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Transmitted via Electronic Mail

January 13, 2024

Ms. Tena Seeds  
Washington State Department of Ecology  
Toxics Cleanup Program  
15700 Dayton Ave N., Shoreline, WA 98133

RE: **Quarterly Progress Report: October 1 through December 31, 2024**  
**Time Oil Bulk Terminal Site, Cleanup Site ID #14604**  
**Prospective Purchaser Consent Decree No. 20-2-15215-3 SEA**

Dear Ms. Seeds:

Pioneer Engineering & Environmental Services, LLC on behalf of TOC Seattle Terminal 1, LLC submits the attached Quarterly Progress Report for the Time Oil Bulk Terminal Site per Section XII of the Prospective Purchaser Consent Decree between the Washington State Department of Ecology and TOC Seattle Terminal 1, LLC. The quarterly progress report consists of a brief narrative summary of notable activities that occurred during the reporting period and that are anticipated for the upcoming reporting period.

If you have any questions about this report, please contact me at 773-435-3725.

Sincerely,

A handwritten signature in black ink that reads "Kim Hempel". The signature is written in a cursive, flowing style.

Kim Hempel  
Project Coordinator  
Pioneer Engineering & Environmental Services, LLC

Distribution List:  
Doug Ciserella and Mike Ciserella, TOC Seattle Terminal 1, LLC  
Bill Joyce and Alexandra Kleeman, Hillis Clark Martin & Peterson P.S.  
Jamie Stevens, CRETE Consulting  
Kristin Anderson, Floyd|Snider

**TIME OIL BULK TERMINAL SITE  
PROSPECTIVE PURCHASER CONSENT DECREE NO. 20-2-15215-3 SEA  
QUARTERLY PROGRESS REPORT: OCTOBER 1 THROUGH DECEMBER 31, 2024**

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This report has been prepared in accordance with the requirements of the Time Oil Bulk Terminal Site Prospective Purchaser Consent Decree (PPCD) between the Washington State Department of Ecology (Ecology) and TOC Seattle Terminal 1, LLC. This progress report provides details on the following: 1) all on site activities; 2) any deviations from required tasks; 3) anticipated problems in meeting schedule or objectives and associated solutions 4) sampling, testing, or other data received; 5) work planned for the upcoming 3-month period; and, 6) deliverables planned for the upcoming 3-month period.

**Summary of On-Site Activities Performed During the Reporting Period (PPCD Section XII.A)**

- A visual check of the site was conducted on November 20, 2024. Construction associated with redevelopment continues on Parcel F, and all interim surfaces on remaining portions of the Site remain in good condition and no other concerns were noted during the site visits.
- Floyd|Snider (F|S) personnel collected the eighth round of post-remediation groundwater samples on November 20, 2024 (Q4 2024) per the approved Groundwater Monitoring Plan (GMP) and additional Ecology email concurrence dated October 23, 2024. Monitoring included continued groundwater collection at contingency well 01MW107 and additional sampling at 01MW15 and 01MW58R based on elevated trichloroethene (TCE) in upgradient portions of the ASKO property and on the BNSF Property.
- Water samples were collected from the ASKO Property permeable reactive barrier vault and gravity well on November 20, 2024 for operation and maintenance (O&M) assessment purposes. O&M assessment of the permeable reactive barrier vault will continue in Q1 2025.

**Deliverables**

Deliverables during this reporting period included the following:

- An ASKO and BNSF property line data summary memorandum was submitted to Ecology on October 1, 2024.
- The Quarterly Progress Report for the third quarter of 2024 was submitted to Ecology on October 15, 2024.

**Deviations from Required Tasks (PPCD Section XII.B)**

- None.

**Anticipated Problems in Meeting Schedule or Objectives and Associated Solutions (PPCD Section XII.C and XII.D)**

- Based on groundwater samples collected by BNSF in November 2023, TCE and associated cVOC as well as TPH contaminant concentrations originating from the upgradient BNSF property were identified in upgradient groundwater as part of the BNSF remedial investigation at levels considerably higher than those observed in the 2019 remedial investigation for the Time Oil Bulk Terminal Site. The elevated TCE and cVOC concentrations in groundwater on BNSF are impacting the shallow water bearing zone (WBZ) in groundwater wells on the downgradient ASKO parcel owned by TOC Seattle Terminal 1, LLC. These impacts, if they continue, represent an on-going source to groundwater and may affect achievement of the cleanup levels (CULs) at the conditional point of compliance (CPOC) within the predicted 15-year restoration timeframe.
- Aside from the item above, there are no other anticipated problems in meeting the schedule of deliverables specified in Exhibit D of the PPCD. The schedule of deliverables and activities specified in Table 8.1 of the Cleanup Action Plan (Exhibit C of the PPCD) are currently on track or ahead of schedule.

### **Raw Data Received (PPCD Section XII.E)**

- Groundwater sampling results for the 4<sup>th</sup> Quarter 2024 were received from Friedman & Bruya, Inc. on December 3, 2024. Results were received in one sample delivery group (F&BI 411323);
- Samples collected for O&M purposes from the ASKO property permeable reactive barrier vault and gravity well were received on December 3, 2024. Results were received in one sample delivery group (F&BI 411322); and
- Copies of the laboratory reports discussed herein are provided as an attachment to this Progress Report.

### **Work Planned During the Upcoming Reporting Period (PPCD Section XII.F)**

The following work is planned for the 1<sup>st</sup> Quarter 2025:

- Ninth round of groundwater sampling and site-wide synoptic gauging is scheduled for mid-February 2025;
- Review of any additional data or deliverables that may be provided by BNSF;
- Monitoring well network updates, as described in an email to Ecology dated January 7, 2025, are anticipated to be performed in March or April 2025, pending Ecology approval;
- Construction on the remaining portions of the ASKO and Bulk Terminal parcels (outside of Lot F) is anticipated to begin in March or April 2025;
- Construction on Lot F continues and is anticipated to be completed by late March 2025;
- Vapor sampling for the structure on Lot F will be scheduled pending building completion; and
- Site checks will be conducted periodically on all interim surfaces outside of Lot F until construction begins to ensure that conditions remain stable during the interim period prior to site development.

