

Caerus Oil and Gas

Sample Delivery Group: L1772210
Samples Received: 08/28/2024
Project Number:
Description: Corral Creek 4508 Facility Decommissioning
Site: CORRAL CREEK 4508
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 National

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¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

SAMPLE SUMMARY

20240827-M29 199 (FC-FL-T)@3 L1772210-01 Solid

Collected by Trevor Lakin Collected date/time 08/27/24 09:46 Received date/time 08/28/24 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2356950	1	09/07/24 20:24	09/07/24 20:24	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2353867	1	09/06/24 15:52	09/09/24 04:28	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2358234	1	09/08/24 05:50	09/08/24 12:04	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2358239	1	09/08/24 05:51	09/08/24 07:39	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2356958	1	09/09/24 14:15	09/09/24 18:27	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2355529	1000	09/02/24 11:40	09/04/24 07:50	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2354873	80	09/02/24 11:40	09/03/24 14:06	JTO	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2356440	20	09/06/24 15:24	09/07/24 17:54	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2355669	1	09/04/24 12:56	09/05/24 13:00	JCH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2355669	20	09/04/24 12:56	09/06/24 06:19	JCH	Mt. Juliet, TN
Subcontracted Analyses	WG2352690	1	09/10/24 00:00	09/10/24 00:00	-	Minneapolis, MN 55414



20240827-M29 199 (FC-DL-SEP)@3 L1772210-02 Solid

Collected by Trevor Lakin Collected date/time 08/27/24 10:25 Received date/time 08/28/24 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2356950	1	09/07/24 20:25	09/07/24 20:25	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2353867	1	09/06/24 15:52	09/09/24 04:39	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2358236	1	09/08/24 05:23	09/08/24 11:22	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2358237	1	09/08/24 05:23	09/08/24 08:26	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2356958	1	09/09/24 14:15	09/09/24 18:28	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2355151	1	09/02/24 11:40	09/03/24 17:21	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2354873	1	09/02/24 11:40	09/03/24 13:26	JTO	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2356440	1	09/06/24 15:24	09/07/24 16:03	KKS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2355669	1	09/04/24 12:56	09/05/24 10:05	NJK	Mt. Juliet, TN
Subcontracted Analyses	WG2352690	1	09/10/24 00:00	09/10/24 00:00	-	Minneapolis, MN 55414

20240827-M29 199 (FC-PIT01)@7 L1772210-03 Solid

Collected by Trevor Lakin Collected date/time 08/27/24 11:21 Received date/time 08/28/24 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2356941	1	09/07/24 21:48	09/07/24 21:48	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2353867	1	09/06/24 15:52	09/09/24 04:49	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2358236	1	09/08/24 05:23	09/08/24 11:22	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2358237	1	09/08/24 05:23	09/08/24 08:26	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2356954	1	09/09/24 14:18	09/09/24 20:23	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2355151	1	09/02/24 11:40	09/03/24 17:44	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2354873	1	09/02/24 11:40	09/03/24 13:46	JTO	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2356440	1	09/06/24 15:24	09/07/24 15:49	KKS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2355669	1	09/04/24 12:56	09/05/24 10:22	NJK	Mt. Juliet, TN
Subcontracted Analyses	WG2352690	1	09/10/24 00:00	09/10/24 00:00	-	Minneapolis, MN 55414

20240827-M29 199 (FC-PIT02)@7 L1772210-04 Solid

Collected by Trevor Lakin Collected date/time 08/27/24 11:59 Received date/time 08/28/24 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2356950	1	09/07/24 21:30	09/07/24 21:30	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2353867	1	09/06/24 15:52	09/09/24 05:33	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2358236	1	09/08/24 05:23	09/08/24 11:22	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2358237	1	09/08/24 05:23	09/08/24 08:26	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2356958	1	09/09/24 14:15	09/09/24 18:30	ZSA	Mt. Juliet, TN

SAMPLE SUMMARY

20240827-M29 199 (FC-PIT02)@7 L1772210-04 Solid

Collected by Trevor Lakin
 Collected date/time 08/27/24 11:59
 Received date/time 08/28/24 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2356030	25	09/02/24 11:40	09/05/24 16:12	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2356652	4	09/02/24 11:40	09/06/24 01:14	AV	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2356441	1	09/05/24 12:29	09/05/24 21:13	KKS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2355669	1	09/04/24 12:56	09/05/24 10:40	NJK	Mt. Juliet, TN
Subcontracted Analyses	WG2352690	1	09/10/24 00:00	09/10/24 00:00	-	Minneapolis, MN 55414

1
Cp

2
Tc

3
Ss

4
Cn

20240827-M29 199 (FC-PIT03)@7 L1772210-05 Solid

Collected by Trevor Lakin
 Collected date/time 08/27/24 12:09
 Received date/time 08/28/24 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2356941	1	09/07/24 21:49	09/07/24 21:49	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2353867	1	09/06/24 15:52	09/09/24 05:44	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2358234	1	09/08/24 05:50	09/08/24 12:04	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2358239	1	09/08/24 05:51	09/08/24 07:39	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2356954	1	09/09/24 14:18	09/09/24 20:24	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2356030	25	09/02/24 11:40	09/05/24 16:36	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2357512	1	09/02/24 11:40	09/06/24 14:43	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2356441	1	09/05/24 12:29	09/06/24 00:33	KKS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2355669	1	09/04/24 12:56	09/05/24 10:57	NJK	Mt. Juliet, TN
Subcontracted Analyses	WG2352690	1	09/10/24 00:00	09/10/24 00:00	-	Minneapolis, MN 55414

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

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

Project Narrative

L1772210 -01, -02, -03, -04, -05 contains subout data that is included after the chain of custody.

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	2.28		1	09/07/2024 20:24	WG2356950

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	09/09/2024 04:28	WG2353867

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.22	<u>T8</u>	1	09/08/2024 12:04	WG2358234

Sample Narrative:

L1772210-01 WG2358234: 8.22 at 21.1C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	249		10.0	1	09/08/2024 07:39	WG2358239

Sample Narrative:

L1772210-01 WG2358239: 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	0.123	<u>J</u>	0.0167	0.200	1	09/09/2024 18:27	WG2356958

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

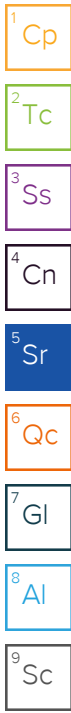
Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	606		21.7	100	1000	09/04/2024 07:50	WG2355529
(S) a,a,a-Trifluorotoluene(FID)	96.8			77.0-120		09/04/2024 07:50	WG2355529

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		0.0374	0.0800	80	09/03/2024 14:06	WG2354873
Toluene	1.30		0.104	0.400	80	09/03/2024 14:06	WG2354873
Ethylbenzene	0.896		0.0590	0.200	80	09/03/2024 14:06	WG2354873
Xylenes, Total	21.5		0.0704	0.520	80	09/03/2024 14:06	WG2354873
1,2,4-Trimethylbenzene	9.40		0.126	0.400	80	09/03/2024 14:06	WG2354873
1,3,5-Trimethylbenzene	4.01		0.160	0.400	80	09/03/2024 14:06	WG2354873
(S) Toluene-d8	94.7			75.0-131		09/03/2024 14:06	WG2354873
(S) 4-Bromofluorobenzene	105			67.0-138		09/03/2024 14:06	WG2354873
(S) 1,2-Dichloroethane-d4	106			70.0-130		09/03/2024 14:06	WG2354873

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	2420		32.2	80.0	20	09/07/2024 17:54	WG2356440
C28-C36 Motor Oil Range	928		5.48	80.0	20	09/07/2024 17:54	WG2356440



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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	0.000	<u>J7</u>		18.0-148		09/07/2024 17:54	WG23556440

