Krazan & ASSOCIATES, INC.
GEOTECHNICAL ENGINEERING • ENVIRONMENTAL ENGINEERING
CONSTRUCTION TESTING & INSPECTION

March 14, 2022 Project No. 104-21020

Ms. Jing Song
Washington State Department of Ecology jing.song@ecy.wa.gov
15700 Dayton Avenue North (206) 594-0100
Shoreline, WA 98133

RE: Facility Site No:6865393
Seitz Property (Lots 25 & 26)
Brian Lane NW
Silverdale, Washington
VCP Project No.: NW3313

Dear Ms. Song:

We received your opinion letter of February 22, 2022. The purpose of this response is to clarify our understanding of the opinion and provide additional information relevant to the opinion. The main elements of the February 22, 2022 opinion, along with our understanding of the requests, are listed below:

1. Soil contamination is sufficiently characterized and remediated.
2. Additional groundwater monitoring wells are needed.

Former House and Drum Area

Ecology requested that we place an additional well in the former single-family residence (SFR) and drum area and that this well be sampled for TPHd and TPHo. MW-6 will be installed as requested and groundwater will be analyzed for TPHd and TPHo. Soil samples will be collected during installation and the well will be screened to straddle the water table year-round. Note, water has been detected in all monitoring wells for the last three quarters. We are scheduled to install this monitoring well at the end of March. Figure 6 shows the planned location for MW-6.

Former Debris Pile 1

Based on Figure 4 provided in the RI, Ecology noted that MW-4 was located south of the former debris pile area and requested an additional monitoring well located near and east of the Former Debris Pile 1. We intended to locate MW-4 within the former debris pile. During field work, the debris pile was found to be in a different location than indicated on the figures in our

previous reports. Based on the data quality objectives for MW-4, we field-located the monitoring well within the debris pile rather than the location identified in the RI. See the attached photographs showing the debris pile and the installation of the monitoring well (the same piece of sheet metal is identified as debris in both photos). This location fulfills the objectives for identifying groundwater impacts associated with the debris pile and better meets the criteria of representativeness based on actual site conditions. Unfortunately, we did not correct Figures 3 and 4 prior to submitting the RI. We believe that MW-4, as located in the field, is a direct measure of conditions in the location of the former debris pile. We respectfully request that you reconsider and retract your request for installation of a monitoring well in the vicinity of the former debris pile.

Please find attached revised Figure 4 and photographs showing the Former Debris Pile 1 area and drilling of the monitoring well within the former debris pile.

3. Further groundwater monitoring is needed. Ecology has requested that PAHs, PCBs, lead, and arsenic be removed from the analyte list in MW-1 through MW-5, and that future groundwater samples not be treated with Silica Gel Cleanup (SGC). We will not report SGC results for additional data collected. Groundwater data has been analyzed without SGC for all sampling and monitoring. SCG was an additional analysis for some of the groundwater sampling events. Please find attached groundwater data tables and lab reports from the third quarter groundwater monitoring report. Note that even without SGC, concentrations of TPH have been below site cleanup levels.

   In order to achieve No Further Action (NFA), all monitoring wells should have at least four consecutive quarters where contaminant concentrations are below site groundwater cleanup levels. Note that we have three quarters of groundwater data showing that concentrations of petroleum and metals in groundwater are below site cleanup levels.

4. As requested, please see the attached updated Figure 3 with the surface soil sampling locations SS-12 through SS-14. Groundwater elevation contours for each groundwater monitoring event are provided in Figures 4, 5, and 6 (attached).

5. EIM data will be submitted in order to receive a final opinion.

The entire parcel is scheduled to be cleared and graded in May for new development. No evidence of buried drums has been verified on the site. The sources of contamination have been removed. Multiple sampling events have shown that any residual contamination on the site has been limited to near surface and has been excavated and removed.

Concentrations of contaminants in groundwater have been below site cleanup levels for three quarters in MW-1 through MW-5. However, TPH has been detected and there is no evidence of releases or buried materials on site to cause these results. Eric Young at Friedman & Bruya Inc. told us it is not uncommon for shallow groundwater in wooded areas to contain organic substances that indicate detections of what appears to petroleum. Mr. Young stated that the material in groundwater samples collected at the site "*is exhibited as a ragged pattern of peaks eluting until approximately nC14 and most closely resemble what would be expected for naturally occurring organics or wood waste breakdown byproducts. Petroleum distillates tend to elute as unresolved complex mixtures (i.e. bell shaped curves with a distinct maximum) whereas the material in these samples is more indicative of several discrete compounds (no bell-shaped curve).*

The samples 2021-GW-105 and 2021-GW-106 look like they may also have a low level of water-soluble fraction of diesel or gasoline in them and the material remaining after silica gel would agree with that. The before and after silica gel results for [2021-GE-101, 103, 104, 105, and 106] all show a significant reduction in concentrations following cleanup, which confirms the presence of polar organics. The patterns are more along the lines of what [the chemist] would expect from naturally occurring organics and are not consistent with typical petroleum degradation.

We respectfully request that if all groundwater contaminants continue to be found at concentrations below cleanup level results for the next (fourth) quarter in the five existing wells and if concentrations of contaminants are not detected in the new monitoring well MW-6 for initial sampling and one additional quarter of sampling (two events), the site be granted NFA. If MW-6 has detected concentrations of TPH below site cleanup levels, sampling will continue for two additional quarters in this well, and NFA will be requested at that point. In the unlikely event concentrations are above site cleanup levels, a feasibility study to treat groundwater will be submitted.

Please contact me at (360) 265-3984 or Shawn Williams at (360) 598-2126 if you have questions or concerns.

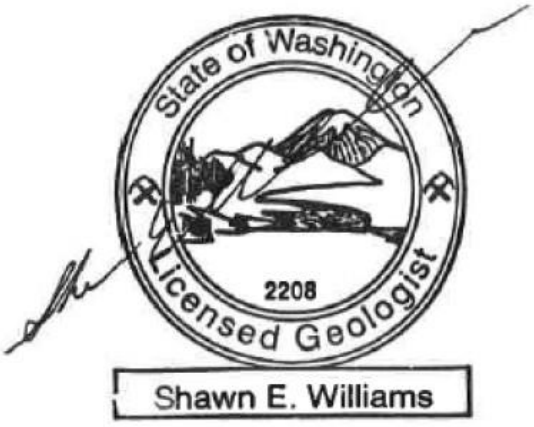
Respectfully submitted,
Krista Webb Consulting

Krista Webb
Senior Environmental Scientist

and

Krazan & Associates, Inc.

Shawn E. Williams
Regional Environmental Manager



Attachments:

- Q3 Groundwater Tables
- Site Photographs
- Revised Figures 3 and 4
- Figures 5 and 6, (groundwater elevation contour maps for each subsequent groundwater monitoring event)
- Groundwater Laboratory Data

Groundwater Level Measurements

Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Water (feet)	Water Table Elevation (feet)
MW-1	217.26	7/21/21	19.92	197.34
		10/6/21	21.95	195.31
		1/21/22	19.25	198.01
MW-2	210.21	7/21/21	13.20	197.01
		10/6/21	14.70	195.51
		1/21/22	12.20	198.01
MW-3	213.72	7/21/21	16.40	197.32
		10/6/21	17.92	195.80
		1/21/22	16.20	197.52
MW-4	208.67	7/21/21	12.70	195.97
		10/6/21	14.05	194.62
		1/21/22	10.80	197.87
MW-5	215.74	7/21/21	18.36	197.38
		10/6/21	19.94	195.80
		1/21/22	17.50	198.24

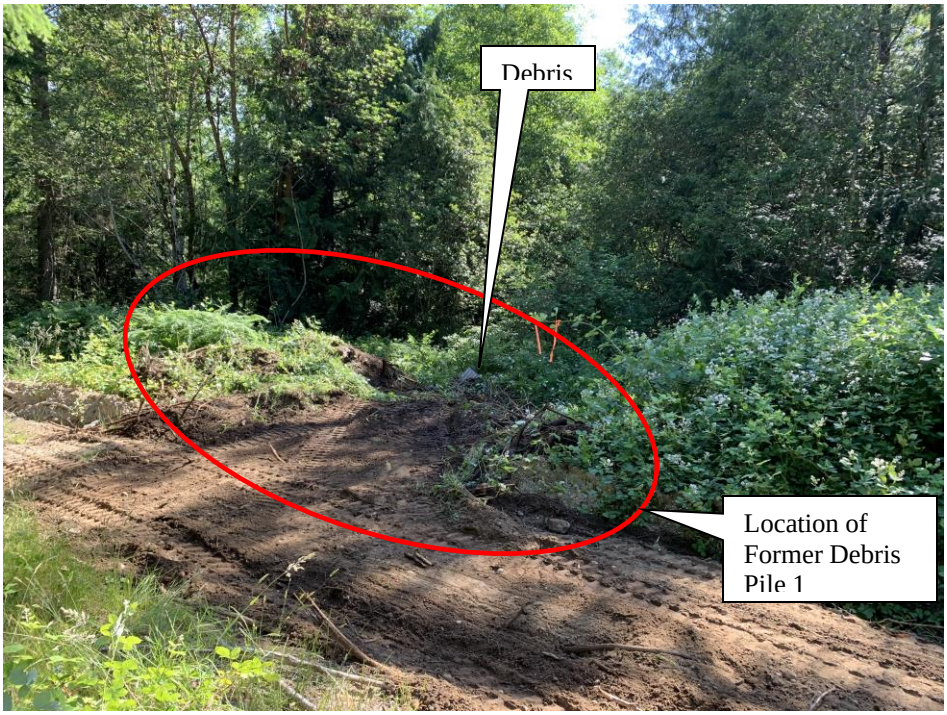
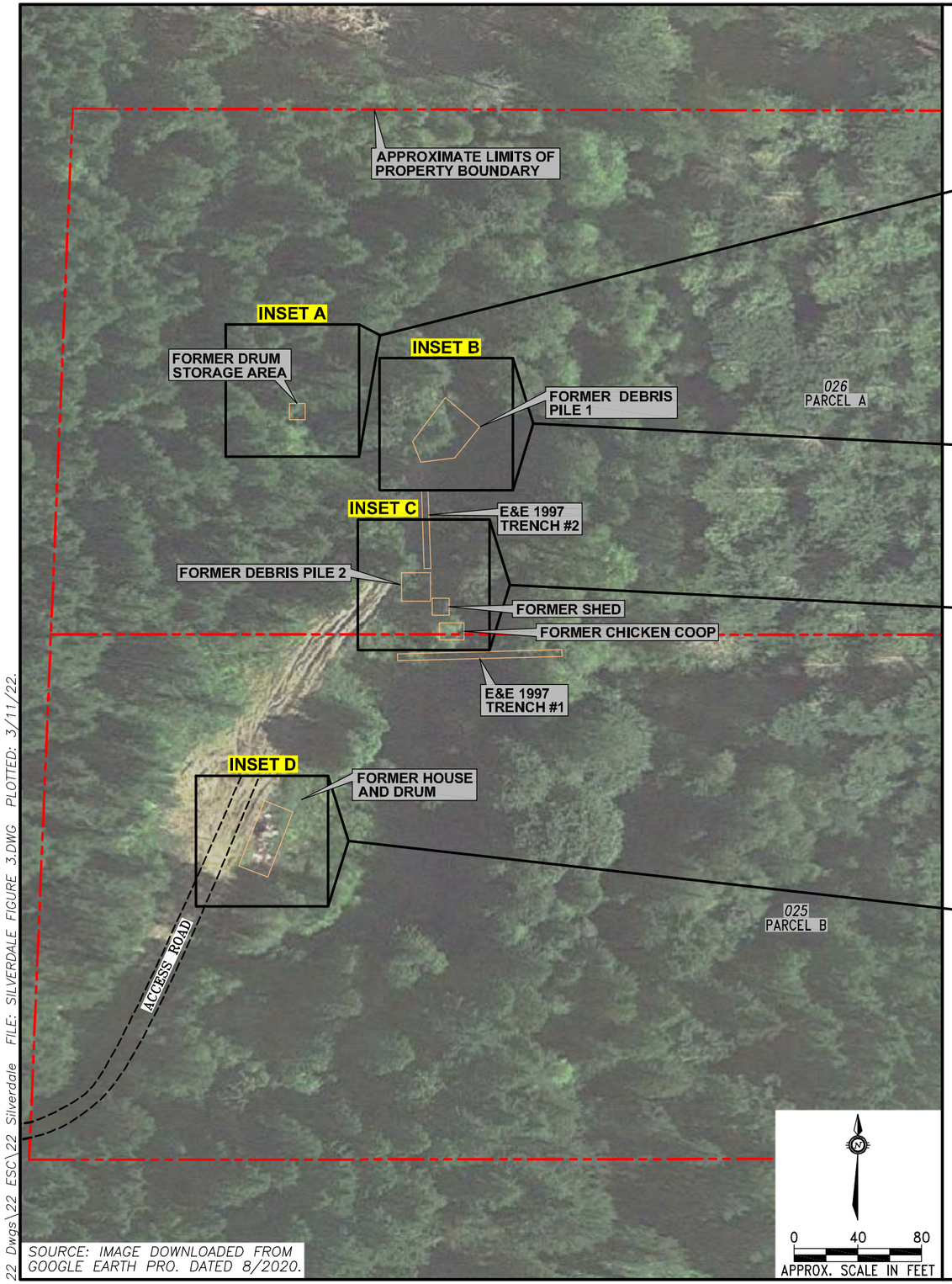
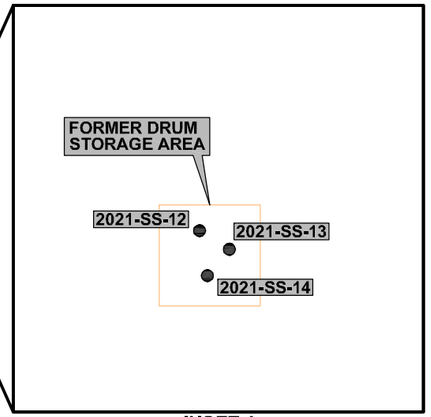


Photo 1: 6-18-21 Surface Soil Sampling – View showing location of Monitoring Well 4, in the area of former Debris Pile 1, prior to installation.