### **Deliverables Planned During the Upcoming Reporting Period (PPCD Section XII.G)**

The following deliverables are anticipated to be completed during the next quarterly reporting period of January through March 2025:

- Transmittal of a summary of 4<sup>th</sup> Quarter 2024 groundwater sampling results to Ecology via email;
- Submittal of the Quarterly Progress Report for the 4<sup>th</sup> Quarter 2024;
- Submittal of a Notification of Construction Activities for the upcoming grading and construction work planned for remaining portions of the ASKO and Bulk Terminal parcels (outside of Lot F); and
- Submittal of the Long-Term Compliance Monitoring Annual Report for 2024.

### **Other Pertinent Information, Including Changes in Key Personnel**

- None.

### **Attachments**

- Attachment 1 – Laboratory Analytical Reports

**END QUARTERLY PROGRESS REPORT**

**ATTACHMENT 1**

**Laboratory Analytical Reports**

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

December 3, 2024

5500 4th Ave South  
Seattle, WA 98108-2419  
(206) 285-8282  
office@friedmanandbruya.com  
www.friedmanandbruya.com

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

Dear Ms Osterhout:

Included are the results from the testing of material submitted on November 20, 2024 from the Time Oil Seattle, F&BI 411323 project. There are 16 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl  
Project Manager

Enclosures

c: Floyd Snider Lab Data, Kristin Anderson  
FDS1203R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 20, 2024 by Friedman & Bruya, Inc. from the Floyd-Snider Time Oil Seattle, F&BI 411323 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Floyd-Snider</u>
411323 -01	01MW53R-112024
411323 -02	01MW85-112024
411323 -03	01MW107-112024
411323 -04	01MW58R-112024
411323 -05	01MW84-112024
411323 -06	01MW84-D-112024
411323 -07	01MW46-112024
411323 -08	01MW19R-112024
411323 -09	Trip Blank

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/03/24  
Date Received: 11/20/24  
Project: Time Oil Seattle, F&BI 411323  
Date Extracted: 11/21/24  
Date Analyzed: 11/25/24

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE  
USING METHOD NWTPH-Gx**  
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 50-150)
01MW84-112024 411323-05	1,700	88
01MW84-D-112024 411323-06	1,800	101
01MW19R-112024 411323-08	490	98
Method Blank 04-2722 MB	<100	91

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/03/24  
Date Received: 11/20/24  
Project: Time Oil Seattle, F&BI 411323  
Date Extracted: 11/21/24  
Date Analyzed: 11/21/24

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL AND MOTOR OIL  
USING METHOD NWTPH-D<sub>x</sub>**  
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> (% Recovery) (Limit 41-152)
01MW58R-112024 411323-04	570 x	<250	104
01MW84-112024 411323-05	1,100 x	<250	110
01MW84-D-112024 411323-06	1,200 x	<250	117
01MW19R-112024 411323-08	710 x	350 x	111
Method Blank 04-2890 MB	<50	<250	110



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	01MW53R-112024	Client:	Floyd-Snider
Date Received:	11/20/24	Project:	Time Oil Seattle, F&BI 411323
Date Extracted:	11/27/24	Lab ID:	411323-01
Date Analyzed:	11/27/24	Data File:	112727.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	78	126
Toluene-d8	97	84	115
4-Bromofluorobenzene	98	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	0.41
cis-1,2-Dichloroethene	2.2
Trichloroethene	15

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	01MW85-112024	Client:	Floyd-Snider
Date Received:	11/20/24	Project:	Time Oil Seattle, F&BI 411323
Date Extracted:	11/27/24	Lab ID:	411323-02 1/10
Date Analyzed:	11/27/24	Data File:	112729.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	91	78	126
Toluene-d8	95	84	115
4-Bromofluorobenzene	98	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	36
cis-1,2-Dichloroethene	990
Trichloroethene	5.0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	01MW107-112024	Client:	Floyd-Snider
Date Received:	11/20/24	Project:	Time Oil Seattle, F&BI 411323
Date Extracted:	11/27/24	Lab ID:	411323-03
Date Analyzed:	11/27/24	Data File:	112723.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	78	126
Toluene-d8	95	84	115
4-Bromofluorobenzene	95	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
cis-1,2-Dichloroethene	<1
Trichloroethene	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	01MW58R-112024	Client:	Floyd-Snider
Date Received:	11/20/24	Project:	Time Oil Seattle, F&BI 411323
Date Extracted:	11/27/24	Lab ID:	411323-04 1/10
Date Analyzed:	11/27/24	Data File:	112728.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	89	78	126
Toluene-d8	90	84	115
4-Bromofluorobenzene	103	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	24
cis-1,2-Dichloroethene	200
Trichloroethene	92

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	01MW84-112024	Client:	Floyd-Snider
Date Received:	11/20/24	Project:	Time Oil Seattle, F&BI 411323
Date Extracted:	11/27/24	Lab ID:	411323-05
Date Analyzed:	11/27/24	Data File:	112725.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	78	126
Toluene-d8	101	84	115
4-Bromofluorobenzene	99	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	01MW84-D-112024	Client:	Floyd-Snider
Date Received:	11/20/24	Project:	Time Oil Seattle, F&BI 411323
Date Extracted:	11/27/24	Lab ID:	411323-06
Date Analyzed:	11/27/24	Data File:	112726.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	92	78	126
Toluene-d8	102	84	115
4-Bromofluorobenzene	99	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	01MW46-112024	Client:	Floyd-Snider
Date Received:	11/20/24	Project:	Time Oil Seattle, F&BI 411323
Date Extracted:	11/27/24	Lab ID:	411323-07 1/10
Date Analyzed:	11/27/24	Data File:	112730.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	78	126
Toluene-d8	95	84	115
4-Bromofluorobenzene	101	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	160
cis-1,2-Dichloroethene	770
Trichloroethene	130
Benzene	<3.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	01MW19R-112024	Client:	Floyd-Snider
Date Received:	11/20/24	Project:	Time Oil Seattle, F&BI 411323
Date Extracted:	11/27/24	Lab ID:	411323-08
Date Analyzed:	11/27/24	Data File:	112724.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	87	78	126
Toluene-d8	91	84	115
4-Bromofluorobenzene	96	72	130

