THURBER ENGINEERING LTD.

October 18, 2024 File No.: 56763

Township of Esquimalt
1229 Esquimalt Road,
Esquimalt, BC V9A 3P1

Attention: Edgar Salamanca

ENVIRONMENTAL SOIL CHARACTERIZATION AT INTERSECTION OF KINVER STREET AND HEALD AVENUE, ESQUIMALT, BC

Dear Edgar,

Thurber Engineering Ltd. (Thurber) prepared this letter for the Township of Esquimalt (Township) to present the analytical soil results for samples collected on the boulevard on the northeast corner of the intersection of Kinver Street and Heald Avenue, Esquimalt, BC (hereafter referred to as the "Project Area"). The samples were collected for laboratory testing to characterize the soil for off-site disposal during a planned sidewalk upgrade project.

It is a condition of this memo that Thurber's performance of its professional services is subject to the attached Statement of Limitations and Conditions.

Thurber understands from the Township that the project requires the excavation to a maximum depth of 0.3 meters below ground surface (mbgs).

1. REGULATORY CONTEXT

In British Columbia, environmental matters pertaining to contaminated sites generally fall under the jurisdiction of the Ministry of Environment and Climate Change Strategy (Ministry), pursuant to the *Environmental Management Act (Act)*. The key regulation under the *Act* relating to the contaminated sites and contaminated soil relocation are the Contaminated Sites Regulation (CSR, B.C. Reg. 375/96, last amended May 31, 2022) and the Hazardous Waste Regulation (HWR, B.C. Reg. 63/88, last amended March 11, 2021).

As per Section 46.1 of the CSR, the applicable standards for relocating soil are the standards that apply at a receiving site, regardless of the use of the source site. For characterization purposes, the following generic land uses, and site-specific factors were considered:

Land Use	Site-Specific factors
• Residential Low-Density (RLD) • Commercial (CL) • Industrial (IL)	• Intake of contaminated soil • Toxicity to soil invertebrates and plants • Groundwater used for drinking water • Groundwater flow to surface water used by aquatic life (freshwater and marine)

Note: CSR standards for agricultural or wildlands use, or the site-specific factor of groundwater used for irrigation for RDL use, which are typically more stringent, were not considered as we understand the Township is not considering relocating soil to these types of properties.

It is noted that soil exceeding the IL standards and the Protocol 4 (P4) regional background concentrations for Vancouver Island is defined as "waste" and must be disposed of at a permitted facility.

2. SOIL SAMPLING

2.1 Drilling Program

One borehole (BH24-03) was advanced within the Project Area to a maximum depth of 0.3 mbgs, the location was hand dug with a shovel. The soils observed during drilling were gravelly soil with some sand from surface to 0.3 mbgs.

2.2 Analytical Testing

One soil sample (BH23-03-01) was submitted to Bureau Veritas for analysis of light and heavy extractable petroleum hydrocarbons (LEPH and HEPH), polycyclic aromatic hydrocarbons (PAH), sodium ion, chloride ion, metals, and volatile organic compounds (VOC).

3. ENVIRONMENTAL INVESTIGATION RESULTS

The concentrations of all analysed parameters were less than the CSR RLD standards. Therefore, the soil is considered RLD quality and can be relocated to a fill receiving site at which the RLD standards listed in Section 1 are applicable.

4. CLOSURE

We trust the above is sufficient for your needs. Please do not hesitate to contact us should you require additional information.

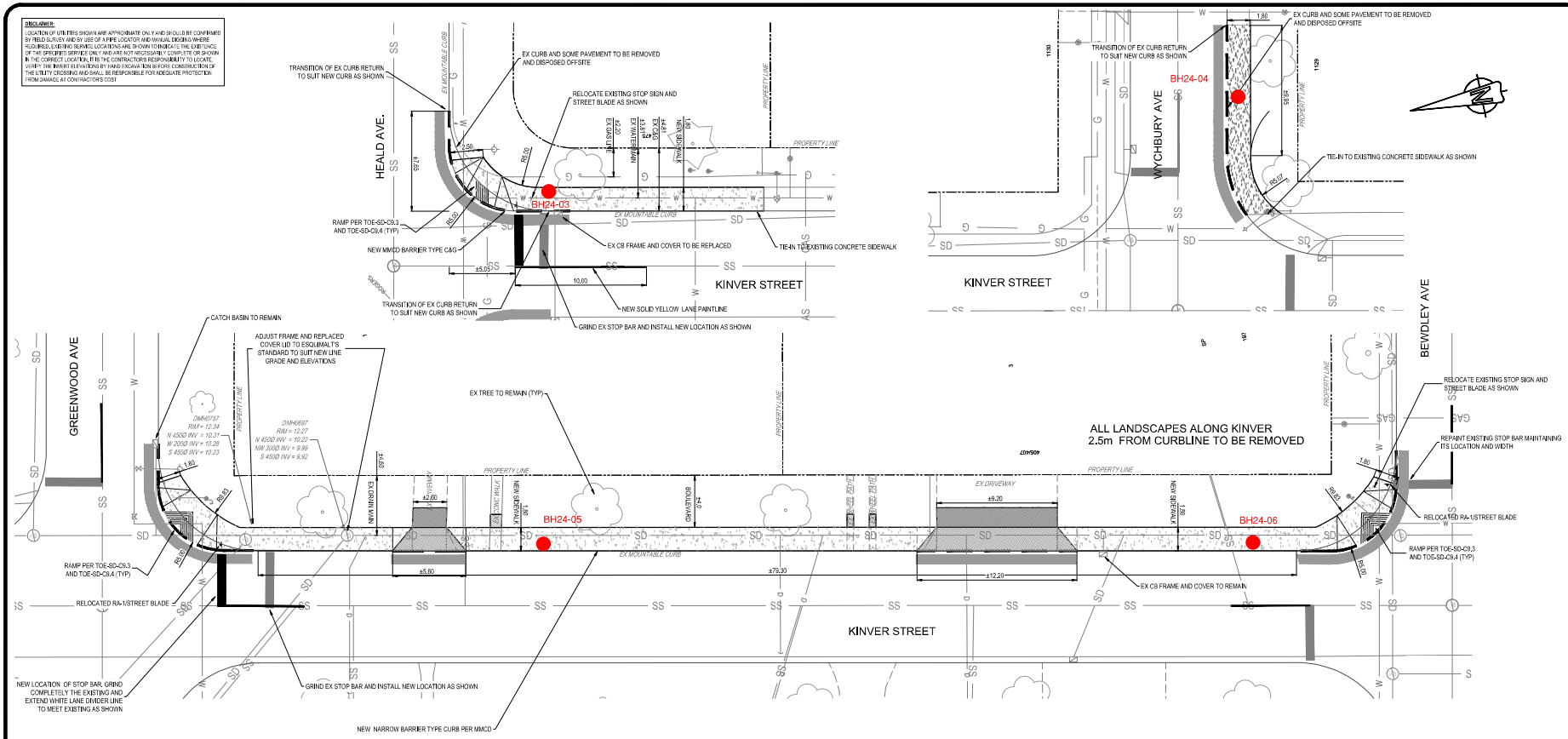
Yours truly,
Thurber Engineering Ltd.

Lora Paul, P.Eng., CSAP
Review Engineer

Kalum Skipper, GIT.
Environmental Geoscientist

Attachment
Statement of Limitations and Conditions
Test Location Plan
Analytical Tables
Laboratory Documents

Thurber Engineering Ltd.
Permit to Practice #1001319



NOTE:

1. CONCRETE SIDEWALK TO BE 100 mm WHILE DRIVEWAY TO BE 150 mm CONCRETE SLOPE AT 2% (MIN) CROSS-FALL AND 100mm GRANULAR BASE MATERIAL COMPACTED TO 95% MPD
2. ALL MATERIALS TO BE MMCD SPECS MIN.
3. DRIVEWAY AND CURB DROP-DOWN PER TOE-SD-C7.1 AND TOE-SD-C7.2 OR ACCORDING TO DRAWING PLAN.
4. CONCRETE SIDEWALK PER TOE-SD-C1.1 AND IT'S ACCOMPANYING SIDEWALK RAMPS PER TOE-SD-C9.3 AND TOE-SD-C9.4 OR ACCORDING TO DRAWING.
5. INSTALL WELDED MESH AT TREE AREA WITHIN THE TREE CANOPY OUTLINE MIN 3.0m IF NO ROOTS ARE EXPOSED.
6. INSTALL A RUBBERIZED SIDEWALK (ECO-PAVING BRAND) IF STRUCTURAL ROOTS ARE EXPOSED ON THE SURFACE. LIMITS TO BE DETERMINED BY THE TOWNSHIP'S ARBORIST.
7. IF SUPPLY OF RUBBERIZED SIDEWALK IS NOT AVAILABLE, EXPOSED ROOTS AREA ARE TO BE FILLED WITH ¾ SCREENING PATHWAY MIX OR 50 mm ASPHALT HOTMIX.
8. DISTANCE BETWEEN BACK OF NEW SIDEWALK AND THE TREE TRUNK CIRCUMFERENTIAL SURFACE TO BE CLEAR 0.40mm (MIN).
9. BARRIER CURB AND GUTTER PER MMCD STD DWG C-4.
10. RESTORE GROUND PER EXISTING CONDITION OR BETTER
11. BOULEVARD CROSS-FALL FROM BACK OF SIDEWALK TO FRONT OF CURB TO BE 2% - 5%
12. DURING SIDEWALK BASE EXCAVATION, PARKS PERSONNEL TO ASSIST IN THE CLARIFICATION OF TRUNK CLEARANCE AND TREE ROOTS REMOVAL.
13. STOP BAR AT EXISTING PAVEMENT TO BE MMA WHILE NEW OVERLAY TO BE THERMOPLASTIC AND WHITE PAINT LINE TO BE TOWNSHIP OF ESQUIMALT'S STANDARD

ISSUED FOR REVIEW
MAY 14, 2024

CONFIRM UNDERGROUND LOCATIONS WITH UTILITY COMPANIES

LEGEND - Existing services shown solid

CABLE — TV — | DRAIN — D — | GAS — G — | SEWER — S — | WATER — W — | ELECTRICAL — H —

SIDEWALK SW | DRAIN MANHOLE | GAS VALVE | SEWER MANHOLE | WATER VALVE

TREE | CATCH BASIN | GAS SNIFFER | HYDRO MANHOLE | FIRE HYDRANT

ELECTRIC POLE | DRAIN CLEANOUT DCO | GAS METER METER | SEWER CLEANOUT SCO | WATER METER

TEL POLE | LAWN BASIN | STREET LIGHT | DRAIN/SEWER INSP CHAMBER | UTILITY CAP

SURVEY MONUMENT | UNDERGROUND — UG — | TEL — T — | TEL MANHOLE | DITCH LINE

REVISIONS	REVISIONS APPROVED									DESIGN APPROVED			TOWNSHIP OF ESQUIMALT	PROJECT NO.	E0__
	REVISION 1			REVISION 2			REVISION 3			EXCEPTIONS	DATE	SIGN	KINVER STREET EAST SIDEWALK		
ISSUED FOR REVIEW	APP.	DATE	SIGN	APP.	DATE	SIGN	APP.	DATE	SIGN	APPROVED BY	2024.05.14	CD	SITE PLAN AT (STA 1+ 325.00 - 1+ 421.00)	DESIGN DWG. NO.	C - 105
	JC	2021.09.28	JC							DESIGN ENG.			CONTROL MONUMENTS		
	JC	2021.09.28	JC							ASSIST.ENG			DESIGN EFS DRAWN EFS SURVEY CW	Sheet #	2
										MUNICIPAL ENG.	2024.05.14	JC	SCALES: H=1:150 DATE 2021.04.16		

Table 1: Hydrocarbons in Soil
Job Number: 56763
Site Address: Kinver Street and Heald Avenue, Esquimalt, BC
Client: Township of Esquimalt

Sample ID				BH24-03-01
Sample Date	Soil Standards (µg/g)*			1-Aug-2024
Certificate of Analysis	Residential Low Density (RLD)	Commercial (CL)	Industrial (IL)	C459220
Depth of Sample (m)				0 - 0.3
Parameters				
Photoionization Detector (ppm)	ns	ns	ns	-
EPH (C10-C19)	ns	ns	ns	<100
EPH (C19-C32)	ns	ns	ns	<100
LEPH (C10-C19)	1000	2000	2000	<100
HEPH (C19-C32)	1000	5000	5000	<100
Acenaphthene	950	15000	15000	<0.0050
Acenaphthylene	ns	ns	ns	0.047
Anthracene	2.5	30	30	0.016
Benz(a)anthracene	1	10	10	0.069
Benzo(a)pyrene	5	30	50	0.13
Benzo(b+j)fluoranthene	1	10	10	0.15
Benzo(g,h,i)perylene	ns	ns	ns	0.11
Benzo(k)fluoranthene	1	10	10	0.056
Chrysene	200	4500	4500	0.10
Dibenz(a,h)anthracene	1	10	10	0.026
Fluoranthene	50	200	200	0.16
Fluorene	600	9500	9500	<0.020
Indeno(1,2,3-c,d)pyrene	1	10	10	0.096
Methylnaphthalene, 1-	250	1000	1000	<0.050
Methylnaphthalene, 2-	60	950	950	<0.020
Naphthalene	0.6	20	20	<0.010
Phenanthrene	5	50	50	0.038
Pyrene	10	100	100	0.14
Quinoline	2.5	10	10	<0.050

Notes:
Values in µg/g unless otherwise stated.
- = not analyzed, ns = no standard
Dup. = duplicate

XXX.XX = Exceeds Applicable RLD Soil Standard
XXX.XX = Exceeds Applicable CL Soil Standard
XXX.XX = Exceeds Applicable IL Soil Standard

* Standards provided in Schedule 3.1 of the BC Contaminated Sites Regulation. Site specific factors include intake of contaminated soil, toxicity to soil invertebrates and plants, groundwater used for drinking water and groundwater flow to surface water used by aquatic life (freshwater and/or marine).

PAH = Polycyclic Aromatic Hydrocarbons
EPH_{10-19} = LEPH, uncorrected for PAH
EPH_{19-32} = HEPH, uncorrected for PAH
LEPH = Light Extractable Petroleum Hydrocarbons, corrected for PAH
HEPH = Heavy Extractable Petroleum Hydrocarbons, corrected for PAH

Table 2: VOC in Soil
Job Number: 56763
Site Address: Kinver Street and Heald Avenue, Esquimalt, BC
Client: Township of Esquimalt

Sample ID				BH24-03-01
Sample Date				1-Aug-24
Certificate of Analysis	Residential Low Density (RLD)	Commercial (CL)	Industrial (IL)	C459220
Depth of Sample (m)				0 - 0.3
Parameters				
Photoionization Detector (ppm)	ns	ns	ns	-
Acetone	15000	200000	200000	<5.0
Benzene	0.035	0.035	0.035	<0.0050
Bromobenzene	150	2000	2000	<0.20
Bromodichloromethane	100	550	550	<0.050
Butadiene, 1,3-	2	9.5	9.5	<0.080
Carbon Disulfide	1500	25000	25000	<15
Carbon Tetrachloride	5	50	50	<0.020
Chlorobenzene	1	10	10	<0.020
Chloroethane	ns	ns	ns	<0.10
Decane, n-	ns	ns	ns	<2.0
Dibromoethane, 1,2-	3.5	15	15	<0.020
Dichlorobenzene, 1,2-	1	10	10	<0.020
Dichlorodifluoromethane	3000	45000	45000	<0.20
Dichloroethane, 1,1-	5	50	50	<0.025
Dichloroethane, 1,2-	5	50	50	<0.020
Dichloroethylene, 1,1-	5	50	50	<0.025
Dichloroethylene, 1,2-cis-	5	50	50	<0.030
Dichloroethylene, 1,2-trans-	5	50	50	<0.030
Dichloromethane	5	50	50	<0.080
Dichloropropane, 1,2-	5	50	50	<0.020
Ethylbenzene	15	15	15	<0.010
Hexane, n-	ns	ns	ns	<0.50
Isopropylbenzene	1500	25000	25000	<0.20
Methyl Ethyl Ketone [MEK]	9500	150000	150000	<15
Methyl Isobutyl Ketone [MIBK]	ns	ns	ns	<0.50
Methylcyclohexane	ns	ns	ns	<0.20
Methyl tert-butyl ether [MTBE]	4000	20000	20000	<0.10
Styrene	5	50	50	<0.030
Tetrachloroethane, 1,1,2,2-	35	150	150	<0.020
Tetrachloroethylene (PERC)	2.5	2.5	2.5	<0.010
Toluene	0.5-6	0.5-6	0.5-6	<0.050
Trichlorobenzene, 1,2,4-	2	10	10	<0.030
Trichloroethane, 1,1,1-	5	50	50	<0.020
Trichloroethane, 1,1,2-	5	50	50	<0.020
Trichloroethylene (TCE)	0.3	0.3	0.3	<0.0090
Trimethylbenzene, 1,2,4-	ns	ns	ns	<0.20
Trimethylbenzene, 1,3,5-	150	2500	2500	<0.20
Vinyl Chloride	0.95	45	45	<0.040
VHs (C6-C10)	ns	ns	ns	<10
VPHs (C6-C10)	200	200	200	<10
Xylene, m&p-	ns	ns	ns	<0.040
Xylene, o-	ns	ns	ns	<0.040
Xylenes, Total	6.5	6.5	6.5	<0.040

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VOC = Volatile Organic Compounds
BTEX = Benzene, Toluene, Ethylbenzene and Xylenes
VPH = Volatile Petroleum Hydrocarbons, corrected for BTEX
VH = Volatile Petroleum Hydrocarbons, uncorrected for BTEX

Table 3: Metals in Soil
Job Number: 56763
Site Address: Kinver Street and Heald Avenue, Esquimalt, BC
Client: Township of Esquimalt

Sample ID				BH24-03-01
Sample Date	Soil Standards (µg/g)*			1-Aug-24
Certificate of Analysis	Residential Low Density (RLD)	Commercial (CL)	Industrial (IL)	C459220
Depth of Sample (m)				0 - 0.3
Parameters				
pH	ns	ns	ns	5.86
Aluminum (Al)	40000	250000	250000	21,000
Antimony (Sb)	20	40	40	0.24
Arsenic (As)	10	10	10	4.40
Barium (Ba)	350	350	350	111
Beryllium (Be)	1-85**	1-350**	1-350**	0.35
Boron (B)	8500	50000	1000000	2.2
Cadmium (Cd)	1-20**	1-50**	1-50**	0.100
Chromium (Cr) (III + VI)	60	60	60	32.7
Cobalt (Co)	25	25	25	10.1
Copper (Cu)	75-150**	75-300**	75-300**	26.4
Iron (Fe)	35000	150000	150000	25,300
Lead (Pb)	120	120-150**	120-1000**	16.3
Lithium (Li)	30	450	450	12.6
Manganese (Mn)	2000	2000	2000	630
Mercury (Hg)	10	75	75	0.072
Molybdenum (Mo)	15	15	15	0.34
Nickel (Ni)	70-150**	70-250**	70-250**	26.0
Selenium (Se)	1	1	1	<0.50
Silver (Ag)	20	40	40	<0.050
Strontium (Sr)	9500	150000	150000	28.7
Thallium (Tl)	9	25	25	<0.050
Tin (Sn)	50	300	300	0.72
Tungsten (W)	15	200	200	<0.50
Uranium (U)	30	30	30	0.383
Vanadium (V)	100	100	100	65.7
Zinc (Zn)	150-200**	150-200**	150-200**	60.0

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** Standard is pH dependent

Table 4: Sodium and Chloride in Soil
Job Number: 56763
Site Address: Kinver Street and Heald Avenue, Esquimalt, BC
Client: Township of Esquimalt

Sample ID				BH24-03-01
Certificate of Analysis	Soil Standards (µg/g)*			1-Aug-2024
Sample Date	Residential Low Density (RLD)	Commercial (CL)	Industrial (IL)	C459220
Depth of Sample (m)				0 - 0.3
Parameters				
Chloride Ion	100	100	100	<5.4
Sodium Ion	200	1000	1000	10.4

Notes:
Values in µg/g unless otherwise stated.
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Your P.O. #: 56763
Your Project #: 56763
Site#: ESQUIMALT
Site Location: ESQUIMALT, BC
Your C.O.C. #: 8537307, 8537308

Attention: Lora Paul

Thurber Engineering Ltd.
4464 MARKHAM ST.
SUITE 2302
VICTORIA, BC
CANADA V8Z 7X8

Report Date: 2024/09/19
Report #: R3558880
Version: 5 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C459220
Received: 2024/08/02, 13:28

Sample Matrix: Soil
Samples Received: 34

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Chloride (soluble)	2	2024/08/15	2024/08/15	BBY6SOP-00011	SM 24 4500-Cl- E m
Chloride (soluble)	25	2024/08/08	2024/08/08	BBY6SOP-00011	SM 24 4500-Cl- E m
Soluble Chloride Ion Calc. (mg/kg)	2	N/A	2024/08/15	BBY WI-00033	Auto Calc
Soluble Chloride Ion Calc. (mg/kg)	25	N/A	2024/08/08	BBY WI-00033	Auto Calc
Elements by ICPMS (total) (1)	8	2024/08/15	2024/08/15	BBY7SOP-00004 / BBY7SOP-00001	EPA 6020b R2 m
Elements by ICPMS (total) (1)	1	2024/08/16	2024/08/16	BBY7SOP-00004 / BBY7SOP-00001	EPA 6020b R2 m
Elements by ICPMS (total) (1)	25	2024/08/08	2024/08/08	BBY7SOP-00004 / BBY7SOP-00001	EPA 6020b R2 m
Moisture	2	2024/08/14	2024/08/15	BBY8SOP-00017	BCMOE BCLM Dec2000 m
Moisture	25	2024/08/07	2024/08/08	BBY8SOP-00017	BCMOE BCLM Dec2000 m
Soluble Sodium Ion Calc. (mg/kg)	2	N/A	2024/08/15	BBY WI-00033	Auto Calc
Soluble Sodium Ion Calc. (mg/kg)	8	N/A	2024/08/08	BBY WI-00033	Auto Calc
Soluble Sodium Ion Calc. (mg/kg)	17	N/A	2024/08/09	BBY WI-00033	Auto Calc
PAH in TCLP Leachate by GC/MS (SIM)	2	2024/09/18	2024/09/18	BBY7SOP-00005 / BBY8SOP-00021	BCMOE BCLM Jul2017m
PAH in Soil by GC/MS (SIM)	2	2024/08/14	2024/08/14	BBY8SOP-00022	BCMOE BCLM Jul2017m
PAH in Soil by GC/MS (SIM)	20	2024/08/07	2024/08/07	BBY8SOP-00022	BCMOE BCLM Jul2017m
PAH in Soil by GC/MS (SIM)	5	2024/08/07	2024/08/08	BBY8SOP-00022	BCMOE BCLM Jul2017m
Total LMW, HMW, Total PAH Calc (2)	2	N/A	2024/09/19	BBY WI-00033	Auto Calc
Total PAH and B(a)P Calculation (3)	2	N/A	2024/08/15	BBY WI-00033	Auto Calc
Total PAH and B(a)P Calculation (3)	23	N/A	2024/08/08	BBY WI-00033	Auto Calc
Total PAH and B(a)P Calculation (3)	2	N/A	2024/08/09	BBY WI-00033	Auto Calc
pH (2:1 DI Water Extract)	8	2024/08/15	2024/08/16	BBY6SOP-00028	BCMOE BCLM Mar2005 m
pH (2:1 DI Water Extract)	1	2024/08/16	2024/08/16	BBY6SOP-00028	BCMOE BCLM Mar2005 m
pH (2:1 DI Water Extract)	25	2024/08/08	2024/08/08	BBY6SOP-00028	BCMOE BCLM Mar2005 m
TCLP pH Measurements	2	N/A	2024/09/17	BBY7SOP-00005	EPA 1311
Saturated Paste	2	2024/08/15	2024/08/15	BBY6SOP-00030	BC Lab Manual 2015 m
Saturated Paste	25	2024/08/08	2024/08/08	BBY6SOP-00030	BC Lab Manual 2015 m

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

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Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Soluble Cations (Ca,K,Mg,Na,S)	2	N/A	2024/08/15	BBY7SOP-00018 / BBY7SOP-00030 / BCLM Nov 2015	EPA 6010d m
Soluble Cations (Ca,K,Mg,Na,S)	25	N/A	2024/08/08	BBY7SOP-00018 / BBY7SOP-00030 / BCLM Nov 2015	EPA 6010d m
EPH less PAH in Soil By GC/FID (4)	2	N/A	2024/08/15	BBY WI-00033	Auto Calc
EPH less PAH in Soil By GC/FID (4)	23	N/A	2024/08/08	BBY WI-00033	Auto Calc
EPH less PAH in Soil By GC/FID (4)	2	N/A	2024/08/09	BBY WI-00033	Auto Calc
EPH in Soil by GC/FID	2	2024/08/14	2024/08/15	BBY8SOP-00029	BCMOE BCLM Dec2016 m
EPH in Soil by GC/FID	22	2024/08/07	2024/08/07	BBY8SOP-00029	BCMOE BCLM Dec2016 m
EPH in Soil by GC/FID	3	2024/08/07	2024/08/08	BBY8SOP-00029	BCMOE BCLM Dec2016 m
Extra VOCs in Soil - Field Pres. (5)	8	N/A	2024/08/10	BBY8SOP-00040	BCMOE BCLM Sep 2017m
Extra VOCs in Soil - Field Pres. (5)	3	N/A	2024/08/17	BBY8SOP-00040	BCMOE BCLM Sep 2017m
Extra VOCs in Soil - Field Pres. (5)	1	N/A	2024/08/09	BBY8SOP-00040	BCMOE BCLM Sep 2017m
VOCs, VH, F1, LH in Soil - Field Pres. (5)	3	N/A	2024/08/16	BBY8SOP-00009 / BBY8SOP-00011 / BBY8SOP-00012	BCMOE BCLM Sep2017 m
VOCs, VH, F1, LH in Soil - Field Pres. (5)	3	N/A	2024/08/08	BBY8SOP-00009 / BBY8SOP-00011 / BBY8SOP-00012	BCMOE BCLM Sep2017 m
VOCs, VH, F1, LH in Soil - Field Pres. (5)	6	N/A	2024/08/09	BBY8SOP-00009 / BBY8SOP-00011 / BBY8SOP-00012	BCMOE BCLM Sep2017 m
Volatile HC-BTEX for Soil (6)	3	N/A	2024/08/18	BBY WI-00033	Auto Calc
Volatile HC-BTEX for Soil (6)	9	N/A	2024/08/09	BBY WI-00033	Auto Calc

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in

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BUREAU VERITAS JOB #: C459220
Received: 2024/08/02, 13:28

writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
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Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) The sample is prepaired per the BC MOE Lab Manual "Strong Acid Leachable Metals (SALM) in Soil - Prescriptive", Revision Nov 6, 2015.
(2) Total PAHs include: Quinoline, Naphthalene, 1-Methylnaphthalene, 2-Methylnaphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Acridine, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b&j)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, and Benzo (g,h,i)perylene.
(3) Total PAHs in Soil include: Quinoline, Naphthalene, 1-Methylnaphthalene, 2-Methylnaphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Acridine, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b&j)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, and Benzo(g,h,i)perylene.

Total PAHs in Sediment include (B.C. Reg. 116/2018, Schedule 3.4): Naphthalene, 2-Methylnaphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(a)pyrene, and Dibenz(a,h)anthracene.
(4) LEPH = EPH (C10 to C19) - (Naphthalene + Phenanthrene)
HEPH = EPH (C19 to C32) - (Benzo(a)anthracene + Benzo(a)pyrene + Benzo(b)fluoranthene + Benzo(k)fluoranthene + Dibenz(a,h)anthracene + Indeno(1,2,3-cd)pyrene + Pyrene)
(5) The extraction date for VOC, BTEX, VH, or F1 samples that are field preserved with methanol equals the date sampled, unless otherwise stated.
(6) VPH = VH - (Benzene + Toluene + Ethylbenzene + m & p-Xylene + o-Xylene + Styrene)

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your P.O. #: 56763
Your Project #: 56763
Site#: ESQUIMALT
Site Location: ESQUIMALT, BC
Your C.O.C. #: 8537307, 8537308

Attention: Lora Paul

Thurber Engineering Ltd.
4464 MARKHAM ST.
SUITE 2302
VICTORIA, BC
CANADA V8Z 7X8

Report Date: 2024/09/19
Report #: R3558880
Version: 5 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C459220
Received: 2024/08/02, 13:28

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Please direct all questions regarding this Certificate of Analysis to:
Shanaz Akbar, Customer Solutions Representative
Email: Shanaz.Akbar@bureauveritas.com
Phone# (604) 734 7276

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Raphael Kwan, General Manager, BC and Yukon Regions responsible for British Columbia Environmental laboratory operations.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

RESULTS OF CHEMICAL ANALYSES OF SOIL

Bureau Veritas ID		CSQ568			CSQ570		CSQ574			CSQ579	
Sampling Date		2024/08/01 10:30			2024/08/01 10:30		2024/08/01 09:15			2024/08/01 09:30	
COC Number		8537307			8537307		8537307			8537307	
	UNITS	SP24-01	RDL	QC Batch	SP24-02	QC Batch	BH24-01-01	RDL	QC Batch	BH24-02-02	QC Batch
Calculated Parameters											
VPH (VH6 to 10 - BTEX)	mg/kg	<10	10	B467275			<10	10	B467275		
Physical Properties											
Soluble (2:1) pH	pH	6.62	N/A	B469888	7.76	B469888	6.08	N/A	B469888	6.94	B469888

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas ID		CSQ580		CSQ582			CSQ583		CSQ585		
Sampling Date		2024/08/01 11:30		2024/08/01 11:45			2024/08/01 12:30		2024/08/01 12:50		
COC Number		8537307		8537307			8537307		8537307		
	UNITS	BH24-03-01	QC Batch	BH24-04-01	RDL	QC Batch	BH24-05-01	QC Batch	BH24-06-01	RDL	QC Batch
Calculated Parameters											
VPH (VH6 to 10 - BTEX)	mg/kg	<10	B478204	<10	10	B467275			<10	10	B478204
Physical Properties											
Soluble (2:1) pH	pH	5.86	B469888	6.01	N/A	B469888	6.45	B469888	7.41	N/A	B469888

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas ID		CSQ636		CSQ637			CSQ638		CSQ639		
Sampling Date		2024/08/01 13:15		2024/08/01 13:30			2024/08/01 14:00		2024/08/01 14:00		
COC Number		8537308		8537308			8537308		8537308		
	UNITS	BH24-07-01	QC Batch	BH24-08-01	RDL	QC Batch	BH24-09-01	QC Batch	BH24-09-02	RDL	QC Batch
Calculated Parameters											
VPH (VH6 to 10 - BTEX)	mg/kg			<10	10	B467275			<10	10	B467275
Physical Properties											
Soluble (2:1) pH	pH	6.05	B469888	6.41	N/A	B469894	6.90	B469894	7.14	N/A	B469894

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

RESULTS OF CHEMICAL ANALYSES OF SOIL

Bureau Veritas ID		CSQ640		CSQ641		CSQ642		CSQ643		
Sampling Date		2024/08/01 14:00		2024/08/01 14:30		2024/08/01 14:30		2024/08/01 14:50		
COC Number		8537308		8537308		8537308		8537308		
	UNITS	BH24-09-03	QC Batch	BH24-10-01	QC Batch	BH24-10-02	QC Batch	BH24-11-01	RDL	QC Batch
Calculated Parameters										
VPH (VH6 to 10 - BTEX)	mg/kg					<10	B478204	<10	10	B467275
Physical Properties										
Soluble (2:1) pH	pH	7.22	B480247	6.12	B469894	6.08	B478979	6.35	N/A	B469894

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas ID		CSQ643	CSQ644		CSQ645			CSQ646	CSQ647	
Sampling Date		2024/08/01 14:50	2024/08/01 15:15		2024/08/02 07:45			2024/08/02 07:45	2024/08/02 08:30	
COC Number		8537308	8537308		8537308			8537308	8537308	
	UNITS	BH24-11-01 Lab-Dup	BH24-12-01	QC Batch	BH24-13-01	RDL	QC Batch	BH24-13-02	BH24-14-01	QC Batch
Calculated Parameters										
VPH (VH6 to 10 - BTEX)	mg/kg				<10	10	B467275			
Physical Properties										
Soluble (2:1) pH	pH	6.37	6.21	B469894	8.82	N/A	B469894	8.62	6.59	B469894

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Bureau Veritas ID		CSQ648			CSQ650	CSQ651		CSQ652		
Sampling Date		2024/08/02 09:30			2024/08/02 09:30	2024/08/02 09:00		2024/08/02 10:15		
COC Number		8537308			8537308	8537308		8537308		
	UNITS	BH24-15-01	RDL	QC Batch	BH24-15-03	BH24-16-01	QC Batch	BH24-17-01	RDL	QC Batch
Calculated Parameters										
VPH (VH6 to 10 - BTEX)	mg/kg	<10	10	B467275				<10	10	B467275
Physical Properties										
Soluble (2:1) pH	pH	7.50	N/A	B469894	6.51	6.54	B469894	8.39	N/A	B469894

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

RESULTS OF CHEMICAL ANALYSES OF SOIL

Bureau Veritas ID		CSQ655		CSQ656	CSQ658	CSQ661		CTH423	
Sampling Date		2024/08/02 10:45		2024/08/02 10:45	2024/08/02 11:15	2024/08/02 11:45			
COC Number		8537308		8537308	8537308	8537308		8537307	
	UNITS	BH24-18-01	QC Batch	BH24-18-02	BH24-19-01	BH24-20-02	QC Batch	BH24-09-02 - RERUN 1	QC Batch
Physical Properties									
Soluble (2:1) pH	pH	8.20	B478979	6.90	6.61	6.31	B469894	7.55	B478979

Bureau Veritas ID		CTH424	CTH433	CTH434	CTH435	
Sampling Date						
COC Number		8537307	8537307	8537307	8537307	
	UNITS	BH24-09-02 - RERUN 2	BH24-13-01 - RERUN 1	BH24-13-01 - RERUN 2	BH24-14-01 - RERUN 1	QC Batch
Physical Properties						
Soluble (2:1) pH	pH	7.57	8.85	8.85	6.52	B478979

Bureau Veritas ID		CTH436	
Sampling Date			
COC Number		8537307	
	UNITS	BH24-14-01 - RERUN 2	QC Batch
Physical Properties			
Soluble (2:1) pH	pH	6.52	B478979

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

PHYSICAL TESTING (SOIL)

Bureau Veritas ID		CSQ568	CSQ570	CSQ574	CSQ579		CSQ580	CSQ580		
Sampling Date		2024/08/01 10:30	2024/08/01 10:30	2024/08/01 09:15	2024/08/01 09:30		2024/08/01 11:30	2024/08/01 11:30		
COC Number		8537307	8537307	8537307	8537307		8537307	8537307		
	UNITS	SP24-01	SP24-02	BH24-01-01	BH24-02-02	QC Batch	BH24-03-01	BH24-03-01 Lab-Dup	RDL	QC Batch
Physical Properties										
Moisture	%	10	7.8	5.9	14	B468362	6.0	6.0	0.30	B468461

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas ID		CSQ582	CSQ583	CSQ585	CSQ636	CSQ637	CSQ638	CSQ639		
Sampling Date		2024/08/01 11:45	2024/08/01 12:30	2024/08/01 12:50	2024/08/01 13:15	2024/08/01 13:30	2024/08/01 14:00	2024/08/01 14:00		
COC Number		8537307	8537307	8537307	8537308	8537308	8537308	8537308		
	UNITS	BH24-04-01	BH24-05-01	BH24-06-01	BH24-07-01	BH24-08-01	BH24-09-01	BH24-09-02	RDL	QC Batch
Physical Properties										
Moisture	%	4.3	2.2	3.2	2.9	3.4	7.9	9.6	0.30	B468461

RDL = Reportable Detection Limit

Bureau Veritas ID		CSQ641		CSQ642		CSQ643	CSQ644	CSQ645		
Sampling Date		2024/08/01 14:30		2024/08/01 14:30		2024/08/01 14:50	2024/08/01 15:15	2024/08/02 07:45		
COC Number		8537308		8537308		8537308	8537308	8537308		
	UNITS	BH24-10-01	QC Batch	BH24-10-02	QC Batch	BH24-11-01	BH24-12-01	BH24-13-01	RDL	QC Batch
Physical Properties										
Moisture	%	7.6	B468461	9.1	B478219	5.1	6.8	5.0	0.30	B468461

RDL = Reportable Detection Limit

Bureau Veritas ID		CSQ646	CSQ647	CSQ648	CSQ650	CSQ651	CSQ652		
Sampling Date		2024/08/02 07:45	2024/08/02 08:30	2024/08/02 09:30	2024/08/02 09:30	2024/08/02 09:00	2024/08/02 10:15		
COC Number		8537308	8537308	8537308	8537308	8537308	8537308		
	UNITS	BH24-13-02	BH24-14-01	BH24-15-01	BH24-15-03	BH24-16-01	BH24-17-01	RDL	QC Batch
Physical Properties									
Moisture	%	17	5.1	5.8	19	4.2	4.1	0.30	B468461

RDL = Reportable Detection Limit

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

PHYSICAL TESTING (SOIL)

Bureau Veritas ID		CSQ655		CSQ656	CSQ658		CSQ661	CSQ661		
Sampling Date		2024/08/02 10:45		2024/08/02 10:45	2024/08/02 11:15		2024/08/02 11:45	2024/08/02 11:45		
COC Number		8537308		8537308	8537308		8537308	8537308		
	UNITS	BH24-18-01	QC Batch	BH24-18-02	BH24-19-01	QC Batch	BH24-20-02	BH24-20-02 Lab-Dup	RDL	QC Batch
Physical Properties										
Moisture	%	5.2	B478219	13	6.7	B468461	9.9	9.9	0.30	B468569

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		CSQ568	CSQ570	CSQ574	CSQ579	CSQ580	CSQ582	CSQ583		
Sampling Date		2024/08/01 10:30	2024/08/01 10:30	2024/08/01 09:15	2024/08/01 09:30	2024/08/01 11:30	2024/08/01 11:45	2024/08/01 12:30		
COC Number		8537307	8537307	8537307	8537307	8537307	8537307	8537307		
	UNITS	SP24-01	SP24-02	BH24-01-01	BH24-02-02	BH24-03-01	BH24-04-01	BH24-05-01	RDL	QC Batch
Total Metals by ICPMS										
Total Aluminum (Al)	mg/kg	21600	21100	19100	25100	21000	17700	18800	100	B469883
Total Antimony (Sb)	mg/kg	0.30	0.35	1.05	0.28	0.24	0.18	0.26	0.10	B469883
Total Arsenic (As)	mg/kg	4.63	4.36	4.43	6.28	4.40	2.75	4.46	0.20	B469883
Total Barium (Ba)	mg/kg	81.9	102	132	111	111	94.9	60.8	0.10	B469883
Total Beryllium (Be)	mg/kg	0.36	0.34	0.38	0.49	0.35	0.33	0.27	0.20	B469883
Total Boron (B)	mg/kg	2.0	2.5	3.2	1.7	2.2	1.7	1.6	1.0	B469883
Total Cadmium (Cd)	mg/kg	0.117	0.111	0.233	0.054	0.100	0.123	0.106	0.050	B469883
Total Chromium (Cr)	mg/kg	31.6	34.0	28.2	45.0	32.7	27.8	28.9	0.50	B469883
Total Cobalt (Co)	mg/kg	11.1	12.5	8.51	13.8	10.1	8.37	13.3	0.10	B469883
Total Copper (Cu)	mg/kg	40.2	40.8	62.1	33.0	26.4	31.4	63.3	0.50	B469883
Total Iron (Fe)	mg/kg	26500	27600	23100	34100	25300	22800	26800	100	B469883
Total Lead (Pb)	mg/kg	14.6	15.4	65.6	14.5	16.3	27.8	9.26	0.10	B469883
Total Lithium (Li)	mg/kg	12.5	12.1	11.3	16.9	12.6	9.68	9.96	0.50	B469883
Total Manganese (Mn)	mg/kg	629	636	463	494	630	507	622	0.20	B469883
Total Mercury (Hg)	mg/kg	0.078	0.081	0.075	0.069	0.072	0.053	<0.050	0.050	B469883
Total Molybdenum (Mo)	mg/kg	0.48	0.61	0.67	0.48	0.34	0.39	0.32	0.10	B469883
Total Nickel (Ni)	mg/kg	26.0	26.3	23.8	30.0	26.0	21.8	26.2	0.50	B469883
Total Selenium (Se)	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	B469883
Total Silver (Ag)	mg/kg	0.066	0.076	0.291	<0.050	<0.050	0.067	<0.050	0.050	B469883
Total Strontium (Sr)	mg/kg	28.9	45.9	36.0	33.4	28.7	25.7	29.0	0.10	B469883
Total Thallium (Tl)	mg/kg	0.054	<0.050	<0.050	0.061	<0.050	<0.050	<0.050	0.050	B469883
Total Tin (Sn)	mg/kg	5.41	0.75	1.81	0.65	0.72	0.79	0.47	0.10	B469883
Total Tungsten (W)	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	B469883
Total Uranium (U)	mg/kg	0.470	0.449	0.600	0.573	0.383	0.454	0.287	0.050	B469883
Total Vanadium (V)	mg/kg	73.3	68.0	60.7	91.1	65.7	63.1	76.5	1.0	B469883
Total Zinc (Zn)	mg/kg	55.6	68.9	67.3	51.4	60.0	46.2	52.3	1.0	B469883

RDL = Reportable Detection Limit

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		CSQ585	CSQ636		CSQ637	CSQ638	CSQ639		
Sampling Date		2024/08/01 12:50	2024/08/01 13:15		2024/08/01 13:30	2024/08/01 14:00	2024/08/01 14:00		
COC Number		8537307	8537308		8537308	8537308	8537308		
	UNITS	BH24-06-01	BH24-07-01	QC Batch	BH24-08-01	BH24-09-01	BH24-09-02	RDL	QC Batch
Total Metals by ICPMS									
Total Aluminum (Al)	mg/kg	16700	18200	B469883	20000	22400	22300	100	B469891
Total Antimony (Sb)	mg/kg	0.20	0.28	B469883	0.30	0.72	0.88	0.10	B469891
Total Arsenic (As)	mg/kg	3.88	4.00	B469883	4.79	4.58	4.80	0.20	B469891
Total Barium (Ba)	mg/kg	60.0	63.5	B469883	85.7	155	162	0.10	B469891
Total Beryllium (Be)	mg/kg	0.25	0.31	B469883	0.31	0.45	0.51	0.20	B469891
Total Boron (B)	mg/kg	1.3	1.4	B469883	2.5	4.9	3.7	1.0	B469891
Total Cadmium (Cd)	mg/kg	0.091	0.115	B469883	0.107	0.188	0.273	0.050	B469891
Total Chromium (Cr)	mg/kg	26.1	29.6	B469883	31.9	38.5	37.0	0.50	B469891
Total Cobalt (Co)	mg/kg	11.8	12.1	B469883	14.7	12.0	12.9	0.10	B469891
Total Copper (Cu)	mg/kg	56.9	59.2	B469883	72.1	46.9	47.8	0.50	B469891
Total Iron (Fe)	mg/kg	25100	25200	B469883	27600	26100	26600	100	B469891
Total Lead (Pb)	mg/kg	8.54	12.3	B469883	11.7	98.2	102	0.10	B469891
Total Lithium (Li)	mg/kg	9.20	10.6	B469883	11.2	14.1	14.3	0.50	B469891
Total Manganese (Mn)	mg/kg	543	585	B469883	714	702	1580	0.20	B469891
Total Mercury (Hg)	mg/kg	<0.050	<0.050	B469883	0.084	0.194	0.159	0.050	B469891
Total Molybdenum (Mo)	mg/kg	0.28	0.30	B469883	0.35	0.81	0.73	0.10	B469891
Total Nickel (Ni)	mg/kg	24.4	26.1	B469883	27.8	29.4	30.3	0.50	B469891
Total Selenium (Se)	mg/kg	<0.50	<0.50	B469883	<0.50	<0.50	<0.50	0.50	B469891
Total Silver (Ag)	mg/kg	<0.050	<0.050	B469883	0.060	0.147	0.139	0.050	B469891
Total Strontium (Sr)	mg/kg	38.7	26.7	B469883	36.6	45.0	43.4	0.10	B469891
Total Thallium (Tl)	mg/kg	<0.050	<0.050	B469883	<0.050	0.056	0.060	0.050	B469891
Total Tin (Sn)	mg/kg	0.44	0.58	B469883	0.74	5.77	11.5	0.10	B469891
Total Tungsten (W)	mg/kg	<0.50	<0.50	B469883	<0.50	<0.50	<0.50	0.50	B469891
Total Uranium (U)	mg/kg	0.276	0.560	B469883	0.336	0.527	0.531	0.050	B469891
Total Vanadium (V)	mg/kg	68.2	67.0	B469883	72.9	66.9	67.1	1.0	B469891
Total Zinc (Zn)	mg/kg	47.7	56.4	B469883	60.4	114	239	1.0	B469891