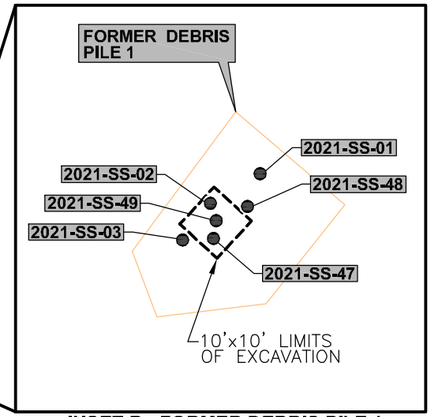
Photo 2: 7-13-21 Monitoring Well Installation – View showing the location of Monitoring Well 4 in the location of former Debris Pile 1.



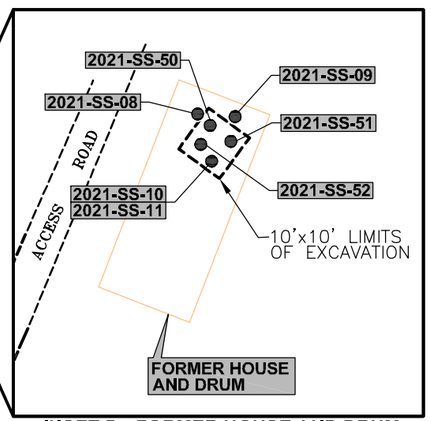
SOURCE: IMAGE DOWNLOADED FROM GOOGLE EARTH PRO. DATED 8/2020.



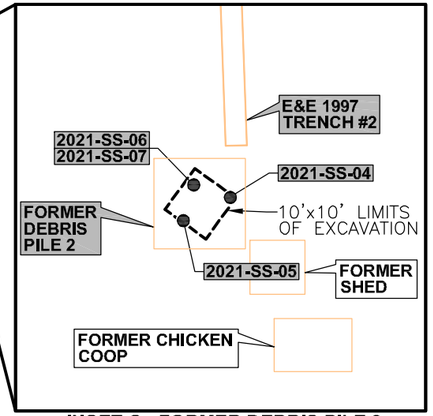
INSET A
FORMER DRUM STORAGE AREA
SAMPLING LOCATIONS
NOT TO SCALE



INSET B - FORMER DEBRIS PILE 1
SAMPLING LOCATIONS
NOT TO SCALE



INSET D - FORMER HOUSE AND DRUM
SAMPLING LOCATIONS
NOT TO SCALE



INSET C - FORMER DEBRIS PILE 2
SAMPLING LOCATIONS
NOT TO SCALE

LEGEND
● 2021 SOIL SAMPLE LOCATION

NOTES:
INSET A: REFERENCE TABLES 4 AND TABLE 5.
INSET B: REFERENCE TABLES 4 AND TABLE 9.
INSET C: REFERENCE TABLE 4.
INSET D: REFERENCE TABLES 5 AND TABLE 9, FOR ALL ANALYTICAL RESULTS.

FIGURE 3

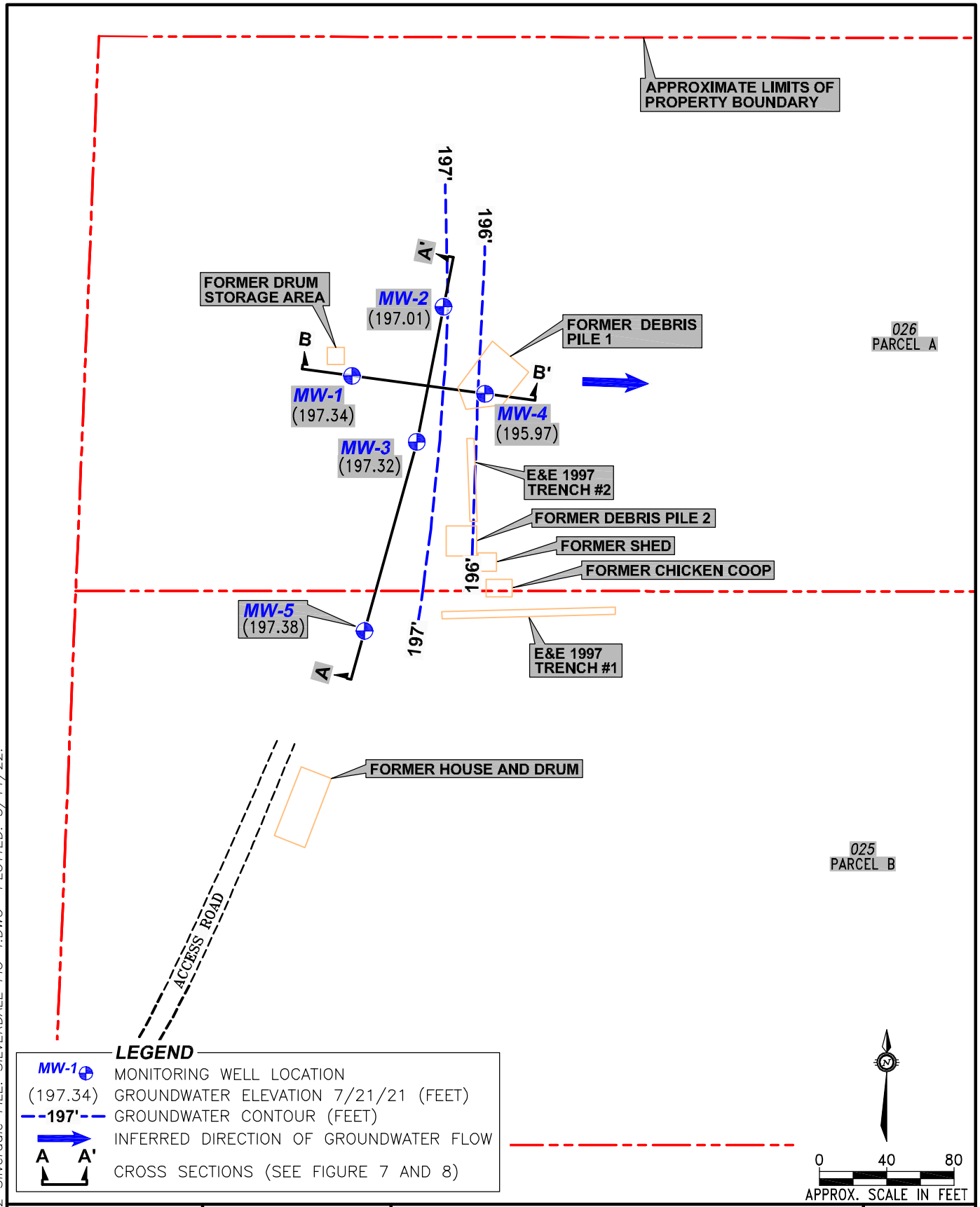
SOIL SAMPLING LOCATIONS

JSP SILVERDALE LOTS 25 AND 26
Silverdale, Washington

Krazan

DATE: MARCH 2022
REV.: –
CHKD: K.L.W.
DRAWN: C.E.H.
PROJ. No.: 104-21020

22 Dwgs\22 ESC\22 Silverdale FILE: SILVERDALE FIGURE 3.DWG PLOTTED: 3/11/22.



22 Dwgs\22 ESC\22 Silverdale FILE: SILVERDALE FIG 4.DWG PLOTTED: 3/11/22.

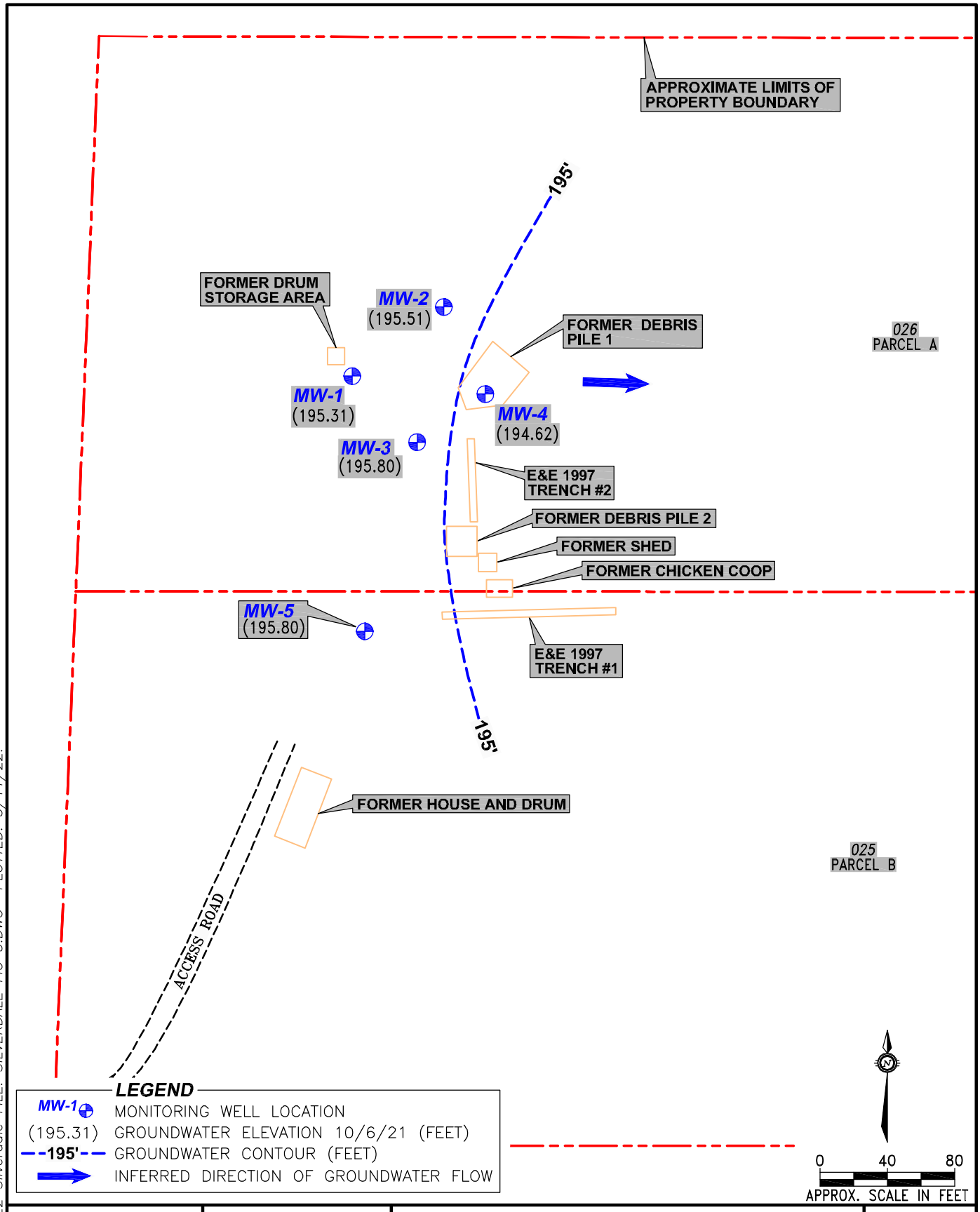
DATE: MARCH 2022
REV.: –
CHKD: K.L.W.
DRAWN: C.E.H.
PROJ. No.: 104-21020

Krazan

JULY 2021 WATER TABLE MAP

JSP SILVERDALE LOTS 25 AND 26
Silverdale, Washington

FIGURE
4



22 Dwgs\22 ESC\22 Silverdale FILE: SILVERDALE FIG 5.DWG PLOTTED: 3/11/22.

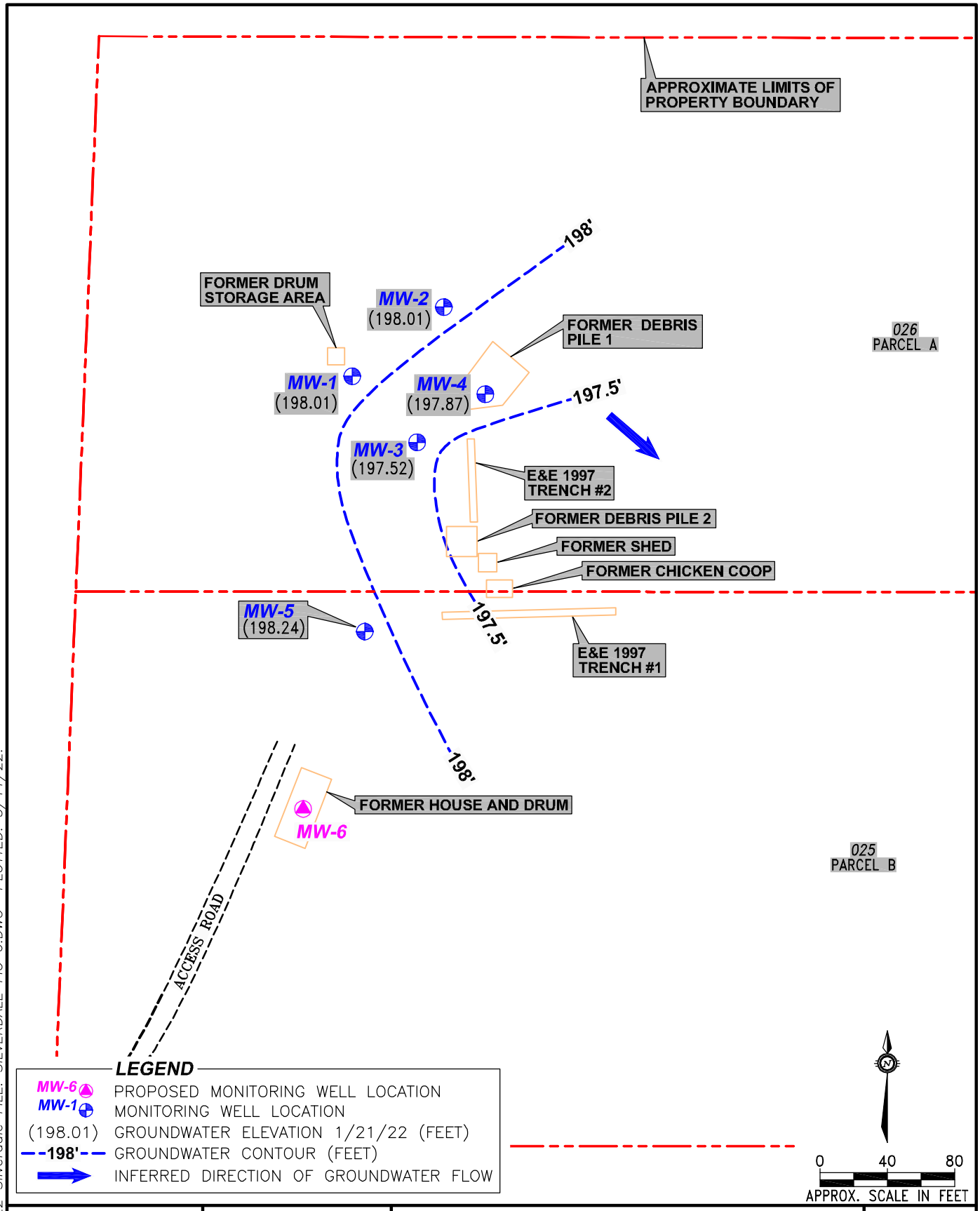
DATE: MARCH 2022
REV.: –
CHKD: K.L.W.
DRAWN: C.E.H.
PROJ. No.: 104-21020

