR DIRECT PUSH
Location:	Inside warehouse metal fabrication shop west of steel covered vault
Surface Condition:	Concrete
Total Depth:	10
First GW Depth:	7

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0							CONC	Concrete		
1								Damp, loose, fine to medium SAND, brown. No hydrocarbon odor. Fill material.		
2		0.0								
3							SP			
4					P03-04					
5								Moist, loose, silty SAND, dark brown. No hydrocarbon odor. Fill material.		
6		0.0					SM			
7		0.0			P03-07				▽	
8								Wet, loose, medium fo fine SAND, brown. No hydrocarbon odor. Native material.		
9		0.0					SP			
10								Temporary screen 6' to 10' bgs. Boring backfilled with bentonite and finished with concrete at ground surface.		
11										
12										
13										
14										
15										

Log of Exploratory Boring:

Notes
Sampler Type Split Spoon

Drilling Co./Driller:	ESN / Nole
Drilling Method:	LAR DIRECT PUSH
Location:	5.5 feet south of roof drain.
Surface Condition:	Gravel
Total Depth:	11
First GW Depth:	7.5

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0–2		0.0					SP	Damp, loose, fine to medium SAND, brown. No hydrocarbon odor. Fill material.		
3–4					P04-04		ML	Damp, loose, SILT with trace fine sand, light brown. No hydrocarbon odor. Fill material.		
4–6		0.0					SP	Damp, loose, fine to medium SAND, brown. No hydrocarbon odor. Fill material.		
6–11		0.0 0.0 0.0			P04-07 P04-11		SM	Moist, loose, silty SAND, brown. NO hydrocarbon odor. Native material.	▽	
11–15								Temporary screen 7' to 11' bgs. Boring backfilled with bentonite and finished with concrete at ground surface.		

SOUND ENVIRONMENTAL STRATEGIES
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6545 5th Avenue South
Former Mastermark Property
Seattle, Washington

Date Started: 8/20/2010
Date Finished: 8/20/2010
Logged By: RAH
Chk By: EKR
SES Project No.: 0761-001-01

BORING LOG
P04

Log of Exploratory Boring:

Notes
Sampler Type Split Spoon

Drilling Co./Driller:	ESN / Nole
Drilling Method:	LAR DIRECT PUSH
Location:	6 feet east and 8 feet south of northeast corner of the warehouse
Surface Condition:	Gravel/ Soil
Total Depth:	12
First GW Depth:	7.5

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0								Damp, dense, fine to medium SAND with brick fragments, dark brown. No hydrocarbon odor. Fill material.		
1										
2		3.3	100							
3		3.3			P05-03		SP			
4										
5										
6		0.5	100							
							ML	Moist, dense, SILT with trace fine sand, dark grey. Moderate hydrocarbon odor. Hydrocarbon sheen on soil at 7' bgs. Fill material.		
7		75.8			P05-07					
							ML	Moist, dense, SILT with trace fine sand, dark grey. Moderate hydrocarbon odor. Fill material.	▽	
8								Wet, dense, silty SAND, dark grey. No hydrocarbon odor. Native material.		
9										
10		8.2	100				SM			
11										
12		4.7			P05-12					
								Temporary screen 7' to 11' bgs. Boring backfilled with bentonite and finished with concrete at ground surface.		
13										
14										
15										

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6545 5th Avenue South
Former Mastermark Property
Seattle, Washington

Date Started: 8/20/2010
Date Finished: 8/20/2010
Logged By: RAH
Chk By: EKR
SES Project No.: 0761-001-01

BORING LOG
P05

Log of Exploratory Boring:

Notes
Sampler Type Split Spoon

Drilling Co./Driller:	ESN / Nole
Drilling Method:	LAR DIRECT PUSH
Location:	4 feet west of southwest corner of the warehouse
Surface Condition:	Asphlt
Total Depth:	12
First GW Depth:	10

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0							FILL	Asphalt 3" thick.		
1								Damp, fine to medium SAND with brick fragments, brown. No hydrocarbon odor. Fill material.		
2		0.0								
3										
4					P06-04					
5							SP			
6		0.0								
7										
8										
9										
10		0.0			P06-10		SP	Moist, loose, fine to medium SAND, brown. No hydrocarbon odor. Native material.	▽	
11							SM	Wet, loose, silty SAND, gray brown. No hydrocarbon odor. Native material.		
12		0.0			P06-12					
13								Temporary screen 8' to 12' bgs. Boring backfilled with bentonite and finished with concrete at ground surface.		
14										
15										

SOUND ENVIRONMENTAL STRATEGIES
www.soundenvironmental.com

6545 5th Avenue South
Former Mastermark Property
Seattle, Washington

Date Started: 8/20/2010
Date Finished: 8/20/2010
Logged By: RAH
Chk By: EKR
SES Project No.: 0761-001-01

BORING LOG
P06

SoundEarth Strategies

Project:	Former Mastermark Printer
Project Number:	0761-001-02
Logged by:	R. Honsberger
Date Started:	4/5/2011
Surface Conditions:	Gravel
Well Location N/S:	2.5' N of NE corner of building
Well Location E/W:	4' E of NE corner of building
Reviewed by:	EKR
Date Completed:	4/5/2011

BORING LOG P06 --

Site Address: 6545 5th Avenue South, Seattle, WA

Water Depth At Time of Drilling: 7 feet bgs

Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0			100	0.4		SP (FILL)		**Gravel (1 inch).** **Damp, loose, fine SAND, with sandy silt and subangular gravel and brick fragments, brown, no hydrocarbon odor (FILL).**	
				0.2	P06-04	SP (FILL)		**Damp, loose, fine to medium SAND, dark brown, no hydrocarbon odor.**	
5			100	0.8					
				0.7	P06-07	SM		**Wet, loose, silty fine SAND, light brown, no hydrocarbon odor.**	
				0.9		SM		**Wet, loose, silty fine SAND, light brown, no hydrocarbon odor.**	
10			100		P06-11			**Moist, loose, silty SAND, dark brown, no hydrocarbon odor.**	
				0.9					
								Boring completed at 12 feet below ground surface (bgs). Backfilled with bentonite and capped with cold patch.	
15									

Drilling Co./Driller:	ESN/Marty		**Well/Auger Diameter:**	--	inches	**Notes/Comments:**
Drilling Equipment:	LAR Probe		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	Push Probe		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	12	feet bgs	**Surface Seal:**	Cold Patch		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite backfill		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	Former Mastermark Printer
Project Number:	0761-001-02
Logged by:	R. Honsberger
Date Started:	4/5/2011
Surface Conditions:	Gravel
Well Location N/S:	2.5' N of NE corner of building
Well Location E/W:	9' E of NE corner of building
Reviewed by:	EKR
Date Completed:	4/5/2011

BORING LOG P07
--

Site Address: 6545 5th Avenue South
Seattle, WA

Water Depth At Time of Drilling: 7.5 feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0				0.1		SP (FILL)		**Damp, loose, fine to medium SAND, with silt and subangular gravel, brown to dark brown, no hydrocarbon odor (FILL).**	
			100						
				0.4	P07-04				
						SP (FILL)		**Damp, loose, fine to medium SAND, dark brown, no hydrocarbon odor (FILL).**	
5									
			100	0.4		SP-SM (FILL)		**Moist, loose, fine to medium SAND with silt, dark brown, no hydrocarbon odor (FILL).**	
					P07-07				
				0.4		SM		**Wet, loose, silty SAND, with reeds, dark brown, no hydrocarbon odor.**	
						SM		**Wet, loose, silty SAND with reeds, dark brown, no hydrocarbon odor.**	
				0.4					
10			100					**Moist, silty SAND with wood, dark brown, no hydrocarbon odor.**	
				0.4	P07-11				
								Boring completed at 12 feet below ground surface (bgs). Backfilled with bentonite and capped with cold patch.	
15									

Drilling Co./Driller:	ESN/Marty		**Well/Auger Diameter:**	--	inches	**Notes/Comments:**
Drilling Equipment:	LAR Probe		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	--		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	-	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	12	feet bgs	**Surface Seal:**	Cold Patch		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite backfill		
State Well ID No.:	-		**Monument Type:**	--		

SoundEarth Strategies

Project:	Former Mastermark Printer
Project Number:	0761-001-02
Logged by:	R. Honsberger
Date Started:	4/5/2011
Surface Conditions:	Asphalt
Well Location N/S:	5' S of NE corner of building
Well Location E/W:	20' E of NE corner of building
Reviewed by:	EKR
Date Completed:	4/5/2011

BORING LOG | P08
--

Site Address: 6545 5th Avenue South
Seattle, WA

Water Depth At Time of Drilling: 7 feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0						SP (FILL)		**Damp, dense, fine to medium SAND with silt and subangular gravel, light brown, no hydrocarbon odor (FILL).**	
			100	0.3					
				0.2	P08-04			**Damp, loose, fine to medium SAND, dark brown, no hydrocarbon odor.**	
5						SP (FILL)		**Moist, loose, fine to medium SAND, dark brown, no hydrocarbon odor.**	
				0.1					
			100			SM		**Wet, loose, silty fine SAND, light gray to dark brown, no hydrocarbon odor.**	
				0.0	P08-07				
						SM		**Wet, loose, silty fine SAND, gray to dark brown, no hydrocarbon odor.**	
				0.1					
10			100						
					P08-11				
				0.1					
								Boring completed at 12 feet below ground surface (bgs). Backfilled with bentonite and capped with cold patch.	
15									

Drilling Co./Driller:	ESN/Marty		**Well/Auger Diameter:**	--	inches	**Notes/Comments:**
Drilling Equipment:	LAR Probe		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	Push Probe		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	12	feet bgs	**Surface Seal:**	Cold Patch		
Total Well Depth:	--	feet bgs	**Annular Seal:**	--		
State Well ID No.:	-		**Monument Type:**	--		

SoundEarth Strategies

Project:	Former Mastermark Printer
Project Number:	0761-001-02
Logged by:	R. Honsberger
Date Started:	4/5/2011
Surface Conditions:	Asphalt
Well Location N/S:	9' S of NE corner of building
Well Location E/W:	20' E of NE corner of building
Reviewed by:	EKR
Date Completed:	4/5/2011

BORING LOG P09 --

Site Address: 6545 5th Avenue South, Seattle, WA

Water Depth At Time of Drilling: 7 feet bgs

Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0						SP (FILL)		**Damp, dense, fine to medium SAND with silt and subangular gravel, light brown, no hydrocarbon odor (FILL).**	
				0.0					
			100					**Damp, loose, fine to medium SAND, dark brown, no hydrocarbon odor.**	
				0.0	P09-04				
						SP (FILL)		**Damp, loose, fine to medium SAND, dark brown, no hydrocarbon odor.**	
5				0.0					
			100						
				0.0	P09-07	SM		**Wet, loose, silty fine SAND with reeds, gray, no hydrocarbon odor.**	
						SM		**Wet, loose, silty fine SAND with reeds, dark brown, no hydrocarbon odor.**	
				0.0					
10			100						
					P09-11				
				0.0					
								Boring completed at 12 feet below ground surface (bgs). Backfilled with bentonite and capped with cold patch.	
15									

Drilling Co./Driller:	ESN/Marty		**Well/Auger Diameter:**	--	inches	**Notes/Comments:**
Drilling Equipment:	LAR Probe		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	Push Probe		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	12	feet bgs	**Surface Seal:**	Cold Patch		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite backfill		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	Former Mastermark Printer
Project Number:	0761-001-02
Logged by:	R. Honsberger
Date Started:	4/5/2011
Surface Conditions:	Gravel
Well Location N/S:	14' S of NE corner of building
Well Location E/W:	6' E of NE corner of building
Reviewed by:	EKR
Date Completed:	4/5/2011

BORING LOG | P10 --

Site Address: 6545 5th Avenue South, Seattle, WA

Water Depth At Time of Drilling: 7 feet bgs

Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0			100	0.0		SP (FILL)		**Damp, dense, fine to medium SAND with silt and subangular gravel, light brown, no hydrocarbon odor (FILL).**	
				0.0	P10-04			**Damp, loose, fine to medium SAND, dark brown, no hydrocarbon odor.**	
5			100	0.1		SP (FILL)		**Similar to previous, no hydrocarbon odor.**	
				85.4	P10-07	SM		**Wet, loose, silty fine SAND, gray, strong hydrocarbon odor.**	
				22.3		SM		**Wet, loose, silty fine SAND, gray, moderate hydrocarbon odor.**	
				13.6				**Wet, loose, silty fine SAND, gray to dark brown, no hydrocarbon odor.**	
10			100		P10-10				
				1.0					
				0.8		SP		**Wet, loose, fine to medium SAND, dark brown, no hydrocarbon odor.**	
								Boring completed at 12 feet below ground surface (bgs). Backfilled with bentonite and capped with cold patch.	
15									

Drilling Co./Driller:	ESN/Marty		**Well/Auger Diameter:**	--	inches	**Notes/Comments:**
Drilling Equipment:	LAR Probe		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	Push Probe		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	-	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	12	feet bgs	**Surface Seal:**	Cold Patch		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite backfill		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	Former Mastermark Printer
Project Number:	0761-001-02
Logged by:	R. Honsberger
Date Started:	4/5/2011
Surface Conditions:	Cement
Well Location N/S:	20.5' S of NE corner of building
Well Location E/W:	3.9' E of NE corner of building
Reviewed by:	EKR
Date Completed:	4/5/2011

BORING LOG P11 --

Site Address: 6545 5th Avenue South, Seattle, WA

Water Depth At Time of Drilling: 7 feet bgs

Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0			80	0.0		SP (Fill)		**Damp, loose, fine to medium SAND, dark brown, no hydrocarbon odor.**	
				0.1	P11-04				
5			100	4.7		SP (Fill)		**Damp, loose, fine to medium SAND, dark brown, no hydrocarbon odor.**	
				40.8	P11-07	SM		**Wet, loose, silty fine SAND, gray, moderate hydrocarbon odor, sheen on soil.**	
				4.8		SM		**Wet, loose, silty fine SAND, gray, no hydrocarbon odor.**	
10			100		P11-10				
				1.7				**Boring completed at 12 feet below ground surface (bgs). Backfilled with bentonite and capped with cold patch.**	
15									

Drilling Co./Driller:	ESN/Marty		**Well/Auger Diameter:**	--	inches	**Notes/Comments:**
Drilling Equipment:	LAR Probe		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	Push Probe		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	12	feet bgs	**Surface Seal:**	Concrete		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite backfill		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	Former Mastermark Printer
Project Number:	0761-001-02
Logged by:	R. Honsberger
Date Started:	4/5/2011
Surface Conditions:	Concrete
Well Location N/S:	22.5' S of NE corner of building
Well Location E/W:	2.6' W of NE corner of building
Reviewed by:	EKR
Date Completed:	4/5/2011

BORING LOG **P12** --

Site Address: 6545 5th Avenue South, Seattle, WA

Water Depth At Time of Drilling: 6 feet bgs

Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0						SP (FILL)		**Damp, loose, fine to medium SAND, dark brown, no hydrocarbon odor.**	
			90	0.0					
				0.2	P12-04				
				0.5		SP (FILL)		**Damp, loose, fine to medium SAND, dark brown, no hydrocarbon odor.**	
5			100	39.0	P12-06	SM		**Wet, loose, silty fine SAND, gray, slight hydrocarbon odor.**	
				2.1				**Wet, loose, silty fine SAND, gray, no hydrocarbon odor.**	
						SM			
				0.2					
10			100					**Wet, loose, silty fine SAND, gray, no hydrocarbon odor.**	
					P12-11				
				0.1					
								Boring completed at 12 feet below ground surface (bgs). Backfilled with bentonite and capped with cold patch.	
15									

Drilling Co./Driller:	ESN/Marty		**Well/Auger Diameter:**	--	inches	**Notes/Comments:**
Drilling Equipment:	LAR Probe		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	Push Probe		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	12	feet bgs	**Surface Seal:**	Concrete		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite backfill		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	Former Mastermark Printer
Project Number:	0761-001-02
Logged by:	R. Honsberger
Date Started:	4/5/2011
Surface Conditions:	Concrete
Well Location N/S:	12' S of NE corner of building
Well Location E/W:	2' W of NE corner of building
Reviewed by:	EKR
Date Completed:	4/5/2011

BORING LOG P13
--

Site Address: 6545 5th Avenue South
Seattle, WA

Water Depth At Time of Drilling: 6 feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0				0.0		SP (FILL)		**Damp, loose, medium SAND, dark brown, no hydrocarbon odor.**	
			100						
				0.0	P13-04				
						SP (FILL)		**Damp, loose, fine to medium SAND, dark brown, no hydrocarbon odor.**	
5									
			100	33.2	P13-06	SM		**Wet, silty fine SAND with rootlets, gray, slight hydrocarbon odor.**	
				1.8					
						SM			
				2.1					
10			100					**Wet, silty fine SAND, gray, no hydrocarbon odor.**	
					P13-11				
				1.1					
								Boring completed at 12 feet below ground surface (bgs). Backfilled with bentonite and capped with cold patch.	
15									

Drilling Co./Driller:	ESN/Marty		**Well/Auger Diameter:**	--	inches	**Notes/Comments:**
Drilling Equipment:	LAR Probe		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	Push Probe		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	12	feet bgs	**Surface Seal:**	Concrete		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite backfill		
State Well ID No.:	--		**Monument Type:**	--		

ATTACHMENT B
LABORATORY ANALYTICAL REPORT

Friedman & Bruya, Inc. #104047

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
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e-mail: fbi@isomedia.com

April 11, 2011

Erin Rothman, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Ms. Rothman:

Included are the results from the testing of material submitted on April 6, 2011 from the SOU_0761_20110406, F&BI 104047 project. There are 7 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
SOU0411R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 6, 2011 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0761_20110406, F&BI 104047 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
104047-01	P06-04
104047-02	P06-07
104047-03	P06-11
104047-04	P07-04
104047-05	P07-07
104047-06	P07-11
104047-07	P08-04
104047-08	P08-07
104047-09	P08-11
104047-10	P09-04
104047-11	P09-07
104047-12	P09-11
104047-13	P10-04
104047-14	P10-07
104047-15	P10-10
104047-16	P11-04
104047-17	P11-07
104047-18	P11-10
104047-19	P12-04
104047-20	P12-06
104047-21	P12-11
104047-22	P13-04
104047-23	P13-06
104047-24	P13-11

All quality control requirements were acceptable.

Date of Report: 04/11/11
Date Received: 04/06/11
Project: SOU_0761_20110406, F&BI 104047
Date Extracted: 04/07/11
Date Analyzed: 04/07/11 and 04/08/11

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

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

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
P06-04 104047-01	<50	<250	106
P06-07 104047-02	<50	<250	116
P06-11 104047-03	<50	<250	108
P07-04 104047-04	<50	<250	118
P07-07 104047-05	<50	<250	118
P07-11 104047-06	<50	<250	109
P08-04 104047-07	<50	<250	112
P08-07 104047-08	<50	<250	115
P08-11 104047-09	<50	530	115
P09-04 104047-10	<50	<250	107
P09-07 104047-11	<50	<250	109

Date of Report: 04/11/11
Date Received: 04/06/11
Project: SOU_0761_20110406, F&BI 104047
Date Extracted: 04/07/11
Date Analyzed: 04/07/11 and 04/08/11

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

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

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
P09-11 104047-12	<50	<250	109
P10-04 104047-13	<50	<250	115
P10-07 104047-14	3,000	<250	114
P10-10 104047-15	<50	<250	87
P11-04 104047-16	<50	<250	118
P11-07 104047-17	<50	<250	104
P11-10 104047-18	<50	<250	118
P12-04 104047-19	<50	<250	121
P12-06 104047-20	160	<250	114
P12-11 104047-21	<50	<250	96
P13-04 104047-22	<50	<250	96

Date of Report: 04/11/11
Date Received: 04/06/11
Project: SOU_0761_20110406, F&BI 104047
Date Extracted: 04/07/11
Date Analyzed: 04/07/11 and 04/08/11

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

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

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
P13-06 104047-23	1,600	<250	95
P13-11 104047-24	<50	<250	96
Method Blank 01-607 MB	<50	<250	103
Method Blank 01-606 MB	<50	<250	126

Date of Report: 04/11/11
Date Received: 04/06/11
Project: SOU_0761_20110406, F&BI 104047

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

Laboratory Code: 104047-22 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	104	105	73-135	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	104	74-139

Date of Report: 04/11/11
Date Received: 04/06/11
Project: SOU_0761_20110406, F&BI 104047

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

Laboratory Code: 104047-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	120	121	63-146	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	121	79-144

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.

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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.

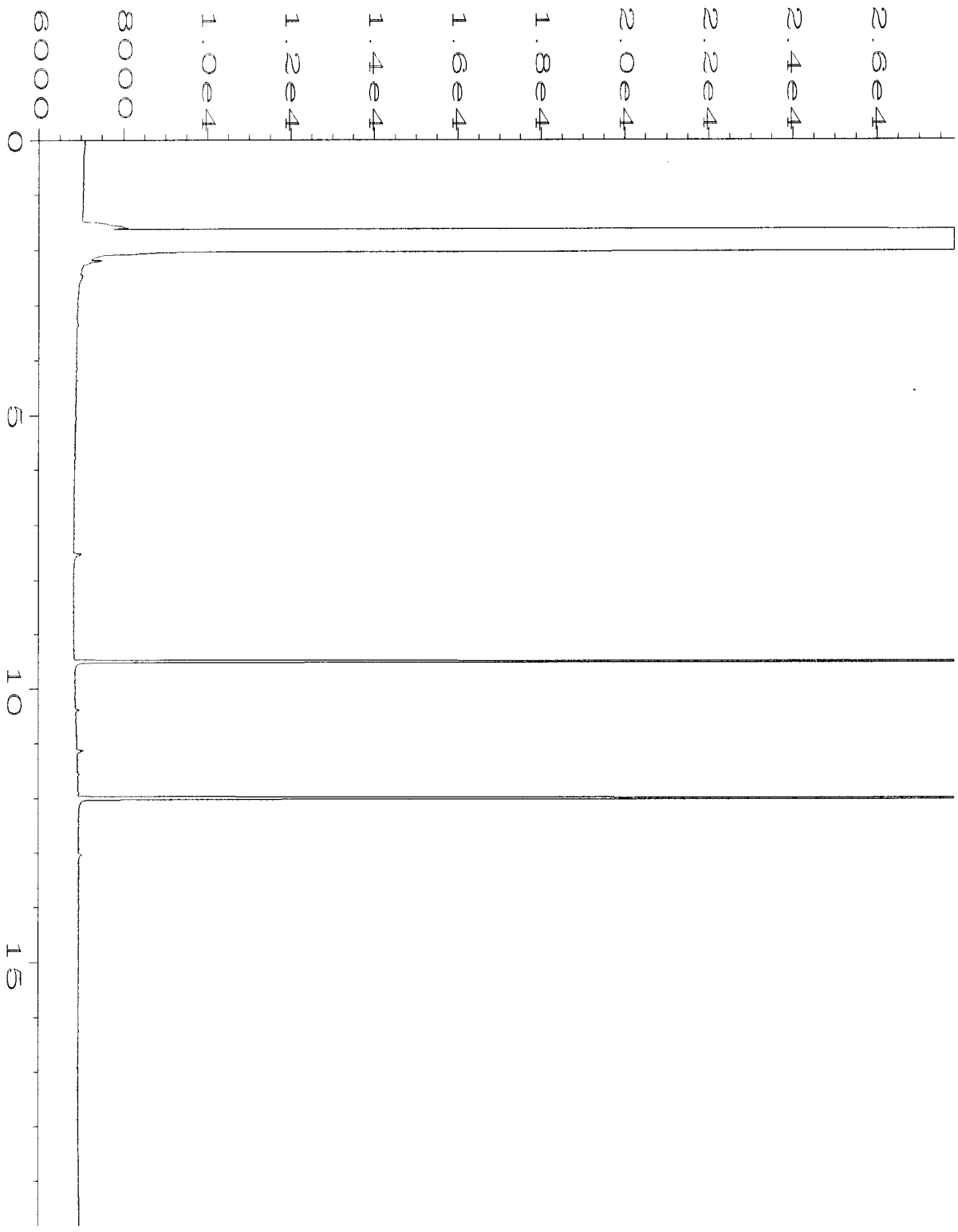
pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

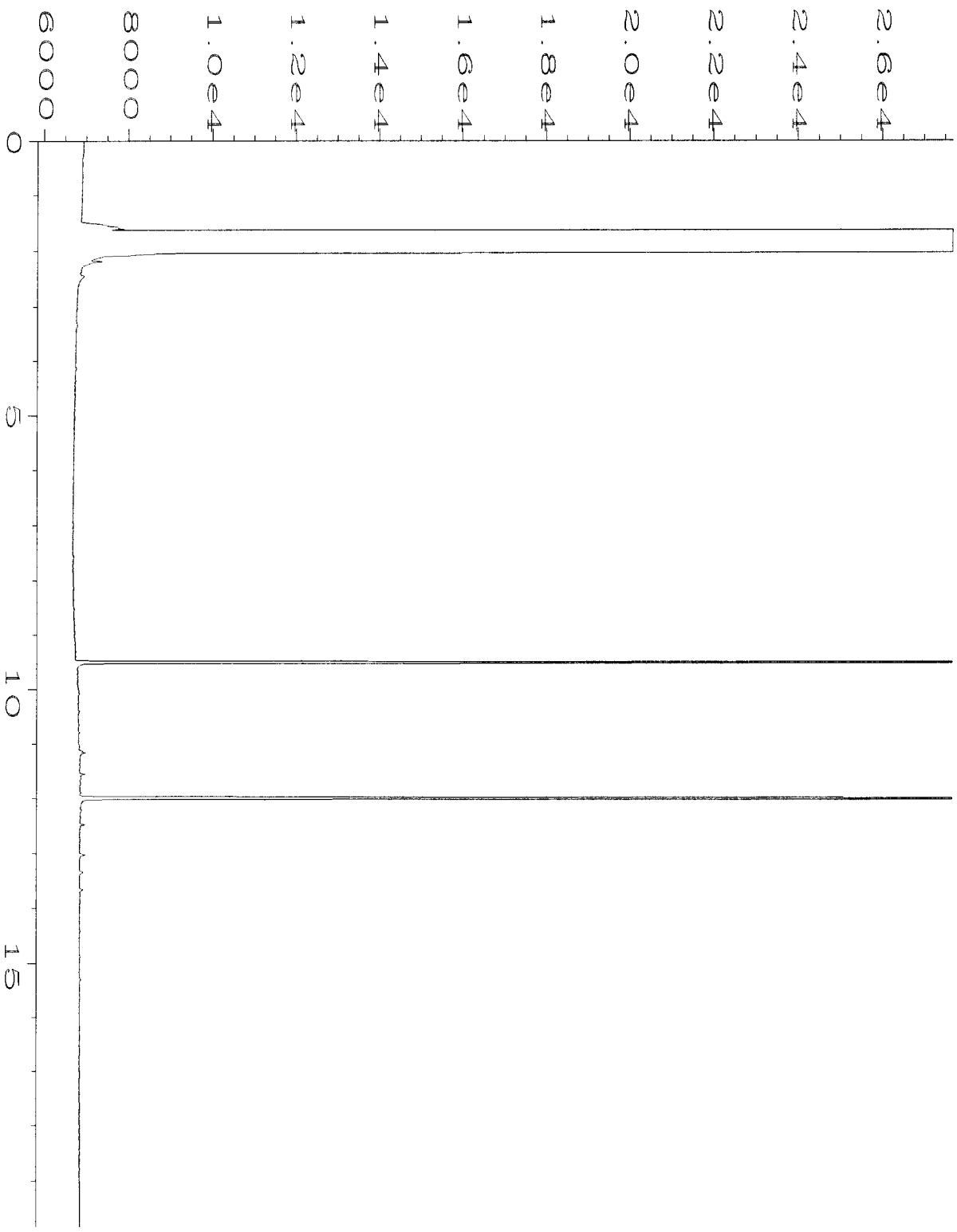
vo - The value reported fell outside the control limits established for this analyte.

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

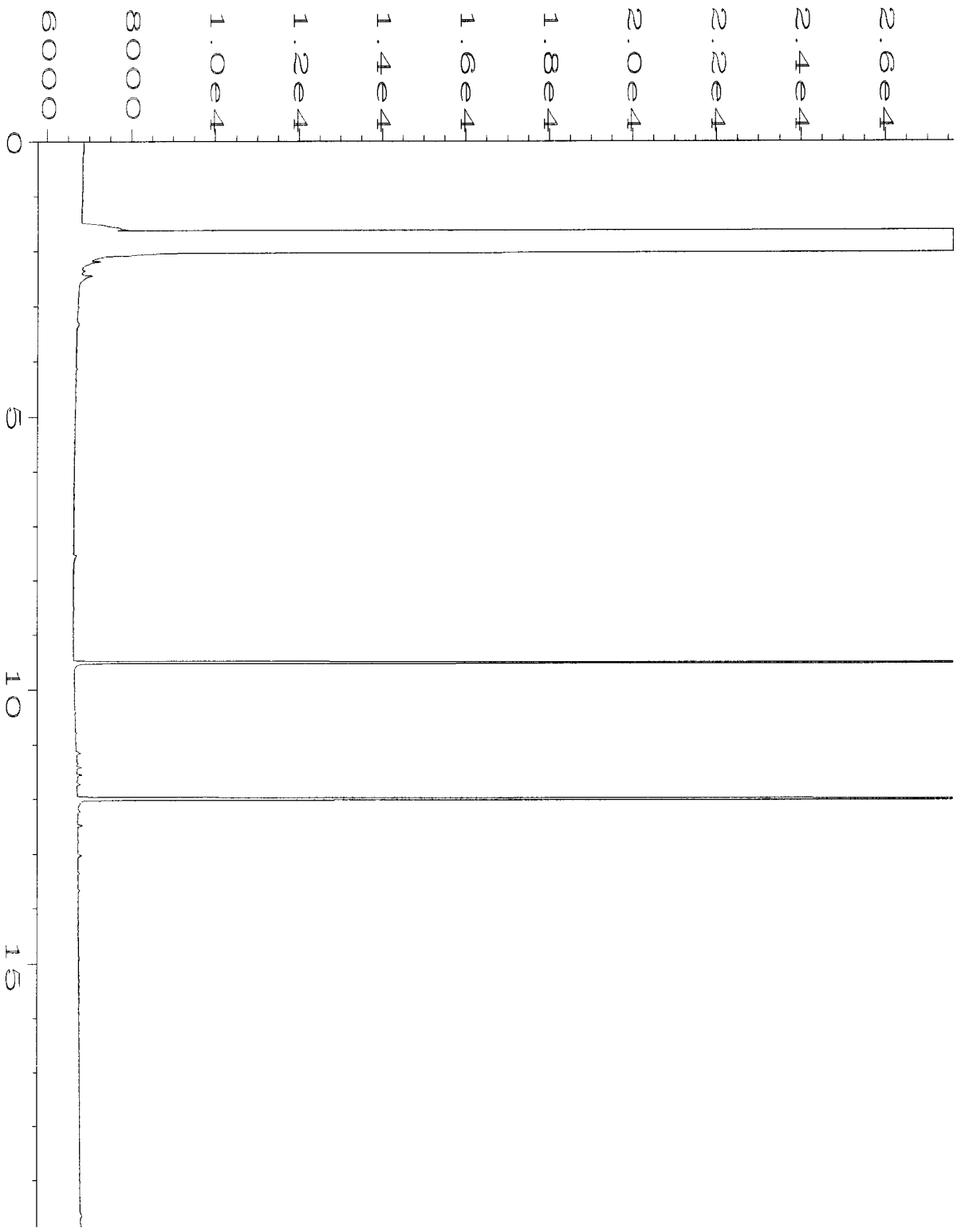


Data File Name : C:\HPCHEM\1\DATA\04-08-11\008F0301.D
Operator : ML
Instrument : GC1
Sample Name : 104047-01
Run Time Bar Code:
Acquired on : 08 Apr 11 08:16 AM
Report Created on: 11 Apr 11 08:55 AM