RDL = Reportable Detection Limit

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		CSQ640			CSQ641		CSQ642			CSQ643		
Sampling Date		2024/08/01 14:00			2024/08/01 14:30		2024/08/01 14:30			2024/08/01 14:50		
COC Number		8537308			8537308		8537308			8537308		
	UNITS	BH24-09-03	RDL	QC Batch	BH24-10-01	QC Batch	BH24-10-02	RDL	QC Batch	BH24-11-01	RDL	QC Batch
TCLP Extraction Procedure												
Initial pH of Sample	pH									7.13	N/A	B516504
pH after HCl	pH									1.98	N/A	B516504
Final pH of Leachate	pH									4.96	N/A	B516504
pH of Leaching Fluid	pH									4.91	N/A	B516504
Total Metals by ICPMS												
Total Aluminum (Al)	mg/kg				19700	B469891	20600	100	B478972	19900	100	B469891
Total Antimony (Sb)	mg/kg				0.44	B469891	0.33	0.10	B478972	0.66	0.10	B469891
Total Arsenic (As)	mg/kg				4.23	B469891	4.31	0.20	B478972	4.60	0.20	B469891
Total Barium (Ba)	mg/kg				112	B469891	123	0.10	B478972	121	0.10	B469891
Total Beryllium (Be)	mg/kg				0.36	B469891	0.34	0.20	B478972	0.35	0.20	B469891
Total Boron (B)	mg/kg				2.5	B469891	3.8	1.0	B478972	3.5	1.0	B469891
Total Cadmium (Cd)	mg/kg				0.159	B469891	0.096	0.050	B478972	0.328	0.050	B469891
Total Chromium (Cr)	mg/kg				30.8	B469891	35.6	0.50	B478972	38.4	0.50	B469891
Total Cobalt (Co)	mg/kg				8.59	B469891	9.00	0.10	B478972	9.69	0.10	B469891
Total Copper (Cu)	mg/kg				29.2	B469891	25.7	0.50	B478972	42.4	0.50	B469891
Total Iron (Fe)	mg/kg				22900	B469891	26500	100	B478972	23600	100	B469891
Total Lead (Pb)	mg/kg				54.6	B469891	26.2	0.10	B478972	112	0.10	B469891
Total Lithium (Li)	mg/kg				11.7	B469891	12.7	0.50	B478972	10.7	0.50	B469891
Total Manganese (Mn)	mg/kg				507	B469891	484	0.20	B478972	596	0.20	B469891
Total Mercury (Hg)	mg/kg				0.108	B469891	0.119	0.050	B478972	0.212	0.050	B469891
Total Molybdenum (Mo)	mg/kg				0.56	B469891	0.68	0.10	B478972	1.14	0.10	B469891
Total Nickel (Ni)	mg/kg				23.2	B469891	24.0	0.50	B478972	24.6	0.50	B469891
Total Selenium (Se)	mg/kg				<0.50	B469891	<0.50	0.50	B478972	<0.50	0.50	B469891
Total Silver (Ag)	mg/kg				0.078	B469891	0.083	0.050	B478972	0.117	0.050	B469891
Total Strontium (Sr)	mg/kg				27.4	B469891	26.4	0.10	B478972	50.0	0.10	B469891
Total Thallium (Tl)	mg/kg				0.058	B469891	0.087	0.050	B478972	<0.050	0.050	B469891
Total Tin (Sn)	mg/kg				2.51	B469891	1.82	0.10	B478972	3.19	0.10	B469891
Total Tungsten (W)	mg/kg				<0.50	B469891	<0.50	0.50	B478972	<0.50	0.50	B469891
Total Uranium (U)	mg/kg				0.576	B469891	0.633	0.050	B478972	0.504	0.050	B469891

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		CSQ640			CSQ641		CSQ642			CSQ643		
Sampling Date		2024/08/01 14:00			2024/08/01 14:30		2024/08/01 14:30			2024/08/01 14:50		
COC Number		8537308			8537308		8537308			8537308		
	UNITS	BH24-09-03	RDL	QC Batch	BH24-10-01	QC Batch	BH24-10-02	RDL	QC Batch	BH24-11-01	RDL	QC Batch
Total Vanadium (V)	mg/kg				58.8	B469891	66.0	1.0	B478972	64.3	1.0	B469891
Total Zinc (Zn)	mg/kg	101	1.0	B480261	76.3	B469891	61.1	1.0	B478972	95.8	1.0	B469891
RDL = Reportable Detection Limit												

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		CSQ644			CSQ645	CSQ646	CSQ647	CSQ648	CSQ650		
Sampling Date		2024/08/01 15:15			2024/08/02 07:45	2024/08/02 07:45	2024/08/02 08:30	2024/08/02 09:30	2024/08/02 09:30		
COC Number		8537308			8537308	8537308	8537308	8537308	8537308		
	UNITS	BH24-12-01	RDL	QC Batch	BH24-13-01	BH24-13-02	BH24-14-01	BH24-15-01	BH24-15-03	RDL	QC Batch
TCLP Extraction Procedure											
Initial pH of Sample	pH	6.77	N/A	B516504							
pH after HCl	pH	1.69	N/A	B516504							
Final pH of Leachate	pH	4.95	N/A	B516504							
pH of Leaching Fluid	pH	4.91	N/A	B516504							
Total Metals by ICPMS											
Total Aluminum (Al)	mg/kg	22000	100	B469891	22800	23700	21000	14200	26700	100	B469891
Total Antimony (Sb)	mg/kg	2.41	0.10	B469891	0.42	0.27	0.79	0.10	0.26	0.10	B469891
Total Arsenic (As)	mg/kg	4.12	0.20	B469891	11.9	5.49	4.42	2.09	6.23	0.20	B469891
Total Barium (Ba)	mg/kg	158	0.10	B469891	94.6	110	113	44.4	112	0.10	B469891
Total Beryllium (Be)	mg/kg	0.42	0.20	B469891	0.39	0.40	0.42	0.26	0.57	0.20	B469891
Total Boron (B)	mg/kg	3.5	1.0	B469891	3.0	2.8	2.5	1.3	2.1	1.0	B469891
Total Cadmium (Cd)	mg/kg	0.236	0.050	B469891	0.161	0.079	0.274	0.052	<0.050	0.050	B469891
Total Chromium (Cr)	mg/kg	28.7	0.50	B469891	53.9	44.5	46.8	19.7	56.5	0.50	B469891
Total Cobalt (Co)	mg/kg	10.3	0.10	B469891	18.1	11.6	12.0	10.2	19.4	0.10	B469891
Total Copper (Cu)	mg/kg	32.9	0.50	B469891	78.9	40.7	49.9	41.6	56.8	0.50	B469891
Total Iron (Fe)	mg/kg	24700	100	B469891	34700	31800	27500	20100	39000	100	B469891
Total Lead (Pb)	mg/kg	63.7	0.10	B469891	53.7	16.2	140	2.28	6.27	0.10	B469891
Total Lithium (Li)	mg/kg	13.0	0.50	B469891	16.2	18.9	11.7	5.22	20.6	0.50	B469891
Total Manganese (Mn)	mg/kg	788	0.20	B469891	825	495	673	441	711	0.20	B469891
Total Mercury (Hg)	mg/kg	0.153	0.050	B469891	0.288	0.112	0.096	<0.050	0.070	0.050	B469891
Total Molybdenum (Mo)	mg/kg	0.45	0.10	B469891	0.60	0.69	0.91	0.25	0.19	0.10	B469891
Total Nickel (Ni)	mg/kg	29.5	0.50	B469891	39.6	31.3	29.1	17.2	55.1	0.50	B469891
Total Selenium (Se)	mg/kg	<0.50	0.50	B469891	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	B469891
Total Silver (Ag)	mg/kg	0.095	0.050	B469891	0.077	0.089	0.102	<0.050	<0.050	0.050	B469891
Total Strontium (Sr)	mg/kg	34.0	0.10	B469891	39.3	38.5	30.4	28.2	47.6	0.10	B469891
Total Thallium (Tl)	mg/kg	0.076	0.050	B469891	<0.050	<0.050	<0.050	<0.050	0.071	0.050	B469891
Total Tin (Sn)	mg/kg	1.62	0.10	B469891	1.75	2.90	1.41	0.66	0.59	0.10	B469891
Total Tungsten (W)	mg/kg	<0.50	0.50	B469891	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	B469891
Total Uranium (U)	mg/kg	0.451	0.050	B469891	0.487	0.737	0.493	0.201	0.358	0.050	B469891

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		CSQ644			CSQ645	CSQ646	CSQ647	CSQ648	CSQ650		
Sampling Date		2024/08/01 15:15			2024/08/02 07:45	2024/08/02 07:45	2024/08/02 08:30	2024/08/02 09:30	2024/08/02 09:30		
COC Number		8537308			8537308	8537308	8537308	8537308	8537308		
	UNITS	BH24-12-01	RDL	QC Batch	BH24-13-01	BH24-13-02	BH24-14-01	BH24-15-01	BH24-15-03	RDL	QC Batch
Total Vanadium (V)	mg/kg	60.0	1.0	B469891	85.1	81.5	65.2	62.8	93.5	1.0	B469891
Total Zinc (Zn)	mg/kg	108	1.0	B469891	81.9	59.3	111	28.3	68.1	1.0	B469891
RDL = Reportable Detection Limit											

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		CSQ651	CSQ652		CSQ655		CSQ656	CSQ658		
Sampling Date		2024/08/02 09:00	2024/08/02 10:15		2024/08/02 10:45		2024/08/02 10:45	2024/08/02 11:15		
COC Number		8537308	8537308		8537308		8537308	8537308		
	UNITS	BH24-16-01	BH24-17-01	QC Batch	BH24-18-01	QC Batch	BH24-18-02	BH24-19-01	RDL	QC Batch
Total Metals by ICPMS										
Total Aluminum (Al)	mg/kg	14800	19300	B469891	18900	B478972	17400	17600	100	B469891
Total Antimony (Sb)	mg/kg	0.47	0.96	B469891	0.15	B478972	0.12	0.29	0.10	B469891
Total Arsenic (As)	mg/kg	2.97	4.52	B469891	3.39	B478972	3.47	3.40	0.20	B469891
Total Barium (Ba)	mg/kg	153	52.9	B469891	49.1	B478972	51.2	95.0	0.10	B469891
Total Beryllium (Be)	mg/kg	0.24	0.21	B469891	0.28	B478972	0.29	0.35	0.20	B469891
Total Boron (B)	mg/kg	2.2	5.0	B469891	2.9	B478972	1.2	1.9	1.0	B469891
Total Cadmium (Cd)	mg/kg	0.165	0.073	B469891	0.079	B478972	<0.050	0.259	0.050	B469891
Total Chromium (Cr)	mg/kg	23.8	40.0	B469891	27.5	B478972	29.4	33.9	0.50	B469891
Total Cobalt (Co)	mg/kg	8.07	17.9	B469891	13.8	B478972	12.0	9.29	0.10	B469891
Total Copper (Cu)	mg/kg	24.9	44.6	B469891	62.5	B478972	33.8	28.4	0.50	B469891
Total Iron (Fe)	mg/kg	19500	28500	B469891	29500	B478972	24000	21800	100	B469891
Total Lead (Pb)	mg/kg	39.9	11.1	B469891	3.43	B478972	3.83	17.1	0.10	B469891
Total Lithium (Li)	mg/kg	9.26	7.84	B469891	10.1	B478972	10.0	11.1	0.50	B469891
Total Manganese (Mn)	mg/kg	480	507	B469891	590	B478972	447	485	0.20	B469891
Total Mercury (Hg)	mg/kg	0.074	<0.050	B469891	0.082	B478972	<0.050	0.059	0.050	B469891
Total Molybdenum (Mo)	mg/kg	0.48	0.64	B469891	0.30	B478972	0.24	0.62	0.10	B469891
Total Nickel (Ni)	mg/kg	22.3	34.4	B469891	24.8	B478972	22.6	23.8	0.50	B469891
Total Selenium (Se)	mg/kg	<0.50	<0.50	B469891	<0.50	B478972	<0.50	<0.50	0.50	B469891
Total Silver (Ag)	mg/kg	0.066	<0.050	B469891	<0.050	B478972	<0.050	0.090	0.050	B469891
Total Strontium (Sr)	mg/kg	29.2	68.2	B469891	23.6	B478972	22.1	28.4	0.10	B469891
Total Thallium (Tl)	mg/kg	<0.050	<0.050	B469891	<0.050	B478972	<0.050	0.057	0.050	B469891
Total Tin (Sn)	mg/kg	1.49	0.78	B469891	0.49	B478972	0.36	0.71	0.10	B469891
Total Tungsten (W)	mg/kg	<0.50	<0.50	B469891	<0.50	B478972	<0.50	<0.50	0.50	B469891
Total Uranium (U)	mg/kg	0.360	0.246	B469891	0.227	B478972	0.267	0.398	0.050	B469891
Total Vanadium (V)	mg/kg	48.0	76.0	B469891	77.0	B478972	67.0	58.3	1.0	B469891
Total Zinc (Zn)	mg/kg	85.7	56.4	B469891	47.2	B478972	39.5	66.9	1.0	B469891

RDL = Reportable Detection Limit

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		CSQ661	CSQ661			CTH423	CTH424		
Sampling Date		2024/08/02 11:45	2024/08/02 11:45						
COC Number		8537308	8537308			8537307	8537307		
	UNITS	BH24-20-02	BH24-20-02 Lab-Dup	RDL	QC Batch	BH24-09-02 - RERUN 1	BH24-09-02 - RERUN 2	RDL	QC Batch
Total Metals by ICPMS									
Total Aluminum (Al)	mg/kg	18200	19000	100	B469891				
Total Antimony (Sb)	mg/kg	0.14	0.16	0.10	B469891				
Total Arsenic (As)	mg/kg	3.42	3.38	0.20	B469891				
Total Barium (Ba)	mg/kg	79.5	82.6	0.10	B469891				
Total Beryllium (Be)	mg/kg	0.31	0.30	0.20	B469891				
Total Boron (B)	mg/kg	1.4	1.7	1.0	B469891				
Total Cadmium (Cd)	mg/kg	<0.050	<0.050	0.050	B469891				
Total Chromium (Cr)	mg/kg	35.6	36.4	0.50	B469891				
Total Cobalt (Co)	mg/kg	12.8	12.4	0.10	B469891				
Total Copper (Cu)	mg/kg	19.2	19.0	0.50	B469891				
Total Iron (Fe)	mg/kg	25500	25400	100	B469891				
Total Lead (Pb)	mg/kg	6.40	6.91	0.10	B469891				
Total Lithium (Li)	mg/kg	13.1	14.0	0.50	B469891				
Total Manganese (Mn)	mg/kg	419	422	0.20	B469891				
Total Mercury (Hg)	mg/kg	<0.050	<0.050	0.050	B469891				
Total Molybdenum (Mo)	mg/kg	0.32	0.36	0.10	B469891				
Total Nickel (Ni)	mg/kg	23.2	23.3	0.50	B469891				
Total Selenium (Se)	mg/kg	<0.50	<0.50	0.50	B469891				
Total Silver (Ag)	mg/kg	0.052	0.054	0.050	B469891				
Total Strontium (Sr)	mg/kg	23.2	25.1	0.10	B469891				
Total Thallium (Tl)	mg/kg	0.071	0.077	0.050	B469891				
Total Tin (Sn)	mg/kg	0.42	0.43	0.10	B469891				
Total Tungsten (W)	mg/kg	<0.50 (1)	<0.50	0.50	B469891				
Total Uranium (U)	mg/kg	0.402	0.430	0.050	B469891				
Total Vanadium (V)	mg/kg	68.1	69.6	1.0	B469891				
Total Zinc (Zn)	mg/kg	44.4	45.8	1.0	B469891	60.3	60.9	1.0	B478972

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
(1) Matrix Spike outside acceptance criteria due to sample matrix interference.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		CTH433	CTH434			CTH435		
Sampling Date								
COC Number		8537307	8537307			8537307		
	UNITS	BH24-13-01 - RERUN 1	BH24-13-01 - RERUN 2	RDL	QC Batch	BH24-14-01 - RERUN 1	RDL	QC Batch
Total Metals by ICPMS								
Total Arsenic (As)	mg/kg	6.76	6.93	0.20	B478972			
Total Lead (Pb)	mg/kg					121	0.10	B478972
RDL = Reportable Detection Limit								

Bureau Veritas ID		CTH436		
Sampling Date				
COC Number		8537307		
	UNITS	BH24-14-01 - RERUN 2	RDL	QC Batch
Total Metals by ICPMS				
Total Lead (Pb)	mg/kg	112	0.10	B478972
RDL = Reportable Detection Limit				

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

VOLATILE ORGANICS BY GC-MS (SOIL)

Bureau Veritas ID		CSQ568			CSQ568		
Sampling Date		2024/08/01 10:30			2024/08/01 10:30		
COC Number		8537307			8537307		
	UNITS	SP24-01	RDL	QC Batch	SP24-01 Lab-Dup	RDL	QC Batch
Volatiles							
VH C6-C10	mg/kg	<10	10	B470636			
1,1,1-trichloroethane	mg/kg	<0.020	0.020	B470636			
1,1,2,2-tetrachloroethane	mg/kg	<0.020	0.020	B470636			
1,1,2-trichloroethane	mg/kg	<0.020	0.020	B470636			
1,1-dichloroethane	mg/kg	<0.025	0.025	B470636			
1,1-dichloroethene	mg/kg	<0.025	0.025	B470636			
1,2,4-trichlorobenzene	mg/kg	<0.030	0.030	B470636			
1,2,4-trimethylbenzene	mg/kg	<0.20	0.20	B470636			
1,2-dibromoethane	mg/kg	<0.020	0.020	B470636			
1,2-dichlorobenzene	mg/kg	<0.020	0.020	B470636			
1,2-dichloroethane	mg/kg	<0.020	0.020	B470636			
1,2-dichloropropane	mg/kg	<0.020	0.020	B470636			
1,3,5-trimethylbenzene	mg/kg	<0.20	0.20	B470636			
1,3-Butadiene	mg/kg	<0.080	0.080	B470636			
2-Butanone (MEK)	mg/kg	<15	15	B470636			
4-Methyl-2-pentanone (MIBK)	mg/kg	<0.50	0.50	B470636			
Acetone	mg/kg	<5.0	5.0	B470636			
Benzene	mg/kg	<0.0050	0.0050	B470636			
Bromobenzene	mg/kg	<0.20	0.20	B470636			
Bromodichloromethane	mg/kg	<0.050	0.050	B470636			
Carbon tetrachloride	mg/kg	<0.020	0.020	B470636			
Chlorobenzene	mg/kg	<0.020	0.020	B470636			
Chloroethane	mg/kg	<0.10	0.10	B470636			
cis-1,2-dichloroethene	mg/kg	<0.030	0.030	B470636			
Dichlorodifluoromethane	mg/kg	<0.20	0.20	B470636			
Dichloromethane	mg/kg	<0.080	0.080	B470636			
Ethylbenzene	mg/kg	<0.010	0.010	B470636			
Hexane	mg/kg	<0.50	0.50	B470636			
Isopropylbenzene	mg/kg	<0.20	0.20	B470636			
Methylcyclohexane	mg/kg	<0.20	0.20	B470636			

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

VOLATILE ORGANICS BY GC-MS (SOIL)

Bureau Veritas ID		CSQ568			CSQ568		
Sampling Date		2024/08/01 10:30			2024/08/01 10:30		
COC Number		8537307			8537307		
	UNITS	SP24-01	RDL	QC Batch	SP24-01 Lab-Dup	RDL	QC Batch
Methyl-tert-butylether (MTBE)	mg/kg	<0.10	0.10	B470636			
n-Decane	mg/kg	<2.0	2.0	B470636			
Styrene	mg/kg	<0.030	0.030	B470636			
Tetrachloroethene	mg/kg	<0.010	0.010	B470636			
Toluene	mg/kg	<0.050	0.050	B470636			
trans-1,2-dichloroethene	mg/kg	<0.030	0.030	B470636			
Trichloroethene	mg/kg	<0.0090	0.0090	B470636			
Vinyl chloride	mg/kg	<0.040	0.040	B470636			
m & p-Xylene	mg/kg	<0.040	0.040	B470636			
o-Xylene	mg/kg	<0.040	0.040	B470636			
Xylenes (Total)	mg/kg	<0.040	0.040	B470636			
Extractable (MeOH) Carbon disulfide	mg/kg	<15	15	B471654	<15	15	B471654
Surrogate Recovery (%)							
Extractable (MeOH) 1,4-Difluorobenzene (sur.)	%	98		B471654	97		B471654
Extractable (MeOH) 4-Bromofluorobenzene (sur.)	%	98		B471654	96		B471654
Extractable (MeOH) D10-o-Xylene (sur.)	%	93		B471654	93		B471654
Extractable (MeOH) D4-1,2-Dichloroethane (sur.)	%	107		B471654	107		B471654
1,4-Difluorobenzene (sur.)	%	101		B470636			
4-Bromofluorobenzene (sur.)	%	87		B470636			
D10-o-Xylene (sur.)	%	95		B470636			
D4-1,2-Dichloroethane (sur.)	%	109		B470636			

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

VOLATILE ORGANICS BY GC-MS (SOIL)

Bureau Veritas ID		CSQ574		CSQ580			CSQ580		
Sampling Date		2024/08/01 09:15		2024/08/01 11:30			2024/08/01 11:30		
COC Number		8537307		8537307			8537307		
	UNITS	BH24-01-01	QC Batch	BH24-03-01	RDL	QC Batch	BH24-03-01 Lab-Dup	RDL	QC Batch
Volatiles									
VH C6-C10	mg/kg	<10	B470636	<10	10	B478924	<10	10	B478924
1,1,1-trichloroethane	mg/kg	<0.020	B470636	<0.020	0.020	B478924	<0.020	0.020	B478924
1,1,2,2-tetrachloroethane	mg/kg	<0.020	B470636	<0.020	0.020	B478924	<0.020	0.020	B478924
1,1,2-trichloroethane	mg/kg	<0.020	B470636	<0.020	0.020	B478924	<0.020	0.020	B478924
1,1-dichloroethane	mg/kg	<0.025	B470636	<0.025	0.025	B478924	<0.025	0.025	B478924
1,1-dichloroethene	mg/kg	<0.025	B470636	<0.025	0.025	B478924	<0.025	0.025	B478924
1,2,4-trichlorobenzene	mg/kg	<0.030	B470636	<0.030	0.030	B478924	<0.030	0.030	B478924
1,2,4-trimethylbenzene	mg/kg	<0.20	B470636	<0.20	0.20	B478924	<0.20	0.20	B478924
1,2-dibromoethane	mg/kg	<0.020	B470636	<0.020	0.020	B478924	<0.020	0.020	B478924
1,2-dichlorobenzene	mg/kg	<0.020	B470636	<0.020	0.020	B478924	<0.020	0.020	B478924
1,2-dichloroethane	mg/kg	<0.020	B470636	<0.020	0.020	B478924	<0.020	0.020	B478924
1,2-dichloropropane	mg/kg	<0.020	B470636	<0.020	0.020	B478924	<0.020	0.020	B478924
1,3,5-trimethylbenzene	mg/kg	<0.20	B470636	<0.20	0.20	B478924	<0.20	0.20	B478924
1,3-Butadiene	mg/kg	<0.080	B470636	<0.080	0.080	B478924	<0.080	0.080	B478924
2-Butanone (MEK)	mg/kg	<15	B470636	<15	15	B478924	<15	15	B478924
4-Methyl-2-pentanone (MIBK)	mg/kg	<0.50	B470636	<0.50	0.50	B478924	<0.50	0.50	B478924
Acetone	mg/kg	<5.0	B470636	<5.0	5.0	B478924	<5.0	5.0	B478924
Benzene	mg/kg	<0.0050	B470636	<0.0050	0.0050	B478924	<0.0050	0.0050	B478924
Bromobenzene	mg/kg	<0.20	B470636	<0.20	0.20	B478924	<0.20	0.20	B478924
Bromodichloromethane	mg/kg	<0.050	B470636	<0.050	0.050	B478924	<0.050	0.050	B478924
Carbon tetrachloride	mg/kg	<0.020	B470636	<0.020	0.020	B478924	<0.020	0.020	B478924
Chlorobenzene	mg/kg	<0.020	B470636	<0.020	0.020	B478924	<0.020	0.020	B478924
Chloroethane	mg/kg	<0.10	B470636	<0.10	0.10	B478924	<0.10	0.10	B478924
cis-1,2-dichloroethene	mg/kg	<0.030	B470636	<0.030	0.030	B478924	<0.030	0.030	B478924
Dichlorodifluoromethane	mg/kg	<0.20	B470636	<0.20	0.20	B478924	<0.20	0.20	B478924
Dichloromethane	mg/kg	<0.080	B470636	<0.080	0.080	B478924	<0.080	0.080	B478924
Ethylbenzene	mg/kg	<0.010	B470636	<0.010	0.010	B478924	<0.010	0.010	B478924
Hexane	mg/kg	<0.50	B470636	<0.50	0.50	B478924	<0.50	0.50	B478924
Isopropylbenzene	mg/kg	<0.20	B470636	<0.20	0.20	B478924	<0.20	0.20	B478924
Methylcyclohexane	mg/kg	<0.20	B470636	<0.20	0.20	B478924	<0.20	0.20	B478924

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

VOLATILE ORGANICS BY GC-MS (SOIL)

Bureau Veritas ID		CSQ574		CSQ580			CSQ580		
Sampling Date		2024/08/01 09:15		2024/08/01 11:30			2024/08/01 11:30		
COC Number		8537307		8537307			8537307		
	UNITS	BH24-01-01	QC Batch	BH24-03-01	RDL	QC Batch	BH24-03-01 Lab-Dup	RDL	QC Batch
Methyl-tert-butylether (MTBE)	mg/kg	<0.10	B470636	<0.10	0.10	B478924	<0.10	0.10	B478924
n-Decane	mg/kg	<2.0	B470636	<2.0	2.0	B478924	<2.0	2.0	B478924
Styrene	mg/kg	<0.030	B470636	<0.030	0.030	B478924	<0.030	0.030	B478924
Tetrachloroethene	mg/kg	<0.010	B470636	<0.010	0.010	B478924	<0.010	0.010	B478924
Toluene	mg/kg	<0.050	B470636	<0.050	0.050	B478924	<0.050	0.050	B478924
trans-1,2-dichloroethene	mg/kg	<0.030	B470636	<0.030	0.030	B478924	<0.030	0.030	B478924
Trichloroethene	mg/kg	<0.0090	B470636	<0.0090	0.0090	B478924	<0.0090	0.0090	B478924
Vinyl chloride	mg/kg	<0.040	B470636	<0.040	0.040	B478924	<0.040	0.040	B478924
m & p-Xylene	mg/kg	<0.040	B470636	<0.040	0.040	B478924	<0.040	0.040	B478924
o-Xylene	mg/kg	<0.040	B470636	<0.040	0.040	B478924	<0.040	0.040	B478924
Xylenes (Total)	mg/kg	<0.040	B470636	<0.040	0.040	B478924	<0.040	0.040	B478924
Extractable (MeOH) Carbon disulfide	mg/kg	<15	B471654	<15	15	B481684			
Surrogate Recovery (%)									
Extractable (MeOH) 1,4-Difluorobenzene (sur.)	%	98	B471654	88		B481684			
Extractable (MeOH) 4-Bromofluorobenzene (sur.)	%	97	B471654	102		B481684			
Extractable (MeOH) D10-o-Xylene (sur.)	%	93	B471654	114		B481684			
Extractable (MeOH) D4-1,2-Dichloroethane (sur.)	%	107	B471654	116		B481684			
1,4-Difluorobenzene (sur.)	%	101	B470636	103		B478924	101		B478924
4-Bromofluorobenzene (sur.)	%	88	B470636	113		B478924	112		B478924
D10-o-Xylene (sur.)	%	96	B470636	110		B478924	110		B478924
D4-1,2-Dichloroethane (sur.)	%	106	B470636	74		B478924	74		B478924

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

VOLATILE ORGANICS BY GC-MS (SOIL)

Bureau Veritas ID		CSQ582		CSQ585			CSQ585		
Sampling Date		2024/08/01 11:45		2024/08/01 12:50			2024/08/01 12:50		
COC Number		8537307		8537307			8537307		
	UNITS	BH24-04-01	QC Batch	BH24-06-01	RDL	QC Batch	BH24-06-01 Lab-Dup	RDL	QC Batch
Volatiles									
VH C6-C10	mg/kg	<10	B470636	<10	10	B478924			
1,1,1-trichloroethane	mg/kg	<0.020	B470636	<0.020	0.020	B478924			
1,1,2,2-tetrachloroethane	mg/kg	<0.020	B470636	<0.020	0.020	B478924			
1,1,2-trichloroethane	mg/kg	<0.020	B470636	<0.020	0.020	B478924			
1,1-dichloroethane	mg/kg	<0.025	B470636	<0.025	0.025	B478924			
1,1-dichloroethene	mg/kg	<0.025	B470636	<0.025	0.025	B478924			
1,2,4-trichlorobenzene	mg/kg	<0.030	B470636	<0.030	0.030	B478924			
1,2,4-trimethylbenzene	mg/kg	<0.20	B470636	<0.20	0.20	B478924			
1,2-dibromoethane	mg/kg	<0.020	B470636	<0.020	0.020	B478924			
1,2-dichlorobenzene	mg/kg	<0.020	B470636	<0.020	0.020	B478924			
1,2-dichloroethane	mg/kg	<0.020	B470636	<0.020	0.020	B478924			
1,2-dichloropropane	mg/kg	<0.020	B470636	<0.020	0.020	B478924			
1,3,5-trimethylbenzene	mg/kg	<0.20	B470636	<0.20	0.20	B478924			
1,3-Butadiene	mg/kg	<0.080	B470636	<0.080	0.080	B478924			
2-Butanone (MEK)	mg/kg	<15	B470636	<15	15	B478924			
4-Methyl-2-pentanone (MIBK)	mg/kg	<0.50	B470636	<0.50	0.50	B478924			
Acetone	mg/kg	<5.0	B470636	<5.0	5.0	B478924			
Benzene	mg/kg	<0.0050	B470636	<0.0050	0.0050	B478924			
Bromobenzene	mg/kg	<0.20	B470636	<0.20	0.20	B478924			
Bromodichloromethane	mg/kg	<0.050	B470636	<0.050	0.050	B478924			
Carbon tetrachloride	mg/kg	<0.020	B470636	<0.020	0.020	B478924			
Chlorobenzene	mg/kg	<0.020	B470636	<0.020	0.020	B478924			
Chloroethane	mg/kg	<0.10	B470636	<0.10	0.10	B478924			
cis-1,2-dichloroethene	mg/kg	<0.030	B470636	<0.030	0.030	B478924			
Dichlorodifluoromethane	mg/kg	<0.20	B470636	<0.20	0.20	B478924			
Dichloromethane	mg/kg	<0.080	B470636	<0.080	0.080	B478924			
Ethylbenzene	mg/kg	<0.010	B470636	<0.010	0.010	B478924			
Hexane	mg/kg	<0.50	B470636	<0.50	0.50	B478924			
Isopropylbenzene	mg/kg	<0.20	B470636	<0.20	0.20	B478924			
Methylcyclohexane	mg/kg	<0.20	B470636	<0.20	0.20	B478924			

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

VOLATILE ORGANICS BY GC-MS (SOIL)

Bureau Veritas ID		CSQ582		CSQ585			CSQ585		
Sampling Date		2024/08/01 11:45		2024/08/01 12:50			2024/08/01 12:50		
COC Number		8537307		8537307			8537307		
	UNITS	BH24-04-01	QC Batch	BH24-06-01	RDL	QC Batch	BH24-06-01 Lab-Dup	RDL	QC Batch
Methyl-tert-butylether (MTBE)	mg/kg	<0.10	B470636	<0.10	0.10	B478924			
n-Decane	mg/kg	<2.0	B470636	<2.0	2.0	B478924			
Styrene	mg/kg	<0.030	B470636	<0.030	0.030	B478924			
Tetrachloroethene	mg/kg	<0.010	B470636	<0.010	0.010	B478924			
Toluene	mg/kg	<0.050	B470636	<0.050	0.050	B478924			
trans-1,2-dichloroethene	mg/kg	<0.030	B470636	<0.030	0.030	B478924			
Trichloroethene	mg/kg	<0.0090	B470636	<0.0090	0.0090	B478924			
Vinyl chloride	mg/kg	<0.040	B470636	<0.040	0.040	B478924			
m & p-Xylene	mg/kg	<0.040	B470636	<0.040	0.040	B478924			
o-Xylene	mg/kg	<0.040	B470636	<0.040	0.040	B478924			
Xylenes (Total)	mg/kg	<0.040	B470636	<0.040	0.040	B478924			
Extractable (MeOH) Carbon disulfide	mg/kg	<15	B471654	<15	15	B481684	<15	15	B481684
Surrogate Recovery (%)									
Extractable (MeOH) 1,4-Difluorobenzene (sur.)	%	98	B471654	90		B481684	89		B481684
Extractable (MeOH) 4-Bromofluorobenzene (sur.)	%	97	B471654	102		B481684	101		B481684
Extractable (MeOH) D10-o-Xylene (sur.)	%	98	B471654	116		B481684	119		B481684
Extractable (MeOH) D4-1,2-Dichloroethane (sur.)	%	109	B471654	116		B481684	116		B481684
1,4-Difluorobenzene (sur.)	%	102	B470636	103		B478924			
4-Bromofluorobenzene (sur.)	%	88	B470636	113		B478924			
D10-o-Xylene (sur.)	%	104	B470636	105		B478924			
D4-1,2-Dichloroethane (sur.)	%	110	B470636	95		B478924			

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

VOLATILE ORGANICS BY GC-MS (SOIL)

Bureau Veritas ID		CSQ637	CSQ639		CSQ642		
Sampling Date		2024/08/01 13:30	2024/08/01 14:00		2024/08/01 14:30		
COC Number		8537308	8537308		8537308		
	UNITS	BH24-08-01	BH24-09-02	QC Batch	BH24-10-02	RDL	QC Batch
Volatiles							
VH C6-C10	mg/kg	<10	<10	B470636	<10	10	B478924
1,1,1-trichloroethane	mg/kg	<0.020	<0.020	B470636	<0.020	0.020	B478924
1,1,2,2-tetrachloroethane	mg/kg	<0.020	<0.020	B470636	<0.020	0.020	B478924
1,1,2-trichloroethane	mg/kg	<0.020	<0.020	B470636	<0.020	0.020	B478924
1,1-dichloroethane	mg/kg	<0.025	<0.025	B470636	<0.025	0.025	B478924
1,1-dichloroethene	mg/kg	<0.025	<0.025	B470636	<0.025	0.025	B478924
1,2,4-trichlorobenzene	mg/kg	<0.030	<0.030	B470636	<0.030	0.030	B478924
1,2,4-trimethylbenzene	mg/kg	<0.20	<0.20	B470636	<0.20	0.20	B478924
1,2-dibromoethane	mg/kg	<0.020	<0.020	B470636	<0.020	0.020	B478924
1,2-dichlorobenzene	mg/kg	<0.020	<0.020	B470636	<0.020	0.020	B478924
1,2-dichloroethane	mg/kg	<0.020	<0.020	B470636	<0.020	0.020	B478924
1,2-dichloropropane	mg/kg	<0.020	<0.020	B470636	<0.020	0.020	B478924
1,3,5-trimethylbenzene	mg/kg	<0.20	<0.20	B470636	<0.20	0.20	B478924
1,3-Butadiene	mg/kg	<0.080	<0.080	B470636	<0.080	0.080	B478924
2-Butanone (MEK)	mg/kg	<15	<15	B470636	<15	15	B478924
4-Methyl-2-pentanone (MIBK)	mg/kg	<0.50	<0.50	B470636	<0.50	0.50	B478924
Acetone	mg/kg	<5.0	<5.0	B470636	<5.0	5.0	B478924
Benzene	mg/kg	<0.0050	0.0057	B470636	<0.0050	0.0050	B478924
Bromobenzene	mg/kg	<0.20	<0.20	B470636	<0.20	0.20	B478924
Bromodichloromethane	mg/kg	<0.050	<0.050	B470636	<0.050	0.050	B478924
Carbon tetrachloride	mg/kg	<0.020	<0.020	B470636	<0.020	0.020	B478924
Chlorobenzene	mg/kg	<0.020	<0.020	B470636	<0.020	0.020	B478924
Chloroethane	mg/kg	<0.10	<0.10	B470636	<0.10	0.10	B478924
cis-1,2-dichloroethene	mg/kg	<0.030	<0.030	B470636	<0.030	0.030	B478924
Dichlorodifluoromethane	mg/kg	<0.20	<0.20	B470636	<0.20	0.20	B478924
Dichloromethane	mg/kg	<0.080	<0.080	B470636	<0.080	0.080	B478924
Ethylbenzene	mg/kg	<0.010	<0.010	B470636	<0.010	0.010	B478924
Hexane	mg/kg	<0.50	<0.50	B470636	<0.50	0.50	B478924
Isopropylbenzene	mg/kg	<0.20	<0.20	B470636	<0.20	0.20	B478924
Methylcyclohexane	mg/kg	<0.20	<0.20	B470636	<0.20	0.20	B478924
Methyl-tert-butylether (MTBE)	mg/kg	<0.10	<0.10	B470636	<0.10	0.10	B478924
RDL = Reportable Detection Limit							

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

VOLATILE ORGANICS BY GC-MS (SOIL)

Bureau Veritas ID		CSQ637	CSQ639		CSQ642		
Sampling Date		2024/08/01 13:30	2024/08/01 14:00		2024/08/01 14:30		
COC Number		8537308	8537308		8537308		
	UNITS	BH24-08-01	BH24-09-02	QC Batch	BH24-10-02	RDL	QC Batch
n-Decane	mg/kg	<2.0	<2.0	B470636	<2.0	2.0	B478924
Styrene	mg/kg	<0.030	<0.030	B470636	<0.030	0.030	B478924
Tetrachloroethene	mg/kg	<0.010	<0.010	B470636	<0.010	0.010	B478924
Toluene	mg/kg	<0.050	<0.050	B470636	<0.050	0.050	B478924
trans-1,2-dichloroethene	mg/kg	<0.030	<0.030	B470636	<0.030	0.030	B478924
Trichloroethene	mg/kg	<0.0090	<0.0090	B470636	<0.0090	0.0090	B478924
Vinyl chloride	mg/kg	<0.040	<0.040	B470636	<0.040	0.040	B478924
m & p-Xylene	mg/kg	<0.040	<0.040	B470636	<0.040	0.040	B478924
o-Xylene	mg/kg	<0.040	<0.040	B470636	<0.040	0.040	B478924
Xylenes (Total)	mg/kg	<0.040	<0.040	B470636	<0.040	0.040	B478924
Extractable (MeOH) Carbon disulfide	mg/kg	<15	<15	B471654	<15	15	B481684
Surrogate Recovery (%)							
Extractable (MeOH) 1,4-Difluorobenzene (sur.)	%	96	98	B471654	100		B481684
Extractable (MeOH) 4-Bromofluorobenzene (sur.)	%	97	95	B471654	96		B481684
Extractable (MeOH) D10-o-Xylene (sur.)	%	98	92	B471654	90		B481684
Extractable (MeOH) D4-1,2-Dichloroethane (sur.)	%	107	108	B471654	103		B481684
1,4-Difluorobenzene (sur.)	%	101	101	B470636	103		B478924
4-Bromofluorobenzene (sur.)	%	87	87	B470636	112		B478924
D10-o-Xylene (sur.)	%	99	98	B470636	106		B478924
D4-1,2-Dichloroethane (sur.)	%	108	107	B470636	75		B478924
RDL = Reportable Detection Limit							

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

VOLATILE ORGANICS BY GC-MS (SOIL)

Bureau Veritas ID		CSQ643	CSQ645	CSQ648	CSQ652		
Sampling Date		2024/08/01 14:50	2024/08/02 07:45	2024/08/02 09:30	2024/08/02 10:15		
COC Number		8537308	8537308	8537308	8537308		
	UNITS	BH24-11-01	BH24-13-01	BH24-15-01	BH24-17-01	RDL	QC Batch
Volatiles							
VH C6-C10	mg/kg	<10	<10	<10	<10	10	B470636
1,1,1-trichloroethane	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	B470636
1,1,2,2-tetrachloroethane	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	B470636
1,1,2-trichloroethane	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	B470636
1,1-dichloroethane	mg/kg	<0.025	<0.025	<0.025	<0.025	0.025	B470636
1,1-dichloroethene	mg/kg	<0.025	<0.025	<0.025	<0.025	0.025	B470636
1,2,4-trichlorobenzene	mg/kg	<0.030	<0.030	<0.030	<0.030	0.030	B470636
1,2,4-trimethylbenzene	mg/kg	<0.20	<0.20	<0.20	<0.20	0.20	B470636
1,2-dibromoethane	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	B470636
1,2-dichlorobenzene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	B470636
1,2-dichloroethane	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	B470636
1,2-dichloropropane	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	B470636
1,3,5-trimethylbenzene	mg/kg	<0.20	<0.20	<0.20	<0.20	0.20	B470636
1,3-Butadiene	mg/kg	<0.080	<0.080	<0.080	<0.080	0.080	B470636
2-Butanone (MEK)	mg/kg	<15	<15	<15	<15	15	B470636
4-Methyl-2-pentanone (MIBK)	mg/kg	<0.50	<0.50	<0.50	<0.50	0.50	B470636
Acetone	mg/kg	<5.0	<5.0	<5.0	<5.0	5.0	B470636
Benzene	mg/kg	0.0079 (1)	<0.0050	<0.0050	<0.0050	0.0050	B470636
Bromobenzene	mg/kg	<0.20	<0.20	<0.20	<0.20	0.20	B470636
Bromodichloromethane	mg/kg	<0.050	<0.050	<0.050	<0.050	0.050	B470636
Carbon tetrachloride	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	B470636
Chlorobenzene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.020	B470636
Chloroethane	mg/kg	<0.10	<0.10	<0.10	<0.10	0.10	B470636
cis-1,2-dichloroethene	mg/kg	<0.030	<0.030	<0.030	<0.030	0.030	B470636
Dichlorodifluoromethane	mg/kg	<0.20	<0.20	<0.20	<0.20	0.20	B470636
Dichloromethane	mg/kg	<0.080	<0.080	<0.080	<0.080	0.080	B470636
Ethylbenzene	mg/kg	0.012	<0.010	<0.010	<0.010	0.010	B470636
Hexane	mg/kg	<0.50	<0.50	<0.50	<0.50	0.50	B470636
Isopropylbenzene	mg/kg	<0.20	<0.20	<0.20	<0.20	0.20	B470636
Methylcyclohexane	mg/kg	<0.20	<0.20	<0.20	<0.20	0.20	B470636