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	0.275		0.00209	0.00600	1	09/05/2024 13:00	WG2355669
Anthracene	U		0.00230	0.00600	1	09/05/2024 13:00	WG2355669
Benzo(a)anthracene	U		0.00173	0.00600	1	09/05/2024 13:00	WG2355669
Benzo(b)fluoranthene	0.0162		0.00153	0.00600	1	09/05/2024 13:00	WG2355669
Benzo(k)fluoranthene	U		0.00215	0.00600	1	09/05/2024 13:00	WG2355669
Benzo(a)pyrene	U		0.00179	0.00600	1	09/05/2024 13:00	WG2355669
Chrysene	0.0589		0.00232	0.00600	1	09/05/2024 13:00	WG2355669
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	09/05/2024 13:00	WG2355669
Fluoranthene	0.0850		0.00227	0.00600	1	09/05/2024 13:00	WG2355669
Fluorene	0.652		0.00205	0.00600	1	09/05/2024 13:00	WG2355669
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	09/05/2024 13:00	WG2355669
1-Methylnaphthalene	7.04		0.0898	0.400	20	09/06/2024 06:19	WG2355669
2-Methylnaphthalene	7.14		0.0854	0.400	20	09/06/2024 06:19	WG2355669
Naphthalene	0.591		0.00408	0.0200	1	09/05/2024 13:00	WG2355669
Pyrene	0.0338		0.00200	0.00600	1	09/05/2024 13:00	WG2355669
(S) p-Terphenyl-d14	102	<u>J7</u>		23.0-120		09/06/2024 06:19	WG2355669
(S) p-Terphenyl-d14	116			23.0-120		09/05/2024 13:00	WG2355669
(S) Nitrobenzene-d5	0.000	<u>J2</u>		14.0-149		09/05/2024 13:00	WG2355669
(S) Nitrobenzene-d5	0.000	<u>J7</u>		14.0-149		09/06/2024 06:19	WG2355669
(S) 2-Fluorobiphenyl	124			34.0-125		09/05/2024 13:00	WG2355669
(S) 2-Fluorobiphenyl	113	<u>J7</u>		34.0-125		09/06/2024 06:19	WG2355669

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	2.05		1	09/07/2024 20:25	WG2356950

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	09/09/2024 04:39	WG2353867

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.41	T8	1	09/08/2024 11:22	WG2358236

Sample Narrative:

L1772210-02 WG2358236: 8.41 at 21.1C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	214		10.0	1	09/08/2024 08:26	WG2358237

Sample Narrative:

L1772210-02 WG2358237: 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	0.146	J	0.0167	0.200	1	09/09/2024 18:28	WG2356958

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

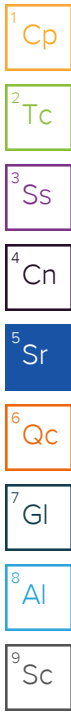
Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.207	B	0.0217	0.100	1	09/03/2024 17:21	WG2355151
(S) a,a,a-Trifluorotoluene(FID)	96.5			77.0-120		09/03/2024 17:21	WG2355151

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	09/03/2024 13:26	WG2354873
Toluene	U		0.00130	0.00500	1	09/03/2024 13:26	WG2354873
Ethylbenzene	U		0.000737	0.00250	1	09/03/2024 13:26	WG2354873
Xylenes, Total	U		0.000880	0.00650	1	09/03/2024 13:26	WG2354873
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/03/2024 13:26	WG2354873
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/03/2024 13:26	WG2354873
(S) Toluene-d8	93.7			75.0-131		09/03/2024 13:26	WG2354873
(S) 4-Bromofluorobenzene	99.7			67.0-138		09/03/2024 13:26	WG2354873
(S) 1,2-Dichloroethane-d4	90.1			70.0-130		09/03/2024 13:26	WG2354873

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	42.2		1.61	4.00	1	09/07/2024 16:03	WG2356440
C28-C36 Motor Oil Range	74.1		0.274	4.00	1	09/07/2024 16:03	WG2356440



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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	66.8			18.0-148		09/07/2024 16:03	WG2356440

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	09/05/2024 10:05	WG2355669
Anthracene	U		0.00230	0.00600	1	09/05/2024 10:05	WG2355669
Benzo(a)anthracene	U		0.00173	0.00600	1	09/05/2024 10:05	WG2355669
Benzo(b)fluoranthene	U		0.00153	0.00600	1	09/05/2024 10:05	WG2355669
Benzo(k)fluoranthene	U		0.00215	0.00600	1	09/05/2024 10:05	WG2355669
Benzo(a)pyrene	U		0.00179	0.00600	1	09/05/2024 10:05	WG2355669
Chrysene	U		0.00232	0.00600	1	09/05/2024 10:05	WG2355669
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	09/05/2024 10:05	WG2355669
Fluoranthene	U		0.00227	0.00600	1	09/05/2024 10:05	WG2355669
Fluorene	U		0.00205	0.00600	1	09/05/2024 10:05	WG2355669
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	09/05/2024 10:05	WG2355669
1-Methylnaphthalene	U		0.00449	0.0200	1	09/05/2024 10:05	WG2355669
2-Methylnaphthalene	U		0.00427	0.0200	1	09/05/2024 10:05	WG2355669
Naphthalene	U		0.00408	0.0200	1	09/05/2024 10:05	WG2355669
Pyrene	U		0.00200	0.00600	1	09/05/2024 10:05	WG2355669
(S) p-Terphenyl-d14	90.4			23.0-120		09/05/2024 10:05	WG2355669
(S) Nitrobenzene-d5	88.1			14.0-149		09/05/2024 10:05	WG2355669
(S) 2-Fluorobiphenyl	83.7			34.0-125		09/05/2024 10:05	WG2355669

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	3.35		1	09/07/2024 21:48	WG2356941

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	09/09/2024 04:49	WG2353867

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.57	T8	1	09/08/2024 11:22	WG2358236

Sample Narrative:

L1772210-03 WG2358236: 7.57 at 21.1C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1970		10.0	1	09/08/2024 08:26	WG2358237

Sample Narrative:

L1772210-03 WG2358237: 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	0.289		0.0167	0.200	1	09/09/2024 20:23	WG2356954

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

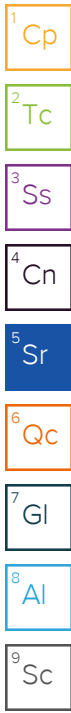
Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0453	B J	0.0217	0.100	1	09/03/2024 17:44	WG2355151
(S) a,a,a-Trifluorotoluene(FID)	98.8			77.0-120		09/03/2024 17:44	WG2355151

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	09/03/2024 13:46	WG2354873
Toluene	U		0.00130	0.00500	1	09/03/2024 13:46	WG2354873
Ethylbenzene	U		0.000737	0.00250	1	09/03/2024 13:46	WG2354873
Xylenes, Total	U		0.000880	0.00650	1	09/03/2024 13:46	WG2354873
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/03/2024 13:46	WG2354873
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/03/2024 13:46	WG2354873
(S) Toluene-d8	96.0			75.0-131		09/03/2024 13:46	WG2354873
(S) 4-Bromofluorobenzene	101			67.0-138		09/03/2024 13:46	WG2354873
(S) 1,2-Dichloroethane-d4	95.8			70.0-130		09/03/2024 13:46	WG2354873

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	9.03		1.61	4.00	1	09/07/2024 15:49	WG2356440
C28-C36 Motor Oil Range	21.6		0.274	4.00	1	09/07/2024 15:49	WG2356440



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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	68.0			18.0-148		09/07/2024 15:49	WG2356440

