

Caerus Oil and Gas

Sample Delivery Group: L1709068
Samples Received: 02/24/2024
Project Number:
Description: J14 496 22C-14
Site: J14 496 22C-14
Report To: Jake J. / Brett M. / Blair R. / Andy V.
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



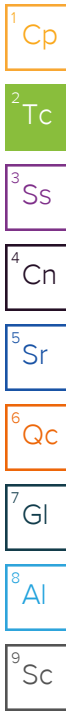
Chris Ward
Project Manager

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Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

20240222-ELU J14 496-(22C-14-POR)@4 L1709068-01 Solid Collected by Alexis Hitzeroth Collected date/time 02/22/24 11:55 Received date/time 02/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2235121	1	02/29/24 10:09	02/29/24 10:09	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2233868	1	02/27/24 22:20	02/28/24 06:23	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2233707	1	02/27/24 12:03	02/27/24 13:50	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2233709	1	02/29/24 09:44	03/01/24 10:00	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2235122	1	02/28/24 08:34	02/28/24 16:56	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2233665	25	02/26/24 22:24	02/28/24 12:42	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2233665	5	02/26/24 22:24	02/28/24 00:05	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2236366	1	02/28/24 19:00	02/29/24 06:20	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2236647	1	02/28/24 19:00	02/29/24 11:12	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2235054	5	02/27/24 14:47	02/29/24 12:40	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2235041	1	02/27/24 15:06	02/28/24 05:04	AGW	Mt. Juliet, TN

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

20240222-ELU J14 496-(22C-14-BASE)@4 L1709068-02 Solid Collected by Alexis Hitzeroth Collected date/time 02/22/24 12:05 Received date/time 02/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2235121	1	02/29/24 10:12	02/29/24 10:12	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2233868	1	02/27/24 22:20	02/28/24 06:36	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2233701	1	02/25/24 11:13	02/26/24 12:14	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2233709	1	02/29/24 09:44	03/01/24 10:00	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2235122	1	02/28/24 08:34	02/28/24 16:58	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2233665	5	02/26/24 22:24	02/28/24 00:08	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2233665	50	02/26/24 22:24	02/28/24 12:45	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2236366	1.01	02/28/24 19:00	02/29/24 06:39	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2236647	1	02/28/24 19:00	02/29/24 11:31	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2235054	1	02/27/24 14:47	02/29/24 03:10	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2235041	1	02/27/24 15:06	02/28/24 05:22	AGW	Mt. Juliet, TN

20240222-ELU J14 496-(22C-14-NW)@3 L1709068-03 Solid Collected by Alexis Hitzeroth Collected date/time 02/22/24 12:10 Received date/time 02/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2235121	1	02/29/24 10:15	02/29/24 10:15	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2233868	1	02/27/24 22:20	02/28/24 06:54	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2233701	1	02/25/24 11:13	02/26/24 12:14	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2233709	1	02/29/24 09:44	03/01/24 10:00	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2235122	1	02/28/24 08:34	02/28/24 16:59	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2233665	5	02/26/24 22:24	02/28/24 00:11	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2236366	1.01	02/28/24 19:00	02/29/24 06:58	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2236647	1	02/28/24 19:00	02/29/24 12:10	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2235054	1	02/27/24 14:47	02/29/24 02:33	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2235041	1	02/27/24 15:06	02/28/24 05:40	AGW	Mt. Juliet, TN

20240222-ELU J14 496-(22C-14-EW)@3 L1709068-04 Solid Collected by Alexis Hitzeroth Collected date/time 02/22/24 12:30 Received date/time 02/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2235121	1	02/29/24 10:18	02/29/24 10:18	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2233868	1	02/27/24 22:20	02/28/24 07:01	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2233701	1	02/25/24 11:13	02/26/24 12:14	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2233709	1	02/29/24 09:44	03/01/24 10:00	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2235122	1	02/28/24 08:34	02/28/24 17:01	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2233665	100	02/26/24 22:24	02/28/24 12:49	JPD	Mt. Juliet, TN

SAMPLE SUMMARY

				Collected by	Collected date/time	Received date/time
20240222-ELU J14 496-(22C-14-EW)@3 L1709068-04 Solid				Alexis Hitzeroth	02/22/24 12:30	02/24/24 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2233665	5	02/26/24 22:24	02/28/24 00:14	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2236366	1	02/28/24 19:00	02/29/24 07:17	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2236647	1	02/28/24 19:00	02/29/24 12:29	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2235054	1	02/27/24 14:47	02/29/24 02:58	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2235041	1	02/27/24 15:06	02/28/24 05:57	AGW	Mt. Juliet, TN



				Collected by	Collected date/time	Received date/time
20240222-ELU J14 496-(22C-14-SW)@3 L1709068-05 Solid				Alexis Hitzeroth	02/22/24 12:20	02/24/24 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2235121	1	02/29/24 10:21	02/29/24 10:21	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2233868	1	02/27/24 22:20	02/28/24 07:07	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2233701	1	02/25/24 11:13	02/26/24 12:14	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2233709	1	02/29/24 09:44	03/01/24 10:00	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2235122	1	02/28/24 08:34	02/28/24 17:03	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2233665	5	02/26/24 22:24	02/28/24 00:18	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2233665	50	02/26/24 22:24	02/28/24 12:52	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2236366	1	02/28/24 19:00	02/29/24 07:37	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2236647	1	02/28/24 19:00	02/29/24 12:49	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2235054	1	02/27/24 14:47	02/29/24 02:09	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2235041	1	02/27/24 15:06	02/28/24 06:15	AGW	Mt. Juliet, TN



				Collected by	Collected date/time	Received date/time
20240222-ELU J14 496-(22C-14-WW)@3 L1709068-06 Solid				Alexis Hitzeroth	02/22/24 12:15	02/24/24 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2235121	1	02/29/24 10:43	02/29/24 10:43	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2233868	1	02/27/24 22:20	02/28/24 07:13	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2233701	1	02/25/24 11:13	02/26/24 12:14	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2233709	1	02/29/24 09:44	03/01/24 10:00	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2235122	1	02/28/24 08:34	02/28/24 17:04	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2233665	5	02/26/24 22:24	02/28/24 00:21	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2233665	50	02/26/24 22:24	02/28/24 12:55	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2239138	1	02/28/24 19:00	03/04/24 15:35	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2236647	1	02/28/24 19:00	02/29/24 13:09	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2235054	1	02/27/24 14:47	02/29/24 03:35	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2235041	1	02/27/24 15:06	02/28/24 06:33	AGW	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

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.16		1	02/29/2024 10:09	WG2235121

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	02/28/2024 06:23	WG2233868

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.78	<u>T8</u>	1	02/27/2024 13:50	WG2233707

Sample Narrative:

L1709068-01 WG2233707: 7.78 at 22.3C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	1550		10.0	1	03/01/2024 10:00	WG2233709

Sample Narrative:

L1709068-01 WG2233709: at 25C

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.547		0.200	1	02/28/2024 16:56	WG2235122

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	4.06		1.00	5	02/28/2024 00:05	WG2233665
Barium	17400		12.5	25	02/28/2024 12:42	WG2233665
Cadmium	ND		1.00	5	02/28/2024 00:05	WG2233665
Copper	456		25.0	25	02/28/2024 12:42	WG2233665
Lead	9.91		2.00	5	02/28/2024 00:05	WG2233665
Nickel	13.3		2.50	5	02/28/2024 00:05	WG2233665
Selenium	ND		2.50	5	02/28/2024 00:05	WG2233665
Silver	ND		0.500	5	02/28/2024 00:05	WG2233665
Zinc	125		25.0	5	02/28/2024 00:05	WG2233665

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.641		0.100	1	02/29/2024 06:20	WG2236366
(S) a, a, a-Trifluorotoluene(FID)	88.9		77.0-120		02/29/2024 06:20	WG2236366

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.0111		0.00100	1	02/29/2024 11:12	WG2236647
Toluene	0.0551		0.00500	1	02/29/2024 11:12	WG2236647
Ethylbenzene	0.0115		0.00250	1	02/29/2024 11:12	WG2236647
Xylenes, Total	0.186		0.00650	1	02/29/2024 11:12	WG2236647
1,2,4-Trimethylbenzene	0.117		0.00500	1	02/29/2024 11:12	WG2236647
1,3,5-Trimethylbenzene	0.278		0.00500	1	02/29/2024 11:12	WG2236647
(S) Toluene-d8	105		75.0-131		02/29/2024 11:12	WG2236647
(S) 4-Bromofluorobenzene	86.6		67.0-138		02/29/2024 11:12	WG2236647
(S) 1,2-Dichloroethane-d4	91.7		70.0-130		02/29/2024 11:12	WG2236647

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

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	222		20.0	5	02/29/2024 12:40	WG2235054
C28-C36 Motor Oil Range	436		20.0	5	02/29/2024 12:40	WG2235054
(S) o-Terphenyl	28.9		18.0-148		02/29/2024 12:40	WG2235054

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00600	1	02/28/2024 05:04	WG2235041
Anthracene	ND		0.00600	1	02/28/2024 05:04	WG2235041
Benzo(a)anthracene	ND		0.00600	1	02/28/2024 05:04	WG2235041
Benzo(b)fluoranthene	ND		0.00600	1	02/28/2024 05:04	WG2235041
Benzo(k)fluoranthene	ND		0.00600	1	02/28/2024 05:04	WG2235041
Benzo(a)pyrene	ND		0.00600	1	02/28/2024 05:04	WG2235041
Chrysene	ND		0.00600	1	02/28/2024 05:04	WG2235041
Dibenz(a,h)anthracene	ND		0.00600	1	02/28/2024 05:04	WG2235041
Fluoranthene	ND		0.00600	1	02/28/2024 05:04	WG2235041
Fluorene	0.00766		0.00600	1	02/28/2024 05:04	WG2235041
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	02/28/2024 05:04	WG2235041
1-Methylnaphthalene	ND		0.0200	1	02/28/2024 05:04	WG2235041
2-Methylnaphthalene	0.0424		0.0200	1	02/28/2024 05:04	WG2235041
Naphthalene	0.0226		0.0200	1	02/28/2024 05:04	WG2235041
Pyrene	0.0130		0.00600	1	02/28/2024 05:04	WG2235041
(S) p-Terphenyl-d14	76.0		23.0-120		02/28/2024 05:04	WG2235041
(S) Nitrobenzene-d5	87.4		14.0-149		02/28/2024 05:04	WG2235041
(S) 2-Fluorobiphenyl	74.7		34.0-125		02/28/2024 05:04	WG2235041

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.24		1	02/29/2024 10:12	WG2235121

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	02/28/2024 06:36	WG2233868

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.39	<u>T8</u>	1	02/26/2024 12:14	WG2233701

Sample Narrative:

L1709068-02 WG2233701: 8.39 at 22.6C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	422		10.0	1	03/01/2024 10:00	WG2233709

Sample Narrative:

L1709068-02 WG2233709: at 25C

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

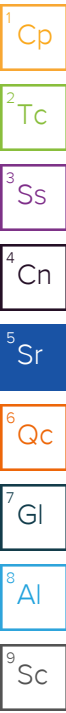
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.296		0.200	1	02/28/2024 16:58	WG2235122

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	3.60		1.00	5	02/28/2024 00:08	WG2233665
Barium	1060		25.0	50	02/28/2024 12:45	WG2233665
Cadmium	ND		1.00	5	02/28/2024 00:08	WG2233665
Copper	21.6		5.00	5	02/28/2024 00:08	WG2233665
Lead	10.1		2.00	5	02/28/2024 00:08	WG2233665
Nickel	19.1		2.50	5	02/28/2024 00:08	WG2233665
Selenium	ND		2.50	5	02/28/2024 00:08	WG2233665
Silver	ND		0.500	5	02/28/2024 00:08	WG2233665
Zinc	43.9		25.0	5	02/28/2024 00:08	WG2233665

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.202	<u>B</u>	0.101	1.01	02/29/2024 06:39	WG2236366
(S) a, a, a-Trifluorotoluene(FID)	88.0		77.0-120		02/29/2024 06:39	WG2236366