RDL = Reportable Detection Limit
(1) Tentatively identified result and may be potentially biased high due to matrix interference.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

VOLATILE ORGANICS BY GC-MS (SOIL)

Bureau Veritas ID		CSQ643	CSQ645	CSQ648	CSQ652		
Sampling Date		2024/08/01 14:50	2024/08/02 07:45	2024/08/02 09:30	2024/08/02 10:15		
COC Number		8537308	8537308	8537308	8537308		
	UNITS	BH24-11-01	BH24-13-01	BH24-15-01	BH24-17-01	RDL	QC Batch
Methyl-tert-butylether (MTBE)	mg/kg	<0.10	<0.10	<0.10	<0.10	0.10	B470636
n-Decane	mg/kg	<2.0	<2.0	<2.0	<2.0	2.0	B470636
Styrene	mg/kg	<0.030	<0.030	<0.030	<0.030	0.030	B470636
Tetrachloroethene	mg/kg	<0.010	<0.010	<0.010	<0.010	0.010	B470636
Toluene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.050	B470636
trans-1,2-dichloroethene	mg/kg	<0.030	<0.030	<0.030	<0.030	0.030	B470636
Trichloroethene	mg/kg	<0.0090	<0.0090	<0.0090	<0.0090	0.0090	B470636
Vinyl chloride	mg/kg	<0.040	<0.040	<0.040	<0.040	0.040	B470636
m & p-Xylene	mg/kg	0.066	<0.040	<0.040	<0.040	0.040	B470636
o-Xylene	mg/kg	0.043	<0.040	<0.040	<0.040	0.040	B470636
Xylenes (Total)	mg/kg	0.11	<0.040	<0.040	<0.040	0.040	B470636
Extractable (MeOH) Carbon disulfide	mg/kg	<15	<15	<15	<15	15	B471654
Surrogate Recovery (%)							
Extractable (MeOH) 1,4-Difluorobenzene (sur.)	%	99	97	98	100		B471654
Extractable (MeOH) 4-Bromofluorobenzene (sur.)	%	97	98	96	96		B471654
Extractable (MeOH) D10-o-Xylene (sur.)	%	101	105	96	95		B471654
Extractable (MeOH) D4-1,2-Dichloroethane (sur.)	%	108	108	109	109		B471654
1,4-Difluorobenzene (sur.)	%	100	101	100	101		B470636
4-Bromofluorobenzene (sur.)	%	88	86	87	90		B470636
D10-o-Xylene (sur.)	%	110	110	99	101		B470636
D4-1,2-Dichloroethane (sur.)	%	107	108	109	111		B470636
RDL = Reportable Detection Limit							

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

LEPH & HEPH WITH PAH FOR CSR IN SOIL (SOIL)

Bureau Veritas ID		CSQ568	CSQ570	CSQ574	CSQ579		CSQ580	CSQ582		
Sampling Date		2024/08/01 10:30	2024/08/01 10:30	2024/08/01 09:15	2024/08/01 09:30		2024/08/01 11:30	2024/08/01 11:45		
COC Number		8537307	8537307	8537307	8537307		8537307	8537307		
	UNITS	SP24-01	SP24-02	BH24-01-01	BH24-02-02	QC Batch	BH24-03-01	BH24-04-01	RDL	QC Batch
Calculated Parameters										
Low Molecular Weight PAH`s	mg/kg	0.21	1.4	1.7	0.23	B467168	0.10	0.11	0.050	B467168
High Molecular Weight PAH`s	mg/kg	3.4	9.2	6.4	1.9	B467168	1.0	1.2	0.050	B467168
Total PAH	mg/kg	3.6	11	8.1	2.1	B467168	1.1	1.3	0.050	B467168
Polycyclic Aromatics										
Quinoline	mg/kg	<0.050	<0.050	<0.050	<0.050	B468562	<0.050	<0.050	0.050	B468830
Naphthalene	mg/kg	<0.010	<0.010	0.021	<0.010	B468562	<0.010	<0.010	0.010	B468830
1-Methylnaphthalene	mg/kg	<0.050	<0.050	<0.050	<0.050	B468562	<0.050	<0.050	0.050	B468830
2-Methylnaphthalene	mg/kg	<0.020	<0.020	0.027	<0.020	B468562	<0.020	<0.020	0.020	B468830
Acenaphthylene	mg/kg	0.076	0.40	0.23	0.075	B468562	0.047	0.045	0.0050	B468830
Acenaphthene	mg/kg	<0.0050	0.021	0.023	0.0061	B468562	<0.0050	<0.0050	0.0050	B468830
Fluorene	mg/kg	<0.020	0.056	0.10	<0.020	B468562	<0.020	<0.020	0.020	B468830
Phenanthrene	mg/kg	0.081	0.69	1.1	0.099	B468562	0.038	0.047	0.010	B468830
Anthracene	mg/kg	0.049	0.26	0.24	0.046	B468562	0.016	0.019	0.0040	B468830
Fluoranthene	mg/kg	0.46	1.4	1.6	0.30	B468562	0.16	0.18	0.020	B468830
Pyrene	mg/kg	0.59	1.6	1.3	0.29	B468562	0.14	0.16	0.020	B468830
Benzo(a)anthracene	mg/kg	0.31	0.65	0.52	0.10	B468562	0.069	0.092	0.020	B468830
Chrysene	mg/kg	0.32	0.78	0.60	0.19	B468562	0.10	0.12	0.020	B468830
Benzo(b&j)fluoranthene	mg/kg	0.49	1.3	0.74	0.32	B468562	0.15	0.17	0.020	B468830
Benzo(b)fluoranthene	mg/kg	0.31	0.80	0.45	0.21	B468562	0.095	0.11	0.020	B468830
Benzo(k)fluoranthene	mg/kg	0.18	0.48	0.28	0.11	B468562	0.056	0.061	0.020	B468830
Benzo(a)pyrene	mg/kg	0.44	1.2	0.59	0.20	B468562	0.13	0.15	0.020	B468830
Indeno(1,2,3-cd)pyrene	mg/kg	0.25	0.80	0.37	0.18	B468562	0.096	0.11	0.020	B468830
Dibenz(a,h)anthracene	mg/kg	0.080	0.20	0.11	0.046	B468562	0.026	0.032	0.020	B468830
Benzo(g,h,i)perylene	mg/kg	0.26	0.81	0.34	0.18	B468562	0.11	0.12	0.050	B468830
Calculated Parameters										
LEPH (C10-C19 less PAH)	mg/kg	<100	<100	<100	<100	B467171	<100	<100	100	B467171
HEPH (C19-C32 less PAH)	mg/kg	<100	120	130	<100	B467171	<100	<100	100	B467171
Hydrocarbons										
EPH (C10-C19)	mg/kg	<100	<100	<100	<100	B468576	<100	<100	100	B468835
EPH (C19-C32)	mg/kg	<100	130	130	<100	B468576	<100	<100	100	B468835
RDL = Reportable Detection Limit										

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

LEPH & HEPH WITH PAH FOR CSR IN SOIL (SOIL)

Bureau Veritas ID		CSQ568	CSQ570	CSQ574	CSQ579		CSQ580	CSQ582		
Sampling Date		2024/08/01 10:30	2024/08/01 10:30	2024/08/01 09:15	2024/08/01 09:30		2024/08/01 11:30	2024/08/01 11:45		
COC Number		8537307	8537307	8537307	8537307		8537307	8537307		
	UNITS	SP24-01	SP24-02	BH24-01-01	BH24-02-02	QC Batch	BH24-03-01	BH24-04-01	RDL	QC Batch
Surrogate Recovery (%)										
D10-ANTHRACENE (sur.)	%	100	94	92	105	B468562	81	87		B468830
D8-ACENAPHTHYLENE (sur.)	%	80	83	83	81	B468562	78	85		B468830
D8-NAPHTHALENE (sur.)	%	76	78	76	77	B468562	78	83		B468830
TERPHENYL-D14 (sur.)	%	108	98	95	112	B468562	99	104		B468830
O-TERPHENYL (sur.)	%	76	86	74	79	B468576	79	77		B468835
RDL = Reportable Detection Limit										

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

LEPH & HEPH WITH PAH FOR CSR IN SOIL (SOIL)

Bureau Veritas ID		CSQ583	CSQ585	CSQ636	CSQ637	CSQ638	CSQ639		
Sampling Date		2024/08/01 12:30	2024/08/01 12:50	2024/08/01 13:15	2024/08/01 13:30	2024/08/01 14:00	2024/08/01 14:00		
COC Number		8537307	8537307	8537308	8537308	8537308	8537308		
	UNITS	BH24-05-01	BH24-06-01	BH24-07-01	BH24-08-01	BH24-09-01	BH24-09-02	RDL	QC Batch
Calculated Parameters									
Low Molecular Weight PAH`s	mg/kg	<0.050	<0.050	<0.050	<0.050	0.41	0.41	0.050	B467168
High Molecular Weight PAH`s	mg/kg	<0.050	0.56	0.16	<0.050	2.1	2.4	0.050	B467168
Total PAH	mg/kg	<0.050	0.59	0.19	<0.050	2.5	2.9	0.050	B467168
Polycyclic Aromatics									
Quinoline	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	B468830
Naphthalene	mg/kg	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	B468830
1-Methylnaphthalene	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	B468830
2-Methylnaphthalene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	B468830
Acenaphthylene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.041	0.049	0.0050	B468830
Acenaphthene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.017	0.013	0.0050	B468830
Fluorene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.022	<0.020	0.020	B468830
Phenanthrene	mg/kg	<0.010	0.025	0.022	<0.010	0.29	0.29	0.010	B468830
Anthracene	mg/kg	<0.0040	0.0081	0.0054	<0.0040	0.049	0.055	0.0040	B468830
Fluoranthene	mg/kg	<0.020	0.11	0.044	<0.020	0.47	0.54	0.020	B468830
Pyrene	mg/kg	<0.020	0.097	0.041	<0.020	0.37	0.47	0.020	B468830
Benzo(a)anthracene	mg/kg	<0.020	0.060	0.021	<0.020	0.14	0.18	0.020	B468830
Chrysene	mg/kg	<0.020	0.070	0.027	<0.020	0.22	0.26	0.020	B468830
Benzo(b&j)fluoranthene	mg/kg	<0.020	0.076	<0.020	<0.020	0.26	0.29	0.020	B468830
Benzo(b)fluoranthene	mg/kg	<0.020	0.044	<0.020	<0.020	0.16	0.18	0.020	B468830
Benzo(k)fluoranthene	mg/kg	<0.020	0.028	<0.020	<0.020	0.091	0.11	0.020	B468830
Benzo(a)pyrene	mg/kg	<0.020	0.071	0.028	<0.020	0.20	0.24	0.020	B468830
Indeno(1,2,3-cd)pyrene	mg/kg	<0.020	0.042	<0.020	<0.020	0.13	0.15	0.020	B468830
Dibenz(a,h)anthracene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.038	0.042	0.020	B468830
Benzo(g,h,i)perylene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.14	0.16	0.050	B468830
Calculated Parameters									
LEPH (C10-C19 less PAH)	mg/kg	<100	<100	<100	<100	<100	<100	100	B467171
HEPH (C19-C32 less PAH)	mg/kg	<100	<100	<100	<100	<100	<100	100	B467171
Hydrocarbons									
EPH (C10-C19)	mg/kg	<100	<100	<100	<100	<100	<100	100	B468835
EPH (C19-C32)	mg/kg	<100	<100	<100	<100	<100	<100	100	B468835
RDL = Reportable Detection Limit									

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

LEPH & HEPH WITH PAH FOR CSR IN SOIL (SOIL)

Bureau Veritas ID		CSQ583	CSQ585	CSQ636	CSQ637	CSQ638	CSQ639		
Sampling Date		2024/08/01 12:30	2024/08/01 12:50	2024/08/01 13:15	2024/08/01 13:30	2024/08/01 14:00	2024/08/01 14:00		
COC Number		8537307	8537307	8537308	8537308	8537308	8537308		
	UNITS	BH24-05-01	BH24-06-01	BH24-07-01	BH24-08-01	BH24-09-01	BH24-09-02	RDL	QC Batch
Surrogate Recovery (%)									
D10-ANTHRACENE (sur.)	%	88	89	87	92	86	88		B468830
D8-ACENAPHTHYLENE (sur.)	%	84	81	80	84	80	82		B468830
D8-NAPHTHALENE (sur.)	%	82	81	79	83	80	81		B468830
TERPHENYL-D14 (sur.)	%	108	106	106	112	103	106		B468830
O-TERPHENYL (sur.)	%	74	88	82	85	69	86		B468835
RDL = Reportable Detection Limit									

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

LEPH & HEPH WITH PAH FOR CSR IN SOIL (SOIL)

Bureau Veritas ID		CSQ641		CSQ642		CSQ643			CSQ643		
Sampling Date		2024/08/01 14:30		2024/08/01 14:30		2024/08/01 14:50			2024/08/01 14:50		
COC Number		8537308		8537308		8537308			8537308		
	UNITS	BH24-10-01	QC Batch	BH24-10-02	QC Batch	BH24-11-01	RDL	QC Batch	BH24-11-01 Lab-Dup	RDL	QC Batch
Calculated Parameters											
Low Molecular Weight PAH`s	mg/kg	0.41	B467168	0.25	B477782	1.8	0.050	B467168			
High Molecular Weight PAH`s	mg/kg	3.1	B467168	1.4	B477782	11	0.050	B467168			
Total PAH	mg/kg	3.5	B467168	1.7	B477782	13	0.050	B467168			
Polycyclic Aromatics											
Quinoline	mg/kg	<0.050	B468830	<0.050	B478244	<0.050	0.050	B468830	<0.050	0.050	B468830
Naphthalene	mg/kg	<0.010	B468830	<0.010	B478244	0.024	0.010	B468830	0.025	0.010	B468830
1-Methylnaphthalene	mg/kg	<0.050	B468830	<0.050	B478244	<0.050	0.050	B468830	<0.050	0.050	B468830
2-Methylnaphthalene	mg/kg	<0.020	B468830	<0.020	B478244	0.027	0.020	B468830	0.030	0.020	B468830
Acenaphthylene	mg/kg	0.10	B468830	0.045	B478244	0.33	0.0050	B468830	0.34	0.0050	B468830
Acenaphthene	mg/kg	0.0080	B468830	0.0054	B478244	0.034	0.0050	B468830	0.043	0.0050	B468830
Fluorene	mg/kg	<0.020	B468830	<0.020	B478244	0.078	0.020	B468830	0.077	0.020	B468830
Phenanthrene	mg/kg	0.25	B468830	0.17	B478244	1.1	0.010	B468830	1.1	0.010	B468830
Anthracene	mg/kg	0.052	B468830	0.031	B478244	0.21	0.0040	B468830	0.22	0.0040	B468830
Fluoranthene	mg/kg	0.56	B468830	0.30	B478244	2.1	0.020	B468830	2.1	0.020	B468830
Pyrene	mg/kg	0.49	B468830	0.26	B478244	1.9	0.020	B468830	2.1	0.020	B468830
Benzo(a)anthracene	mg/kg	0.24	B468830	0.10	B478244	0.83	0.020	B468830	0.86	0.020	B468830
Chrysene	mg/kg	0.33	B468830	0.15	B478244	1.1	0.020	B468830	1.2	0.020	B468830
Benzo(b&j)fluoranthene	mg/kg	0.43	B468830	0.17	B478244	1.5	0.020	B468830	1.6	0.020	B468830
Benzo(b)fluoranthene	mg/kg	0.27	B468830	0.11	B478244	0.97	0.020	B468830	1.0	0.020	B468830
Benzo(k)fluoranthene	mg/kg	0.15	B468830	0.066	B478244	0.54	0.020	B468830	0.53	0.020	B468830
Benzo(a)pyrene	mg/kg	0.36	B468830	0.15	B478244	1.3	0.020	B468830	1.3	0.020	B468830
Indeno(1,2,3-cd)pyrene	mg/kg	0.25	B468830	0.094	B478244	0.81	0.020	B468830	0.79	0.020	B468830
Dibenz(a,h)anthracene	mg/kg	0.073	B468830	0.027	B478244	0.24	0.020	B468830	0.24	0.020	B468830
Benzo(g,h,i)perylene	mg/kg	0.26	B468830	0.095	B478244	0.81	0.050	B468830	0.77	0.050	B468830
Calculated Parameters											
LEPH (C10-C19 less PAH)	mg/kg	<100	B467171	<100	B478197	<100	100	B467171			
HEPH (C19-C32 less PAH)	mg/kg	<100	B467171	<100	B478197	200	100	B467171			
Hydrocarbons											
EPH (C10-C19)	mg/kg	<100	B468835	<100	B478259	<100	100	B468835	<100	100	B468835
EPH (C19-C32)	mg/kg	<100	B468835	<100	B478259	200	100	B468835	180	100	B468835

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

LEPH & HEPH WITH PAH FOR CSR IN SOIL (SOIL)

Bureau Veritas ID		CSQ641		CSQ642		CSQ643			CSQ643		
Sampling Date		2024/08/01 14:30		2024/08/01 14:30		2024/08/01 14:50			2024/08/01 14:50		
COC Number		8537308		8537308		8537308			8537308		
	UNITS	BH24-10-01	QC Batch	BH24-10-02	QC Batch	BH24-11-01	RDL	QC Batch	BH24-11-01 Lab-Dup	RDL	QC Batch
Surrogate Recovery (%)											
D10-ANTHRACENE (sur.)	%	90	B468830	87	B478244	83		B468830	84		B468830
D8-ACENAPHTHYLENE (sur.)	%	85	B468830	80	B478244	87		B468830	87		B468830
D8-NAPHTHALENE (sur.)	%	84	B468830	79	B478244	85		B468830	87		B468830
TERPHENYL-D14 (sur.)	%	107	B468830	107	B478244	101		B468830	101		B468830
O-TERPHENYL (sur.)	%	79	B468835	90	B478259	77		B468835	84		B468835

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

LEPH & HEPH WITH PAH FOR CSR IN SOIL (SOIL)

Bureau Veritas ID		CSQ644	CSQ645	CSQ646	CSQ647	CSQ648	CSQ650		
Sampling Date		2024/08/01 15:15	2024/08/02 07:45	2024/08/02 07:45	2024/08/02 08:30	2024/08/02 09:30	2024/08/02 09:30		
COC Number		8537308	8537308	8537308	8537308	8537308	8537308		
	UNITS	BH24-12-01	BH24-13-01	BH24-13-02	BH24-14-01	BH24-15-01	BH24-15-03	RDL	QC Batch
Calculated Parameters									
Low Molecular Weight PAH`s	mg/kg	1.5	2.2	0.071	0.73	<0.050	<0.050	0.050	B467168
High Molecular Weight PAH`s	mg/kg	9.1	21	0.67	5.5	0.082	<0.050	0.050	B467168
Total PAH	mg/kg	11	24	0.74	6.2	0.11	<0.050	0.050	B467168
Polycyclic Aromatics									
Quinoline	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	B468830
Naphthalene	mg/kg	0.014	0.017	<0.010	<0.010	<0.010	<0.010	0.010	B468830
1-Methylnaphthalene	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	B468830
2-Methylnaphthalene	mg/kg	<0.020	<0.020	<0.020	<0.020	0.025	<0.020	0.020	B468830
Acenaphthylene	mg/kg	0.30	0.79	0.030	0.18	<0.0050	<0.0050	0.0050	B468830
Acenaphthene	mg/kg	0.019	0.036	<0.0050	0.015	<0.0050	<0.0050	0.0050	B468830
Fluorene	mg/kg	0.048	0.059	<0.020	0.024	<0.020	<0.020	0.020	B468830
Phenanthrene	mg/kg	0.93	0.84	0.028	0.40	<0.010	<0.010	0.010	B468830
Anthracene	mg/kg	0.14	0.42	0.013	0.11	<0.0040	<0.0040	0.0040	B468830
Fluoranthene	mg/kg	1.8	3.1	0.11	1.0	<0.020	<0.020	0.020	B468830
Pyrene	mg/kg	1.7	3.3	0.099	0.91	<0.020	<0.020	0.020	B468830
Benzo(a)anthracene	mg/kg	0.61	1.8	0.044	0.43	<0.020	<0.020	0.020	B468830
Chrysene	mg/kg	0.93	2.0	0.070	0.57	0.061	<0.020	0.020	B468830
Benzo(b&j)fluoranthene	mg/kg	1.2	3.0	0.10	0.77	0.021	<0.020	0.020	B468830
Benzo(b)fluoranthene	mg/kg	0.78	1.9	0.068	0.50	0.021	<0.020	0.020	B468830
Benzo(k)fluoranthene	mg/kg	0.42	1.1	0.034	0.27	<0.020	<0.020	0.020	B468830
Benzo(a)pyrene	mg/kg	1.0	2.8	0.086	0.63	<0.020	<0.020	0.020	B468830
Indeno(1,2,3-cd)pyrene	mg/kg	0.62	1.7	0.058	0.39	<0.020	<0.020	0.020	B468830
Dibenz(a,h)anthracene	mg/kg	0.17	0.52	<0.020	0.11	<0.020	<0.020	0.020	B468830
Benzo(g,h,i)perylene	mg/kg	0.63	1.9	0.064	0.40	<0.050	<0.050	0.050	B468830
Calculated Parameters									
LEPH (C10-C19 less PAH)	mg/kg	<100	<100	<100	<100	<100	<100	100	B467171
HEPH (C19-C32 less PAH)	mg/kg	100	330	<100	<100	410	<100	100	B467171
Hydrocarbons									
EPH (C10-C19)	mg/kg	<100	<100	<100	<100	<100	<100	100	B468835
EPH (C19-C32)	mg/kg	110	350	<100	<100	410	<100	100	B468835
RDL = Reportable Detection Limit									

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

LEPH & HEPH WITH PAH FOR CSR IN SOIL (SOIL)

Bureau Veritas ID		CSQ644	CSQ645	CSQ646	CSQ647	CSQ648	CSQ650		
Sampling Date		2024/08/01 15:15	2024/08/02 07:45	2024/08/02 07:45	2024/08/02 08:30	2024/08/02 09:30	2024/08/02 09:30		
COC Number		8537308	8537308	8537308	8537308	8537308	8537308		
	UNITS	BH24-12-01	BH24-13-01	BH24-13-02	BH24-14-01	BH24-15-01	BH24-15-03	RDL	QC Batch
Surrogate Recovery (%)									
D10-ANTHRACENE (sur.)	%	84	86	86	86	87	89		B468830
D8-ACENAPHTHYLENE (sur.)	%	87	83	82	86	82	83		B468830
D8-NAPHTHALENE (sur.)	%	86	83	80	85	82	80		B468830
TERPHENYL-D14 (sur.)	%	101	99	104	103	101	109		B468830
O-TERPHENYL (sur.)	%	87	76	79	78	90	79		B468835
RDL = Reportable Detection Limit									

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

LEPH & HEPH WITH PAH FOR CSR IN SOIL (SOIL)

Bureau Veritas ID		CSQ651	CSQ652		CSQ655		CSQ656		
Sampling Date		2024/08/02 09:00	2024/08/02 10:15		2024/08/02 10:45		2024/08/02 10:45		
COC Number		8537308	8537308		8537308		8537308		
	UNITS	BH24-16-01	BH24-17-01	QC Batch	BH24-18-01	QC Batch	BH24-18-02	RDL	QC Batch
Calculated Parameters									
Low Molecular Weight PAH`s	mg/kg	0.081	0.18	B467168	<0.050	B477782	<0.050	0.050	B467168
High Molecular Weight PAH`s	mg/kg	0.69	1.4	B467168	<0.050	B477782	<0.050	0.050	B467168
Total PAH	mg/kg	0.77	1.6	B467168	<0.050	B477782	<0.050	0.050	B467168
Polycyclic Aromatics									
Quinoline	mg/kg	<0.050	<0.050	B468830	<0.050	B478244	<0.050	0.050	B469387
Naphthalene	mg/kg	<0.010	<0.010	B468830	<0.010	B478244	<0.010	0.010	B469387
1-Methylnaphthalene	mg/kg	<0.050	<0.050	B468830	<0.050	B478244	<0.050	0.050	B469387
2-Methylnaphthalene	mg/kg	<0.020	<0.020	B468830	<0.020	B478244	<0.020	0.020	B469387
Acenaphthylene	mg/kg	0.025	0.031	B468830	<0.0050	B478244	<0.0050	0.0050	B469387
Acenaphthene	mg/kg	<0.0050	<0.0050	B468830	<0.0050	B478244	<0.0050	0.0050	B469387
Fluorene	mg/kg	<0.020	<0.020	B468830	<0.020	B478244	<0.020	0.020	B469387
Phenanthrene	mg/kg	0.046	0.11	B468830	<0.010	B478244	<0.010	0.010	B469387
Anthracene	mg/kg	0.010	0.032	B468830	<0.0040	B478244	<0.0040	0.0040	B469387
Fluoranthene	mg/kg	0.13	0.27	B468830	<0.020	B478244	<0.020	0.020	B469387
Pyrene	mg/kg	0.12	0.22	B468830	<0.020	B478244	<0.020	0.020	B469387
Benzo(a)anthracene	mg/kg	0.063	0.13	B468830	<0.020	B478244	<0.020	0.020	B469387
Chrysene	mg/kg	0.091	0.16	B468830	<0.020	B478244	<0.020	0.020	B469387
Benzo(b&j)fluoranthene	mg/kg	0.11	0.19	B468830	<0.020	B478244	<0.020	0.020	B469387
Benzo(b)fluoranthene	mg/kg	0.073	0.12	B468830	<0.020	B478244	<0.020	0.020	B469387
Benzo(k)fluoranthene	mg/kg	0.038	0.065	B468830	<0.020	B478244	<0.020	0.020	B469387
Benzo(a)pyrene	mg/kg	0.089	0.15	B468830	<0.020	B478244	<0.020	0.020	B469387
Indeno(1,2,3-cd)pyrene	mg/kg	0.048	0.071	B468830	<0.020	B478244	<0.020	0.020	B469387
Dibenz(a,h)anthracene	mg/kg	<0.020	0.024	B468830	<0.020	B478244	<0.020	0.020	B469387
Benzo(g,h,i)perylene	mg/kg	<0.050	0.086	B468830	<0.050	B478244	<0.050	0.050	B469387
Calculated Parameters									
LEPH (C10-C19 less PAH)	mg/kg	<100	<100	B467171	<100	B478197	<100	100	B467171
HEPH (C19-C32 less PAH)	mg/kg	<100	140	B467171	<100	B478197	<100	100	B467171
Hydrocarbons									
EPH (C10-C19)	mg/kg	<100	<100	B468835	<100	B478259	<100	100	B469392
EPH (C19-C32)	mg/kg	<100	140	B468835	<100	B478259	<100	100	B469392
RDL = Reportable Detection Limit									

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

LEPH & HEPH WITH PAH FOR CSR IN SOIL (SOIL)

Bureau Veritas ID		CSQ651	CSQ652		CSQ655		CSQ656		
Sampling Date		2024/08/02 09:00	2024/08/02 10:15		2024/08/02 10:45		2024/08/02 10:45		
COC Number		8537308	8537308		8537308		8537308		
	UNITS	BH24-16-01	BH24-17-01	QC Batch	BH24-18-01	QC Batch	BH24-18-02	RDL	QC Batch
Surrogate Recovery (%)									
D10-ANTHRACENE (sur.)	%	88	85	B468830	84	B478244	81		B469387
D8-ACENAPHTHYLENE (sur.)	%	85	80	B468830	77	B478244	75		B469387
D8-NAPHTHALENE (sur.)	%	84	79	B468830	75	B478244	73		B469387
TERPHENYL-D14 (sur.)	%	106	101	B468830	105	B478244	102		B469387
O-TERPHENYL (sur.)	%	87	84	B468835	96	B478259	77		B469392

RDL = Reportable Detection Limit

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

LEPH & HEPH WITH PAH FOR CSR IN SOIL (SOIL)

Bureau Veritas ID		CSQ656			CSQ658		CSQ661		
Sampling Date		2024/08/02 10:45			2024/08/02 11:15		2024/08/02 11:45		
COC Number		8537308			8537308		8537308		
	UNITS	BH24-18-02 Lab-Dup	RDL	QC Batch	BH24-19-01	QC Batch	BH24-20-02	RDL	QC Batch
Calculated Parameters									
Low Molecular Weight PAH`s	mg/kg				<0.050	B467168	<0.050	0.050	B467168
High Molecular Weight PAH`s	mg/kg				0.43	B467168	<0.050	0.050	B467168
Total PAH	mg/kg				0.48	B467168	<0.050	0.050	B467168
Polycyclic Aromatics									
Quinoline	mg/kg	<0.050	0.050	B469387	<0.050	B469387	<0.050	0.050	B468830
Naphthalene	mg/kg	<0.010	0.010	B469387	<0.010	B469387	<0.010	0.010	B468830
1-Methylnaphthalene	mg/kg	<0.050	0.050	B469387	<0.050	B469387	<0.050	0.050	B468830
2-Methylnaphthalene	mg/kg	<0.020	0.020	B469387	<0.020	B469387	<0.020	0.020	B468830
Acenaphthylene	mg/kg	<0.0050	0.0050	B469387	0.0088	B469387	<0.0050	0.0050	B468830
Acenaphthene	mg/kg	<0.0050	0.0050	B469387	<0.0050	B469387	<0.0050	0.0050	B468830
Fluorene	mg/kg	<0.020	0.020	B469387	<0.020	B469387	<0.020	0.020	B468830
Phenanthrene	mg/kg	<0.010	0.010	B469387	0.035	B469387	<0.010	0.010	B468830
Anthracene	mg/kg	<0.0040	0.0040	B469387	0.0047	B469387	<0.0040	0.0040	B468830
Fluoranthene	mg/kg	<0.020	0.020	B469387	0.094	B469387	<0.020	0.020	B468830
Pyrene	mg/kg	<0.020	0.020	B469387	0.074	B469387	<0.020	0.020	B468830
Benzo(a)anthracene	mg/kg	<0.020	0.020	B469387	0.034	B469387	<0.020	0.020	B468830
Chrysene	mg/kg	<0.020	0.020	B469387	0.045	B469387	<0.020	0.020	B468830
Benzo(b&j)fluoranthene	mg/kg	<0.020	0.020	B469387	0.068	B469387	<0.020	0.020	B468830
Benzo(b)fluoranthene	mg/kg	<0.020	0.020	B469387	0.042	B469387	<0.020	0.020	B468830
Benzo(k)fluoranthene	mg/kg	<0.020	0.020	B469387	0.023	B469387	<0.020	0.020	B468830
Benzo(a)pyrene	mg/kg	<0.020	0.020	B469387	0.053	B469387	<0.020	0.020	B468830
Indeno(1,2,3-cd)pyrene	mg/kg	<0.020	0.020	B469387	0.036	B469387	<0.020	0.020	B468830
Dibenz(a,h)anthracene	mg/kg	<0.020	0.020	B469387	<0.020	B469387	<0.020	0.020	B468830
Benzo(g,h,i)perylene	mg/kg	<0.050	0.050	B469387	<0.050	B469387	<0.050	0.050	B468830
Calculated Parameters									
LEPH (C10-C19 less PAH)	mg/kg				<100	B467171	<100	100	B467171
HEPH (C19-C32 less PAH)	mg/kg				<100	B467171	<100	100	B467171
Hydrocarbons									
EPH (C10-C19)	mg/kg	<100	100	B469392	<100	B469392	<100	100	B468835
EPH (C19-C32)	mg/kg	<100	100	B469392	<100	B469392	<100	100	B468835

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

LEPH & HEPH WITH PAH FOR CSR IN SOIL (SOIL)

Bureau Veritas ID		CSQ656			CSQ658		CSQ661		
Sampling Date		2024/08/02 10:45			2024/08/02 11:15		2024/08/02 11:45		
COC Number		8537308			8537308		8537308		
	UNITS	BH24-18-02 Lab-Dup	RDL	QC Batch	BH24-19-01	QC Batch	BH24-20-02	RDL	QC Batch
Surrogate Recovery (%)									
D10-ANTHRACENE (sur.)	%	79		B469387	88	B469387	89		B468830
D8-ACENAPHTHYLENE (sur.)	%	73		B469387	79	B469387	84		B468830
D8-NAPHTHALENE (sur.)	%	72		B469387	78	B469387	81		B468830
TERPHENYL-D14 (sur.)	%	100		B469387	107	B469387	109		B468830
O-TERPHENYL (sur.)	%	73		B469392	72	B469392	77		B468835

RDL = Reportable Detection Limit
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Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

SOLUBLE SODIUM AND CHLORIDE IN SOIL (SOIL)

Bureau Veritas ID		CSQ568		CSQ570	CSQ574		CSQ579		CSQ580		
Sampling Date		2024/08/01 10:30		2024/08/01 10:30	2024/08/01 09:15		2024/08/01 09:30		2024/08/01 11:30		
COC Number		8537307		8537307	8537307		8537307		8537307		
	UNITS	SP24-01	RDL	SP24-02	BH24-01-01	RDL	BH24-02-02	RDL	BH24-03-01	RDL	QC Batch
ANIONS											
Soluble Chloride (Cl)	mg/L	101	10	44	<10	10	<10	10	<10	10	B469969
Calculated Parameters											
Soluble Chloride (Cl)	mg/kg	50.1	5.0	23.4	<5.3	5.3	<5.9	5.9	<5.4	5.4	B467244
Soluble Sodium (Na)	mg/kg	52.6	2.5	54.0	10.7	2.6	10.8	2.9	10.4	2.7	B467400
Soluble Parameters											
Saturation %	%	49.8	N/A	53.0	52.6	N/A	58.6	N/A	54.1	N/A	B469880
Soluble Sodium (Na)	mg/L	106	5.0	102	20.3	5.0	18.5	5.0	19.2	5.0	B469949

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas ID		CSQ582		CSQ583		CSQ585			CSQ636		CSQ637		
Sampling Date		2024/08/01 11:45		2024/08/01 12:30		2024/08/01 12:50			2024/08/01 13:15		2024/08/01 13:30		
COC Number		8537307		8537307		8537307			8537308		8537308		
	UNITS	BH24-04-01	RDL	BH24-05-01	RDL	BH24-06-01	RDL	QC Batch	BH24-07-01	RDL	BH24-08-01	RDL	QC Batch
ANIONS													
Soluble Chloride (Cl)	mg/L	<10	10	<10	10	<10	10	B469969	<10	10	<10	10	B469975
Calculated Parameters													
Soluble Chloride (Cl)	mg/kg	<5.6	5.6	<3.9	3.9	<3.8	3.8	B467244	<5.3	5.3	<4.3	4.3	B467244
Soluble Sodium (Na)	mg/kg	10.7	2.8	6.2	2.0	9.1	1.9	B467400	7.6	2.6	6.9	2.2	B467400
Soluble Parameters													
Saturation %	%	56.1	N/A	39.5	N/A	38.3	N/A	B469880	52.8	N/A	43.1	N/A	B469902
Soluble Sodium (Na)	mg/L	19.1	5.0	15.7	5.0	23.7	5.0	B469949	14.4	5.0	16.0	5.0	B469958

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

SOLUBLE SODIUM AND CHLORIDE IN SOIL (SOIL)

Bureau Veritas ID		CSQ638		CSQ639		CSQ641			CSQ642		
Sampling Date		2024/08/01 14:00		2024/08/01 14:00		2024/08/01 14:30			2024/08/01 14:30		
COC Number		8537308		8537308		8537308			8537308		
	UNITS	BH24-09-01	RDL	BH24-09-02	RDL	BH24-10-01	RDL	QC Batch	BH24-10-02	RDL	QC Batch
ANIONS											
Soluble Chloride (Cl)	mg/L	30	10	35	10	<10	10	B469975	<10	10	B479205
Calculated Parameters											
Soluble Chloride (Cl)	mg/kg	21.6	7.3	23.9	6.8	<5.8	5.8	B467244	<5.0	5.0	B478184
Soluble Sodium (Na)	mg/kg	62.7	3.6	65.7	3.4	21.5	2.9	B467400	14.5	2.5	B478189
Soluble Parameters											
Saturation %	%	72.8	N/A	68.1	N/A	58.4	N/A	B469902	49.9	N/A	B478797
Soluble Sodium (Na)	mg/L	86.1	5.0	96.4	5.0	36.8	5.0	B469958	29.0	5.0	B479073

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas ID		CSQ643			CSQ643			CSQ644		CSQ645		
Sampling Date		2024/08/01 14:50			2024/08/01 14:50			2024/08/01 15:15		2024/08/02 07:45		
COC Number		8537308			8537308			8537308		8537308		
	UNITS	BH24-11-01	RDL	QC Batch	BH24-11-01 Lab-Dup	RDL	QC Batch	BH24-12-01	RDL	BH24-13-01	RDL	QC Batch
ANIONS												
Soluble Chloride (Cl)	mg/L	19	10	B469975	18	10	B469975	<10	10	15	10	B469975
Calculated Parameters												
Soluble Chloride (Cl)	mg/kg	9.3	4.8	B467244				<5.5	5.5	10.6	7.0	B467244
Soluble Sodium (Na)	mg/kg	23.8	2.4	B467400				9.2	2.7	71.9	3.5	B467400
Soluble Parameters												
Saturation %	%	48.1	N/A	B469902	48.1	N/A	B469902	54.7	N/A	70.4	N/A	B469902
Soluble Sodium (Na)	mg/L	49.4	5.0	B469958	49.7	5.0	B469958	16.8	5.0	102	5.0	B469958

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

SOLUBLE SODIUM AND CHLORIDE IN SOIL (SOIL)

Bureau Veritas ID		CSQ646		CSQ647		CSQ648		CSQ650		CSQ651		
Sampling Date		2024/08/02 07:45		2024/08/02 08:30		2024/08/02 09:30		2024/08/02 09:30		2024/08/02 09:00		
COC Number		8537308		8537308		8537308		8537308		8537308		
	UNITS	BH24-13-02	RDL	BH24-14-01	RDL	BH24-15-01	RDL	BH24-15-03	RDL	BH24-16-01	RDL	QC Batch
ANIONS												
Soluble Chloride (Cl)	mg/L	85	10	65	10	184	10	137	10	12	10	B469975
Calculated Parameters												
Soluble Chloride (Cl)	mg/kg	40.4	4.8	29.2	4.5	96.3	5.2	87.0	6.3	6.1	5.2	B467244
Soluble Sodium (Na)	mg/kg	66.6	2.4	24.4	2.2	37.9	2.6	34.2	3.2	7.4	2.6	B467400
Soluble Parameters												
Saturation %	%	47.6	N/A	44.7	N/A	52.4	N/A	63.3	N/A	51.6	N/A	B469902
Soluble Sodium (Na)	mg/L	140	5.0	54.6	5.0	72.3	5.0	53.9	5.0	14.3	5.0	B469958

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas ID		CSQ652			CSQ655			CSQ656		CSQ658		
Sampling Date		2024/08/02 10:15			2024/08/02 10:45			2024/08/02 10:45		2024/08/02 11:15		
COC Number		8537308			8537308			8537308		8537308		
	UNITS	BH24-17-01	RDL	QC Batch	BH24-18-01	RDL	QC Batch	BH24-18-02	RDL	BH24-19-01	RDL	QC Batch
ANIONS												
Soluble Chloride (Cl)	mg/L	51	10	B469975	14	10	B479205	100	10	<10	10	B469975
Calculated Parameters												
Soluble Chloride (Cl)	mg/kg	28.6	5.7	B467244	4.5	3.1	B478184	67.0	6.7	<3.1	3.1	B467244
Soluble Sodium (Na)	mg/kg	86.5	2.8	B467400	14.6	1.6	B478189	52.9	3.4	4.6	1.6	B467400
Soluble Parameters												
Saturation %	%	56.5	N/A	B469902	31.0	N/A	B478797	67.2	N/A	31.2	N/A	B469902
Soluble Sodium (Na)	mg/L	153	5.0	B469958	47.1	5.0	B479073	78.7	5.0	14.6	5.0	B469958

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

SOLUBLE SODIUM AND CHLORIDE IN SOIL (SOIL)

Bureau Veritas ID		CSQ661		
Sampling Date		2024/08/02 11:45		
COC Number		8537308		
	UNITS	BH24-20-02	RDL	QC Batch
ANIONS				
Soluble Chloride (Cl)	mg/L	<10	10	B469975
Calculated Parameters				
Soluble Chloride (Cl)	mg/kg	<6.1	6.1	B467244
Soluble Sodium (Na)	mg/kg	13.1	3.0	B467400
Soluble Parameters				
Saturation %	%	60.6	N/A	B469902
Soluble Sodium (Na)	mg/L	21.6	5.0	B469958

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

PAH IN LEACHATE BY GC-MS (SOIL)

Bureau Veritas ID		CSQ643	CSQ644		
Sampling Date		2024/08/01 14:50	2024/08/01 15:15		
COC Number		8537308	8537308		
	UNITS	BH24-11-01	BH24-12-01	RDL	QC Batch
Calculated Parameters					
Leachate Low Molecular Weight PAH`s	ug/L	<0.50	<0.50	0.50	B518622
Leachate High Molecular Weight PAH`s	ug/L	<0.20	<0.20	0.20	B518622
Leachate Total PAH	ug/L	<0.50	<0.50	0.50	B518622
Polycyclic Aromatics					
Leachate Benzo(a)pyrene	ug/L	<0.10	<0.10	0.10	B526158
Surrogate Recovery (%)					
Leachate D10-ANTHRACENE (sur.)	%	127	116		B526158
Leachate D8-ACENAPHTHYLENE (sur.)	%	80	82		B526158
Leachate D8-NAPHTHALENE (sur.)	%	73	72		B526158
Leachate TERPHENYL-D14 (sur.)	%	87	91		B526158
RDL = Reportable Detection Limit					

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	9.7°C
Package 2	14.7°C

Version 2: Report reissued to include results on samples SP24-01 & SP24-02 only as requested by Kalum Skipper on 2024/08/14.

Version 3: Report reissued to include results on samples listed as per client request received 2024/08/14.