Compounds:	Concentration ug/L (ppb)
Benzene	1.0



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	Floyd-Snider
Date Received:	Not Applicable	Project:	Time Oil Seattle, F&BI 411323
Date Extracted:	11/27/24	Lab ID:	04-2867 mb
Date Analyzed:	11/27/24	Data File:	112718.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	93	78	126
Toluene-d8	96	84	115
4-Bromofluorobenzene	94	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
cis-1,2-Dichloroethene	<1
Trichloroethene	<0.5
Benzene	<0.35

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/03/24

Date Received: 11/20/24

Project: Time Oil Seattle, F&BI 411323

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR TPH AS GASOLINE  
USING METHOD NWTPH-G<sub>x</sub>**

Laboratory Code: 411293-06 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	99	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/03/24

Date Received: 11/20/24

Project: Time Oil Seattle, F&BI 411323

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

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	92	92	72-139	0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/03/24

Date Received: 11/20/24

Project: Time Oil Seattle, F&BI 411323

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

Laboratory Code: 411322-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance
				Recovery MS	Criteria
Vinyl chloride	ug/L (ppb)	10	<0.02	102	50-150
cis-1,2-Dichloroethene	ug/L (ppb)	10	1.4	84	10-211
Benzene	ug/L (ppb)	10	<0.35	104	50-150
Trichloroethene	ug/L (ppb)	10	11	0 b	35-149

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Percent	Acceptance Criteria	RPD (Limit 20)
			Recovery LCS	Recovery LCSD		
Vinyl chloride	ug/L (ppb)	10	108	107	64-142	1
cis-1,2-Dichloroethene	ug/L (ppb)	10	106	100	70-130	6
Benzene	ug/L (ppb)	10	106	103	70-130	3
Trichloroethene	ug/L (ppb)	10	96	94	70-130	2

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The analyte is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits due to sample matrix effects.
- j - The analyte concentration is reported between the method detection limit and the lowest calibration point. 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.
- k - The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.
- 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.

411323

SAMPLE CHAIN OF CUSTODY

11-20-24

Page # 1 of 1

Report To Pamela Osterhant - Kristin Anderson

FORNAROUND TIME

Company Floyd Snyder

Address 100 Union St Suite 100

City, State, ZIP Seattle, WA

Phone Email lab@floyd-snyder.com

PROJECT NAME  
Twin in Seattle

PO #  
INVOICE TO  
P. Power

Standard turnaround  
RUSH  
Rush charges authorized by:

REMARKS  
Project specific RIs? - Yes / No

INVOICE TO  
P. Power

SAMPLE DISPOSAL  
Archive samples  
Other  
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED										Notes		
						NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	TCE, Cis-1,2-DCE, VC by 82100	Benzene 82100				
01MWS3R-112024	01 A-C	11/20/24	13:31	GRU	3													
01MWS5-112024	02 A-C		14:15		3													
01MWS107-112024	03 A-C		13:50		3													
01MWS8R-112024	04 A-D		11:00		4													
01MWS84-112024	05 A-G		10:40		7													
01MWS84-D-112024	06 A-G		10:50		7													
01MWS46-112024	07 A-C		10:11		3													
01MWS19R-112024	08 A-G		09:45		7													
TRIP BLANK	09 A-B																	HOLD

Samples received at 3 of

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
<i>[Signature]</i>	P. Osterhant	FIS	11/20/24	15:21
<i>[Signature]</i>	Ann Pham	FBI	11/20/24	15:21
Received by:				
Relinquished by:				

Friedman & Bruya, Inc.  
Ph. (206) 285-8282

SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 41132

CLIENT Floyd Snider

INITIALS/ AP

DATE: 11/20/24

If custody seals are present on cooler, are they intact?

NA  YES  NO

Cooler/Sample temperature

3 °C

Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs?

YES  NO

How did samples arrive?

Over the Counter

Picked up by F&BI

FedEx/UPS/GSO

Is there a Chain-of-Custody\* (COC)?

YES  NO

Initials/

(NP)  
11/21

Date:

\*or other representative documents, letters, and/or shipping memos

Number of days samples have been sitting prior to receipt at laboratory 0 days

Are the samples clearly identified? (explain "no" answer below)

YES  NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below)

YES  NO

Were appropriate sample containers used?

YES  NO  Unknown

If custody seals are present on samples, are they intact?

NA  YES  NO

Are samples requiring no headspace, headspace free?

NA  YES  NO

Is the following information provided on the COC, and does it match the sample label? (explain "no" answer below)