Krazan

OCTOBER 2021 WATER TABLE MAP

JSP SILVERDALE LOTS 25 AND 26
Silverdale, Washington

FIGURE
5



22 Dwgs\22 ESC\22 Silverdale FILE: SILVERDALE FIG 6.DWG PLOTTED: 3/11/22.

DATE: MARCH 2022
REV.: –
CHKD: K.L.W.
DRAWN: C.E.H.
PROJ. No.: 104-21020

Krazan

JANUARY 2022 WATER TABLE MAP

JSP SILVERDALE LOTS 25 AND 26
Silverdale, Washington

FIGURE

6

Groundwater Laboratory Data

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

July 29, 2021

Shawn Williams, Project Manager
Krazan & Associates
1230 Finn Hill Rd NW, Suite A
Poulsbo, WA 98370

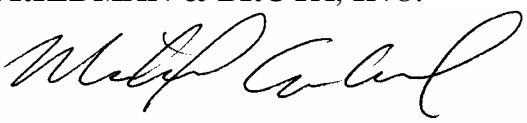
Dear Mr Williams:

Included are the results from the testing of material submitted on July 21, 2021 from the Lots 25 and 26, F&BI 107352 project. There are 38 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
KZP0729R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on July 21, 2020 by Friedman & Bruya, Inc. from the Krazan & Associates Lots 25 and 26, F&BI 107352 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Krazan & Associates
107352 -01	2021-GW-101
107352 -02	2021-GW-102
107352 -03	2021-GW-103
107352 -04	2021-GW-104
107352 -05	2021-GW-105
107352 -06	2021-GW-106
107352 -07	Trip Blank

All quality control requirements were acceptable.

Date of Report: 07/29/21
Date Received: 07/21/21
Project: Lots 25 and 26, F&BI 107352
Date Extracted: 07/27/21
Date Analyzed: 07/27/21

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
2021-GW-101 107352-01	<1	<1	<1	<3	<100	82
2021-GW-102 107352-02	<1	<1	<1	<3	<100	81
2021-GW-103 107352-03	<1	<1	<1	<3	<100	80
2021-GW-104 107352-04	<1	<1	<1	<3	<100	80
2021-GW-105 107352-05	<1	<1	<1	3.3	370	79
2021-GW-106 107352-06	<1	<1	<1	3.1	380	80
Method Blank 01-1658 MB	<1	<1	<1	<3	<100	80

Date of Report: 07/29/21
Date Received: 07/21/21
Project: Lots 25 and 26, F&BI 107352
Date Extracted: 07/23/21
Date Analyzed: 07/23/21

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 41-152)
2021-GW-101 107352-01	180 x	<250	107
2021-GW-102 107352-02	<50	<250	90
2021-GW-103 107352-03	210 x	<250	101
2021-GW-104 107352-04 1/1.2	130 x	<300	103
2021-GW-105 107352-05	420 x	<250	91
2021-GW-106 107352-06	340 x	<250	97
Method Blank 01-1728 MB	<50	<250	86

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	2021-GW-101 f	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/28/21	Lab ID:	107352-01
Date Analyzed:	07/28/21	Data File:	107352-01.089
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	2021-GW-102 f	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/28/21	Lab ID:	107352-02
Date Analyzed:	07/28/21	Data File:	107352-02.092
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	2021-GW-103 f	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/28/21	Lab ID:	107352-03
Date Analyzed:	07/28/21	Data File:	107352-03.093
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	2021-GW-104 f	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/28/21	Lab ID:	107352-04
Date Analyzed:	07/28/21	Data File:	107352-04.094
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	2021-GW-105 f	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/28/21	Lab ID:	107352-05
Date Analyzed:	07/28/21	Data File:	107352-05.095
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	2021-GW-106 f	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/28/21	Lab ID:	107352-06
Date Analyzed:	07/28/21	Data File:	107352-06.096
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	Method Blank f	Client:	Krazan & Associates
Date Received:	NA	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/28/21	Lab ID:	I1-455 mb
Date Analyzed:	07/28/21	Data File:	I1-455 mb.083
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	2021-GW-101	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/23/21	Lab ID:	107352-01
Date Analyzed:	07/23/21	Data File:	107352-01.164
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	2021-GW-102	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/23/21	Lab ID:	107352-02
Date Analyzed:	07/23/21	Data File:	107352-02.167
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	2021-GW-103	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/23/21	Lab ID:	107352-03
Date Analyzed:	07/23/21	Data File:	107352-03.168
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	2021-GW-104	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/23/21	Lab ID:	107352-04
Date Analyzed:	07/23/21	Data File:	107352-04.169
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	2021-GW-105	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/23/21	Lab ID:	107352-05
Date Analyzed:	07/23/21	Data File:	107352-05.170
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	2021-GW-106	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/23/21	Lab ID:	107352-06
Date Analyzed:	07/26/21	Data File:	107352-06.038
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Krazan & Associates
Date Received:	NA	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/23/21	Lab ID:	I1-448 mb
Date Analyzed:	07/23/21	Data File:	I1-448 mb.133
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	2021-GW-101	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/22/21	Lab ID:	107352-01 1/2
Date Analyzed:	07/23/21	Data File:	072311.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	43	11	65
Phenol-d6	29	11	65
Nitrobenzene-d5	75	50	150
2-Fluorobiphenyl	68	44	108
2,4,6-Tribromophenol	95	10	140
Terphenyl-d14	101	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	<0.04
Fluorene	<0.04
Phenanthrene	<0.04
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	2021-GW-102	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/22/21	Lab ID:	107352-02 1/2
Date Analyzed:	07/23/21	Data File:	072312.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	35	11	65
Phenol-d6	29	11	65
Nitrobenzene-d5	72	50	150
2-Fluorobiphenyl	67	44	108
2,4,6-Tribromophenol	85	10	140
Terphenyl-d14	92	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	<0.04
Fluorene	<0.04
Phenanthrene	<0.04
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	2021-GW-103	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/22/21	Lab ID:	107352-03 1/2
Date Analyzed:	07/23/21	Data File:	072313.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	26	11	65
Phenol-d6	27	11	65
Nitrobenzene-d5	73	50	150
2-Fluorobiphenyl	65	44	108
2,4,6-Tribromophenol	67	10	140
Terphenyl-d14	94	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	<0.04
Fluorene	<0.04
Phenanthrene	<0.04
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	2021-GW-104	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/22/21	Lab ID:	107352-04 1/2
Date Analyzed:	07/23/21	Data File:	072314.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	35	11	65
Phenol-d6	28	11	65
Nitrobenzene-d5	82	50	150
2-Fluorobiphenyl	71	44	108
2,4,6-Tribromophenol	82	10	140
Terphenyl-d14	101	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	<0.04
Fluorene	<0.04
Phenanthrene	<0.04
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	2021-GW-105	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/22/21	Lab ID:	107352-05 1/2
Date Analyzed:	07/23/21	Data File:	072315.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	27	11	65
Phenol-d6	30	11	65
Nitrobenzene-d5	81	50	150
2-Fluorobiphenyl	71	44	108
2,4,6-Tribromophenol	59	10	140
Terphenyl-d14	96	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	<0.04
Fluorene	<0.04
Phenanthrene	<0.04
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	2021-GW-106	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/22/21	Lab ID:	107352-06 1/2
Date Analyzed:	07/23/21	Data File:	072316.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	35	11	65
Phenol-d6	29	11	65
Nitrobenzene-d5	78	50	150
2-Fluorobiphenyl	69	44	108
2,4,6-Tribromophenol	82	10	140
Terphenyl-d14	99	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	<0.04
Fluorene	<0.04
Phenanthrene	<0.04
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Krazan & Associates
Date Received:	Not Applicable	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/22/21	Lab ID:	01-1694 mb
Date Analyzed:	07/23/21	Data File:	072310.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	20	11	65
Phenol-d6	12	11	65
Nitrobenzene-d5	81	50	150
2-Fluorobiphenyl	72	44	108
2,4,6-Tribromophenol	63	10	140
Terphenyl-d14	94	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	<0.02
Fluorene	<0.02
Phenanthrene	<0.02
Anthracene	<0.02
Fluoranthene	<0.02
Pyrene	<0.02
Benz(a)anthracene	<0.02
Chrysene	<0.02
Benzo(a)pyrene	<0.02
Benzo(b)fluoranthene	<0.02
Benzo(k)fluoranthene	<0.02
Indeno(1,2,3-cd)pyrene	<0.02
Dibenz(a,h)anthracene	<0.02
Benzo(g,h,i)perylene	<0.04

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	2021-GW-101	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/23/21	Lab ID:	107352-01
Date Analyzed:	07/23/21	Data File:	072312.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	33	24	127

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	2021-GW-102	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/23/21	Lab ID:	107352-02
Date Analyzed:	07/23/21	Data File:	072313.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	47	24	127

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	2021-GW-103	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/23/21	Lab ID:	107352-03
Date Analyzed:	07/23/21	Data File:	072314.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	43	24	127

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	2021-GW-104	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/23/21	Lab ID:	107352-04
Date Analyzed:	07/23/21	Data File:	072315.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	42	24	127

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	2021-GW-105	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/23/21	Lab ID:	107352-05
Date Analyzed:	07/23/21	Data File:	072316.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	42	24	127

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	2021-GW-106	Client:	Krazan & Associates
Date Received:	07/21/21	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/23/21	Lab ID:	107352-06
Date Analyzed:	07/23/21	Data File:	072317.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	53	24	127

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	Krazan & Associates
Date Received:	Not Applicable	Project:	Lots 25 and 26, F&BI 107352
Date Extracted:	07/23/21	Lab ID:	01-1727 mb
Date Analyzed:	07/23/21	Data File:	072310.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	49	24	127

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Date of Report: 07/29/21
Date Received: 07/21/21
Project: Lots 25 and 26, F&BI 107352

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

Laboratory Code: 107352-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Benzene	ug/L (ppb)	50	<1	85	87	50-150	2
Toluene	ug/L (ppb)	50	<1	88	90	50-150	2
Ethylbenzene	ug/L (ppb)	50	<1	95	97	50-150	2
Xylenes	ug/L (ppb)	150	<3	90	91	50-150	1
Gasoline	ug/L (ppb)	1,000	<100	92	95	53-117	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	94	65-118
Toluene	ug/L (ppb)	50	98	72-122
Ethylbenzene	ug/L (ppb)	50	101	73-126
Xylenes	ug/L (ppb)	150	96	74-118
Gasoline	ug/L (ppb)	1,000	100	69-134

Date of Report: 07/29/21
Date Received: 07/21/21
Project: Lots 25 and 26, F&BI 107352

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

Laboratory Code: 107352-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	<250	133	123	50-150	8

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	ug/L (ppb)	2,500	115	63-142

Date of Report: 07/29/21
Date Received: 07/21/21
Project: Lots 25 and 26, F&BI 107352

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 6020B

Laboratory Code: 107352-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	<1	98	97	75-125	1
Lead	ug/L (ppb)	50	<1	92	90	75-125	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	94	80-120
Lead	ug/L (ppb)	50	92	80-120

Date of Report: 07/29/21
Date Received: 07/21/21
Project: Lots 25 and 26, F&BI 107352

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 107352-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	<1	100	99	75-125	1
Lead	ug/L (ppb)	10	<1	99	99	75-125	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	93	80-120
Lead	ug/L (ppb)	10	100	80-120

Date of Report: 07/29/21
Date Received: 07/21/21
Project: Lots 25 and 26, F&BI 107352

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: 107352-01 1/2 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	5	<0.4	76	65	50-150	16
2-Methylnaphthalene	ug/L (ppb)	5	<0.4	81	70	50-150	15
1-Methylnaphthalene	ug/L (ppb)	5	<0.4	82	70	50-150	16
Acenaphthylene	ug/L (ppb)	5	<0.04	84	77	50-150	9
Acenaphthene	ug/L (ppb)	5	<0.04	83	75	50-150	10
Fluorene	ug/L (ppb)	5	<0.04	89	82	50-150	8
Phenanthrene	ug/L (ppb)	5	<0.04	90	83	50-150	8
Anthracene	ug/L (ppb)	5	<0.04	90	85	50-150	6
Fluoranthene	ug/L (ppb)	5	<0.04	95	89	50-150	7
Pyrene	ug/L (ppb)	5	<0.04	98	88	50-150	11
Benz(a)anthracene	ug/L (ppb)	5	<0.04	98	91	50-150	7
Chrysene	ug/L (ppb)	5	<0.04	96	89	50-150	8
Benzo(a)pyrene	ug/L (ppb)	5	<0.04	99	93	50-150	6
Benzo(b)fluoranthene	ug/L (ppb)	5	<0.04	99	94	50-150	5
Benzo(k)fluoranthene	ug/L (ppb)	5	<0.04	99	91	50-150	8
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	<0.04	95	92	50-150	3
Dibenz(a,h)anthracene	ug/L (ppb)	5	<0.04	94	90	50-150	4
Benzo(g,h,i)perylene	ug/L (ppb)	5	<0.08	106	100	50-150	6