VOCs
BH24-03-01/CSQ580
BH24-06-01/CSQ585
BH24-10-02/CSQ642

LEPH/HEPH/PAH
BH24-10-02/CSQ642
BH24-18-01/CSQ655

Zinc
BH24-09-03/CSQ640
BH24-09-02 - RERUN 1/CTH423
BH24-09-02 - RERUN 2/CTH424

Arsenic
BH24-13-01 - RERUN 1/CTH433
BH24-13-01 - RERUN 2/CTH434

Lead
BH24-14-01 - RERUN 1/CTH435
BH24-14-01 - RERUN 2/CTH436

Version 5: Report reissued to include results for TCLP Benzo(a) pyrene on samples listed as per client request received 2024/09/16.
BH24-11-01
BH24-12-01

Sample CSQ643 [BH24-11-01] : Sample analyzed past method specified hold time for PAH in TCLP Leachate by GC/MS (SIM). Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample CSQ644 [BH24-12-01] : Sample analyzed past method specified hold time for PAH in TCLP Leachate by GC/MS (SIM). Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Results relate only to the items tested.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B468562	D10-ANTHRACENE (sur.)	2024/08/07	90	50 - 140	93	50 - 140	102	%				
B468562	D8-ACENAPHTHYLENE (sur.)	2024/08/07	81	50 - 140	82	50 - 140	86	%				
B468562	D8-NAPHTHALENE (sur.)	2024/08/07	76	50 - 140	79	50 - 140	81	%				
B468562	TERPHENYL-D14 (sur.)	2024/08/07	104	50 - 140	100	50 - 140	116	%				
B468576	O-TERPHENYL (sur.)	2024/08/07	89	60 - 140	82	60 - 140	78	%				
B468830	D10-ANTHRACENE (sur.)	2024/08/07	81	50 - 140	86	50 - 140	90	%				
B468830	D8-ACENAPHTHYLENE (sur.)	2024/08/07	88	50 - 140	85	50 - 140	83	%				
B468830	D8-NAPHTHALENE (sur.)	2024/08/07	86	50 - 140	79	50 - 140	76	%				
B468830	TERPHENYL-D14 (sur.)	2024/08/07	101	50 - 140	105	50 - 140	111	%				
B468835	O-TERPHENYL (sur.)	2024/08/07	71	60 - 140	72	60 - 140	80	%				
B469387	D10-ANTHRACENE (sur.)	2024/08/08	81	50 - 140	82	50 - 140	83	%				
B469387	D8-ACENAPHTHYLENE (sur.)	2024/08/08	75	50 - 140	78	50 - 140	79	%				
B469387	D8-NAPHTHALENE (sur.)	2024/08/08	75	50 - 140	79	50 - 140	77	%				
B469387	TERPHENYL-D14 (sur.)	2024/08/08	100	50 - 140	100	50 - 140	104	%				
B469392	O-TERPHENYL (sur.)	2024/08/08	80	60 - 140	68	60 - 140	85	%				
B470636	1,4-Difluorobenzene (sur.)	2024/08/08	98	50 - 140	98	50 - 140	101	%				
B470636	4-Bromofluorobenzene (sur.)	2024/08/08	97	50 - 140	99	50 - 140	92	%				
B470636	D10-o-Xylene (sur.)	2024/08/08	100	50 - 140	94	50 - 140	98	%				
B470636	D4-1,2-Dichloroethane (sur.)	2024/08/08	116	50 - 140	107	50 - 140	106	%				
B471654	Extractable (MeOH) 1,4-Difluorobenzene (sur.)	2024/08/09	95	50 - 140	99	50 - 140	99	%				
B471654	Extractable (MeOH) 4-Bromofluorobenzene (sur.)	2024/08/09	96	50 - 140	99	50 - 140	97	%				
B471654	Extractable (MeOH) D10-o-Xylene (sur.)	2024/08/09	90	50 - 140	85	50 - 140	91	%				
B471654	Extractable (MeOH) D4-1,2-Dichloroethane (sur.)	2024/08/09	103	50 - 140	107	50 - 140	106	%				
B478244	D10-ANTHRACENE (sur.)	2024/08/14	81	50 - 140	86	50 - 140	87	%				
B478244	D8-ACENAPHTHYLENE (sur.)	2024/08/14	77	50 - 140	83	50 - 140	79	%				
B478244	D8-NAPHTHALENE (sur.)	2024/08/14	77	50 - 140	82	50 - 140	78	%				
B478244	TERPHENYL-D14 (sur.)	2024/08/14	103	50 - 140	107	50 - 140	108	%				
B478259	O-TERPHENYL (sur.)	2024/08/15	89	60 - 140	75	60 - 140	89	%				
B478924	1,4-Difluorobenzene (sur.)	2024/08/16	101	50 - 140	102	50 - 140	102	%				
B478924	4-Bromofluorobenzene (sur.)	2024/08/16	115	50 - 140	115	50 - 140	110	%				

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B478924	D10-o-Xylene (sur.)	2024/08/16	112	50 - 140	94	50 - 140	97	%				
B478924	D4-1,2-Dichloroethane (sur.)	2024/08/16	111	50 - 140	101	50 - 140	73	%				
B481684	Extractable (MeOH) 1,4-Difluorobenzene (sur.)	2024/08/17	99	50 - 140	87	50 - 140	88	%				
B481684	Extractable (MeOH) 4-Bromofluorobenzene (sur.)	2024/08/17	94	50 - 140	101	50 - 140	104	%				
B481684	Extractable (MeOH) D10-o-Xylene (sur.)	2024/08/17	95	50 - 140	101	50 - 140	116	%				
B481684	Extractable (MeOH) D4-1,2-Dichloroethane (sur.)	2024/08/17	100	50 - 140	113	50 - 140	118	%				
B526158	Leachate D10-ANTHRACENE (sur.)	2024/09/18			128	50 - 140	128	%				
B526158	Leachate D8-ACENAPHTHYLENE (sur.)	2024/09/18			85	50 - 140	84	%				
B526158	Leachate D8-NAPHTHALENE (sur.)	2024/09/18			80	50 - 140	79	%				
B526158	Leachate TERPHENYL-D14 (sur.)	2024/09/18			88	50 - 140	92	%				
B468362	Moisture	2024/08/08					<0.30	%	3.7	20		
B468461	Moisture	2024/08/08					<0.30	%	0	20		
B468562	1-Methylnaphthalene	2024/08/07	87	50 - 140	89	50 - 140	<0.050	mg/kg	NC	50		
B468562	2-Methylnaphthalene	2024/08/07	88	50 - 140	87	50 - 140	<0.020	mg/kg	22	50		
B468562	Acenaphthene	2024/08/07	87	50 - 140	87	50 - 140	<0.0050	mg/kg	9.0	50		
B468562	Acenaphthylene	2024/08/07	83	50 - 140	83	50 - 140	<0.0050	mg/kg	NC	50		
B468562	Anthracene	2024/08/07	87	50 - 140	87	50 - 140	<0.0040	mg/kg	NC	50		
B468562	Benzo(a)anthracene	2024/08/07	77	50 - 140	72	50 - 140	<0.020	mg/kg	NC	50		
B468562	Benzo(a)pyrene	2024/08/07	79	50 - 140	81	50 - 140	<0.020	mg/kg	NC	50		
B468562	Benzo(b&j)fluoranthene	2024/08/07	80	50 - 140	78	50 - 140	<0.020	mg/kg	NC	50		
B468562	Benzo(b)fluoranthene	2024/08/07	84	50 - 140	81	50 - 140	<0.020	mg/kg	NC	50		
B468562	Benzo(g,h,i)perylene	2024/08/07	81	50 - 140	84	50 - 140	<0.050	mg/kg	NC	50		
B468562	Benzo(k)fluoranthene	2024/08/07	76	50 - 140	86	50 - 140	<0.020	mg/kg	NC	50		
B468562	Chrysene	2024/08/07	76	50 - 140	73	50 - 140	<0.020	mg/kg	NC	50		
B468562	Dibenz(a,h)anthracene	2024/08/07	84	50 - 140	88	50 - 140	<0.020	mg/kg	NC	50		
B468562	Fluoranthene	2024/08/07	94	50 - 140	90	50 - 140	<0.020	mg/kg	NC	50		
B468562	Fluorene	2024/08/07	79	50 - 140	81	50 - 140	<0.020	mg/kg	1.6	50		
B468562	Indeno(1,2,3-cd)pyrene	2024/08/07	86	50 - 140	90	50 - 140	<0.020	mg/kg	NC	50		
B468562	Naphthalene	2024/08/07	80	50 - 140	82	50 - 140	<0.010	mg/kg	30	50		
B468562	Phenanthrene	2024/08/07	80	50 - 140	80	50 - 140	<0.010	mg/kg	10	50		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B468562	Pyrene	2024/08/07	97	50 - 140	90	50 - 140	<0.020	mg/kg	NC	50		
B468562	Quinoline	2024/08/07	108	50 - 140	106	50 - 140	<0.050	mg/kg	NC	50		
B468569	Moisture	2024/08/08					<0.30	%	0	20		
B468576	EPH (C10-C19)	2024/08/08	120	60 - 140	111	70 - 130	<100	mg/kg	NC	40		
B468576	EPH (C19-C32)	2024/08/08	108	60 - 140	102	70 - 130	<100	mg/kg	NC	40		
B468830	1-Methylnaphthalene	2024/08/07	86	50 - 140	83	50 - 140	<0.050	mg/kg	NC	50		
B468830	2-Methylnaphthalene	2024/08/07	91	50 - 140	87	50 - 140	<0.020	mg/kg	10	50		
B468830	Acenaphthene	2024/08/07	87	50 - 140	83	50 - 140	<0.0050	mg/kg	24	50		
B468830	Acenaphthylene	2024/08/07	88	50 - 140	86	50 - 140	<0.0050	mg/kg	2.8	50		
B468830	Anthracene	2024/08/07	77	50 - 140	82	50 - 140	<0.0040	mg/kg	4.4	50		
B468830	Benzo(a)anthracene	2024/08/07	62	50 - 140	79	50 - 140	<0.020	mg/kg	2.7	50		
B468830	Benzo(a)pyrene	2024/08/07	NC	50 - 140	85	50 - 140	<0.020	mg/kg	6.5	50		
B468830	Benzo(b&j)fluoranthene	2024/08/07	69	50 - 140	81	50 - 140	<0.020	mg/kg	7.5	50		
B468830	Benzo(b)fluoranthene	2024/08/07	76	50 - 140	89	50 - 140	<0.020	mg/kg	7.1	50		
B468830	Benzo(g,h,i)perylene	2024/08/07	66	50 - 140	91	50 - 140	<0.050	mg/kg	5.2	50		
B468830	Benzo(k)fluoranthene	2024/08/07	65	50 - 140	78	50 - 140	<0.020	mg/kg	0.39	50		
B468830	Chrysene	2024/08/07	NC	50 - 140	82	50 - 140	<0.020	mg/kg	5.5	50		
B468830	Dibenz(a,h)anthracene	2024/08/07	82	50 - 140	95	50 - 140	<0.020	mg/kg	1.8	50		
B468830	Fluoranthene	2024/08/07	NC	50 - 140	89	50 - 140	<0.020	mg/kg	1.0	50		
B468830	Fluorene	2024/08/07	88	50 - 140	88	50 - 140	<0.020	mg/kg	1.6	50		
B468830	Indeno(1,2,3-cd)pyrene	2024/08/07	68	50 - 140	89	50 - 140	<0.020	mg/kg	3.0	50		
B468830	Naphthalene	2024/08/07	93	50 - 140	89	50 - 140	<0.010	mg/kg	3.8	50		
B468830	Phenanthrene	2024/08/07	NC	50 - 140	81	50 - 140	<0.010	mg/kg	0.94	50		
B468830	Pyrene	2024/08/07	NC	50 - 140	81	50 - 140	<0.020	mg/kg	6.9	50		
B468830	Quinoline	2024/08/07	115	50 - 140	111	50 - 140	<0.050	mg/kg	NC	50		
B468835	EPH (C10-C19)	2024/08/07	105	60 - 140	105	70 - 130	<100	mg/kg	NC	40		
B468835	EPH (C19-C32)	2024/08/07	93	60 - 140	96	70 - 130	<100	mg/kg	14	40		
B469387	1-Methylnaphthalene	2024/08/08	72	50 - 140	75	50 - 140	<0.050	mg/kg	NC	50		
B469387	2-Methylnaphthalene	2024/08/08	76	50 - 140	79	50 - 140	<0.020	mg/kg	NC	50		
B469387	Acenaphthene	2024/08/08	73	50 - 140	76	50 - 140	<0.0050	mg/kg	NC	50		
B469387	Acenaphthylene	2024/08/08	75	50 - 140	79	50 - 140	<0.0050	mg/kg	NC	50		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B469387	Anthracene	2024/08/08	73	50 - 140	75	50 - 140	<0.0040	mg/kg	NC	50		
B469387	Benzo(a)anthracene	2024/08/08	69	50 - 140	74	50 - 140	<0.020	mg/kg	NC	50		
B469387	Benzo(a)pyrene	2024/08/08	74	50 - 140	78	50 - 140	<0.020	mg/kg	NC	50		
B469387	Benzo(b&j)fluoranthene	2024/08/08	67	50 - 140	72	50 - 140	<0.020	mg/kg	NC	50		
B469387	Benzo(b)fluoranthene	2024/08/08	71	50 - 140	77	50 - 140	<0.020	mg/kg	NC	50		
B469387	Benzo(g,h,i)perylene	2024/08/08	80	50 - 140	83	50 - 140	<0.050	mg/kg	NC	50		
B469387	Benzo(k)fluoranthene	2024/08/08	73	50 - 140	75	50 - 140	<0.020	mg/kg	NC	50		
B469387	Chrysene	2024/08/08	71	50 - 140	76	50 - 140	<0.020	mg/kg	NC	50		
B469387	Dibenz(a,h)anthracene	2024/08/08	88	50 - 140	90	50 - 140	<0.020	mg/kg	NC	50		
B469387	Fluoranthene	2024/08/08	81	50 - 140	84	50 - 140	<0.020	mg/kg	NC	50		
B469387	Fluorene	2024/08/08	76	50 - 140	79	50 - 140	<0.020	mg/kg	NC	50		
B469387	Indeno(1,2,3-cd)pyrene	2024/08/08	80	50 - 140	84	50 - 140	<0.020	mg/kg	NC	50		
B469387	Naphthalene	2024/08/08	79	50 - 140	81	50 - 140	<0.010	mg/kg	NC	50		
B469387	Phenanthrene	2024/08/08	75	50 - 140	78	50 - 140	<0.010	mg/kg	NC	50		
B469387	Pyrene	2024/08/08	75	50 - 140	78	50 - 140	<0.020	mg/kg	NC	50		
B469387	Quinoline	2024/08/08	113	50 - 140	112	50 - 140	<0.050	mg/kg	NC	50		
B469392	EPH (C10-C19)	2024/08/08	106	60 - 140	91	70 - 130	<100	mg/kg	NC	40		
B469392	EPH (C19-C32)	2024/08/08	97	60 - 140	85	70 - 130	<100	mg/kg	NC	40		
B469880	Saturation %	2024/08/08					0	%	0.026	30	102	75 - 125
B469883	Total Aluminum (Al)	2024/08/08	NC	75 - 125	101	75 - 125	<100	mg/kg	0.48	40	96	70 - 130
B469883	Total Antimony (Sb)	2024/08/08	98	75 - 125	101	75 - 125	<0.10	mg/kg	1.4	30		
B469883	Total Arsenic (As)	2024/08/08	103	75 - 125	103	75 - 125	<0.20	mg/kg	0.23	30	109	70 - 130
B469883	Total Barium (Ba)	2024/08/08	112	75 - 125	101	75 - 125	<0.10	mg/kg	2.7	40	96	70 - 130
B469883	Total Beryllium (Be)	2024/08/08	99	75 - 125	102	75 - 125	<0.20	mg/kg	NC	30	92	70 - 130
B469883	Total Boron (B)	2024/08/08	97	75 - 125	102	75 - 125	<1.0	mg/kg	NC	30		
B469883	Total Cadmium (Cd)	2024/08/08	102	75 - 125	100	75 - 125	<0.050	mg/kg	5.9	30	107	70 - 130
B469883	Total Chromium (Cr)	2024/08/08	105	75 - 125	104	75 - 125	<0.50	mg/kg	2.4	30	86	70 - 130
B469883	Total Cobalt (Co)	2024/08/08	100	75 - 125	104	75 - 125	<0.10	mg/kg	0.85	30	98	70 - 130
B469883	Total Copper (Cu)	2024/08/08	104	75 - 125	108	75 - 125	<0.50	mg/kg	1.9	30	103	70 - 130
B469883	Total Iron (Fe)	2024/08/08	NC	75 - 125	97	75 - 125	<100	mg/kg	0.60	30	95	70 - 130
B469883	Total Lead (Pb)	2024/08/08	100	75 - 125	100	75 - 125	<0.10	mg/kg	0.42	40	102	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B469883	Total Lithium (Li)	2024/08/08	101	75 - 125	101	75 - 125	<0.50	mg/kg	2.4	30	92	70 - 130
B469883	Total Manganese (Mn)	2024/08/08	119	75 - 125	101	75 - 125	<0.20	mg/kg	1.8	30	104	70 - 130
B469883	Total Mercury (Hg)	2024/08/08	101	75 - 125	100	75 - 125	<0.050	mg/kg	NC	40	105	70 - 130
B469883	Total Molybdenum (Mo)	2024/08/08	102	75 - 125	99	75 - 125	<0.10	mg/kg	3.0	40	104	70 - 130
B469883	Total Nickel (Ni)	2024/08/08	99	75 - 125	101	75 - 125	<0.50	mg/kg	2.3	30	102	70 - 130
B469883	Total Selenium (Se)	2024/08/08	106	75 - 125	106	75 - 125	<0.50	mg/kg	NC	30	90	70 - 130
B469883	Total Silver (Ag)	2024/08/08	95	75 - 125	93	75 - 125	<0.050	mg/kg	NC	40	99	70 - 130
B469883	Total Strontium (Sr)	2024/08/08	116	75 - 125	103	75 - 125	<0.10	mg/kg	3.6	40	101	70 - 130
B469883	Total Thallium (Tl)	2024/08/08	95	75 - 125	95	75 - 125	<0.050	mg/kg	NC	30		
B469883	Total Tin (Sn)	2024/08/08	107	75 - 125	103	75 - 125	<0.10	mg/kg	9.0	40	118	70 - 130
B469883	Total Tungsten (W)	2024/08/08	94	75 - 125	101	75 - 125	<0.50	mg/kg	NC	40		
B469883	Total Uranium (U)	2024/08/08	98	75 - 125	98	75 - 125	<0.050	mg/kg	1.9	30	94	70 - 130
B469883	Total Vanadium (V)	2024/08/08	108	75 - 125	101	75 - 125	<1.0	mg/kg	2.5	30	96	70 - 130
B469883	Total Zinc (Zn)	2024/08/08	97	75 - 125	99	75 - 125	<1.0	mg/kg	2.8	30	101	70 - 130
B469888	Soluble (2:1) pH	2024/08/08			100	97 - 103			1.1	N/A		
B469891	Total Aluminum (Al)	2024/08/08	NC	75 - 125	100	75 - 125	<100	mg/kg	4.3	40	100	70 - 130
B469891	Total Antimony (Sb)	2024/08/08	87	75 - 125	101	75 - 125	<0.10	mg/kg	10	30		
B469891	Total Arsenic (As)	2024/08/08	96	75 - 125	101	75 - 125	<0.20	mg/kg	0.93	30	108	70 - 130
B469891	Total Barium (Ba)	2024/08/08	102	75 - 125	98	75 - 125	<0.10	mg/kg	3.8	40	95	70 - 130
B469891	Total Beryllium (Be)	2024/08/08	97	75 - 125	100	75 - 125	<0.20	mg/kg	2.2	30	97	70 - 130
B469891	Total Boron (B)	2024/08/08	104	75 - 125	100	75 - 125	<1.0	mg/kg	20	30		
B469891	Total Cadmium (Cd)	2024/08/08	97	75 - 125	101	75 - 125	<0.050	mg/kg	NC	30	105	70 - 130
B469891	Total Chromium (Cr)	2024/08/08	97	75 - 125	103	75 - 125	<0.50	mg/kg	2.1	30	89	70 - 130
B469891	Total Cobalt (Co)	2024/08/08	96	75 - 125	105	75 - 125	<0.10	mg/kg	3.0	30	99	70 - 130
B469891	Total Copper (Cu)	2024/08/08	97	75 - 125	104	75 - 125	<0.50	mg/kg	0.82	30	102	70 - 130
B469891	Total Iron (Fe)	2024/08/08	NC	75 - 125	98	75 - 125	<100	mg/kg	0.49	30	94	70 - 130
B469891	Total Lead (Pb)	2024/08/08	96	75 - 125	98	75 - 125	<0.10	mg/kg	7.8	40	101	70 - 130
B469891	Total Lithium (Li)	2024/08/08	103	75 - 125	102	75 - 125	<0.50	mg/kg	7.1	30	93	70 - 130
B469891	Total Manganese (Mn)	2024/08/08	NC	75 - 125	100	75 - 125	<0.20	mg/kg	0.89	30	104	70 - 130
B469891	Total Mercury (Hg)	2024/08/08	97	75 - 125	98	75 - 125	<0.050	mg/kg	NC	40	102	70 - 130
B469891	Total Molybdenum (Mo)	2024/08/08	95	75 - 125	97	75 - 125	<0.10	mg/kg	12	40	103	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B469891	Total Nickel (Ni)	2024/08/08	92	75 - 125	100	75 - 125	<0.50	mg/kg	0.71	30	103	70 - 130
B469891	Total Selenium (Se)	2024/08/08	101	75 - 125	107	75 - 125	<0.50	mg/kg	NC	30	91	70 - 130
B469891	Total Silver (Ag)	2024/08/08	90	75 - 125	93	75 - 125	<0.050	mg/kg	4.9	40	103	70 - 130
B469891	Total Strontium (Sr)	2024/08/08	104	75 - 125	103	75 - 125	<0.10	mg/kg	7.9	40	100	70 - 130
B469891	Total Thallium (Tl)	2024/08/08	91	75 - 125	93	75 - 125	<0.050	mg/kg	7.7	30		
B469891	Total Tin (Sn)	2024/08/08	100	75 - 125	103	75 - 125	<0.10	mg/kg	2.2	40	115	70 - 130
B469891	Total Tungsten (W)	2024/08/08	69 (1)	75 - 125	101	75 - 125	<0.50	mg/kg	NC	40		
B469891	Total Uranium (U)	2024/08/08	95	75 - 125	97	75 - 125	<0.050	mg/kg	6.8	30	92	70 - 130
B469891	Total Vanadium (V)	2024/08/08	101	75 - 125	99	75 - 125	<1.0	mg/kg	2.2	30	99	70 - 130
B469891	Total Zinc (Zn)	2024/08/08	92	75 - 125	97	75 - 125	<1.0	mg/kg	3.0	30	100	70 - 130
B469894	Soluble (2:1) pH	2024/08/08			100	97 - 103			0.31	N/A		
B469902	Saturation %	2024/08/08					0	%	0.017	30	104	75 - 125
B469949	Soluble Sodium (Na)	2024/08/08	103	80 - 120	96	80 - 120	<5.0	mg/L	7.2	40	104	75 - 125
B469958	Soluble Sodium (Na)	2024/08/08	96	80 - 120	95	80 - 120	<5.0	mg/L	0.73	40	90	75 - 125
B469969	Soluble Chloride (Cl)	2024/08/08	102	75 - 125	99	80 - 120	<10	mg/L	15	30	88	75 - 125
B469975	Soluble Chloride (Cl)	2024/08/08	105	75 - 125	100	80 - 120	<10	mg/L	6.5	30	83	75 - 125
B470636	1,1,1-trichloroethane	2024/08/08	96	50 - 140	95	60 - 130	<0.020	mg/kg	NC	50		
B470636	1,1,2,2-tetrachloroethane	2024/08/08	93	50 - 140	97	60 - 130	<0.020	mg/kg	NC	50		
B470636	1,1,2-trichloroethane	2024/08/08	97	50 - 140	96	60 - 130	<0.020	mg/kg	NC	50		
B470636	1,1-dichloroethane	2024/08/08	103	50 - 140	105	60 - 130	<0.025	mg/kg	NC	50		
B470636	1,1-dichloroethene	2024/08/08	106	50 - 140	112	60 - 130	<0.025	mg/kg	NC	50		
B470636	1,2,4-trichlorobenzene	2024/08/08	94	50 - 140	101	60 - 130	<0.030	mg/kg	NC	50		
B470636	1,2,4-trimethylbenzene	2024/08/08	122	50 - 140	124	60 - 130	<0.20	mg/kg	NC	50		
B470636	1,2-dibromoethane	2024/08/08	104	50 - 140	97	60 - 130	<0.020	mg/kg	NC	50		
B470636	1,2-dichlorobenzene	2024/08/08	94	50 - 140	101	60 - 130	<0.020	mg/kg	NC	50		
B470636	1,2-dichloroethane	2024/08/08	96	50 - 140	97	60 - 130	<0.020	mg/kg	NC	50		
B470636	1,2-dichloropropane	2024/08/08	105	50 - 140	101	60 - 130	<0.020	mg/kg	NC	50		
B470636	1,3,5-trimethylbenzene	2024/08/08	118	50 - 140	118	60 - 130	<0.20	mg/kg	NC	50		
B470636	1,3-Butadiene	2024/08/08	76	50 - 140	108	50 - 140	<0.080	mg/kg	NC	50		
B470636	2-Butanone (MEK)	2024/08/08			126	50 - 140	<15	mg/kg	NC	50		
B470636	4-Methyl-2-pentanone (MIBK)	2024/08/08			112	50 - 140	<0.50	mg/kg	NC	50		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B470636	Acetone	2024/08/08			114	50 - 140	<5.0	mg/kg	NC	50		
B470636	Benzene	2024/08/08	110	50 - 140	109	60 - 130	<0.0050	mg/kg	NC	50		
B470636	Bromobenzene	2024/08/08	99	50 - 140	98	60 - 130	<0.20	mg/kg	NC	50		
B470636	Bromodichloromethane	2024/08/08	101	50 - 140	97	60 - 130	<0.050	mg/kg	NC	50		
B470636	Carbon tetrachloride	2024/08/08	98	50 - 140	95	60 - 130	<0.020	mg/kg	NC	50		
B470636	Chlorobenzene	2024/08/08	100	50 - 140	99	60 - 130	<0.020	mg/kg	NC	50		
B470636	Chloroethane	2024/08/08	78	50 - 140	72	50 - 140	<0.10	mg/kg	NC	50		
B470636	cis-1,2-dichloroethene	2024/08/08	108	50 - 140	100	60 - 130	<0.030	mg/kg	NC	50		
B470636	Dichlorodifluoromethane	2024/08/08	49 (1)	50 - 140	54	50 - 140	<0.20	mg/kg	NC	50		
B470636	Dichloromethane	2024/08/08	87	50 - 140	93	60 - 130	<0.080	mg/kg	NC	50		
B470636	Ethylbenzene	2024/08/08	109	50 - 140	101	60 - 130	<0.010	mg/kg	NC	50		
B470636	Hexane	2024/08/08	96	50 - 140	89	60 - 130	<0.50	mg/kg				
B470636	Isopropylbenzene	2024/08/08	112	50 - 140	105	60 - 130	<0.20	mg/kg	NC	50		
B470636	m & p-Xylene	2024/08/08	104	50 - 140	104	60 - 130	<0.040	mg/kg	NC	50		
B470636	Methylcyclohexane	2024/08/08	113	50 - 140	102	60 - 130	<0.20	mg/kg				
B470636	Methyl-tert-butylether (MTBE)	2024/08/08	106	50 - 140	105	60 - 130	<0.10	mg/kg	NC	50		
B470636	n-Decane	2024/08/08	132	50 - 140	133 (2)	60 - 130	<2.0	mg/kg	NC	50		
B470636	o-Xylene	2024/08/08	108	50 - 140	107	60 - 130	<0.040	mg/kg	NC	50		
B470636	Styrene	2024/08/08	84	50 - 140	94	60 - 130	<0.030	mg/kg	NC	50		
B470636	Tetrachloroethene	2024/08/08	97	50 - 140	99	60 - 130	<0.010	mg/kg	NC	50		
B470636	Toluene	2024/08/08	102	50 - 140	89	60 - 130	<0.050	mg/kg	NC	50		
B470636	trans-1,2-dichloroethene	2024/08/08	107	50 - 140	110	60 - 130	<0.030	mg/kg	NC	50		
B470636	Trichloroethene	2024/08/08	100	50 - 140	97	60 - 130	<0.0090	mg/kg	NC	50		
B470636	VH C6-C10	2024/08/08			89	70 - 130	<10	mg/kg	NC	50		
B470636	Vinyl chloride	2024/08/08	61	50 - 140	99	50 - 140	<0.040	mg/kg	NC	50		
B470636	Xylenes (Total)	2024/08/08					<0.040	mg/kg	NC	50		
B471654	Extractable (MeOH) Carbon disulfide	2024/08/09	96	60 - 140	65	60 - 140	<15	mg/kg	NC	50		
B478219	Moisture	2024/08/15					<0.30	%	0	20		
B478244	1-Methylnaphthalene	2024/08/15	74	50 - 140	77	50 - 140	<0.050	mg/kg	NC	50		
B478244	2-Methylnaphthalene	2024/08/15	78	50 - 140	82	50 - 140	<0.020	mg/kg	NC	50		
B478244	Acenaphthene	2024/08/15	73	50 - 140	76	50 - 140	<0.0050	mg/kg	NC	50		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B478244	Acenaphthylene	2024/08/15	76	50 - 140	79	50 - 140	<0.0050	mg/kg	NC	50		
B478244	Anthracene	2024/08/15	72	50 - 140	75	50 - 140	<0.0040	mg/kg	NC	50		
B478244	Benzo(a)anthracene	2024/08/15	66	50 - 140	68	50 - 140	<0.020	mg/kg	NC	50		
B478244	Benzo(a)pyrene	2024/08/15	71	50 - 140	75	50 - 140	<0.020	mg/kg	NC	50		
B478244	Benzo(b&j)fluoranthene	2024/08/15	67	50 - 140	70	50 - 140	<0.020	mg/kg	NC	50		
B478244	Benzo(b)fluoranthene	2024/08/15	73	50 - 140	75	50 - 140	<0.020	mg/kg	NC	50		
B478244	Benzo(g,h,i)perylene	2024/08/15	71	50 - 140	76	50 - 140	<0.050	mg/kg	NC	50		
B478244	Benzo(k)fluoranthene	2024/08/15	68	50 - 140	73	50 - 140	<0.020	mg/kg	NC	50		
B478244	Chrysene	2024/08/15	69	50 - 140	71	50 - 140	<0.020	mg/kg	NC	50		
B478244	Dibenz(a,h)anthracene	2024/08/15	77	50 - 140	83	50 - 140	<0.020	mg/kg	NC	50		
B478244	Fluoranthene	2024/08/15	78	50 - 140	80	50 - 140	<0.020	mg/kg	NC	50		
B478244	Fluorene	2024/08/15	75	50 - 140	79	50 - 140	<0.020	mg/kg	NC	50		
B478244	Indeno(1,2,3-cd)pyrene	2024/08/15	73	50 - 140	78	50 - 140	<0.020	mg/kg	NC	50		
B478244	Naphthalene	2024/08/15	80	50 - 140	84	50 - 140	<0.010	mg/kg	NC	50		
B478244	Phenanthrene	2024/08/15	70	50 - 140	72	50 - 140	<0.010	mg/kg	NC	50		
B478244	Pyrene	2024/08/15	70	50 - 140	72	50 - 140	<0.020	mg/kg	NC	50		
B478244	Quinoline	2024/08/15	104	50 - 140	106	50 - 140	<0.050	mg/kg	NC	50		
B478259	EPH (C10-C19)	2024/08/15	107	60 - 140	92	70 - 130	<100	mg/kg	NC	40		
B478259	EPH (C19-C32)	2024/08/15	100	60 - 140	84	70 - 130	<100	mg/kg	NC	40		
B478797	Saturation %	2024/08/15					0	%	0	30	101	75 - 125
B478924	1,1,1-trichloroethane	2024/08/16	106	50 - 140	96	60 - 130	<0.020	mg/kg	NC	50		
B478924	1,1,2,2-tetrachloroethane	2024/08/16	90	50 - 140	92	60 - 130	<0.020	mg/kg	NC	50		
B478924	1,1,2-trichloroethane	2024/08/16	104	50 - 140	101	60 - 130	<0.020	mg/kg	NC	50		
B478924	1,1-dichloroethane	2024/08/16	99	50 - 140	92	60 - 130	<0.025	mg/kg	NC	50		
B478924	1,1-dichloroethene	2024/08/16	117	50 - 140	110	60 - 130	<0.025	mg/kg	NC	50		
B478924	1,2,4-trichlorobenzene	2024/08/16	111	50 - 140	110	60 - 130	<0.030	mg/kg	NC	50		
B478924	1,2,4-trimethylbenzene	2024/08/16	121	50 - 140	115	60 - 130	<0.20	mg/kg	NC	50		
B478924	1,2-dibromoethane	2024/08/16	112	50 - 140	106	60 - 130	<0.020	mg/kg	NC	50		
B478924	1,2-dichlorobenzene	2024/08/16	107	50 - 140	109	60 - 130	<0.020	mg/kg	NC	50		
B478924	1,2-dichloroethane	2024/08/16	105	50 - 140	100	60 - 130	<0.020	mg/kg	NC	50		
B478924	1,2-dichloropropane	2024/08/16	98	50 - 140	91	60 - 130	<0.020	mg/kg	NC	50		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B478924	1,3,5-trimethylbenzene	2024/08/16	113	50 - 140	107	60 - 130	<0.20	mg/kg	NC	50		
B478924	1,3-Butadiene	2024/08/16	112	50 - 140	67	50 - 140	<0.080	mg/kg	NC	50		
B478924	2-Butanone (MEK)	2024/08/16			135	50 - 140	<15	mg/kg	NC	50		
B478924	4-Methyl-2-pentanone (MIBK)	2024/08/16			128	50 - 140	<0.50	mg/kg	NC	50		
B478924	Acetone	2024/08/16			109	50 - 140	<5.0	mg/kg	NC	50		
B478924	Benzene	2024/08/16	109	50 - 140	101	60 - 130	<0.0050	mg/kg	NC	50		
B478924	Bromobenzene	2024/08/16	109	50 - 140	106	60 - 130	<0.20	mg/kg	NC	50		
B478924	Bromodichloromethane	2024/08/16	103	50 - 140	98	60 - 130	<0.050	mg/kg	NC	50		
B478924	Carbon tetrachloride	2024/08/16	112	50 - 140	100	60 - 130	<0.020	mg/kg	NC	50		
B478924	Chlorobenzene	2024/08/16	109	50 - 140	103	60 - 130	<0.020	mg/kg	NC	50		
B478924	Chloroethane	2024/08/16	68	50 - 140	94	50 - 140	<0.10	mg/kg	NC	50		
B478924	cis-1,2-dichloroethene	2024/08/16	117	50 - 140	111	60 - 130	<0.030	mg/kg	NC	50		
B478924	Dichlorodifluoromethane	2024/08/16	84	50 - 140	68	50 - 140	<0.20	mg/kg	NC	50		
B478924	Dichloromethane	2024/08/16	92	50 - 140	89	60 - 130	<0.080	mg/kg	NC	50		
B478924	Ethylbenzene	2024/08/16	104	50 - 140	94	60 - 130	<0.010	mg/kg	NC	50		
B478924	Hexane	2024/08/16	92	50 - 140	82	60 - 130	<0.50	mg/kg	NC	50		
B478924	Isopropylbenzene	2024/08/16	109	50 - 140	102	60 - 130	<0.20	mg/kg	NC	50		
B478924	m & p-Xylene	2024/08/16	105	50 - 140	96	60 - 130	<0.040	mg/kg	NC	50		
B478924	Methylcyclohexane	2024/08/16	110	50 - 140	99	60 - 130	<0.20	mg/kg	NC	50		
B478924	Methyl-tert-butylether (MTBE)	2024/08/16	106	50 - 140	103	60 - 130	<0.10	mg/kg	NC	50		
B478924	n-Decane	2024/08/16	89	50 - 140	103	60 - 130	<2.0	mg/kg	NC	50		
B478924	o-Xylene	2024/08/16	103	50 - 140	97	60 - 130	<0.040	mg/kg	NC	50		
B478924	Styrene	2024/08/16	118	50 - 140	113	60 - 130	<0.030	mg/kg	NC	50		
B478924	Tetrachloroethene	2024/08/16	119	50 - 140	114	60 - 130	<0.010	mg/kg	NC	50		
B478924	Toluene	2024/08/16	105	50 - 140	99	60 - 130	<0.050	mg/kg	NC	50		
B478924	trans-1,2-dichloroethene	2024/08/16	120	50 - 140	113	60 - 130	<0.030	mg/kg	NC	50		
B478924	Trichloroethene	2024/08/16	118	50 - 140	107	60 - 130	<0.0090	mg/kg	NC	50		
B478924	VH C6-C10	2024/08/16			109	70 - 130	<10	mg/kg	NC	50		
B478924	Vinyl chloride	2024/08/16	79	50 - 140	71	50 - 140	<0.040	mg/kg	NC	50		
B478924	Xylenes (Total)	2024/08/16					<0.040	mg/kg	NC	50		
B478972	Total Aluminum (Al)	2024/08/16	NC	75 - 125	103	75 - 125	<100	mg/kg	6.7	40	88	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B478972	Total Antimony (Sb)	2024/08/16	98	75 - 125	106	75 - 125	<0.10	mg/kg	0.63	30		
B478972	Total Arsenic (As)	2024/08/16	101	75 - 125	103	75 - 125	<0.20	mg/kg	6.8	30	99	70 - 130
B478972	Total Barium (Ba)	2024/08/16	108	75 - 125	104	75 - 125	<0.10	mg/kg	3.6	40	92	70 - 130
B478972	Total Beryllium (Be)	2024/08/16	99	75 - 125	103	75 - 125	<0.20	mg/kg	NC	30	88	70 - 130
B478972	Total Boron (B)	2024/08/16	93	75 - 125	99	75 - 125	<1.0	mg/kg	16	30		
B478972	Total Cadmium (Cd)	2024/08/16	102	75 - 125	104	75 - 125	<0.050	mg/kg	2.1	30	101	70 - 130
B478972	Total Chromium (Cr)	2024/08/16	99	75 - 125	105	75 - 125	<0.50	mg/kg	1.7	30	82	70 - 130
B478972	Total Cobalt (Co)	2024/08/16	104	75 - 125	109	75 - 125	<0.10	mg/kg	5.5	30	92	70 - 130
B478972	Total Copper (Cu)	2024/08/16	100	75 - 125	105	75 - 125	<0.50	mg/kg	5.5	30	97	70 - 130
B478972	Total Iron (Fe)	2024/08/16	NC	75 - 125	106	75 - 125	<100	mg/kg	3.2	30	94	70 - 130
B478972	Total Lead (Pb)	2024/08/16	102	75 - 125	104	75 - 125	<0.10	mg/kg	3.7	40	99	70 - 130
B478972	Total Lithium (Li)	2024/08/16	101	75 - 125	102	75 - 125	<0.50	mg/kg	5.5	30	86	70 - 130
B478972	Total Manganese (Mn)	2024/08/16	119	75 - 125	104	75 - 125	<0.20	mg/kg	2.2	30	100	70 - 130
B478972	Total Mercury (Hg)	2024/08/16	104	75 - 125	106	75 - 125	<0.050	mg/kg	NC	40	98	70 - 130
B478972	Total Molybdenum (Mo)	2024/08/16	103	75 - 125	103	75 - 125	<0.10	mg/kg	8.9	40	100	70 - 130
B478972	Total Nickel (Ni)	2024/08/16	99	75 - 125	103	75 - 125	<0.50	mg/kg	2.6	30	96	70 - 130
B478972	Total Selenium (Se)	2024/08/16	103	75 - 125	105	75 - 125	<0.50	mg/kg	NC	30	72	70 - 130
B478972	Total Silver (Ag)	2024/08/16	90	75 - 125	91	75 - 125	<0.050	mg/kg	NC	40	92	70 - 130
B478972	Total Strontium (Sr)	2024/08/16	119	75 - 125	104	75 - 125	<0.10	mg/kg	4.1	40	95	70 - 130
B478972	Total Thallium (Tl)	2024/08/16	95	75 - 125	96	75 - 125	<0.050	mg/kg	8.2	30		
B478972	Total Tin (Sn)	2024/08/16	104	75 - 125	108	75 - 125	<0.10	mg/kg	3.0	40	109	70 - 130
B478972	Total Tungsten (W)	2024/08/16	94	75 - 125	108	75 - 125	<0.50	mg/kg	NC	40		
B478972	Total Uranium (U)	2024/08/16	101	75 - 125	103	75 - 125	<0.050	mg/kg	2.3	30	100	70 - 130
B478972	Total Vanadium (V)	2024/08/16	103	75 - 125	104	75 - 125	<1.0	mg/kg	5.5	30	91	70 - 130
B478972	Total Zinc (Zn)	2024/08/16	100	75 - 125	104	75 - 125	<1.0	mg/kg	2.0	30	97	70 - 130
B478979	Soluble (2:1) pH	2024/08/16			100	97 - 103			0.14	N/A		
B479073	Soluble Sodium (Na)	2024/08/15	90	80 - 120	93	80 - 120	<5.0	mg/L	1.4	40	89	75 - 125
B479205	Soluble Chloride (Cl)	2024/08/15	108	75 - 125	102	80 - 120	<10	mg/L	9.2	30	84	75 - 125
B480247	Soluble (2:1) pH	2024/08/16			100	97 - 103			0.39	N/A		
B480261	Total Zinc (Zn)	2024/08/16	100	75 - 125	104	75 - 125	<1.0	mg/kg	0.039	30	104	70 - 130
B481684	Extractable (MeOH) Carbon disulfide	2024/08/17	91	60 - 140	60	60 - 140	<15	mg/kg	NC	50		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
B516504	Final pH of Leachate	2024/09/17					4.92	pH	0.38	N/A		
B516504	Initial pH of Sample	2024/09/17					4.91	pH	0.43	N/A		
B516504	pH after HCl	2024/09/17					NA	pH	0.62	N/A		
B516504	pH of Leaching Fluid	2024/09/17					4.91	pH	0	N/A		
B526158	Leachate Benzo(a)pyrene	2024/09/18			92	50 - 140	<0.10	ug/L				

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) Spike recovery exceeds acceptance criteria (high recovery). As results are non-detect, there is no impact on data quality.

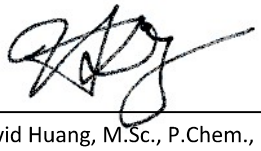
Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C459220
Report Date: 2024/09/19

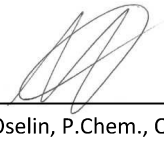
Thurber Engineering Ltd.
Client Project #: 56763
Site Location: ESQUIMALT, BC
Your P.O. #: 56763
Sampler Initials: KSK

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



David Huang, M.Sc., P.Chem., QP, Scientific Services Manager



Mauro Oselin, P.Chem., QP, Scientific Specialist

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Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

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Tel (604) 734-7276 Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

ENV COC - 00015v3

Page 1 of 2

Invoice Information	Invoice to requires report: ☐	Report Information (if differs from invoice)		Project Information	
Company:	Thurber Engineering Ltd	Company:		Quotation #:	—
Contact Name:	Loren Paul	Contact Name:		P.O. #/ AFE#:	56763
Street Address:	2302-4464 Markham St	Street Address:		Project#:	56763
City: Victoria Prov: BC Postal Code: V8Z 7X8		City: Prov: Postal Code:		Site #:	Esquimalt
Phone:		Phone:		Site Location:	Esquimalt
Email:	lpaul@thurber.ca	Email:	ap@thurber.ca	Site Location Province:	B.C.
Copies:	[illegible]@thurber.ca	Copies:		Sampled By:	KSK

LAB USE ONLY - PLACE STICKER HERE

Rush Confirmation #:

Regulatory Criteria

☒ BC CSR ☐ CCME ☐ Drinking Water
☐ YUKON CSR ☐ BC Water Quality ☐ Other:

SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

Regular Turnaround Time (TAT): ☒ 5 to 7 Day ☐ 10 Day

Rush Turnaround Time (TAT) Surcharges apply: ☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 4 Day

Date Required: YY MM DD

#	Sample Identification	YY	MM	DD	HH	MM	Matrix	1 Field Filtered	2 Field Preserved	3 Lab Filtration Required	4 BTEX/VPH	5 VOCs Thurber Routine	6 MTBE	7 BTEX/F1	8 PAHs	9 LEPH/HEPH	10 F2-F4	11 TEH	12 Dissolved metals	13 Dissolved mercury	14 Total metals, Thurber Routine	15 Total mercury	16 Sat Paste Na/Cl	17	18	19	20	21 # of Containers Submitted	22 Hold - Do Not Analyze	Comments
1	SP24-01	24	05	01	10	30	Soil					X			X	X					X		X					4	X	
2	SP24-02	↓	↓	↓	↓		↓								X	X					X		X					4	↓	
3	SP24-03																											4		
4	SP24-04																											4		
5	BH24-01-01				9	15						X			X	X					X		X					4		
6	BH24-01-02				9	15																						4		
7	BH24-02-01				9	30																						4		
8	BH24-02-02				9	30									X	X					X		X					4		
9	BH24-03-01				11	30									X	X					X		X					4		
10	BH24-04-01				11	45						X			X	X					X		X					4		
11	BH24-05-01				12	30									X	X					X		X					4		
12	BH24-06-01	↓	↓	↓	12	50	↓								X	X					X		X					4	↓	

*UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS OR BY CALLING THE LABORATORY LISTED ABOVE TO OBTAIN A COPY

LAB USE ONLY	Yes	No	°C	1	2	3
Seal present		✓		10	10	9
Seal intact		—				
Cooling media present	✓					

LAB USE ONLY	Yes	No	°C	1	2	3
Seal present		✓		14	15	15
Seal intact						
Cooling media present						

LAB USE ONLY	Yes	No	°C	1	2	3
Seal present						
Seal intact						
Cooling media present						

Temperature reading by:

#	Relinquished by: (Signature/ Print)	YY	MM	DD	HH	MM	Received by: (Signature/ Print)	YY	MM	DD	HH	MM	Special Instructions
1	Kalum Skinner	24	05	02	13	25	Simrat [illegible]	24	05	03	13	35	
2													

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Tel: (604) 734-7276 Toll Free: (800) 665-8566

CHAIN OF CUSTODY RECORD

ENV COC - 00015v3

CONTINUED

[PAGE 1 REFERENCE]

Company:	TEC 0
Contact Name:	Lisa Bui 0
Project #:	56765 0

SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

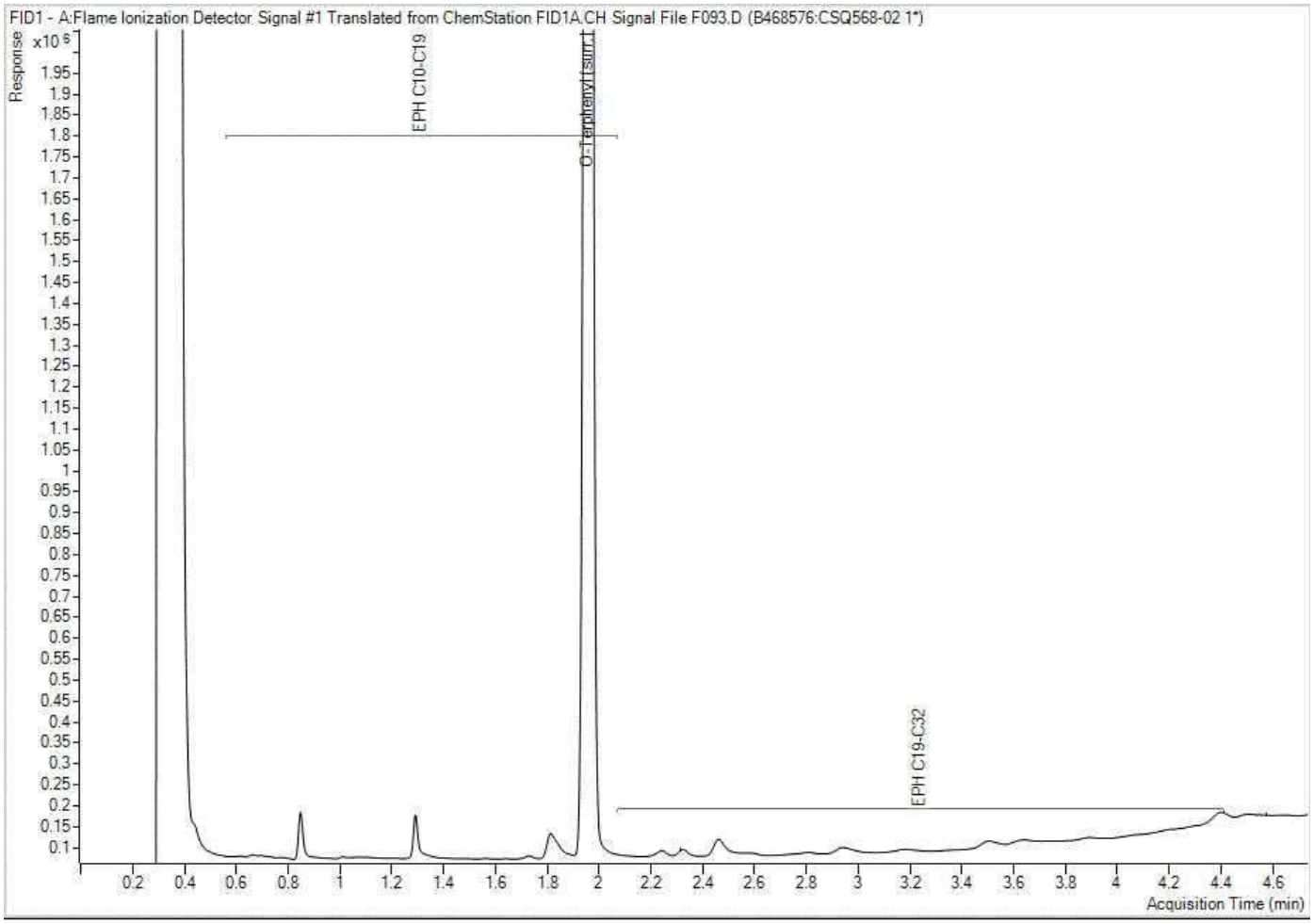
	Sample Identification	Date Sampled YY	Date Sampled MM	Date Sampled DD	Time (24hr) HH	Time (24hr) MM	Matrix
13	BH24-07-01	24	08	01	13	15	Soil
14	BH24-08-01				13	30	
15	BH24-09-01				14	00	
16	BH24-09-02						
17	BH24-09-03						
18	BH24-10-01				14	30	
19	BH24-10-02				14	30	
20	BH24-11-01				14	50	
21	BH24-12-01				15	15	
22	BH24-13-01			02	7	15	
23	BH24-13-02				7	15	
24	BH24-14-01				8	30	
25	BH24-15-01				9	30	
26	BH24-15-02				9	30	
27	BH24-15-03				9	30	
28	BH24-16-01				9	00	
29	BH24-17-01				10	15	
30	BH24-17-02						
31	BH24-17-03						
32	BH24-18-01				10	45	
33	BH24-18-02						
34	BH24-18-03						
35	BH24-19-01				11	15	
36	BH24-19-02				11	15	
37	BH24-20-01				11	45	
38	BH24-20-02				11	45	
39							
40							

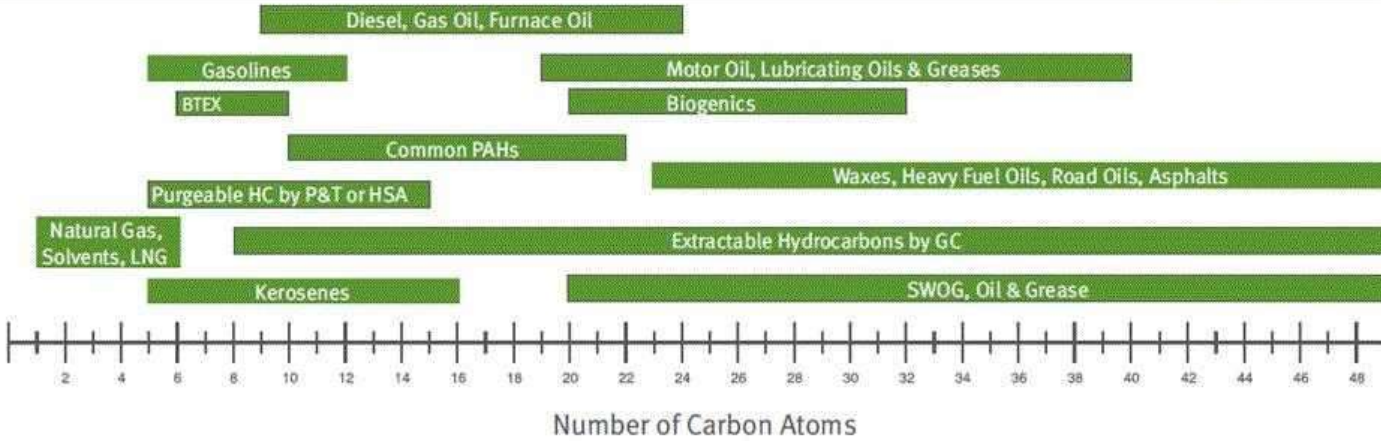
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	FIELD FILTERED (Y/N)	FIELD PRESERVED (Y/N)	LABORATORY REQUIRED	BTEX/VPH	VOCs, Thunder Bay list	SVOCs	BTEX/F1	PAHs	LEPH/HEPH	F2-F4	TCLP	Dissolved metals	Dissolved mercury	Total metals Thunder Bay list	Total mercury	Sat + Paste NAG					# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
					X			X	X					X		X					5	X
					X			X	X					X		X					5	
								X	X					X		X					4	
					X			X	X					X		X					4	
								X	X					X		X					2	
					X			X	X					X		X					5	
								X	X					X		X					5	
					X			X	X					X		X					5	
								X	X					X		X					4	
								X	X					X		X					4	
					X			X	X					X		X					4	
								X	X					X		X					2	
								X	X					X		X					2	
					X			X	X					X		X					4	
																					2	
																					2	
																					2	
								X	X					X		X					4	
																					2	
								X	X					X		X					4	
								X	X					X		X					4	
								X	X					X		X					4	
								X	X					X		X					4	

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ568

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: SP24-01

EPH in Soil by GC/FID Chromatogram



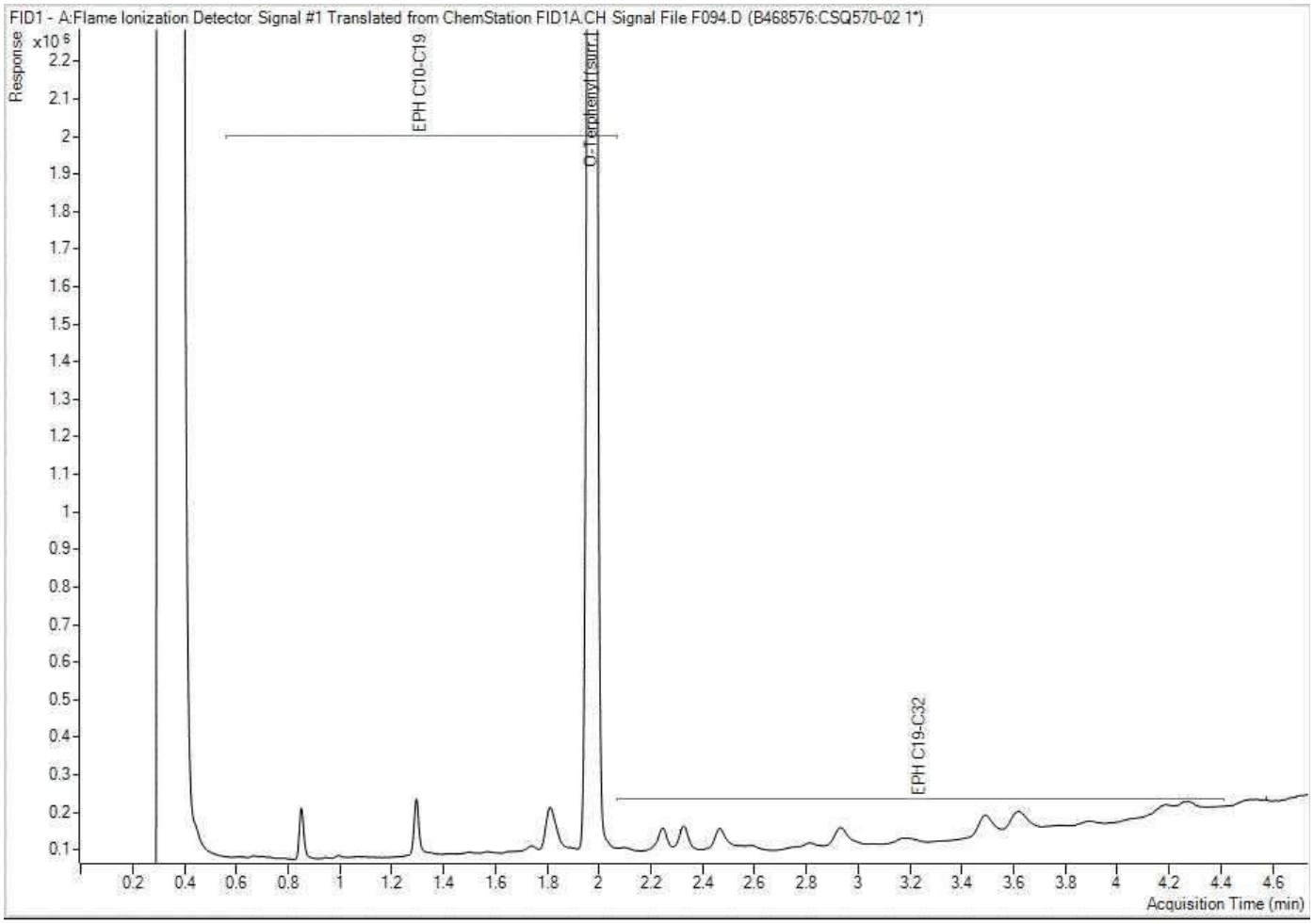


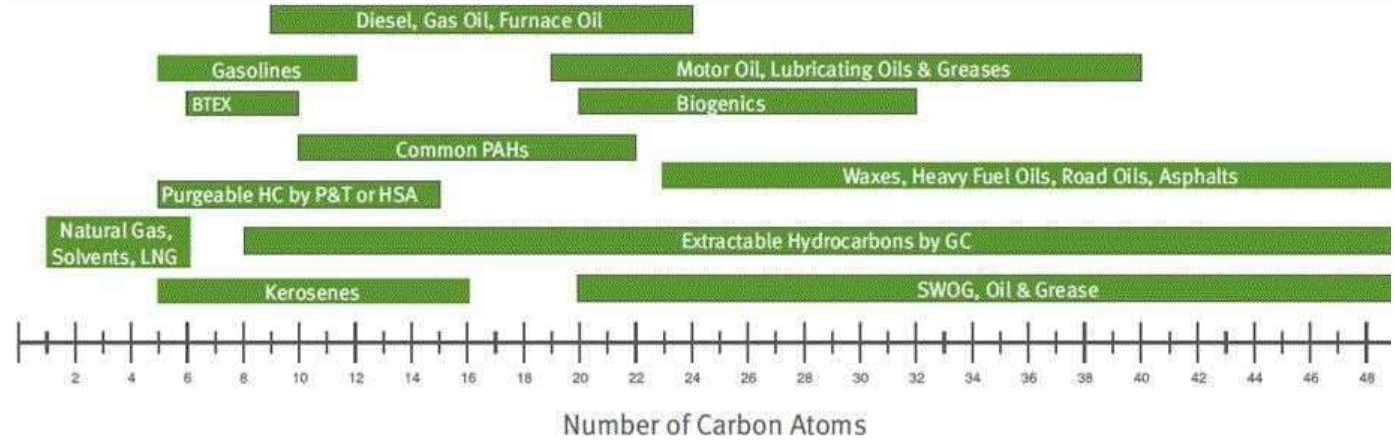
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ570

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: SP24-02

EPH in Soil by GC/FID Chromatogram





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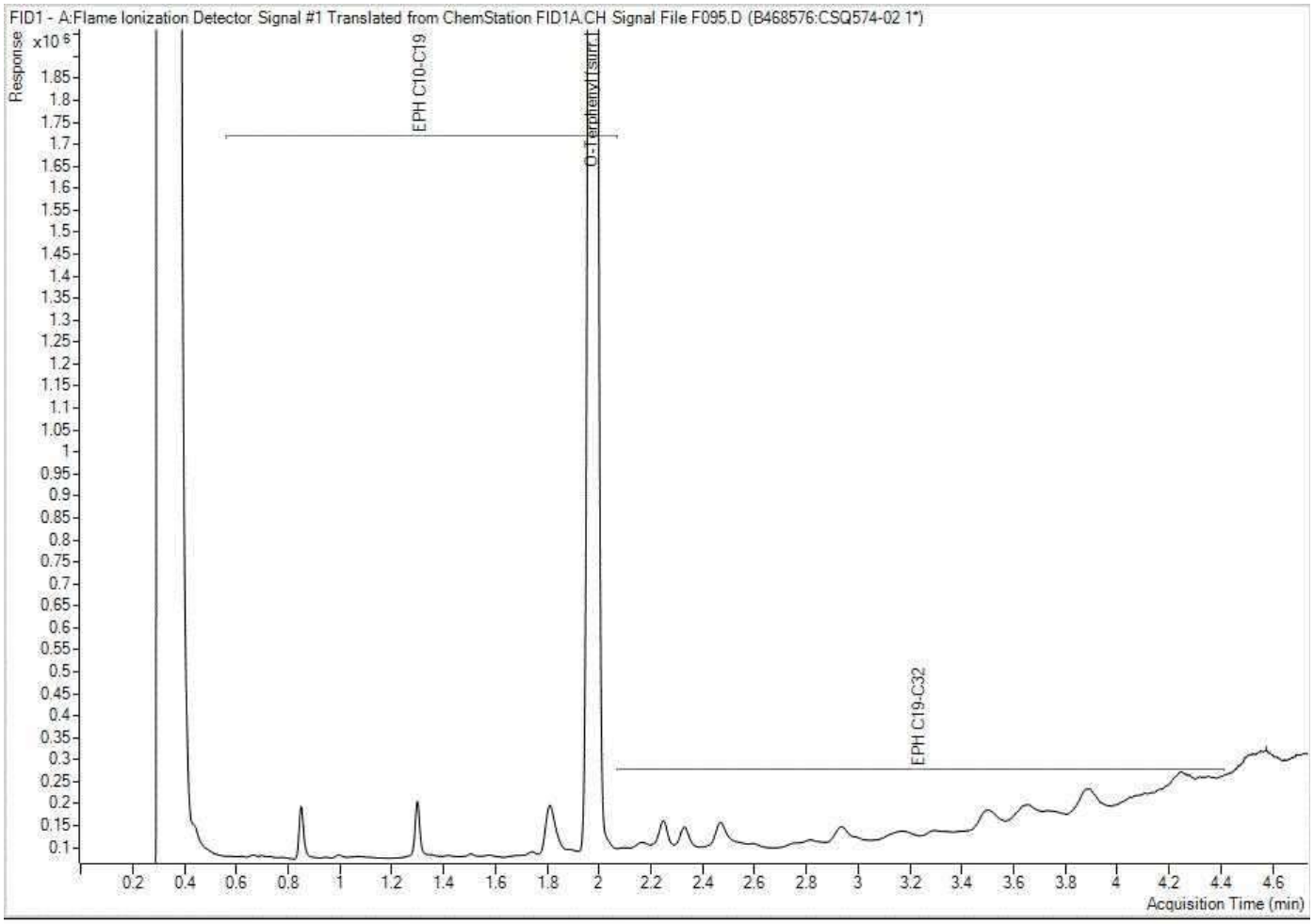
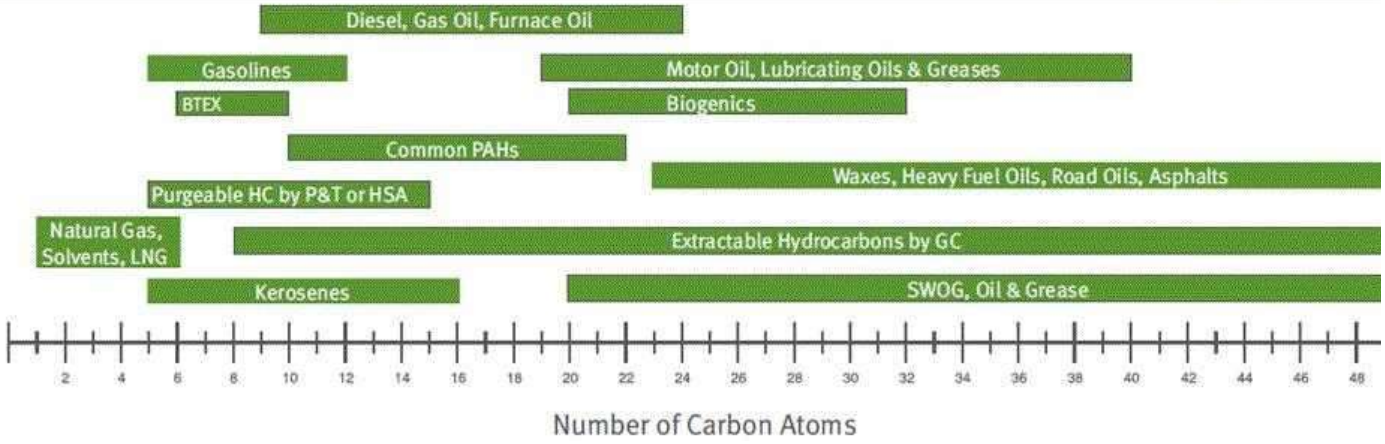
Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ574

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-01-01

EPH in Soil by GC/FID Chromatogram



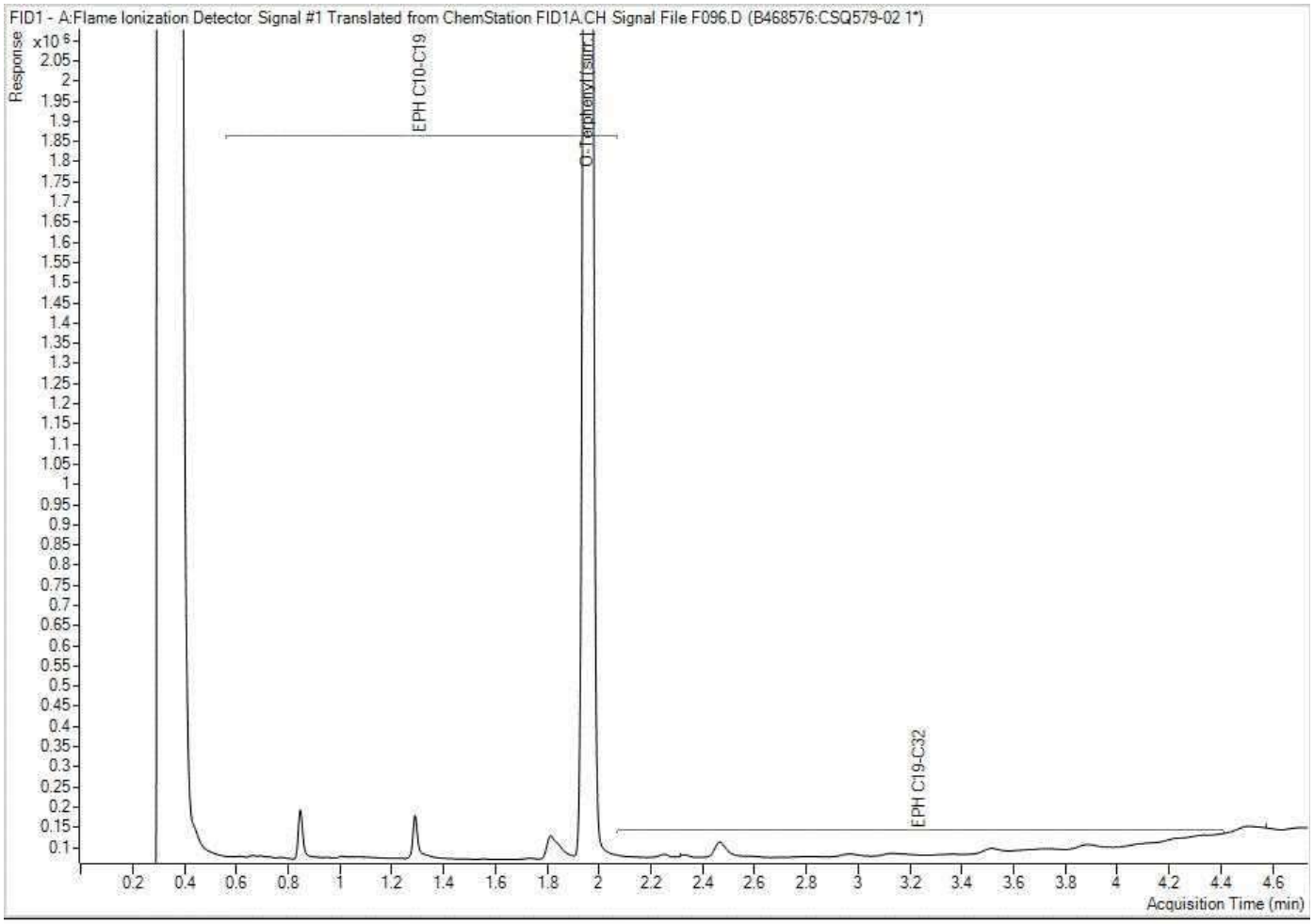


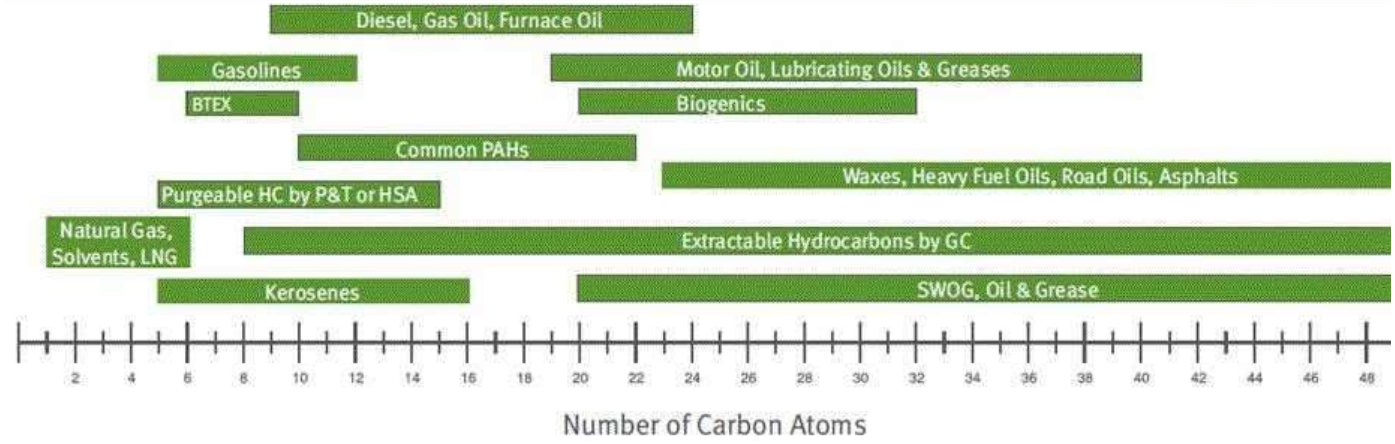
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ579

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-02-02

EPH in Soil by GC/FID Chromatogram



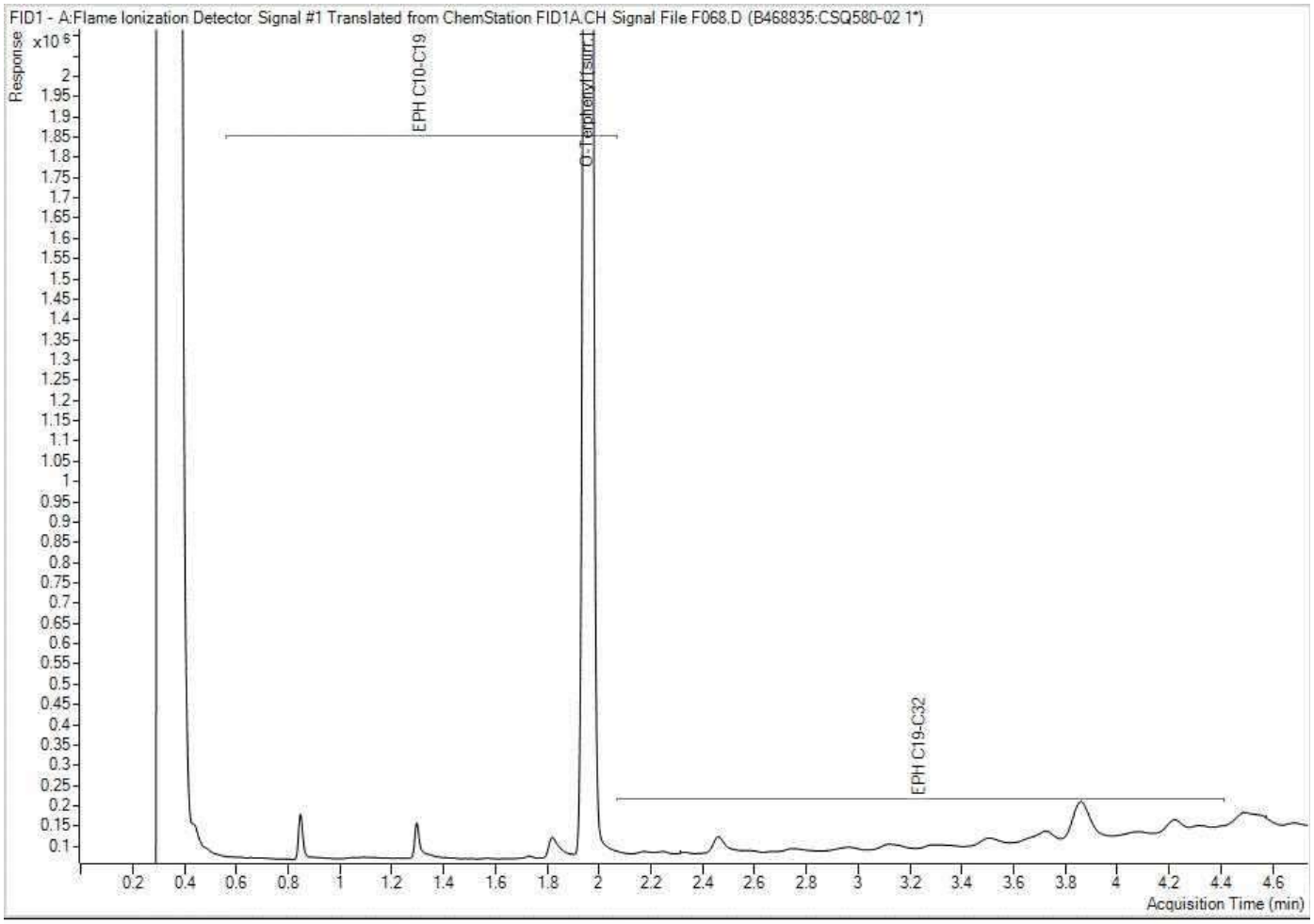


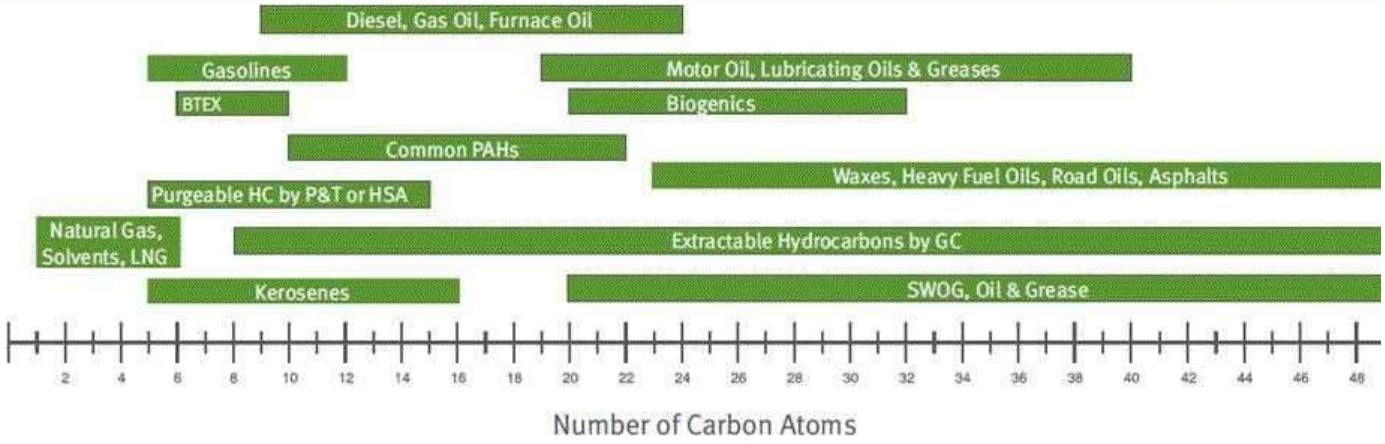
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ580

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-03-01

EPH in Soil by GC/FID Chromatogram



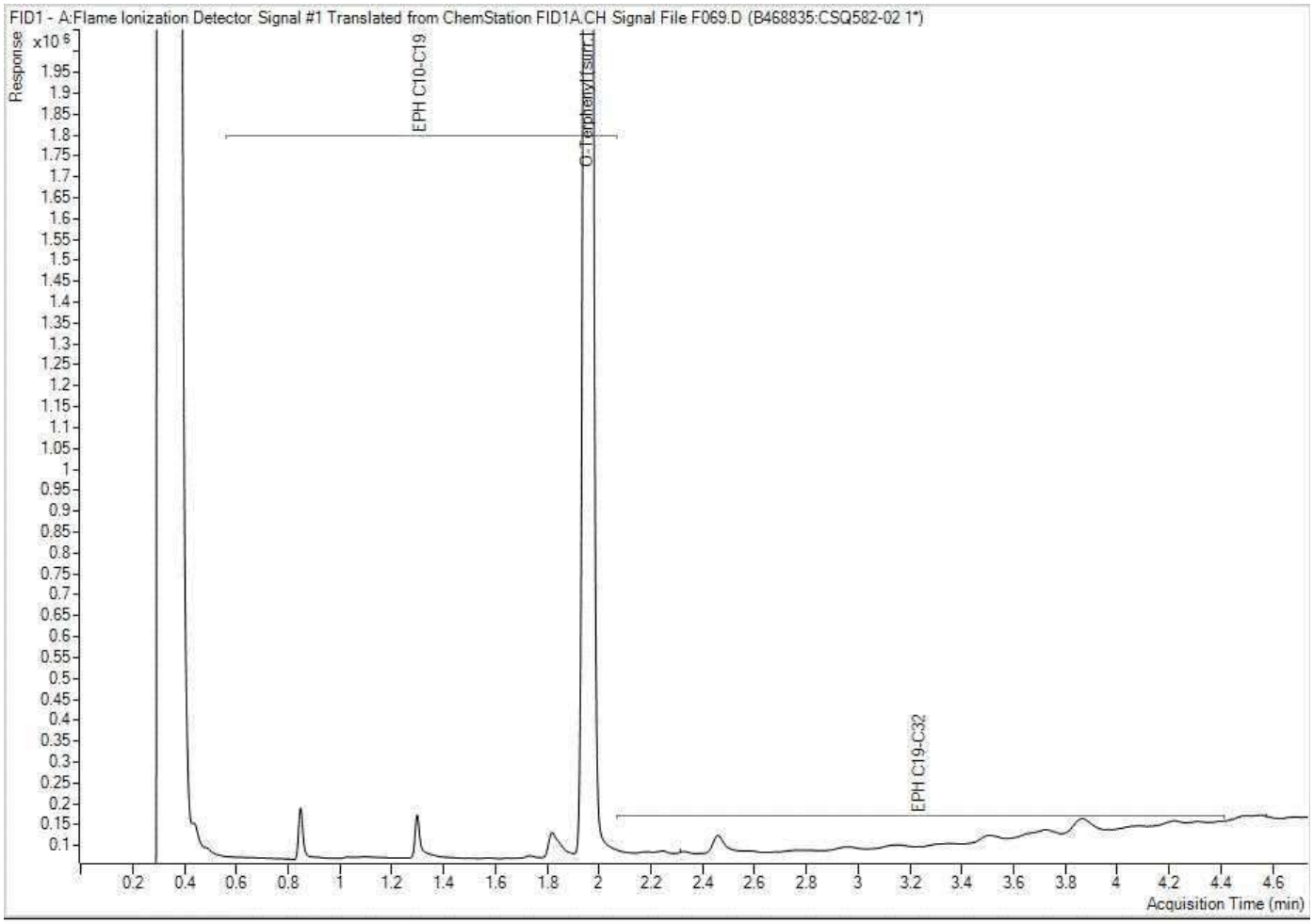


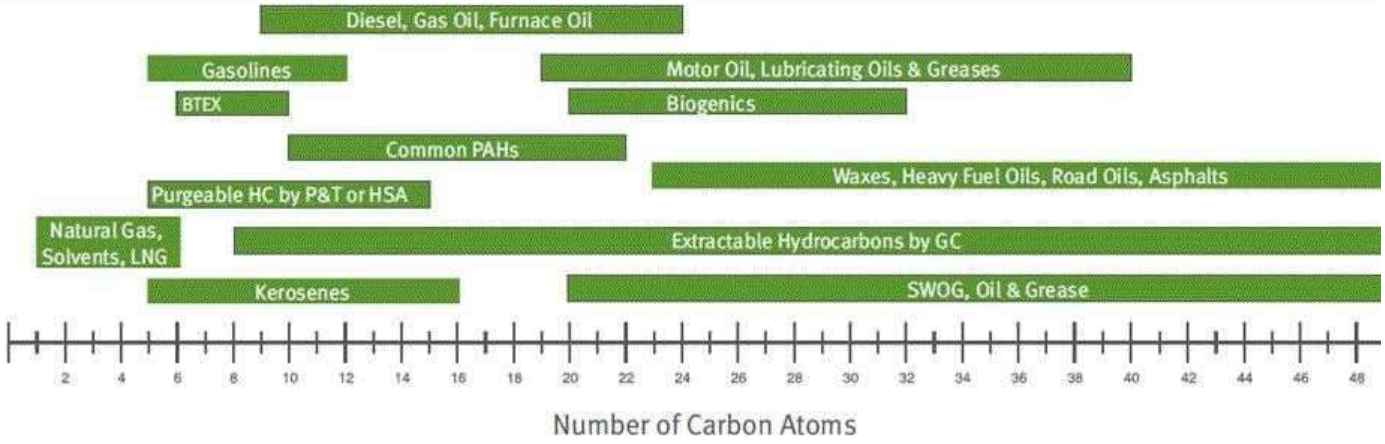
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ582

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-04-01

EPH in Soil by GC/FID Chromatogram



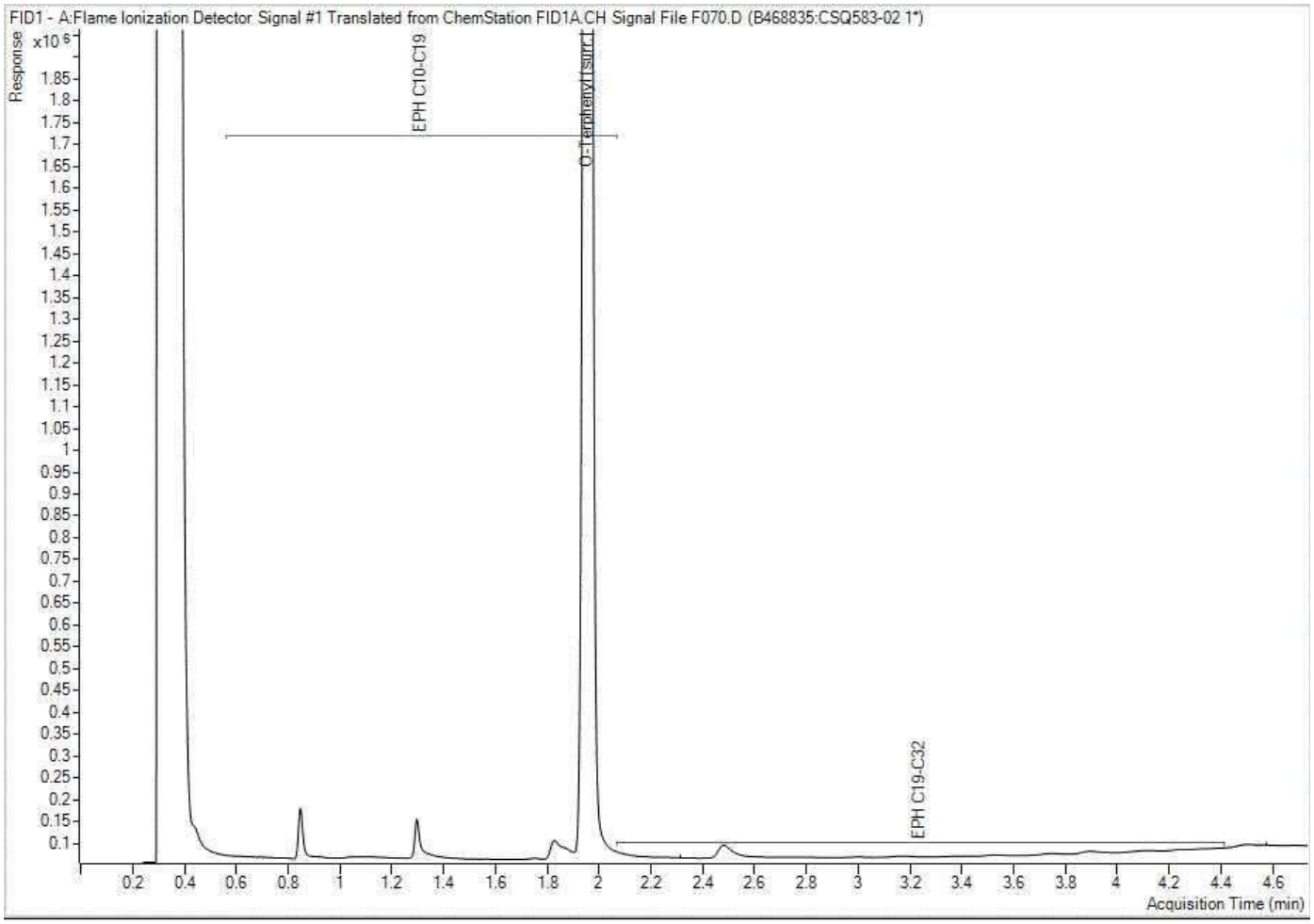


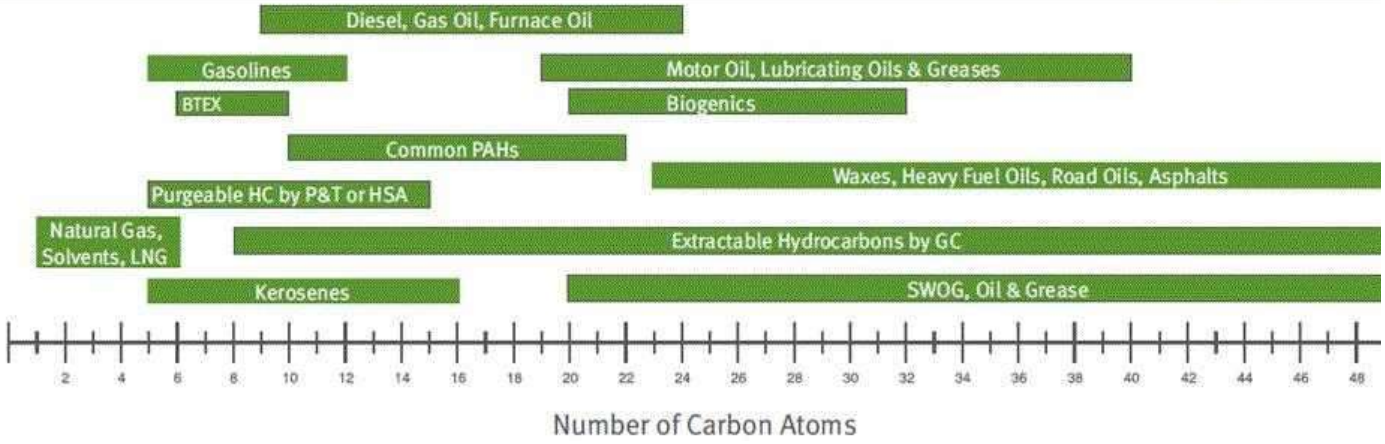
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ583

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-05-01

EPH in Soil by GC/FID Chromatogram



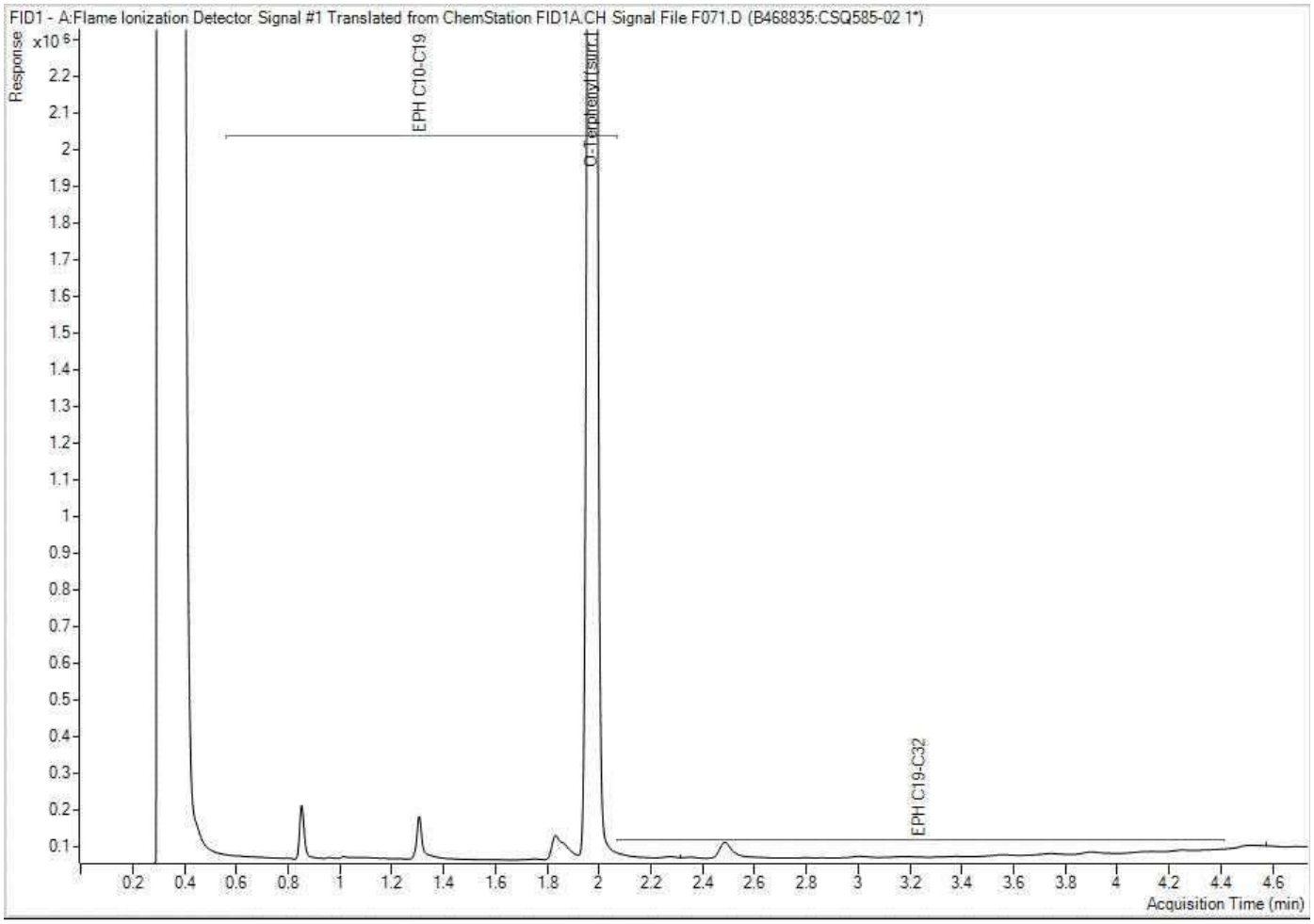


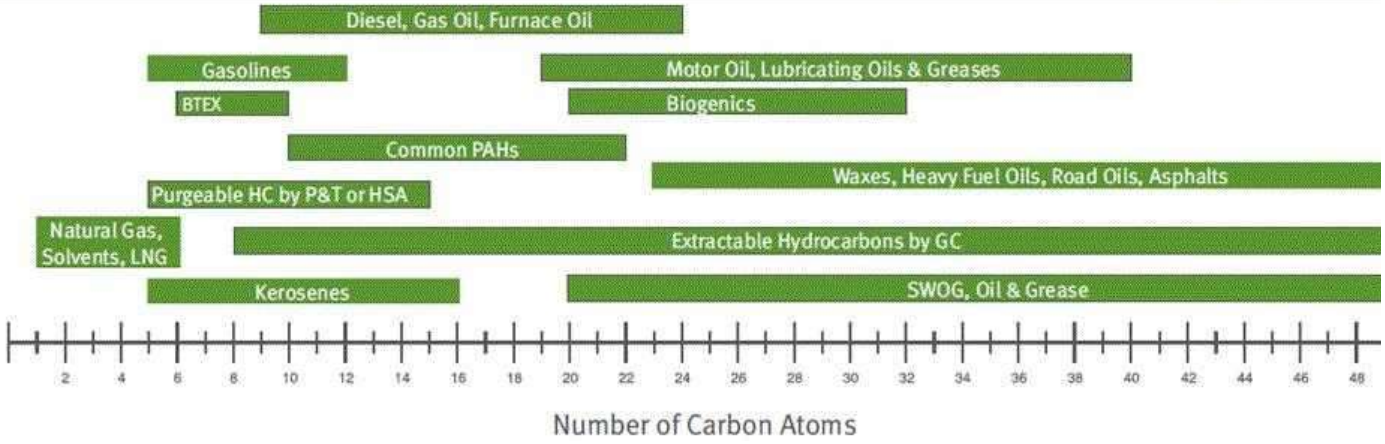
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ585

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-06-01

EPH in Soil by GC/FID Chromatogram



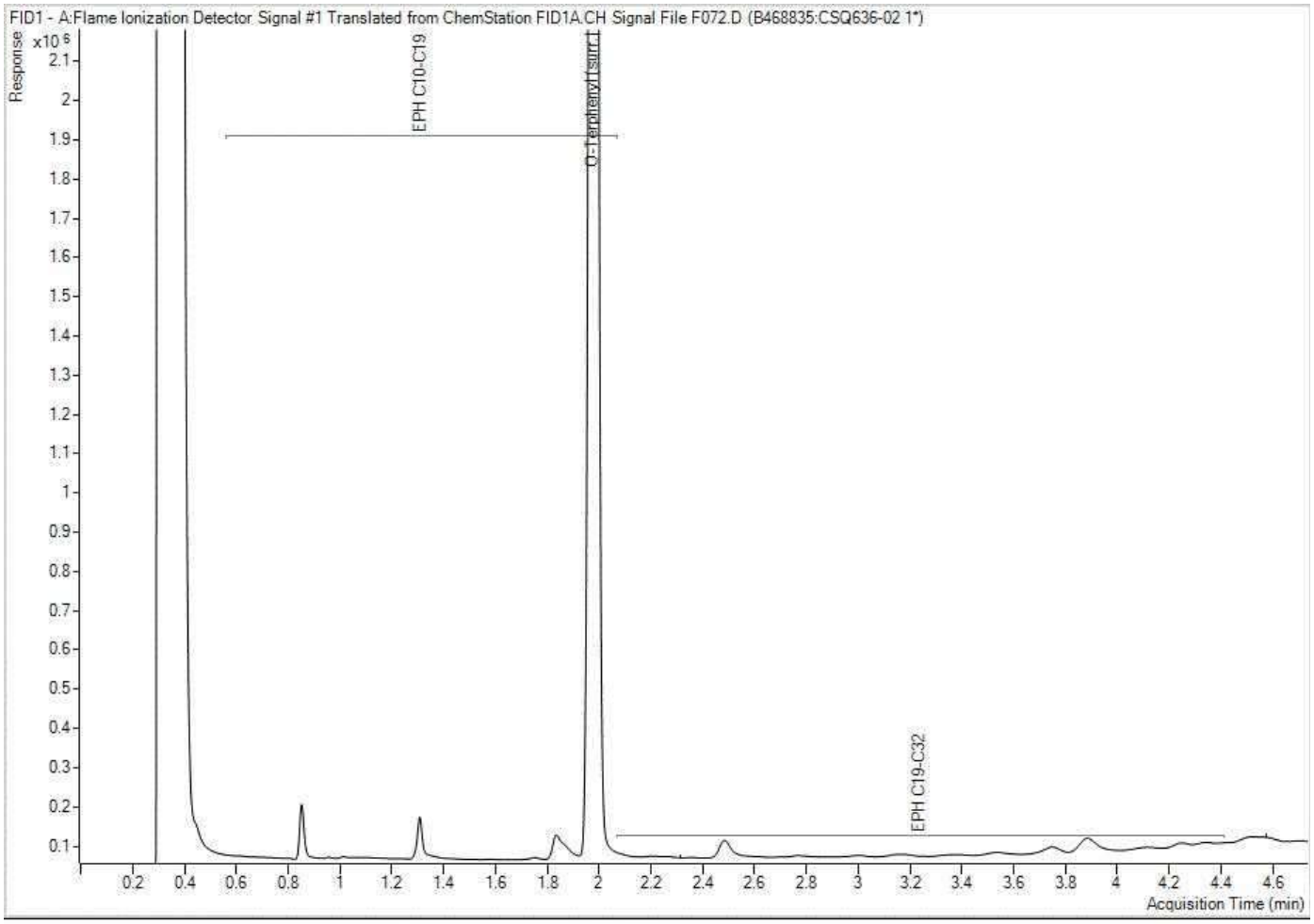


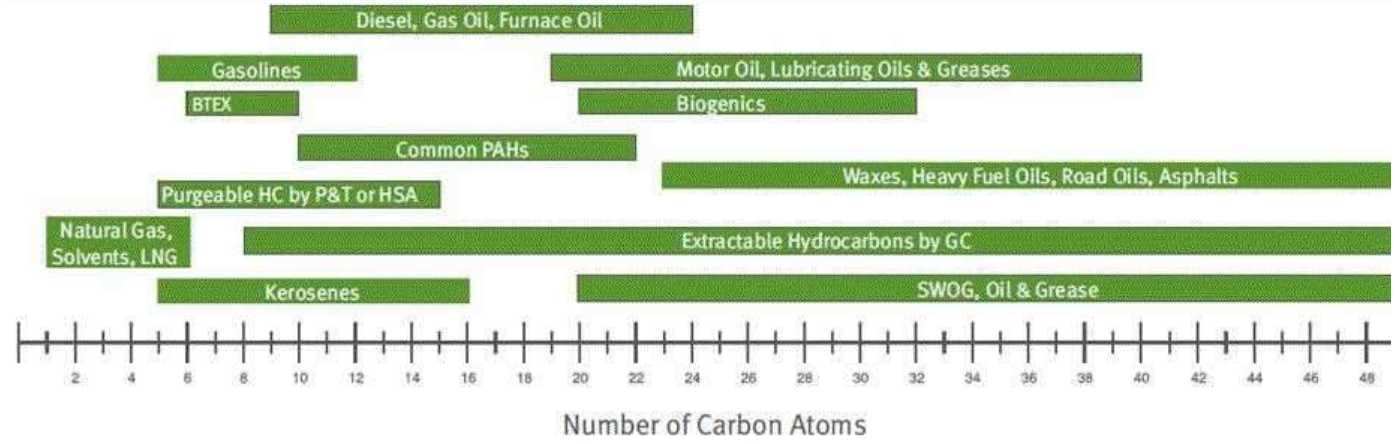
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ636

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-07-01

EPH in Soil by GC/FID Chromatogram



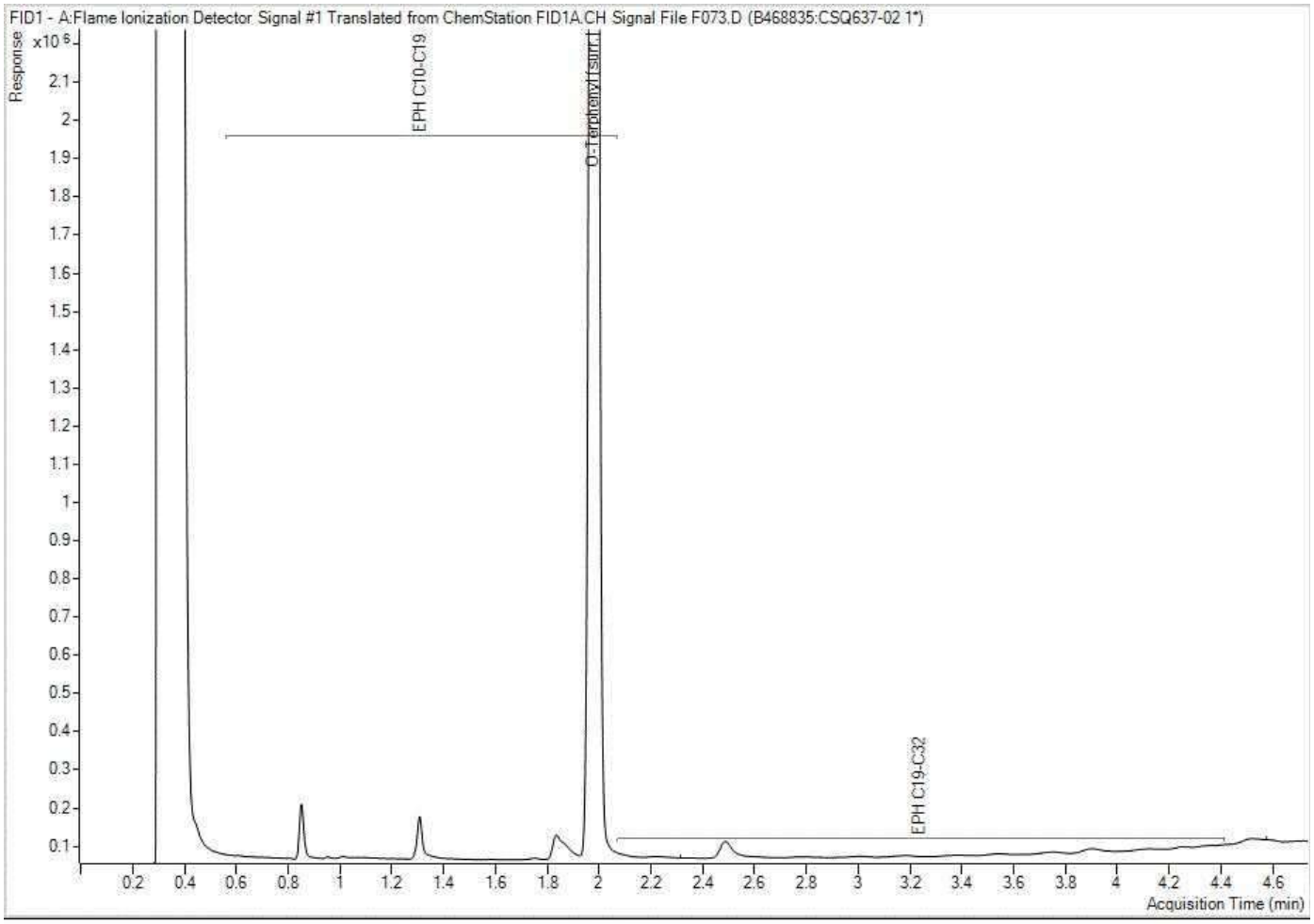


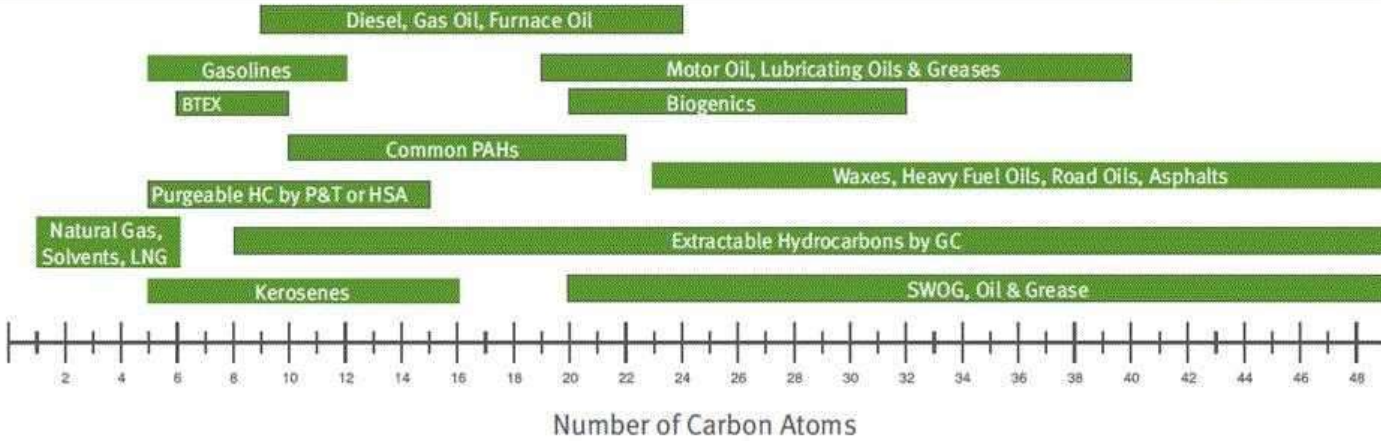
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ637

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-08-01

EPH in Soil by GC/FID Chromatogram



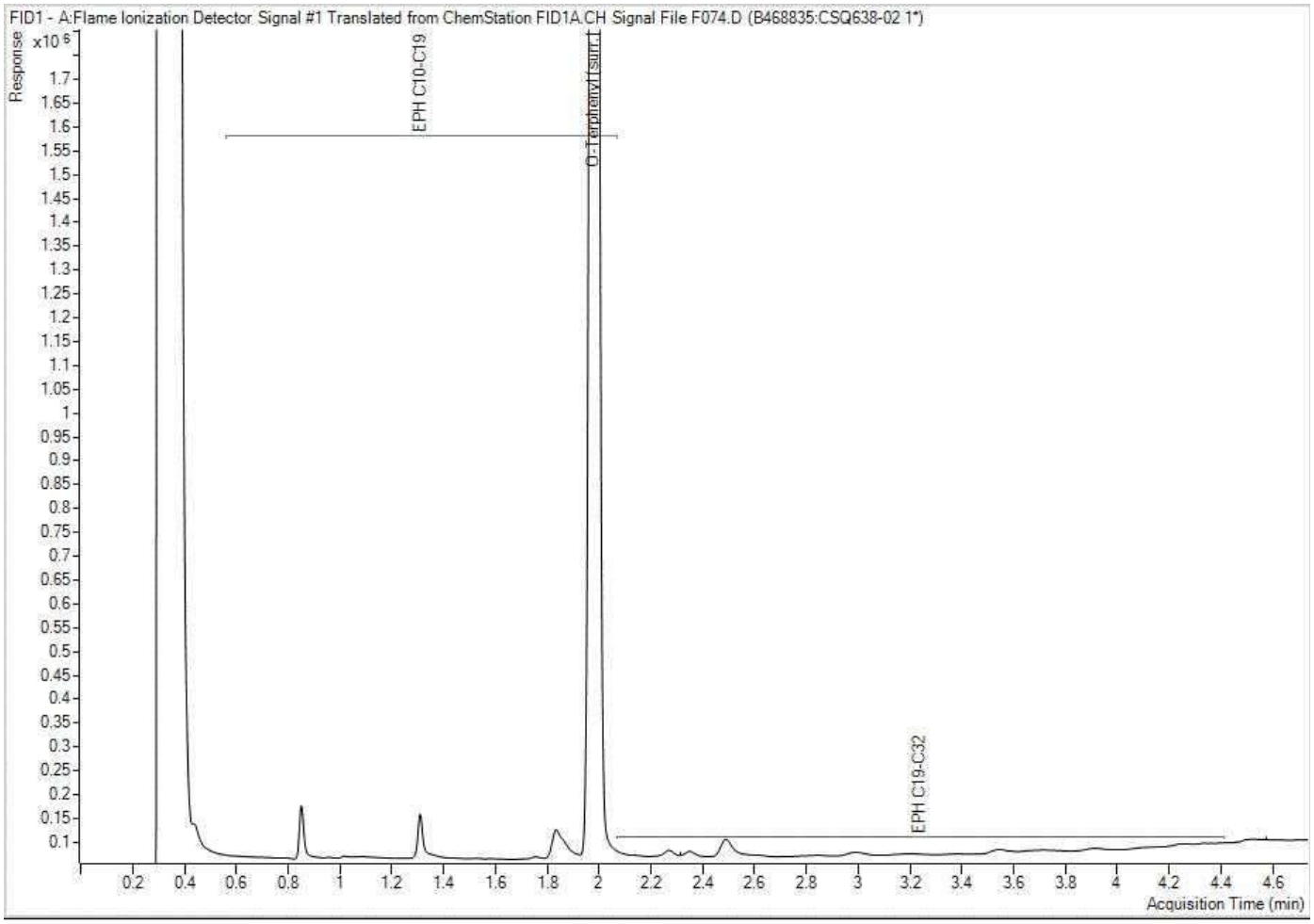


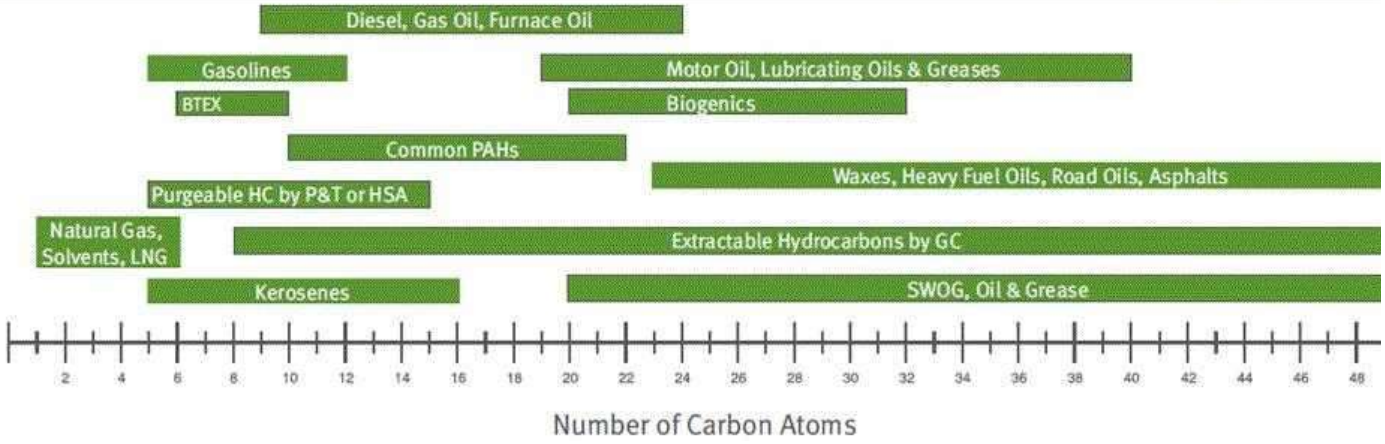
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ638

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-09-01

EPH in Soil by GC/FID Chromatogram



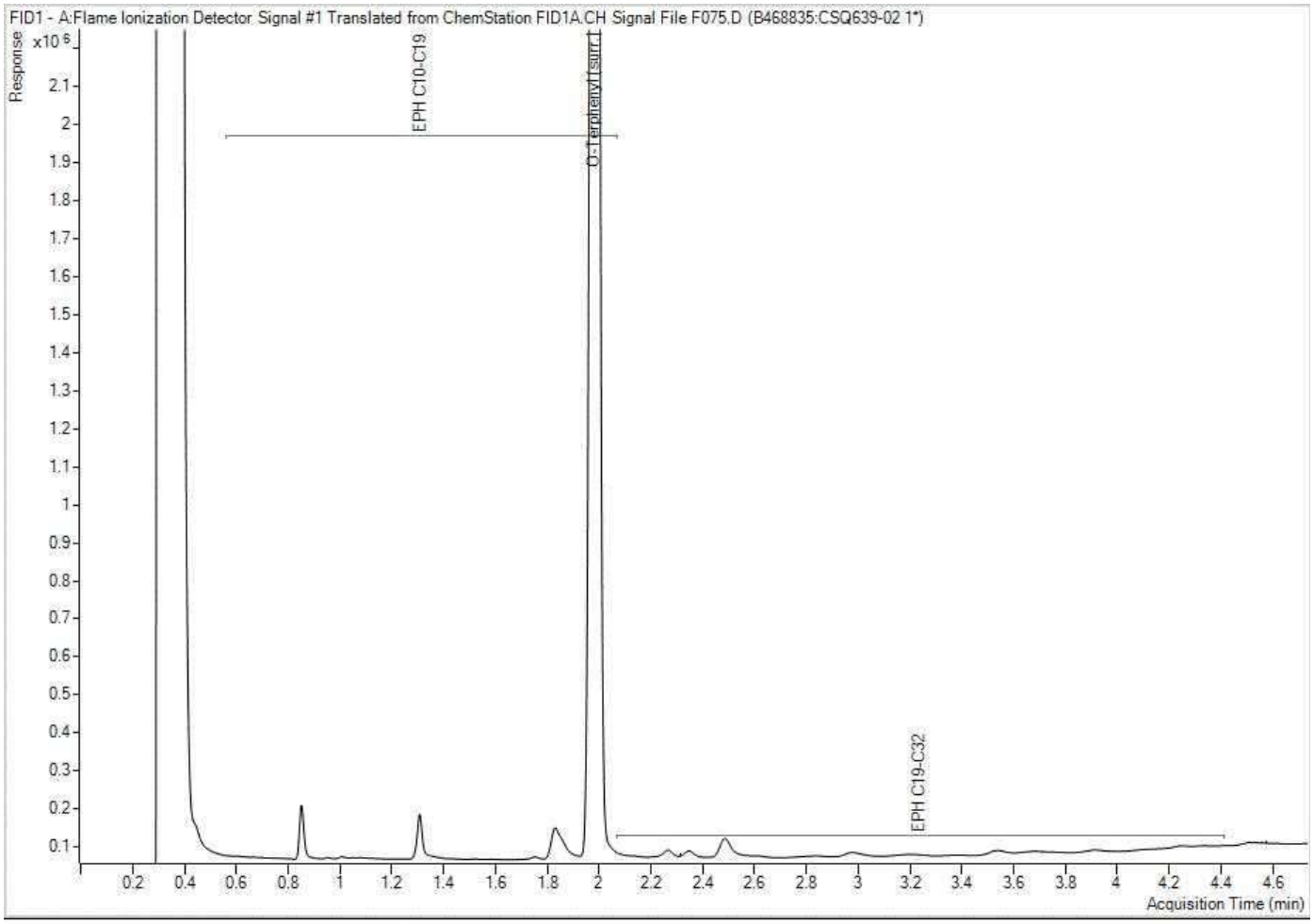


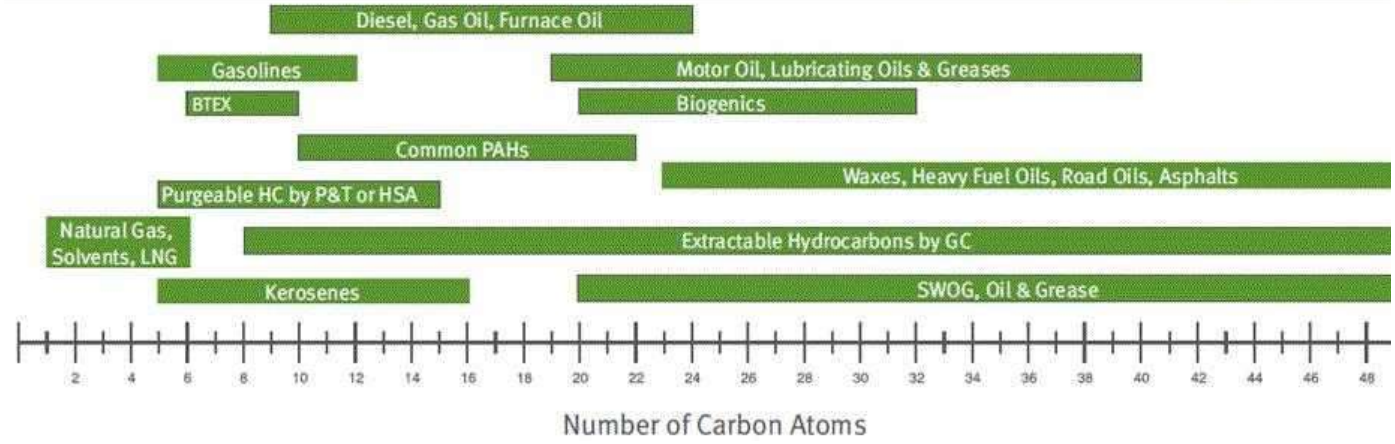
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ639

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-09-02

EPH in Soil by GC/FID Chromatogram



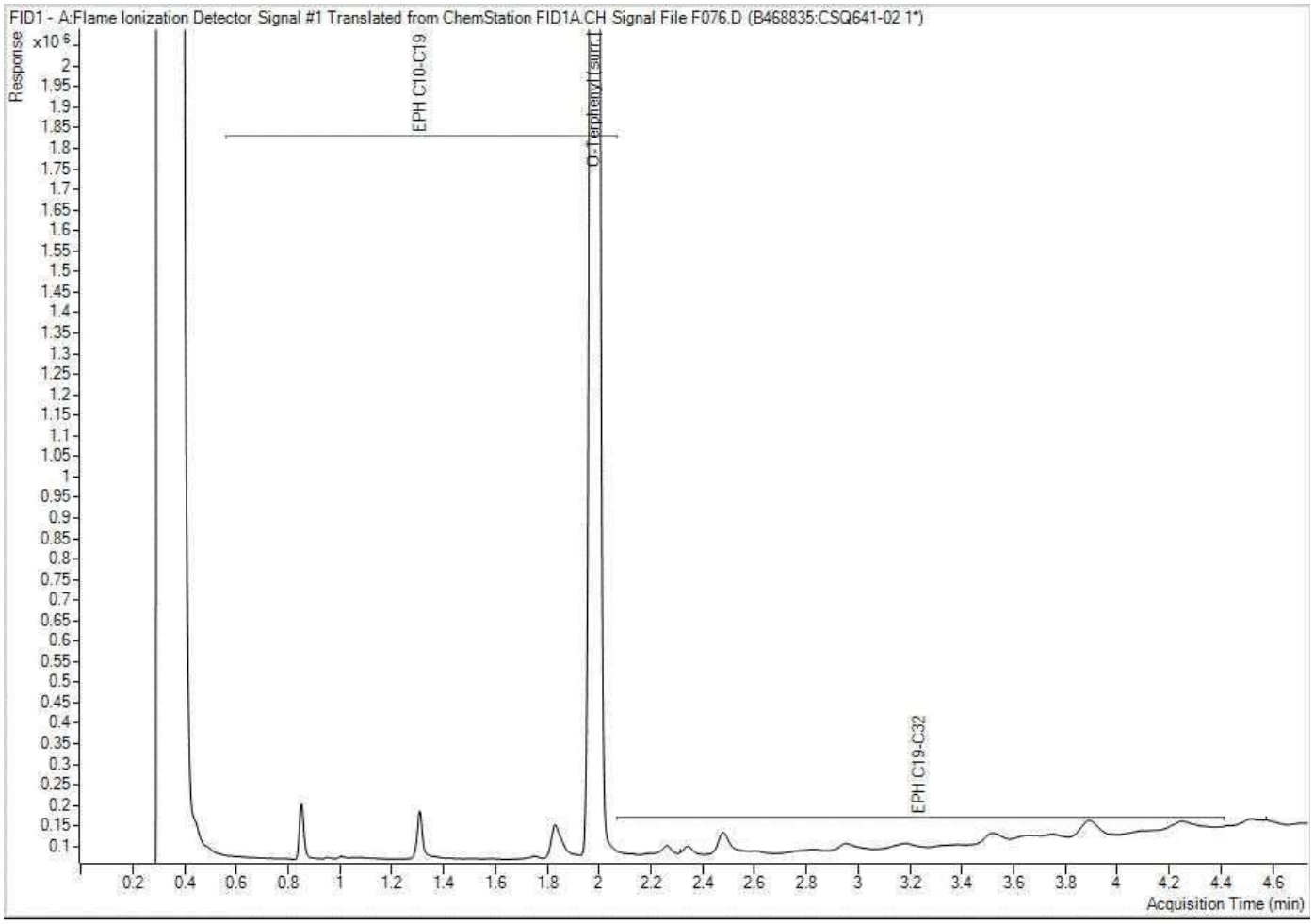


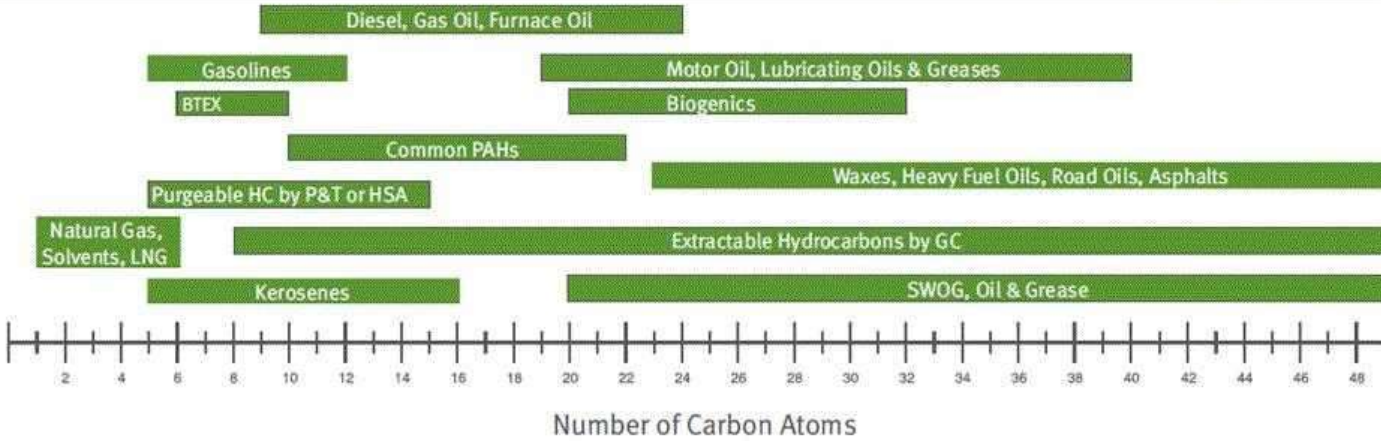
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ641

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-10-01

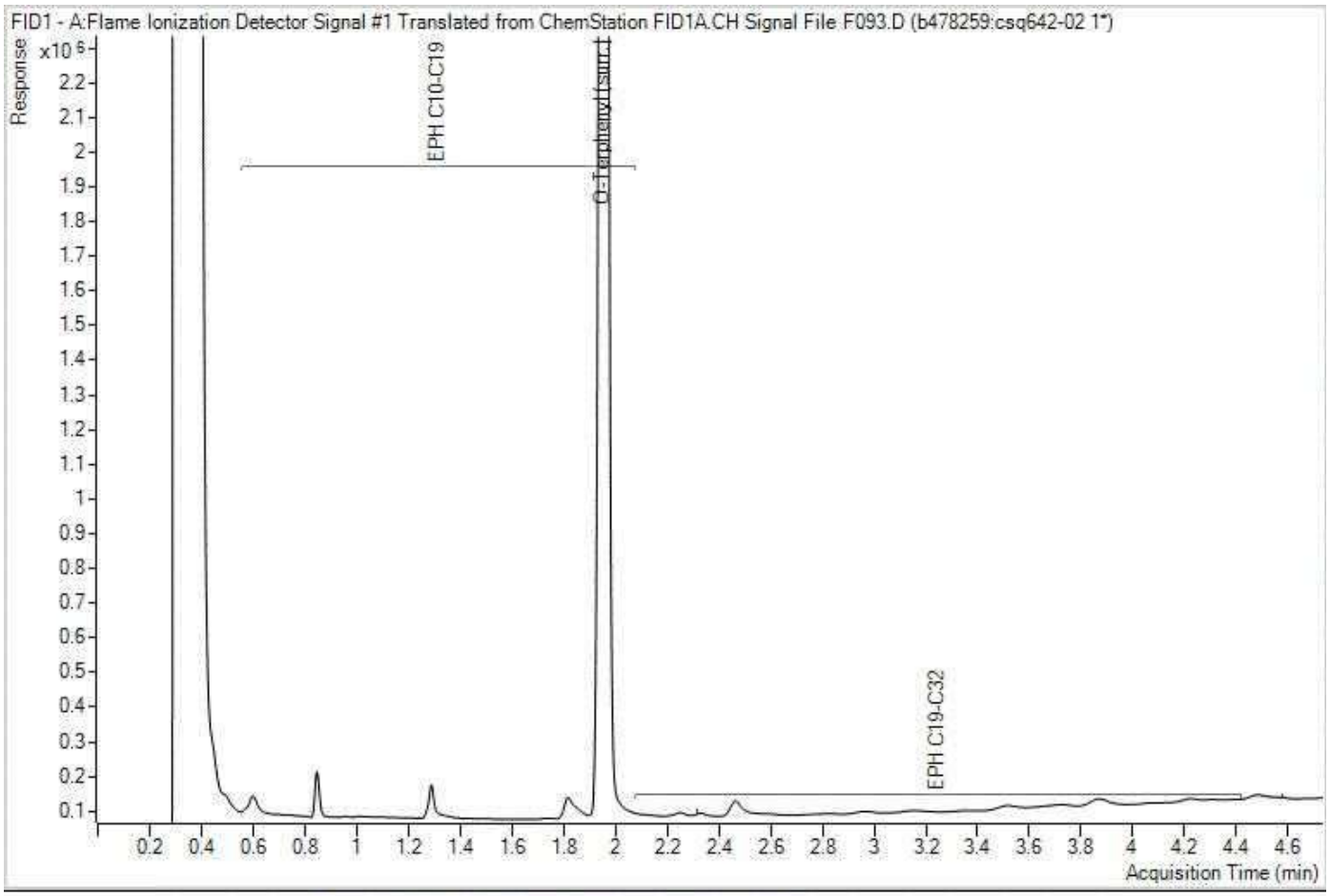
EPH in Soil by GC/FID Chromatogram

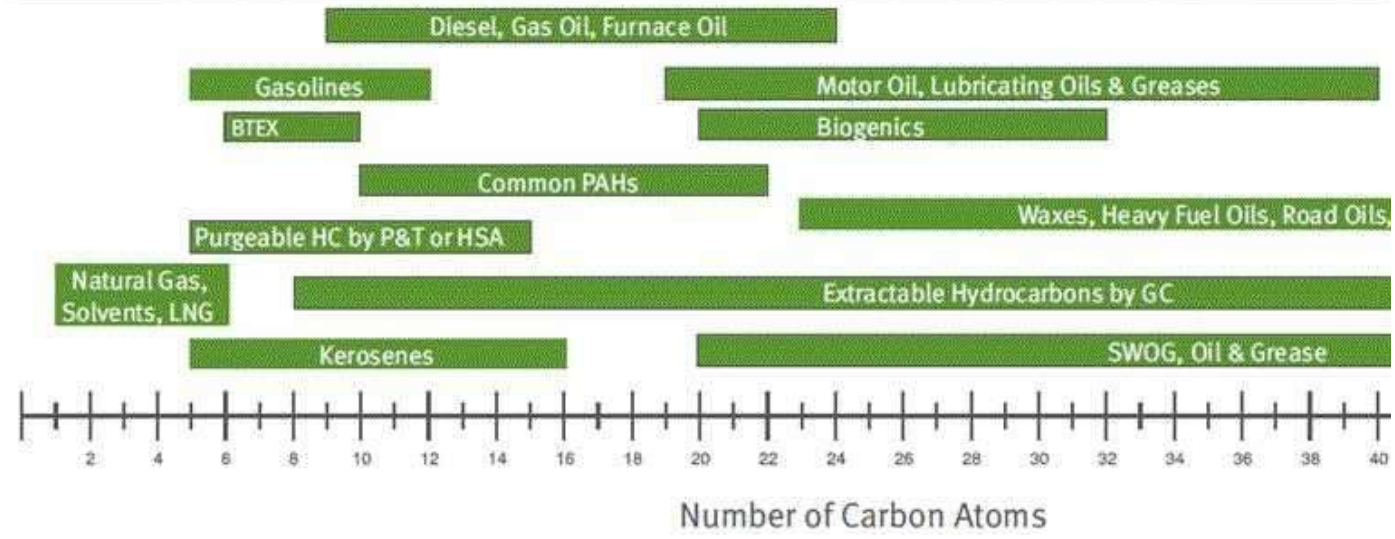




Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

EPH in Soil by GC/FID Chromatogram



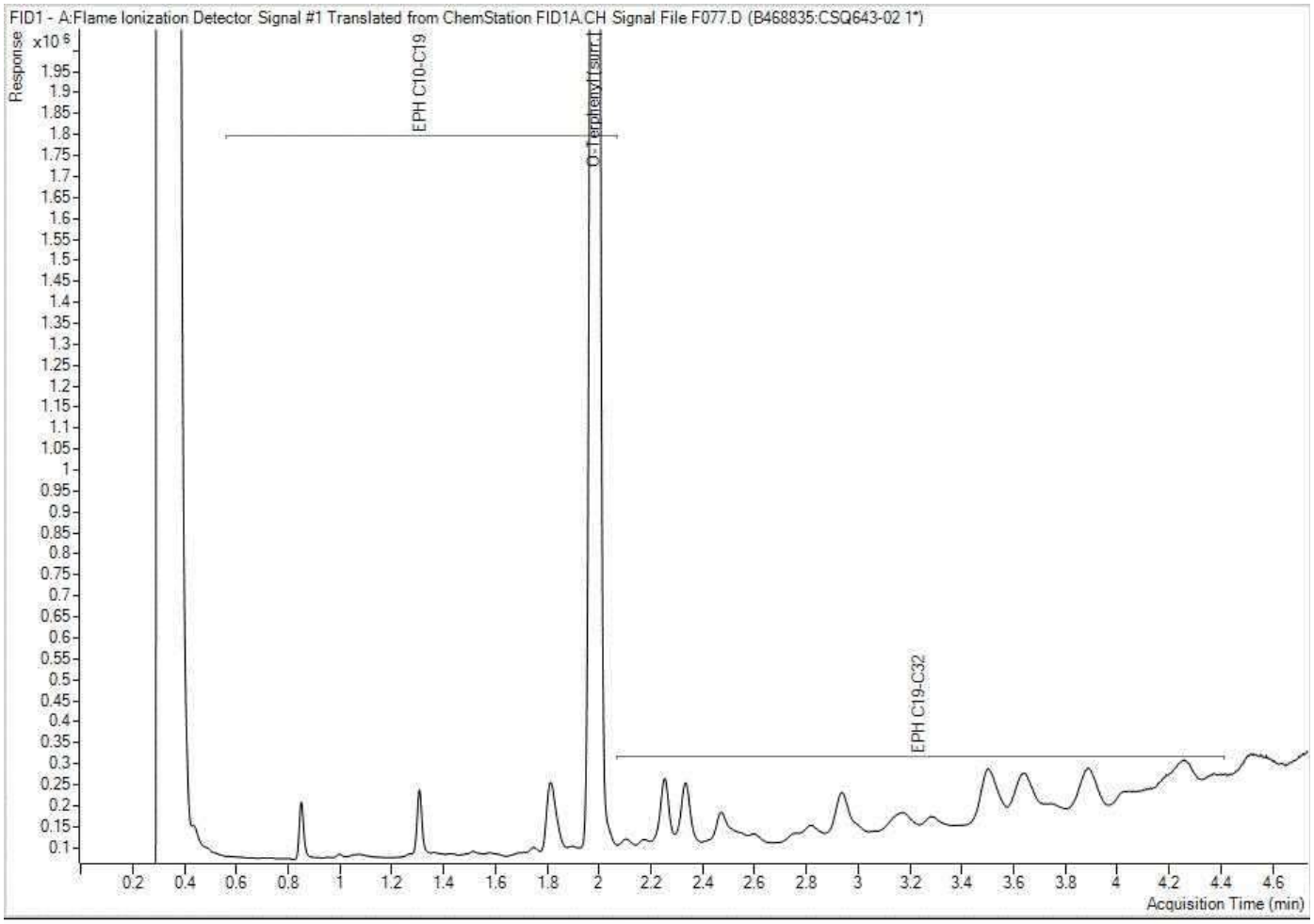


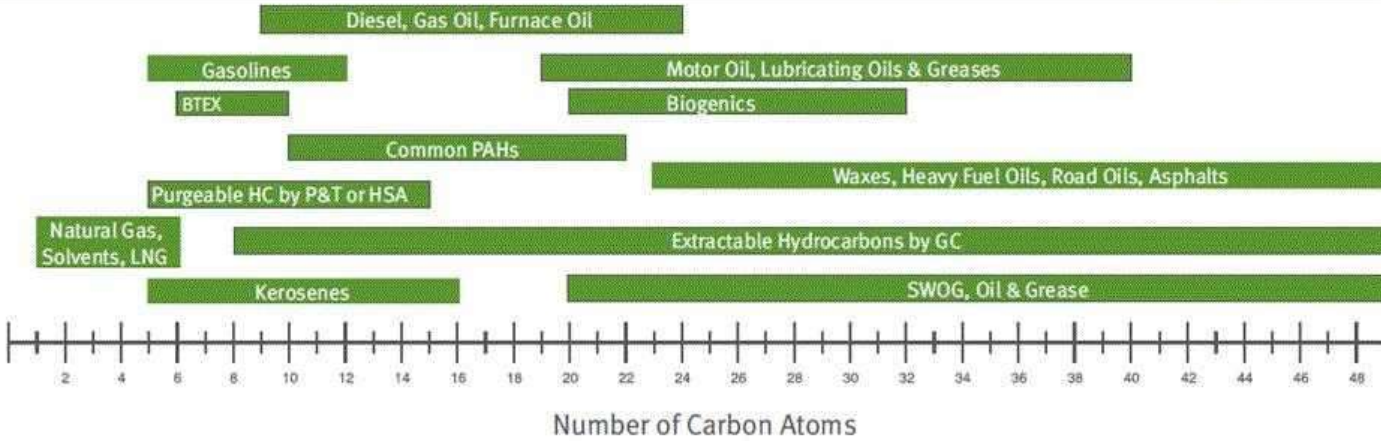
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ643

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-11-01

EPH in Soil by GC/FID Chromatogram



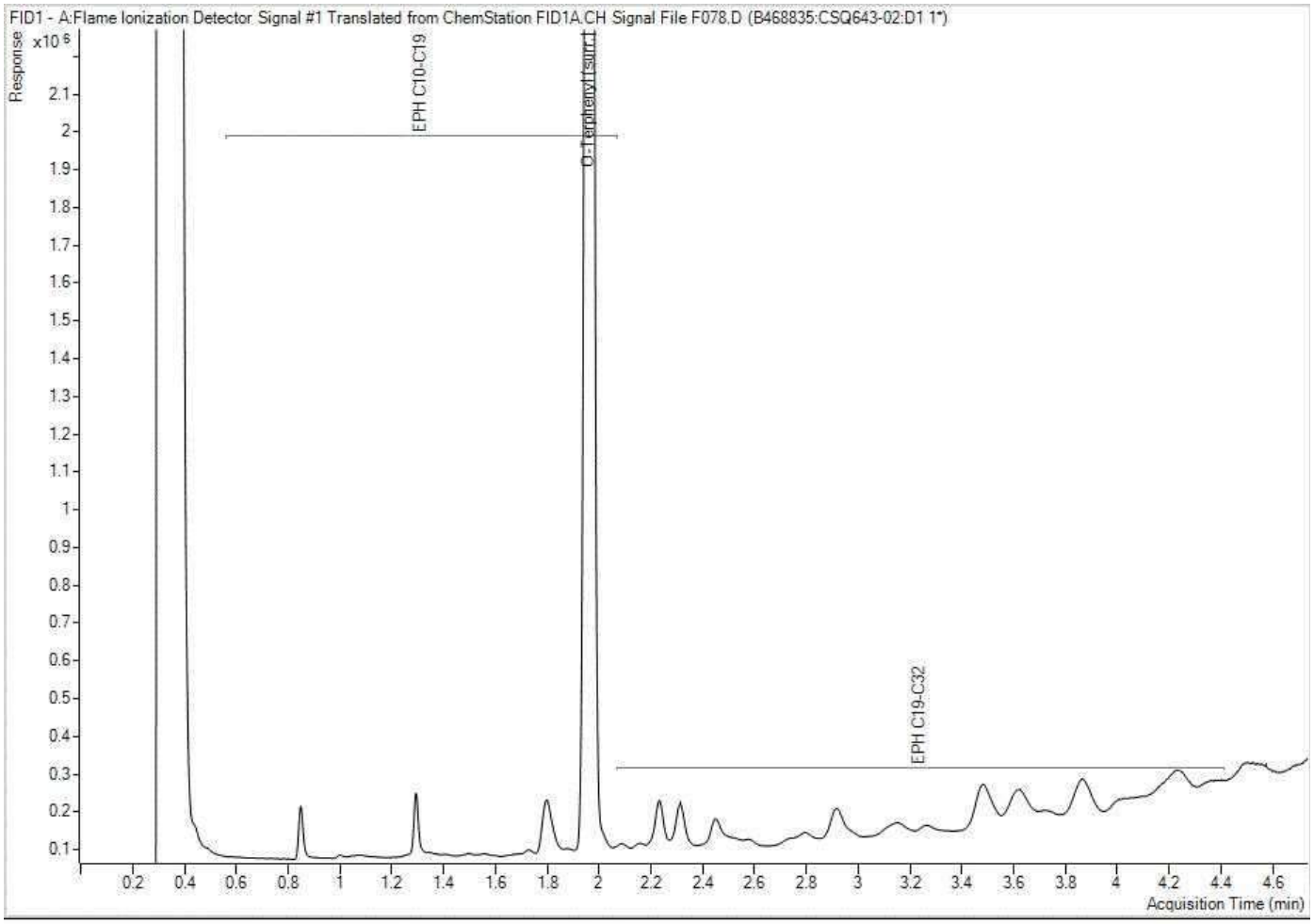


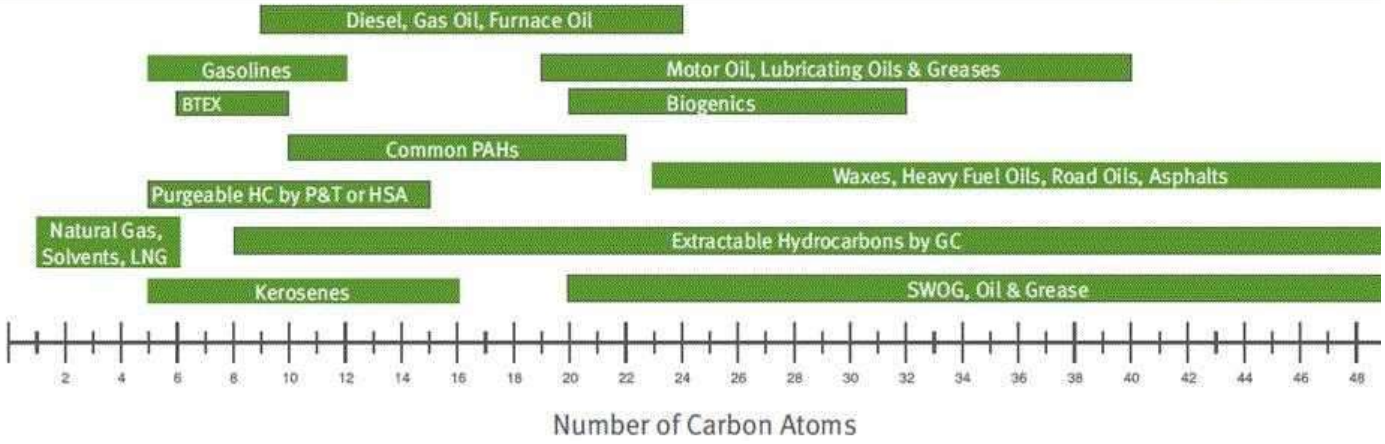
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ643 Lab-Dup

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-11-01

EPH in Soil by GC/FID Chromatogram



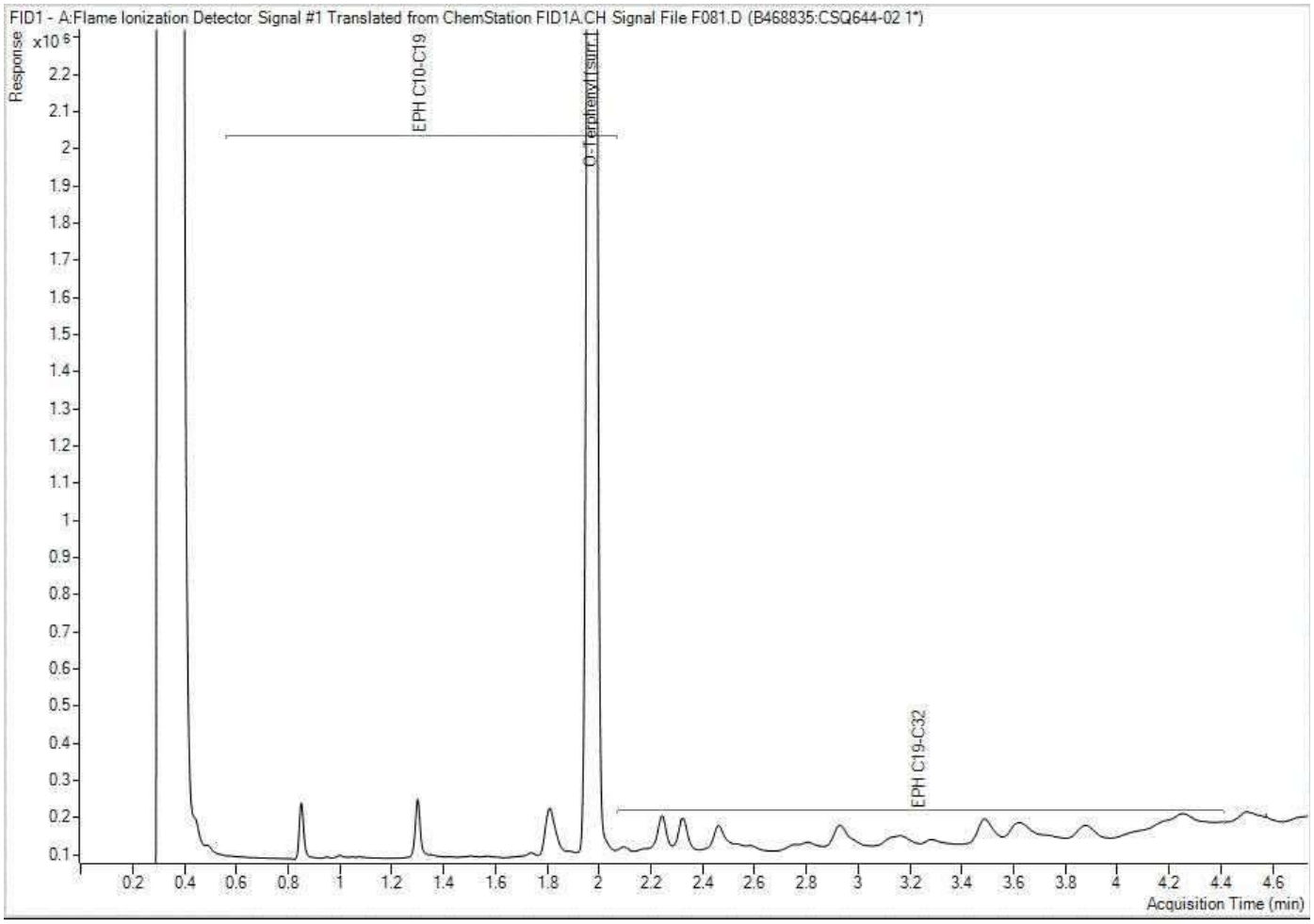


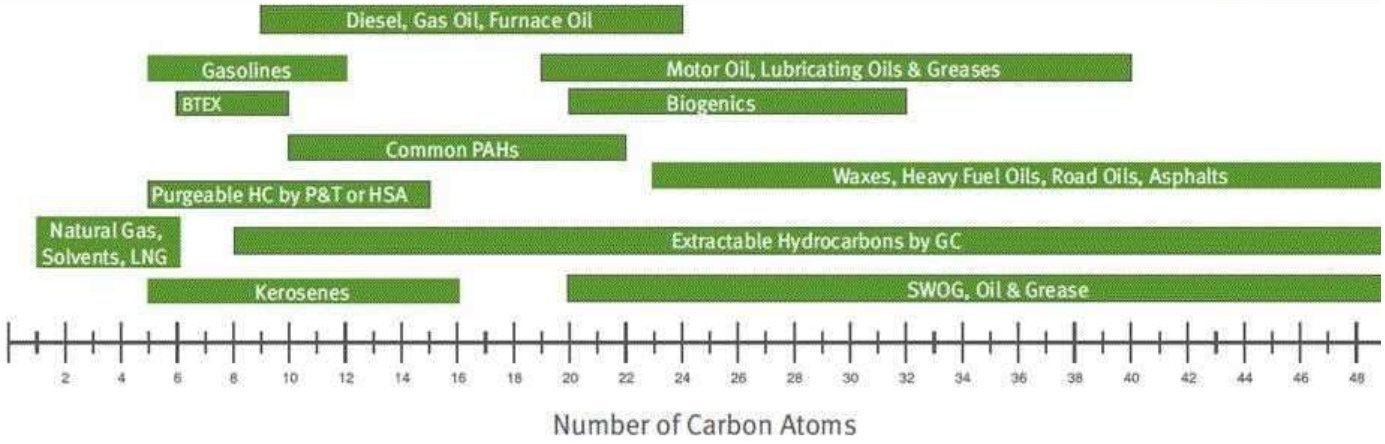
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ644

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-12-01

EPH in Soil by GC/FID Chromatogram



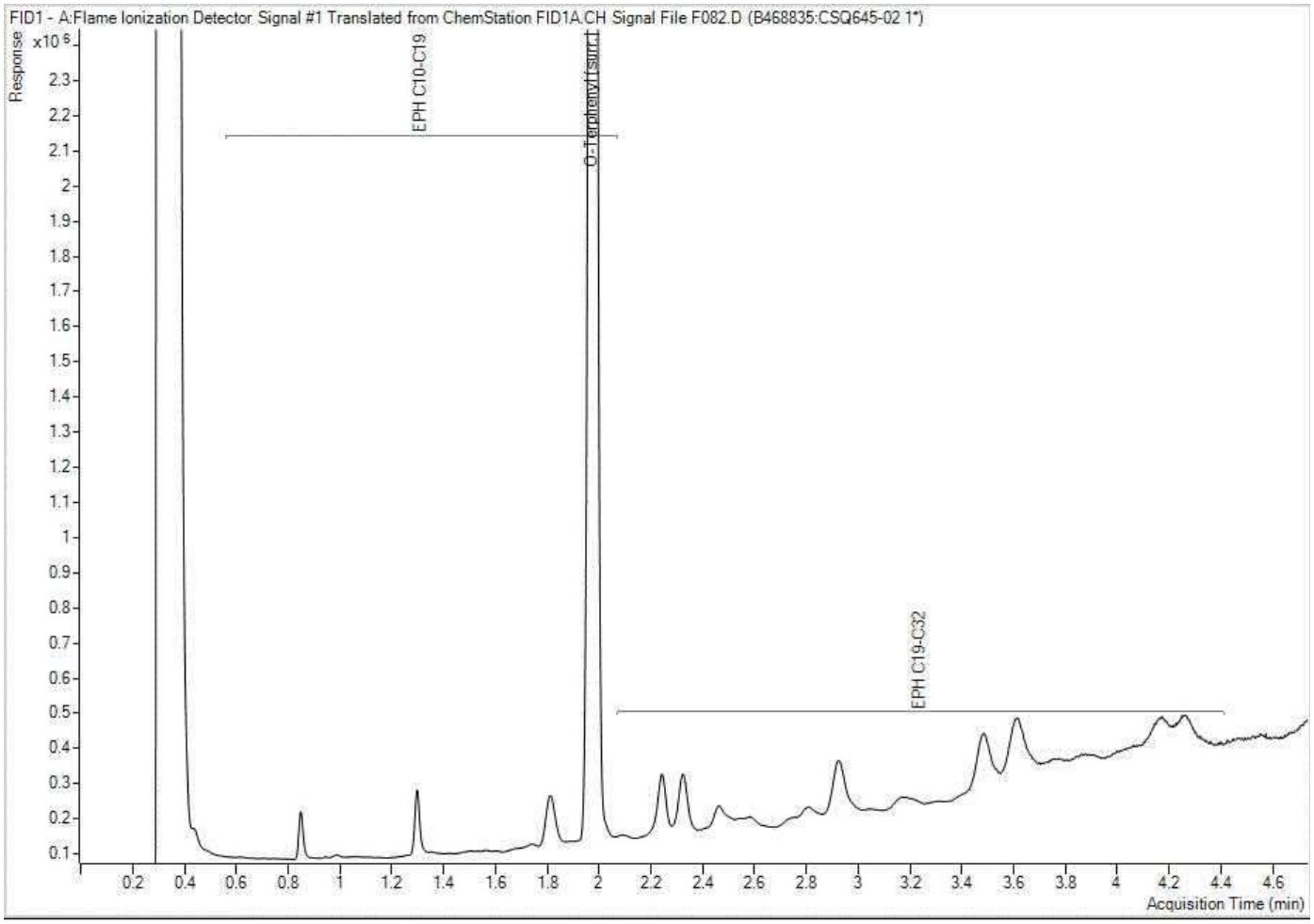


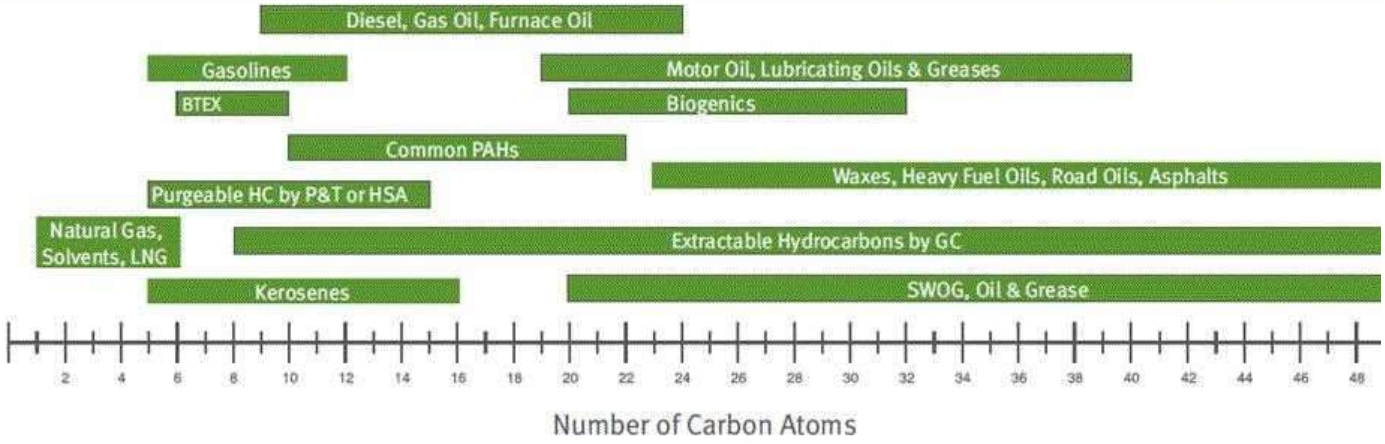
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ645

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-13-01

EPH in Soil by GC/FID Chromatogram



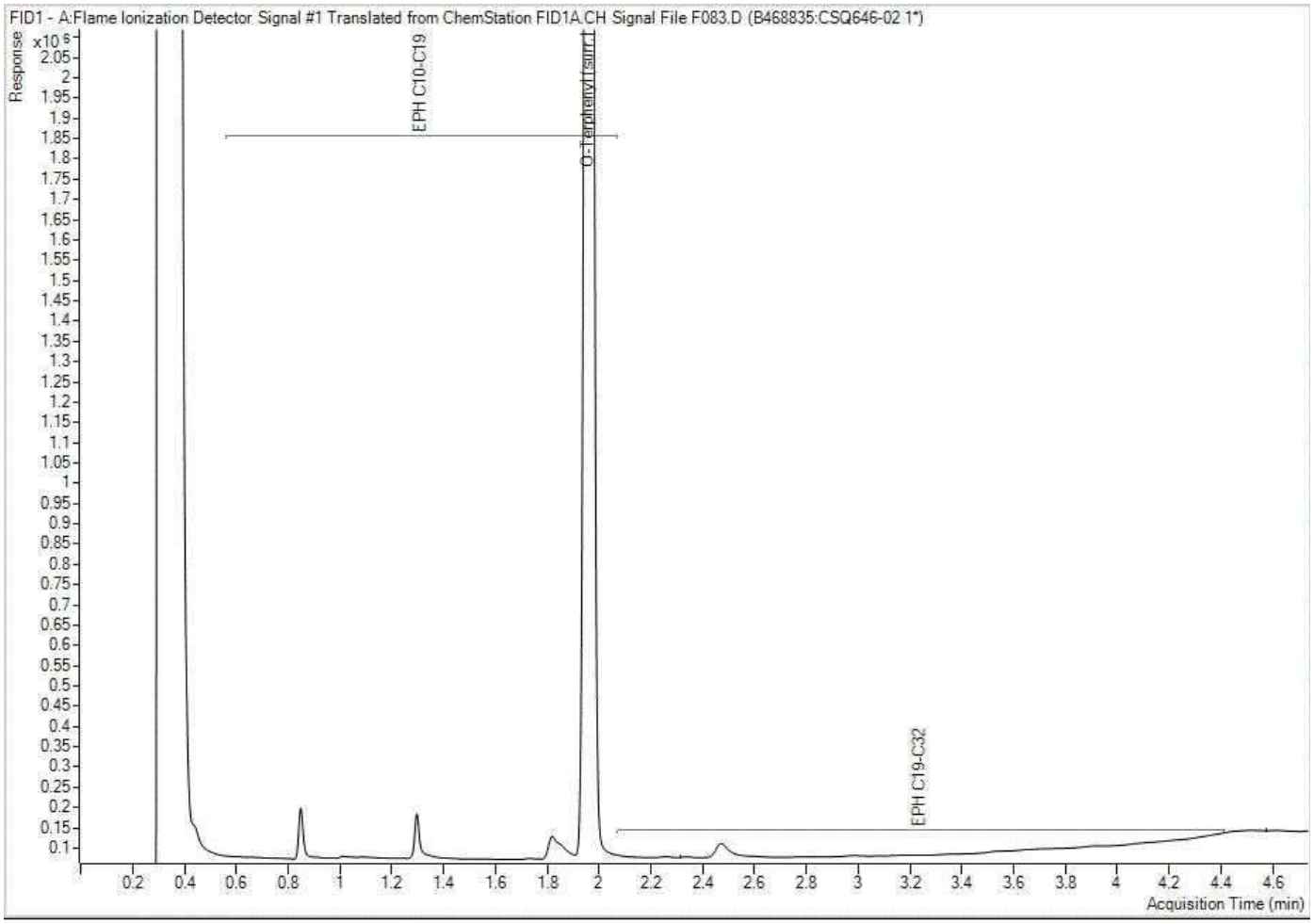


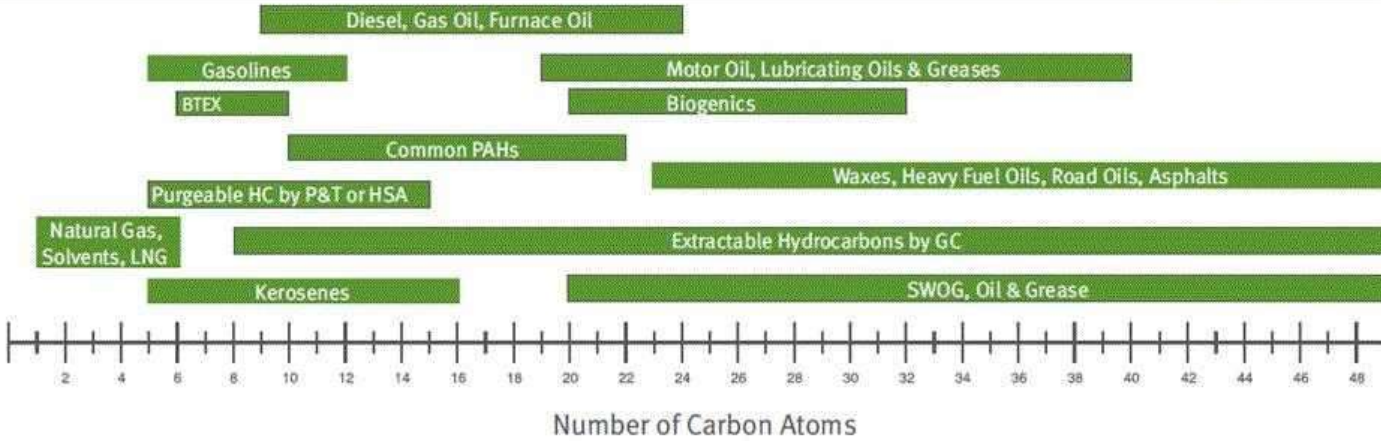
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ646

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-13-02

EPH in Soil by GC/FID Chromatogram



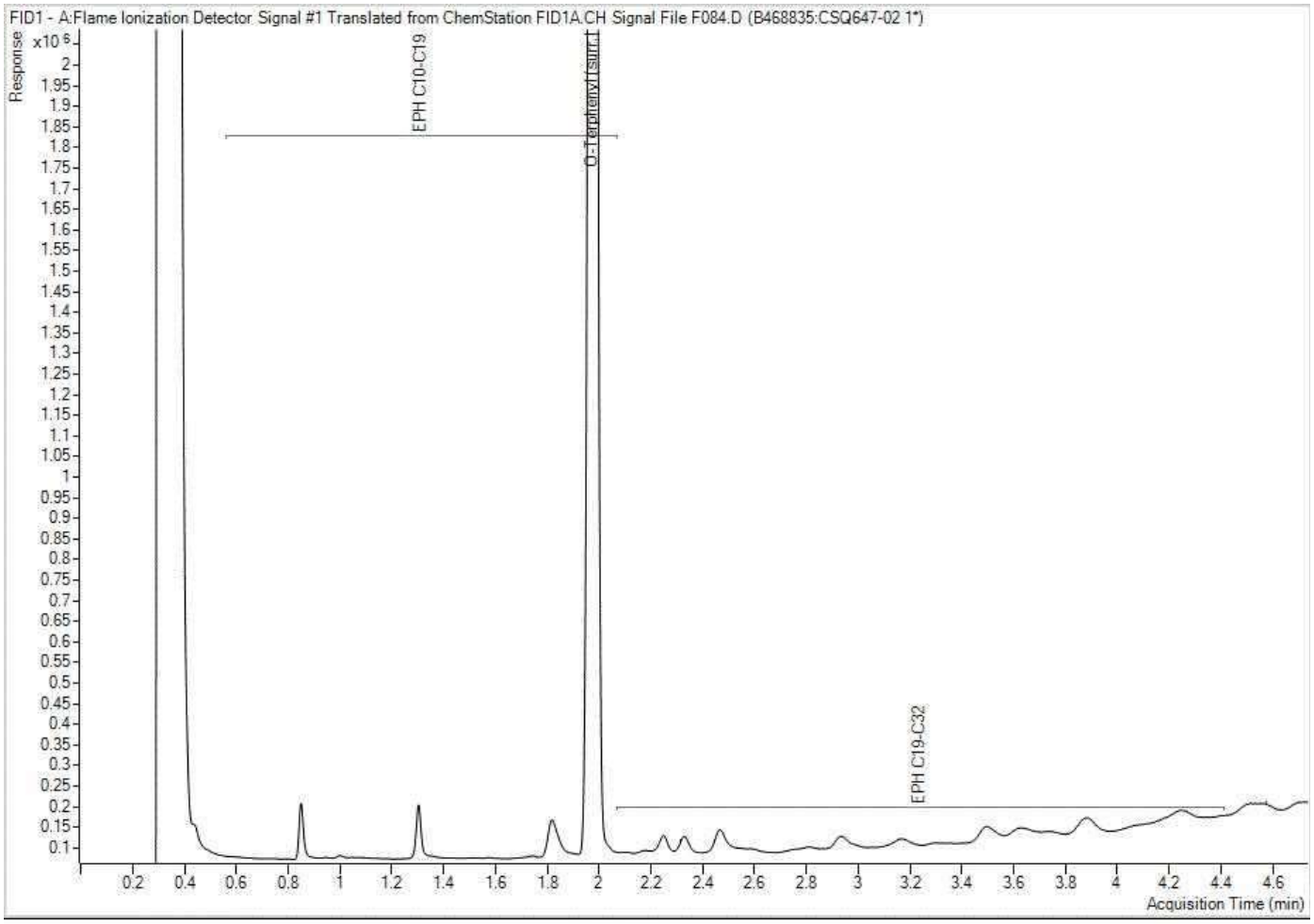


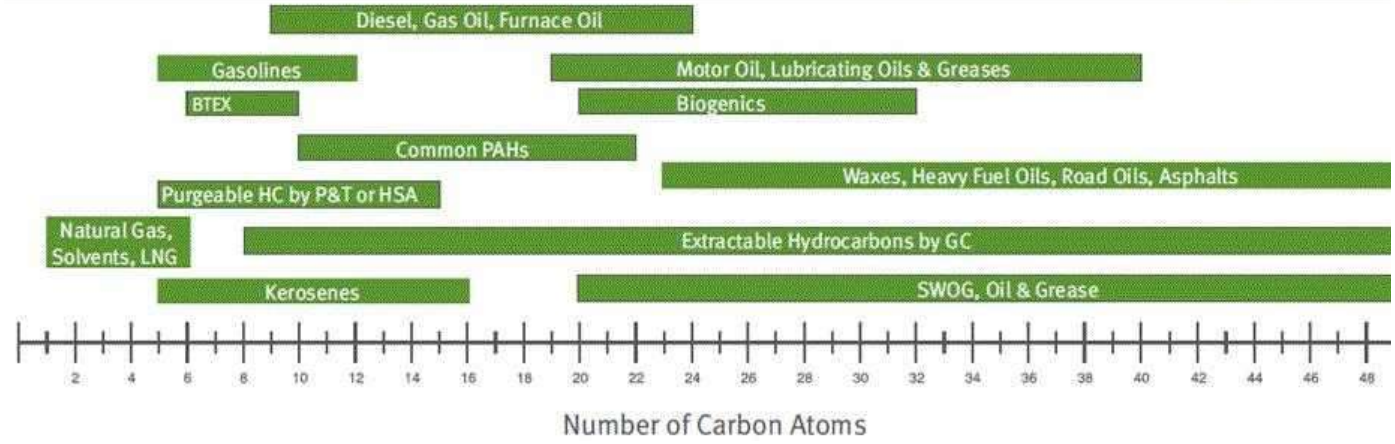
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ647

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-14-01

EPH in Soil by GC/FID Chromatogram



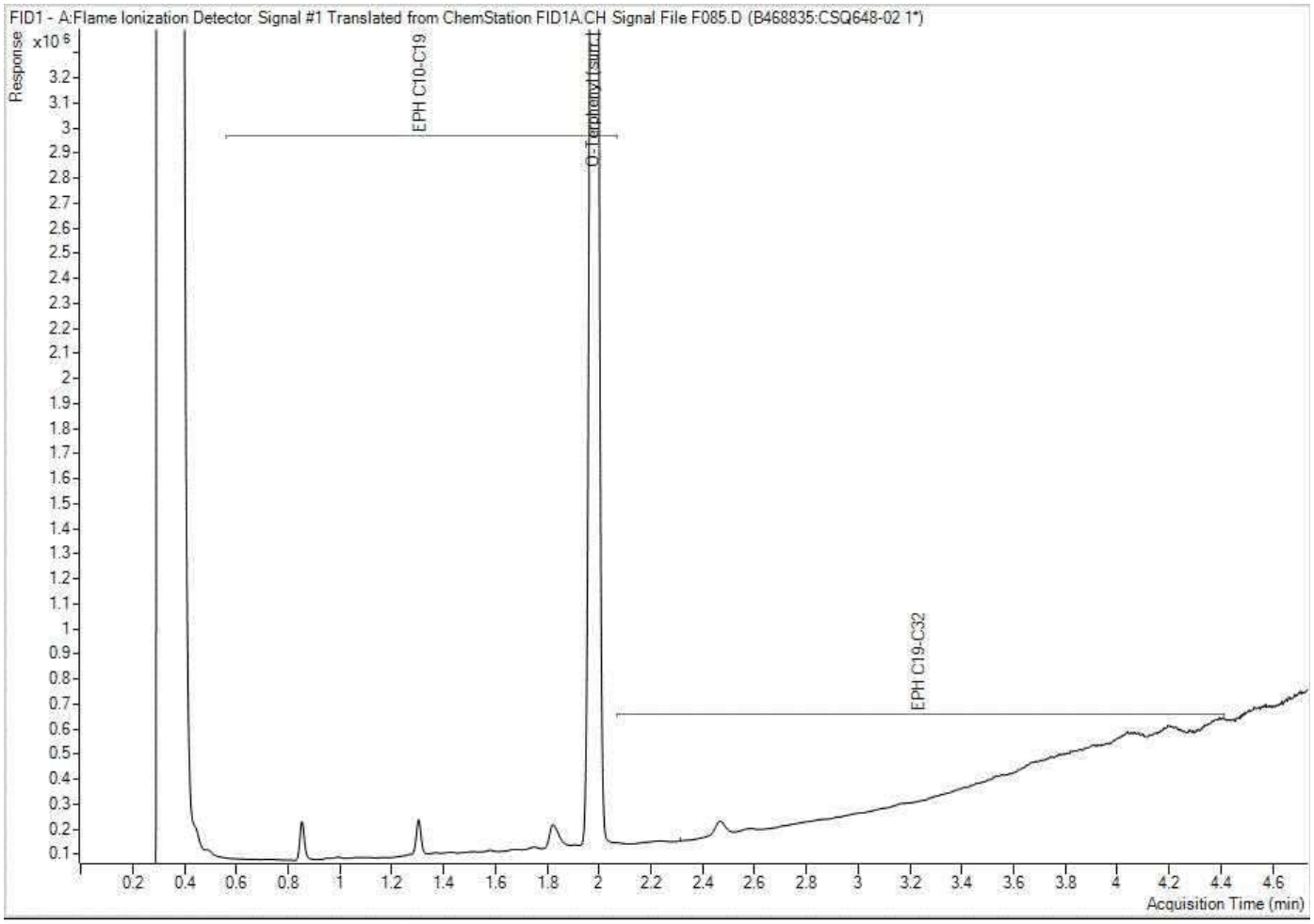


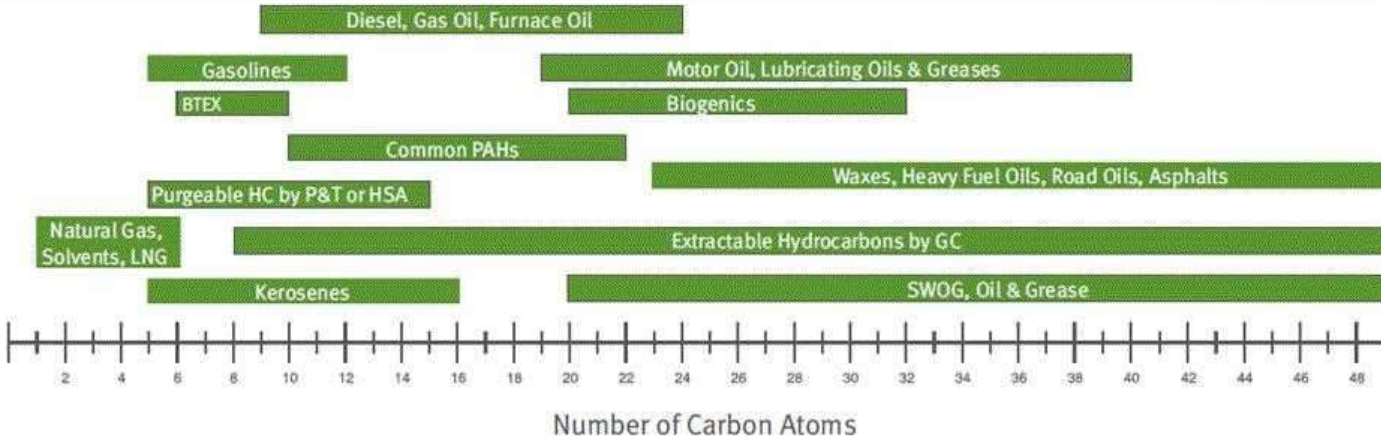
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ648

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-15-01

EPH in Soil by GC/FID Chromatogram



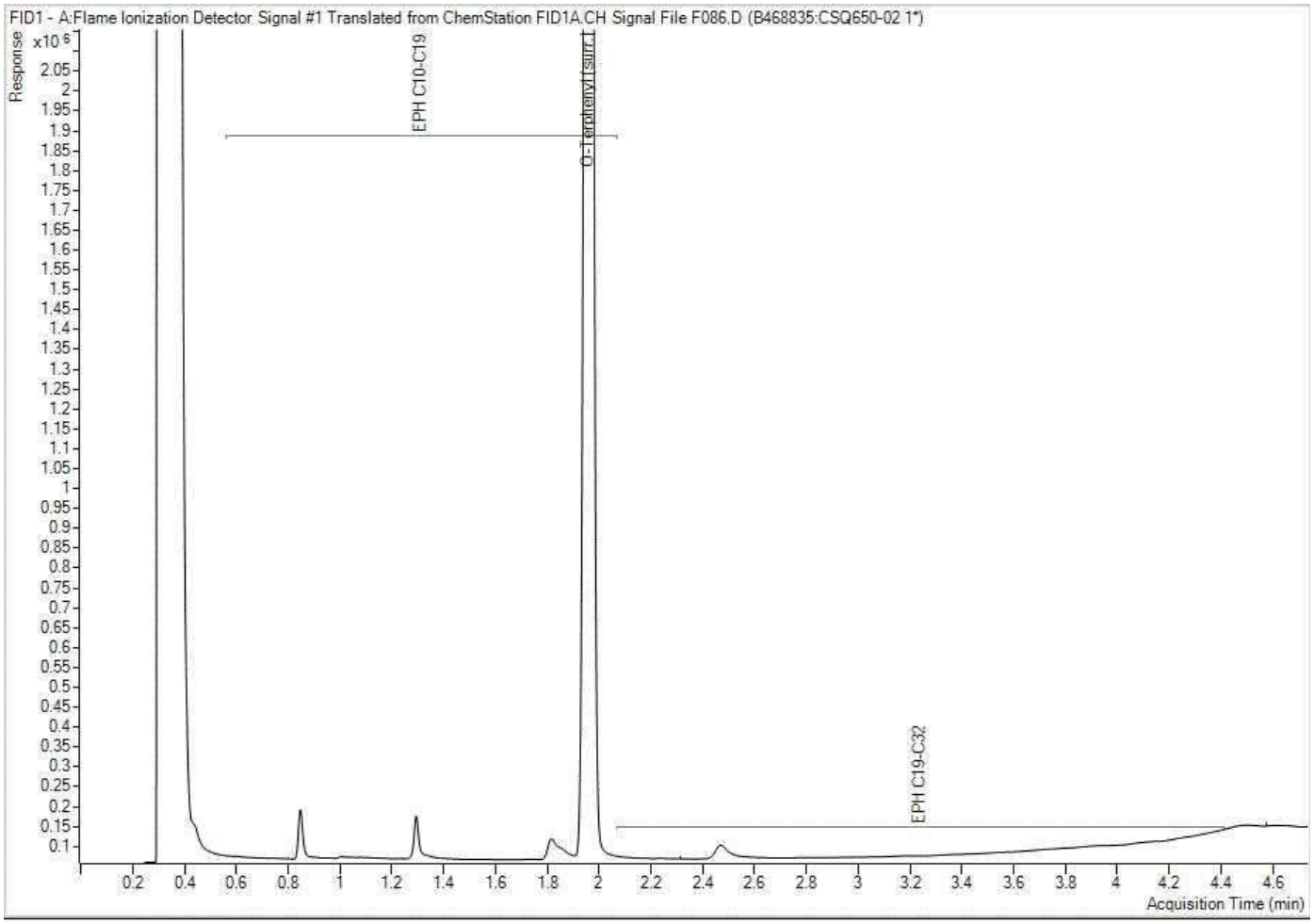


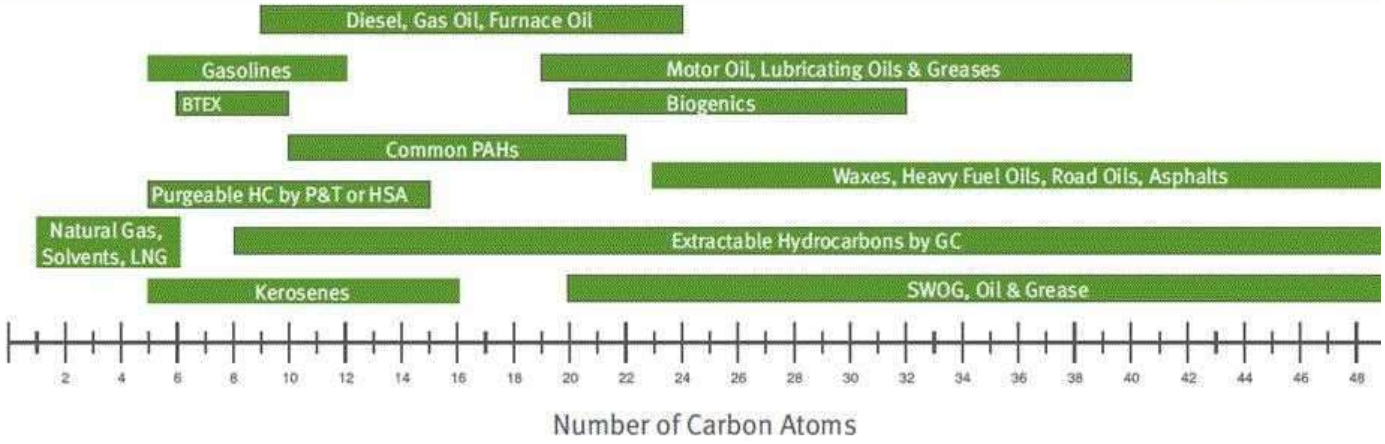
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ650

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-15-03

EPH in Soil by GC/FID Chromatogram



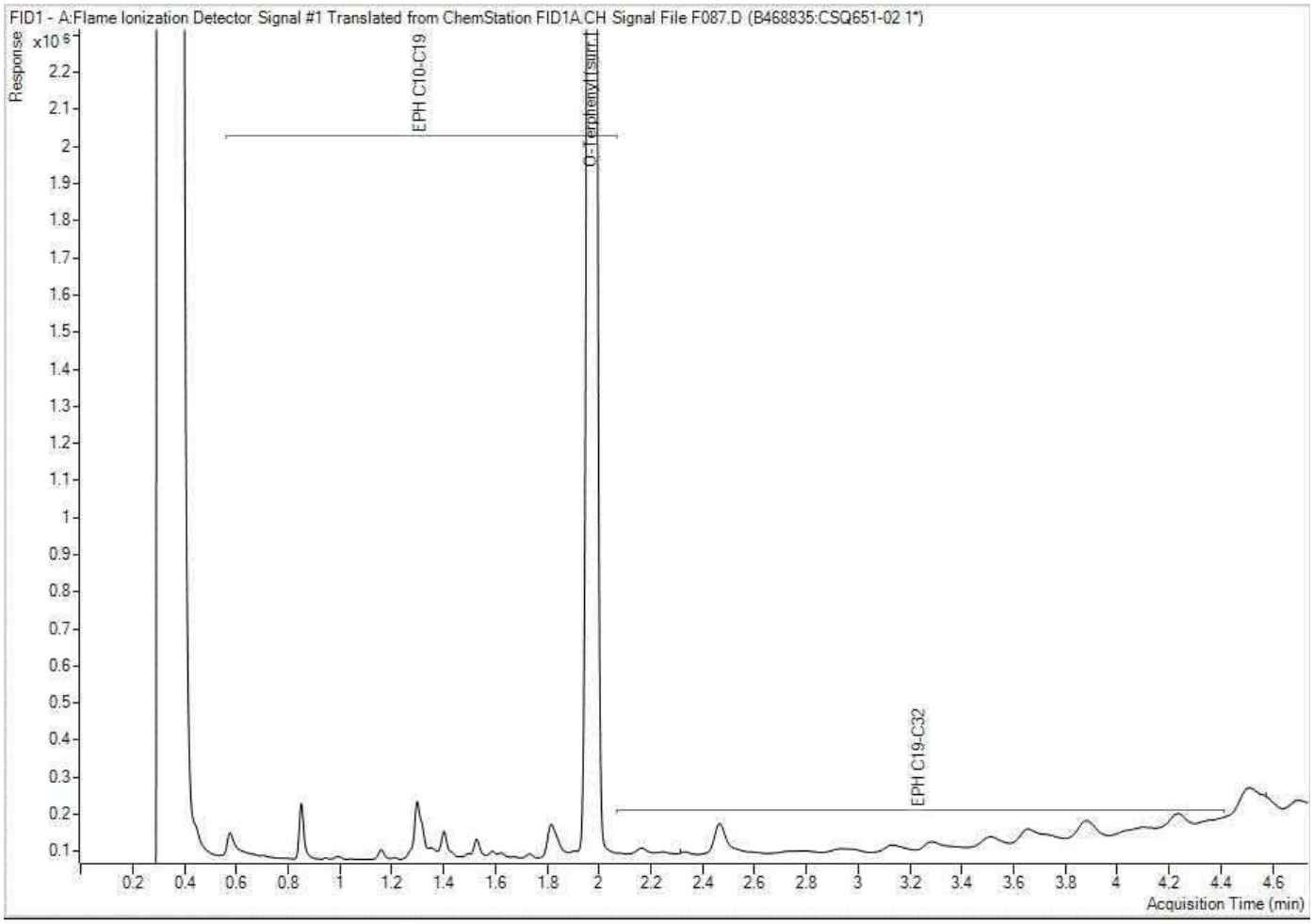


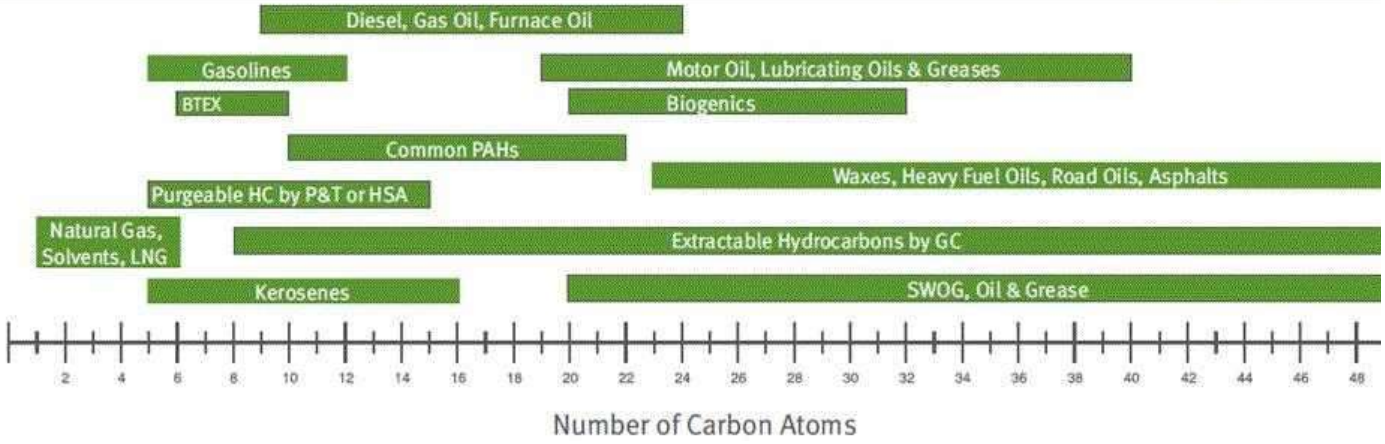
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ651

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-16-01

EPH in Soil by GC/FID Chromatogram



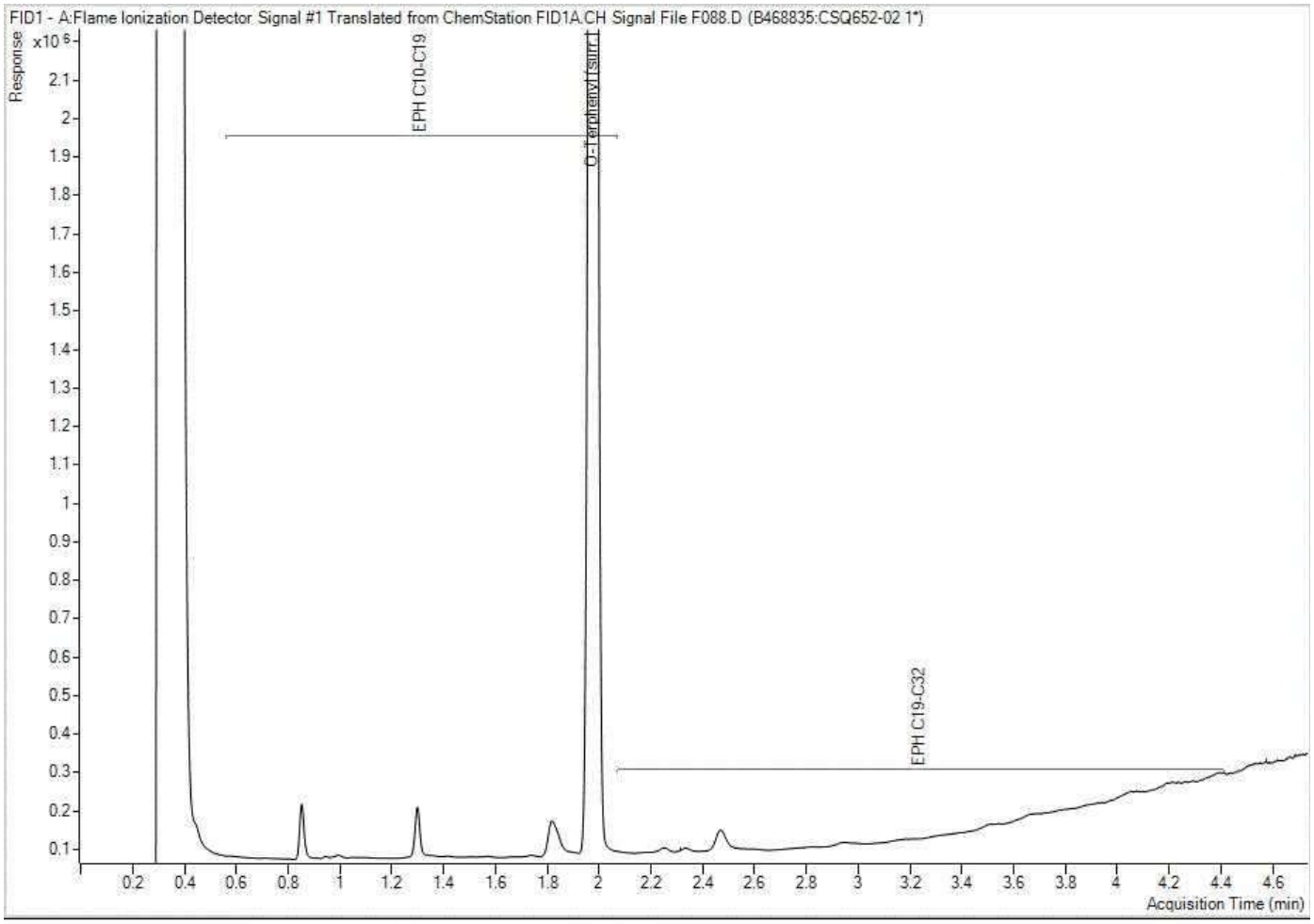


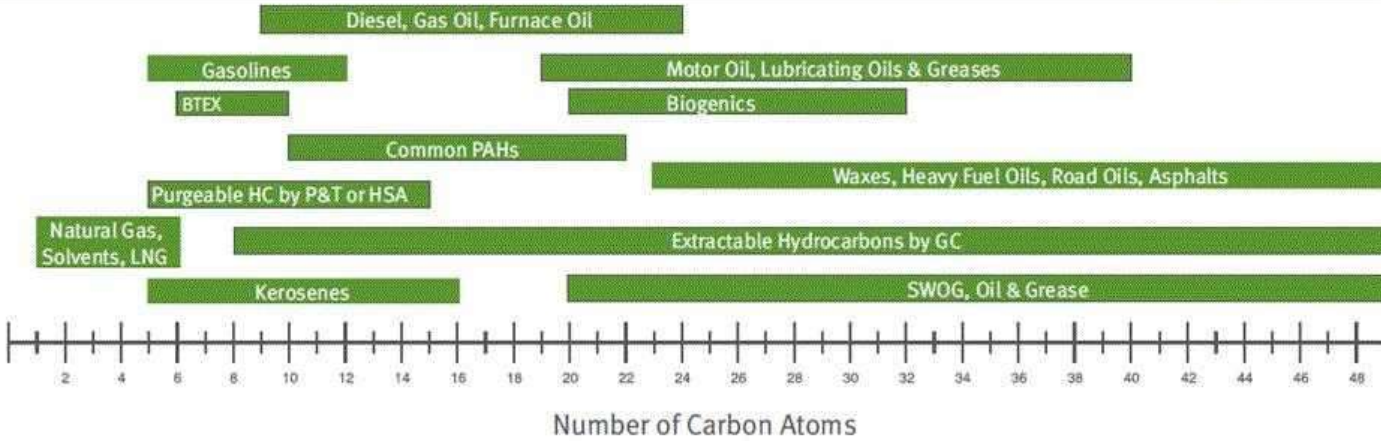
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ652

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-17-01

EPH in Soil by GC/FID Chromatogram



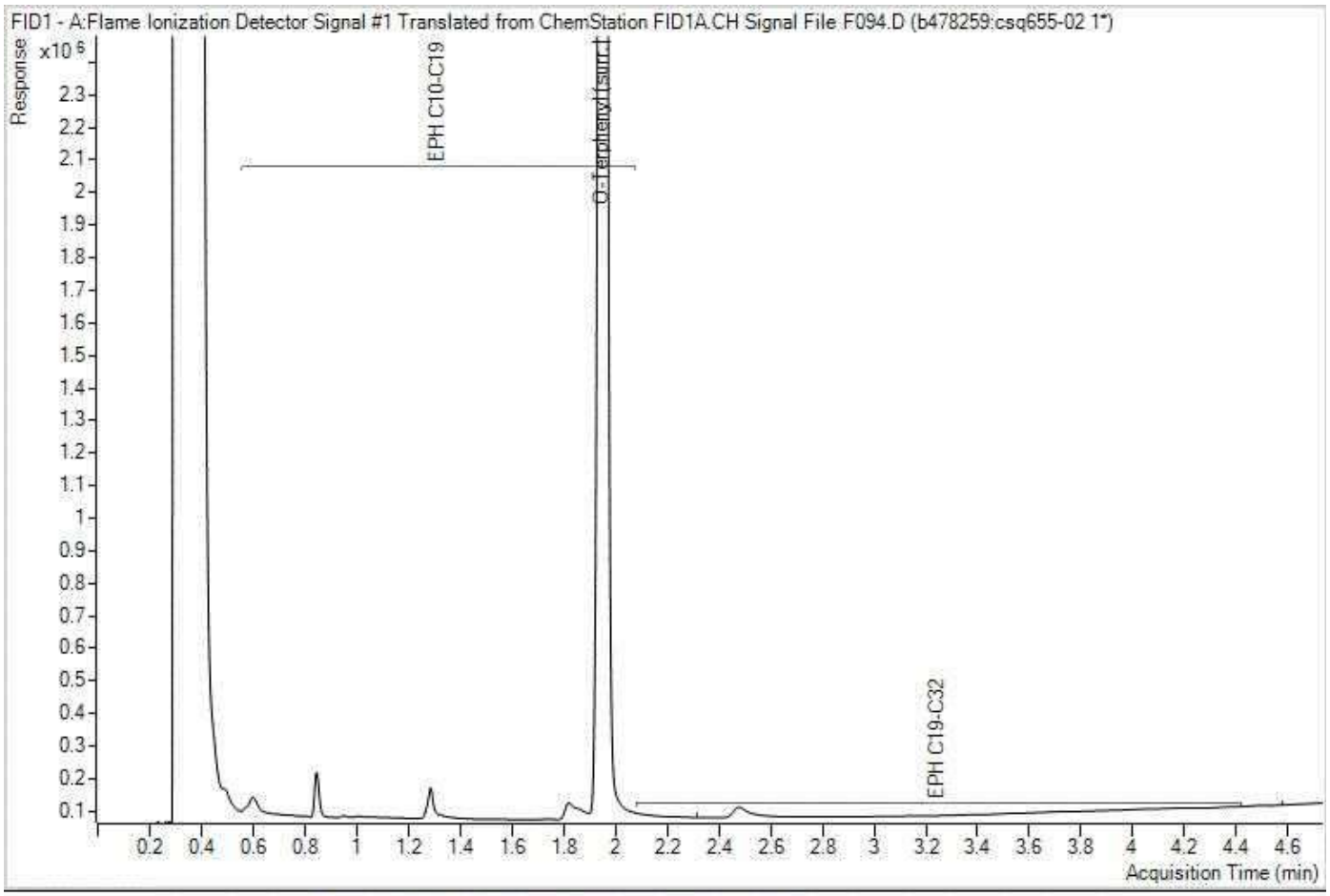


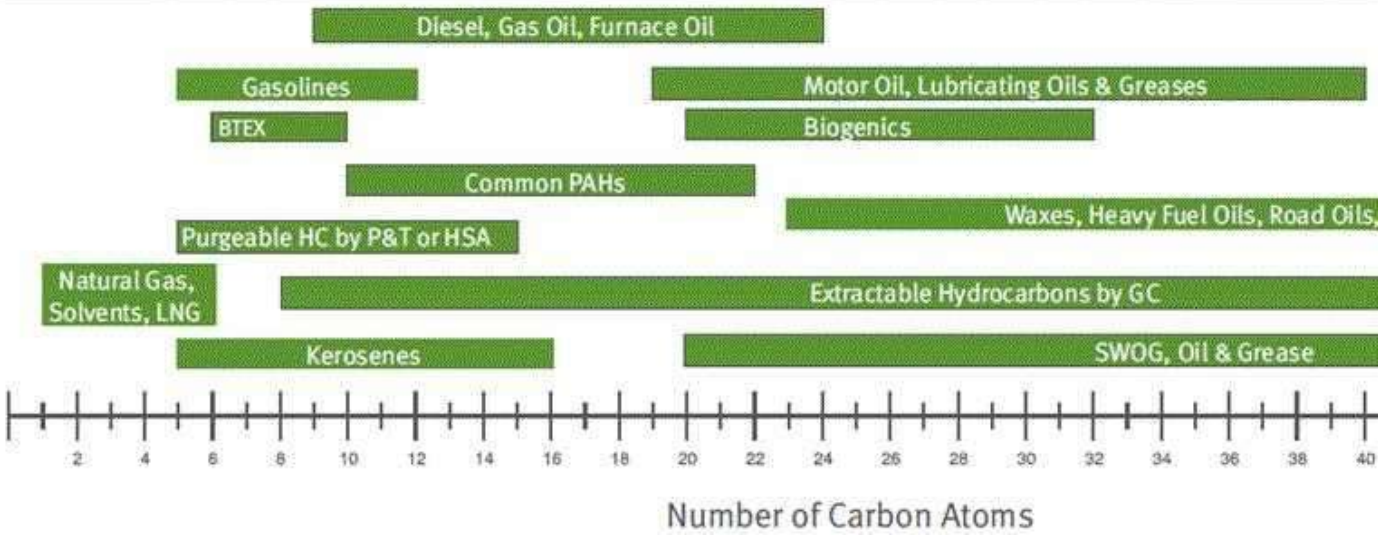
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ655

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-18-01

EPH in Soil by GC/FID Chromatogram



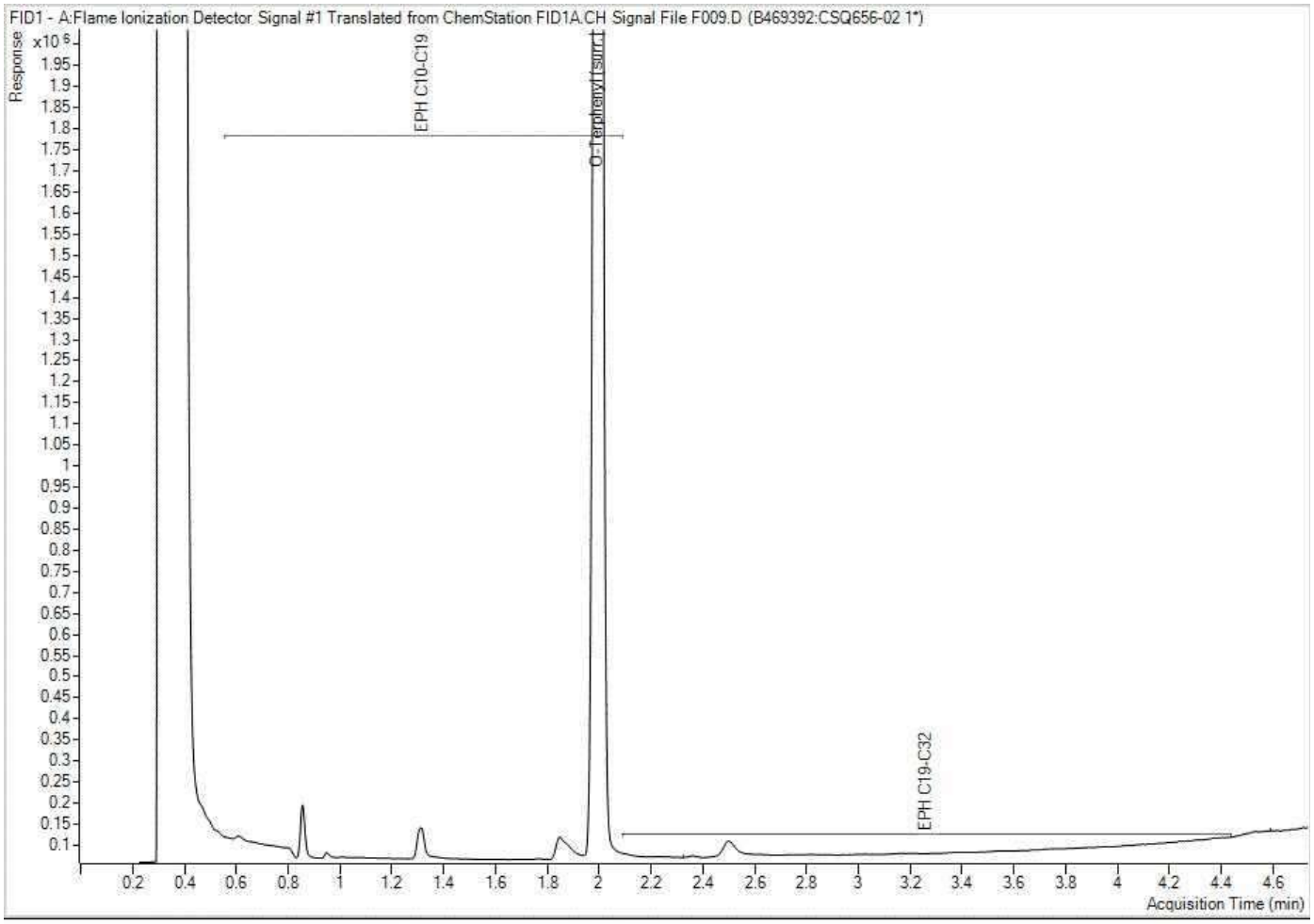


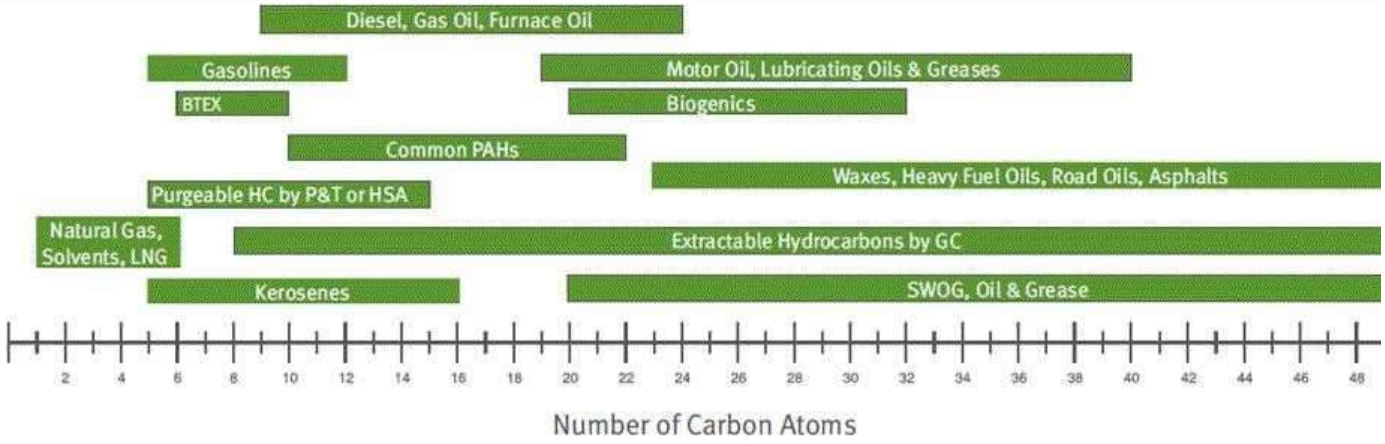
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ656

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-18-02

EPH in Soil by GC/FID Chromatogram





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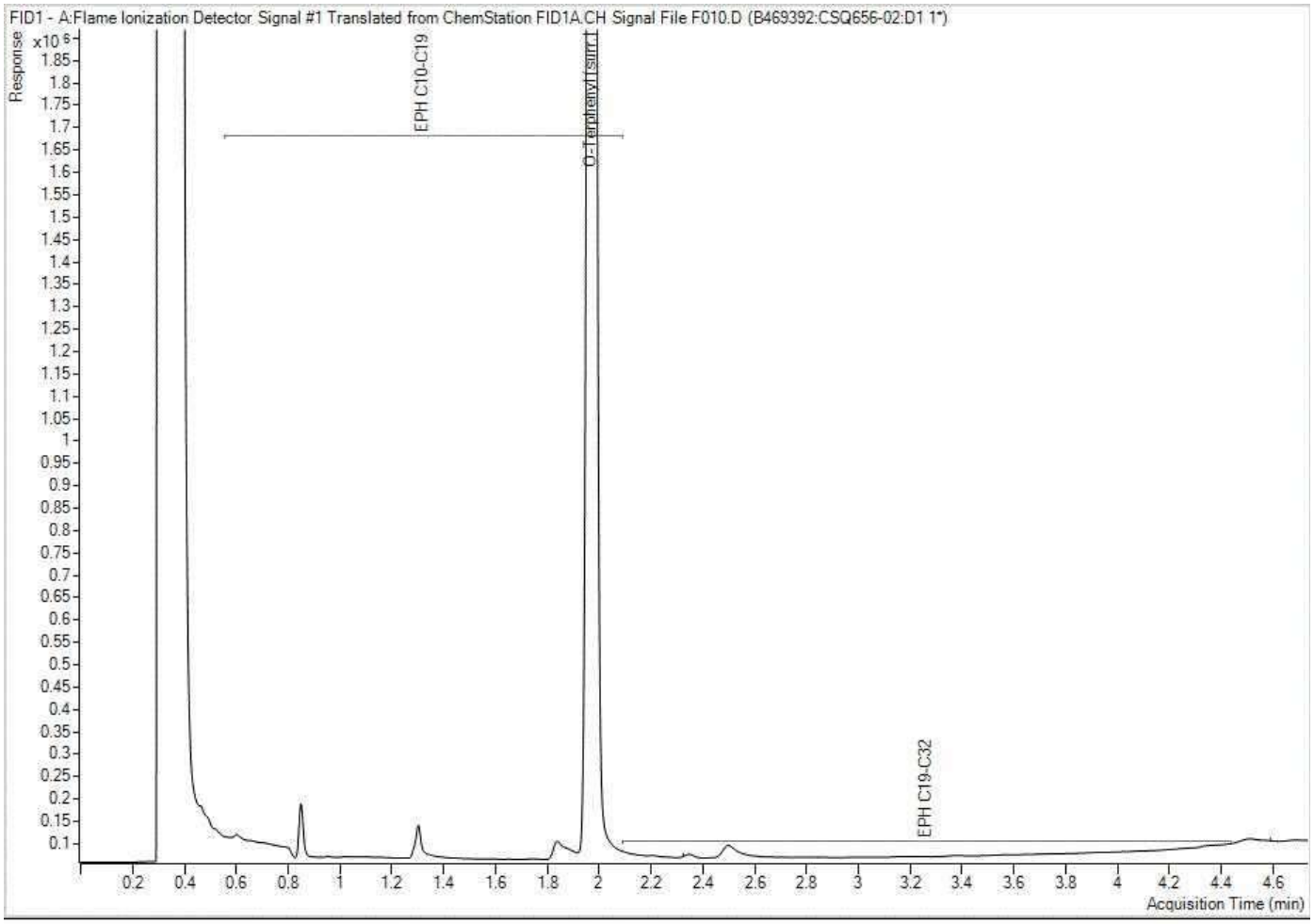
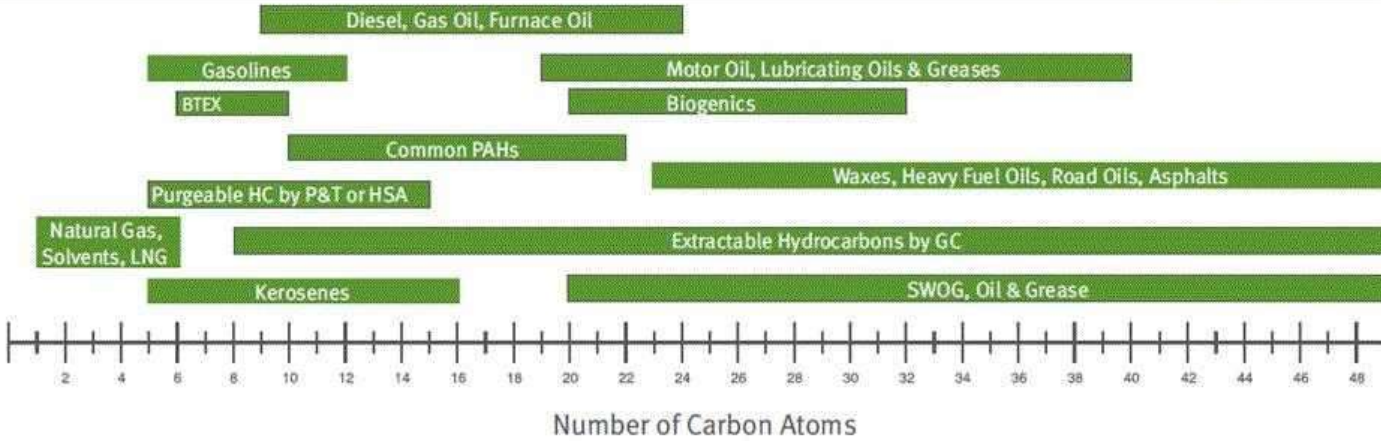
Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ656 Lab-Dup

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-18-02

EPH in Soil by GC/FID Chromatogram





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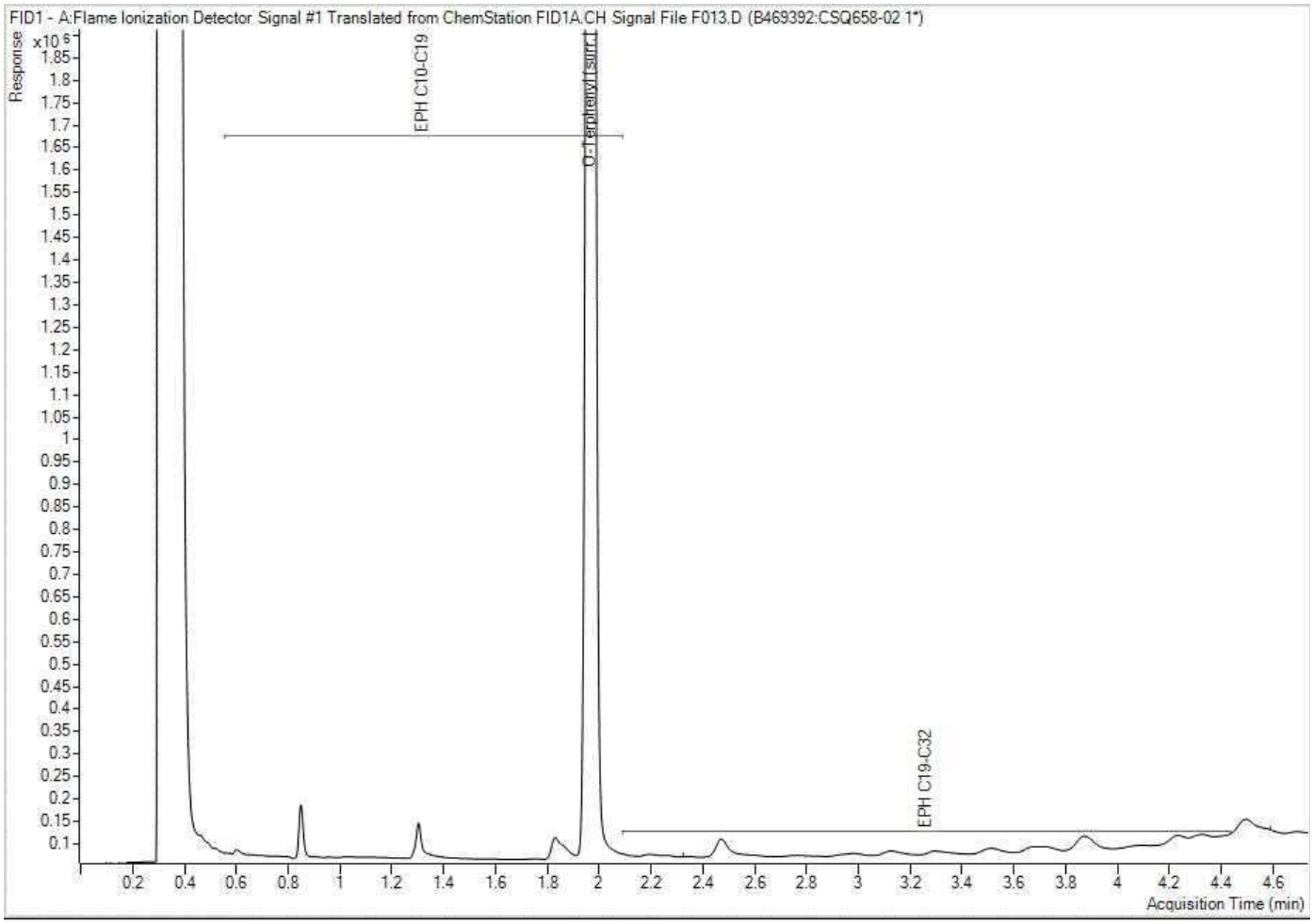
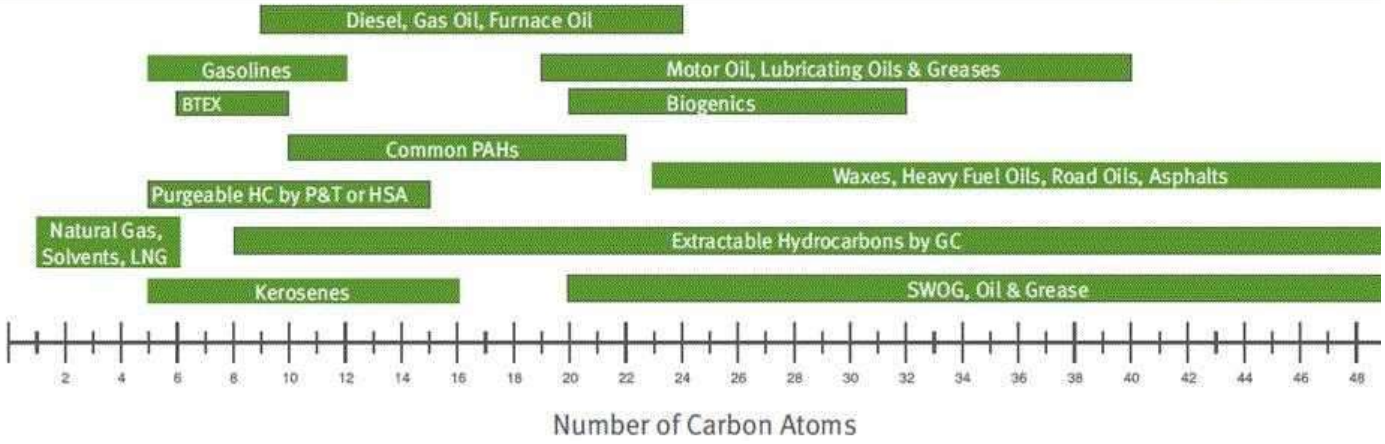
Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ658

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-19-01

EPH in Soil by GC/FID Chromatogram





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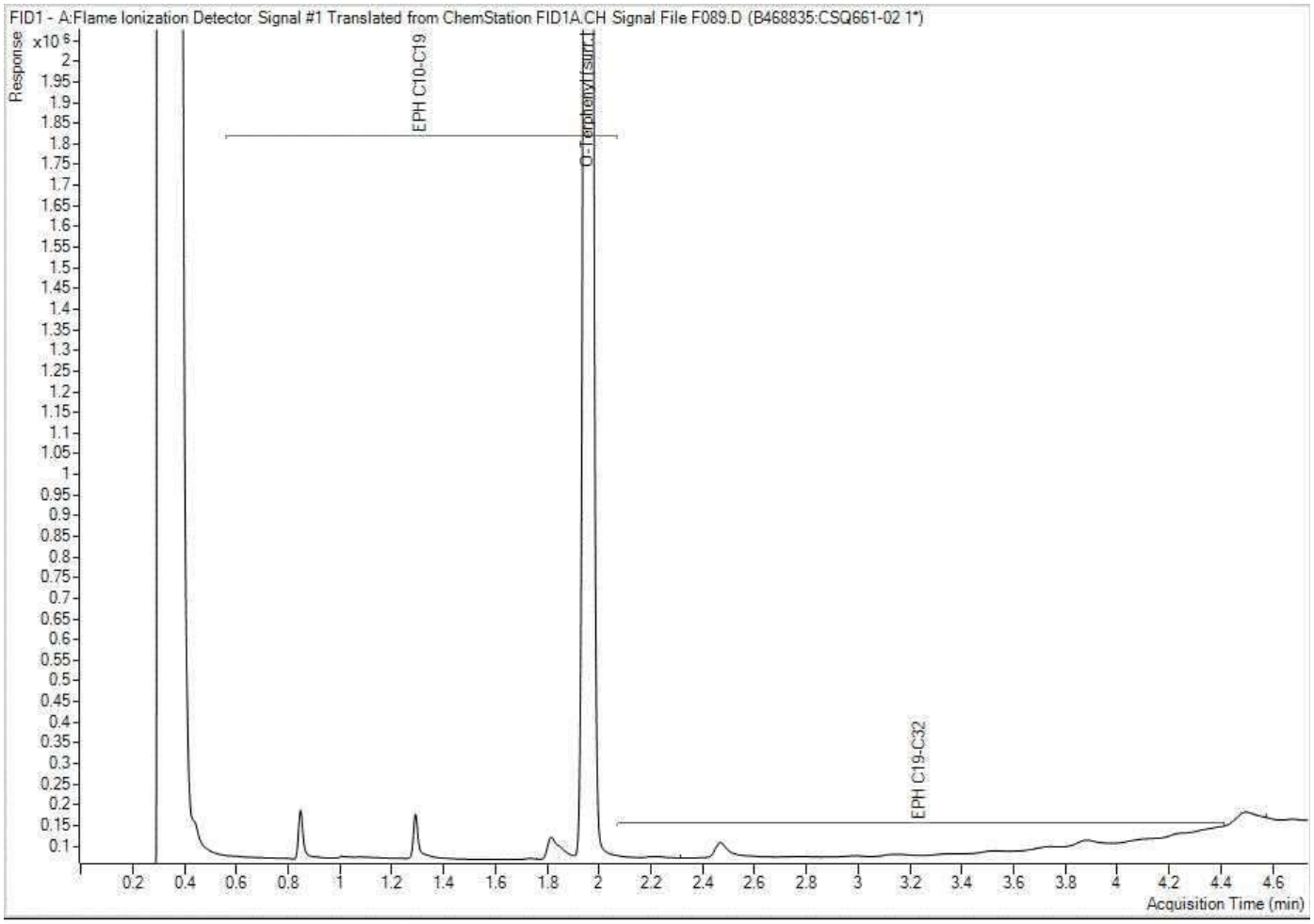
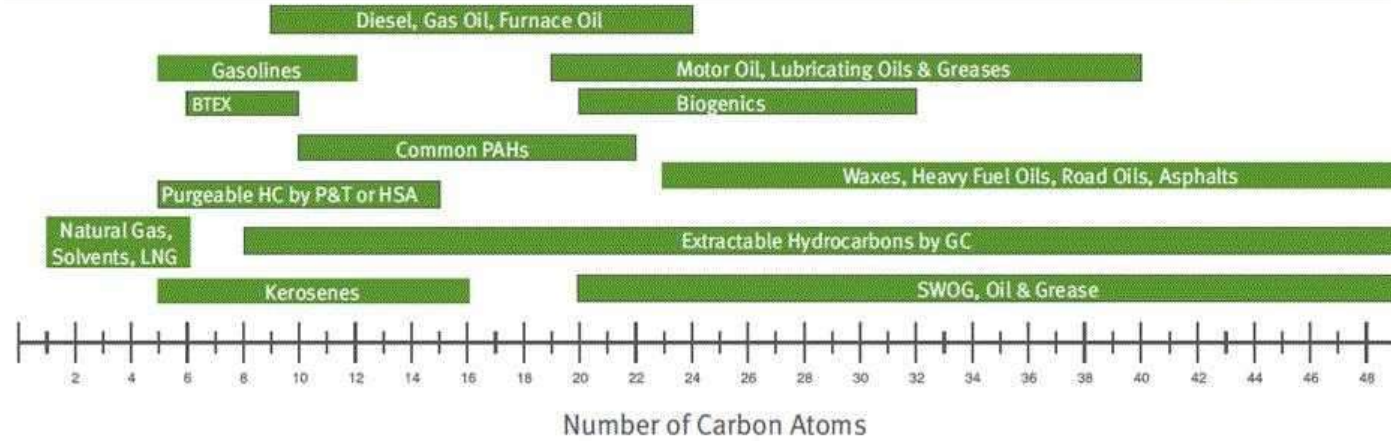
Bureau Veritas Job #: C459220
Report Date: 2024/09/19
Bureau Veritas Sample: CSQ661

Thurber Engineering Ltd.
Client Project #: 56763
Site Reference: ESQUIMALT, BC
Client ID: BH24-20-02

EPH in Soil by GC/FID Chromatogram





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