Sample ID's  Yes  No \_\_\_\_\_  Not on COC/label

Date Sampled  Yes  No \_\_\_\_\_  Not on COC/label

Time Sampled  Yes  No \_\_\_\_\_  Not on COC/label

# of Containers  Yes  No \_\_\_\_\_

Relinquished  Yes  No \_\_\_\_\_

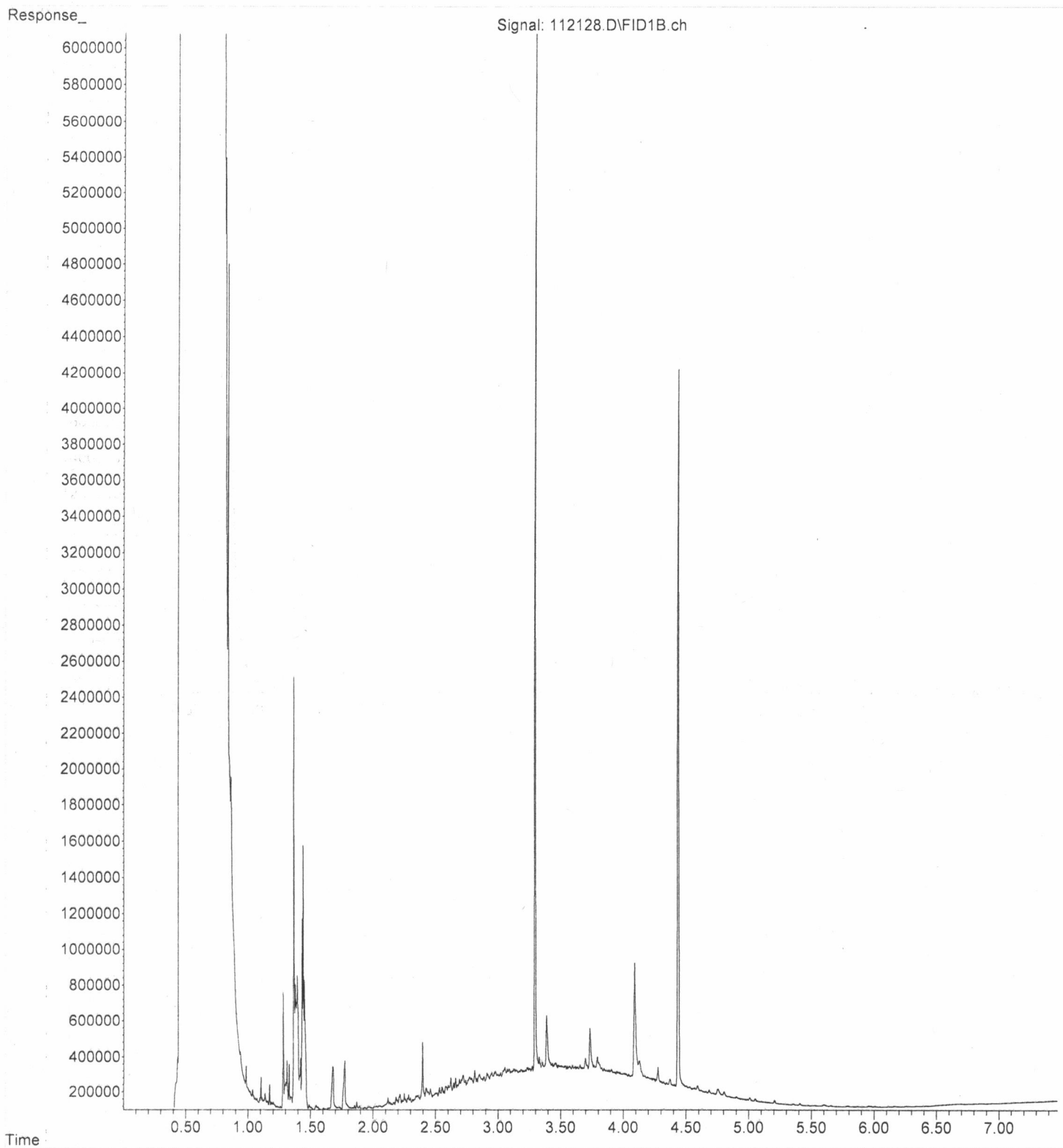