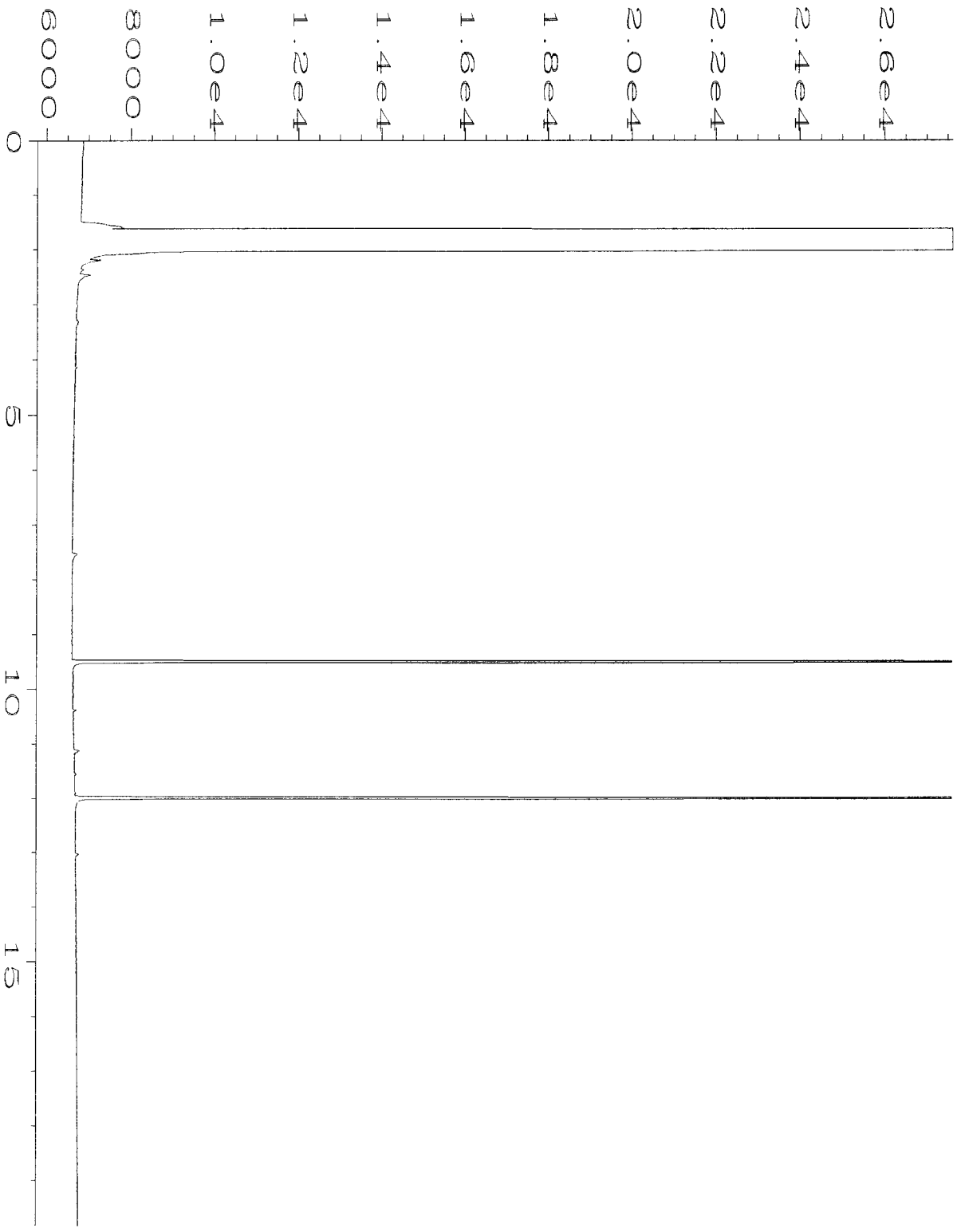
Page Number : 1
Vial Number : 8
Injection Number : 1
Sequence Line : 3
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



Data File Name	: C:\HPCHEM\1\DATA\04-08-11\011F0501.D		
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 11
Sample Name	: 104047-02	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 5
Acquired on	: 08 Apr 11 10:29 AM	Instrument Method	: TPHD.MTH
Report Created on	: 11 Apr 11 08:55 AM	Analysis Method	: TPHD.MTH

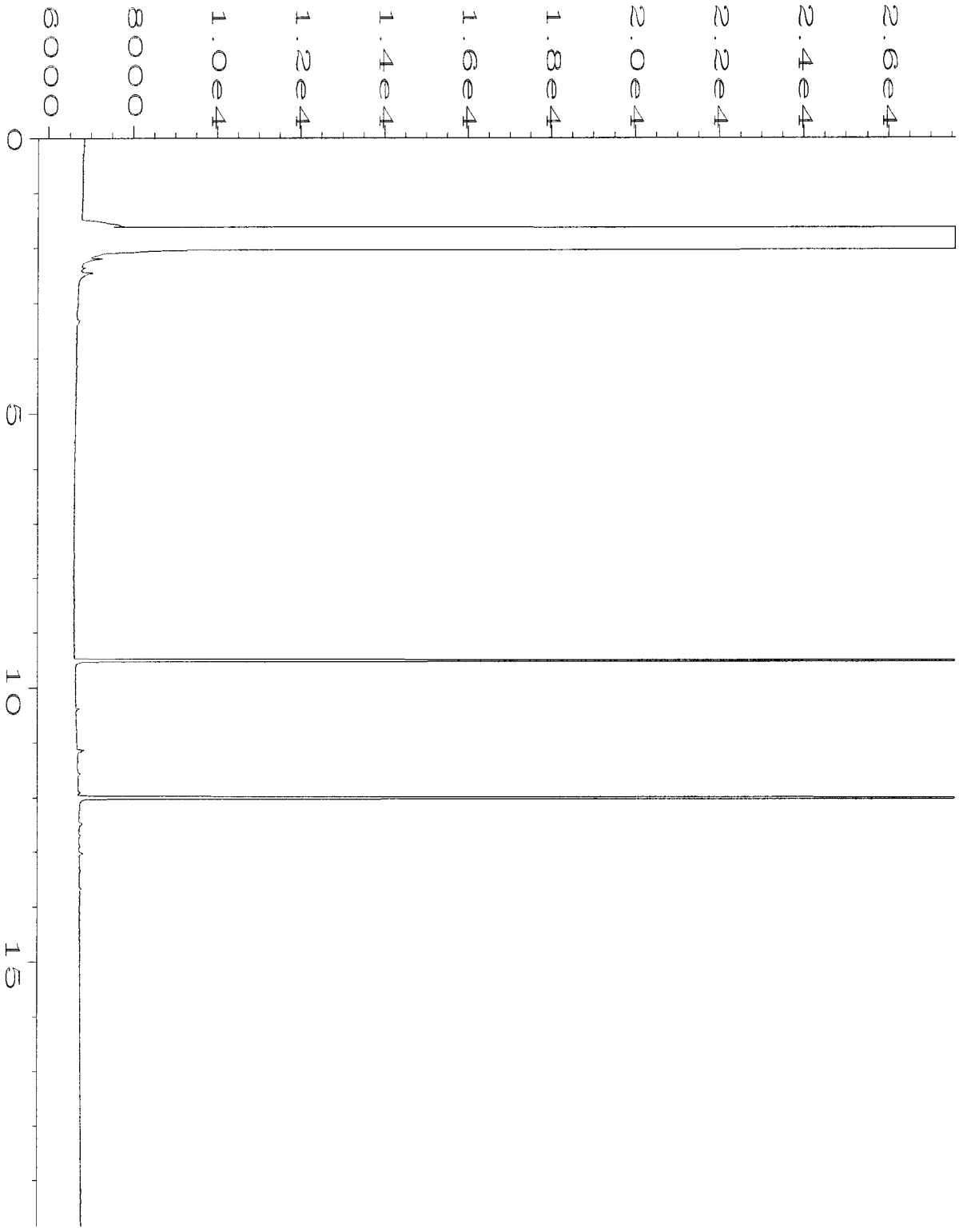


Data File Name	: C:\HPCHEM\1\DATA\04-08-11\014F0501.D		
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 14
Sample Name	: 104047-03	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 5
Acquired on	: 08 Apr 11 11:49 AM	Instrument Method	: TPHD.MTH
Report Created on	: 11 Apr 11 08:56 AM	Analysis Method	: TPHD.MTH



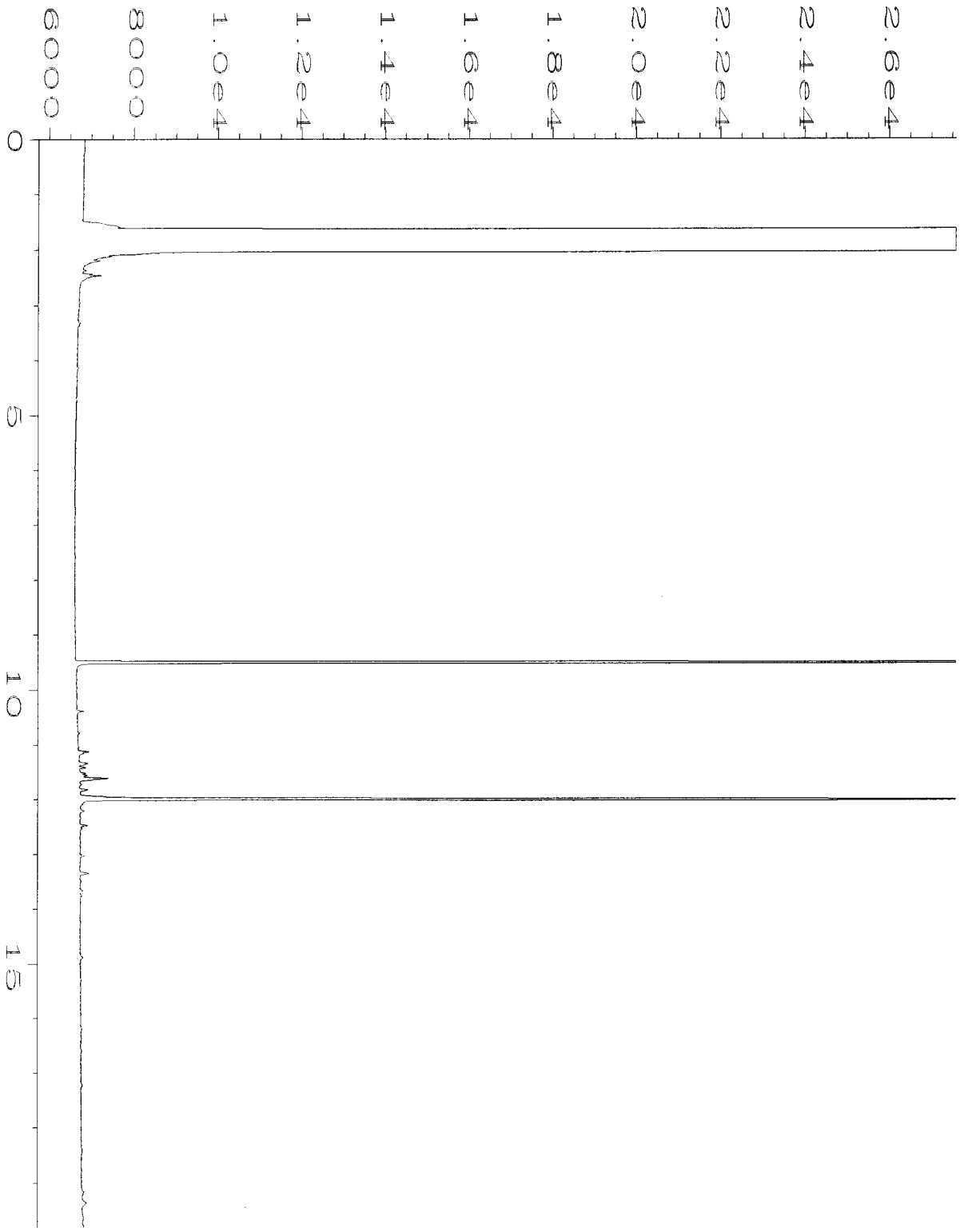
Data File Name : C:\HPCHEM\1\DATA\04-08-11\015F0501.D
Operator : ML
Instrument : GC1
Sample Name : 104047-04
Run Time Bar Code:
Acquired on : 08 Apr 11 12:16 PM
Report Created on: 11 Apr 11 08:56 AM

Page Number : 1
Vial Number : 15
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



Data File Name : C:\HPCHEM\1\DATA\04-08-11\016F0501.D
Operator : ML
Instrument : GC1
Sample Name : 104047-05
Run Time Bar Code:
Acquired on : 08 Apr 11 12:43 PM
Report Created on: 11 Apr 11 08:56 AM

Page Number : 1
Vial Number : 16
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