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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	02/29/2024 11:31	WG2236647
Toluene	ND		0.00500	1	02/29/2024 11:31	WG2236647
Ethylbenzene	ND		0.00250	1	02/29/2024 11:31	WG2236647
Xylenes, Total	ND		0.00650	1	02/29/2024 11:31	WG2236647
1,2,4-Trimethylbenzene	ND		0.00500	1	02/29/2024 11:31	WG2236647
1,3,5-Trimethylbenzene	0.00745		0.00500	1	02/29/2024 11:31	WG2236647
(S) Toluene-d8	110		75.0-131		02/29/2024 11:31	WG2236647
(S) 4-Bromofluorobenzene	84.5		67.0-138		02/29/2024 11:31	WG2236647
(S) 1,2-Dichloroethane-d4	89.6		70.0-130		02/29/2024 11:31	WG2236647

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	12.5		4.00	1	02/29/2024 03:10	WG2235054
C28-C36 Motor Oil Range	17.4		4.00	1	02/29/2024 03:10	WG2235054
(S) o-Terphenyl	29.8		18.0-148		02/29/2024 03:10	WG2235054

6 Qc
7 Gl
8 Al

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00600	1	02/28/2024 05:22	WG2235041
Anthracene	ND		0.00600	1	02/28/2024 05:22	WG2235041
Benzo(a)anthracene	ND		0.00600	1	02/28/2024 05:22	WG2235041
Benzo(b)fluoranthene	ND		0.00600	1	02/28/2024 05:22	WG2235041
Benzo(k)fluoranthene	ND		0.00600	1	02/28/2024 05:22	WG2235041
Benzo(a)pyrene	ND		0.00600	1	02/28/2024 05:22	WG2235041
Chrysene	ND		0.00600	1	02/28/2024 05:22	WG2235041
Dibenz(a,h)anthracene	ND		0.00600	1	02/28/2024 05:22	WG2235041
Fluoranthene	ND		0.00600	1	02/28/2024 05:22	WG2235041
Fluorene	ND		0.00600	1	02/28/2024 05:22	WG2235041
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	02/28/2024 05:22	WG2235041
1-Methylnaphthalene	ND		0.0200	1	02/28/2024 05:22	WG2235041
2-Methylnaphthalene	ND		0.0200	1	02/28/2024 05:22	WG2235041
Naphthalene	ND		0.0200	1	02/28/2024 05:22	WG2235041
Pyrene	ND		0.00600	1	02/28/2024 05:22	WG2235041
(S) p-Terphenyl-d14	75.9		23.0-120		02/28/2024 05:22	WG2235041
(S) Nitrobenzene-d5	101		14.0-149		02/28/2024 05:22	WG2235041
(S) 2-Fluorobiphenyl	83.5		34.0-125		02/28/2024 05:22	WG2235041

9 Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	8.94		1	02/29/2024 10:15	WG2235121

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	02/28/2024 06:54	WG2233868

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.52	<u>T8</u>	1	02/26/2024 12:14	WG2233701

Sample Narrative:

L1709068-03 WG2233701: 8.52 at 22.4C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	738		10.0	1	03/01/2024 10:00	WG2233709

Sample Narrative:

L1709068-03 WG2233709: at 25C

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.634		0.200	1	02/28/2024 16:59	WG2235122

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	3.91		1.00	5	02/28/2024 00:11	WG2233665
Barium	845		2.50	5	02/28/2024 00:11	WG2233665
Cadmium	ND		1.00	5	02/28/2024 00:11	WG2233665
Copper	20.7		5.00	5	02/28/2024 00:11	WG2233665
Lead	13.9		2.00	5	02/28/2024 00:11	WG2233665
Nickel	18.9		2.50	5	02/28/2024 00:11	WG2233665
Selenium	ND		2.50	5	02/28/2024 00:11	WG2233665
Silver	ND		0.500	5	02/28/2024 00:11	WG2233665
Zinc	49.4		25.0	5	02/28/2024 00:11	WG2233665

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.228	<u>B</u>	0.101	1.01	02/29/2024 06:58	WG2236366
(S) a, a, a-Trifluorotoluene(FID)	87.5		77.0-120		02/29/2024 06:58	WG2236366



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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	02/29/2024 12:10	WG2236647
Toluene	ND		0.00500	1	02/29/2024 12:10	WG2236647
Ethylbenzene	ND		0.00250	1	02/29/2024 12:10	WG2236647
Xylenes, Total	ND		0.00650	1	02/29/2024 12:10	WG2236647
1,2,4-Trimethylbenzene	ND		0.00500	1	02/29/2024 12:10	WG2236647
1,3,5-Trimethylbenzene	0.0113		0.00500	1	02/29/2024 12:10	WG2236647
(S) Toluene-d8	97.9		75.0-131		02/29/2024 12:10	WG2236647
(S) 4-Bromofluorobenzene	99.4		67.0-138		02/29/2024 12:10	WG2236647
(S) 1,2-Dichloroethane-d4	92.4		70.0-130		02/29/2024 12:10	WG2236647

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	33.9		4.00	1	02/29/2024 02:33	WG2235054
C28-C36 Motor Oil Range	19.3		4.00	1	02/29/2024 02:33	WG2235054
(S) o-Terphenyl	22.6		18.0-148		02/29/2024 02:33	WG2235054

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00600	1	02/28/2024 05:40	WG2235041
Anthracene	ND		0.00600	1	02/28/2024 05:40	WG2235041
Benzo(a)anthracene	ND		0.00600	1	02/28/2024 05:40	WG2235041
Benzo(b)fluoranthene	ND		0.00600	1	02/28/2024 05:40	WG2235041
Benzo(k)fluoranthene	ND		0.00600	1	02/28/2024 05:40	WG2235041
Benzo(a)pyrene	ND		0.00600	1	02/28/2024 05:40	WG2235041
Chrysene	ND		0.00600	1	02/28/2024 05:40	WG2235041
Dibenz(a,h)anthracene	ND		0.00600	1	02/28/2024 05:40	WG2235041
Fluoranthene	ND		0.00600	1	02/28/2024 05:40	WG2235041
Fluorene	ND		0.00600	1	02/28/2024 05:40	WG2235041
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	02/28/2024 05:40	WG2235041
1-Methylnaphthalene	ND		0.0200	1	02/28/2024 05:40	WG2235041
2-Methylnaphthalene	ND		0.0200	1	02/28/2024 05:40	WG2235041
Naphthalene	ND		0.0200	1	02/28/2024 05:40	WG2235041
Pyrene	ND		0.00600	1	02/28/2024 05:40	WG2235041
(S) p-Terphenyl-d14	78.0		23.0-120		02/28/2024 05:40	WG2235041
(S) Nitrobenzene-d5	94.1		14.0-149		02/28/2024 05:40	WG2235041
(S) 2-Fluorobiphenyl	81.5		34.0-125		02/28/2024 05:40	WG2235041

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.88		1	02/29/2024 10:18	WG2235121

1 Cp

2 Tc

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	02/28/2024 07:01	WG2233868

3 Ss

4 Cn

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.70	T8	1	02/26/2024 12:14	WG2233701

5 Sr

6 Qc

Sample Narrative:

L1709068-04 WG2233701: 8.7 at 22.3C

7 Gl

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	271		10.0	1	03/01/2024 10:00	WG2233709

8 Al

9 Sc

Sample Narrative:

L1709068-04 WG2233709: at 25C

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	ND		0.200	1	02/28/2024 17:01	WG2235122

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	3.74		1.00	5	02/28/2024 00:14	WG2233665
Barium	2690		50.0	100	02/28/2024 12:49	WG2233665
Cadmium	ND		1.00	5	02/28/2024 00:14	WG2233665
Copper	29.0		5.00	5	02/28/2024 00:14	WG2233665
Lead	13.0		2.00	5	02/28/2024 00:14	WG2233665
Nickel	12.5		2.50	5	02/28/2024 00:14	WG2233665
Selenium	ND		2.50	5	02/28/2024 00:14	WG2233665
Silver	ND		0.500	5	02/28/2024 00:14	WG2233665
Zinc	40.8		25.0	5	02/28/2024 00:14	WG2233665

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	ND		0.100	1	02/29/2024 07:17	WG2236366
(S) a, a, a-Trifluorotoluene(FID)	88.6		77.0-120		02/29/2024 07:17	WG2236366

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	02/29/2024 12:29	WG2236647
Toluene	ND		0.00500	1	02/29/2024 12:29	WG2236647
Ethylbenzene	ND		0.00250	1	02/29/2024 12:29	WG2236647
Xylenes, Total	ND		0.00650	1	02/29/2024 12:29	WG2236647
1,2,4-Trimethylbenzene	ND		0.00500	1	02/29/2024 12:29	WG2236647
1,3,5-Trimethylbenzene	ND		0.00500	1	02/29/2024 12:29	WG2236647
(S) Toluene-d8	102		75.0-131		02/29/2024 12:29	WG2236647
(S) 4-Bromofluorobenzene	94.1		67.0-138		02/29/2024 12:29	WG2236647
(S) 1,2-Dichloroethane-d4	94.8		70.0-130		02/29/2024 12:29	WG2236647

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	53.0		4.00	1	02/29/2024 02:58	WG2235054
C28-C36 Motor Oil Range	19.9		4.00	1	02/29/2024 02:58	WG2235054
(S) o-Terphenyl	29.0		18.0-148		02/29/2024 02:58	WG2235054

6 Qc
7 Gl
8 Al

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00600	1	02/28/2024 05:57	WG2235041
Anthracene	ND		0.00600	1	02/28/2024 05:57	WG2235041
Benzo(a)anthracene	ND		0.00600	1	02/28/2024 05:57	WG2235041
Benzo(b)fluoranthene	ND		0.00600	1	02/28/2024 05:57	WG2235041
Benzo(k)fluoranthene	ND		0.00600	1	02/28/2024 05:57	WG2235041
Benzo(a)pyrene	ND		0.00600	1	02/28/2024 05:57	WG2235041
Chrysene	ND		0.00600	1	02/28/2024 05:57	WG2235041
Dibenz(a,h)anthracene	ND		0.00600	1	02/28/2024 05:57	WG2235041
Fluoranthene	ND		0.00600	1	02/28/2024 05:57	WG2235041
Fluorene	ND		0.00600	1	02/28/2024 05:57	WG2235041
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	02/28/2024 05:57	WG2235041
1-Methylnaphthalene	ND		0.0200	1	02/28/2024 05:57	WG2235041
2-Methylnaphthalene	ND		0.0200	1	02/28/2024 05:57	WG2235041
Naphthalene	ND		0.0200	1	02/28/2024 05:57	WG2235041
Pyrene	0.0173		0.00600	1	02/28/2024 05:57	WG2235041
(S) p-Terphenyl-d14	85.3		23.0-120		02/28/2024 05:57	WG2235041
(S) Nitrobenzene-d5	93.6		14.0-149		02/28/2024 05:57	WG2235041
(S) 2-Fluorobiphenyl	85.3		34.0-125		02/28/2024 05:57	WG2235041

9 Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	4.95		1	02/29/2024 10:21	WG2235121

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	02/28/2024 07:07	WG2233868

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.74	<u>T8</u>	1	02/26/2024 12:14	WG2233701

Sample Narrative:

L1709068-05 WG2233701: 8.74 at 22.4C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	551		10.0	1	03/01/2024 10:00	WG2233709

Sample Narrative:

L1709068-05 WG2233709: at 25C

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.241		0.200	1	02/28/2024 17:03	WG2235122

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	3.25		1.00	5	02/28/2024 00:18	WG2233665
Barium	997		25.0	50	02/28/2024 12:52	WG2233665
Cadmium	ND		1.00	5	02/28/2024 00:18	WG2233665
Copper	17.5		5.00	5	02/28/2024 00:18	WG2233665
Lead	7.66		2.00	5	02/28/2024 00:18	WG2233665
Nickel	13.4		2.50	5	02/28/2024 00:18	WG2233665
Selenium	ND		2.50	5	02/28/2024 00:18	WG2233665
Silver	ND		0.500	5	02/28/2024 00:18	WG2233665
Zinc	32.2		25.0	5	02/28/2024 00:18	WG2233665

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	ND		0.100	1	02/29/2024 07:37	WG2236366
(S) a, a, a-Trifluorotoluene(FID)	88.8		77.0-120		02/29/2024 07:37	WG2236366

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	02/29/2024 12:49	WG2236647
Toluene	ND		0.00500	1	02/29/2024 12:49	WG2236647
Ethylbenzene	ND		0.00250	1	02/29/2024 12:49	WG2236647
Xylenes, Total	ND		0.00650	1	02/29/2024 12:49	WG2236647
1,2,4-Trimethylbenzene	ND		0.00500	1	02/29/2024 12:49	WG2236647
1,3,5-Trimethylbenzene	ND		0.00500	1	02/29/2024 12:49	WG2236647
(S) Toluene-d8	102		75.0-131		02/29/2024 12:49	WG2236647
(S) 4-Bromofluorobenzene	95.2		67.0-138		02/29/2024 12:49	WG2236647
(S) 1,2-Dichloroethane-d4	93.9		70.0-130		02/29/2024 12:49	WG2236647

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	ND		4.00	1	02/29/2024 02:09	WG2235054
C28-C36 Motor Oil Range	ND		4.00	1	02/29/2024 02:09	WG2235054
(S) o-Terphenyl	42.2		18.0-148		02/29/2024 02:09	WG2235054

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00600	1	02/28/2024 06:15	WG2235041
Anthracene	ND		0.00600	1	02/28/2024 06:15	WG2235041
Benzo(a)anthracene	ND		0.00600	1	02/28/2024 06:15	WG2235041
Benzo(b)fluoranthene	ND		0.00600	1	02/28/2024 06:15	WG2235041
Benzo(k)fluoranthene	ND		0.00600	1	02/28/2024 06:15	WG2235041
Benzo(a)pyrene	ND		0.00600	1	02/28/2024 06:15	WG2235041
Chrysene	ND		0.00600	1	02/28/2024 06:15	WG2235041
Dibenz(a,h)anthracene	ND		0.00600	1	02/28/2024 06:15	WG2235041
Fluoranthene	ND		0.00600	1	02/28/2024 06:15	WG2235041
Fluorene	ND		0.00600	1	02/28/2024 06:15	WG2235041
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	02/28/2024 06:15	WG2235041
1-Methylnaphthalene	ND		0.0200	1	02/28/2024 06:15	WG2235041
2-Methylnaphthalene	ND		0.0200	1	02/28/2024 06:15	WG2235041
Naphthalene	ND		0.0200	1	02/28/2024 06:15	WG2235041
Pyrene	ND		0.00600	1	02/28/2024 06:15	WG2235041
(S) p-Terphenyl-d14	57.3		23.0-120		02/28/2024 06:15	WG2235041
(S) Nitrobenzene-d5	74.3		14.0-149		02/28/2024 06:15	WG2235041
(S) 2-Fluorobiphenyl	63.3		34.0-125		02/28/2024 06:15	WG2235041

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.84		1	02/29/2024 10:43	WG2235121

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	02/28/2024 07:13	WG2233868

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.47	T8	1	02/26/2024 12:14	WG2233701

Sample Narrative:

L1709068-06 WG2233701: 8.47 at 22.5C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	416		10.0	1	03/01/2024 10:00	WG2233709

Sample Narrative:

L1709068-06 WG2233709: at 25C

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

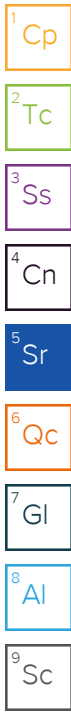
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.327		0.200	1	02/28/2024 17:04	WG2235122

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	5.55		1.00	5	02/28/2024 00:21	WG2233665
Barium	1440		25.0	50	02/28/2024 12:55	WG2233665
Cadmium	ND		1.00	5	02/28/2024 00:21	WG2233665
Copper	30.8		5.00	5	02/28/2024 00:21	WG2233665
Lead	13.1		2.00	5	02/28/2024 00:21	WG2233665
Nickel	18.0		2.50	5	02/28/2024 00:21	WG2233665
Selenium	ND		2.50	5	02/28/2024 00:21	WG2233665
Silver	ND		0.500	5	02/28/2024 00:21	WG2233665
Zinc	50.9		25.0	5	02/28/2024 00:21	WG2233665

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.110		0.100	1	03/04/2024 15:35	WG2239138
(S) a, a, a-Trifluorotoluene(FID)	92.4		77.0-120		03/04/2024 15:35	WG2239138



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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00113		0.00100	1	02/29/2024 13:09	WG2236647
Toluene	0.00605		0.00500	1	02/29/2024 13:09	WG2236647
Ethylbenzene	ND		0.00250	1	02/29/2024 13:09	WG2236647
Xylenes, Total	0.0106		0.00650	1	02/29/2024 13:09	WG2236647
1,2,4-Trimethylbenzene	ND		0.00500	1	02/29/2024 13:09	WG2236647
1,3,5-Trimethylbenzene	0.0147		0.00500	1	02/29/2024 13:09	WG2236647
(S) Toluene-d8	101		75.0-131		02/29/2024 13:09	WG2236647
(S) 4-Bromofluorobenzene	93.2		67.0-138		02/29/2024 13:09	WG2236647
(S) 1,2-Dichloroethane-d4	93.5		70.0-130		02/29/2024 13:09	WG2236647

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	13.2		4.00	1	02/29/2024 03:35	WG2235054
C28-C36 Motor Oil Range	27.4		4.00	1	02/29/2024 03:35	WG2235054
(S) o-Terphenyl	26.4		18.0-148		02/29/2024 03:35	WG2235054

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND	<u>J3</u>	0.00600	1	02/28/2024 06:33	WG2235041
Anthracene	ND		0.00600	1	02/28/2024 06:33	WG2235041
Benzo(a)anthracene	ND		0.00600	1	02/28/2024 06:33	WG2235041
Benzo(b)fluoranthene	ND		0.00600	1	02/28/2024 06:33	WG2235041
Benzo(k)fluoranthene	ND		0.00600	1	02/28/2024 06:33	WG2235041
Benzo(a)pyrene	ND		0.00600	1	02/28/2024 06:33	WG2235041
Chrysene	ND		0.00600	1	02/28/2024 06:33	WG2235041
Dibenz(a,h)anthracene	ND		0.00600	1	02/28/2024 06:33	WG2235041
Fluoranthene	ND		0.00600	1	02/28/2024 06:33	WG2235041
Fluorene	ND		0.00600	1	02/28/2024 06:33	WG2235041
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	02/28/2024 06:33	WG2235041
1-Methylnaphthalene	ND	<u>J3</u>	0.0200	1	02/28/2024 06:33	WG2235041
2-Methylnaphthalene	ND	<u>J3</u>	0.0200	1	02/28/2024 06:33	WG2235041
Naphthalene	ND		0.0200	1	02/28/2024 06:33	WG2235041
Pyrene	ND		0.00600	1	02/28/2024 06:33	WG2235041
(S) p-Terphenyl-d14	90.5		23.0-120		02/28/2024 06:33	WG2235041
(S) Nitrobenzene-d5	101		14.0-149		02/28/2024 06:33	WG2235041
(S) 2-Fluorobiphenyl	97.1		34.0-125		02/28/2024 06:33	WG2235041

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

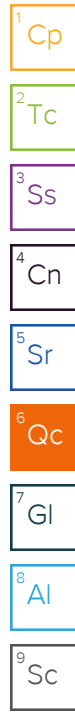
8 Al

9 Sc

Method Blank (MB)

(MB) R4039114-1 02/28/24 05:38

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Hexavalent Chromium	U		0.255	1.00



L1708786-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1708786-05 02/28/24 05:52 • (DUP) R4039114-3 02/28/24 05:59

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Hexavalent Chromium	ND	ND	1	0.000		20

L1709068-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1709068-01 02/28/24 06:23 • (DUP) R4039114-4 02/28/24 06:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Hexavalent Chromium	ND	ND	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R4039114-2 02/28/24 05:46

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Hexavalent Chromium	10.0	11.1	111	80.0-120	

L1709565-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1709565-01 02/28/24 07:19 • (MS) R4039114-6 02/28/24 07:32 • (MSD) R4039114-7 02/28/24 07:38

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Hexavalent Chromium	20.0	ND	10.8	6.17	53.8	30.8	1	75.0-125	J6	J3 J6	54.3	20

L1709565-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1709565-02 02/28/24 07:50 • (MS) R4039114-10 02/28/24 08:15 • (MSD) R4039114-11 02/28/24 08:21

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Hexavalent Chromium	20.0	ND	1.03	3.88	5.13	19.4	1	75.0-125	J6	J3 J6	116	20

L1709565-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1709565-01 02/28/24 07:19 • (MS) R4039114-8 02/28/24 07:44

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>
Hexavalent Chromium	641	ND	516	80.5	50	75.0-125	

L1709565-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1709565-02 02/28/24 07:50 • (MS) R4039114-12 02/28/24 08:27

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>
Hexavalent Chromium	643	ND	500	77.7	50	75.0-125	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1708788-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1708788-02 02/26/24 12:14 • (DUP) R4038253-2 02/26/24 12:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
su	su			%		%
pH	10.0	10.0	1	0.299		1

Sample Narrative:

OS: 10.01 at 22.8C

DUP: 10.04 at 22.9C

L1708854-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1708854-02 02/26/24 12:14 • (DUP) R4038253-3 02/26/24 12:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
su	su			%		%
pH	8.17	8.19	1	0.244		1

Sample Narrative:

OS: 8.17 at 22.8C

DUP: 8.19 at 22.8C

Laboratory Control Sample (LCS)

(LCS) R4038253-1 02/26/24 12:14

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 21.8C

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1707328-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1707328-02 02/27/24 13:50 • (DUP) R4038783-2 02/27/24 13:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
su	su			%		%
pH	7.35	7.34	1	0.136		1

Sample Narrative:

OS: 7.35 at 22.8C
DUP: 7.34 at 22.3C

L1709113-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1709113-05 02/27/24 13:50 • (DUP) R4038783-3 02/27/24 13:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
su	su			%		%
pH	8.03	8.04	1	0.124		1

Sample Narrative:

OS: 8.03 at 21.7C
DUP: 8.04 at 21.8C

Laboratory Control Sample (LCS)

(LCS) R4038783-1 02/27/24 13:50

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

Sample Narrative:

LCS: 10.01 at 21.3C

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4040241-1 03/01/24 10:00

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

L1709068-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1709068-02 03/01/24 10:00 • (DUP) R4040241-3 03/01/24 10:00

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Specific Conductance	422	421	1	0.237		20

Sample Narrative:

OS: at 25C
DUP: at 25C

L1709678-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1709678-01 03/01/24 10:00 • (DUP) R4040241-4 03/01/24 10:00

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Specific Conductance	269	268	1	0.186		20

Sample Narrative:

OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4040241-2 03/01/24 10:00

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	327	333	102	85.0-115	

Sample Narrative:

LCS: at 25C



Method Blank (MB)

(MB) R4039488-1 02/28/24 16:29

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) R4039488-2 02/28/24 16:31 • (LCSD) R4039488-3 02/28/24 16:33

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	1.12	1.14	112	114	80.0-120			2.15	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4039043-1 02/27/24 23:12

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

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

Laboratory Control Sample (LCS)

(LCS) R4039043-2 02/27/24 23:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	90.7	90.7	80.0-120	
Barium	100	82.7	82.7	80.0-120	
Cadmium	100	92.8	92.8	80.0-120	
Copper	100	88.5	88.5	80.0-120	
Lead	100	87.3	87.3	80.0-120	
Nickel	100	94.2	94.2	80.0-120	
Selenium	100	92.3	92.3	80.0-120	
Silver	20.0	18.4	92.2	80.0-120	
Zinc	100	89.7	89.7	80.0-120	

⁷Gl

⁸Al

⁹Sc

L1708644-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1708644-09 02/27/24 23:18 • (MS) R4039043-5 02/27/24 23:28 • (MSD) R4039043-6 02/27/24 23:32

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	11.6	116	109	104	97.4	5	75.0-125			5.98	20
Barium	100	270	405	354	135	84.4	5	75.0-125	J5		13.3	20
Cadmium	100	ND	112	104	111	104	5	75.0-125			6.65	20
Copper	100	18.7	120	117	101	97.9	5	75.0-125			3.03	20
Lead	100	14.6	117	112	102	97.6	5	75.0-125			4.14	20
Nickel	100	18.7	127	119	108	101	5	75.0-125			5.96	20
Selenium	100	ND	113	104	112	103	5	75.0-125			8.27	20
Silver	20.0	ND	22.0	20.5	110	103	5	75.0-125			6.72	20
Zinc	100	58.7	161	151	102	91.9	5	75.0-125			6.42	20

Method Blank (MB)

(MB) R4039721-3 02/29/24 00:26

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0277	↓	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	94.3			77.0-120

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

(LCS) R4039721-1 02/28/24 23:12 • (LCSD) R4039721-2 02/28/24 23:32

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 %
TPH (GC/FID) Low Fraction	5.00	5.11	4.90	102	98.0	72.0-127			4.20	20
(S) a,a,a-Trifluorotoluene(FID)				105	103	77.0-120				

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

Method Blank (MB)

(MB) R4041260-3 03/04/24 12:32

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)	96.1			77.0-120

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

(LCS) R4041260-1 03/04/24 11:00 • (LCSD) R4041260-2 03/04/24 11:46

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 %
TPH (GC/FID) Low Fraction	5.00	5.34	6.00	107	120	72.0-127			11.6	20
^(S) a,a,a-Trifluorotoluene(FID)				107	109	77.0-120				

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

Method Blank (MB)

(MB) R4039883-3 02/29/24 07:46

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	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	114			75.0-131
(S) 4-Bromofluorobenzene	84.4			67.0-138
(S) 1,2-Dichloroethane-d4	91.8			70.0-130

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

(LCS) R4039883-1 02/29/24 06:08 • (LCSD) R4039883-2 02/29/24 06:27

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Benzene	0.125	0.125	0.120	100	96.0	70.0-123			4.08	20
Toluene	0.125	0.137	0.122	110	97.6	75.0-121			11.6	20
Ethylbenzene	0.125	0.117	0.108	93.6	86.4	74.0-126			8.00	20
Xylenes, Total	0.375	0.355	0.322	94.7	85.9	72.0-127			9.75	20
1,2,4-Trimethylbenzene	0.125	0.124	0.118	99.2	94.4	70.0-126			4.96	20
1,3,5-Trimethylbenzene	0.125	0.128	0.122	102	97.6	73.0-127			4.80	20
(S) Toluene-d8				107	99.2	75.0-131				
(S) 4-Bromofluorobenzene				90.8	86.6	67.0-138				
(S) 1,2-Dichloroethane-d4				103	107	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4039677-1 02/29/24 01:44

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
<i>(S) o-Terphenyl</i>	38.9			18.0-148

Laboratory Control Sample (LCS)

(LCS) R4039677-2 02/29/24 01:57

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
C10-C28 Diesel Range	50.0	29.6	59.2	50.0-150	
<i>(S) o-Terphenyl</i>			49.5	18.0-148	

L1708987-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1708987-01 02/29/24 05:25 • (MS) R4039677-3 02/29/24 05:38 • (MSD) R4039677-4 02/29/24 05:50

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
C10-C28 Diesel Range	48.8	ND	45.8	44.4	73.9	72.3	5	50.0-150			3.10	20
<i>(S) o-Terphenyl</i>					26.5	30.5		18.0-148				

Sample Narrative:

OS: Cannot run at lower dilution due to viscosity of extract.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4039304-2 02/27/24 23:43

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	101			23.0-120
(S) Nitrobenzene-d5	94.4			14.0-149
(S) 2-Fluorobiphenyl	98.2			34.0-125

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4039304-1 02/27/24 23:25

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0694	86.8	50.0-120	
Anthracene	0.0800	0.0647	80.9	50.0-126	
Benzo(a)anthracene	0.0800	0.0649	81.1	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0757	94.6	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0718	89.8	49.0-125	
Benzo(a)pyrene	0.0800	0.0618	77.3	42.0-120	
Chrysene	0.0800	0.0765	95.6	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0738	92.3	47.0-125	
Fluoranthene	0.0800	0.0733	91.6	49.0-129	
Fluorene	0.0800	0.0755	94.4	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0648	81.0	46.0-125	
1-Methylnaphthalene	0.0800	0.0744	93.0	51.0-121	
2-Methylnaphthalene	0.0800	0.0732	91.5	50.0-120	
Naphthalene	0.0800	0.0785	98.1	50.0-120	
Pyrene	0.0800	0.0757	94.6	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R4039304-1 02/27/24 23:25

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			111	23.0-120	
(S) Nitrobenzene-d5			113	14.0-149	
(S) 2-Fluorobiphenyl			116	34.0-125	

L1709068-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1709068-06 02/28/24 06:33 • (MS) R4039304-3 02/28/24 06:51 • (MSD) R4039304-4 02/28/24 07:08

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	ND	0.0428	0.0575	54.9	73.0	1	14.0-127		J3	29.3	27
Anthracene	0.0780	ND	0.0452	0.0589	57.9	74.7	1	10.0-145			26.3	30
Benzo(a)anthracene	0.0780	ND	0.0499	0.0621	64.0	78.8	1	10.0-139			21.8	30
Benzo(b)fluoranthene	0.0780	ND	0.0412	0.0509	52.8	64.6	1	10.0-140			21.1	36
Benzo(k)fluoranthene	0.0780	ND	0.0448	0.0532	57.4	67.5	1	10.0-137			17.1	31
Benzo(a)pyrene	0.0780	ND	0.0465	0.0551	59.6	69.9	1	10.0-141			16.9	31
Chrysene	0.0780	ND	0.0528	0.0621	67.7	78.8	1	10.0-145			16.2	30
Dibenz(a,h)anthracene	0.0780	ND	0.0457	0.0539	58.6	68.4	1	10.0-132			16.5	31
Fluoranthene	0.0780	ND	0.0495	0.0636	63.5	80.7	1	10.0-153			24.9	33
Fluorene	0.0780	ND	0.0505	0.0643	64.7	81.6	1	11.0-130			24.0	29
Indeno(1,2,3-cd)pyrene	0.0780	ND	0.0412	0.0497	52.8	63.1	1	10.0-137			18.7	32
1-Methylnaphthalene	0.0780	ND	0.0492	0.0653	63.1	82.9	1	10.0-142		J3	28.1	28
2-Methylnaphthalene	0.0780	ND	0.0494	0.0656	63.3	83.2	1	10.0-137		J3	28.2	28
Naphthalene	0.0780	ND	0.0484	0.0624	62.1	79.2	1	10.0-135			25.3	27
Pyrene	0.0780	ND	0.0450	0.0582	57.7	73.9	1	10.0-148			25.6	35
(S) p-Terphenyl-d14					68.5	86.4		23.0-120				
(S) Nitrobenzene-d5					87.8	102		14.0-149				
(S) 2-Fluorobiphenyl					75.8	93.8		34.0-125				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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.
ND	Not detected at the Reporting Limit (or MDL where applicable).
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.
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.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

ACCREDITATIONS & LOCATIONS

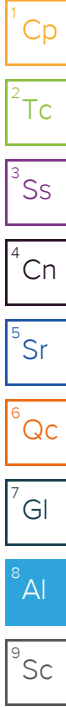
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.



CHAIN-OF-CUSTODY Analytical Request Document
 Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: **Carroll Oil and Gas LLC**
 Address: Info on file
 Billing Information: Info on file
 Report To: Jake Janicek, Brett Middleton, Blair Rollins, Andy Verbonitz
 Email To: Info on file
 Copy To: Same as Above
 Site Collection Info/Address: J14 496 22C-14

Customer Project Name/Number: J14 496 22C-14
 State: **CO** / County/City: **Garfield** [JPT [X] MI] [CT] [JT]
 Time Zone Collected: []
 Phone: INFO ON FILE
 Email: INFO ON FILE
 Site/Facility ID #: J14 496 22C-14
 Compliance Monitoring? [] Yes [X] No
 Collected By (print): **Alexis Hitzler**
 Purchase Order #: **NA**
 Quote #: _____
 Collected By (signature): *Alexis Hitzler*
 Turnaround Date Required: **Standard Turnaround**
 Immediately Faced on ice: [X] Yes [] No
 Sample Disposal: [X] Dispose as appropriate [] Return [] Archive [] Hold
 Rush: [Expedite Charges Apply] [] Same Day [] Next Day [] 2 Day [] 3 Day [] 4 Day [] 5 Day
 Field Filtered (if applicable): [] Yes [X] No
 Analysis: **NA**

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Biossey (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Cans	Container Type: Plastic (P) or Glass (G)
			Date	Time	Date	Time			
20240222-ELU J14 496 (22C-14-POR)@4	SL	G	2/22/2024	1155			3	6	X X X X X X X X
20240222-ELU J14 496 (22C-14-BASE)@4	SL	G	2/22/2024	1205			3	6	X X X X X X X X
20240222-ELU J14 496 (22C-14-NW)@3	SL	G	2/22/2024	1210			3	6	X X X X X X X X
20240222-ELU J14 496 (22C-14-EW)@3	SL	G	2/22/2024	1230			3	6	X X X X X X X X
20240222-ELU J14 496 (22C-14-SW)@3	SL	G	2/22/2024	1220			3	6	X X X X X X X X
20240222-ELU J14 496 (22C-14-WW)@3	SL	G	2/22/2024	1215			3	6	X X X X X X X X
20240222-ELU J14 496 (22C-14-Stock)	SL	G	2/22/2024	1250			3	6	X X X X X X X X

Type of Ice Used: **Wet** [] Blue [] Dry [] None []
 Packing Material Used: _____
 Radchem sample(s) screened (<500 cpm): [] Y [] N [] NA []

Relinquished by/Company (Signature): *Alexis Hitzler*
 Date/Time: **2/23/24 1500**
 Received by/Company (Signature): *[Signature]*
 Date/Time: _____
 Relinquished by/Company (Signature): *[Signature]*
 Date/Time: **2/23/24 1600**
 Received by/Company (Signature): *[Signature]*
 Date/Time: _____
 Relinquished by/Company (Signature): _____
 Date/Time: _____
 Received by/Company (Signature): *[Signature]*
 Date/Time: _____

FOR USE ONLY BY WORKER/TECHNICIAN LABEL HERE OR THE OTHER WORKER NUMBER OR ANALYST NUMBER HERE
ALL FIELDS OUTLINED ABOVE ARE FOR LAB USE ONLY

Container Preservative Type **
 Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium metabisulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Analyses	Lab Profile/Line:
FC, SAP, P Boron (not Water soluble) TPH (C 20/D30/O/C) Table 9/15-1 VOCs Table 9/15-1 PAHs Table 9/15-1 Metals Cr6	Lab Sample Receipt Checklist: Custody Seal Present/Intact Y N NA Custody Signatures Present Y N NA Collector Signature Present Y N NA Bottles Intact Y N NA Correct Bottles Y N NA Sufficient Volume Y N NA Samples Received on Ice Y N NA VOA - Leadspace Acceptable Y N NA USDA Regulated Soils Y N NA Samples in Holding Time Y N NA Residual Chlorine Present Y N NA Cl Strips: _____ Sample pH Acceptable Y N NA pH Strips: _____ Sulfide Present Y N NA Lead Acetate Strips: _____ Lab USE ONLY Lab Sample # / Comments:

L1709068
 -01
 -02
 -03
 -04
 -05
 -06
HOLD ANALYSIS -07

HOLD ANALYSIS for sample 20240222-ELU J14 496 (22C-14-STOCK)

SHORTY HOLDS PRESENT (<72 hours): Y N N/A
 Lab Tracking #: **5882 7564 8224**
 Samples received via: **FEDEX** UPS Client Courier Face Courier

Lab Sample Temperature Info:
 Temp Blank Received: Y N NA
 Therm ID#: _____
 Cooler 1 Temp: _____
 Upon Receipt: _____
 Cooler 1 Temp: _____
 Factor: _____
 Cooler 1 Corrected Temp: _____
 Comments: _____

0.310-0.319

PN: _____
 PP: _____
 Non Conformance(s): YES / NO
 Page: **1** of **1**

[Signature] **Burchfield** **2/23/24**
9:00