Requested analysis  Yes  On Hold \_\_\_\_\_

Other comments (use a separate page if needed)

Air Samples: Were any additional canisters/tubes received?  NA  YES  NO

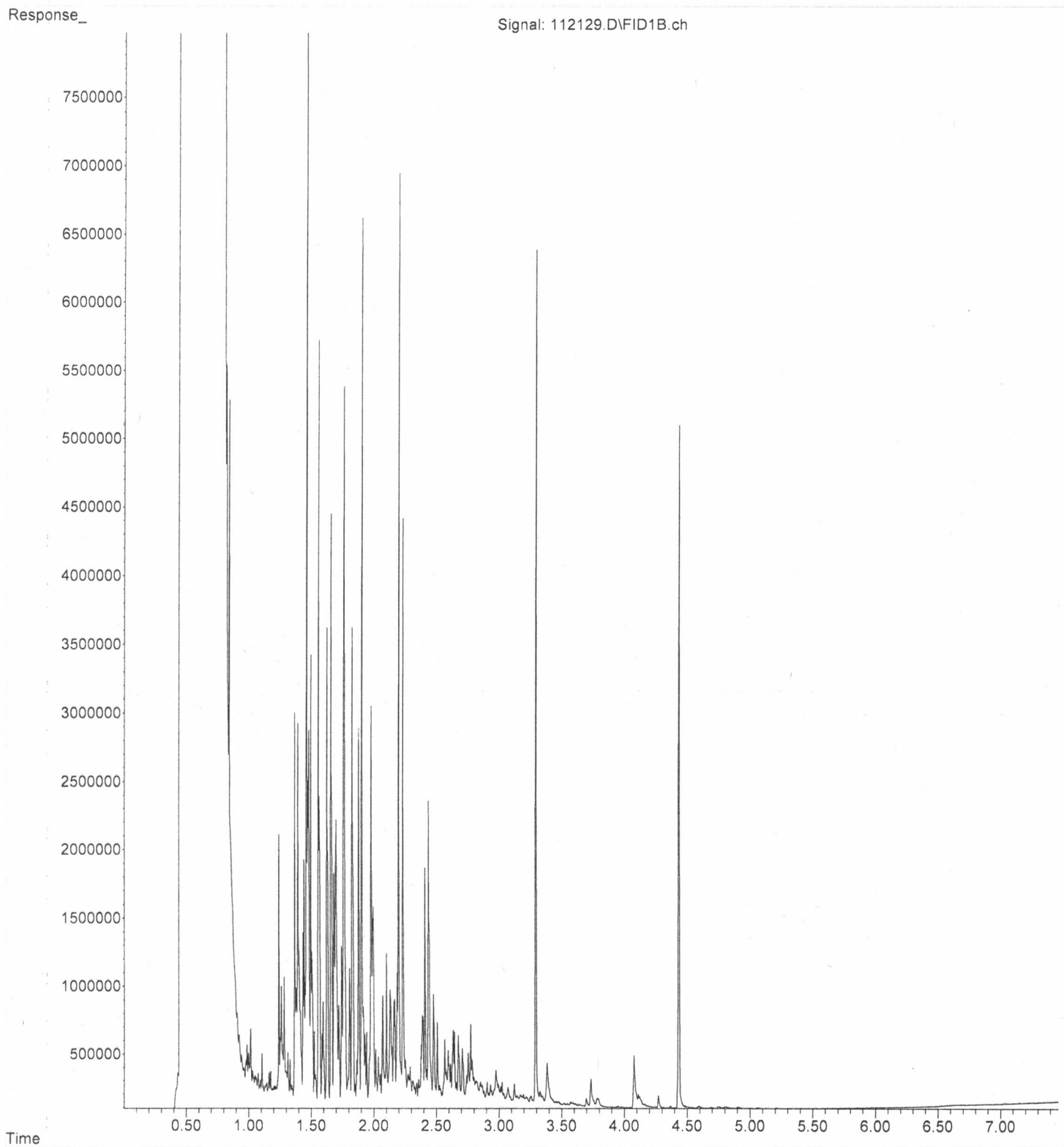
Number of unused TO15 canisters \_\_\_\_\_ Number of unused TO17 tubes \_\_\_\_\_

File : P:\Proc\_GC10\11-21-24\112128.D  
Operator : TL  
Acquired : 21 Nov 2024 04:12 pm using AcqMethod DX.M  
Instrument : GC10  
Sample Name: 411323-04  
Misc Info :  
Vial Number: 23

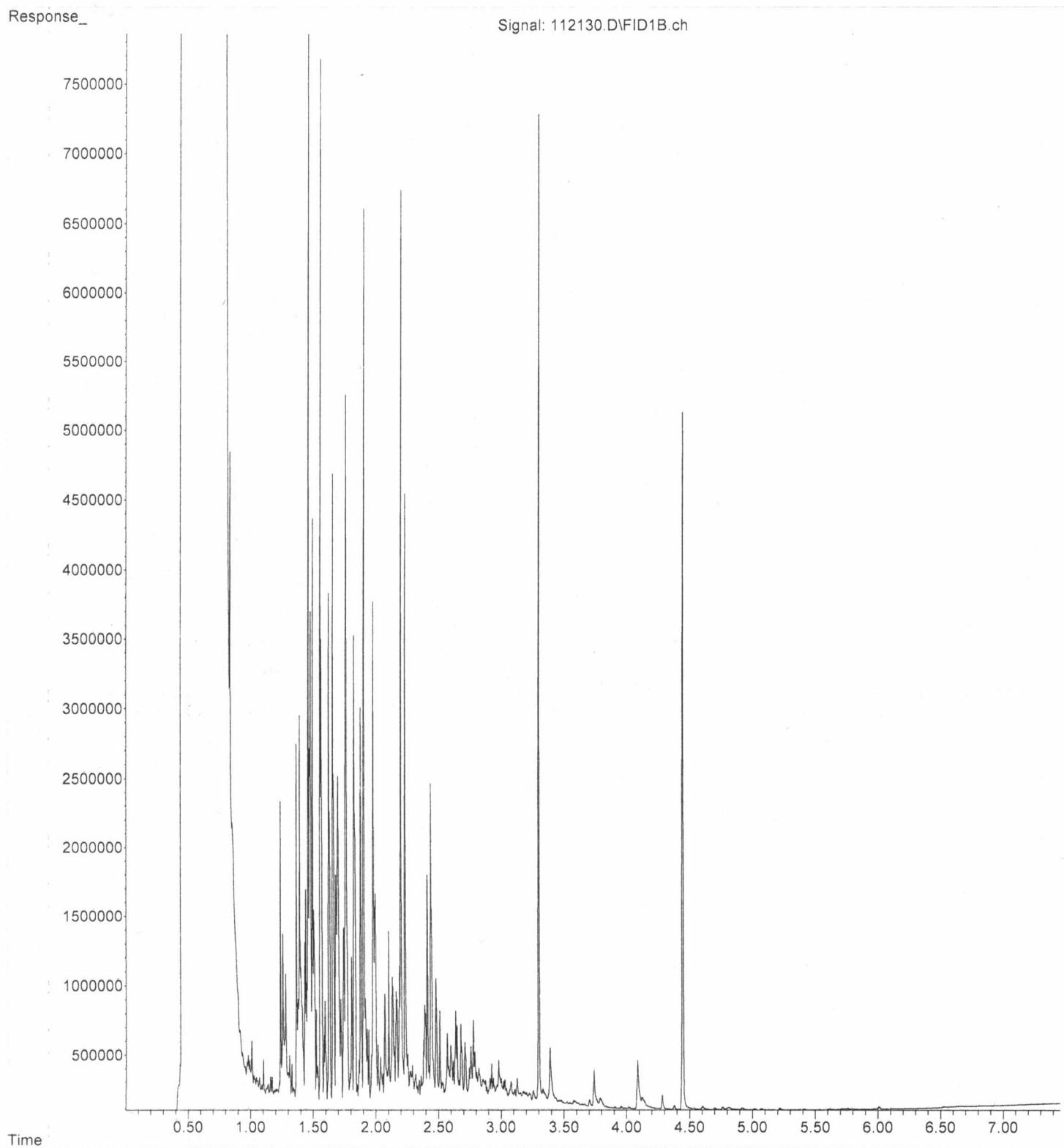




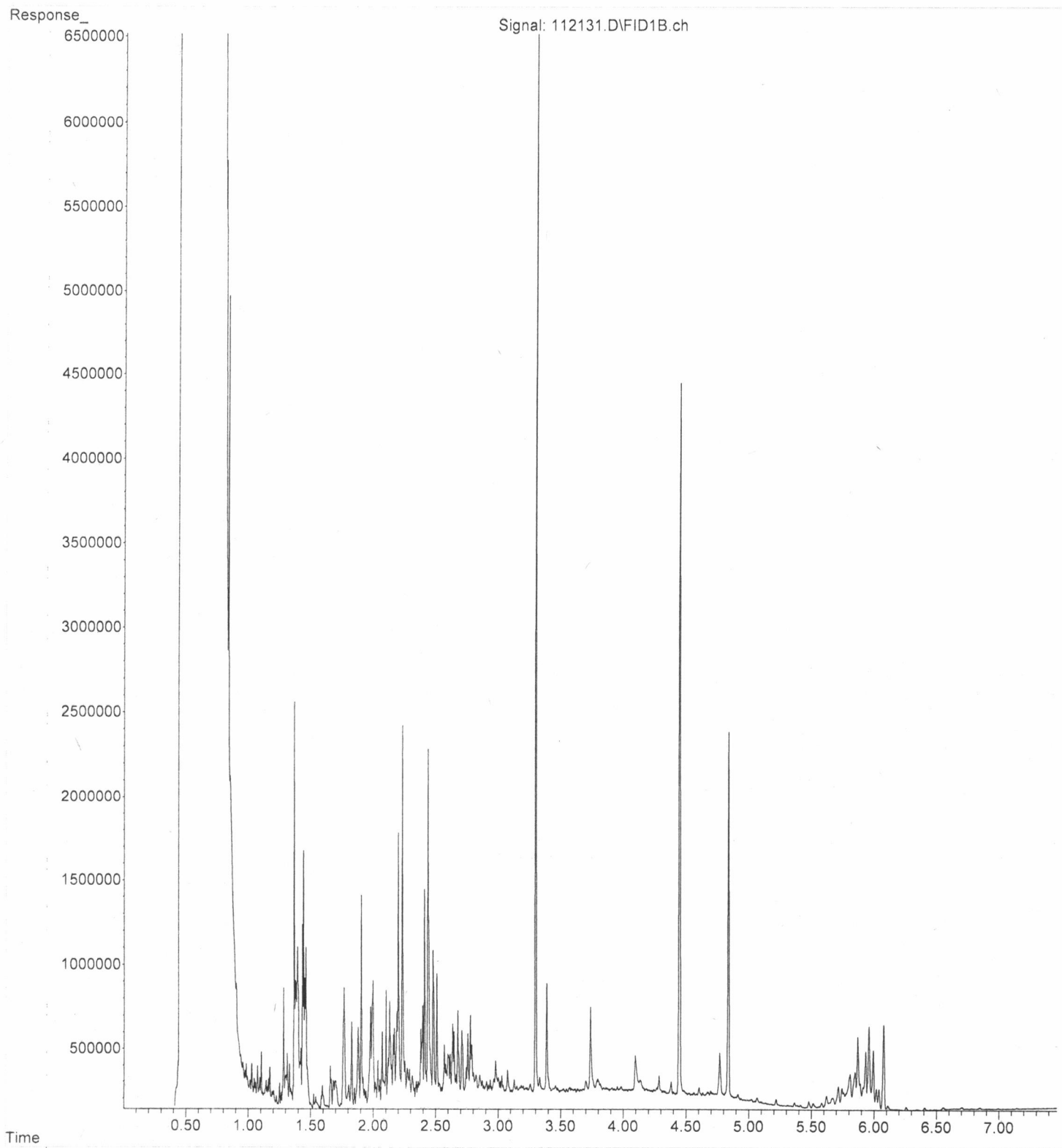
File :P:\Proc\_GC10\11-21-24\112129.D  
Operator : TL  
Acquired : 21 Nov 2024 04:23 pm using AcqMethod DX.M  
Instrument : GC10  
Sample Name: 411323-05  
Misc Info :  
Vial Number: 24