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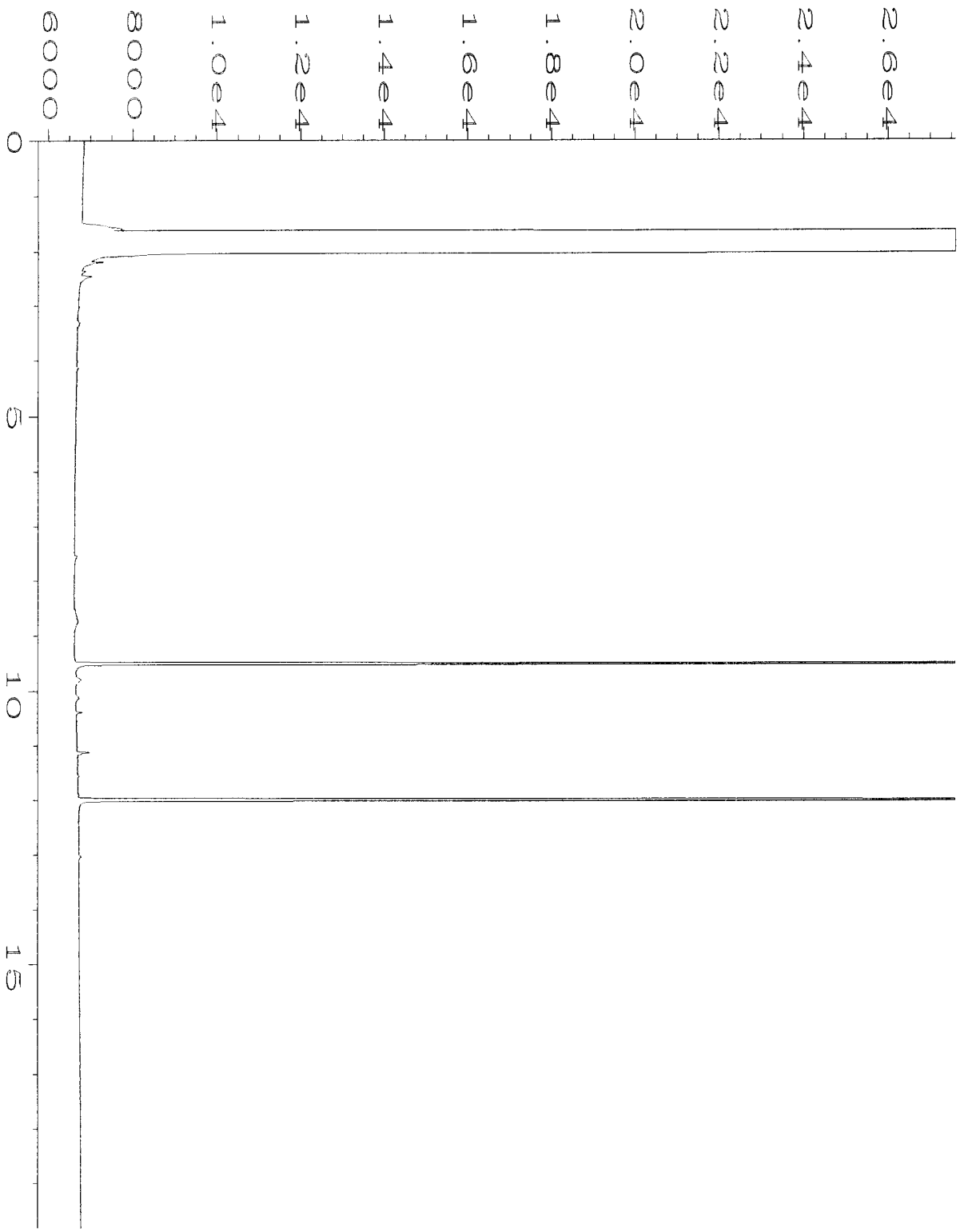
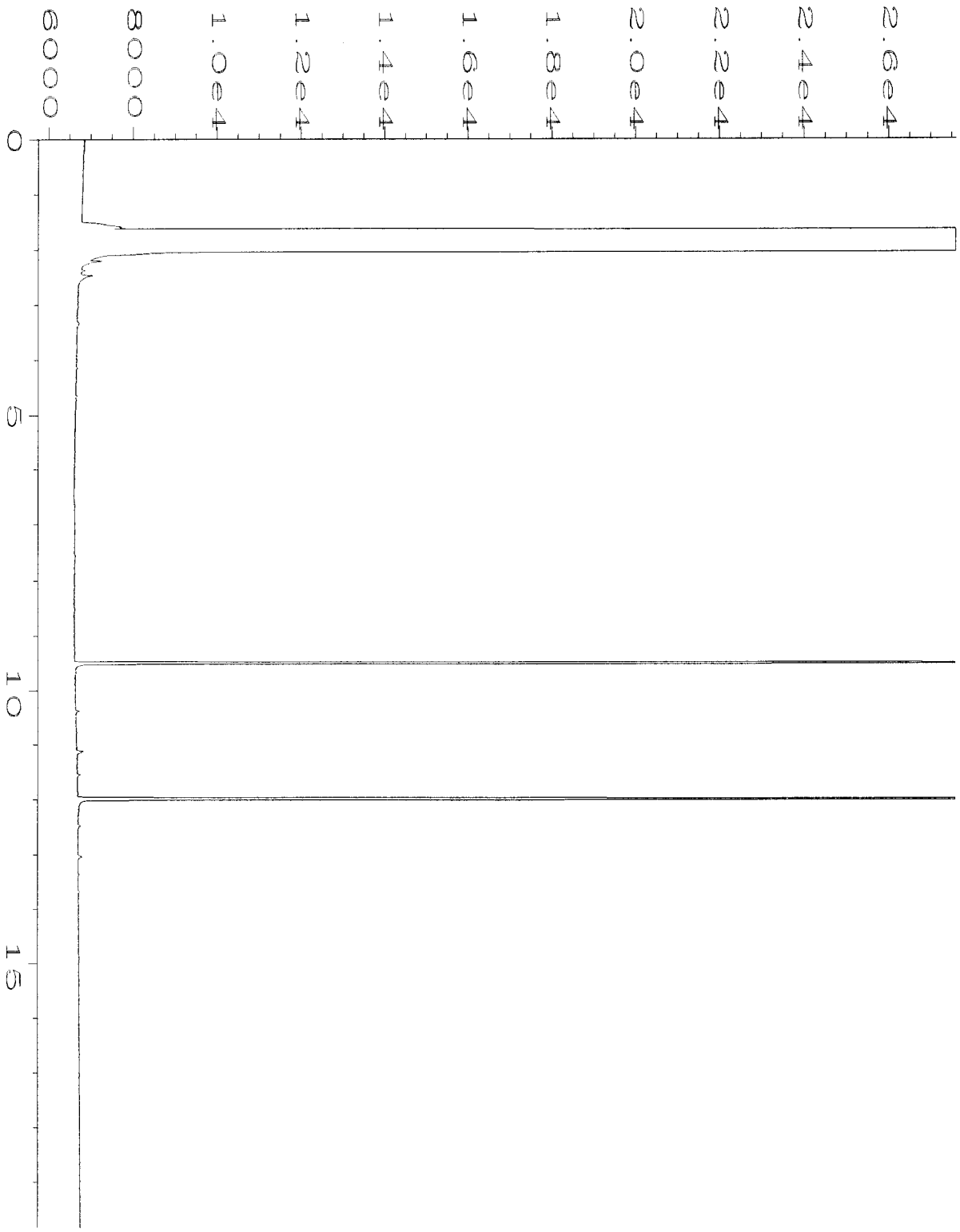
Operator : ML
Instrument : GC1
Sample Name : 104047-06
Run Time Bar Code:
Acquired on : 08 Apr 11 01:10 PM
Report Created on: 11 Apr 11 08:56 AM

Page Number : 1
Vial Number : 17
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



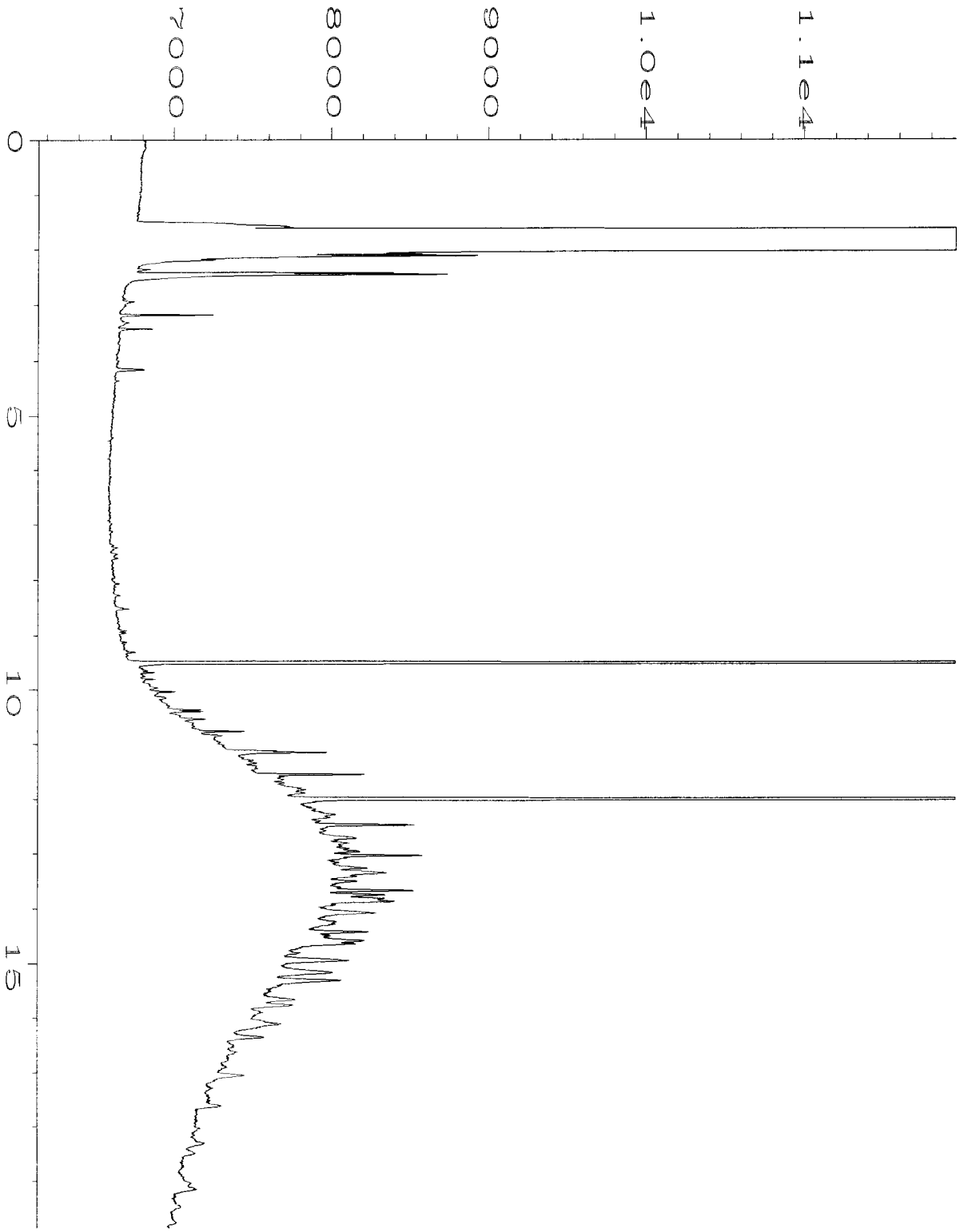
Data File Name : C:\HPCHEM\1\DATA\04-08-11\018F0501.D
Operator : ML
Instrument : GC1
Sample Name : 104047-07
Run Time Bar Code:
Acquired on : 08 Apr 11 01:37 PM
Report Created on: 11 Apr 11 08:56 AM

Page Number : 1
Vial Number : 18
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH

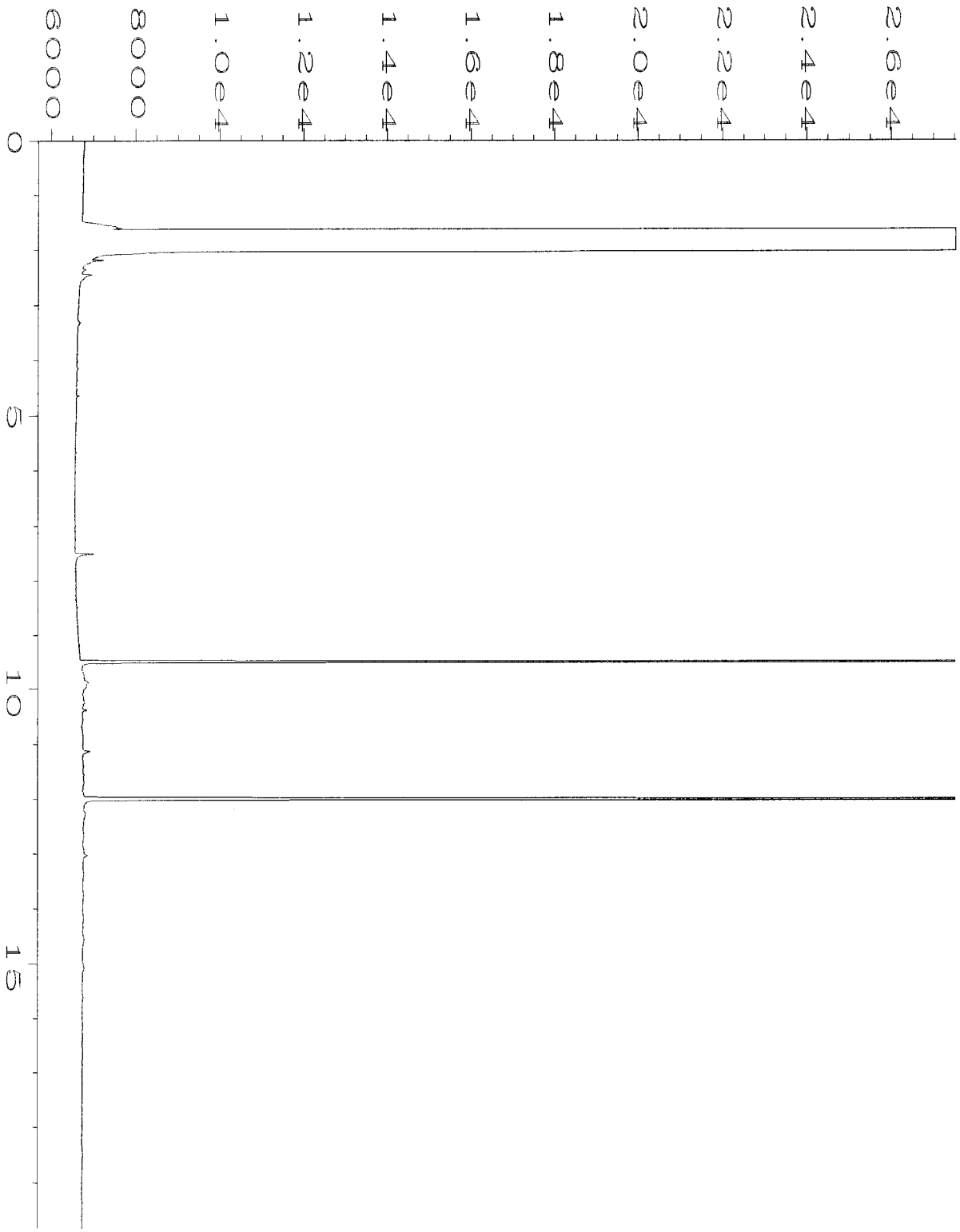


Data File Name : C:\HPCHEM\1\DATA\04-08-11\019F0501.D
Operator : ML
Instrument : GC1
Sample Name : 104047-08
Run Time Bar Code:
Acquired on : 08 Apr 11 02:03 PM
Report Created on: 11 Apr 11 08:56 AM

Page Number : 1
Vial Number : 19
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH

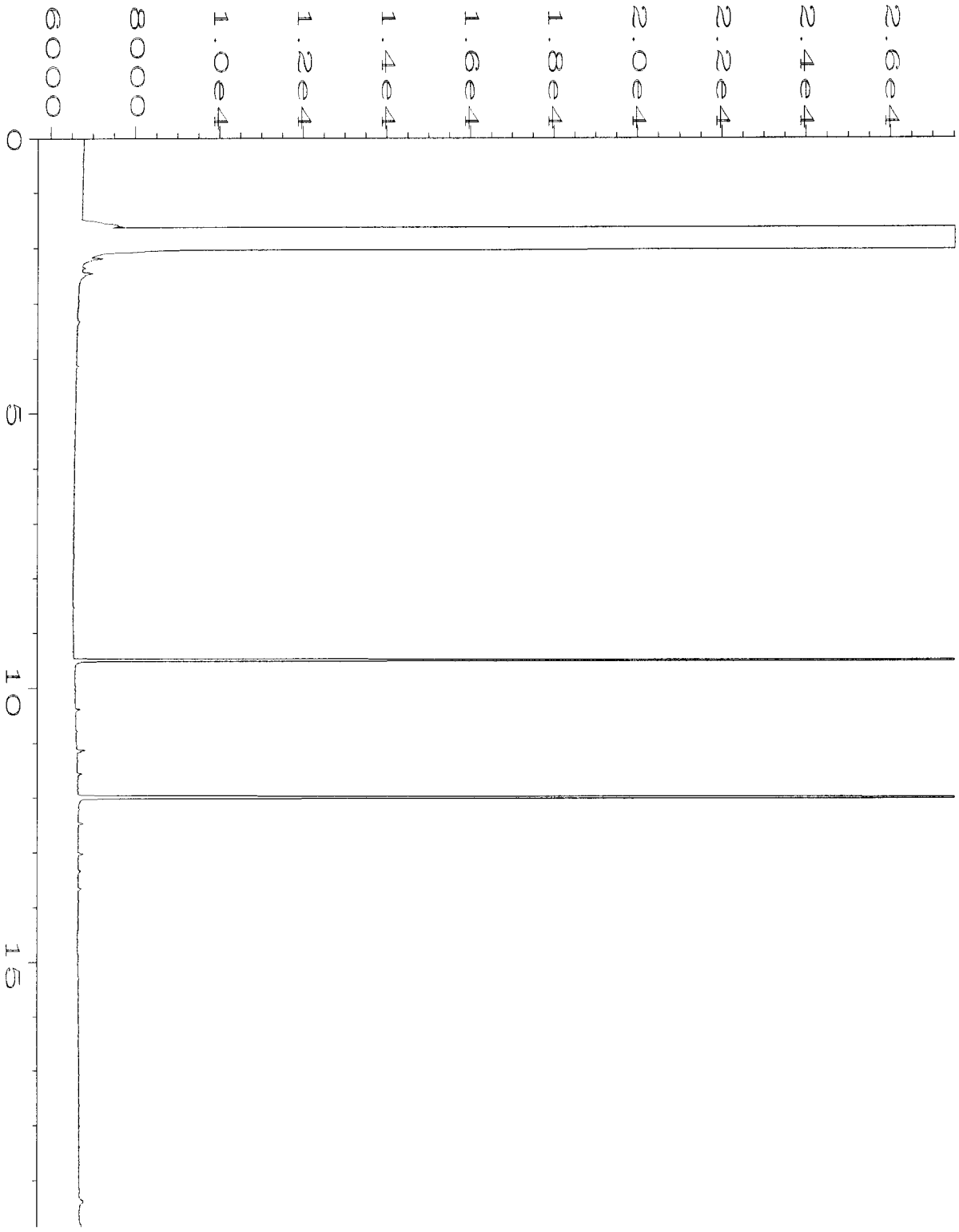


Data File Name	: C:\HPCHEM\1\DATA\04-08-11\020F0701.D		
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 20
Sample Name	: 104047-09	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 7
Acquired on	: 08 Apr 11 03:24 PM	Instrument Method	: TPHD.MTH
Report Created on:	11 Apr 11 08:56 AM	Analysis Method	: TPHD.MTH



Data File Name : C:\HPCHEM\1\DATA\04-08-11\021F0701.D
Operator : ML
Instrument : GC1
Sample Name : 104047-10
Run Time Bar Code:
Acquired on : 08 Apr 11 03:51 PM
Report Created on: 11 Apr 11 08:56 AM

Page Number : 1
Vial Number : 21
Injection Number : 1
Sequence Line : 7
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



Data File Name	: C:\HPCHEM\1\DATA\04-08-11\022F0701.D		
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 22
Sample Name	: 104047-11	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 7
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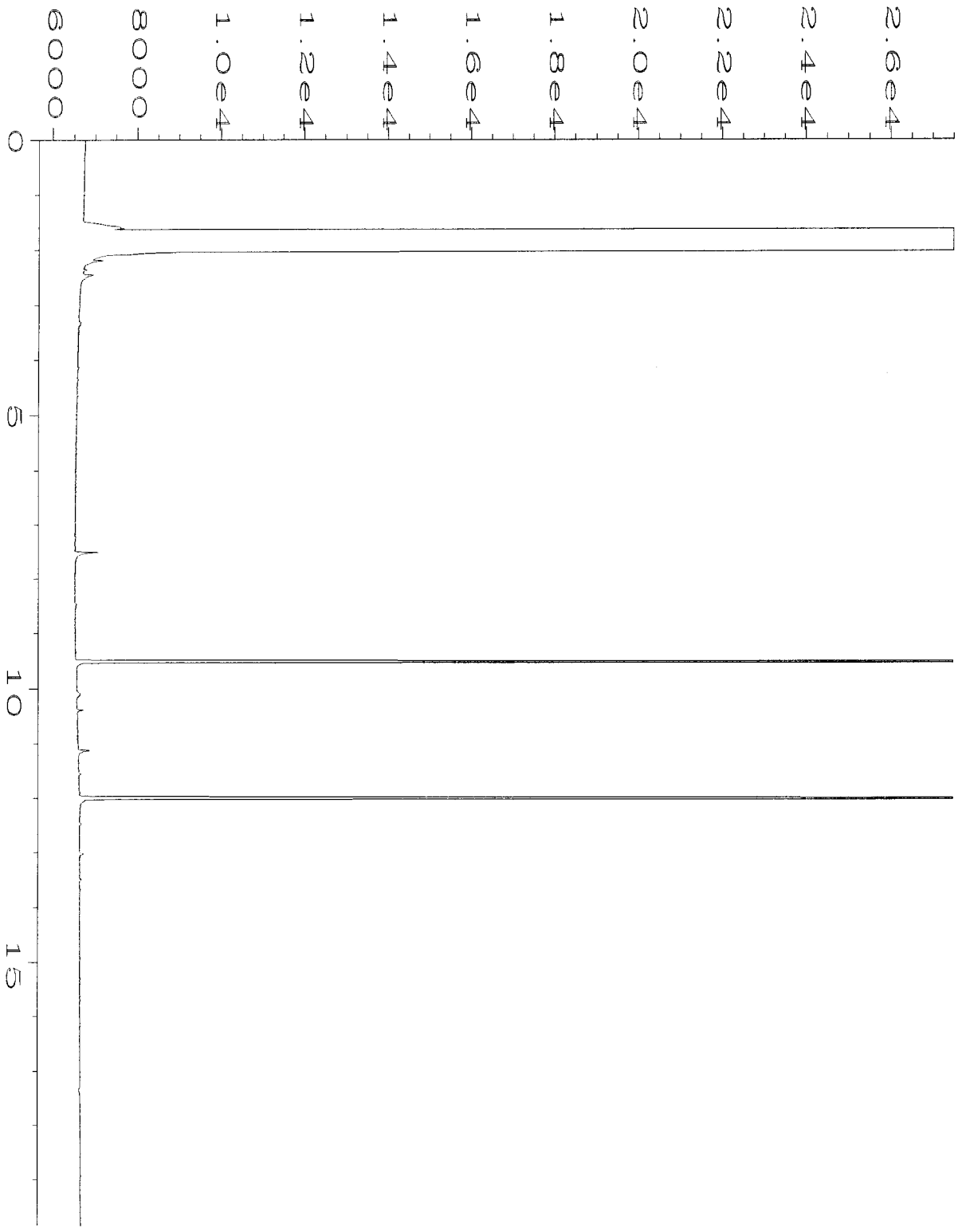
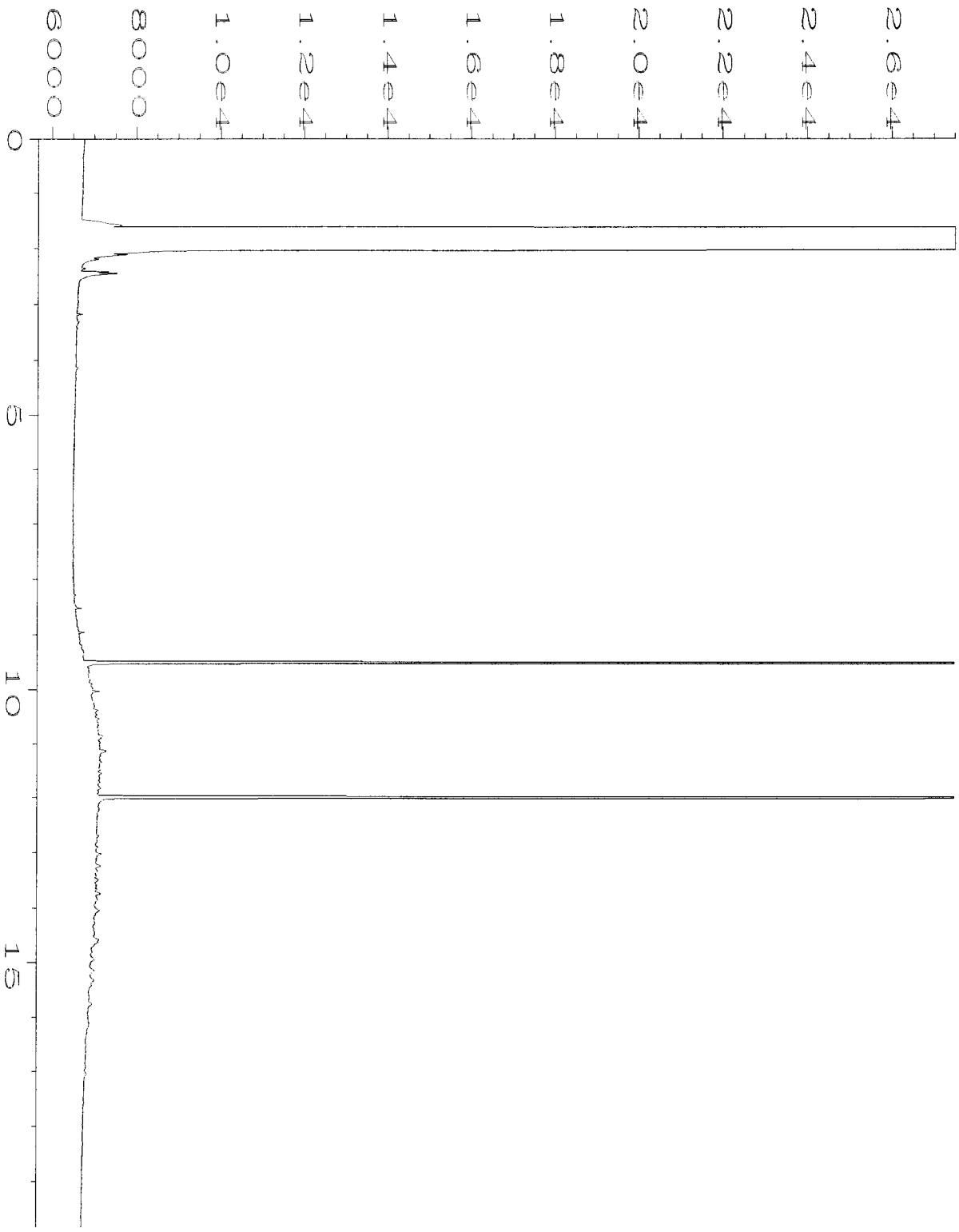
Report Created on	: 11 Apr 11 08:56 AM	Analysis Method	: TPHD.MTH



Data File Name : C:\HPCHEM\1\DATA\04-08-11\023F0701.D
Operator : ML
Instrument : GC1
Sample Name : 104047-12
Run Time Bar Code:
Acquired on : 08 Apr 11 04:45 PM
Report Created on: 11 Apr 11 08:57 AM

Page Number : 1
Vial Number : 23
Injection Number : 1
Sequence Line : 7
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



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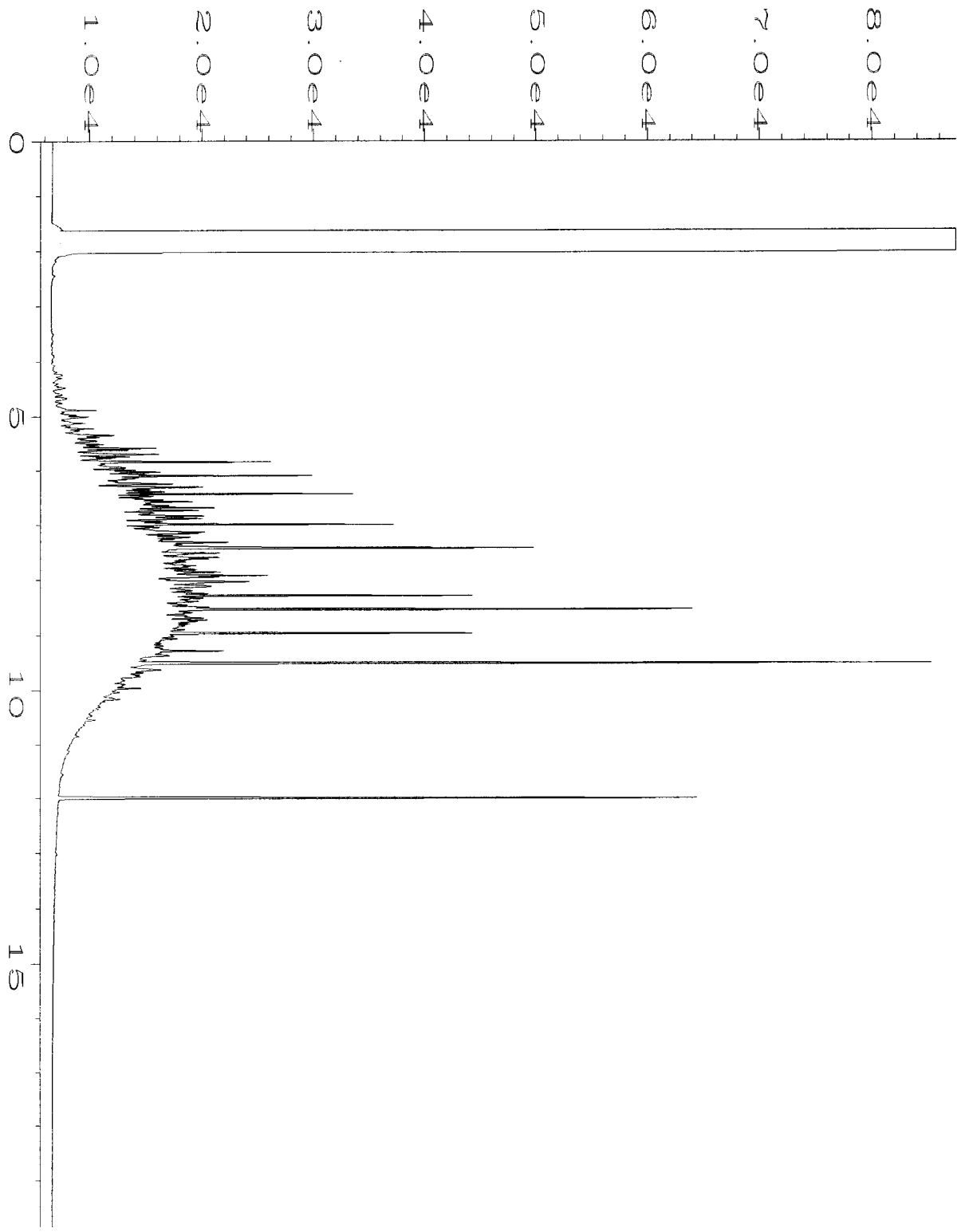
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 24
Sample Name	: 104047-13	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 7
Acquired on	: 08 Apr 11 05:12 PM	Instrument Method	: TPHD.MTH
Report Created on	: 11 Apr 11 08:57 AM	Analysis Method	: TPHD.MTH



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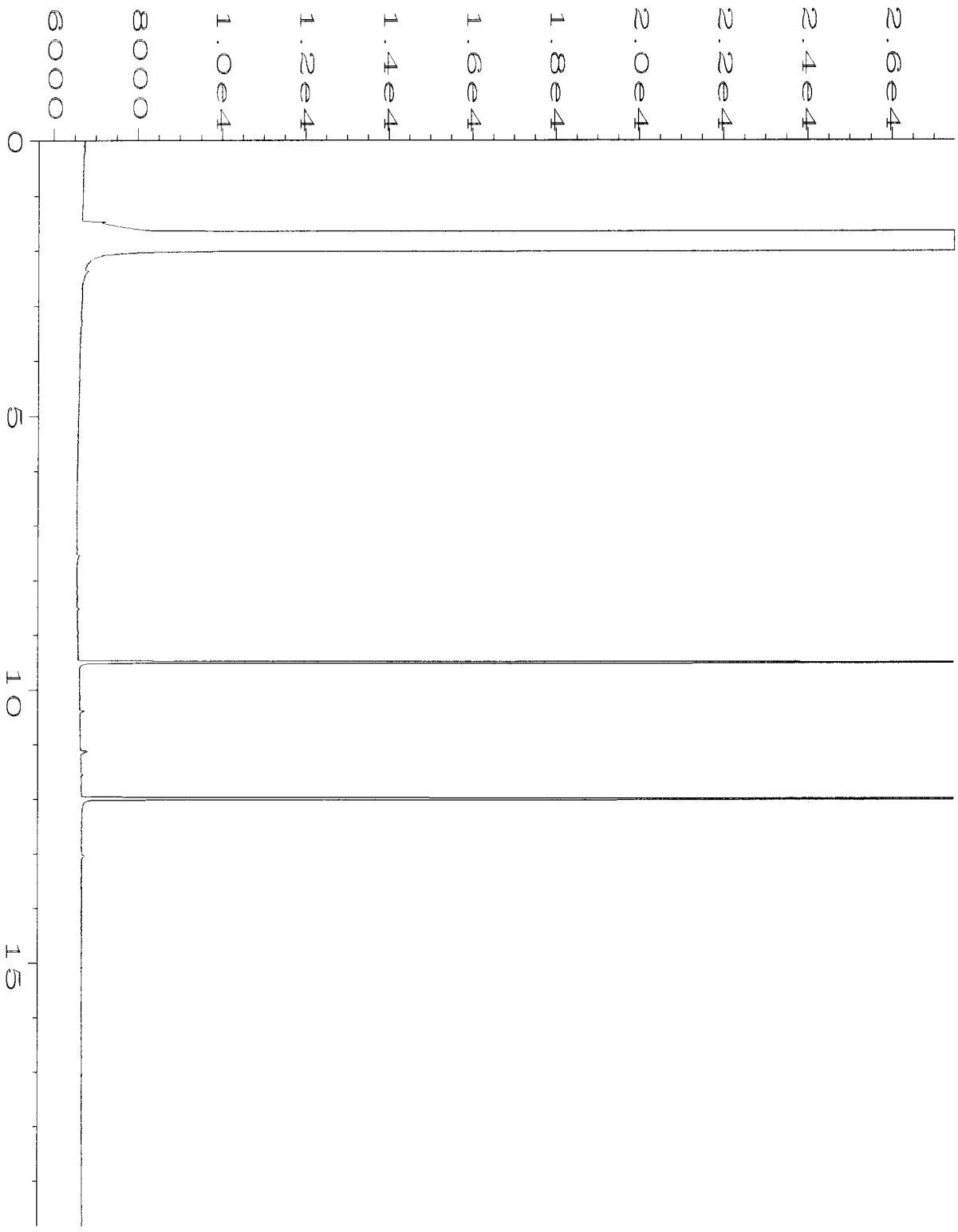
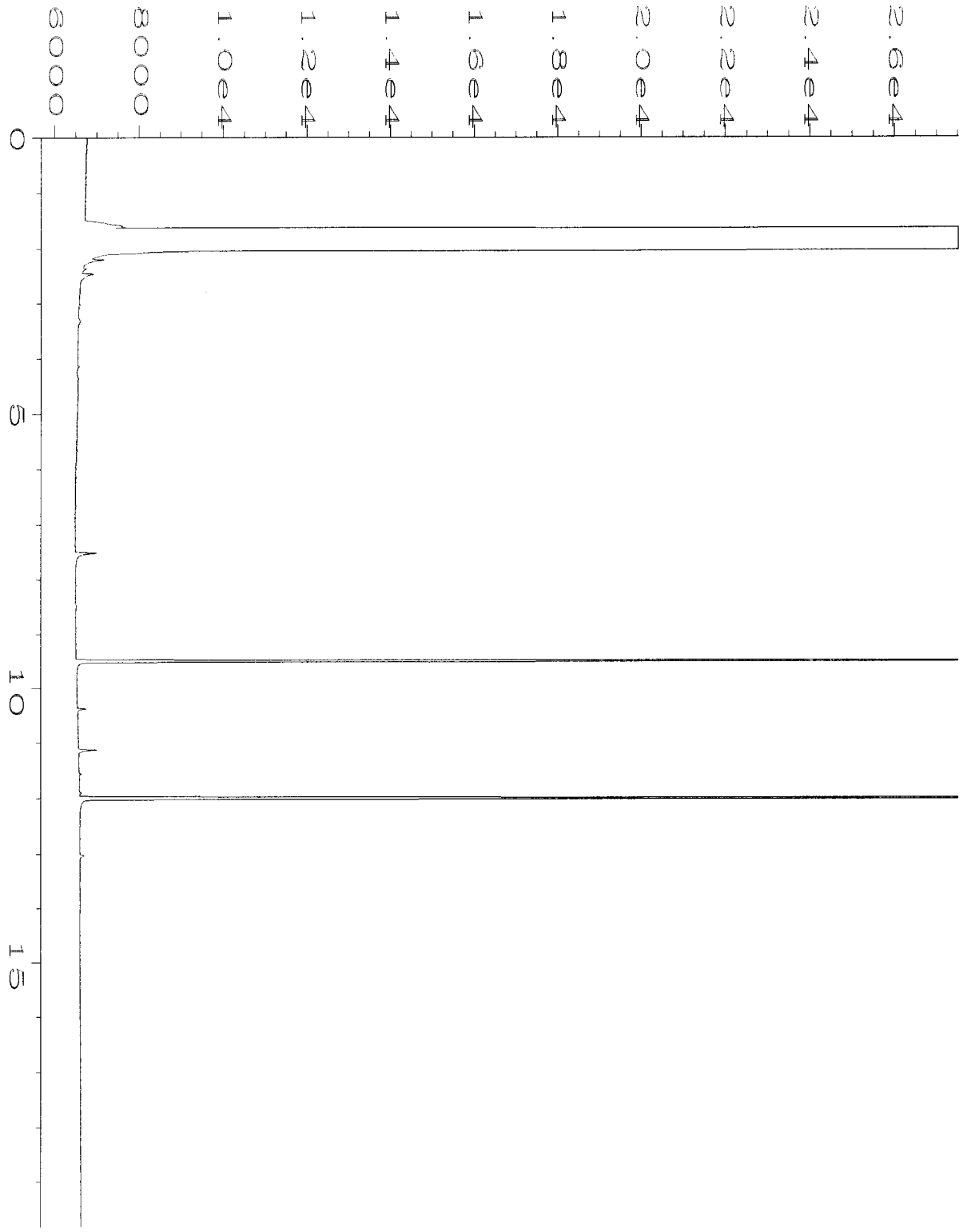
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 25
Sample Name	: 104047-14	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 7
Acquired on	: 08 Apr 11 05:39 PM	Instrument Method	: TPHD.MTH
Report Created on	: 11 Apr 11 08:57 AM	Analysis Method	: TPHD.MTH



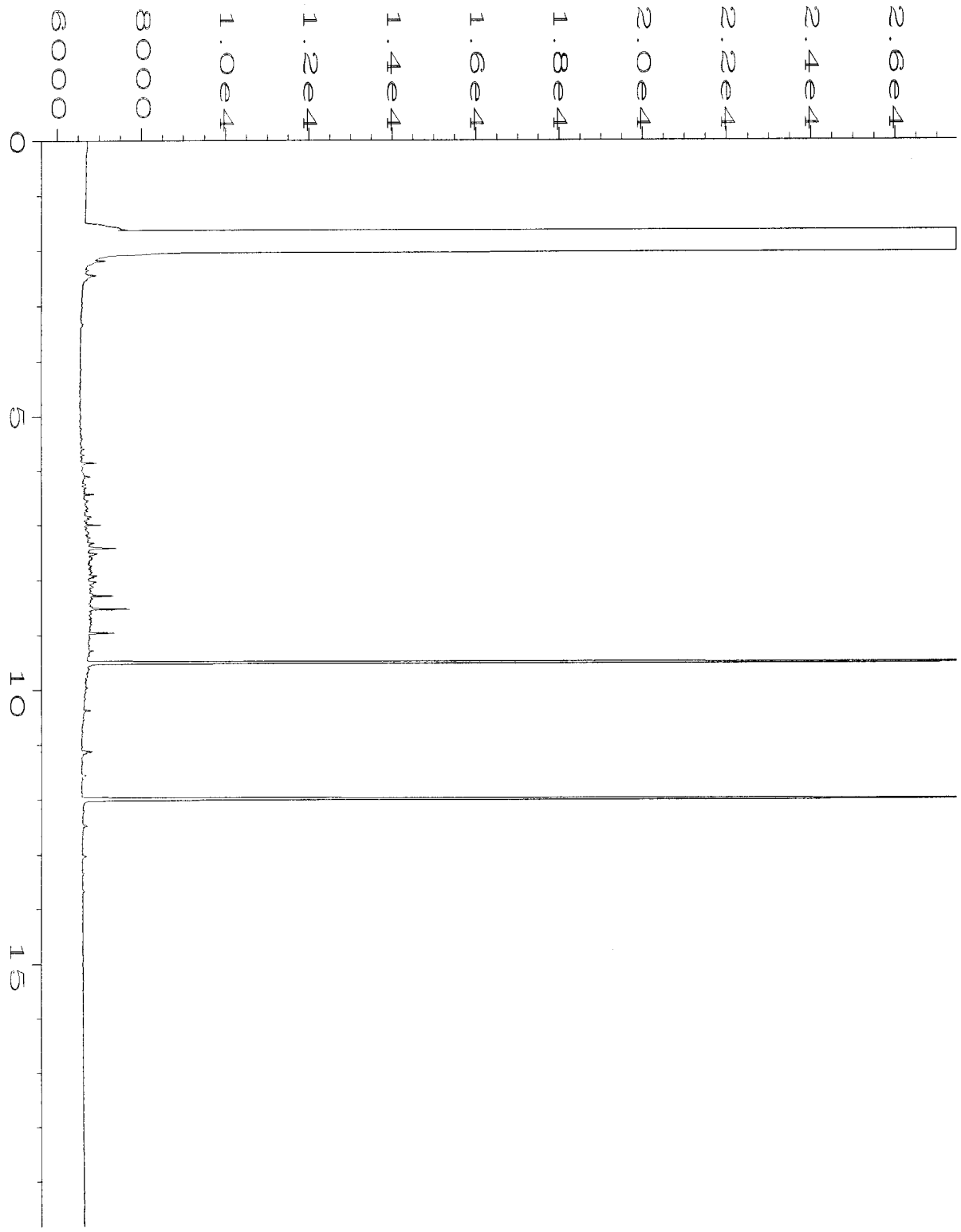
Data File Name : C:\HPCHEM\1\DATA\04-08-11\026F0701.D
Operator : ML
Instrument : GC1
Sample Name : 104047-15
Run Time Bar Code:
Acquired on : 08 Apr 11 06:06 PM
Report Created on: 11 Apr 11 08:57 AM

Page Number : 1
Vial Number : 26
Injection Number : 1
Sequence Line : 7
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



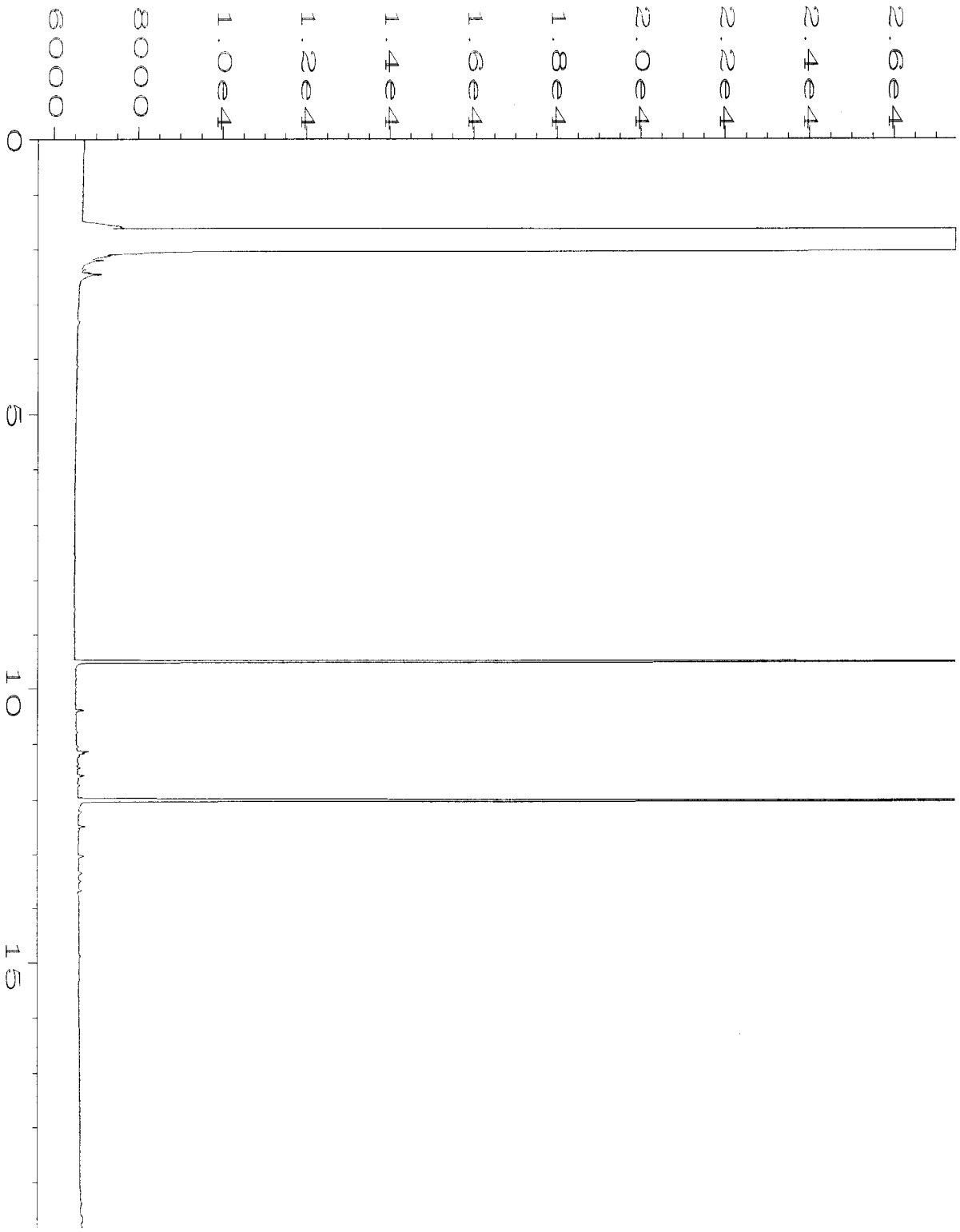
Data File Name : C:\HPCHEM\1\DATA\04-08-11\027F0701.D
Operator : ML
Instrument : GC1
Sample Name : 104047-16
Run Time Bar Code:
Acquired on : 08 Apr 11 06:33 PM
Report Created on: 11 Apr 11 08:57 AM

Page Number : 1
Vial Number : 27
Injection Number : 1
Sequence Line : 7
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



Data File Name : C:\HPCHEM\1\DATA\04-08-11\028F0701.D
Operator : ML
Instrument : GC1
Sample Name : 104047-17
Run Time Bar Code:
Acquired on : 08 Apr 11 07:00 PM
Report Created on: 11 Apr 11 08:57 AM

Page Number : 1
Vial Number : 28
Injection Number : 1
Sequence Line : 7
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



Data File Name	: C:\HPCHEM\1\DATA\04-08-11\029F0701.D		
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 29
Sample Name	: 104047-18	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 7
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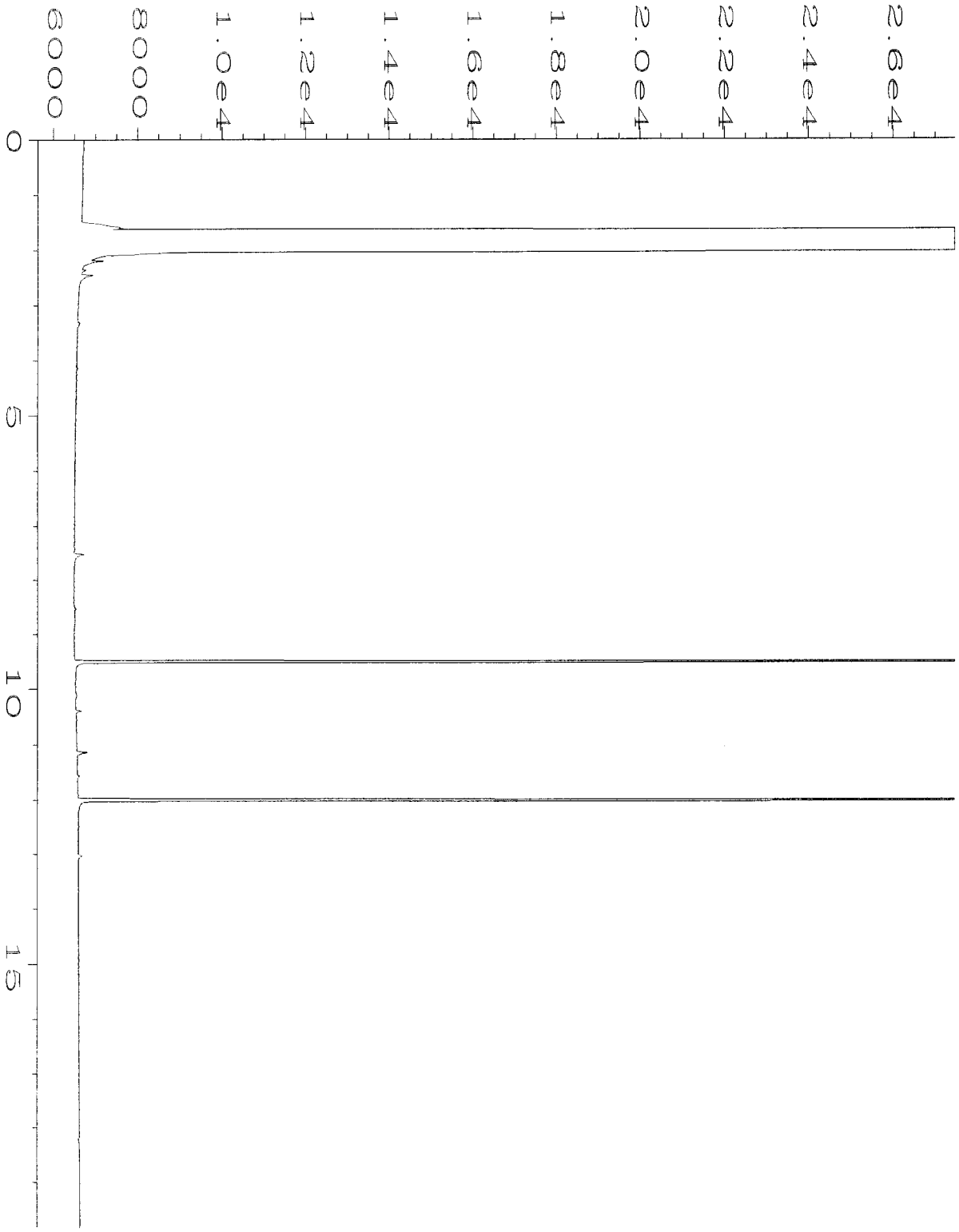
Report Created on:	11 Apr 11 08:57 AM	Analysis Method	: TPHD.MTH



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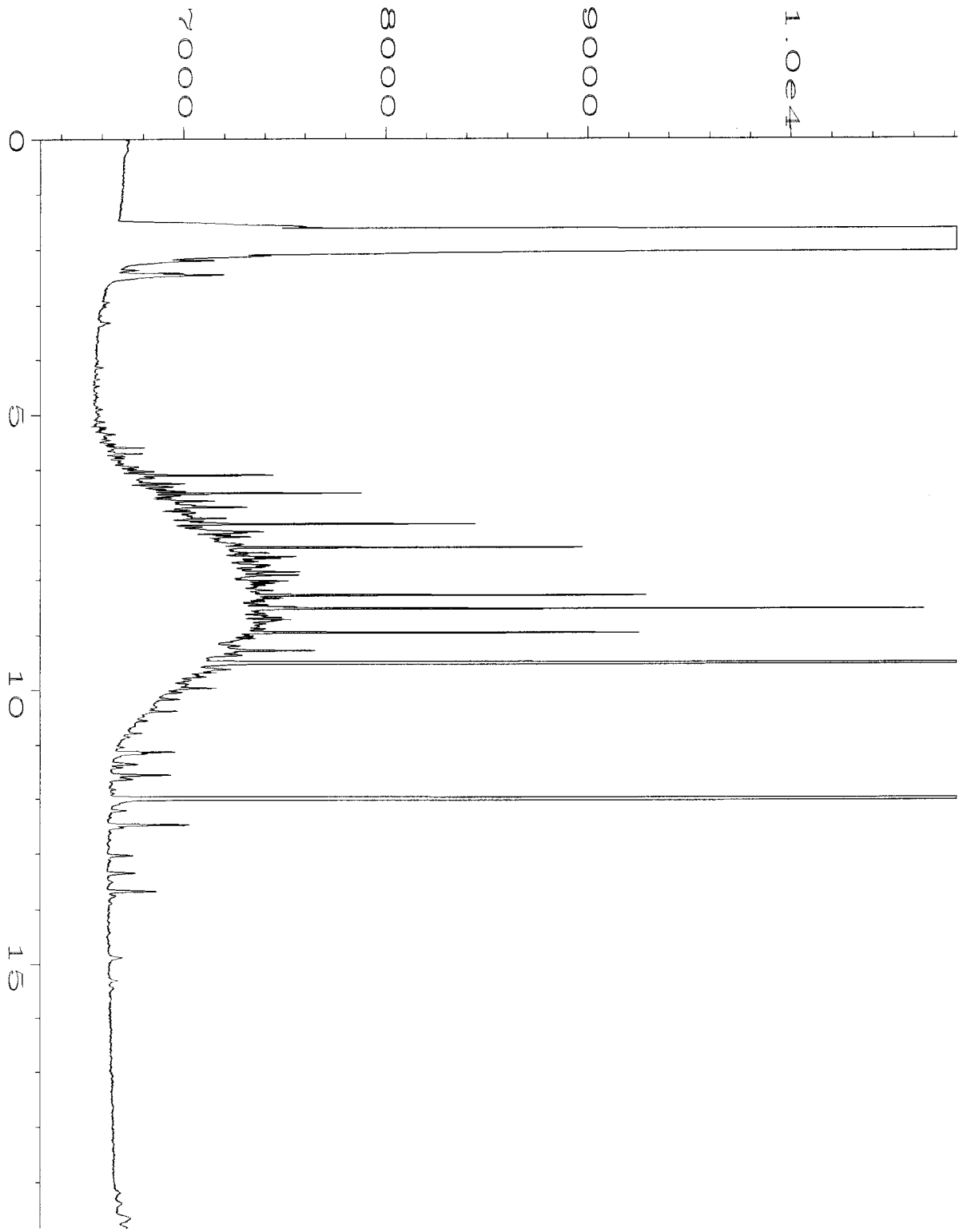
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 30
Sample Name	: 104047-19	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 7
Acquired on	: 08 Apr 11 07:53 PM	Instrument Method	: TPHD.MTH
Report Created on	: 11 Apr 11 08:57 AM	Analysis Method	: TPHD.MTH



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Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 31
Sample Name	: 104047-20	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 7
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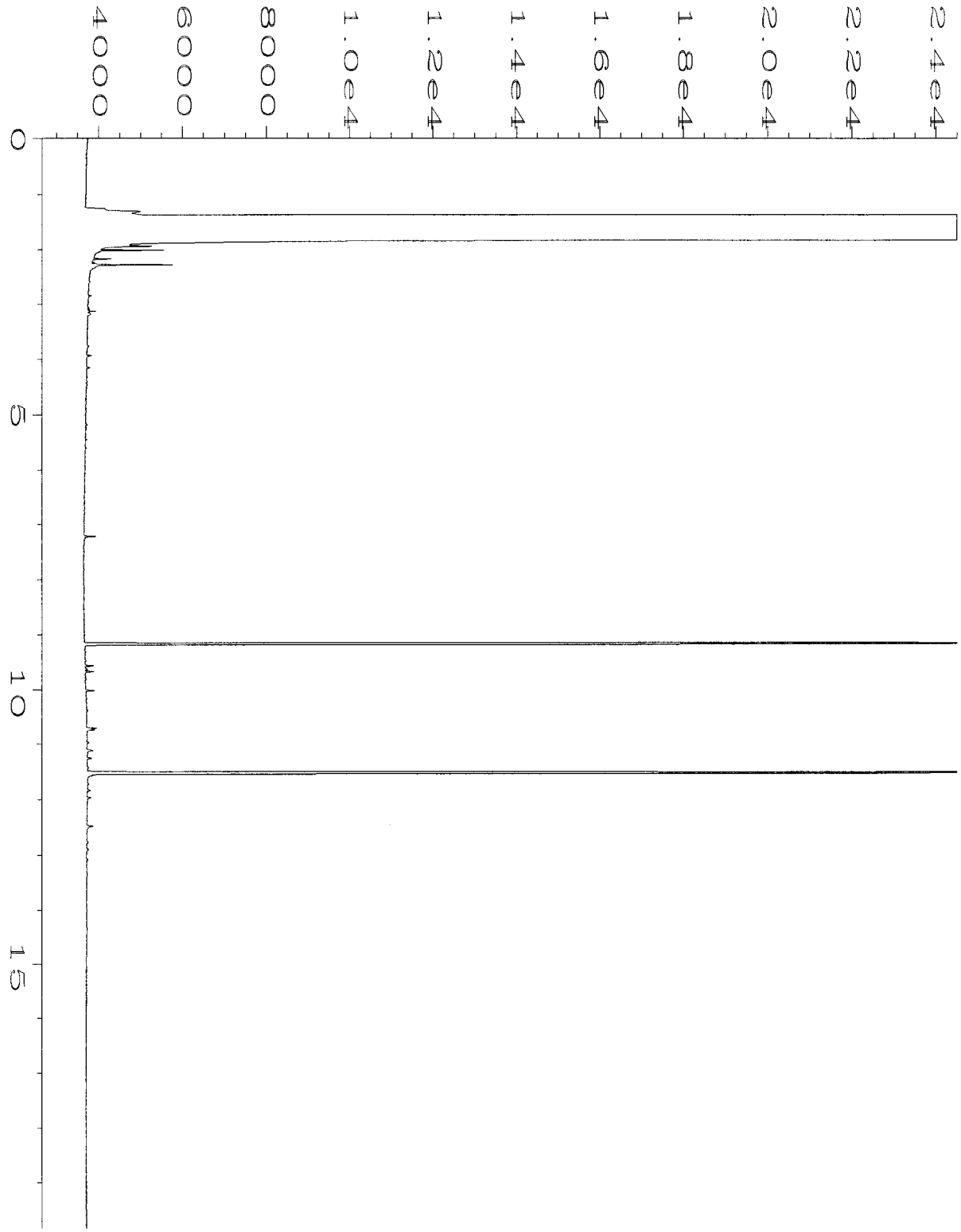
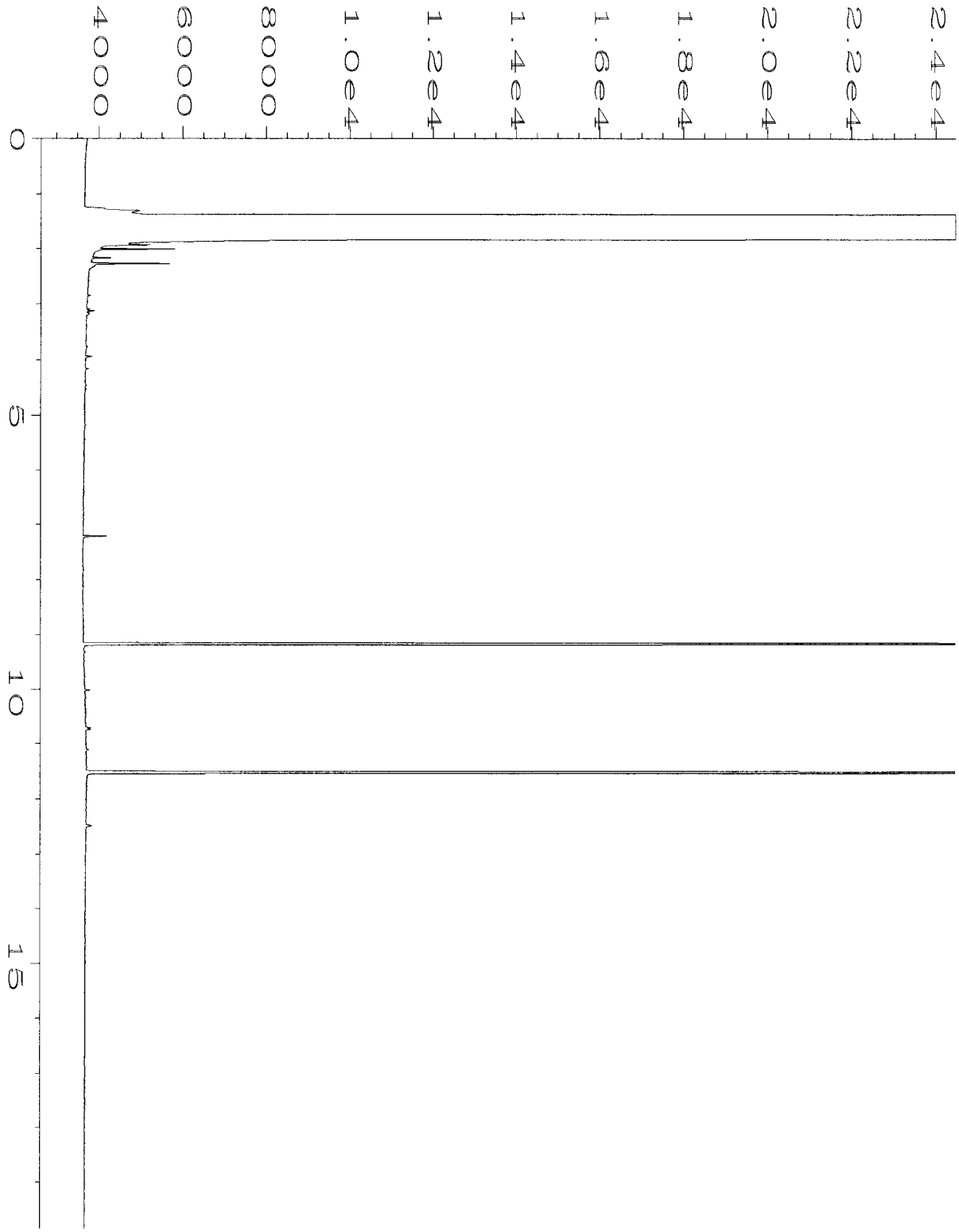
Report Created on	: 11 Apr 11 08:58 AM	Analysis Method	: TPHD.MTH



Data File Name : C:\HPCHEM\4\DATA\04-07-11\026F0601.D
Operator : ML
Instrument : GC#4
Sample Name : 104047-21
Run Time Bar Code:
Acquired on : 07 Apr 11 06:19 PM
Report Created on: 08 Apr 11 08:59 AM

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



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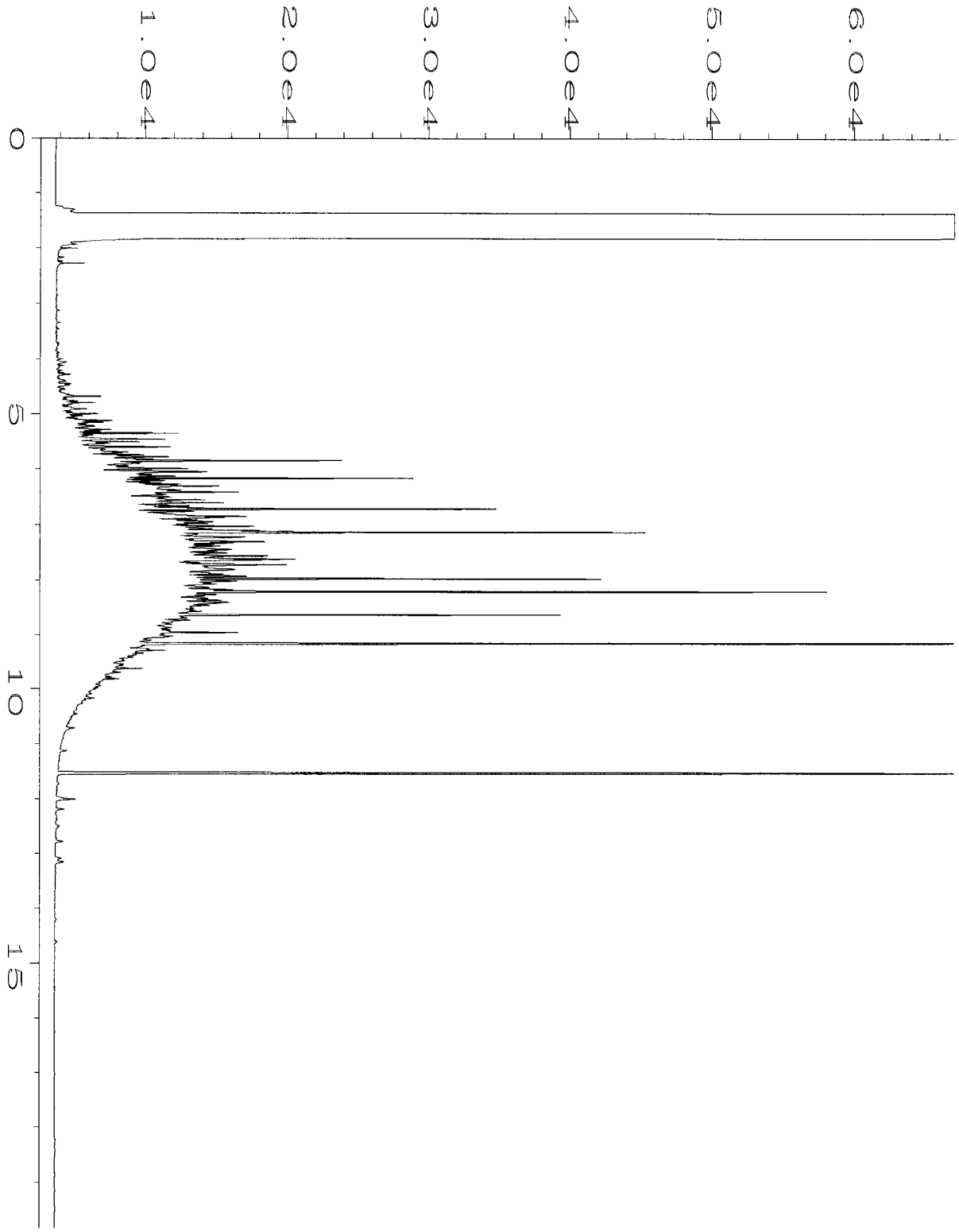
Operator : ML
Instrument : GC#4
Sample Name : 104047-22
Run Time Bar Code:
Acquired on : 07 Apr 11 06:45 PM
Report Created on: 08 Apr 11 08:59 AM

Page Number : 1
Vial Number : 27
Injection Number : 1
Sequence Line : 6
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



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Operator	: ML	Page Number	: 1
Instrument	: GC#4	Vial Number	: 28
Sample Name	: 104047-23	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 6
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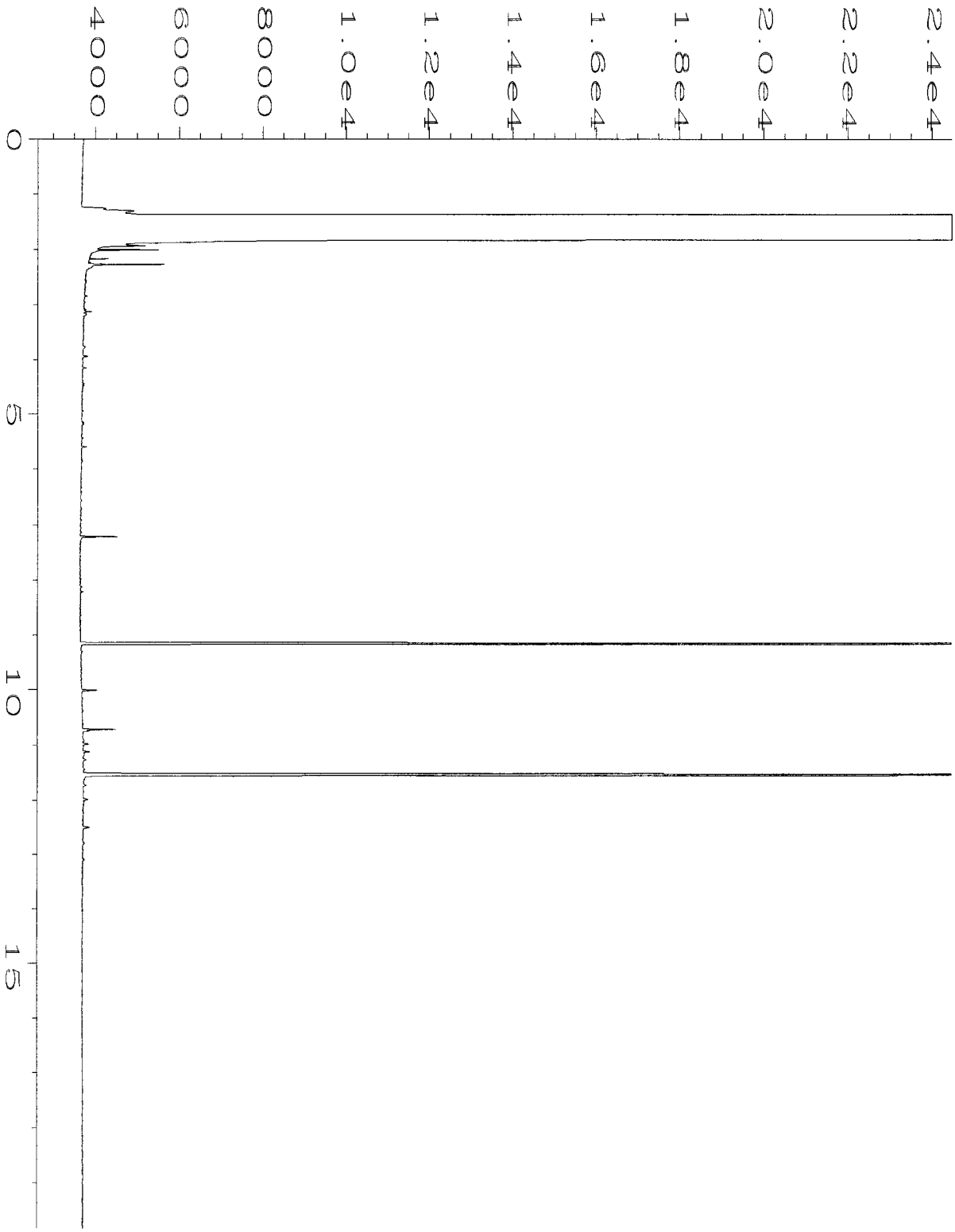

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Operator : ML
Instrument : GC#4
Sample Name : 104047-24
Run Time Bar Code:
Acquired on : 07 Apr 11 07:38 PM
Report Created on: 08 Apr 11 08:59 AM

Page Number : 1
Vial Number : 29
Injection Number : 1
Sequence Line : 6
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH

104047

SAMPLE CHAIN OF CUSTODY

ME 04/06/11

COS

Page # 1 of 2

Send Report To ~~Erin~~ Erin Rothman

Company SES

Address 2811 Fairview Ave East Suite 2000

City, State, ZIP Seattle WA 98102

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

SAMPLERS (signature)

PROJECT NAME/NO. 0761

PO #

REMARKS

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
P06-04	P06	04	01	4-5-11	0820	Soil	1	X								
P06-07	"	07	02	"	0825	"	1	X								
P06-11	"	11	03	"	0830	"	1	X								
P07-04 ~~4/6~~	P07	04	04	"	0845	"	1	X								
P07-07	"	07	05	"	0850	"	1	X								
P07-11	"	11	06	"	0855	"	1	X								
P08-04	P08	04	07	"	0905	"	1	X								
P08-07	"	07	08	"	0910	"	1	X								
P08-11	"	11	09	"	0915	"	1	X								
P09-04	P09	04	10	"	0935	"	1	X								
P09-07	"	07	11	"	0940	"	1	X								
P09-11	"	11	12	"	0945	"	1	X								
P10-04	P10	04	13	"	1005	"	1	X								

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert A Harsberger	SES	4-6-11	0915
Received by:		Nhan Pham	FEBT	4/6/11	V
Relinquished by:					
Received by:			Samples received	2	°C

FORMS\COC\SESGEMSR1.DOC (Revision 1)

104047

SAMPLE CHAIN OF CUSTODY

ME 04/06/11 COS

Page # 2 of 2

Send Report To _____

Company See Page 1

Address _____

City, State, ZIP _____

Phone # _____ Fax # _____

SAMPLERS (signature)

PROJECT NAME/NO. 0761

PO #

REMARKS

GEMS Y / N

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

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

Sample ID (NP 4/6)	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
P10-07	P10	07	14	4-5-11	1010	Soil	1	X								
P10-10	"	10	15	"	1015	"	1	X								
P11-04	P11	04	16	"	1200	"	1	X								
P11-07	"	07	17	"	1205	"	1	X								
P11-10	"	10	18	"	1210	"	1	X								
P12-04	P12	04	19	"	1245	"	1	X								
P12-06	"	06	20	"	1250	"	1	X								
P12-11	"	11	21	"	1255	"	1	X								
P13-04	P13	04	22	"	1350	"	1	X								
P13-06	"	06	23	"	1355	"	1	X								
P13-11	"	11	24	"	1400	"	1	X								

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert A Honeyman	SRS	4-6-11	0915
Received by:		Nhan Phan	FEBT	4/6/11	0915
Relinquished by:					
Received by:			Samples received at: 2 °C		

ATTACHMENT C
UCL STATISTICAL ANALYSIS

General UCL Statistics for Data Sets with Non-Detects

User Selected Options	
From File	C:\Documents and Settings\mselman\Desktop\SOU_0761.wst
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Diesel

General Statistics			
Number of Valid Data	25	Number of Detected Data	4
Number of Distinct Detected Data	4	Number of Non-Detect Data	21
		Percent Non-Detects	84.00%
Raw Statistics		Log-transformed Statistics	
Minimum Detected	160	Minimum Detected	5.075
Maximum Detected	3000	Maximum Detected	8.006
Mean of Detected	1915	Mean of Detected	7.108
SD of Detected	1333	SD of Detected	1.386
Minimum Non-Detect	50	Minimum Non-Detect	3.912
Maximum Non-Detect	50	Maximum Non-Detect	3.912

Warning: There are only 4 Distinct Detected Values in this data
Note: It should be noted that even though bootstrap may be performed on this data set
the resulting calculations may not be reliable enough to draw conclusions

It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.884	Shapiro Wilk Test Statistic	0.776
5% Shapiro Wilk Critical Value	0.748	5% Shapiro Wilk Critical Value	0.748
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	327.4	Mean	3.841
SD	849.7	SD	1.535
95% DL/2 (t) UCL	618.2	95% H-Stat (DL/2) UCL	419
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
MLE yields a negative mean		Mean in Log Scale	1.95
		SD in Log Scale	3.334
		Mean in Original Scale	323
		SD in Original Scale	852
		95% t UCL	614.5
		95% Percentile Bootstrap UCL	616.2
		95% BCA Bootstrap UCL	671
		95% H-UCL	125715
Gamma Distribution Test with Detected Values Only		Data Distribution Test with Detected Values Only	
k star (bias corrected)	0.48	Data appear Normal at 5% Significance Level	
Theta Star	3991		
nu star	3.839		
A-D Test Statistic	0.53	**Nonparametric Statistics**	

5% A-D Critical Value	0.664	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.664	Mean	440.8
5% K-S Critical Value	0.401	SD	791.8
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	182.9
		95% KM (t) UCL	753.7
Assuming Gamma Distribution		95% KM (z) UCL	741.6
Gamma ROS Statistics using Extrapolated Data		95% KM (jackknife) UCL	1339
Minimum	1.00E-06	95% KM (bootstrap t) UCL	591.7
Maximum	3000	95% KM (BCA) UCL	2912
Mean	306.4	95% KM (Percentile Bootstrap) UCL	2908
Median	1.00E-06	95% KM (Chebyshev) UCL	1238
SD	857.5	97.5% KM (Chebyshev) UCL	1583
k star	0.0739	99% KM (Chebyshev) UCL	2260
Theta star	4145		
Nu star	3.696	**Potential UCLs to Use**	
AppChi2	0.605	**95% KM (t) UCL**	**753.7**
95% Gamma Approximate UCL	1871	**95% KM (Percentile Bootstrap) UCL**	**2908**
95% Adjusted Gamma UCL	N/A		

Note: DL/2 is not a recommended method.

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
For additional insight, the user may want to consult a statistician.