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Naphthalene	ug/L (ppb)	5	74	62-90
2-Methylnaphthalene	ug/L (ppb)	5	81	64-93
1-Methylnaphthalene	ug/L (ppb)	5	81	64-93
Acenaphthylene	ug/L (ppb)	5	82	70-130
Acenaphthene	ug/L (ppb)	5	79	70-130
Fluorene	ug/L (ppb)	5	84	70-130
Phenanthrene	ug/L (ppb)	5	88	70-130
Anthracene	ug/L (ppb)	5	88	70-130
Fluoranthene	ug/L (ppb)	5	95	70-130
Pyrene	ug/L (ppb)	5	95	70-130
Benz(a)anthracene	ug/L (ppb)	5	97	70-130
Chrysene	ug/L (ppb)	5	97	70-130
Benzo(a)pyrene	ug/L (ppb)	5	99	70-130
Benzo(b)fluoranthene	ug/L (ppb)	5	99	70-130
Benzo(k)fluoranthene	ug/L (ppb)	5	97	70-130
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	94	70-130
Dibenz(a,h)anthracene	ug/L (ppb)	5	92	70-130
Benzo(g,h,i)perylene	ug/L (ppb)	5	106	70-130

Date of Report: 07/29/21
Date Received: 07/21/21
Project: Lots 25 and 26, F&BI 107352

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR POLYCHLORINATED BIPHENYLS AS AROCLOR 1016/1260 BY EPA METHOD 8082A

Laboratory Code: 107352-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	ug/L (ppb)	0.25	<0.1	53	54	50-150	2
Aroclor 1260	ug/L (ppb)	0.25	<0.1	58	57	50-150	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Aroclor 1016	ug/L (ppb)	0.25	52	25-111
Aroclor 1260	ug/L (ppb)	0.25	81	23-123

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

ip - Recovery fell outside of control limits due to sample matrix effects.

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

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

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

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

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

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

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

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

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

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

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

107352

SAMPLE CHAIN OF CUSTODY

ME 07/21/21 VWS/AIG

Page # 1 of 1 E04

Report To Shawn Williams

Company Krazan

Address 1230 Finn Hill Road NW Suite A

City, State, ZIP Poulsbo, WA 98370

Phone 360-598-2126 Email Shawn.williams@krazan.com

SAMPLERS (*signature*)

PROJECT NAME: Lots 25 and 26

PO #

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082		Lead	Arsenic	MS/MSD	Notes
																	Total / Dissolved
2021-GW-101	01A-AD	7/21/21	12:00pm	water	30	X	X	X			X	X		X	X	X	Metals per
2021-GW-102	02A-J		10:30am		10	X	X	X			X	X		X	X		SW 7/22/21
2021-GW-103	03		11:05am		10	X	X	X			X	X		X	X		ME
2021-GW-104	04		9:50am		10	X	X	X			X	X		X	X		
2021-GW-105	05		9:00am		10	X	X	X			X	X		X	X		
2021-GW-106	06	↓	9:00 am	↓	10	X	X	X			X	X		X	X		
Trip Blank	07AB	—	—	water	2												Added at lab (NP) 7/22

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Chloe Barrett	Krazan		
Received by:	Abbigail Cotwell	PBI	7/21/21	1650
Relinquished by:				
Received by:		Samples received at 6.0°C		

KP

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

August 4, 2021

Shawn Williams, Project Manager
Krazan & Associates
1230 Finn Hill Rd NW, Suite A
Poulsbo, WA 98370

Dear Mr Williams:

Included are the additional results from the testing of material submitted on July 21, 2021 from the Lots 25 and 26, F&BI 107352 project. There are 4 pages included in this report.

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
KZP0804R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on July 21, 2020 by Friedman & Bruya, Inc. from the Krazan & Associates Lots 25 and 26, F&BI 107352 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Krazan & Associates
107352 -01	2021-GW-101
107352 -02	2021-GW-102
107352 -03	2021-GW-103
107352 -04	2021-GW-104
107352 -05	2021-GW-105
107352 -06	2021-GW-106
107352 -07	Trip Blank

All quality control requirements were acceptable.

Date of Report: 08/04/21
Date Received: 07/21/21
Project: Lots 25 and 26, F&BI 107352
Date Extracted: 07/23/21
Date Analyzed: 08/02/21

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

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 41-152)
2021-GW-101 107352-01	<50	<250	110
2021-GW-103 107352-03	<50	<250	96
2021-GW-104 107352-04	<60	<300	105
2021-GW-105 107352-05	86 x	<250	99
2021-GW-106 107352-06	84 x	<250	95
Method Blank 01-1728 MB	<50	<250	98

Date of Report: 08/04/21
Date Received: 07/21/21
Project: Lots 25 and 26, F&BI 107352

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

Laboratory Code: 107352-01 (Matrix Spike) Silica Gel

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	<50	103	95	50-150	8

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	ug/L (ppb)	2,500	92	63-142

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

ip - Recovery fell outside of control limits due to sample matrix effects.

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

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

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

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

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

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

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

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

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

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

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

107352

SAMPLE CHAIN OF CUSTODY

ME 07/21/21 VWS/AIG

Page 1 of 1

E04

Report To Shawn Williams
Company Krazan
Address 1230 Finn Hill Road NW Suite A
City, State, ZIP Poulsbo, WA 98370
Phone 360-598-2126 Email Shawn williams@krazan.com

SAMPLERS (signature) [signature]
PROJECT NAME Lots 25 and 26
PO #
REMARKS
Project specific RLs? - Yes / No
INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

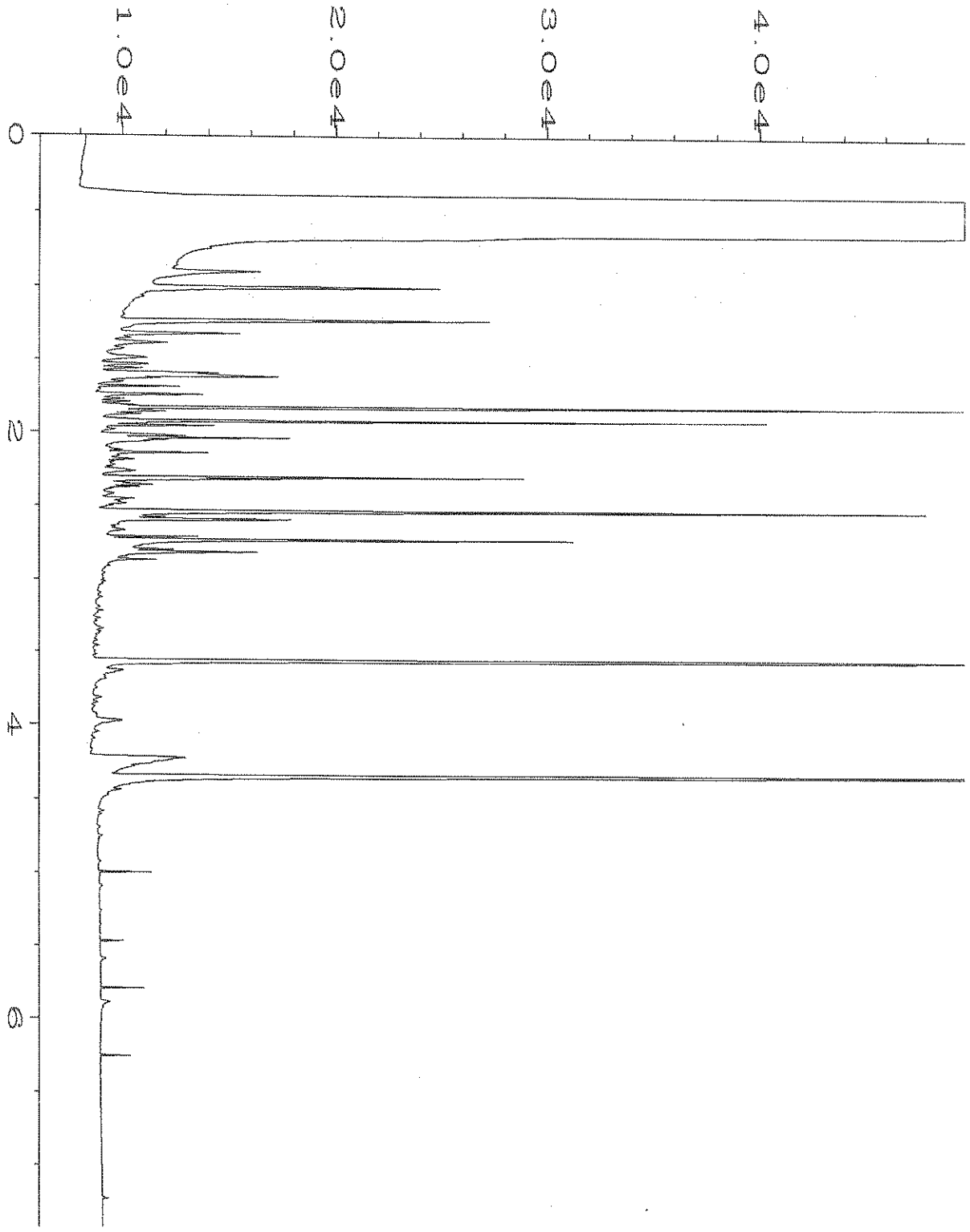
SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Dx w/Silica Gel	Lead	Arsenic	MS/MSD	Notes
																	Total / Dissolved
2021-GW-101	01 A-AD	7/21/21	12:00pm	water	30	X	X	X			X	X	●	X	X	X	Metals per
2021-GW-102	02 A-J		10:30am		10	X	X	X			X	X		X	X		SW 7/22/21
2021-GW-103	03		11:05am		10	X	X	X			X	X	●	X	X		ME
2021-GW-104	04		9:50am		10	X	X	X			X	X	●	X	X		● per SW
2021-GW-105	05		9:00am		10	X	X	X			X	X	●	X	X		8/2/21 ME
2021-GW-106	06	↓	9:00 am	↓	10	X	X	X			X	X	●	X	X		
Trip Blank	07 A B	—	—	water	2												Added at lab (NP) 7/22

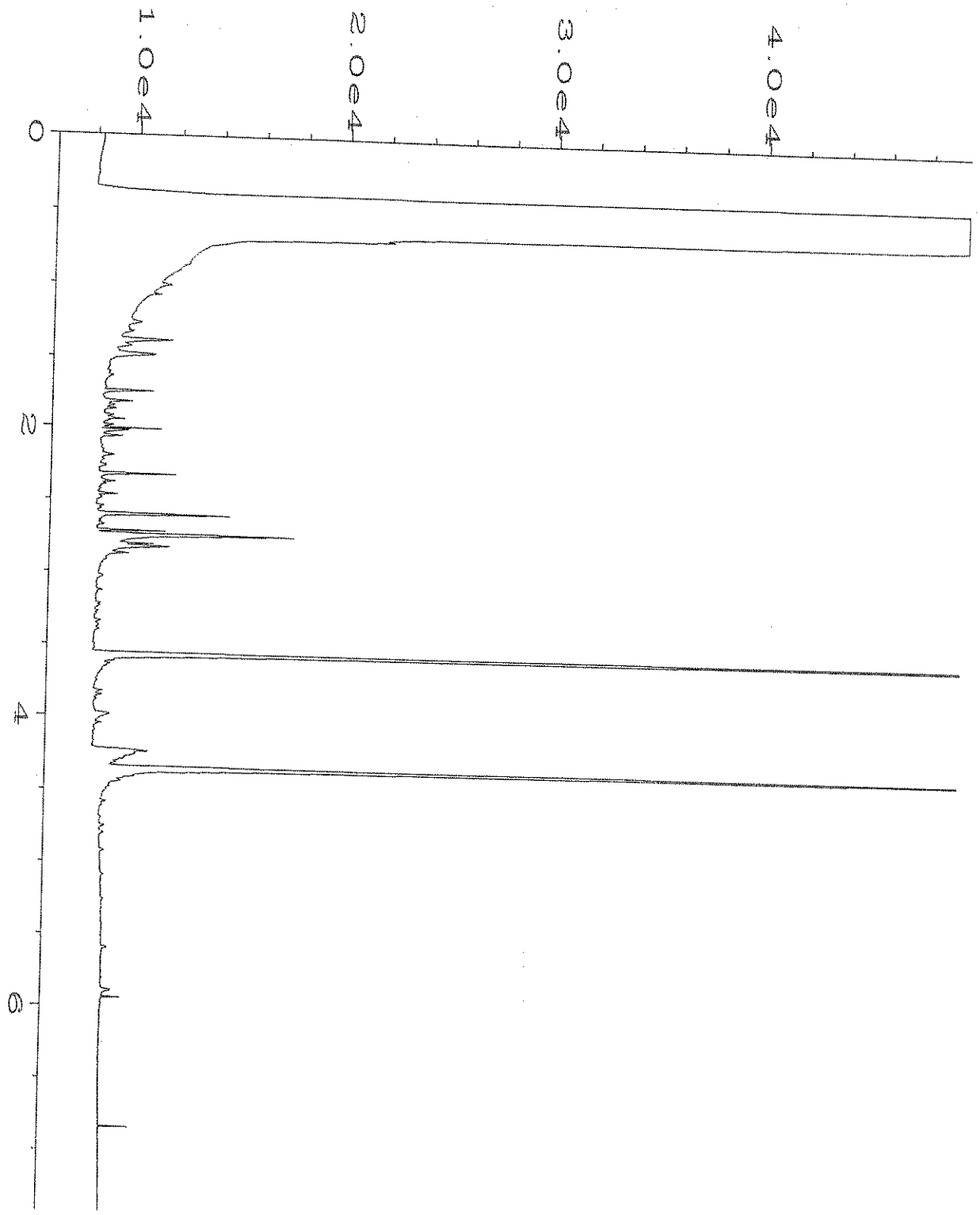
SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Chloe Barrett	Krazan		
Received by: [signature]	Abbigail Cotwen	FBI	7/21/21	1650
Relinquished by:				
Received by:		Samples received at 6 °C		

KP

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



Data File Name	: C:\HPCHEM\1\DATA\07-23-21\029F0501.D		
Operator	: TL	Page Number	: 1
Instrument	: GC1	Vial Number	: 29
Sample Name	: 107352-01	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 5
Acquired on	: 23 Jul 21 02:53 PM	Instrument Method	: DX.MTH
Report Created on	: 26 Jul 21 12:14 PM	Analysis Method	: DEFAULT.MTH



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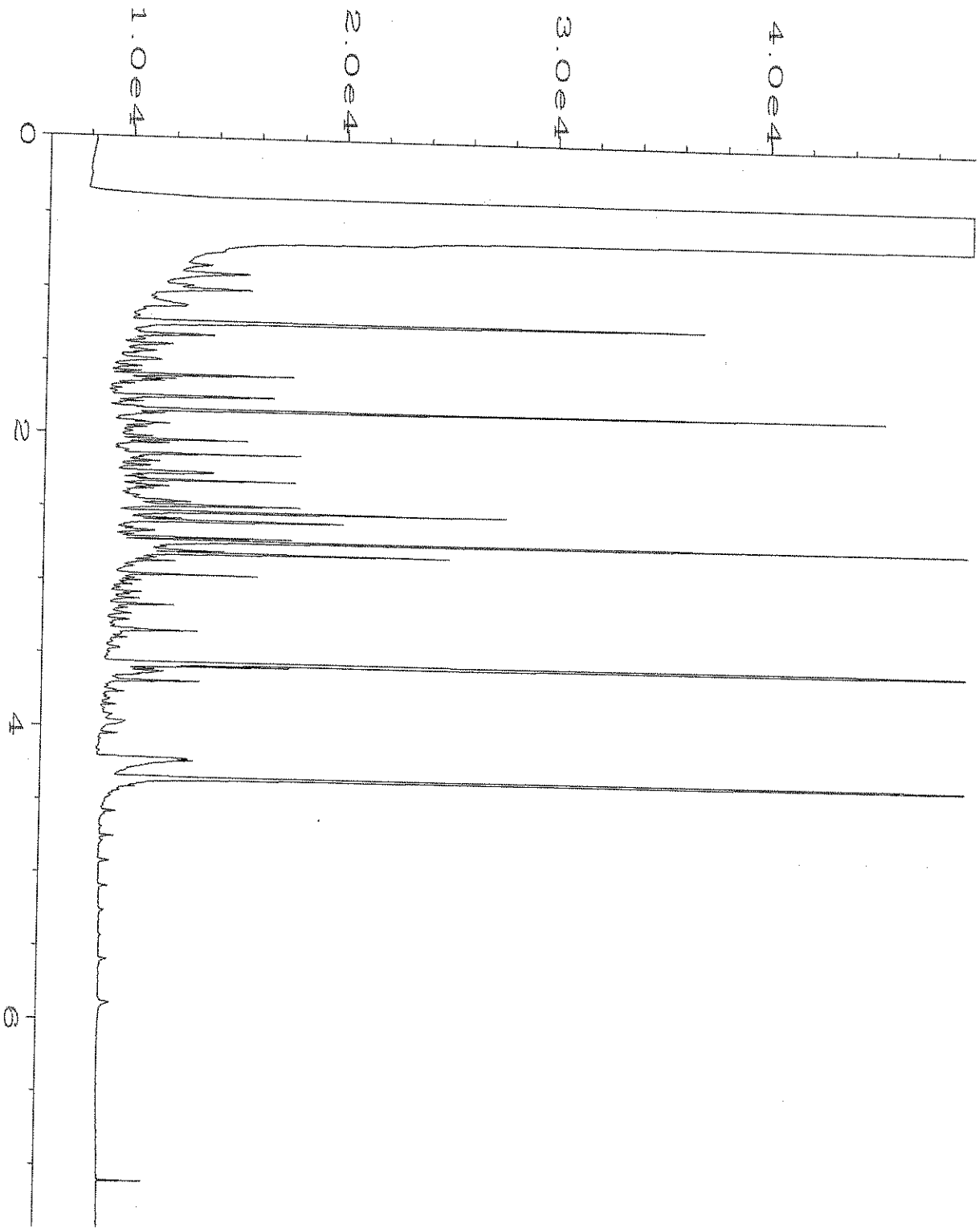
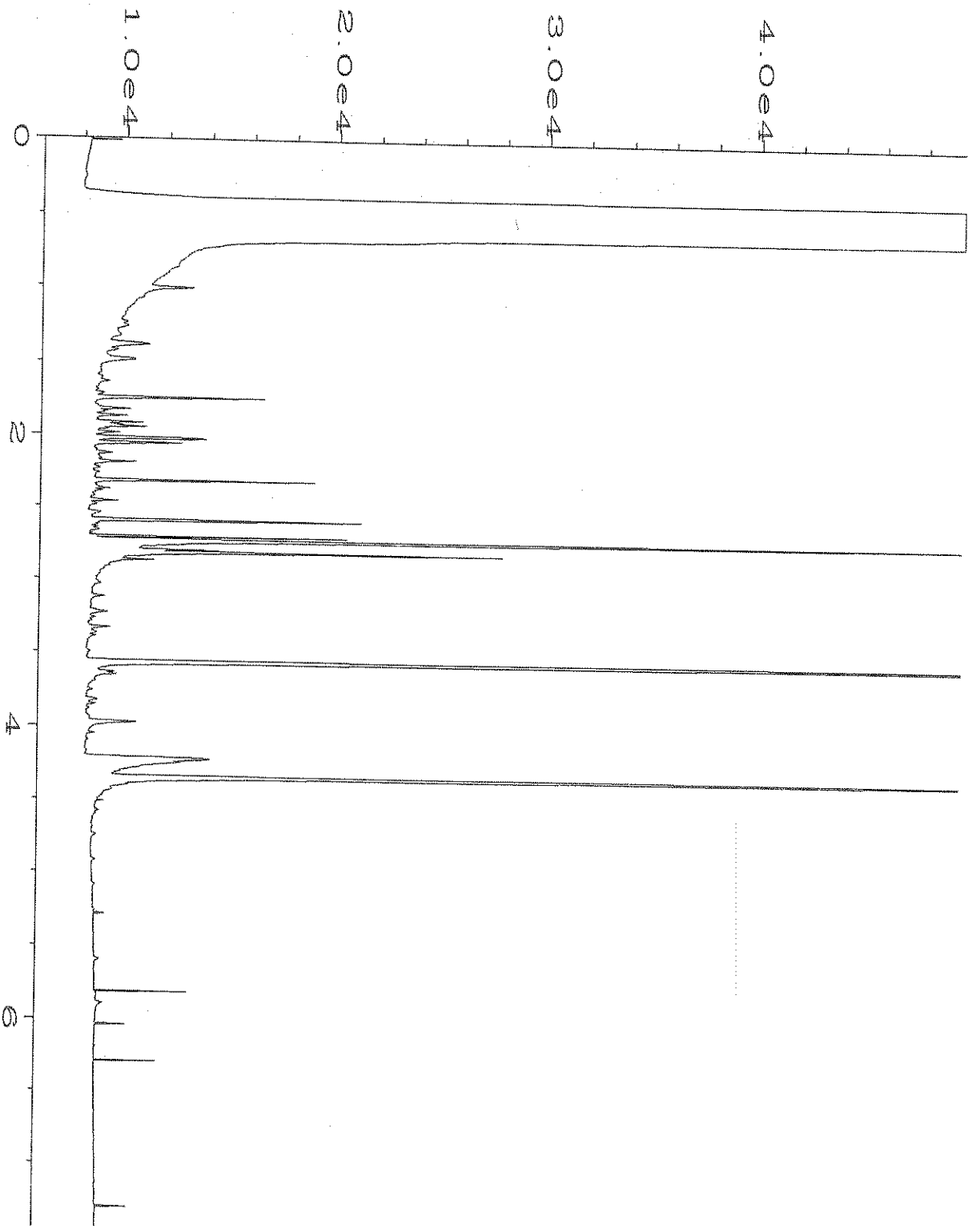
Operator : TL
Instrument : GC1
Sample Name : 107352-02
Run Time Bar Code:
Acquired on : 23 Jul 21 03:05 PM
Report Created on: 26 Jul 21 12:14 PM

Page Number : 1
Vial Number : 30
Injection Number : 1
Sequence Line : 5
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



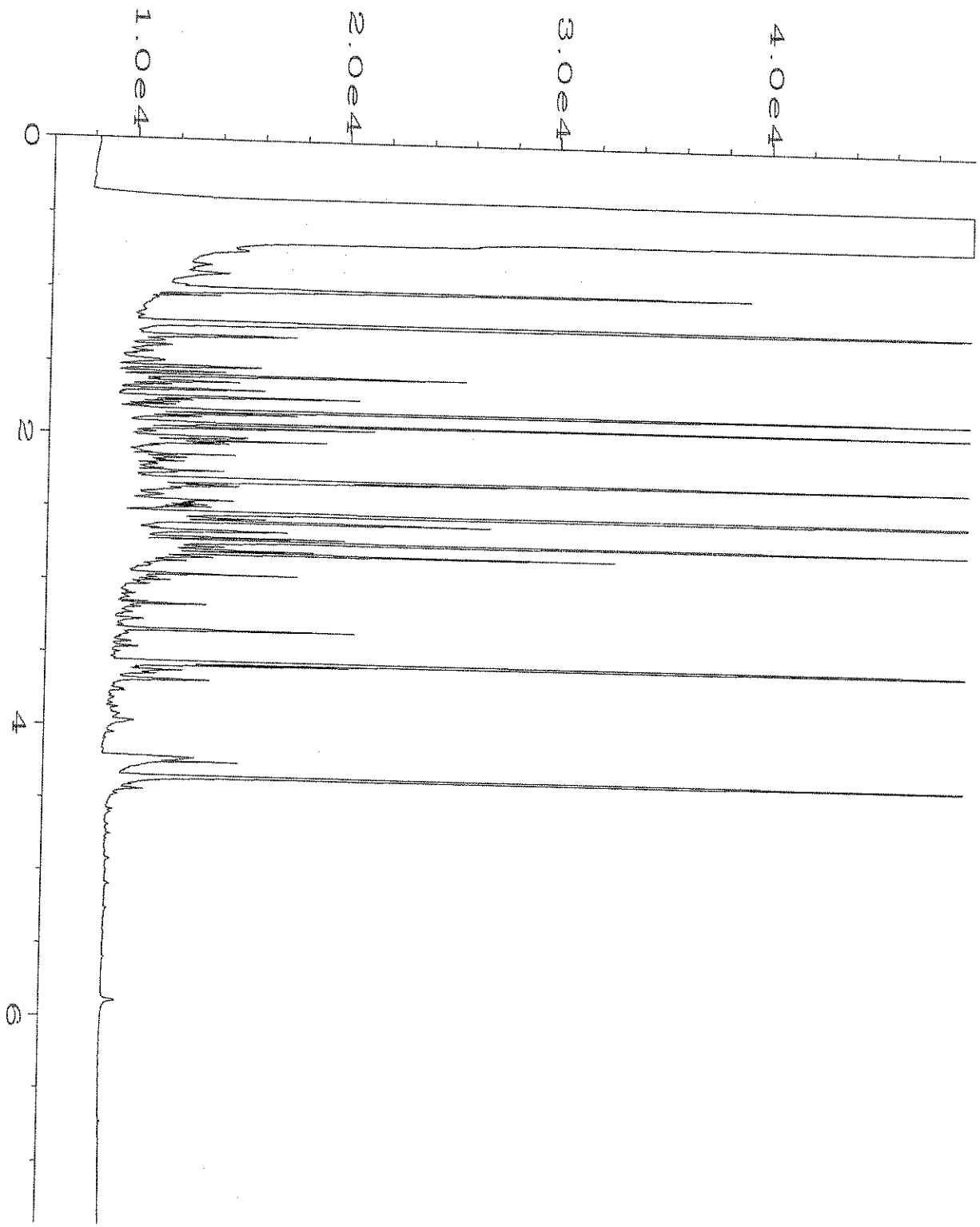
Data File Name : C:\HPCHEM\1\DATA\07-23-21\031F0501.D
Operator : TL
Instrument : GC1
Sample Name : 107352-03
Run Time Bar Code:
Acquired on : 23 Jul 21 03:17 PM
Report Created on: 26 Jul 21 12:15 PM

Page Number : 1
Vial Number : 31
Injection Number : 1
Sequence Line : 5
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



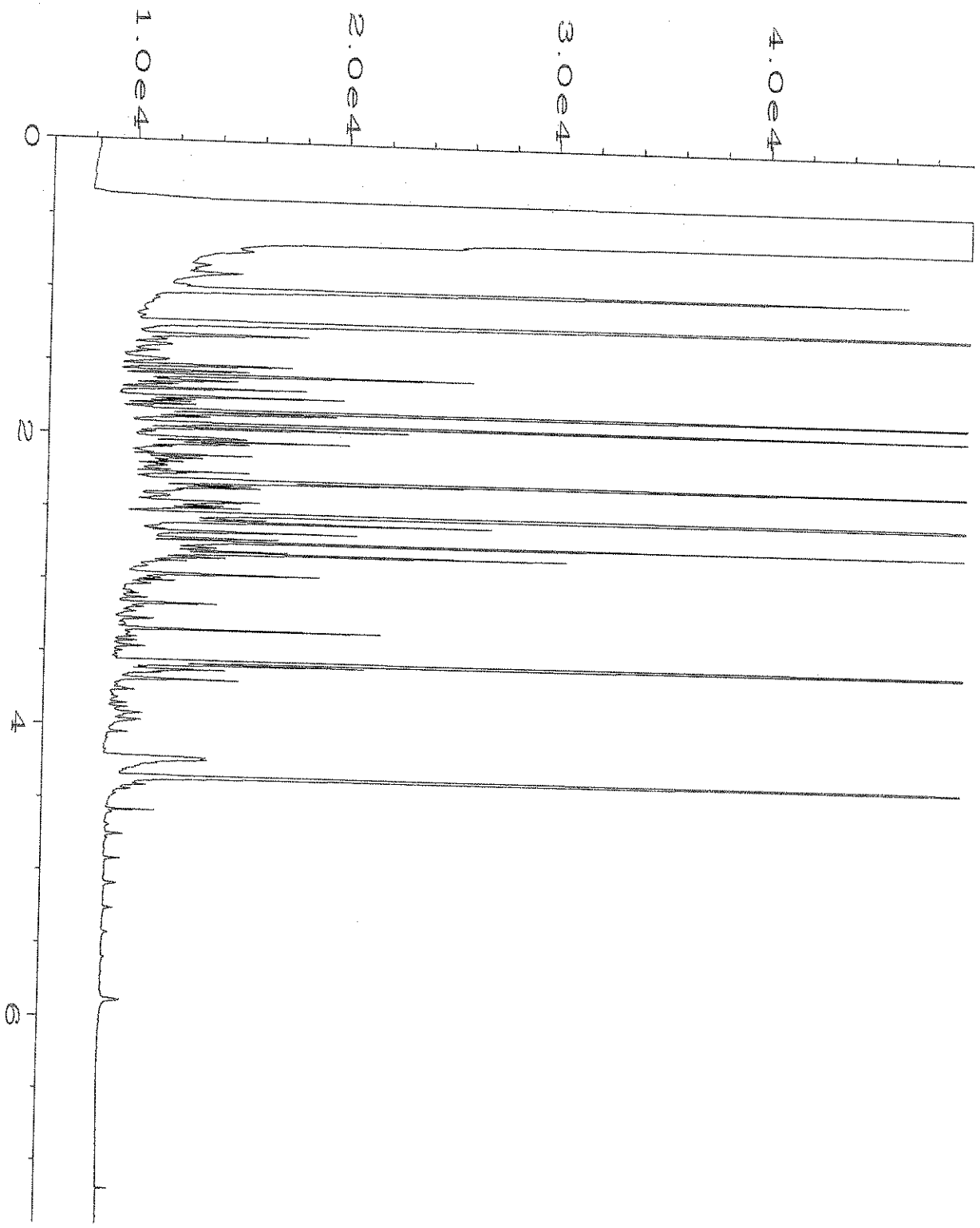
Data File Name : C:\HPCHEM\1\DATA\07-23-21\032F0501.D
Operator : TL
Instrument : GC1
Sample Name : 107352-04
Run Time Bar Code:
Acquired on : 23 Jul 21 03:28 PM
Report Created on: 26 Jul 21 12:15 PM

Page Number : 1
Vial Number : 32
Injection Number : 1
Sequence Line : 5
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



Data File Name : C:\HPCHEM\1\DATA\07-23-21\033F0501.D
Operator : TL
Instrument : GC1
Sample Name : 107352-05
Run Time Bar Code:
Acquired on : 23 Jul 21 03:40 PM
Report Created on: 26 Jul 21 12:15 PM

Page Number : 1
Vial Number : 33
Injection Number : 1
Sequence Line : 5
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



Data File Name : C:\HPCHEM\1\DATA\07-23-21\034F0501.D
Operator : TL
Instrument : GC1
Sample Name : 107352-06
Run Time Bar Code:
Acquired on : 23 Jul 21 03:52 PM
Report Created on: 26 Jul 21 12:15 PM

Page Number : 1
Vial Number : 34
Injection Number : 1
Sequence Line : 5
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

October 18, 2021

Shawn Williams, Project Manager
Krazan & Associates (Poulsbo)
1230 Finn Hill Rd NW, Suite A
Poulsbo, WA 98370

Dear Mr Williams:

Included are the results from the testing of material submitted on October 7, 2021 from the Lots 25 and 26, F&BI 110159 project. There are 39 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
KZP1018R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 7, 2021 by Friedman & Bruya, Inc. from the Krazan & Associates (Poulsbo) Lots 25 and 26, F&BI 110159 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Krazan & Associates (Poulsbo)
110159 -01	2021-GW-201
110159 -02	2021-GW-202
110159 -03	2021-GW-203
110159 -04	2021-GW-204
110159 -05	2021-GW-205
110159 -06	2021-GW-206
110159 -07	Trip Blank

The dissolved metals samples were filtered at Friedman and Bruya on October 8, 2020 at 12:22. The data were flagged accordingly.

All other quality control requirements were acceptable.

Date of Report: 10/18/21
Date Received: 10/07/21
Project: Lots 25 and 26, F&BI 110159
Date Extracted: 10/11/21
Date Analyzed: 10/11/21

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
2021-GW-201 110159-01	<1	<1	<1	<3	<100	95
2021-GW-202 110159-02	<1	<1	<1	<3	<100	85
2021-GW-203 110159-03	<1	<1	<1	<3	<100	95
2021-GW-204 110159-04	<1	<1	<1	<3	<100	95
2021-GW-205 110159-05	<1	<1	<1	<3	<100	92
2021-GW-206 110159-06	<1	<1	<1	<3	<100	78
Method Blank 01-2294 MB	<1	<1	<1	<3	<100	95

Date of Report: 10/18/21
Date Received: 10/07/21
Project: Lots 25 and 26, F&BI 110159
Date Extracted: 10/13/21
Date Analyzed: 10/13/21

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 41-152)
2021-GW-201 110159-01	<60	<300	109
2021-GW-202 110159-02	73 x	<250	100
2021-GW-203 110159-03	<60	<300	107
2021-GW-204 110159-04	<50	<250	113
2021-GW-205 110159-05	<50	<250	108
2021-GW-206 110159-06	<50	<250	109
Method Blank 01-2356 MB	<50	<250	111

Analysis For Total Metals By EPA Method 6020B

Client ID:	2021-GW-201	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/13/21	Lab ID:	110159-01
Date Analyzed:	10/14/21	Data File:	110159-01.209
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	2021-GW-202	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/13/21	Lab ID:	110159-02
Date Analyzed:	10/14/21	Data File:	110159-02.210
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	2021-GW-203	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/13/21	Lab ID:	110159-03
Date Analyzed:	10/14/21	Data File:	110159-03.213
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	2021-GW-204	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/13/21	Lab ID:	110159-04
Date Analyzed:	10/14/21	Data File:	110159-04.214
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	2021-GW-205	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/13/21	Lab ID:	110159-05
Date Analyzed:	10/14/21	Data File:	110159-05.215
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	2021-GW-206	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/13/21	Lab ID:	110159-06
Date Analyzed:	10/14/21	Data File:	110159-06.216
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Krazan & Associates (Poulsbo)
Date Received:	NA	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/13/21	Lab ID:	I1-651 mb
Date Analyzed:	10/13/21	Data File:	I1-651 mb.054
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	2021-GW-201 f	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/08/21	Lab ID:	110159-01
Date Analyzed:	10/09/21	Data File:	110159-01.220
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	2021-GW-202 f	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/08/21	Lab ID:	110159-02
Date Analyzed:	10/09/21	Data File:	110159-02.221
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	2021-GW-203 f	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/08/21	Lab ID:	110159-03
Date Analyzed:	10/09/21	Data File:	110159-03.222
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	2021-GW-204 f	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/08/21	Lab ID:	110159-04
Date Analyzed:	10/09/21	Data File:	110159-04.223
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	2021-GW-205 f	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/08/21	Lab ID:	110159-05
Date Analyzed:	10/09/21	Data File:	110159-05.224
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	2021-GW-206 f	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/08/21	Lab ID:	110159-06
Date Analyzed:	10/09/21	Data File:	110159-06.225
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	Method Blank f	Client:	Krazan & Associates (Poulsbo)
Date Received:	NA	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/08/21	Lab ID:	I1-633 mb2
Date Analyzed:	10/09/21	Data File:	I1-633 mb2.214
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	2021-GW-201	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/12/21	Lab ID:	110159-01
Date Analyzed:	10/13/21	Data File:	101314.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	17	11	65
Phenol-d6	15	11	65
Nitrobenzene-d5	93	50	150
2-Fluorobiphenyl	86	44	108
2,4,6-Tribromophenol	74	10	140
Terphenyl-d14	93	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	<0.02
Fluorene	<0.02
Phenanthrene	<0.02
Anthracene	<0.02
Fluoranthene	<0.02
Pyrene	<0.02
Benz(a)anthracene	<0.02
Chrysene	<0.02
Benzo(a)pyrene	<0.02
Benzo(b)fluoranthene	<0.02
Benzo(k)fluoranthene	<0.02
Indeno(1,2,3-cd)pyrene	<0.02
Dibenz(a,h)anthracene	<0.02
Benzo(g,h,i)perylene	<0.04

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	2021-GW-202	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/12/21	Lab ID:	110159-02
Date Analyzed:	10/13/21	Data File:	101311.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	6 vo	10	60
Phenol-d6	11	10	49
Nitrobenzene-d5	104	15	144
2-Fluorobiphenyl	94	25	128
2,4,6-Tribromophenol	31	10	142
Terphenyl-d14	106	41	138

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	<0.02
Fluorene	<0.02
Phenanthrene	<0.02
Anthracene	<0.02
Fluoranthene	<0.02
Pyrene	<0.02
Benz(a)anthracene	<0.02
Chrysene	<0.02
Benzo(a)pyrene	<0.02
Benzo(b)fluoranthene	<0.02
Benzo(k)fluoranthene	<0.02
Indeno(1,2,3-cd)pyrene	<0.02
Dibenz(a,h)anthracene	<0.02
Benzo(g,h,i)perylene	<0.04

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	2021-GW-203	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/12/21	Lab ID:	110159-03
Date Analyzed:	10/13/21	Data File:	101315.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	7 vo	11	65
Phenol-d6	11	11	65
Nitrobenzene-d5	90	50	150
2-Fluorobiphenyl	82	44	108
2,4,6-Tribromophenol	39	10	140
Terphenyl-d14	95	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	<0.02
Fluorene	<0.02
Phenanthrene	<0.02
Anthracene	<0.02
Fluoranthene	<0.02
Pyrene	<0.02
Benz(a)anthracene	<0.02
Chrysene	<0.02
Benzo(a)pyrene	<0.02
Benzo(b)fluoranthene	<0.02
Benzo(k)fluoranthene	<0.02
Indeno(1,2,3-cd)pyrene	<0.02
Dibenz(a,h)anthracene	<0.02
Benzo(g,h,i)perylene	<0.04

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	2021-GW-204	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/12/21	Lab ID:	110159-04
Date Analyzed:	10/13/21	Data File:	101316.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	5 vo	11	65
Phenol-d6	10 vo	11	65
Nitrobenzene-d5	92	50	150
2-Fluorobiphenyl	84	44	108
2,4,6-Tribromophenol	20	10	140
Terphenyl-d14	96	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	<0.02
Fluorene	<0.02
Phenanthrene	<0.02
Anthracene	<0.02
Fluoranthene	<0.02
Pyrene	<0.02
Benz(a)anthracene	<0.02
Chrysene	<0.02
Benzo(a)pyrene	<0.02
Benzo(b)fluoranthene	<0.02
Benzo(k)fluoranthene	<0.02
Indeno(1,2,3-cd)pyrene	<0.02
Dibenz(a,h)anthracene	<0.02
Benzo(g,h,i)perylene	<0.04

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	2021-GW-205	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/12/21	Lab ID:	110159-05
Date Analyzed:	10/13/21	Data File:	101317.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	3 vo	11	65
Phenol-d6	8 vo	11	65
Nitrobenzene-d5	70	50	150
2-Fluorobiphenyl	69	44	108
2,4,6-Tribromophenol	18	10	140
Terphenyl-d14	100	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	<0.02
Fluorene	<0.02
Phenanthrene	<0.02
Anthracene	<0.02
Fluoranthene	<0.02
Pyrene	<0.02
Benz(a)anthracene	<0.02
Chrysene	<0.02
Benzo(a)pyrene	<0.02
Benzo(b)fluoranthene	<0.02
Benzo(k)fluoranthene	<0.02
Indeno(1,2,3-cd)pyrene	<0.02
Dibenz(a,h)anthracene	<0.02
Benzo(g,h,i)perylene	<0.04

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	2021-GW-206	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/12/21	Lab ID:	110159-06
Date Analyzed:	10/13/21	Data File:	101318.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	2 vo	11	65
Phenol-d6	1 vo	11	65
Nitrobenzene-d5	82	50	150
2-Fluorobiphenyl	76	44	108
2,4,6-Tribromophenol	2 vo	10	140
Terphenyl-d14	98	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	<0.02
Fluorene	<0.02
Phenanthrene	<0.02 js
Anthracene	<0.02 js
Fluoranthene	<0.02 js
Pyrene	<0.02 js
Benz(a)anthracene	<0.02
Chrysene	<0.02
Benzo(a)pyrene	<0.02
Benzo(b)fluoranthene	<0.02
Benzo(k)fluoranthene	<0.02
Indeno(1,2,3-cd)pyrene	<0.02
Dibenz(a,h)anthracene	<0.02
Benzo(g,h,i)perylene	<0.04

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Krazan & Associates (Poulsbo)
Date Received:	Not Applicable	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/12/21	Lab ID:	01-2354 mb
Date Analyzed:	10/13/21	Data File:	101310.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	23	10	60
Phenol-d6	15	10	49
Nitrobenzene-d5	109	15	144
2-Fluorobiphenyl	96	25	128
2,4,6-Tribromophenol	75	10	142
Terphenyl-d14	108	41	138

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	<0.02
Fluorene	<0.02
Phenanthrene	<0.02
Anthracene	<0.02
Fluoranthene	<0.02
Pyrene	<0.02
Benz(a)anthracene	<0.02
Chrysene	<0.02
Benzo(a)pyrene	<0.02
Benzo(b)fluoranthene	<0.02
Benzo(k)fluoranthene	<0.02
Indeno(1,2,3-cd)pyrene	<0.02
Dibenz(a,h)anthracene	<0.02
Benzo(g,h,i)perylene	<0.04

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	2021-GW-201	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/13/21	Lab ID:	110159-01
Date Analyzed:	10/13/21	Data File:	101316.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	38	24	127

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	2021-GW-202	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/13/21	Lab ID:	110159-02
Date Analyzed:	10/13/21	Data File:	101317.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	40	24	127

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	2021-GW-203	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/13/21	Lab ID:	110159-03
Date Analyzed:	10/13/21	Data File:	101318.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	37	24	127

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	2021-GW-204	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/13/21	Lab ID:	110159-04
Date Analyzed:	10/13/21	Data File:	101319.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	35	24	127

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	2021-GW-205	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/13/21	Lab ID:	110159-05
Date Analyzed:	10/13/21	Data File:	101320.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	40	24	127

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	2021-GW-206	Client:	Krazan & Associates (Poulsbo)
Date Received:	10/07/21	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/13/21	Lab ID:	110159-06
Date Analyzed:	10/13/21	Data File:	101321.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	31	24	127

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	Krazan & Associates (Poulsbo)
Date Received:	Not Applicable	Project:	Lots 25 and 26, F&BI 110159
Date Extracted:	10/13/21	Lab ID:	01-2355 mb
Date Analyzed:	10/13/21	Data File:	101307.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	40	24	127

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Date of Report: 10/18/21
Date Received: 10/07/21
Project: Lots 25 and 26, F&BI 110159

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

Laboratory Code: 110159-02 Matrix Spike

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Benzene	ug/L (ppb)	50	<1	98	96	50-150	2
Toluene	ug/L (ppb)	50	<1	98	94	50-150	4
Ethylbenzene	ug/L (ppb)	50	<1	95	92	50-150	3
Xylenes	ug/L (ppb)	150	<3	94	91	50-150	3
Gasoline	ug/L (ppb)	1,000	<100	75	79	50-150	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	103	72-119
Toluene	ug/L (ppb)	50	101	71-113
Ethylbenzene	ug/L (ppb)	50	100	72-114
Xylenes	ug/L (ppb)	150	99	72-113
Gasoline	ug/L (ppb)	1,000	95	70-119

Date of Report: 10/18/21
Date Received: 10/07/21
Project: Lots 25 and 26, F&BI 110159

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

Laboratory Code: 110159-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	<250	108	108	50-150	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	ug/L (ppb)	2,500	84	63-142

Date of Report: 10/18/21
Date Received: 10/07/21
Project: Lots 25 and 26, F&BI 110159

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 110159-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	<1	97	99	70-130	2
Lead	ug/L (ppb)	10	<1	95	97	70-130	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	90	85-115
Lead	ug/L (ppb)	10	91	85-115

Date of Report: 10/18/21
Date Received: 10/07/21
Project: Lots 25 and 26, F&BI 110159

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 6020B

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	103	101	80-120	2
Lead	ug/L (ppb)	10	103	101	80-120	2

Date of Report: 10/18/21
Date Received: 10/07/21
Project: Lots 25 and 26, F&BI 110159

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: 110159-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	5	<0.2	88	82	50-150	7
2-Methylnaphthalene	ug/L (ppb)	5	<0.2	92	86	50-150	7
1-Methylnaphthalene	ug/L (ppb)	5	<0.2	93	86	50-150	8
Acenaphthylene	ug/L (ppb)	5	<0.02	98	93	50-150	5
Acenaphthene	ug/L (ppb)	5	<0.02	95	89	50-150	7
Fluorene	ug/L (ppb)	5	<0.02	98	93	50-150	5
Phenanthrene	ug/L (ppb)	5	<0.02	95	93	50-150	2
Anthracene	ug/L (ppb)	5	<0.02	98	96	50-150	2
Fluoranthene	ug/L (ppb)	5	<0.02	101	98	50-150	3
Pyrene	ug/L (ppb)	5	<0.02	103	101	50-150	2
Benz(a)anthracene	ug/L (ppb)	5	<0.02	101	100	50-150	1
Chrysene	ug/L (ppb)	5	<0.02	102	100	50-150	2
Benzo(a)pyrene	ug/L (ppb)	5	<0.02	103	99	50-150	4
Benzo(b)fluoranthene	ug/L (ppb)	5	<0.02	101	97	50-150	4
Benzo(k)fluoranthene	ug/L (ppb)	5	<0.02	107	102	50-150	5
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	<0.02	93	95	50-150	2
Dibenz(a,h)anthracene	ug/L (ppb)	5	<0.02	97	99	50-150	2
Benzo(g,h,i)perylene	ug/L (ppb)	5	<0.04	95	100	50-150	5

Date of Report: 10/18/21
Date Received: 10/07/21
Project: Lots 25 and 26, F&BI 110159

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Naphthalene	ug/L (ppb)	5	85	66-94
2-Methylnaphthalene	ug/L (ppb)	5	88	68-98
1-Methylnaphthalene	ug/L (ppb)	5	89	67-97
Acenaphthylene	ug/L (ppb)	5	95	70-130
Acenaphthene	ug/L (ppb)	5	92	70-130
Fluorene	ug/L (ppb)	5	96	70-130
Phenanthrene	ug/L (ppb)	5	94	70-130
Anthracene	ug/L (ppb)	5	98	70-130
Fluoranthene	ug/L (ppb)	5	99	70-130
Pyrene	ug/L (ppb)	5	101	70-130
Benz(a)anthracene	ug/L (ppb)	5	101	70-130
Chrysene	ug/L (ppb)	5	103	70-130
Benzo(a)pyrene	ug/L (ppb)	5	101	70-130
Benzo(b)fluoranthene	ug/L (ppb)	5	99	62-130
Benzo(k)fluoranthene	ug/L (ppb)	5	104	70-130
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	96	70-130
Dibenz(a,h)anthracene	ug/L (ppb)	5	98	70-130
Benzo(g,h,i)perylene	ug/L (ppb)	5	97	70-130

Date of Report: 10/18/21
Date Received: 10/07/21
Project: Lots 25 and 26, F&BI 110159

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR POLYCHLORINATED BIPHENYLS AS AROCLOR 1016/1260 BY EPA METHOD 8082A

Laboratory Code: 110159-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	ug/L (ppb)	0.25	<0.1	64	57	50-150	12
Aroclor 1260	ug/L (ppb)	0.25	<0.1	82	77	50-150	6

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Aroclor 1016	ug/L (ppb)	0.25	55	25-111
Aroclor 1260	ug/L (ppb)	0.25	66	23-123

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

ip - Recovery fell outside of control limits due to sample matrix effects.

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

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

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

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

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

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

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

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

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

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

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

110159

SAMPLE CHAIN OF CUSTODY

ME 10/7/21 Page 1 of 1 VW3/AIG

Report To Shawn Williams
Company Krazan and Associates
Address 1230 NW Finn Hill Road Suite A
City, State, ZIP Poulsbo, WA, 98370
Phone 3605982126 Email Shawnwilliams@krazan.com

SAMPLERS (signature)

PROJECT NAME: Lots 25 and 26

PO #

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- X Standard turnaround 5 day EO3
- X RUSH per CB 10/8/21
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Lead/Arsenic		MS/MSD		Notes
						ANALYSES REQUESTED											Total + Dissolved
2021-GW-201	01 A-G	10/6/21	9:45am	water	7	X	X	X			X	X	X				metals per historical
2021-GW-202	02 A-S		8:40am		19	X	X	X			X	X	X		X		MS 10/7/21 MS
2021-GW-203	03 A-G		10:30am		7	X	X	X			X	X	X				
2021-GW-204	04 A-G		10:30am		7	X	X	X			X	X	X				
2021-GW-205	05 A-G		9:15am		7	X	X	X			X	X	X				
2021-GW-206	06 A-G		10:55		7	X	X	X			X	X	X				
Trip Blank	07 A-B	—	—	water	2												added at lab (MP) 10/8/21
													Samples received at 6 °C				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Chloe Barrett	Krazan	10/7/21	2:50
Received by:	NINA	FBI	10/7/21	2:50PM
Relinquished by:				
Received by:				

Samples received at 6 °C

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

3012 16th Avenue West
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fbi@isomedia.com
www.friedmanandbruya.com

February 3, 2022

Shawn Williams, Project Manager
Krazan & Associates (Poulsbo)
1230 Finn Hill Rd NW, Suite A
Poulsbo, WA 98370

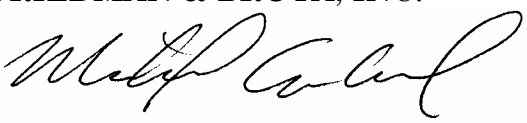
Dear Mr Williams:

Included are the results from the testing of material submitted on January 24, 2022 from the Lots 25 and 26 Proj 104-21020, F&BI 201330 project. There are 33 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
KZP0203R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 24, 2022 by Friedman & Bruya, Inc. from the Krazan & Associates (Poulsbo) Lots 25 and 26 Proj 104-21020, F&BI 201330 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Krazan & Associates (Poulsbo)
201330 -01	2021-GW-301
201330 -02	2021-GW-302
201330 -03	2021-GW-303
201330 -04	2021-GW-304
201330 -05	2021-GW-305
201330 -06	2021-GW-306
201330 -07	Trip Blank

All quality control requirements were acceptable.

Date of Report: 02/03/22
Date Received: 01/24/22
Project: Lots 25 and 26 Proj 104-21020, F&BI 201330
Date Extracted: 01/31/22
Date Analyzed: 01/31/22

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
2021-GW-301 201330-01	<1	<1	<1	<3	<100	81
2021-GW-302 201330-02	<1	<1	<1	<3	<100	80
2021-GW-303 201330-03	<1	<1	<1	<3	<100	80
2021-GW-304 201330-04	<1	<1	<1	<3	<100	80
2021-GW-305 201330-05	<1	<1	<1	<3	<100	80
2021-GW-306 201330-06	<1	<1	<1	<3	<100	80
Method Blank 02-0166 MB	<1	<1	<1	<3	<100	81

Date of Report: 02/03/22
Date Received: 01/24/22
Project: Lots 25 and 26 Proj 104-21020, F&BI 201330
Date Extracted: 01/26/22
Date Analyzed: 01/28/22

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

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 41-152)
2021-GW-301 201330-01	<50	<250	140
2021-GW-302 201330-02	<50	<250	140
2021-GW-303 201330-03	<50	<250	129
2021-GW-304 201330-04	<50	<250	125
2021-GW-305 201330-05	<50	<250	126
2021-GW-306 201330-06	<50	<250	128
Method Blank 02-247 MB	<50	<250	136

Date of Report: 02/03/22
Date Received: 01/24/22
Project: Lots 25 and 26 Proj 104-21020, F&BI 201330
Date Extracted: 01/26/22
Date Analyzed: 01/26/22

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 41-152)
2021-GW-301 201330-01	<50	<250	116
2021-GW-302 201330-02	<50	<250	114
2021-GW-303 201330-03	<50	<250	114
2021-GW-304 201330-04	<50	<250	114
2021-GW-305 201330-05	<50	<250	117
2021-GW-306 201330-06	<50	<250	122
Method Blank 02-247 MB	<50	<250	126

Analysis For Total Metals By EPA Method 6020B

Client ID:	2021-GW-301	Client:	Krazan & Associates (Poulsbo)
Date Received:	01/24/22	Project:	Lots 25 and 26 Proj 104-21020
Date Extracted:	01/26/22	Lab ID:	201330-01
Date Analyzed:	01/26/22	Data File:	201330-01.057
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	2021-GW-302	Client:	Krazan & Associates (Poulsbo)
Date Received:	01/24/22	Project:	Lots 25 and 26 Proj 104-21020
Date Extracted:	01/26/22	Lab ID:	201330-02
Date Analyzed:	01/26/22	Data File:	201330-02.058
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	2021-GW-303	Client:	Krazan & Associates (Poulsbo)
Date Received:	01/24/22	Project:	Lots 25 and 26 Proj 104-21020
Date Extracted:	01/26/22	Lab ID:	201330-03
Date Analyzed:	01/26/22	Data File:	201330-03.059
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	2021-GW-304	Client:	Krazan & Associates (Poulsbo)
Date Received:	01/24/22	Project:	Lots 25 and 26 Proj 104-21020
Date Extracted:	01/26/22	Lab ID:	201330-04
Date Analyzed:	01/26/22	Data File:	201330-04.060
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	2021-GW-305	Client:	Krazan & Associates (Poulsbo)
Date Received:	01/24/22	Project:	Lots 25 and 26 Proj 104-21020
Date Extracted:	01/26/22	Lab ID:	201330-05
Date Analyzed:	01/26/22	Data File:	201330-05.061
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	2021-GW-306	Client:	Krazan & Associates (Poulsbo)
Date Received:	01/24/22	Project:	Lots 25 and 26 Proj 104-21020
Date Extracted:	01/26/22	Lab ID:	201330-06
Date Analyzed:	01/26/22	Data File:	201330-06.069
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Krazan & Associates (Poulsbo)
Date Received:	NA	Project:	Lots 25 and 26 Proj 104-21020
Date Extracted:	01/26/22	Lab ID:	I2-63 mb
Date Analyzed:	01/26/22	Data File:	I2-63 mb.034
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	2021-GW-301	Client:	Krazan & Associates (Poulsbo)
Date Received:	01/24/22	Project:	Lots 25 and 26 Proj 104-21020
Date Extracted:	01/26/22	Lab ID:	201330-01 1/2
Date Analyzed:	01/27/22	Data File:	012712.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	35	11	65
Phenol-d6	24	11	65
Nitrobenzene-d5	76	50	150
2-Fluorobiphenyl	78	44	108
2,4,6-Tribromophenol	76	10	140
Terphenyl-d14	96	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	<0.04
Fluorene	<0.04
Phenanthrene	<0.04
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	2021-GW-302	Client:	Krazan & Associates (Poulsbo)
Date Received:	01/24/22	Project:	Lots 25 and 26 Proj 104-21020
Date Extracted:	01/26/22	Lab ID:	201330-02 1/2
Date Analyzed:	01/27/22	Data File:	012713.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	40	11	65
Phenol-d6	28	11	65
Nitrobenzene-d5	84	50	150
2-Fluorobiphenyl	84	44	108
2,4,6-Tribromophenol	81	10	140
Terphenyl-d14	99	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	<0.04
Fluorene	<0.04
Phenanthrene	<0.04
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	2021-GW-303	Client:	Krazan & Associates (Poulsbo)
Date Received:	01/24/22	Project:	Lots 25 and 26 Proj 104-21020
Date Extracted:	01/26/22	Lab ID:	201330-03 1/2
Date Analyzed:	01/27/22	Data File:	012714.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	25	11	65
Phenol-d6	24	11	65
Nitrobenzene-d5	84	50	150
2-Fluorobiphenyl	83	44	108
2,4,6-Tribromophenol	50	10	140
Terphenyl-d14	90	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	<0.04
Fluorene	<0.04
Phenanthrene	<0.04
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	2021-GW-304	Client:	Krazan & Associates (Poulsbo)
Date Received:	01/24/22	Project:	Lots 25 and 26 Proj 104-21020
Date Extracted:	01/26/22	Lab ID:	201330-04 1/2
Date Analyzed:	01/27/22	Data File:	012715.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	36	11	65
Phenol-d6	27	11	65
Nitrobenzene-d5	87	50	150
2-Fluorobiphenyl	85	44	108
2,4,6-Tribromophenol	70	10	140
Terphenyl-d14	92	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	<0.04
Fluorene	<0.04
Phenanthrene	<0.04
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	2021-GW-305	Client:	Krazan & Associates (Poulsbo)
Date Received:	01/24/22	Project:	Lots 25 and 26 Proj 104-21020
Date Extracted:	01/26/22	Lab ID:	201330-05 1/2
Date Analyzed:	01/27/22	Data File:	012711.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	39	11	65
Phenol-d6	27	11	65
Nitrobenzene-d5	82	50	150
2-Fluorobiphenyl	80	44	108
2,4,6-Tribromophenol	82	10	140
Terphenyl-d14	95	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	<0.04
Fluorene	<0.04
Phenanthrene	<0.04
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	2021-GW-306	Client:	Krazan & Associates (Poulsbo)
Date Received:	01/24/22	Project:	Lots 25 and 26 Proj 104-21020
Date Extracted:	01/26/22	Lab ID:	201330-06 1/2
Date Analyzed:	01/27/22	Data File:	012716.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	34	11	65
Phenol-d6	26	11	65
Nitrobenzene-d5	87	50	150
2-Fluorobiphenyl	82	44	108
2,4,6-Tribromophenol	61	10	140
Terphenyl-d14	96	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	<0.04
Fluorene	<0.04
Phenanthrene	<0.04
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Krazan & Associates (Poulsbo)
Date Received:	Not Applicable	Project:	Lots 25 and 26 Proj 104-21020
Date Extracted:	01/26/22	Lab ID:	02-249 mb
Date Analyzed:	01/27/22	Data File:	012710.D
Matrix:	Water	Instrument:	GCMS12
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	21	11	65
Phenol-d6	13	11	65
Nitrobenzene-d5	77	50	150
2-Fluorobiphenyl	80	44	108
2,4,6-Tribromophenol	74	10	140
Terphenyl-d14	90	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	<0.02
Fluorene	<0.02
Phenanthrene	<0.02
Anthracene	<0.02
Fluoranthene	<0.02
Pyrene	<0.02
Benz(a)anthracene	<0.02
Chrysene	<0.02
Benzo(a)pyrene	<0.02
Benzo(b)fluoranthene	<0.02
Benzo(k)fluoranthene	<0.02
Indeno(1,2,3-cd)pyrene	<0.02
Dibenz(a,h)anthracene	<0.02
Benzo(g,h,i)perylene	<0.04

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	2021-GW-301	Client:	Krazan & Associates (Poulsbo)
Date Received:	01/24/22	Project:	Lots 25 and 26 Proj 104-21020
Date Extracted:	01/26/22	Lab ID:	201330-01
Date Analyzed:	01/27/22	Data File:	012706.D
Matrix:	Water	Instrument:	GC9
Units:	ug/L (ppb)	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	48	25	160

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	2021-GW-302	Client:	Krazan & Associates (Poulsbo)
Date Received:	01/24/22	Project:	Lots 25 and 26 Proj 104-21020
Date Extracted:	01/26/22	Lab ID:	201330-02
Date Analyzed:	01/27/22	Data File:	012707.D
Matrix:	Water	Instrument:	GC9
Units:	ug/L (ppb)	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	45	25	160

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	2021-GW-303	Client:	Krazan & Associates (Poulsbo)
Date Received:	01/24/22	Project:	Lots 25 and 26 Proj 104-21020
Date Extracted:	01/26/22	Lab ID:	201330-03
Date Analyzed:	01/27/22	Data File:	012708.D
Matrix:	Water	Instrument:	GC9
Units:	ug/L (ppb)	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	27	25	160

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	2021-GW-304	Client:	Krazan & Associates (Poulsbo)
Date Received:	01/24/22	Project:	Lots 25 and 26 Proj 104-21020
Date Extracted:	01/26/22	Lab ID:	201330-04
Date Analyzed:	01/27/22	Data File:	012709.D
Matrix:	Water	Instrument:	GC9
Units:	ug/L (ppb)	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	46	25	160

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	2021-GW-305	Client:	Krazan & Associates (Poulsbo)
Date Received:	01/24/22	Project:	Lots 25 and 26 Proj 104-21020
Date Extracted:	01/26/22	Lab ID:	201330-05
Date Analyzed:	01/27/22	Data File:	012713.D
Matrix:	Water	Instrument:	GC9
Units:	ug/L (ppb)	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	45	25	160

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	2021-GW-306	Client:	Krazan & Associates (Poulsbo)
Date Received:	01/24/22	Project:	Lots 25 and 26 Proj 104-21020
Date Extracted:	01/26/22	Lab ID:	201330-06
Date Analyzed:	01/27/22	Data File:	012710.D
Matrix:	Water	Instrument:	GC9
Units:	ug/L (ppb)	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	41	25	160

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	Krazan & Associates (Poulsbo)
Date Received:	Not Applicable	Project:	Lots 25 and 26 Proj 104-21020
Date Extracted:	01/26/22	Lab ID:	02-0248 mb
Date Analyzed:	01/27/22	Data File:	012704.D
Matrix:	Water	Instrument:	GC9
Units:	ug/L (ppb)	Operator:	MG

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	42	25	160

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Date of Report: 02/03/22
Date Received: 01/24/22
Project: Lots 25 and 26 Proj 104-21020, F&BI 201330

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

Laboratory Code: 201330-05 Matrix Spike

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Benzene	ug/L (ppb)	50	<1	94	98	50-150	4
Toluene	ug/L (ppb)	50	<1	92	94	50-150	2
Ethylbenzene	ug/L (ppb)	50	<1	98	100	50-150	2
Xylenes	ug/L (ppb)	150	<3	94	95	50-150	1
Gasoline	ug/L (ppb)	1,000	<100	92	89	53-117	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	104	65-118
Toluene	ug/L (ppb)	50	100	72-122
Ethylbenzene	ug/L (ppb)	50	106	73-126
Xylenes	ug/L (ppb)	150	100	74-118
Gasoline	ug/L (ppb)	1,000	98	69-134

Date of Report: 02/03/22
Date Received: 01/24/22
Project: Lots 25 and 26 Proj 104-21020, F&BI 201330

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

Laboratory Code: 201330-05 (Matrix Spike) Silica Gel

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	<50	132	116	50-150	13

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	ug/L (ppb)	2,500	120	63-142

Date of Report: 02/03/22
Date Received: 01/24/22
Project: Lots 25 and 26 Proj 104-21020, F&BI 201330

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

Laboratory Code: 201330-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	<50	123	121	50-150	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	ug/L (ppb)	2,500	123	63-142

Date of Report: 02/03/22
Date Received: 01/24/22
Project: Lots 25 and 26 Proj 104-21020, F&BI 201330

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 201330-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	<1	95	96	75-125	1
Lead	ug/L (ppb)	10	<1	95	96	75-125	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	95	80-120
Lead	ug/L (ppb)	10	97	80-120

Date of Report: 02/03/22
Date Received: 01/24/22
Project: Lots 25 and 26 Proj 104-21020, F&BI 201330

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: 201330-05 1/2 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	5	<0.4	89	88	50-150	1
2-Methylnaphthalene	ug/L (ppb)	5	<0.4	87	86	50-150	1
1-Methylnaphthalene	ug/L (ppb)	5	<0.4	90	89	50-150	1
Acenaphthylene	ug/L (ppb)	5	<0.04	93	94	50-150	1
Acenaphthene	ug/L (ppb)	5	<0.04	95	95	50-150	0
Fluorene	ug/L (ppb)	5	<0.04	97	97	50-150	0
Phenanthrene	ug/L (ppb)	5	<0.04	97	96	50-150	1
Anthracene	ug/L (ppb)	5	<0.04	96	93	50-150	3
Fluoranthene	ug/L (ppb)	5	<0.04	98	96	50-150	2
Pyrene	ug/L (ppb)	5	<0.04	107	108	50-150	1
Benz(a)anthracene	ug/L (ppb)	5	<0.04	99	101	50-150	2
Chrysene	ug/L (ppb)	5	<0.04	98	100	50-150	2
Benzo(a)pyrene	ug/L (ppb)	5	<0.04	90	92	50-150	2
Benzo(b)fluoranthene	ug/L (ppb)	5	<0.04	97	98	50-150	1
Benzo(k)fluoranthene	ug/L (ppb)	5	<0.04	99	101	50-150	2
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	<0.04	105	106	50-150	1
Dibenz(a,h)anthracene	ug/L (ppb)	5	<0.04	109	112	50-150	3
Benzo(g,h,i)perylene	ug/L (ppb)	5	<0.08	110	112	50-150	2

Date of Report: 02/03/22
Date Received: 01/24/22
Project: Lots 25 and 26 Proj 104-21020, F&BI 201330

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Naphthalene	ug/L (ppb)	5	87	62-90
2-Methylnaphthalene	ug/L (ppb)	5	90	64-93
1-Methylnaphthalene	ug/L (ppb)	5	93	64-93
Acenaphthylene	ug/L (ppb)	5	91	70-130
Acenaphthene	ug/L (ppb)	5	93	70-130
Fluorene	ug/L (ppb)	5	96	70-130
Phenanthrene	ug/L (ppb)	5	94	70-130
Anthracene	ug/L (ppb)	5	95	70-130
Fluoranthene	ug/L (ppb)	5	91	70-130
Pyrene	ug/L (ppb)	5	95	70-130
Benz(a)anthracene	ug/L (ppb)	5	96	70-130
Chrysene	ug/L (ppb)	5	96	70-130
Benzo(a)pyrene	ug/L (ppb)	5	88	70-130
Benzo(b)fluoranthene	ug/L (ppb)	5	95	70-130
Benzo(k)fluoranthene	ug/L (ppb)	5	96	70-130
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	93	70-130
Dibenz(a,h)anthracene	ug/L (ppb)	5	100	70-130
Benzo(g,h,i)perylene	ug/L (ppb)	5	98	70-130

Date of Report: 02/03/22
Date Received: 01/24/22
Project: Lots 25 and 26 Proj 104-21020, F&BI 201330

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR POLYCHLORINATED BIPHENYLS AS AROCLOR 1016/1260 BY EPA METHOD 8082A

Laboratory Code: 201330-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	ug/L (ppb)	0.25	<0.1	66	60	50-150	10
Aroclor 1260	ug/L (ppb)	0.25	<0.1	81	83	50-150	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Aroclor 1016	ug/L (ppb)	0.25	60	25-165
Aroclor 1260	ug/L (ppb)	0.25	73	25-163

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

ip - Recovery fell outside of control limits due to sample matrix effects.

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

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

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

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

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

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

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

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

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

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

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

201330

SAMPLE CHAIN OF CUSTODY

01-24-22 VW3/E04/AI2

Page # 1 of 1

Report To Shawn Williams
Company Krazan and Associates
Address 1230 NW Finn Hill Road Suite A
City, State, ZIP Poulsbo, WA 98370
Phone 306-548-2126 Email Shawn.williams@krazan.com

SAMPLERS (signature)

PROJECT NAME: Lots 25 and 26 Proj# 104-21620

PO #

REMARKS: Results With and Witout Silica Gel
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Total Lead/Arsenic		MS/MSD	Silica Gel	Notes
																	Total Metals
2021-GW-301	01A-G	1-21-22	10:40am	Water	7	X	X	X			X	X	X			X	per SW 1/25/22 mE
2021-GW-302	02		10:40am		7	X	X	X			X	X	X			X	
2021-GW-303	03		9:20am		7	X	X	X			X	X	X			X	
2021-GW-304	04		11:20am		7	X	X	X			X	X	X			X	
2021-GW-305	05A-S		10:00am		19	X	X	X			X	X	X		X	X	
2021-GW-306	06A-G		11:50am		7	X	X	X			X	X	X			X	
Trip Blank	07A-B																Added @ Lab TWC 01/25/22

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Chloe Bartlett	Krazan		
Received by:	Abbigail Corwen	PBI	1/24/22	1550
Relinquished by:				
Received by:		Samples received at 6 °C		

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