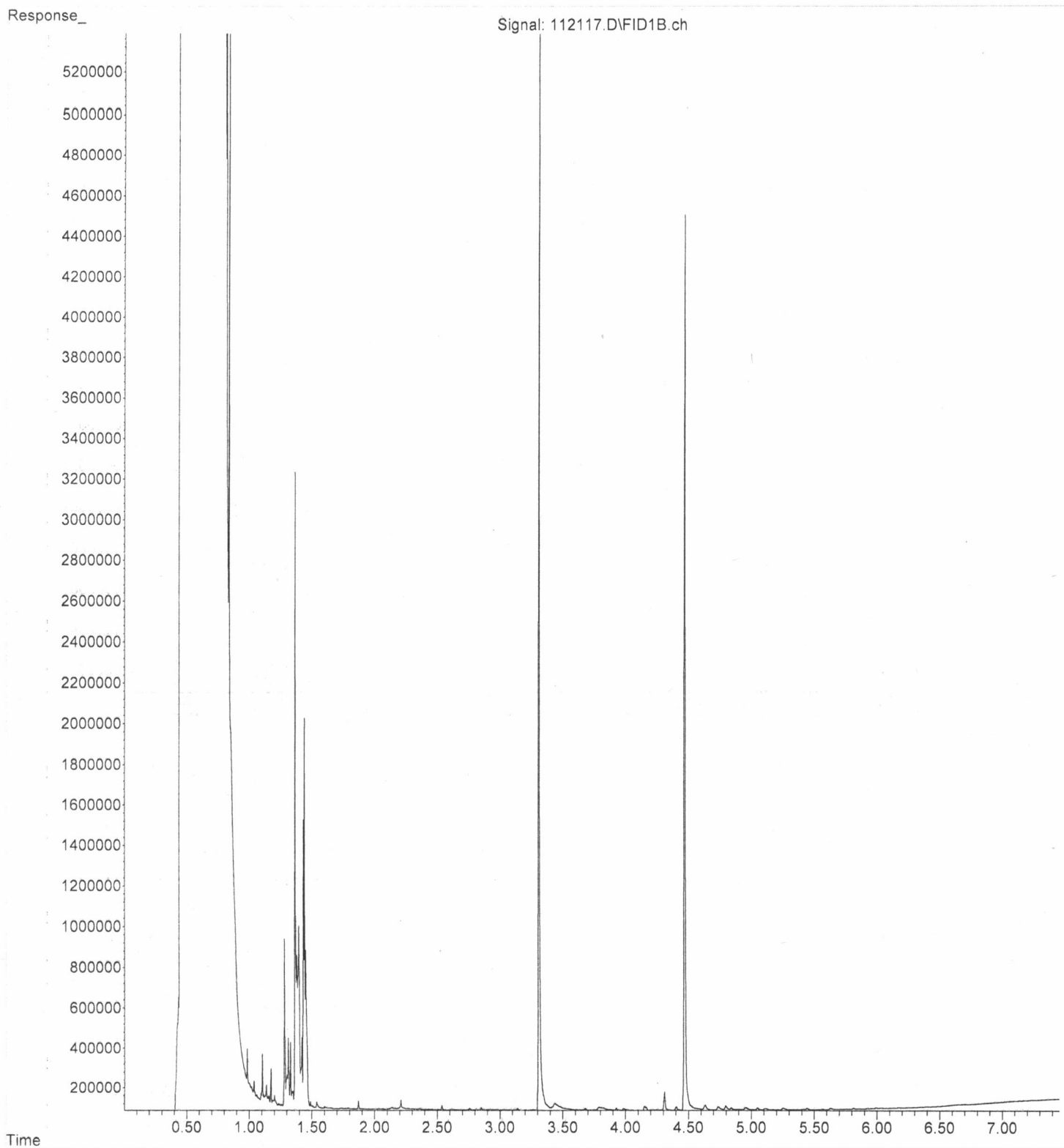
File : P:\Proc\_GC10\11-21-24\112130.D  
Operator : TL  
Acquired : 21 Nov 2024 04:35 pm using AcqMethod DX.M  
Instrument : GC10  
Sample Name: 411323-06  
Misc Info :  
Vial Number: 25



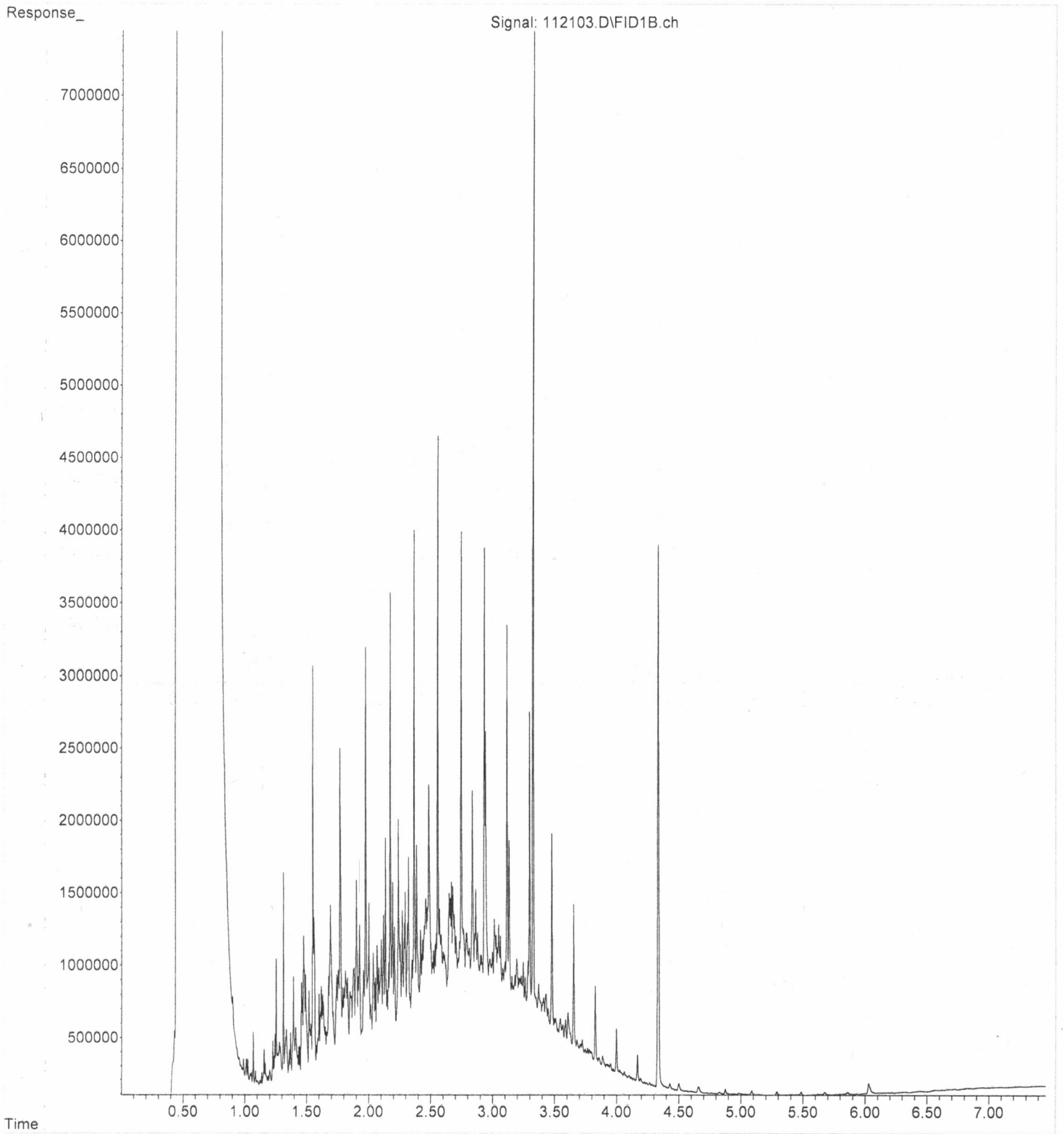
File : P:\Proc\_GC10\11-21-24\112131.D  
Operator : TL  
Acquired : 21 Nov 2024 04:47 pm using AcqMethod DX.M  
Instrument : GC10  
Sample Name: 411323-08  
Misc Info :  
Vial Number: 26



File : P:\Proc\_GC10\11-21-24\112117.D  
Operator : TL  
Acquired : 21 Nov 2024 02:02 pm using AcqMethod DX.M  
Instrument : GC10  
Sample Name: 04-2890 mb  
Misc Info :  
Vial Number: 14



File : P:\Proc\_GC10\11-21-24\112103.D  
Operator : TL  
Acquired : 21 Nov 2024 07:50 am using AcqMethod DX.M  
Instrument : GC10  
Sample Name: 500 Dx 73-88G  
Misc Info :  
Vial Number: 3



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

December 3, 2024

5500 4th Ave South  
Seattle, WA 98108-2419  
(206) 285-8282  
office@friedmanandbruya.com  
www.friedmanandbruya.com

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

Dear Ms Osterhout:

Included are the results from the testing of material submitted on November 20, 2024 from the Time Oil Seattle, F&BI 411322 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl  
Project Manager

Enclosures

c: Floyd Snider Lab Data, Kristin Anderson  
FDS1203R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 20, 2024 by Friedman & Bruya, Inc. from the Floyd-Snider Time Oil Seattle, F&BI 411322 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Floyd-Snider</u>
411322 -01	Gravity-112024
411322 -02	INF Vault-112024
411322 -03	Clear-112024

All quality control requirements were acceptable.

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Gravity-112024	Client:	Floyd-Snider
Date Received:	11/20/24	Project:	Time Oil Seattle, F&BI 411322
Date Extracted:	11/27/24	Lab ID:	411322 01 1/10
Date Analyzed:	11/27/24	Data File:	112732.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	78	126
Toluene-d8	96	84	115
4-Bromofluorobenzene	100	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	35
cis-1,2-Dichloroethene	410
Trichloroethene	370



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	INF Vault-112024	Client:	Floyd-Snider
Date Received:	11/20/24	Project:	Time Oil Seattle, F&BI 411322
Date Extracted:	11/27/24	Lab ID:	411322-02
Date Analyzed:	11/27/24	Data File:	112721.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	78	126
Toluene-d8	102	84	115
4-Bromofluorobenzene	94	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	0.22
cis-1,2-Dichloroethene	4.9
Trichloroethene	14

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Clear-112024	Client:	Floyd-Snider
Date Received:	11/20/24	Project:	Time Oil Seattle, F&BI 411322
Date Extracted:	11/27/24	Lab ID:	411322-03
Date Analyzed:	11/27/24	Data File:	112722.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	78	126
Toluene-d8	99	84	115
4-Bromofluorobenzene	97	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
cis-1,2-Dichloroethene	1.4
Trichloroethene	11

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	Floyd-Snider
Date Received:	Not Applicable	Project:	Time Oil Seattle, F&BI 411322
Date Extracted:	11/27/24	Lab ID:	04-2867 mb
Date Analyzed:	11/27/24	Data File:	112718.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	MD

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	93	78	126
Toluene-d8	96	84	115
4-Bromofluorobenzene	94	72	130

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.02
cis-1,2-Dichloroethene	<1
Trichloroethene	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/03/24

Date Received: 11/20/24

Project: Time Oil Seattle, F&BI 411322

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

Laboratory Code: 411322-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance
				Recovery MS	Criteria
Vinyl chloride	ug/L (ppb)	10	<0.02	102	50-150
cis-1,2-Dichloroethene	ug/L (ppb)	10	1.4	84	10-211
Trichloroethene	ug/L (ppb)	10	11	0 b	35-149

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Percent	Acceptance Criteria	RPD (Limit 20)
			Recovery LCS	Recovery LCSD		
Vinyl chloride	ug/L (ppb)	10	108	107	64-142	1
cis-1,2-Dichloroethene	ug/L (ppb)	10	106	100	70-130	6
Trichloroethene	ug/L (ppb)	10	96	94	70-130	2

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

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



# SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 411322 CLIENT Floyd Snider INITIALS/ AP  
DATE: 11/20/24

If custody seals are present on cooler, are they intact?  NA  YES  NO

Cooler/Sample temperature 3 °C  
Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs?  YES  NO

How did samples arrive?  
 Over the Counter  Picked up by F&BI  FedEx/UPS/GSO

Is there a Chain-of-Custody\* (COC)?  YES  NO Initials/ 11/21 JS  
\*or other representative documents, letters, and/or shipping memos Date: 11/21 JS

Number of days samples have been sitting prior to receipt at laboratory 1 days

Are the samples clearly identified? (explain "no" answer below)  YES  NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below)  YES  NO

Were appropriate sample containers used?  YES  NO  Unknown

If custody seals are present on samples, are they intact?  NA  YES  NO

Are samples requiring no headspace, headspace free?  NA  YES  NO

Is the following information provided on the COC, and does it match the sample label?  
(explain "no" answer below)

- Sample ID's  Yes  No \_\_\_\_\_  Not on COC/label
- Date Sampled  Yes  No \_\_\_\_\_  Not on COC/label
- Time Sampled  Yes  No \_\_\_\_\_  Not on COC/label
- # of Containers  Yes  No \_\_\_\_\_
- Relinquished  Yes  No \_\_\_\_\_
- Requested analysis  Yes  On Hold \_\_\_\_\_

Other comments (use a separate page if needed)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Air Samples: Were any additional canisters/tubes received?  NA  YES  NO  
Number of unused TO15 canisters \_\_\_\_\_ Number of unused TO17 tubes \_\_\_\_\_