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	09/05/2024 10:22	WG2355669
Anthracene	U		0.00230	0.00600	1	09/05/2024 10:22	WG2355669
Benzo(a)anthracene	U		0.00173	0.00600	1	09/05/2024 10:22	WG2355669
Benzo(b)fluoranthene	U		0.00153	0.00600	1	09/05/2024 10:22	WG2355669
Benzo(k)fluoranthene	U		0.00215	0.00600	1	09/05/2024 10:22	WG2355669
Benzo(a)pyrene	U		0.00179	0.00600	1	09/05/2024 10:22	WG2355669
Chrysene	U		0.00232	0.00600	1	09/05/2024 10:22	WG2355669
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	09/05/2024 10:22	WG2355669
Fluoranthene	U		0.00227	0.00600	1	09/05/2024 10:22	WG2355669
Fluorene	U		0.00205	0.00600	1	09/05/2024 10:22	WG2355669
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	09/05/2024 10:22	WG2355669
1-Methylnaphthalene	U		0.00449	0.0200	1	09/05/2024 10:22	WG2355669
2-Methylnaphthalene	U		0.00427	0.0200	1	09/05/2024 10:22	WG2355669
Naphthalene	U		0.00408	0.0200	1	09/05/2024 10:22	WG2355669
Pyrene	U		0.00200	0.00600	1	09/05/2024 10:22	WG2355669
(S) p-Terphenyl-d14	91.1			23.0-120		09/05/2024 10:22	WG2355669
(S) Nitrobenzene-d5	92.4			14.0-149		09/05/2024 10:22	WG2355669
(S) 2-Fluorobiphenyl	85.9			34.0-125		09/05/2024 10:22	WG2355669

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	56.8		1	09/07/2024 21:30	WG2356950

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	09/09/2024 05:33	WG2353867

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.66	T8	1	09/08/2024 11:22	WG2358236

Sample Narrative:

L1772210-04 WG2358236: 7.66 at 20.7C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	3100		10.0	1	09/08/2024 08:26	WG2358237

Sample Narrative:

L1772210-04 WG2358237: 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	7.42		0.0167	0.200	1	09/09/2024 18:30	WG2356958

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

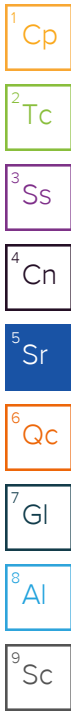
Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	14.4		0.543	2.50	25	09/05/2024 16:12	WG2356030
(S) a,a,a-Trifluorotoluene(FID)	97.6			77.0-120		09/05/2024 16:12	WG2356030

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		0.00187	0.00400	4	09/06/2024 01:14	WG2356652
Toluene	0.00990	J	0.00520	0.0200	4	09/06/2024 01:14	WG2356652
Ethylbenzene	0.00860	J	0.00295	0.0100	4	09/06/2024 01:14	WG2356652
Xylenes, Total	0.0156	J	0.00352	0.0260	4	09/06/2024 01:14	WG2356652
1,2,4-Trimethylbenzene	0.0142	J	0.00632	0.0200	4	09/06/2024 01:14	WG2356652
1,3,5-Trimethylbenzene	U		0.00800	0.0200	4	09/06/2024 01:14	WG2356652
(S) Toluene-d8	88.9			75.0-131		09/06/2024 01:14	WG2356652
(S) 4-Bromofluorobenzene	131			67.0-138		09/06/2024 01:14	WG2356652
(S) 1,2-Dichloroethane-d4	98.8			70.0-130		09/06/2024 01:14	WG2356652

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	36.0		1.61	4.00	1	09/05/2024 21:13	WG2356441
C28-C36 Motor Oil Range	12.9		0.274	4.00	1	09/05/2024 21:13	WG2356441



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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	35.7			18.0-148		09/05/2024 21:13	WG2356441

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	09/05/2024 10:40	WG2355669
Anthracene	U		0.00230	0.00600	1	09/05/2024 10:40	WG2355669
Benzo(a)anthracene	U		0.00173	0.00600	1	09/05/2024 10:40	WG2355669
Benzo(b)fluoranthene	U		0.00153	0.00600	1	09/05/2024 10:40	WG2355669
Benzo(k)fluoranthene	U		0.00215	0.00600	1	09/05/2024 10:40	WG2355669
Benzo(a)pyrene	U		0.00179	0.00600	1	09/05/2024 10:40	WG2355669
Chrysene	U		0.00232	0.00600	1	09/05/2024 10:40	WG2355669
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	09/05/2024 10:40	WG2355669
Fluoranthene	U		0.00227	0.00600	1	09/05/2024 10:40	WG2355669
Fluorene	U		0.00205	0.00600	1	09/05/2024 10:40	WG2355669
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	09/05/2024 10:40	WG2355669
1-Methylnaphthalene	U		0.00449	0.0200	1	09/05/2024 10:40	WG2355669
2-Methylnaphthalene	U		0.00427	0.0200	1	09/05/2024 10:40	WG2355669
Naphthalene	U		0.00408	0.0200	1	09/05/2024 10:40	WG2355669
Pyrene	U		0.00200	0.00600	1	09/05/2024 10:40	WG2355669
(S) p-Terphenyl-d14	74.7			23.0-120		09/05/2024 10:40	WG2355669
(S) Nitrobenzene-d5	71.5			14.0-149		09/05/2024 10:40	WG2355669
(S) 2-Fluorobiphenyl	66.1			34.0-125		09/05/2024 10:40	WG2355669

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	19.5		1	09/07/2024 21:49	WG2356941

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	09/09/2024 05:44	WG2353867

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.63	<u>T8</u>	1	09/08/2024 12:04	WG2358234

Sample Narrative:

L1772210-05 WG2358234: 7.63 at 21C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	13100		10.0	1	09/08/2024 07:39	WG2358239

Sample Narrative:

L1772210-05 WG2358239: 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	2.29		0.0167	0.200	1	09/09/2024 20:24	WG2356954

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

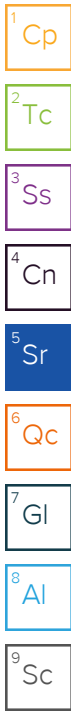
Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	4.15	<u>B</u>	0.543	2.50	25	09/05/2024 16:36	WG2356030
(S) a,a,a-Trifluorotoluene(FID)	97.8			77.0-120		09/05/2024 16:36	WG2356030

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	0.000475	<u>J</u>	0.000467	0.00100	1	09/06/2024 14:43	WG2357512
Toluene	U		0.00130	0.00500	1	09/06/2024 14:43	WG2357512
Ethylbenzene	0.00500		0.000737	0.00250	1	09/06/2024 14:43	WG2357512
Xylenes, Total	0.00510	<u>J</u>	0.000880	0.00650	1	09/06/2024 14:43	WG2357512
1,2,4-Trimethylbenzene	0.0187		0.00158	0.00500	1	09/06/2024 14:43	WG2357512
1,3,5-Trimethylbenzene	0.0133		0.00200	0.00500	1	09/06/2024 14:43	WG2357512
(S) Toluene-d8	108			75.0-131		09/06/2024 14:43	WG2357512
(S) 4-Bromofluorobenzene	99.9			67.0-138		09/06/2024 14:43	WG2357512
(S) 1,2-Dichloroethane-d4	87.3			70.0-130		09/06/2024 14:43	WG2357512

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	45.0		1.61	4.00	1	09/06/2024 00:33	WG2356441
C28-C36 Motor Oil Range	21.1		0.274	4.00	1	09/06/2024 00:33	WG2356441



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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
(S) o-Terphenyl	45.8			18.0-148		09/06/2024 00:33	WG2356441

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	0.00457	J	0.00209	0.00600	1	09/05/2024 10:57	WG2355669
Anthracene	U		0.00230	0.00600	1	09/05/2024 10:57	WG2355669
Benzo(a)anthracene	U		0.00173	0.00600	1	09/05/2024 10:57	WG2355669
Benzo(b)fluoranthene	U		0.00153	0.00600	1	09/05/2024 10:57	WG2355669
Benzo(k)fluoranthene	U		0.00215	0.00600	1	09/05/2024 10:57	WG2355669
Benzo(a)pyrene	U		0.00179	0.00600	1	09/05/2024 10:57	WG2355669
Chrysene	U		0.00232	0.00600	1	09/05/2024 10:57	WG2355669
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	09/05/2024 10:57	WG2355669
Fluoranthene	U		0.00227	0.00600	1	09/05/2024 10:57	WG2355669
Fluorene	0.0135		0.00205	0.00600	1	09/05/2024 10:57	WG2355669
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	09/05/2024 10:57	WG2355669
1-Methylnaphthalene	0.121		0.00449	0.0200	1	09/05/2024 10:57	WG2355669
2-Methylnaphthalene	0.161		0.00427	0.0200	1	09/05/2024 10:57	WG2355669
Naphthalene	0.0314		0.00408	0.0200	1	09/05/2024 10:57	WG2355669
Pyrene	U		0.00200	0.00600	1	09/05/2024 10:57	WG2355669
(S) p-Terphenyl-d14	88.3			23.0-120		09/05/2024 10:57	WG2355669
(S) Nitrobenzene-d5	96.5			14.0-149		09/05/2024 10:57	WG2355669
(S) 2-Fluorobiphenyl	83.7			34.0-125		09/05/2024 10:57	WG2355669

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4117139-1 09/09/24 03:08

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

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1772210-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1772210-03 09/09/24 04:49 • (DUP) R4117139-3 09/09/24 05:22

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

L1772218-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1772218-02 09/09/24 06:38 • (DUP) R4117139-4 09/09/24 06:49

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

Laboratory Control Sample (LCS)

(LCS) R4117139-2 09/09/24 03:19

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Hexavalent Chromium	10.0	10.1	101	80.0-120	

L1772218-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1772218-03 09/09/24 07:00 • (MS) R4117139-6 09/09/24 07:44 • (MSD) R4117139-7 09/09/24 07:55

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	U	18.8	18.8	94.0	93.8	1	75.0-125			0.177	20

L1772218-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1772218-03 09/09/24 07:00 • (MS) R4117139-8 09/09/24 08:06

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Hexavalent Chromium	646	U	759	117	50	75.0-125	

L1772186-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1772186-02 09/08/24 12:04 • (DUP) R4116934-2 09/08/24 12:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.60	7.59	1	0.132		1

Sample Narrative:

OS: 7.6 at 21.3C
DUP: 7.59 at 21.4C

L1773056-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1773056-05 09/08/24 12:04 • (DUP) R4116934-3 09/08/24 12:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.22	8.22	1	0.000		1

Sample Narrative:

OS: 8.22 at 20.7C
DUP: 8.22 at 20.8C

Laboratory Control Sample (LCS)

(LCS) R4116934-1 09/08/24 12:04

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 at 20.8C

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1772186-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1772186-07 09/08/24 11:22 • (DUP) R4116935-2 09/08/24 11:22

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.87	7.84	1	0.382		1

Sample Narrative:

OS: 7.87 at 21.2C
 DUP: 7.84 at 21.3C

L1773056-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1773056-04 09/08/24 11:22 • (DUP) R4116935-3 09/08/24 11:22

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.01	8.05	1	0.498		1

Sample Narrative:

OS: 8.01 at 20.4C
 DUP: 8.05 at 20.5C

Laboratory Control Sample (LCS)

(LCS) R4116935-1 09/08/24 11:22

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 at 21.1C



Method Blank (MB)

(MB) R4116904-1 09/08/24 08:26

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Specific Conductance	U		10.0	10.0

Sample Narrative:

BLANK: at 25C

L1772186-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1772186-03 09/08/24 08:26 • (DUP) R4116904-3 09/08/24 08:26

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Specific Conductance	2830	2800	1	0.960		20

Sample Narrative:

OS: at 25C
DUP: at 25C

L1773056-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1773056-02 09/08/24 08:26 • (DUP) R4116904-4 09/08/24 08:26

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Specific Conductance	700	686	1	2.02		20

Sample Narrative:

OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4116904-2 09/08/24 08:26

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Specific Conductance	733	713	97.3	85.0-115	

Sample Narrative:

LCS: at 25C

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4116902-1 09/08/24 07:39

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Specific Conductance	U		10.0	10.0

Sample Narrative:

BLANK: at 25C

L1772186-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1772186-12 09/08/24 07:39 • (DUP) R4116902-3 09/08/24 07:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Specific Conductance	4790	4740	1	1.05		20

Sample Narrative:

OS: at 25C
DUP: at 25C

L1773056-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1773056-06 09/08/24 07:39 • (DUP) R4116902-4 09/08/24 07:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Specific Conductance	856	851	1	0.586		20

Sample Narrative:

OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4116902-2 09/08/24 07:39

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Specific Conductance	733	718	98.0	85.0-115	

Sample Narrative:

LCS: at 25C

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4117459-1 09/09/24 19:54

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) R4117459-2 09/09/24 19:56 • (LCSD) R4117459-3 09/09/24 19:58

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	0.965	0.963	96.5	96.3	80.0-120			0.139	20

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

Method Blank (MB)

(MB) R4117434-1 09/09/24 18:02

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) R4117434-2 09/09/24 18:04 • (LCSD) R4117434-3 09/09/24 18:06

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	0.947	0.969	94.7	96.9	80.0-120			2.32	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4116085-2 09/03/24 10:39

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0503	↓	0.0217	0.100
^(S) a,a,a-Trifluorotoluene(FID)	101			77.0-120

Laboratory Control Sample (LCS)

(LCS) R4116085-1 09/03/24 10:12

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.00	4.90	98.0	72.0-127	
^(S) a,a,a-Trifluorotoluene(FID)			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) R4115296-3 09/03/24 23:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TPH (GC/FID) Low Fraction	1.02	↓	0.543	2.50
(S) a,a,a-Trifluorotoluene(FID)	100			77.0-120

1 Cp

2 Tc

3 Ss

4 Cn

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

(LCS) R4115296-1 09/03/24 21:35 • (LCSD) R4115296-2 09/03/24 21:59

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TPH (GC/FID) Low Fraction	5.00	4.73	4.95	94.6	99.0	72.0-127			4.55	20
(S) a,a,a-Trifluorotoluene(FID)				108	109	77.0-120				

5 Sr

6 Qc

7 Gl

L1772242-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1772242-10 09/04/24 07:26 • (MS) R4115296-4 09/04/24 09:01 • (MSD) R4115296-5 09/04/24 09:24

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TPH (GC/FID) Low Fraction	85.0	0.600	83.4	76.4	97.4	89.2	25	10.0-151			8.76	28
(S) a,a,a-Trifluorotoluene(FID)					106	106		77.0-120				

8 Al

9 Sc

Method Blank (MB)

(MB) R4116013-2 09/05/24 10:55

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	1.01	↓	0.543	2.50
(S) a,a,a-Trifluorotoluene(FID)	98.0			77.0-120

Laboratory Control Sample (LCS)

(LCS) R4116013-1 09/05/24 09:46

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.00	5.20	104	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			108	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) R4115211-3 09/03/24 07:50

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	94.6			75.0-131
(S) 4-Bromofluorobenzene	98.8			67.0-138
(S) 1,2-Dichloroethane-d4	96.3			70.0-130

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

(LCS) R4115211-1 09/03/24 06:11 • (LCSD) R4115211-2 09/03/24 06:31

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	0.124	0.130	99.2	104	70.0-123			4.72	20
Toluene	0.125	0.121	0.123	96.8	98.4	75.0-121			1.64	20
Ethylbenzene	0.125	0.120	0.121	96.0	96.8	74.0-126			0.830	20
Xylenes, Total	0.375	0.377	0.370	101	98.7	72.0-127			1.87	20
1,2,4-Trimethylbenzene	0.125	0.110	0.109	88.0	87.2	70.0-126			0.913	20
1,3,5-Trimethylbenzene	0.125	0.110	0.106	88.0	84.8	73.0-127			3.70	20
(S) Toluene-d8				91.8	93.1	75.0-131				
(S) 4-Bromofluorobenzene				92.9	93.9	67.0-138				
(S) 1,2-Dichloroethane-d4				99.2	108	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) R4116373-3 09/05/24 17:21

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	89.3			75.0-131
(S) 4-Bromofluorobenzene	92.1			67.0-138
(S) 1,2-Dichloroethane-d4	90.6			70.0-130

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

(LCS) R4116373-1 09/05/24 15:31 • (LCSD) R4116373-2 09/05/24 15:53

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	0.149	0.148	119	118	70.0-123			0.673	20
Toluene	0.125	0.119	0.125	95.2	100	75.0-121			4.92	20
Ethylbenzene	0.125	0.127	0.129	102	103	74.0-126			1.56	20
Xylenes, Total	0.375	0.352	0.372	93.9	99.2	72.0-127			5.52	20
1,2,4-Trimethylbenzene	0.125	0.112	0.120	89.6	96.0	70.0-126			6.90	20
1,3,5-Trimethylbenzene	0.125	0.117	0.119	93.6	95.2	73.0-127			1.69	20
(S) Toluene-d8				85.0	88.2	75.0-131				
(S) 4-Bromofluorobenzene				95.9	96.4	67.0-138				
(S) 1,2-Dichloroethane-d4				102	98.4	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) R4116514-3 09/06/24 13:10

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	112			75.0-131
(S) 4-Bromofluorobenzene	96.6			67.0-138
(S) 1,2-Dichloroethane-d4	83.0			70.0-130

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

(LCS) R4116514-1 09/06/24 11:07 • (LCSD) R4116514-2 09/06/24 11:26

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	0.117	0.110	93.6	88.0	70.0-123			6.17	20
Toluene	0.125	0.131	0.125	105	100	75.0-121			4.69	20
Ethylbenzene	0.125	0.125	0.117	100	93.6	74.0-126			6.61	20
Xylenes, Total	0.375	0.376	0.358	100	95.5	72.0-127			4.90	20
1,2,4-Trimethylbenzene	0.125	0.107	0.111	85.6	88.8	70.0-126			3.67	20
1,3,5-Trimethylbenzene	0.125	0.112	0.114	89.6	91.2	73.0-127			1.77	20
(S) Toluene-d8				111	111	75.0-131				
(S) 4-Bromofluorobenzene				103	97.4	67.0-138				
(S) 1,2-Dichloroethane-d4				97.5	89.6	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) R4116878-1 09/07/24 14:28

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
<i>(S) o-Terphenyl</i>	82.1			18.0-148

Laboratory Control Sample (LCS)

(LCS) R4116878-2 09/07/24 14:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	36.4	72.8	50.0-150	
<i>(S) o-Terphenyl</i>			77.0	18.0-148	

L1772190-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1772190-03 09/07/24 14:56 • (MS) R4116878-3 09/07/24 15:09 • (MSD) R4116878-4 09/07/24 15:23

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	50.0	U	26.2	29.7	52.4	59.4	1	50.0-150			12.5	20
<i>(S) o-Terphenyl</i>					51.1	54.8		18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4116335-1 09/05/24 17:52

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	72.4			18.0-148

Laboratory Control Sample (LCS)

(LCS) R4116335-2 09/05/24 18:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	36.8	73.6	50.0-150	
(S) o-Terphenyl			61.9	18.0-148	

L1772242-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1772242-08 09/05/24 18:19 • (MS) R4116335-3 09/05/24 18:32 • (MSD) R4116335-4 09/05/24 18:46

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	48.2	U	37.4	30.1	77.6	63.5	1	50.0-150		J3	21.6	20
(S) o-Terphenyl					61.5	50.6		18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4115937-2 09/05/24 02:55

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	129	J1		23.0-120
(S) Nitrobenzene-d5	101			14.0-149
(S) 2-Fluorobiphenyl	124			34.0-125

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R4115937-1 09/05/24 02:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0723	90.4	50.0-120	
Anthracene	0.0800	0.0802	100	50.0-126	
Benzo(a)anthracene	0.0800	0.0801	100	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0884	111	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0858	107	49.0-125	
Benzo(a)pyrene	0.0800	0.0783	97.9	42.0-120	
Chrysene	0.0800	0.0887	111	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0860	108	47.0-125	
Fluoranthene	0.0800	0.0855	107	49.0-129	
Fluorene	0.0800	0.0797	99.6	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0802	100	46.0-125	
1-Methylnaphthalene	0.0800	0.0743	92.9	51.0-121	
2-Methylnaphthalene	0.0800	0.0719	89.9	50.0-120	
Naphthalene	0.0800	0.0691	86.4	50.0-120	
Pyrene	0.0800	0.0869	109	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R4115937-1 09/05/24 02:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			114	23.0-120	
(S) Nitrobenzene-d5			96.9	14.0-149	
(S) 2-Fluorobiphenyl			112	34.0-125	

L1773045-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1773045-08 09/05/24 12:06 • (MS) R4115937-3 09/05/24 12:24 • (MSD) R4115937-4 09/05/24 12:42

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	0.0800	U	0.0679	0.0696	84.9	87.0	1	14.0-127			2.47	27
Anthracene	0.0800	U	0.0752	0.0755	94.0	94.4	1	10.0-145			0.398	30
Benzo(a)anthracene	0.0800	U	0.0737	0.0731	92.1	91.4	1	10.0-139			0.817	30
Benzo(b)fluoranthene	0.0800	U	0.0810	0.0815	101	102	1	10.0-140			0.615	36
Benzo(k)fluoranthene	0.0800	U	0.0780	0.0775	97.5	96.9	1	10.0-137			0.643	31
Benzo(a)pyrene	0.0800	U	0.0751	0.0746	93.9	93.3	1	10.0-141			0.668	31
Chrysene	0.0800	U	0.0825	0.0814	103	102	1	10.0-145			1.34	30
Dibenz(a,h)anthracene	0.0800	U	0.0812	0.0800	102	100	1	10.0-132			1.49	31
Fluoranthene	0.0800	U	0.0801	0.0801	100	100	1	10.0-153			0.000	33
Fluorene	0.0800	U	0.0760	0.0759	95.0	94.9	1	11.0-130			0.132	29
Indeno(1,2,3-cd)pyrene	0.0800	U	0.0730	0.0729	91.3	91.1	1	10.0-137			0.137	32
1-Methylnaphthalene	0.0800	U	0.0689	0.0713	86.1	89.1	1	10.0-142			3.42	28
2-Methylnaphthalene	0.0800	U	0.0662	0.0690	82.8	86.3	1	10.0-137			4.14	28
Naphthalene	0.0800	U	0.0645	0.0673	80.6	84.1	1	10.0-135			4.25	27
Pyrene	0.0800	U	0.0806	0.0798	101	99.8	1	10.0-148			0.998	35
(S) p-Terphenyl-d14					110	105		23.0-120				
(S) Nitrobenzene-d5					99.2	94.6		14.0-149				
(S) 2-Fluorobiphenyl					109	105		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

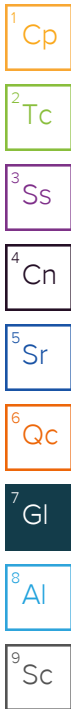
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.
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.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
T8	Sample(s) received past/too close to holding time expiration.



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.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Caerus Oil and Gas
143 Diamond Avenue
Parachute, CO 81635

Billing Information:
SAMEASLEFT

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page 6 of 7



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



Report to: Jake Janicek
Email To: jjanicek@caerusoilandgas.com

Project Description: Corral Creek 4508 Facility Decommissioning
City/State: Piceance Crk, CO
Please Circle: PT MI CT ET

Phone: (970) 778-2314
Client Project #: -
Lab Project #: -

Collected by (print): Trevor Lakin
Site/Facility ID #: Corral Creek 4508
P.O. #: -

Collected by (signature): [Signature]
Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Immediately Packed on Ice N ___ Y X
Date Results Needed: Standard TAT
No. of Cntrs

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs
20240827-M29 199-(FC-FL-T)03	Grab	SS	3ft	8/27/24	9:46	4
20240827-M29 199-(FC-DL-SEP)03	↓	↓	↓	↓	10:25	4
20240827-M29 199-(FC-PIT01)07	↓	↓	7ft	↓	11:21	4
20240827-M29 199-(FC-PIT02)07	↓	↓	↓	↓	11:59	4
20240827-M29 199-(FC-PIT03)07	↓	↓	↓	↓	12:09	4

COGCC Table 915-1	EC, pH, SAR	Arsenic, Boron	COGCC Table 910-1							
X										
X										
X										
X										
X										

SDG # 61772210
F208

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

Remarks	Sample # (lab only)
	-01
	-02
	-03
	-04
	-05

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

Remarks:
Samples returned via: ___ UPS ___ FedEx ___ Courier ___
Tracking #
pH ___ Temp ___
Flow ___ Other ___

Sample Receipt Checklist
COC Seal Present/Intact: ___ NP X Y ___ N
COC Signed/Accurate: ___ X 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) [Signature]	Date: 8/27/24	Time: 16:30	Received by: (Signature) [Signature]	Trip Blank Received: Yes/No <u>No</u> HCL/MeOH TBR
Relinquished by: (Signature) [Signature]	Date: 8-27-24	Time: 1700	Received by: (Signature) [Signature]	Temp: °C 116.3/1.9 Bottles Received: 20
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) Christopher J. Mallin	Date: 8/28/24 Time: 0845

If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK



September 10, 2024

Client Services
Pace National
12065 Lebanon Rd
Mt. Juliet, TN 37122

RE: Project: L1772210 WG2352690
Pace Project No.: 10706218

Dear Client Services:

Enclosed are the analytical results for sample(s) received by the laboratory on August 30, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Minneapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Yeng Ozawa
yeng.ozawa@pacelabs.com
(612)607-1700
Project Manager

Enclosures

cc: Jimmy Huckaba, Pace Analytical National Center for
Testing & Innovation



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: L1772210 WG2352690

Pace Project No.: 10706218

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014

Arkansas DW Certification #: MN00064

Arkansas WW Certification #: 88-0680

California Certification #: 2929

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

DoD Certification via A2LA #: 2926.01

EPA Region 8 Tribal Water Systems+Wyoming DW

Certification #: via MN 027-053-137

Florida Certification #: E87605

Georgia Certification #: 959

GMP+ Certification #: GMP050884

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

ISO/IEC 17025 Certification via A2LA #: 2926.01

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: AI-03086

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064

Maryland Certification #: 322

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Approval: via MN 027-053-137

Minnesota Petrofund Registration #: 1240

Mississippi Certification #: MN00064

Missouri Certification #: 10100

Montana Certification #: CERT0092

Nebraska Certification #: NE-OS-18-06

Nevada Certification #: MN00064

New Hampshire Certification #: 2081

New Jersey Certification #: MN002

New York Certification #: 11647

North Carolina DW Certification #: 27700

North Carolina WW Certification #: 530

North Dakota Certification (A2LA) #: R-036

North Dakota Certification (MN) #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification (1700) #: CL101

Oklahoma Certification #: 9507

Oregon Primary Certification #: MN300001

Oregon Secondary Certification #: MN200001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification #: MN00064

South Carolina Certification #: 74003001

Tennessee Certification #: TN02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Vermont Certification #: VT-027053137

Virginia Certification #: 460163

Washington Certification #: C486

West Virginia DEP Certification #: 382

West Virginia DW Certification #: 9952 C

Wisconsin Certification #: 999407970

Wyoming UST Certification via A2LA #: 2926.01

USDA Permit #: P330-19-00208

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SAMPLE SUMMARY

Project: L1772210 WG2352690
Pace Project No.: 10706218

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10706218001	20240827-M29 199 (FC-FL-T)@3	Solid	08/27/24 09:46	08/30/24 08:50
10706218002	20240827-M29 199 (FC-DL-SEP)@3	Solid	08/27/24 10:25	08/30/24 08:50
10706218003	20240827-M29 199 (FC-PIT01)@7	Solid	08/27/24 11:21	08/30/24 08:50
10706218004	20240827-M29 199 (FC-PIT02)@7	Solid	08/27/24 11:59	08/30/24 08:50
10706218005	20240827-M29 199 (FC-PIT03)@7	Solid	08/27/24 12:09	08/30/24 08:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: L1772210 WG2352690
Pace Project No.: 10706218

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10706218001	20240827-M29 199 (FC-FL-T)@3	EPA 6020B	GAS1, NN2	9	PASI-M
10706218002	20240827-M29 199 (FC-DL-SEP)@3	EPA 6020B	GAS1, NN2	9	PASI-M
10706218003	20240827-M29 199 (FC-PIT01)@7	EPA 6020B	GAS1, NN2	9	PASI-M
10706218004	20240827-M29 199 (FC-PIT02)@7	EPA 6020B	GAS1, NN2	9	PASI-M
10706218005	20240827-M29 199 (FC-PIT03)@7	EPA 6020B	GAS1, NN2	9	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: L1772210 WG2352690

Pace Project No.: 10706218

Sample: 20240827-M29 199 (FC-FL-T)@3 Lab ID: 10706218001 Collected: 08/27/24 09:46 Received: 08/30/24 08:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3050B									
Pace Analytical Services - Minneapolis									
Arsenic	3.9	mg/kg	0.47	0.13	20	09/03/24 17:10	09/09/24 21:09	7440-38-2	
Barium	682	mg/kg	1.4	0.41	100	09/03/24 17:10	09/09/24 21:12	7440-39-3	
Cadmium	0.097	mg/kg	0.075	0.028	20	09/03/24 17:10	09/05/24 02:13	7440-43-9	
Copper	11.1	mg/kg	0.94	0.29	20	09/03/24 17:10	09/09/24 21:09	7440-50-8	
Lead	8.1	mg/kg	0.47	0.16	20	09/03/24 17:10	09/09/24 21:09	7439-92-1	
Nickel	25.6	mg/kg	0.47	0.22	20	09/03/24 17:10	09/09/24 21:09	7440-02-0	
Selenium	0.17J	mg/kg	0.47	0.098	20	09/03/24 17:10	09/05/24 02:13	7782-49-2	
Silver	<0.19	mg/kg	0.47	0.19	20	09/03/24 17:10	09/05/24 02:13	7440-22-4	
Zinc	48.5	mg/kg	4.7	1.3	20	09/03/24 17:10	09/05/24 02:13	7440-66-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: L1772210 WG2352690

Pace Project No.: 10706218

Sample: 20240827-M29 199 (FC-DL-SEP)@3 Lab ID: 10706218002 Collected: 08/27/24 10:25 Received: 08/30/24 08:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3050B Pace Analytical Services - Minneapolis							
Arsenic	3.8	mg/kg	0.47	0.13	20	09/03/24 17:10	09/09/24 21:15	7440-38-2	
Barium	486	mg/kg	1.4	0.41	100	09/03/24 17:10	09/09/24 21:17	7440-39-3	
Cadmium	0.17	mg/kg	0.075	0.027	20	09/03/24 17:10	09/05/24 02:17	7440-43-9	
Copper	14.1	mg/kg	0.93	0.29	20	09/03/24 17:10	09/09/24 21:15	7440-50-8	
Lead	6.9	mg/kg	0.47	0.16	20	09/03/24 17:10	09/09/24 21:15	7439-92-1	
Nickel	34.9	mg/kg	0.47	0.22	20	09/03/24 17:10	09/09/24 21:15	7440-02-0	
Selenium	0.19J	mg/kg	0.47	0.098	20	09/03/24 17:10	09/05/24 02:17	7782-49-2	
Silver	<0.19	mg/kg	0.47	0.19	20	09/03/24 17:10	09/05/24 02:17	7440-22-4	
Zinc	42.0	mg/kg	4.7	1.3	20	09/03/24 17:10	09/05/24 02:17	7440-66-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: L1772210 WG2352690

Pace Project No.: 10706218

Sample: 20240827-M29 199 (FC-PIT01)@7 Lab ID: 10706218003 Collected: 08/27/24 11:21 Received: 08/30/24 08:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3050B									
Pace Analytical Services - Minneapolis									
Arsenic	3.5	mg/kg	0.48	0.14	20	09/03/24 17:10	09/09/24 21:20	7440-38-2	
Barium	185	mg/kg	0.29	0.084	20	09/03/24 17:10	09/09/24 21:20	7440-39-3	
Cadmium	0.11	mg/kg	0.076	0.028	20	09/03/24 17:10	09/05/24 02:21	7440-43-9	
Copper	8.1	mg/kg	0.96	0.29	20	09/03/24 17:10	09/09/24 21:20	7440-50-8	
Lead	13.5	mg/kg	0.48	0.17	20	09/03/24 17:10	09/09/24 21:20	7439-92-1	
Nickel	12.0	mg/kg	0.48	0.22	20	09/03/24 17:10	09/09/24 21:20	7440-02-0	
Selenium	0.30J	mg/kg	0.48	0.10	20	09/03/24 17:10	09/05/24 02:21	7782-49-2	
Silver	<0.20	mg/kg	0.48	0.20	20	09/03/24 17:10	09/05/24 02:21	7440-22-4	
Zinc	45.9	mg/kg	4.8	1.4	20	09/03/24 17:10	09/05/24 02:21	7440-66-6	

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ANALYTICAL RESULTS

Project: L1772210 WG2352690

Pace Project No.: 10706218

Sample: 20240827-M29 199 (FC-PIT02)@7 Lab ID: 10706218004 Collected: 08/27/24 11:59 Received: 08/30/24 08:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3050B Pace Analytical Services - Minneapolis							
Arsenic	3.1	mg/kg	0.47	0.14	20	09/03/24 17:10	09/09/24 21:23	7440-38-2	
Barium	357	mg/kg	0.28	0.083	20	09/03/24 17:10	09/09/24 21:23	7440-39-3	
Cadmium	0.11	mg/kg	0.076	0.028	20	09/03/24 17:10	09/05/24 02:25	7440-43-9	
Copper	7.9	mg/kg	0.95	0.29	20	09/03/24 17:10	09/09/24 21:23	7440-50-8	
Lead	16.8	mg/kg	0.47	0.16	20	09/03/24 17:10	09/09/24 21:23	7439-92-1	
Nickel	12.3	mg/kg	0.47	0.22	20	09/03/24 17:10	09/09/24 21:23	7440-02-0	
Selenium	0.45J	mg/kg	0.47	0.10	20	09/03/24 17:10	09/05/24 02:25	7782-49-2	
Silver	<0.19	mg/kg	0.47	0.19	20	09/03/24 17:10	09/05/24 02:25	7440-22-4	
Zinc	52.7	mg/kg	4.7	1.3	20	09/03/24 17:10	09/05/24 02:25	7440-66-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: L1772210 WG2352690

Pace Project No.: 10706218

Sample: 20240827-M29 199 (FC-PIT03)@7 Lab ID: 10706218005 Collected: 08/27/24 12:09 Received: 08/30/24 08:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3050B Pace Analytical Services - Minneapolis							
Arsenic	3.2	mg/kg	0.48	0.14	20	09/03/24 17:10	09/09/24 21:25	7440-38-2	
Barium	224	mg/kg	0.29	0.084	20	09/03/24 17:10	09/09/24 21:25	7440-39-3	
Cadmium	0.11	mg/kg	0.076	0.028	20	09/03/24 17:10	09/05/24 02:29	7440-43-9	
Copper	8.0	mg/kg	0.96	0.29	20	09/03/24 17:10	09/09/24 21:25	7440-50-8	
Lead	10.9	mg/kg	0.48	0.17	20	09/03/24 17:10	09/09/24 21:25	7439-92-1	
Nickel	16.0	mg/kg	0.48	0.22	20	09/03/24 17:10	09/09/24 21:25	7440-02-0	
Selenium	0.24J	mg/kg	0.48	0.10	20	09/03/24 17:10	09/05/24 02:29	7782-49-2	
Silver	<0.19	mg/kg	0.48	0.19	20	09/03/24 17:10	09/05/24 02:29	7440-22-4	
Zinc	44.9	mg/kg	4.8	1.4	20	09/03/24 17:10	09/05/24 02:29	7440-66-6	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: L1772210 WG2352690

Pace Project No.: 10706218

QC Batch:	966009	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3050B	Analysis Description:	6020B Solids UPD5
		Laboratory:	Pace Analytical Services - Minneapolis

Associated Lab Samples: 10706218001, 10706218002, 10706218003, 10706218004, 10706218005

METHOD BLANK: 5048591 Matrix: Solid
 Associated Lab Samples: 10706218001, 10706218002, 10706218003, 10706218004, 10706218005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/kg	<0.13	0.47	0.13	09/05/24 00:35	
Barium	mg/kg	<0.082	0.28	0.082	09/05/24 00:35	
Cadmium	mg/kg	<0.027	0.075	0.027	09/05/24 00:35	
Copper	mg/kg	<0.29	0.93	0.29	09/05/24 00:35	
Lead	mg/kg	<0.16	0.47	0.16	09/05/24 00:35	
Nickel	mg/kg	<0.22	0.47	0.22	09/05/24 00:35	
Selenium	mg/kg	<0.098	0.47	0.098	09/05/24 00:35	
Silver	mg/kg	<0.19	0.47	0.19	09/05/24 00:35	
Zinc	mg/kg	2.1J	4.7	1.3	09/05/24 00:35	

LABORATORY CONTROL SAMPLE: 5048592

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	46.3	49.8	107	80-120	
Barium	mg/kg	46.3	50.9	110	80-120	
Cadmium	mg/kg	46.3	48.3	104	80-120	
Copper	mg/kg	46.3	52.2	113	80-120	
Lead	mg/kg	46.3	52.3	113	80-120	
Nickel	mg/kg	46.3	52.2	113	80-120	
Selenium	mg/kg	46.3	46.4	100	80-120	
Silver	mg/kg	23.2	25.0	108	80-120	
Zinc	mg/kg	46.3	49.9	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5048593 5048594

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10706203001 Result	Spike Conc.	Spike Conc.	MS Result						
Arsenic	mg/kg	3.8	46.8	48.3	55.8	55.8	111	108	75-125	0	20
Barium	mg/kg	122	46.8	48.3	176	172	115	104	75-125	2	20
Cadmium	mg/kg	0.17	46.8	48.3	48.8	49.6	104	102	75-125	1	20
Copper	mg/kg	9.2	46.8	48.3	62.5	62.1	114	110	75-125	1	20
Lead	mg/kg	7.7	46.8	48.3	60.5	61.0	113	110	75-125	1	20
Nickel	mg/kg	9.2	46.8	48.3	61.9	62.9	113	111	75-125	2	20
Selenium	mg/kg	0.21J	46.8	48.3	47.8	49.9	102	103	75-125	4	20
Silver	mg/kg	<0.20	23.4	24.2	25.4	25.6	108	106	75-125	1	20
Zinc	mg/kg	35.1	46.8	48.3	87.1	84.9	111	103	75-125	3	20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: L1772210 WG2352690

Pace Project No.: 10706218

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: L1772210 WG2352690
 Pace Project No.: 10706218

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10706218001	20240827-M29 199 (FC-FL-T)@3	EPA 3050B	966009	EPA 6020B	966253
10706218002	20240827-M29 199 (FC-DL-SEP)@3	EPA 3050B	966009	EPA 6020B	966253
10706218003	20240827-M29 199 (FC-PIT01)@7	EPA 3050B	966009	EPA 6020B	966253
10706218004	20240827-M29 199 (FC-PIT02)@7	EPA 3050B	966009	EPA 6020B	966253
10706218005	20240827-M29 199 (FC-PIT03)@7	EPA 3050B	966009	EPA 6020B	966253

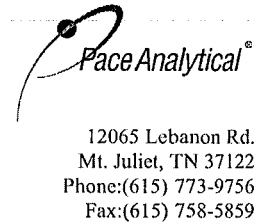
REPORT OF LABORATORY ANALYSIS

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Sub-Contract Chain of Custody

Batch Date/Time: 08/29/24 09:10
Sub-Contract Lab: PACEMN
Address: 1700 Elm Street Suite 200
 SE
City/State: Minneapolis, MN 55414
Contact: tong.lee@pacelabs.com
Owner Lab: PACEMTJL
Address: 12065 Lebanon Rd.
City/State: Mt. Juliet, TN 37122
Phone: (615) 773-9756
Fax: (615) 758-5859

WO: WG2352690
Email: MTJLSuboutTeam@pacelabs.com
Results Due Date: 09/12/24
ESC Purchase Order #: L1772210
Send Reports to: James C Huckaba



Sample ID Container ID	Matrix	State	Collect Date	Description	Sample Number Lab Use Only	Sample Comments Lab Use Only
20240827-M29 199 (FC-FL-T)@3	SS	CO	08/27/24 09:46	Metals	1. L1772210-01	6020 Total Ag,As,Ba,Cd,Cu,Ni,Pb,Se,Zn; MDL/RDL Reporting
20240827-M29 199 (FC-DL-SEP)@3	SS	CO	08/27/24 10:25	Metals	2. L1772210-02	6020 Total Ag,As,Ba,Cd,Cu,Ni,Pb,Se,Zn; MDL/RDL Reporting
20240827-M29 199 (FC-PIT01)@7	SS	CO	08/27/24 11:21	Metals	3. L1772210-03	6020 Total Ag,As,Ba,Cd,Cu,Ni,Pb,Se,Zn; MDL/RDL Reporting
20240827-M29 199 (FC-PIT02)@7	SS	CO	08/27/24 11:59	Metals	4. L1772210-04	6020 Total Ag,As,Ba,Cd,Cu,Ni,Pb,Se,Zn; MDL/RDL Reporting
20240827-M29 199 (FC-PIT03)@7	SS	CO	08/27/24 12:09	Metals	5. L1772210-05	6020 Total Ag,As,Ba,Cd,Cu,Ni,Pb,Se,Zn; MDL/RDL Reporting

*= Container used for multiple Samples and/or Analyses

Relinquished by: [Signature] Date 8-29-24
 Received by: W.A. PACE Date 8/30/24 850
 Relinquished by: _____ Date _____
 Received by: _____ Date _____

No Ice

20.9°C



ENV-FRM-MIN4-0150 v17 Sample Condition Upon Receipt

CLIENT NAME: Pace National PROJECT #: _____

COURIER: Client Commercial FedEx Pace
 SpeeDee UPS USPS

WO#: 10706218

PM: Y01 Due Date: 09/16/24
 CLIENT: PASI-TN

TRACKING NUMBER: 4041 0478 9605 See Exceptions form ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present: YES NO Seals Intact: YES NO Biological Tissue Frozen: YES NO N/A
 Packing Material: Bubble Bags Bubble Wrap None Other Temp Blank: YES NO Type of Ice: Blue Dry Wet
 Thermometer: T1 (0461) T2 (0436) T3 (0459) T4 (0402) T5 (0178) T6 (0235) T7 (0042) T8 (0775) T9 (0727) 01339252 (1710) Melted None

Did Samples Originate in West Virginia: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Were All Container Temps taken: <input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
Correction Factor: <u>-0.4</u> Cooler Temp Read w/Temp Blank: _____ °C (amb) Cooler Temp Corrected w/Temp Blank: _____ °C	Average Corrected Temp (no Temp Blank Only): <u>20.9</u> °C
NOTE: Temp should be above freezing to 6°C.	
<input checked="" type="checkbox"/> See Exceptions Form ENV-FRM-MIN4-0142 <input type="checkbox"/> 1 Container	

USDA Regulated Soil: <input type="checkbox"/> N/A - Water Sample/Other (describe): _____	Initials & Date of Person Examining Contents: <u>WJ 8/30/24</u>
Did Samples originate from one of the following states (check maps) - AL, AR, AZ, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Did samples originate from a foreign source (international, including Hawaii and Puerto Rico): <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
NOTE: If YES to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.	

LOCATION (check one): <input type="checkbox"/> DULUTH <input checked="" type="checkbox"/> MINNEAPOLIS <input type="checkbox"/> VIRGINIA	YES	NO	N/A	COMMENT(S)								
Chain of Custody Present and Filled Out?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		1.								
Chain of Custody Relinquished?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		2.								
Sampler Name and/or Signature on COC?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3.								
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		4. If Fecal: <input type="checkbox"/> <8 hrs <input type="checkbox"/> >8 hr, <24 hr <input type="checkbox"/> No								
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		5. <input type="checkbox"/> BOD / cBOD <input type="checkbox"/> Fecal coliform <input type="checkbox"/> Hex Chrom <input type="checkbox"/> HPC <input type="checkbox"/> Nitrate <input type="checkbox"/> Nitrite <input type="checkbox"/> Ortho Phos <input type="checkbox"/> Total coliform/E. coli <input type="checkbox"/> Other: _____								
Rush Turn Around Time Requested?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		6.								
Sufficient Sample Volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		7.								
Correct Containers Used? - Pace Containers Used?	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	8.								
Containers Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		9.								
Field Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10. Is sediment visible in the dissolved container: <input type="checkbox"/> YES <input type="checkbox"/> NO								
Is sufficient information available to reconcile the samples to the COC? NOTE: If ID/Date/Time don't match fill out section 11. Matrix: <input type="checkbox"/> Oil <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> Other	<input checked="" type="checkbox"/>	<input type="checkbox"/>		11. If NO, write ID/Date/Time of container below: <input type="checkbox"/> See Exceptions form ENV-FRM-MIN4-0142								
All containers needing acid/base preservation have been checked? All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , < 2 pH, NaOH > 9 Sulfide, NaOH > 10 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil & Grease, DRO/8015 (water) and Dioxins/PFAS	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	12. Sample #: <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> Zinc Acetate Positive for Residual Chlorine: <input type="checkbox"/> YES <input type="checkbox"/> NO pH Paper Lot # <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <th style="width: 25%;">Residual Chlorine</th> <th style="width: 25%;">0-6 Roll</th> <th style="width: 25%;">0-6 Strip</th> <th style="width: 25%;">0-14 Strip</th> </tr> <tr> <td style="height: 20px;"></td> <td></td> <td></td> <td></td> </tr> </table> <input type="checkbox"/> See Exceptions form ENV-FRM-MIN4-0142	Residual Chlorine	0-6 Roll	0-6 Strip	0-14 Strip				
Residual Chlorine	0-6 Roll	0-6 Strip	0-14 Strip									
Headspace in Methyl Mercury Container?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	13.								
Extra labels present on soil VOA or WIDRO containers? Headspace in VOA Vials (greater than 6mm)?	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	14. <input type="checkbox"/> See Exceptions form ENV-FRM-MIN4-0140								
Trip Blanks Present? Trip Blank Custody Seals Present?	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	15. Pace Trip Blank Lot # (if purchased): _____								

CLIENT NOTIFICATION / RESOLUTION FIELD DATA REQUIRED: YES NO
 Person Contacted: _____ Date & Time: _____
 Comments / Resolution: _____

Project Manager Review: Yeng Ozawa Date: 9/3/24

NOTE: When there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEQ Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).
 Labeled By: HB Line: 3

Workorder #: _____

No Temp Blank		
Read Temp	Corrected Temp	Average temp
21.3	20.9	20.9
21.3	20.9	
21.5	21.1	
21.1	20.7	

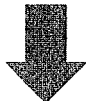
PM Notified of Out of Temp Cooler? YES NO

If yes, indicate who was contacted, date and time.
If no, indicate reason why.

"No Ice" on cooler

Multiple Cooler Project? YES NO

If anything is OVER 6.0°C, you **MUST** document containers in this section **HERE**



Tracking Number	Temperature

Out of Temp Sample ID	Container Type	# of Containers

pH Adjustment Log for Preserved Samples										
Sample ID	Type Of Preserve	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance After Addition?		Initials
								YES	NO	
								<input type="checkbox"/>	<input type="checkbox"/>	
								<input type="checkbox"/>	<input type="checkbox"/>	
								<input type="checkbox"/>	<input type="checkbox"/>	
								<input type="checkbox"/>	<input type="checkbox"/>	
								<input type="checkbox"/>	<input type="checkbox"/>	
								<input type="checkbox"/>	<input type="checkbox"/>	
								<input type="checkbox"/>	<input type="checkbox"/>	
								<input type="checkbox"/>	<input type="checkbox"/>	

Comments:
