ANALYTICAL REPORT

November 05, 2024

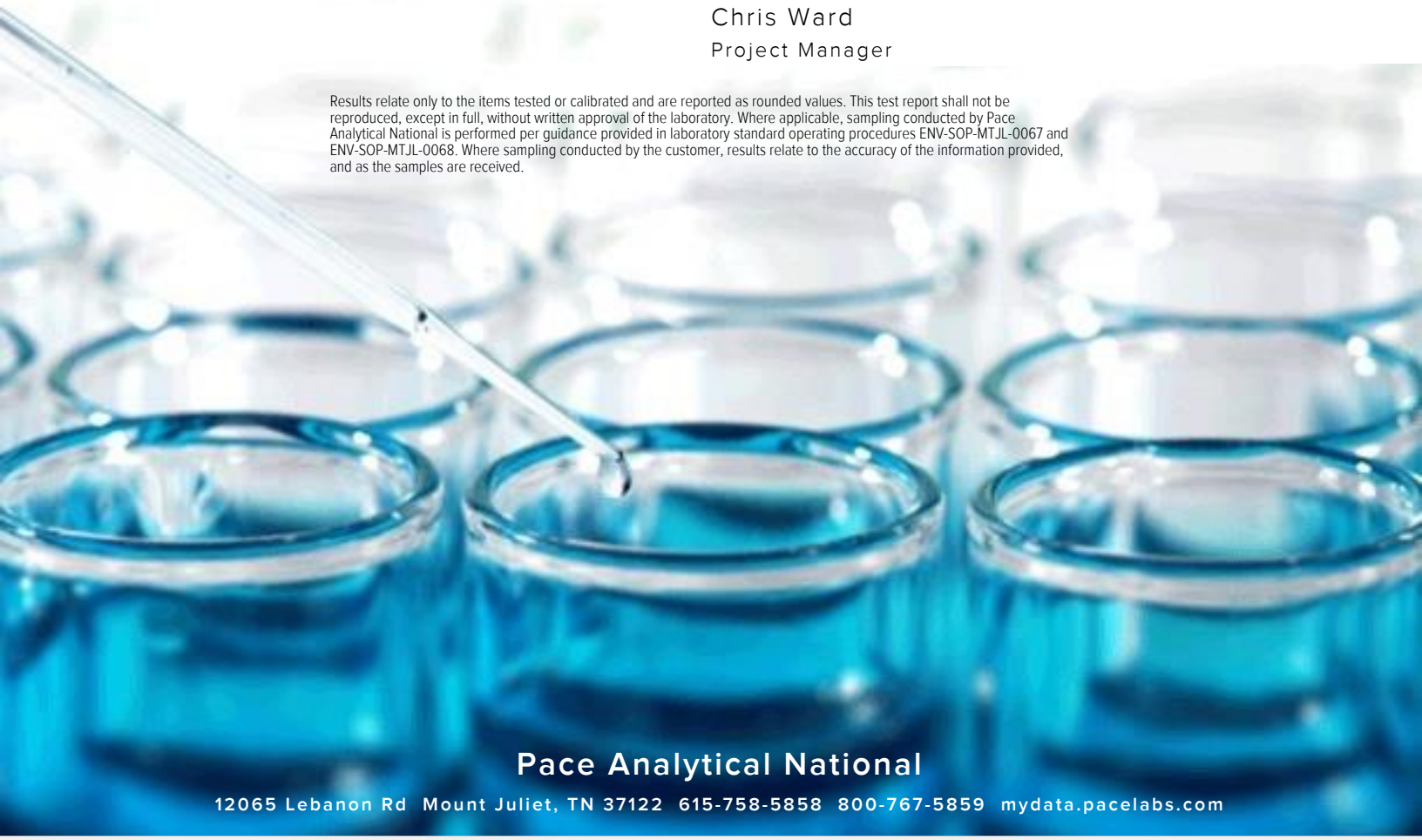
Pace Analytical Services, LLC
2025.04.23 21:58:50 -05'00'
Document is certified

QB Energy

Sample Delivery Group:	L1790970
Samples Received:	10/19/2024
Project Number:	
Description:	Corral Creek 4508 Investigation
Site:	CORRAL CREEK 4508 PAD
Report To:	Jake J. / Brett M. / Blair R. / Andy V. 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By:

Chris Ward
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

TABLE OF CONTENTS

20241018-M29 199-(SB02)@1 L1790970-01 Solid

Collected by: Alex Fenske | Collected date/time: 10/18/24 08:50 | Received date/time: 10/19/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2388069	1	10/25/24 15:57	10/25/24 15:57	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2387308	1	10/28/24 15:33	10/29/24 00:30	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2389295	1	10/25/24 09:09	10/25/24 11:15	BRT	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2389300	1	10/25/24 09:10	10/25/24 16:10	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2387264	1	10/25/24 21:44	10/26/24 13:20	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2388020	25	10/27/24 23:14	10/29/24 10:00	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2388020	5	10/27/24 23:14	10/29/24 03:03	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2389791	1	10/23/24 08:31	10/26/24 10:46	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2389831	1	10/23/24 08:31	10/26/24 15:43	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2391211	1	10/29/24 08:57	10/29/24 18:39	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2390921	1	10/28/24 16:48	10/29/24 14:30	HLA	Mt. Juliet, TN

20241018-M29 199-(SB02)@5 L1790970-02 Solid

Collected by: Alex Fenske | Collected date/time: 10/18/24 09:06 | Received date/time: 10/19/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2388071	1	10/27/24 20:09	10/27/24 20:09	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2387308	1	10/28/24 15:33	10/29/24 00:37	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2390678	1	10/28/24 07:14	10/28/24 07:21	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2390674	1	10/28/24 07:15	10/28/24 09:13	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2388077	1	10/29/24 11:01	10/29/24 15:47	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2388020	25	10/27/24 23:14	10/29/24 10:03	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2388020	5	10/27/24 23:14	10/29/24 03:07	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2389791	1	10/23/24 08:31	10/26/24 11:09	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2389164	1	10/23/24 08:31	10/26/24 16:44	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2391211	1	10/29/24 08:57	10/29/24 18:52	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2390921	1	10/28/24 16:48	10/29/24 14:48	HLA	Mt. Juliet, TN

20241018-M29 199-(SB02)@10 L1790970-03 Solid

Collected by: Alex Fenske | Collected date/time: 10/18/24 10:32 | Received date/time: 10/19/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2388069	1	10/25/24 16:00	10/25/24 16:00	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2387308	1	10/28/24 15:33	10/29/24 00:43	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2389295	1	10/25/24 09:09	10/25/24 11:15	BRT	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2389300	1	10/25/24 09:10	10/25/24 16:10	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2388073	1	10/24/24 15:51	10/25/24 14:05	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2388020	5	10/27/24 23:14	10/29/24 03:10	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2390824	25	10/23/24 08:31	10/28/24 12:11	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2390784	1	10/23/24 08:31	10/28/24 14:23	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2391211	1	10/29/24 08:57	10/29/24 18:39	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2390921	1	10/28/24 16:48	10/29/24 15:05	HLA	Mt. Juliet, TN

20241018-M29 199-(SB02)@20 L1790970-04 Solid

Collected by: Alex Fenske | Collected date/time: 10/18/24 11:14 | Received date/time: 10/19/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2388069	1	10/25/24 16:03	10/25/24 16:03	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2387308	1	10/28/24 15:33	10/29/24 01:08	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2389295	1	10/25/24 09:09	10/25/24 11:15	BRT	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2389300	1	10/25/24 09:10	10/25/24 16:10	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2388073	1	10/24/24 15:51	10/25/24 14:08	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2388020	5	10/27/24 23:14	10/29/24 03:20	JPD	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

20241018-M29 199-(SB02)@20 L1790970-04 Solid

Collected by: Alex Fenske | Collected date/time: 10/18/24 11:14 | Received date/time: 10/19/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2389791	1	10/23/24 08:31	10/26/24 11:32	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2389164	1	10/23/24 08:31	10/26/24 17:04	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2391211	1	10/29/24 08:57	10/29/24 17:42	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2390921	1	10/28/24 16:48	10/29/24 15:59	HLA	Mt. Juliet, TN

20241018-M29 199-(SB02)@30 L1790970-05 Solid

Collected by: Alex Fenske | Collected date/time: 10/18/24 11:59 | Received date/time: 10/19/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2388069	1	10/25/24 16:05	10/25/24 16:05	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2387308	1	10/28/24 15:33	10/29/24 01:14	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2389295	1	10/25/24 09:09	10/25/24 11:15	BRT	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2389300	1	10/25/24 09:10	10/25/24 16:10	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2388073	1	10/24/24 15:51	10/25/24 14:11	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2388020	5	10/27/24 23:14	10/29/24 03:23	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2389791	1	10/23/24 08:31	10/26/24 11:56	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2389164	1	10/23/24 08:31	10/26/24 17:24	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2391211	1	10/29/24 08:57	10/29/24 17:17	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2390921	1	10/28/24 16:48	10/29/24 16:17	HLA	Mt. Juliet, TN

20241018-M29 199-(SB02)@40 L1790970-06 Solid

Collected by: Alex Fenske | Collected date/time: 10/18/24 12:58 | Received date/time: 10/19/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2388069	1	10/25/24 16:08	10/25/24 16:08	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2387308	1	10/28/24 15:33	10/29/24 01:20	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2389295	1	10/25/24 09:09	10/25/24 11:15	BRT	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2389300	1	10/25/24 09:10	10/25/24 16:10	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2388073	1	10/24/24 15:51	10/25/24 14:14	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2388020	25	10/27/24 23:14	10/29/24 10:06	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2388020	5	10/27/24 23:14	10/29/24 03:26	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2390824	25	10/23/24 08:31	10/28/24 12:35	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2390784	1	10/23/24 08:31	10/28/24 14:43	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2391211	1	10/29/24 08:57	10/29/24 17:05	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2390921	1	10/28/24 16:48	10/29/24 16:34	HLA	Mt. Juliet, TN

20241018-M29 199-(SB02)@50 L1790970-07 Solid

Collected by: Alex Fenske | Collected date/time: 10/18/24 14:05 | Received date/time: 10/19/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2388069	1	10/25/24 16:11	10/25/24 16:11	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2387308	1	10/28/24 15:33	10/29/24 01:26	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2389295	1	10/25/24 09:09	10/25/24 11:15	BRT	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2389300	1	10/25/24 09:10	10/25/24 16:10	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2388073	1	10/24/24 15:51	10/25/24 13:04	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2388008	25	10/27/24 23:17	10/29/24 01:44	UNP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2388008	5	10/27/24 23:17	10/28/24 23:37	UNP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2390824	25	10/23/24 08:31	10/28/24 12:58	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2390784	1	10/23/24 08:31	10/28/24 15:04	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2391211	1	10/29/24 08:57	10/29/24 19:18	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2391202	1	10/29/24 10:29	10/30/24 04:43	JDG	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris Ward
Project Manager

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	13.1		1	10/25/2024 15:57	WG2388069

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.279	J	0.255	1.00	1	10/29/2024 00:30	WG2387308

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.33	T8	1	10/25/2024 11:15	WG2389295

Sample Narrative:
L1790970-01 WG2389295: 7.33 at 20C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	9040	umhos/cm		10.0	1	10/25/2024 16:10	WG2389300

Sample Narrative:
L1790970-01 WG2389300: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	1.36		0.0167	0.200	1	10/26/2024 13:20	WG2387264

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.97		0.100	1.00	5	10/29/2024 03:03	WG2388020
Barium	244		0.760	12.5	25	10/29/2024 10:00	WG2388020
Cadmium	0.109	J	0.0855	1.00	5	10/29/2024 03:03	WG2388020
Copper	9.95		0.132	5.00	5	10/29/2024 03:03	WG2388020
Lead	13.9		0.0990	2.00	5	10/29/2024 03:03	WG2388020
Nickel	13.0		0.197	2.50	5	10/29/2024 03:03	WG2388020
Selenium	0.497	J	0.180	2.50	5	10/29/2024 03:03	WG2388020
Silver	U		0.0865	0.500	5	10/29/2024 03:03	WG2388020
Zinc	40.6		0.740	25.0	5	10/29/2024 03:03	WG2388020

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0803	J	0.0217	0.100	1	10/26/2024 10:46	WG2389791
(S) a,a,a-Trifluorotoluene(FID)	*97.2*			*77.0-120*		*10/26/2024 10:46*	WG2389791

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	10/26/2024 15:43	WG2389831
Toluene	0.00150	J	0.00130	0.00500	1	10/26/2024 15:43	WG2389831
Ethylbenzene	U		0.000737	0.00250	1	10/26/2024 15:43	WG2389831
Xylenes, Total	U		0.000880	0.00650	1	10/26/2024 15:43	WG2389831
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	10/26/2024 15:43	WG2389831
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	10/26/2024 15:43	WG2389831
(S) Toluene-d8	*101*			*75.0-131*		*10/26/2024 15:43*	WG2389831
(S) 4-Bromofluorobenzene	*103*			*67.0-138*		*10/26/2024 15:43*	WG2389831
(S) 1,2-Dichloroethane-d4	*96.1*			*70.0-130*		*10/26/2024 15:43*	WG2389831

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	3.25	J	1.61	4.00	1	10/29/2024 18:39	WG2391211
C28-C36 Motor Oil Range	4.72		0.274	4.00	1	10/29/2024 18:39	WG2391211
(S) o-Terphenyl	*59.3*			*18.0-148*		*10/29/2024 18:39*	WG2391211

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	10/29/2024 14:30	WG2390921
Anthracene	U		0.00230	0.00600	1	10/29/2024 14:30	WG2390921
Benzo(a)anthracene	U		0.00173	0.00600	1	10/29/2024 14:30	WG2390921
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/29/2024 14:30	WG2390921
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/29/2024 14:30	WG2390921
Benzo(a)pyrene	U		0.00179	0.00600	1	10/29/2024 14:30	WG2390921
Chrysene	U		0.00232	0.00600	1	10/29/2024 14:30	WG2390921
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/29/2024 14:30	WG2390921
Fluoranthene	U		0.00227	0.00600	1	10/29/2024 14:30	WG2390921
Fluorene	U		0.00205	0.00600	1	10/29/2024 14:30	WG2390921
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/29/2024 14:30	WG2390921
1-Methylnaphthalene	U		0.00449	0.0200	1	10/29/2024 14:30	WG2390921
2-Methylnaphthalene	U		0.00427	0.0200	1	10/29/2024 14:30	WG2390921
Naphthalene	U		0.00408	0.0200	1	10/29/2024 14:30	WG2390921
Pyrene	U		0.00200	0.00600	1	10/29/2024 14:30	WG2390921
(S) p-Terphenyl-d14	*71.4*			*23.0-120*		*10/29/2024 14:30*	WG2390921
(S) Nitrobenzene-d5	*69.0*			*14.0-149*		*10/29/2024 14:30*	WG2390921
(S) 2-Fluorobiphenyl	*69.1*			*34.0-125*		*10/29/2024 14:30*	WG2390921

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	20.0		1	10/27/2024 20:09	WG2388071

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	10/29/2024 00:37	WG2387308

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.51	T8	1	10/28/2024 07:21	WG2390678

Sample Narrative:

L1790970-02 WG2390678: 7.51 at 20.5C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	15100	umhos/cm		10.0	1	10/28/2024 09:13	WG2390674

Sample Narrative:

L1790970-02 WG2390674: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	2.17		0.0167	0.200	1	10/29/2024 15:47	WG2388077

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.44		0.100	1.00	5	10/29/2024 03:07	WG2388020
Barium	330		0.760	12.5	25	10/29/2024 10:03	WG2388020
Cadmium	0.130	J	0.0855	1.00	5	10/29/2024 03:07	WG2388020
Copper	65.3		0.132	5.00	5	10/29/2024 03:07	WG2388020
Lead	12.9		0.0990	2.00	5	10/29/2024 03:07	WG2388020
Nickel	13.2		0.197	2.50	5	10/29/2024 03:07	WG2388020
Selenium	0.504	J	0.180	2.50	5	10/29/2024 03:07	WG2388020
Silver	U		0.0865	0.500	5	10/29/2024 03:07	WG2388020
Zinc	45.3		0.740	25.0	5	10/29/2024 03:07	WG2388020

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0527	J	0.0217	0.100	1	10/26/2024 11:09	WG2389791
(S) a,a,a-Trifluorotoluene(FID)	*97.2*			*77.0-120*		*10/26/2024 11:09*	WG2389791

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	10/26/2024 16:44	WG2389164
Toluene	0.00133	J	0.00130	0.00500	1	10/26/2024 16:44	WG2389164
Ethylbenzene	U		0.000737	0.00250	1	10/26/2024 16:44	WG2389164
Xylenes, Total	U		0.000880	0.00650	1	10/26/2024 16:44	WG2389164
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	10/26/2024 16:44	WG2389164
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	10/26/2024 16:44	WG2389164
(S) Toluene-d8	*102*			*75.0-131*		*10/26/2024 16:44*	WG2389164
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*10/26/2024 16:44*	WG2389164
(S) 1,2-Dichloroethane-d4	*89.8*			*70.0-130*		*10/26/2024 16:44*	WG2389164

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	87.7		1.61	4.00	1	10/29/2024 18:52	WG2391211
C28-C36 Motor Oil Range	38.2		0.274	4.00	1	10/29/2024 18:52	WG2391211
(S) o-Terphenyl	*35.7*			*18.0-148*		*10/29/2024 18:52*	WG2391211

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	10/29/2024 14:48	WG2390921
Anthracene	U		0.00230	0.00600	1	10/29/2024 14:48	WG2390921
Benzo(a)anthracene	U		0.00173	0.00600	1	10/29/2024 14:48	WG2390921
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/29/2024 14:48	WG2390921
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/29/2024 14:48	WG2390921
Benzo(a)pyrene	U		0.00179	0.00600	1	10/29/2024 14:48	WG2390921
Chrysene	U		0.00232	0.00600	1	10/29/2024 14:48	WG2390921
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/29/2024 14:48	WG2390921
Fluoranthene	U		0.00227	0.00600	1	10/29/2024 14:48	WG2390921
Fluorene	U		0.00205	0.00600	1	10/29/2024 14:48	WG2390921
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/29/2024 14:48	WG2390921
1-Methylnaphthalene	U		0.00449	0.0200	1	10/29/2024 14:48	WG2390921
2-Methylnaphthalene	U		0.00427	0.0200	1	10/29/2024 14:48	WG2390921
Naphthalene	U		0.00408	0.0200	1	10/29/2024 14:48	WG2390921
Pyrene	U		0.00200	0.00600	1	10/29/2024 14:48	WG2390921
(S) p-Terphenyl-d14	*62.2*			*23.0-120*		*10/29/2024 14:48*	WG2390921
(S) Nitrobenzene-d5	*65.0*			*14.0-149*		*10/29/2024 14:48*	WG2390921
(S) 2-Fluorobiphenyl	*63.7*			*34.0-125*		*10/29/2024 14:48*	WG2390921

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	18.0		1	10/25/2024 16:00	WG2388069

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	10/29/2024 00:43	WG2387308

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.63	T8	1	10/25/2024 11:15	WG2389295

Sample Narrative:

L1790970-03 WG2389295: 7.63 at 19.8C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	9980	umhos/cm		10.0	1	10/25/2024 16:10	WG2389300

Sample Narrative:

L1790970-03 WG2389300: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	1.94		0.0167	0.200	1	10/25/2024 14:05	WG2388073

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.23		0.100	1.00	5	10/29/2024 03:10	WG2388020
Barium	154		0.152	2.50	5	10/29/2024 03:10	WG2388020
Cadmium	U		0.0855	1.00	5	10/29/2024 03:10	WG2388020
Copper	8.73		0.132	5.00	5	10/29/2024 03:10	WG2388020
Lead	10.4		0.0990	2.00	5	10/29/2024 03:10	WG2388020
Nickel	18.1		0.197	2.50	5	10/29/2024 03:10	WG2388020
Selenium	0.420	J	0.180	2.50	5	10/29/2024 03:10	WG2388020
Silver	U		0.0865	0.500	5	10/29/2024 03:10	WG2388020
Zinc	46.4		0.740	25.0	5	10/29/2024 03:10	WG2388020

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	3.66	B	0.543	2.50	25	10/28/2024 12:11	WG2390824
(S) a,a,a-Trifluorotoluene(FID)	*99.1*			*77.0-120*		*10/28/2024 12:11*	WG2390824

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U	J3	0.000467	0.00100	1	10/28/2024 14:23	WG2390784
Toluene	0.00240	B J J3	0.00130	0.00500	1	10/28/2024 14:23	WG2390784
Ethylbenzene	0.00105	J	0.000737	0.00250	1	10/28/2024 14:23	WG2390784
Xylenes, Total	0.0168		0.000880	0.00650	1	10/28/2024 14:23	WG2390784
1,2,4-Trimethylbenzene	0.0701	J3	0.00158	0.00500	1	10/28/2024 14:23	WG2390784
1,3,5-Trimethylbenzene	0.0284	J3	0.00200	0.00500	1	10/28/2024 14:23	WG2390784
(S) Toluene-d8	*99.9*			*75.0-131*		*10/28/2024 14:23*	WG2390784
(S) 4-Bromofluorobenzene	*106*			*67.0-138*		*10/28/2024 14:23*	WG2390784
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*10/28/2024 14:23*	WG2390784

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	114		1.61	4.00	1	10/29/2024 18:39	WG2391211
C28-C36 Motor Oil Range	45.3		0.274	4.00	1	10/29/2024 18:39	WG2391211
(S) o-Terphenyl	*48.7*			*18.0-148*		*10/29/2024 18:39*	WG2391211

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	10/29/2024 15:05	WG2390921
Anthracene	U		0.00230	0.00600	1	10/29/2024 15:05	WG2390921
Benzo(a)anthracene	U		0.00173	0.00600	1	10/29/2024 15:05	WG2390921
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/29/2024 15:05	WG2390921
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/29/2024 15:05	WG2390921
Benzo(a)pyrene	U		0.00179	0.00600	1	10/29/2024 15:05	WG2390921
Chrysene	U		0.00232	0.00600	1	10/29/2024 15:05	WG2390921
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/29/2024 15:05	WG2390921
Fluoranthene	U		0.00227	0.00600	1	10/29/2024 15:05	WG2390921
Fluorene	0.0135		0.00205	0.00600	1	10/29/2024 15:05	WG2390921
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/29/2024 15:05	WG2390921
1-Methylnaphthalene	0.0689		0.00449	0.0200	1	10/29/2024 15:05	WG2390921
2-Methylnaphthalene	0.103	J6	0.00427	0.0200	1	10/29/2024 15:05	WG2390921
Naphthalene	0.0132	J	0.00408	0.0200	1	10/29/2024 15:05	WG2390921
Pyrene	U		0.00200	0.00600	1	10/29/2024 15:05	WG2390921
(S) p-Terphenyl-d14	*75.6*			*23.0-120*		*10/29/2024 15:05*	WG2390921
(S) Nitrobenzene-d5	*78.6*			*14.0-149*		*10/29/2024 15:05*	WG2390921
(S) 2-Fluorobiphenyl	*73.9*			*34.0-125*		*10/29/2024 15:05*	WG2390921

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	15.4		1	10/25/2024 16:03	WG2388069

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	10/29/2024 01:08	WG2387308

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.70	T8	1	10/25/2024 11:15	WG2389295

Sample Narrative:

L1790970-04 WG2389295: 7.7 at 19.7C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	7920	umhos/cm		10.0	1	10/25/2024 16:10	WG2389300

Sample Narrative:

L1790970-04 WG2389300: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	1.03		0.0167	0.200	1	10/25/2024 14:08	WG2388073

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.65		0.100	1.00	5	10/29/2024 03:20	WG2388020
Barium	177		0.152	2.50	5	10/29/2024 03:20	WG2388020
Cadmium	0.118	J	0.0855	1.00	5	10/29/2024 03:20	WG2388020
Copper	11.8		0.132	5.00	5	10/29/2024 03:20	WG2388020
Lead	13.9		0.0990	2.00	5	10/29/2024 03:20	WG2388020
Nickel	16.4		0.197	2.50	5	10/29/2024 03:20	WG2388020
Selenium	1.37	J	0.180	2.50	5	10/29/2024 03:20	WG2388020
Silver	U		0.0865	0.500	5	10/29/2024 03:20	WG2388020
Zinc	48.5		0.740	25.0	5	10/29/2024 03:20	WG2388020

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0765	J	0.0217	0.100	1	10/26/2024 11:32	WG2389791
(S) a,a,a-Trifluorotoluene(FID)	*96.6*			*77.0-120*		*10/26/2024 11:32*	WG2389791

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	10/26/2024 17:04	WG2389164
Toluene	0.00147	J	0.00130	0.00500	1	10/26/2024 17:04	WG2389164
Ethylbenzene	U		0.000737	0.00250	1	10/26/2024 17:04	WG2389164
Xylenes, Total	U		0.000880	0.00650	1	10/26/2024 17:04	WG2389164
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	10/26/2024 17:04	WG2389164
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	10/26/2024 17:04	WG2389164
(S) Toluene-d8	*101*			*75.0-131*		*10/26/2024 17:04*	WG2389164
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*10/26/2024 17:04*	WG2389164
(S) 1,2-Dichloroethane-d4	*90.4*			*70.0-130*		*10/26/2024 17:04*	WG2389164

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	60.7		1.61	4.00	1	10/29/2024 17:42	WG2391211
C28-C36 Motor Oil Range	23.5		0.274	4.00	1	10/29/2024 17:42	WG2391211
(S) o-Terphenyl	*67.9*			*18.0-148*		*10/29/2024 17:42*	WG2391211

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	10/29/2024 15:59	WG2390921
Anthracene	U		0.00230	0.00600	1	10/29/2024 15:59	WG2390921
Benzo(a)anthracene	U		0.00173	0.00600	1	10/29/2024 15:59	WG2390921
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/29/2024 15:59	WG2390921
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/29/2024 15:59	WG2390921
Benzo(a)pyrene	U		0.00179	0.00600	1	10/29/2024 15:59	WG2390921
Chrysene	U		0.00232	0.00600	1	10/29/2024 15:59	WG2390921
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/29/2024 15:59	WG2390921
Fluoranthene	U		0.00227	0.00600	1	10/29/2024 15:59	WG2390921
Fluorene	0.00372	J	0.00205	0.00600	1	10/29/2024 15:59	WG2390921
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/29/2024 15:59	WG2390921
1-Methylnaphthalene	0.0161	J	0.00449	0.0200	1	10/29/2024 15:59	WG2390921
2-Methylnaphthalene	0.0231		0.00427	0.0200	1	10/29/2024 15:59	WG2390921
Naphthalene	U		0.00408	0.0200	1	10/29/2024 15:59	WG2390921
Pyrene	U		0.00200	0.00600	1	10/29/2024 15:59	WG2390921
(S) p-Terphenyl-d14	*46.9*			*23.0-120*		*10/29/2024 15:59*	WG2390921
(S) Nitrobenzene-d5	*51.3*			*14.0-149*		*10/29/2024 15:59*	WG2390921
(S) 2-Fluorobiphenyl	*48.6*			*34.0-125*		*10/29/2024 15:59*	WG2390921

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.67		1	10/25/2024 16:05	WG2388069

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	10/29/2024 01:14	WG2387308

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.60	T8	1	10/25/2024 11:15	WG2389295

Sample Narrative:

L1790970-05 WG2389295: 7.6 at 19.8C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	4250	umhos/cm		10.0	1	10/25/2024 16:10	WG2389300

Sample Narrative:

L1790970-05 WG2389300: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.215		0.0167	0.200	1	10/25/2024 14:11	WG2388073

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.74		0.100	1.00	5	10/29/2024 03:23	WG2388020
Barium	160		0.152	2.50	5	10/29/2024 03:23	WG2388020
Cadmium	0.187	J	0.0855	1.00	5	10/29/2024 03:23	WG2388020
Copper	15.1		0.132	5.00	5	10/29/2024 03:23	WG2388020
Lead	15.6		0.0990	2.00	5	10/29/2024 03:23	WG2388020
Nickel	17.1		0.197	2.50	5	10/29/2024 03:23	WG2388020
Selenium	1.59	J	0.180	2.50	5	10/29/2024 03:23	WG2388020
Silver	U		0.0865	0.500	5	10/29/2024 03:23	WG2388020
Zinc	51.1		0.740	25.0	5	10/29/2024 03:23	WG2388020

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0488	J	0.0217	0.100	1	10/26/2024 11:56	WG2389791
(S) a,a,a-Trifluorotoluene(FID)	*96.9*			*77.0-120*		*10/26/2024 11:56*	WG2389791

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	10/26/2024 17:24	WG2389164
Toluene	0.00138	J	0.00130	0.00500	1	10/26/2024 17:24	WG2389164
Ethylbenzene	U		0.000737	0.00250	1	10/26/2024 17:24	WG2389164
Xylenes, Total	U		0.000880	0.00650	1	10/26/2024 17:24	WG2389164
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	10/26/2024 17:24	WG2389164
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	10/26/2024 17:24	WG2389164
(S) Toluene-d8	*101*			*75.0-131*		*10/26/2024 17:24*	WG2389164
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*10/26/2024 17:24*	WG2389164
(S) 1,2-Dichloroethane-d4	*86.6*			*70.0-130*		*10/26/2024 17:24*	WG2389164

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	129		1.61	4.00	1	10/29/2024 17:17	WG2391211
C28-C36 Motor Oil Range	57.9		0.274	4.00	1	10/29/2024 17:17	WG2391211
(S) o-Terphenyl	*61.8*			*18.0-148*		*10/29/2024 17:17*	WG2391211

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	10/29/2024 16:17	WG2390921
Anthracene	U		0.00230	0.00600	1	10/29/2024 16:17	WG2390921
Benzo(a)anthracene	U		0.00173	0.00600	1	10/29/2024 16:17	WG2390921
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/29/2024 16:17	WG2390921
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/29/2024 16:17	WG2390921
Benzo(a)pyrene	U		0.00179	0.00600	1	10/29/2024 16:17	WG2390921
Chrysene	U		0.00232	0.00600	1	10/29/2024 16:17	WG2390921
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/29/2024 16:17	WG2390921
Fluoranthene	U		0.00227	0.00600	1	10/29/2024 16:17	WG2390921
Fluorene	U		0.00205	0.00600	1	10/29/2024 16:17	WG2390921
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/29/2024 16:17	WG2390921
1-Methylnaphthalene	U		0.00449	0.0200	1	10/29/2024 16:17	WG2390921
2-Methylnaphthalene	U		0.00427	0.0200	1	10/29/2024 16:17	WG2390921
Naphthalene	U		0.00408	0.0200	1	10/29/2024 16:17	WG2390921
Pyrene	U		0.00200	0.00600	1	10/29/2024 16:17	WG2390921
(S) p-Terphenyl-d14	*59.7*			*23.0-120*		*10/29/2024 16:17*	WG2390921
(S) Nitrobenzene-d5	*65.1*			*14.0-149*		*10/29/2024 16:17*	WG2390921
(S) 2-Fluorobiphenyl	*61.9*			*34.0-125*		*10/29/2024 16:17*	WG2390921

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.34		1	10/25/2024 16:08	WG2388069

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	10/29/2024 01:20	WG2387308

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.66	T8	1	10/25/2024 11:15	WG2389295

Sample Narrative:

L1790970-06 WG2389295: 7.66 at 19.9C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	3460	umhos/cm		10.0	1	10/25/2024 16:10	WG2389300

Sample Narrative:

L1790970-06 WG2389300: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.390		0.0167	0.200	1	10/25/2024 14:14	WG2388073

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.75		0.100	1.00	5	10/29/2024 03:26	WG2388020
Barium	190		0.760	12.5	25	10/29/2024 10:06	WG2388020
Cadmium	0.165	J	0.0855	1.00	5	10/29/2024 03:26	WG2388020
Copper	16.9		0.132	5.00	5	10/29/2024 03:26	WG2388020
Lead	16.5		0.0990	2.00	5	10/29/2024 03:26	WG2388020
Nickel	12.9		0.197	2.50	5	10/29/2024 03:26	WG2388020
Selenium	1.14	J	0.180	2.50	5	10/29/2024 03:26	WG2388020
Silver	U		0.0865	0.500	5	10/29/2024 03:26	WG2388020
Zinc	39.7		0.740	25.0	5	10/29/2024 03:26	WG2388020

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	1.65	B J	0.543	2.50	25	10/28/2024 12:35	WG2390824
(S) a,a,a-Trifluorotoluene(FID)	*102*			*77.0-120*		*10/28/2024 12:35*	WG2390824

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U	J3	0.000467	0.00100	1	10/28/2024 14:43	WG2390784
Toluene	0.00173	B J J3	0.00130	0.00500	1	10/28/2024 14:43	WG2390784
Ethylbenzene	U		0.000737	0.00250	1	10/28/2024 14:43	WG2390784
Xylenes, Total	0.00250	J	0.000880	0.00650	1	10/28/2024 14:43	WG2390784
1,2,4-Trimethylbenzene	U	J3	0.00158	0.00500	1	10/28/2024 14:43	WG2390784
1,3,5-Trimethylbenzene	U	J3	0.00200	0.00500	1	10/28/2024 14:43	WG2390784
(S) Toluene-d8	*99.4*			*75.0-131*		*10/28/2024 14:43*	WG2390784
(S) 4-Bromofluorobenzene	*100*			*67.0-138*		*10/28/2024 14:43*	WG2390784
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*10/28/2024 14:43*	WG2390784

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	35.0		1.61	4.00	1	10/29/2024 17:05	WG2391211
C28-C36 Motor Oil Range	11.6		0.274	4.00	1	10/29/2024 17:05	WG2391211
(S) o-Terphenyl	*58.2*			*18.0-148*		*10/29/2024 17:05*	WG2391211

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	10/29/2024 16:34	WG2390921
Anthracene	U		0.00230	0.00600	1	10/29/2024 16:34	WG2390921
Benzo(a)anthracene	U		0.00173	0.00600	1	10/29/2024 16:34	WG2390921
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/29/2024 16:34	WG2390921
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/29/2024 16:34	WG2390921
Benzo(a)pyrene	U		0.00179	0.00600	1	10/29/2024 16:34	WG2390921
Chrysene	U		0.00232	0.00600	1	10/29/2024 16:34	WG2390921
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/29/2024 16:34	WG2390921
Fluoranthene	U		0.00227	0.00600	1	10/29/2024 16:34	WG2390921
Fluorene	U		0.00205	0.00600	1	10/29/2024 16:34	WG2390921
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/29/2024 16:34	WG2390921
1-Methylnaphthalene	U		0.00449	0.0200	1	10/29/2024 16:34	WG2390921
2-Methylnaphthalene	U		0.00427	0.0200	1	10/29/2024 16:34	WG2390921
Naphthalene	U		0.00408	0.0200	1	10/29/2024 16:34	WG2390921
Pyrene	U		0.00200	0.00600	1	10/29/2024 16:34	WG2390921
(S) p-Terphenyl-d14	*69.9*			*23.0-120*		*10/29/2024 16:34*	WG2390921
(S) Nitrobenzene-d5	*67.2*			*14.0-149*		*10/29/2024 16:34*	WG2390921
(S) 2-Fluorobiphenyl	*68.8*			*34.0-125*		*10/29/2024 16:34*	WG2390921

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.97		1	10/25/2024 16:11	WG2388069

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	1.37		0.255	1.00	1	10/29/2024 01:26	WG2387308

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.85	T8	1	10/25/2024 11:15	WG2389295

Sample Narrative:

L1790970-07 WG2389295: 7.85 at 19.6C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	1980	umhos/cm		10.0	1	10/25/2024 16:10	WG2389300

Sample Narrative:

L1790970-07 WG2389300: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.203		0.0167	0.200	1	10/25/2024 13:04	WG2388073

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.39		0.100	1.00	5	10/28/2024 23:37	WG2388008
Barium	397		0.760	12.5	25	10/29/2024 01:44	WG2388008
Cadmium	0.105	J	0.0855	1.00	5	10/28/2024 23:37	WG2388008
Copper	15.0		0.132	5.00	5	10/28/2024 23:37	WG2388008
Lead	12.6		0.0990	2.00	5	10/28/2024 23:37	WG2388008
Nickel	15.0		0.197	2.50	5	10/28/2024 23:37	WG2388008
Selenium	0.512	J	0.180	2.50	5	10/28/2024 23:37	WG2388008
Silver	U		0.0865	0.500	5	10/28/2024 23:37	WG2388008
Zinc	44.3		0.740	25.0	5	10/28/2024 23:37	WG2388008

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.858	B J	0.543	2.50	25	10/28/2024 12:58	WG2390824
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*		*10/28/2024 12:58*	WG2390824

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U	J3	0.000467	0.00100	1	10/28/2024 15:04	WG2390784
Toluene	0.00138	B J J3	0.00130	0.00500	1	10/28/2024 15:04	WG2390784
Ethylbenzene	U		0.000737	0.00250	1	10/28/2024 15:04	WG2390784
Xylenes, Total	0.00128	J	0.000880	0.00650	1	10/28/2024 15:04	WG2390784
1,2,4-Trimethylbenzene	U	J3	0.00158	0.00500	1	10/28/2024 15:04	WG2390784
1,3,5-Trimethylbenzene	U	J3	0.00200	0.00500	1	10/28/2024 15:04	WG2390784
(S) Toluene-d8	*98.6*			*75.0-131*		*10/28/2024 15:04*	WG2390784
(S) 4-Bromofluorobenzene	*100*			*67.0-138*		*10/28/2024 15:04*	WG2390784
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*10/28/2024 15:04*	WG2390784

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	61.8		1.61	4.00	1	10/29/2024 19:18	WG2391211
C28-C36 Motor Oil Range	27.0		0.274	4.00	1	10/29/2024 19:18	WG2391211
(S) o-Terphenyl	*38.6*			*18.0-148*		*10/29/2024 19:18*	WG2391211

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	10/30/2024 04:43	WG2391202
Anthracene	U		0.00230	0.00600	1	10/30/2024 04:43	WG2391202
Benzo(a)anthracene	U		0.00173	0.00600	1	10/30/2024 04:43	WG2391202
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/30/2024 04:43	WG2391202
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/30/2024 04:43	WG2391202
Benzo(a)pyrene	U		0.00179	0.00600	1	10/30/2024 04:43	WG2391202
Chrysene	U		0.00232	0.00600	1	10/30/2024 04:43	WG2391202
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/30/2024 04:43	WG2391202
Fluoranthene	U		0.00227	0.00600	1	10/30/2024 04:43	WG2391202
Fluorene	U		0.00205	0.00600	1	10/30/2024 04:43	WG2391202
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/30/2024 04:43	WG2391202
1-Methylnaphthalene	U		0.00449	0.0200	1	10/30/2024 04:43	WG2391202
2-Methylnaphthalene	U		0.00427	0.0200	1	10/30/2024 04:43	WG2391202
Naphthalene	U		0.00408	0.0200	1	10/30/2024 04:43	WG2391202
Pyrene	U		0.00200	0.00600	1	10/30/2024 04:43	WG2391202
(S) p-Terphenyl-d14	*59.4*			*23.0-120*		*10/30/2024 04:43*	WG2391202
(S) Nitrobenzene-d5	*51.4*			*14.0-149*		*10/30/2024 04:43*	WG2391202
(S) 2-Fluorobiphenyl	*58.1*			*34.0-125*		*10/30/2024 04:43*	WG2391202

Method Blank (MB)

(MB) R4138775-1 10/28/24 22:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Hexavalent Chromium	U		0.255	1.00

L1790970-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1790970-03 10/29/24 00:43 • (DUP) R4138775-7 10/29/24 00:49

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	U	U	1	0.000		20

L1791493-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1791493-01 10/29/24 01:32 • (DUP) R4138775-8 10/29/24 01:39

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	0.316	0.280	1	11.9	J	20

Laboratory Control Sample (LCS)

(LCS) R4138775-2 10/28/24 22:45

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	10.4	104	80.0-120	

L1790947-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790947-03 10/28/24 23:22 • (MS) R4138775-3 10/28/24 23:29 • (MSD) R4138775-4 10/28/24 23:35

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	20.0	U	20.0	20.8	100	104	1	75.0-125			3.66	20

L1790947-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1790947-03 10/28/24 23:22 • (MS) R4138775-5 10/28/24 23:53

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	654	U	573	87.6	50	75.0-125	

L1789878-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1789878-04 10/25/24 11:15 • (DUP) R4137644-2 10/25/24 11:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	7.94	7.91	1	0.379		1

Sample Narrative:

OS: 7.94 at 20.3C

DUP: 7.91 at 20.4C

L1790970-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1790970-06 10/25/24 11:15 • (DUP) R4137644-3 10/25/24 11:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	7.66	7.67	1	0.130		1

Sample Narrative:

OS: 7.66 at 19.9C

DUP: 7.67 at 20.2C

Laboratory Control Sample (LCS)

(LCS) R4137644-1 10/25/24 11:15

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	9.99	99.9	99.0-101	

Sample Narrative:

LCS: 9.99 at 19.7C

L1790944-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1790944-03 10/28/24 07:21 • (DUP) R4138269-2 10/28/24 07:21

Analyte	Original Result su	DUP Result su	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
pH	7.18	7.23	1	0.694		1

Sample Narrative:

OS: 7.18 at 21.4C

DUP: 7.23 at 21.2C

L1790947-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1790947-05 10/28/24 07:21 • (DUP) R4138269-3 10/28/24 07:21

Analyte	Original Result pH	DUP Result su	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
pH	8.07	8.04	1	0.372		1

Sample Narrative:

OS: 8.07 at 20.7C

DUP: 8.04 at 20.8C

Laboratory Control Sample (LCS)

(LCS) R4138269-1 10/28/24 07:21

Analyte	Spike Amount su	LCS Result su	LCS Rec. %	Rec. Limits %	LCS Qualifier
pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10.01 at 20.3C

Method Blank (MB)

(MB) R4137822-1 10/25/24 16:10

Analyte	MB Result umhos/cm	MB Qualifier	MB MDL umhos/cm	MB RDL umhos/cm
Specific Conductance	U		10.0	10.0

Sample Narrative:
BLANK: at 25C

L1789878-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1789878-03 10/25/24 16:10 • (DUP) R4137822-3 10/25/24 16:10

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	408	407	1	0.245		20

Sample Narrative:
OS: at 25C
DUP: at 25C

L1790970-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1790970-05 10/25/24 16:10 • (DUP) R4137822-4 10/25/24 16:10

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	4250	4240	1	0.236		20

Sample Narrative:
OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4137822-2 10/25/24 16:10

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	733	747	102	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R4138364-1 10/28/24 09:13

Analyte	MB Result umhos/cm	MB Qualifier	MB MDL umhos/cm	MB RDL umhos/cm
Specific Conductance	U		10.0	10.0

Sample Narrative:
BLANK: at 25C

L1790944-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1790944-04 10/28/24 09:13 • (DUP) R4138364-3 10/28/24 09:13

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	213	210	1	1.56		20

Sample Narrative:
OS: at 25C
DUP: at 25C

L1790947-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1790947-07 10/28/24 09:13 • (DUP) R4138364-4 10/28/24 09:13

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	502	499	1	0.599		20

Sample Narrative:
OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4138364-2 10/28/24 09:13

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	733	702	95.8	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R4138074-1 10/26/24 12:23

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	U		0.0167	0.200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4138074-2 10/26/24 12:26 • (LCSD) R4138074-3 10/26/24 12:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.03	1.03	103	103	80.0-120			0.0918	20

Method Blank (MB)

(MB) R4137727-1 10/25/24 13:15

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	U		0.0167	0.200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4137727-2 10/25/24 13:17 • (LCSD) R4137727-3 10/25/24 13:20

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.01	1.02	101	102	80.0-120			0.734	20

Method Blank (MB)

(MB) R4139252-1 10/29/24 15:13

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	U		0.0167	0.200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4139252-2 10/29/24 15:15 • (LCSD) R4139252-3 10/29/24 15:16

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.09	1.12	109	112	80.0-120			3.17	20

Method Blank (MB)

(MB) R4138762-1 10/28/24 22:44

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Copper	U		0.133	5.00
Lead	U		0.0990	2.00
Nickel	U		0.197	2.50
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

Laboratory Control Sample (LCS)

(LCS) R4138762-2 10/28/24 22:47

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	96.1	96.1	80.0-120	
Barium	100	94.1	94.1	80.0-120	
Cadmium	100	99.4	99.4	80.0-120	
Copper	100	94.2	94.2	80.0-120	
Lead	100	94.2	94.2	80.0-120	
Nickel	100	97.8	97.8	80.0-120	
Selenium	100	96.7	96.7	80.0-120	
Silver	20.0	19.5	97.6	80.0-120	
Zinc	100	95.1	95.1	80.0-120	

L1790942-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790942-06 10/28/24 22:51 • (MS) R4138762-5 10/28/24 23:00 • (MSD) R4138762-6 10/28/24 23:04

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	2.58	112	105	109	103	5	75.0-125			5.98	20
Barium	100	2350	2770	1240	416	0.000	5	75.0-125	E V	E J3 V	76.1	20
Cadmium	100	0.218	112	107	112	107	5	75.0-125			4.54	20
Copper	100	8.75	118	110	110	101	5	75.0-125			7.57	20
Lead	100	7.30	117	106	110	98.8	5	75.0-125			10.0	20
Nickel	100	8.63	116	110	107	101	5	75.0-125			4.93	20
Selenium	100	0.668	107	102	107	102	5	75.0-125			4.64	20
Silver	20.0	U	22.5	20.6	113	103	5	75.0-125			8.70	20
Zinc	100	41.2	141	131	99.5	90.1	5	75.0-125			6.90	20

Method Blank (MB)

(MB) R4138831-1 10/29/24 01:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Copper	U		0.133	5.00
Lead	U		0.0990	2.00
Nickel	U		0.197	2.50
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

Laboratory Control Sample (LCS)

(LCS) R4138831-2 10/29/24 02:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	100	100	80.0-120	
Barium	100	96.2	96.2	80.0-120	
Cadmium	100	103	103	80.0-120	
Copper	100	95.0	95.0	80.0-120	
Lead	100	93.4	93.4	80.0-120	
Nickel	100	103	103	80.0-120	
Selenium	100	105	105	80.0-120	
Silver	20.0	20.3	102	80.0-120	
Zinc	100	101	101	80.0-120	

L1790836-23 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790836-23 10/29/24 02:06 • (MS) R4138831-5 10/29/24 02:16 • (MSD) R4138831-6 10/29/24 02:19

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	3.43	101	99.8	97.2	96.3	5	75.0-125			0.862	20
Barium	100	37.5	483	138	446	100	5	75.0-125	E J5	J3	111	20
Cadmium	100	U	96.1	98.0	96.1	98.0	5	75.0-125			1.93	20
Copper	100	31.5	135	129	103	97.2	5	75.0-125			4.60	20
Lead	100	2.08	95.7	94.1	93.7	92.0	5	75.0-125			1.73	20
Nickel	100	14.6	115	116	101	102	5	75.0-125			0.886	20
Selenium	100	U	93.7	95.8	93.7	95.8	5	75.0-125			2.20	20
Silver	20.0	U	19.1	19.8	95.5	99.0	5	75.0-125			3.60	20
Zinc	100	31.8	132	135	100	104	5	75.0-125			2.66	20

Method Blank (MB)

(MB) R4139764-2 10/26/24 09:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*99.3*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R4139764-1 10/26/24 08:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.00	4.96	99.2	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*109*	*77.0-120*	

Method Blank (MB)

(MB) R4139635-2 10/28/24 11:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.940	J	0.543	2.50
(S) a,a,a-Trifluorotoluene(FID)	*102*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R4139635-1 10/28/24 10:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.00	4.85	97.0	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*103*	*77.0-120*	

Method Blank (MB)

(MB) R4138310-3 10/26/24 11:00

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	*103*			*75.0-131*
(S) 4-Bromofluorobenzene	*110*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*88.0*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4138310-1 10/26/24 09:21 • (LCSD) R4138310-2 10/26/24 09:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.130	0.135	104	108	70.0-123			3.77	20
Toluene	0.125	0.130	0.126	104	101	75.0-121			3.12	20
Ethylbenzene	0.125	0.133	0.127	106	102	74.0-126			4.62	20
Xylenes, Total	0.375	0.398	0.383	106	102	72.0-127			3.84	20
1,2,4-Trimethylbenzene	0.125	0.140	0.134	112	107	70.0-126			4.38	20
1,3,5-Trimethylbenzene	0.125	0.150	0.139	120	111	73.0-127			7.61	20
(S) Toluene-d8				*95.9*	*96.1*	*75.0-131*				
(S) 4-Bromofluorobenzene				*110*	*106*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*97.2*	*101*	*70.0-130*				

Method Blank (MB)

(MB) R4138321-3 10/26/24 09:14

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	*100*			*75.0-131*
(S) 4-Bromofluorobenzene	*100*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*90.4*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4138321-1 10/26/24 07:39 • (LCSD) R4138321-2 10/26/24 07:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.115	0.130	92.0	104	70.0-123			12.2	20
Toluene	0.125	0.111	0.127	88.8	102	75.0-121			13.4	20
Ethylbenzene	0.125	0.110	0.130	88.0	104	74.0-126			16.7	20
Xylenes, Total	0.375	0.341	0.392	90.9	105	72.0-127			13.9	20
1,2,4-Trimethylbenzene	0.125	0.101	0.122	80.8	97.6	70.0-126			18.8	20
1,3,5-Trimethylbenzene	0.125	0.103	0.125	82.4	100	73.0-127			19.3	20
(S) Toluene-d8				*97.2*	*96.1*	*75.0-131*				
(S) 4-Bromofluorobenzene				*100*	*98.3*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*103*	*100*	*70.0-130*				

Method Blank (MB)

(MB) R4139006-2 10/28/24 11:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	0.00140	J	0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	*98.9*			*75.0-131*
(S) 4-Bromofluorobenzene	*101*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*104*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4139006-1 10/28/24 09:11 • (LCSD) R4139006-3 10/28/24 12:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.113	0.147	90.4	118	70.0-123		J3	26.2	20
Toluene	0.125	0.103	0.127	82.4	102	75.0-121		J3	20.9	20
Ethylbenzene	0.125	0.105	0.127	84.0	102	74.0-126			19.0	20
Xylenes, Total	0.375	0.312	0.381	83.2	102	72.0-127			19.9	20
1,2,4-Trimethylbenzene	0.125	0.101	0.126	80.8	101	70.0-126		J3	22.0	20
1,3,5-Trimethylbenzene	0.125	0.104	0.132	83.2	106	73.0-127		J3	23.7	20
(S) Toluene-d8				*99.9*	*99.7*	*75.0-131*				
(S) 4-Bromofluorobenzene				*101*	*97.4*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*104*	*107*	*70.0-130*				

Method Blank (MB)

(MB) R4139467-1 10/29/24 16:40

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	*66.5*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R4139467-2 10/29/24 16:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	38.2	76.4	50.0-150	
(S) o-Terphenyl			*84.2*	*18.0-148*	

L1790962-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790962-17 10/29/24 19:05 • (MS) R4139467-3 10/29/24 19:18 • (MSD) R4139467-4 10/29/24 19:30

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	49.5	U	36.4	34.6	73.5	69.9	1	50.0-150			5.07	20
(S) o-Terphenyl					*79.2*	*79.4*		*18.0-148*				

Method Blank (MB)

(MB) R4140393-2 10/29/24 11:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00209	0.00600
Anthracene	U		0.00230	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
Naphthalene	U		0.00408	0.0200
Pyrene	U		0.00200	0.00600
(S) p-Terphenyl-d14	*85.3*			*23.0-120*
(S) Nitrobenzene-d5	*80.3*			*14.0-149*
(S) 2-Fluorobiphenyl	*81.8*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R4140393-1 10/29/24 11:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0494	61.8	50.0-120	
Anthracene	0.0800	0.0525	65.6	50.0-126	
Benzo(a)anthracene	0.0800	0.0546	68.3	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0556	69.5	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0534	66.8	49.0-125	
Benzo(a)pyrene	0.0800	0.0470	58.7	42.0-120	
Chrysene	0.0800	0.0549	68.6	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0561	70.1	47.0-125	
Fluoranthene	0.0800	0.0532	66.5	49.0-129	
Fluorene	0.0800	0.0547	68.4	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0546	68.3	46.0-125	
1-Methylnaphthalene	0.0800	0.0576	72.0	51.0-121	
2-Methylnaphthalene	0.0800	0.0563	70.4	50.0-120	
Naphthalene	0.0800	0.0526	65.8	50.0-120	
Pyrene	0.0800	0.0521	65.1	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R4140393-1 10/29/24 11:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			*82.7*	*23.0-120*	
(S) Nitrobenzene-d5			*81.3*	*14.0-149*	
(S) 2-Fluorobiphenyl			*80.7*	*34.0-125*	

L1790970-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790970-03 10/29/24 15:05 • (MS) R4140393-3 10/29/24 15:23 • (MSD) R4140393-4 10/29/24 15:41

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0780	U	0.0430	0.0411	55.1	52.4	1	14.0-127			4.52	27
Anthracene	0.0780	U	0.0398	0.0390	51.0	49.7	1	10.0-145			2.03	30
Benzo(a)anthracene	0.0780	U	0.0443	0.0429	56.8	54.7	1	10.0-139			3.21	30
Benzo(b)fluoranthene	0.0780	U	0.0425	0.0409	54.5	52.2	1	10.0-140			3.84	36
Benzo(k)fluoranthene	0.0780	U	0.0416	0.0399	53.3	50.9	1	10.0-137			4.17	31
Benzo(a)pyrene	0.0780	U	0.0431	0.0413	55.3	52.7	1	10.0-141			4.27	31
Chrysene	0.0780	U	0.0452	0.0426	57.9	54.3	1	10.0-145			5.92	30
Dibenz(a,h)anthracene	0.0780	U	0.0439	0.0421	56.3	53.7	1	10.0-132			4.19	31
Fluoranthene	0.0780	U	0.0435	0.0419	55.8	53.4	1	10.0-153			3.75	33
Fluorene	0.0780	0.0135	0.0548	0.0517	52.9	48.7	1	11.0-130			5.82	29
Indeno(1,2,3-cd)pyrene	0.0780	U	0.0425	0.0408	54.5	52.0	1	10.0-137			4.08	32
1-Methylnaphthalene	0.0780	0.0689	0.0999	0.0863	39.7	22.2	1	10.0-142			14.6	28
2-Methylnaphthalene	0.0780	0.103	0.122	0.103	24.4	0.000	1	10.0-137		J6	16.9	28
Naphthalene	0.0780	0.0132	0.0517	0.0475	49.4	43.8	1	10.0-135			8.47	27
Pyrene	0.0780	U	0.0424	0.0401	54.4	51.1	1	10.0-148			5.58	35
(S) p-Terphenyl-d14					*65.2*	*63.8*		*23.0-120*				
(S) Nitrobenzene-d5					*71.5*	*73.1*		*14.0-149*				
(S) 2-Fluorobiphenyl					*65.2*	*66.5*		*34.0-125*				

Method Blank (MB)

(MB) R4140934-2 10/29/24 23:14

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00209	0.00600
Anthracene	U		0.00230	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
Naphthalene	U		0.00408	0.0200
Pyrene	U		0.00200	0.00600
(S) p-Terphenyl-d14	*93.8*			*23.0-120*
(S) Nitrobenzene-d5	*75.4*			*14.0-149*
(S) 2-Fluorobiphenyl	*88.2*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R4140934-1 10/29/24 22:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0561	70.1	50.0-120	
Anthracene	0.0800	0.0580	72.5	50.0-126	
Benzo(a)anthracene	0.0800	0.0567	70.9	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0621	77.6	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0650	81.3	49.0-125	
Benzo(a)pyrene	0.0800	0.0523	65.4	42.0-120	
Chrysene	0.0800	0.0630	78.8	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0622	77.8	47.0-125	
Fluoranthene	0.0800	0.0609	76.1	49.0-129	
Fluorene	0.0800	0.0612	76.5	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0577	72.1	46.0-125	
1-Methylnaphthalene	0.0800	0.0615	76.9	51.0-121	
2-Methylnaphthalene	0.0800	0.0595	74.4	50.0-120	
Naphthalene	0.0800	0.0575	71.9	50.0-120	
Pyrene	0.0800	0.0601	75.1	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R4140934-1 10/29/24 22:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			*92.7*	*23.0-120*	
(S) Nitrobenzene-d5			*82.6*	*14.0-149*	
(S) 2-Fluorobiphenyl			*91.0*	*34.0-125*	

L1790792-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790792-01 10/30/24 08:46 • (MS) R4140934-3 10/30/24 09:03 • (MSD) R4140934-4 10/30/24 09:20

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0788	U	0.0486	0.0438	61.7	55.6	1	14.0-127			10.4	27
Anthracene	0.0788	U	0.0501	0.0455	63.6	57.7	1	10.0-145			9.62	30
Benzo(a)anthracene	0.0788	U	0.0506	0.0469	64.2	59.5	1	10.0-139			7.59	30
Benzo(b)fluoranthene	0.0788	U	0.0550	0.0492	69.8	62.4	1	10.0-140			11.1	36
Benzo(k)fluoranthene	0.0788	U	0.0543	0.0484	68.9	61.4	1	10.0-137			11.5	31
Benzo(a)pyrene	0.0788	U	0.0531	0.0479	67.4	60.8	1	10.0-141			10.3	31
Chrysene	0.0788	U	0.0562	0.0504	71.3	64.0	1	10.0-145			10.9	30
Dibenz(a,h)anthracene	0.0788	U	0.0553	0.0498	70.2	63.2	1	10.0-132			10.5	31
Fluoranthene	0.0788	U	0.0556	0.0501	70.6	63.6	1	10.0-153			10.4	33
Fluorene	0.0788	U	0.0537	0.0483	68.1	61.3	1	11.0-130			10.6	29
Indeno(1,2,3-cd)pyrene	0.0788	U	0.0536	0.0477	68.0	60.5	1	10.0-137			11.6	32
1-Methylnaphthalene	0.0788	U	0.0539	0.0488	68.4	61.9	1	10.0-142			9.93	28
2-Methylnaphthalene	0.0788	U	0.0516	0.0469	65.5	59.5	1	10.0-137			9.54	28
Naphthalene	0.0788	U	0.0499	0.0454	63.3	57.6	1	10.0-135			9.44	27
Pyrene	0.0788	U	0.0540	0.0482	68.5	61.2	1	10.0-148			11.4	35
(S) p-Terphenyl-d14					*81.1*	*72.5*		*23.0-120*				
(S) Nitrobenzene-d5					*72.8*	*64.8*		*14.0-149*				
(S) 2-Fluorobiphenyl					*81.5*	*72.6*		*34.0-125*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Caerus Oil and Gas
143 Diamond Avenue
Parachute, CO 81635

Billing Information: **SAME AS LEFT**

Report to: **Jake Janicek**

Email To: **jjanicek@qb-energy.com**

Project Description: Corral Creek 4508 investigation

City/State Collected: **Piceance Crk, CO**

Please Circle: PT MT CT ET

Phone: **(970) 778-2314**

Client Project # ----------

Lab Project # ----------

Collected by (print): **Alex Fenske**

Site/Facility ID # Corral Creek 4508 pad

P.O. # ----------

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote # ----------

Date Results Needed: **Standard TAT**

Chain of Custody Page ___ of ___

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

SDG # 190970
A006

Acctnum:
Template:
Prelogin:
PM:
PB:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	Pres Chk	ECME Table 915-1	EC, pH, SAR	Arsenic, Boron	802	Remarks	Sample # (lab only)
20241018-MZ9199-(SB02)@01	Grab	SS	1	10/18/24	8:50	4		X					-01
20241018-MZ9199-(SB02)@05			5		9:06	4		X					-02
20241018-MZ9199-(SB02)@10			10		10:32	4		X					-03
20241018-MZ9199-(SB02)@20			20		11:14	4		X					-04
20241018-MZ9199-(SB02)@30			30		11:59	4		X					-05
20241018-MZ9199-(SB02)@40			40		12:58	4		X					-06
20241018-MZ9199-(SB02)@50			50		14:05	4		X					-07

Alex Fenske 10/18/24

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 7315 3203 0345

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Relinquished by : (Signature) Alex Fenske	Date: 10/18/24	Time: 16:55	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by : (Signature)	Date: 10/18/24	Time: 1730	Received by: (Signature)	Temp: .4+.3=.4 °C Bottles Received:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10-19-24 Time: 9:00

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK