

**HRL Compliance Solutions- CO**

Sample Delivery Group: L1633518  
Samples Received: 07/08/2023  
Project Number:  
Description: UGC DPU 7712 Soil Delineation  
Site: DPU 7712  
Report To: Joel Adams  
2385 F ½ Road  
Grand Junction, CO 81505

Entire Report Reviewed By:



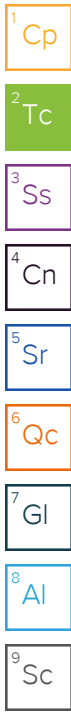
Chris Ward  
Project Manager

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# SAMPLE SUMMARY

## SB-04 @ 20' L1633518-01 Solid

Collected by J. Adams      Collected date/time 07/06/23 11:30      Received date/time 07/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2092704	1	07/14/23 13:14	07/14/23 13:14	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2092295	1	07/11/23 17:10	07/13/23 00:51	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2092778	1	07/11/23 14:53	07/11/23 17:00	EPW	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2093273	1	07/12/23 09:18	07/12/23 16:12	MCC	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2091362	1	07/14/23 13:49	07/17/23 13:27	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2092910	5	07/11/23 17:42	07/12/23 22:16	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2094646	1	07/11/23 17:59	07/14/23 02:57	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2093522	1	07/11/23 17:59	07/12/23 19:46	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2093980	1	07/14/23 06:01	07/14/23 14:37	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2094002	1	07/13/23 16:43	07/14/23 07:06	DLH	Mt. Juliet, TN



## SB-04 @ 40' L1633518-02 Solid

Collected by J. Adams      Collected date/time 07/06/23 12:40      Received date/time 07/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2092377	1	07/18/23 09:21	07/18/23 09:21	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2092295	1	07/11/23 17:10	07/13/23 00:56	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2092778	1	07/11/23 14:53	07/11/23 17:00	EPW	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2093273	1	07/12/23 09:18	07/12/23 16:12	MCC	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2092378	1	07/11/23 17:18	07/17/23 16:14	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2092910	5	07/11/23 17:42	07/12/23 22:19	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2094646	1	07/11/23 17:59	07/14/23 03:15	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2093848	1	07/11/23 17:59	07/13/23 02:29	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2093980	1	07/14/23 06:01	07/14/23 13:59	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2094002	1	07/13/23 16:43	07/14/23 07:24	DLH	Mt. Juliet, TN

## SB-04 @ 60' L1633518-03 Solid

Collected by J. Adams      Collected date/time 07/06/23 13:30      Received date/time 07/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2092377	1	07/18/23 09:24	07/18/23 09:24	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2092295	1	07/11/23 17:10	07/13/23 01:01	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2092778	1	07/11/23 14:53	07/11/23 17:00	EPW	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2093273	1	07/12/23 09:18	07/12/23 16:12	MCC	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2092378	1	07/11/23 17:18	07/17/23 16:17	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2092910	5	07/11/23 17:42	07/12/23 22:22	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2094650	1	07/11/23 17:59	07/14/23 02:28	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2093848	1	07/11/23 17:59	07/13/23 02:48	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2093980	1	07/14/23 06:01	07/14/23 13:31	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2094002	1	07/13/23 16:43	07/14/23 08:18	DLH	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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.508		1	07/14/2023 13:14	WG2092704

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	07/13/2023 00:51	<a href="#">WG2092295</a>

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.59	<u>T8</u>	1	07/11/2023 17:00	<a href="#">WG2092778</a>

Sample Narrative:

L1633518-01 WG2092778: 7.59 at 21.4C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	3040		10.0	1	07/12/2023 16:12	<a href="#">WG2093273</a>

Sample Narrative:

L1633518-01 WG2093273: at 25C

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

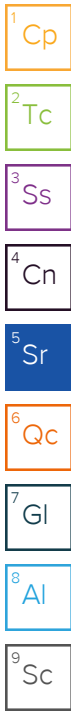
Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.178	<u>J</u>	0.0167	0.200	1	07/17/2023 13:27	<a href="#">WG2091362</a>

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	9.65		0.100	1.00	5	07/12/2023 22:16	<a href="#">WG2092910</a>
Barium	161		0.152	2.50	5	07/12/2023 22:16	<a href="#">WG2092910</a>
Cadmium	0.208	<u>J</u>	0.0855	1.00	5	07/12/2023 22:16	<a href="#">WG2092910</a>
Copper	15.1		0.132	5.00	5	07/12/2023 22:16	<a href="#">WG2092910</a>
Lead	9.22		0.0990	2.00	5	07/12/2023 22:16	<a href="#">WG2092910</a>
Nickel	10.0		0.197	2.50	5	07/12/2023 22:16	<a href="#">WG2092910</a>
Selenium	0.377	<u>J</u>	0.180	2.50	5	07/12/2023 22:16	<a href="#">WG2092910</a>
Silver	U		0.0865	0.500	5	07/12/2023 22:16	<a href="#">WG2092910</a>
Zinc	40.4		0.740	25.0	5	07/12/2023 22:16	<a href="#">WG2092910</a>

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	0.0851	<u>J</u>	0.0217	0.100	1	07/14/2023 02:57	<a href="#">WG2094646</a>
(S) a,a,a-Trifluorotoluene(FID)	95.4			77.0-120		07/14/2023 02:57	<a href="#">WG2094646</a>



## 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	07/12/2023 19:46	<a href="#">WG2093522</a>
Toluene	U		0.00130	0.00500	1	07/12/2023 19:46	<a href="#">WG2093522</a>
Ethylbenzene	U		0.000737	0.00250	1	07/12/2023 19:46	<a href="#">WG2093522</a>
Xylenes, Total	U		0.000880	0.00650	1	07/12/2023 19:46	<a href="#">WG2093522</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	07/12/2023 19:46	<a href="#">WG2093522</a>
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	07/12/2023 19:46	<a href="#">WG2093522</a>
(S) Toluene-d8	108			75.0-131		07/12/2023 19:46	<a href="#">WG2093522</a>
(S) 4-Bromofluorobenzene	103			67.0-138		07/12/2023 19:46	<a href="#">WG2093522</a>
(S) 1,2-Dichloroethane-d4	85.0			70.0-130		07/12/2023 19:46	<a href="#">WG2093522</a>

## 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	6.87		1.61	4.00	1	07/14/2023 14:37	<a href="#">WG2093980</a>
C28-C36 Motor Oil Range	18.1		0.274	4.00	1	07/14/2023 14:37	<a href="#">WG2093980</a>
(S) o-Terphenyl	29.4			18.0-148		07/14/2023 14:37	<a href="#">WG2093980</a>

## 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
Anthracene	U		0.00230	0.00600	1	07/14/2023 07:06	<a href="#">WG2094002</a>
Acenaphthene	U		0.00209	0.00600	1	07/14/2023 07:06	<a href="#">WG2094002</a>
Acenaphthylene	U		0.00216	0.00600	1	07/14/2023 07:06	<a href="#">WG2094002</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	07/14/2023 07:06	<a href="#">WG2094002</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	07/14/2023 07:06	<a href="#">WG2094002</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	07/14/2023 07:06	<a href="#">WG2094002</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	07/14/2023 07:06	<a href="#">WG2094002</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	07/14/2023 07:06	<a href="#">WG2094002</a>
Chrysene	U		0.00232	0.00600	1	07/14/2023 07:06	<a href="#">WG2094002</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	07/14/2023 07:06	<a href="#">WG2094002</a>
Fluoranthene	U		0.00227	0.00600	1	07/14/2023 07:06	<a href="#">WG2094002</a>
Fluorene	U		0.00205	0.00600	1	07/14/2023 07:06	<a href="#">WG2094002</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	07/14/2023 07:06	<a href="#">WG2094002</a>
Naphthalene	U		0.00408	0.0200	1	07/14/2023 07:06	<a href="#">WG2094002</a>
Phenanthrene	U		0.00231	0.00600	1	07/14/2023 07:06	<a href="#">WG2094002</a>
Pyrene	U		0.00200	0.00600	1	07/14/2023 07:06	<a href="#">WG2094002</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	07/14/2023 07:06	<a href="#">WG2094002</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	07/14/2023 07:06	<a href="#">WG2094002</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	07/14/2023 07:06	<a href="#">WG2094002</a>
(S) p-Terphenyl-d14	67.0			23.0-120		07/14/2023 07:06	<a href="#">WG2094002</a>
(S) Nitrobenzene-d5	50.6			14.0-149		07/14/2023 07:06	<a href="#">WG2094002</a>
(S) 2-Fluorobiphenyl	50.9			34.0-125		07/14/2023 07:06	<a href="#">WG2094002</a>

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	0.888		1	07/18/2023 09:21	WG2092377

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.334	J	0.255	1.00	1	07/13/2023 00:56	<a href="#">WG2092295</a>

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.66	T8	1	07/11/2023 17:00	<a href="#">WG2092778</a>

Sample Narrative:

L1633518-02 WG2092778: 7.66 at 21.4C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	3450		10.0	1	07/12/2023 16:12	<a href="#">WG2093273</a>

Sample Narrative:

L1633518-02 WG2093273: at 25C

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

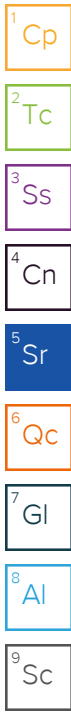
Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.240		0.0167	0.200	1	07/17/2023 16:14	<a href="#">WG2092378</a>

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.97		0.100	1.00	5	07/12/2023 22:19	<a href="#">WG2092910</a>
Barium	144		0.152	2.50	5	07/12/2023 22:19	<a href="#">WG2092910</a>
Cadmium	0.201	J	0.0855	1.00	5	07/12/2023 22:19	<a href="#">WG2092910</a>
Copper	14.5		0.132	5.00	5	07/12/2023 22:19	<a href="#">WG2092910</a>
Lead	8.79		0.0990	2.00	5	07/12/2023 22:19	<a href="#">WG2092910</a>
Nickel	9.50		0.197	2.50	5	07/12/2023 22:19	<a href="#">WG2092910</a>
Selenium	0.308	J	0.180	2.50	5	07/12/2023 22:19	<a href="#">WG2092910</a>
Silver	U		0.0865	0.500	5	07/12/2023 22:19	<a href="#">WG2092910</a>
Zinc	38.7		0.740	25.0	5	07/12/2023 22:19	<a href="#">WG2092910</a>

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	0.0789	J	0.0217	0.100	1	07/14/2023 03:15	<a href="#">WG2094646</a>
(S) a,a,a-Trifluorotoluene(FID)	97.6			77.0-120		07/14/2023 03:15	<a href="#">WG2094646</a>



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	07/13/2023 02:29	<a href="#">WG2093848</a>
Toluene	U		0.00130	0.00500	1	07/13/2023 02:29	<a href="#">WG2093848</a>
Ethylbenzene	U		0.000737	0.00250	1	07/13/2023 02:29	<a href="#">WG2093848</a>
Xylenes, Total	U		0.000880	0.00650	1	07/13/2023 02:29	<a href="#">WG2093848</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	07/13/2023 02:29	<a href="#">WG2093848</a>
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	07/13/2023 02:29	<a href="#">WG2093848</a>
(S) Toluene-d8	110			75.0-131		07/13/2023 02:29	<a href="#">WG2093848</a>
(S) 4-Bromofluorobenzene	91.4			67.0-138		07/13/2023 02:29	<a href="#">WG2093848</a>
(S) 1,2-Dichloroethane-d4	95.1			70.0-130		07/13/2023 02:29	<a href="#">WG2093848</a>

- 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	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	2.84	U	1.61	4.00	1	07/14/2023 13:59	<a href="#">WG2093980</a>
C28-C36 Motor Oil Range	8.07		0.274	4.00	1	07/14/2023 13:59	<a href="#">WG2093980</a>
(S) o-Terphenyl	29.4			18.0-148		07/14/2023 13:59	<a href="#">WG2093980</a>

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
Anthracene	U		0.00230	0.00600	1	07/14/2023 07:24	<a href="#">WG2094002</a>
Acenaphthene	U		0.00209	0.00600	1	07/14/2023 07:24	<a href="#">WG2094002</a>
Acenaphthylene	U		0.00216	0.00600	1	07/14/2023 07:24	<a href="#">WG2094002</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	07/14/2023 07:24	<a href="#">WG2094002</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	07/14/2023 07:24	<a href="#">WG2094002</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	07/14/2023 07:24	<a href="#">WG2094002</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	07/14/2023 07:24	<a href="#">WG2094002</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	07/14/2023 07:24	<a href="#">WG2094002</a>
Chrysene	U		0.00232	0.00600	1	07/14/2023 07:24	<a href="#">WG2094002</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	07/14/2023 07:24	<a href="#">WG2094002</a>
Fluoranthene	U		0.00227	0.00600	1	07/14/2023 07:24	<a href="#">WG2094002</a>
Fluorene	U		0.00205	0.00600	1	07/14/2023 07:24	<a href="#">WG2094002</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	07/14/2023 07:24	<a href="#">WG2094002</a>
Naphthalene	U		0.00408	0.0200	1	07/14/2023 07:24	<a href="#">WG2094002</a>
Phenanthrene	U		0.00231	0.00600	1	07/14/2023 07:24	<a href="#">WG2094002</a>
Pyrene	U		0.00200	0.00600	1	07/14/2023 07:24	<a href="#">WG2094002</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	07/14/2023 07:24	<a href="#">WG2094002</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	07/14/2023 07:24	<a href="#">WG2094002</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	07/14/2023 07:24	<a href="#">WG2094002</a>
(S) p-Terphenyl-d14	68.8			23.0-120		07/14/2023 07:24	<a href="#">WG2094002</a>
(S) Nitrobenzene-d5	46.3			14.0-149		07/14/2023 07:24	<a href="#">WG2094002</a>
(S) 2-Fluorobiphenyl	42.6			34.0-125		07/14/2023 07:24	<a href="#">WG2094002</a>

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.21		1	07/18/2023 09:24	WG2092377

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	07/13/2023 01:01	<a href="#">WG2092295</a>

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.62	<u>T8</u>	1	07/11/2023 17:00	<a href="#">WG2092778</a>

Sample Narrative:

L1633518-03 WG2092778: 7.62 at 21.3C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	3910		10.0	1	07/12/2023 16:12	<a href="#">WG2093273</a>

Sample Narrative:

L1633518-03 WG2093273: at 25C

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

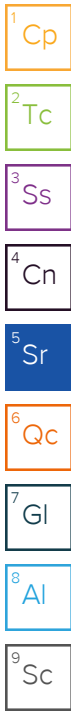
Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.225		0.0167	0.200	1	07/17/2023 16:17	<a href="#">WG2092378</a>

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.67		0.100	1.00	5	07/12/2023 22:22	<a href="#">WG2092910</a>
Barium	134		0.152	2.50	5	07/12/2023 22:22	<a href="#">WG2092910</a>
Cadmium	0.205	<u>J</u>	0.0855	1.00	5	07/12/2023 22:22	<a href="#">WG2092910</a>
Copper	15.5		0.132	5.00	5	07/12/2023 22:22	<a href="#">WG2092910</a>
Lead	8.30		0.0990	2.00	5	07/12/2023 22:22	<a href="#">WG2092910</a>
Nickel	10.2		0.197	2.50	5	07/12/2023 22:22	<a href="#">WG2092910</a>
Selenium	0.339	<u>J</u>	0.180	2.50	5	07/12/2023 22:22	<a href="#">WG2092910</a>
Silver	0.0915	<u>J</u>	0.0865	0.500	5	07/12/2023 22:22	<a href="#">WG2092910</a>
Zinc	40.2		0.740	25.0	5	07/12/2023 22:22	<a href="#">WG2092910</a>

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	0.0709	<u>J</u>	0.0217	0.100	1	07/14/2023 02:28	<a href="#">WG2094650</a>
(S) a,a,a-Trifluorotoluene(FID)	92.8			77.0-120		07/14/2023 02:28	<a href="#">WG2094650</a>



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	07/13/2023 02:48	<a href="#">WG2093848</a>
Toluene	U		0.00130	0.00500	1	07/13/2023 02:48	<a href="#">WG2093848</a>
Ethylbenzene	U		0.000737	0.00250	1	07/13/2023 02:48	<a href="#">WG2093848</a>
Xylenes, Total	U		0.000880	0.00650	1	07/13/2023 02:48	<a href="#">WG2093848</a>
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	07/13/2023 02:48	<a href="#">WG2093848</a>
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	07/13/2023 02:48	<a href="#">WG2093848</a>
(S) Toluene-d8	108			75.0-131		07/13/2023 02:48	<a href="#">WG2093848</a>
(S) 4-Bromofluorobenzene	94.6			67.0-138		07/13/2023 02:48	<a href="#">WG2093848</a>
(S) 1,2-Dichloroethane-d4	95.5			70.0-130		07/13/2023 02:48	<a href="#">WG2093848</a>

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	2.83	U	1.61	4.00	1	07/14/2023 13:31	<a href="#">WG2093980</a>
C28-C36 Motor Oil Range	3.50	U	0.274	4.00	1	07/14/2023 13:31	<a href="#">WG2093980</a>
(S) o-Terphenyl	42.3			18.0-148		07/14/2023 13:31	<a href="#">WG2093980</a>

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
Anthracene	U		0.00230	0.00600	1	07/14/2023 08:18	<a href="#">WG2094002</a>
Acenaphthene	U		0.00209	0.00600	1	07/14/2023 08:18	<a href="#">WG2094002</a>
Acenaphthylene	U		0.00216	0.00600	1	07/14/2023 08:18	<a href="#">WG2094002</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	07/14/2023 08:18	<a href="#">WG2094002</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	07/14/2023 08:18	<a href="#">WG2094002</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	07/14/2023 08:18	<a href="#">WG2094002</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	07/14/2023 08:18	<a href="#">WG2094002</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	07/14/2023 08:18	<a href="#">WG2094002</a>
Chrysene	U		0.00232	0.00600	1	07/14/2023 08:18	<a href="#">WG2094002</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	07/14/2023 08:18	<a href="#">WG2094002</a>
Fluoranthene	U		0.00227	0.00600	1	07/14/2023 08:18	<a href="#">WG2094002</a>
Fluorene	U		0.00205	0.00600	1	07/14/2023 08:18	<a href="#">WG2094002</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	07/14/2023 08:18	<a href="#">WG2094002</a>
Naphthalene	U		0.00408	0.0200	1	07/14/2023 08:18	<a href="#">WG2094002</a>
Phenanthrene	U		0.00231	0.00600	1	07/14/2023 08:18	<a href="#">WG2094002</a>
Pyrene	U		0.00200	0.00600	1	07/14/2023 08:18	<a href="#">WG2094002</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	07/14/2023 08:18	<a href="#">WG2094002</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	07/14/2023 08:18	<a href="#">WG2094002</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	07/14/2023 08:18	<a href="#">WG2094002</a>
(S) p-Terphenyl-d14	68.8			23.0-120		07/14/2023 08:18	<a href="#">WG2094002</a>
(S) Nitrobenzene-d5	46.5			14.0-149		07/14/2023 08:18	<a href="#">WG2094002</a>
(S) 2-Fluorobiphenyl	49.6			34.0-125		07/14/2023 08:18	<a href="#">WG2094002</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3947979-1 07/12/23 23:21

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

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

L1633428-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1633428-03 07/12/23 23:49 • (DUP) R3947979-3 07/12/23 23:54

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

<sup>4</sup>Cn

<sup>5</sup>Sr

L1633428-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1633428-09 07/13/23 00:35 • (DUP) R3947979-4 07/13/23 00:41

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

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

Laboratory Control Sample (LCS)

(LCS) R3947979-2 07/12/23 23:28

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Hexavalent Chromium	10.0	10.5	105	80.0-120	

<sup>9</sup>Sc

L1633533-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1633533-08 07/11/23 17:00 • (DUP) R3947309-2 07/11/23 17:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
pH	8.39	8.38	1	0.119		1

Sample Narrative:

OS: 8.39 at 21.7C  
DUP: 8.38 at 22.2C

L1633571-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1633571-01 07/11/23 17:00 • (DUP) R3947309-3 07/11/23 17:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
pH	8.29	8.32	1	0.361		1

Sample Narrative:

OS: 8.29 at 21.7C  
DUP: 8.32 at 21.8C

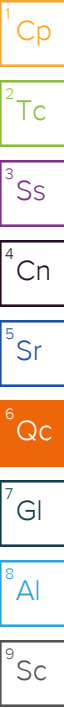
Laboratory Control Sample (LCS)

(LCS) R3947309-1 07/11/23 17:00

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

Sample Narrative:

LCS: 10 at 22C



Method Blank (MB)

(MB) R3947893-1 07/12/23 16:12

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

Sample Narrative:

BLANK: at 25C

L1633531-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1633531-04 07/12/23 16:12 • (DUP) R3947893-3 07/12/23 16:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Specific Conductance	41.0	41.2	1	0.487		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1633921-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1633921-05 07/12/23 16:12 • (DUP) R3947893-4 07/12/23 16:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Specific Conductance	233	234	1	0.342		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3947893-2 07/12/23 16:12

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Specific Conductance	327	329	101	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) R3949374-1 07/17/23 12:35

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) R3949374-2 07/17/23 12:37 • (LCSD) R3949374-3 07/17/23 12:40

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	1.13	1.06	113	106	80.0-120			6.28	20

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3949648-1 07/17/23 16:06

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) R3949648-2 07/17/23 16:08 • (LCSD) R3949648-3 07/17/23 16:11

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	1.08	1.13	108	113	80.0-120			4.80	20

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3948033-1 07/12/23 21:52

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

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

Laboratory Control Sample (LCS)

(LCS) R3948033-7 07/12/23 22:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	88.1	88.1	80.0-120	
Barium	100	88.1	88.1	80.0-120	
Cadmium	100	88.2	88.2	80.0-120	
Copper	100	87.5	87.5	80.0-120	
Lead	100	84.8	84.8	80.0-120	
Nickel	100	84.2	84.2	80.0-120	
Selenium	100	91.2	91.2	80.0-120	
Silver	20.0	17.3	86.5	80.0-120	
Zinc	100	84.4	84.4	80.0-120	

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1633850-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1633850-01 07/12/23 21:59 • (MS) R3948033-5 07/12/23 22:09 • (MSD) R3948033-6 07/12/23 22:12

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	4.67	82.8	95.5	78.1	90.9	5	75.0-125			14.3	20
Barium	100	151	156	186	5.00	34.5	5	75.0-125	J6	J6	17.3	20
Cadmium	100	U	84.8	94.1	84.8	94.1	5	75.0-125			10.3	20
Copper	100	13.7	87.1	99.0	73.4	85.3	5	75.0-125	J6		12.8	20
Lead	100	17.9	95.5	100	77.6	82.2	5	75.0-125			4.67	20
Nickel	100	12.3	85.2	101	72.8	88.6	5	75.0-125	J6		16.9	20
Selenium	100	0.456	85.7	95.8	85.2	95.4	5	75.0-125			11.2	20
Silver	20.0	U	16.8	18.4	83.9	92.1	5	75.0-125			9.32	20
Zinc	100	44.4	104	121	59.5	76.5	5	75.0-125	J6		15.1	20

Method Blank (MB)

(MB) R3948822-2 07/14/23 00:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
<sup>(S)</sup> a,a,a-Trifluorotoluene(FID)	99.9			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3948822-1 07/13/23 23:29

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.80	87.3	72.0-127	
<sup>(S)</sup> a,a,a-Trifluorotoluene(FID)			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) R3948820-2 07/14/23 00:04

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)	97.9			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3948820-1 07/13/23 21:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.35	97.3	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			105	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) R3949350-2 07/12/23 09:55

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	105			75.0-131
(S) 4-Bromofluorobenzene	104			67.0-138
(S) 1,2-Dichloroethane-d4	96.3			70.0-130

Laboratory Control Sample (LCS)

(LCS) R3949350-1 07/12/23 08:39

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
Benzene	0.125	0.115	92.0	70.0-123	
Toluene	0.125	0.121	96.8	75.0-121	
Ethylbenzene	0.125	0.111	88.8	74.0-126	
Xylenes, Total	0.375	0.334	89.1	72.0-127	
1,2,4-Trimethylbenzene	0.125	0.102	81.6	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.104	83.2	73.0-127	
(S) Toluene-d8			103	75.0-131	
(S) 4-Bromofluorobenzene			104	67.0-138	
(S) 1,2-Dichloroethane-d4			97.7	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) R3948066-2 07/12/23 21:48

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Benzene	U		0.000467	0.00100
Toluene	0.00138	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	110			75.0-131
(S) 4-Bromofluorobenzene	90.9			67.0-138
(S) 1,2-Dichloroethane-d4	88.3			70.0-130

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3948066-1 07/12/23 20:52

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
Benzene	0.125	0.123	98.4	70.0-123	
Toluene	0.125	0.127	102	75.0-121	
Ethylbenzene	0.125	0.125	100	74.0-126	
Xylenes, Total	0.375	0.348	92.8	72.0-127	
1,2,4-Trimethylbenzene	0.125	0.125	100	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.130	104	73.0-127	
(S) Toluene-d8			106	75.0-131	
(S) 4-Bromofluorobenzene			92.8	67.0-138	
(S) 1,2-Dichloroethane-d4			99.1	70.0-130	

L1634432-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1634432-04 07/13/23 01:33 • (MS) R3948066-3 07/13/23 04:58 • (MSD) R3948066-4 07/13/23 05:17

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	%	%		%			%	%
Benzene	0.125	U	0.102	0.115	81.6	92.0	1	10.0-149			12.0	37
Toluene	0.125	U	0.111	0.123	88.8	98.4	1	10.0-156			10.3	38
Ethylbenzene	0.125	U	0.102	0.119	81.6	95.2	1	10.0-160			15.4	38
Xylenes, Total	0.375	U	0.292	0.336	77.9	89.6	1	10.0-160			14.0	38
1,2,4-Trimethylbenzene	0.125	0.00460	0.112	0.125	85.9	96.3	1	10.0-160			11.0	36
1,3,5-Trimethylbenzene	0.125	U	0.112	0.131	89.6	105	1	10.0-160			15.6	38
(S) Toluene-d8					109	110		75.0-131				
(S) 4-Bromofluorobenzene					91.1	94.1		67.0-138				
(S) 1,2-Dichloroethane-d4					95.9	90.4		70.0-130				

Method Blank (MB)

(MB) R3948860-1 07/14/23 12:39

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
(S) o-Terphenyl	81.1			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3948860-2 07/14/23 12:52

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
C10-C28 Diesel Range	50.0	38.5	77.0	50.0-150	
(S) o-Terphenyl			66.8	18.0-148	

L1633518-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1633518-01 07/14/23 14:37 • (MS) R3948860-3 07/14/23 14:51 • (MSD) R3948860-4 07/14/23 15:04

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	49.7	6.87	35.3	41.0	57.2	68.3	1	50.0-150			14.9	20
(S) o-Terphenyl					31.9	36.9		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) R3949197-2 07/14/23 02:56

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	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
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) p-Terphenyl-d14	80.8			23.0-120
(S) Nitrobenzene-d5	42.0			14.0-149
(S) 2-Fluorobiphenyl	49.9			34.0-125

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3949197-1 07/14/23 02:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0588	73.5	50.0-126	
Acenaphthene	0.0800	0.0574	71.8	50.0-120	
Acenaphthylene	0.0800	0.0618	77.3	50.0-120	
Benzo(a)anthracene	0.0800	0.0633	79.1	45.0-120	
Benzo(a)pyrene	0.0800	0.0542	67.8	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0561	70.1	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0519	64.9	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0541	67.6	49.0-125	
Chrysene	0.0800	0.0590	73.8	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0555	69.4	47.0-125	
Fluoranthene	0.0800	0.0676	84.5	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3949197-1 07/14/23 02:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0606	75.8	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0605	75.6	46.0-125	
Naphthalene	0.0800	0.0532	66.5	50.0-120	
Phenanthrene	0.0800	0.0568	71.0	47.0-120	
Pyrene	0.0800	0.0588	73.5	43.0-123	
1-Methylnaphthalene	0.0800	0.0580	72.5	51.0-121	
2-Methylnaphthalene	0.0800	0.0588	73.5	50.0-120	
2-Chloronaphthalene	0.0800	0.0559	69.9	50.0-120	
(S) p-Terphenyl-d14			74.5	23.0-120	
(S) Nitrobenzene-d5			54.3	14.0-149	
(S) 2-Fluorobiphenyl			59.6	34.0-125	

L1633511-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1633511-02 07/14/23 03:32 • (MS) R3949197-3 07/14/23 03:50 • (MSD) R3949197-4 07/14/23 04:08

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 %
Anthracene	0.0796	U	0.0415	0.0461	52.1	57.9	1	10.0-145			10.5	30
Acenaphthene	0.0796	U	0.0396	0.0434	49.7	54.5	1	14.0-127			9.16	27
Acenaphthylene	0.0796	U	0.0427	0.0464	53.6	58.3	1	21.0-124			8.31	25
Benzo(a)anthracene	0.0796	U	0.0449	0.0498	56.4	62.6	1	10.0-139			10.3	30
Benzo(a)pyrene	0.0796	U	0.0404	0.0459	50.8	57.7	1	10.0-141			12.7	31
Benzo(b)fluoranthene	0.0796	0.00181	0.0354	0.0414	44.5	52.0	1	10.0-140			15.6	36
Benzo(g,h,i)perylene	0.0796	U	0.0332	0.0382	41.7	48.0	1	10.0-140			14.0	33
Benzo(k)fluoranthene	0.0796	U	0.0362	0.0411	45.5	51.6	1	10.0-137			12.7	31
Chrysene	0.0796	U	0.0443	0.0487	55.7	61.2	1	10.0-145			9.46	30
Dibenz(a,h)anthracene	0.0796	U	0.0357	0.0412	44.8	51.8	1	10.0-132			14.3	31
Fluoranthene	0.0796	U	0.0498	0.0548	62.6	68.8	1	10.0-153			9.56	33
Fluorene	0.0796	U	0.0442	0.0467	55.5	58.7	1	11.0-130			5.50	29
Indeno(1,2,3-cd)pyrene	0.0796	U	0.0355	0.0423	44.6	53.1	1	10.0-137			17.5	32
Naphthalene	0.0796	U	0.0358	0.0417	45.0	52.4	1	10.0-135			15.2	27
Phenanthrene	0.0796	U	0.0428	0.0501	53.8	62.9	1	10.0-144			15.7	31
Pyrene	0.0796	U	0.0428	0.0483	53.8	60.7	1	10.0-148			12.1	35
1-Methylnaphthalene	0.0796	U	0.0415	0.0492	48.9	58.6	1	10.0-142			17.0	28
2-Methylnaphthalene	0.0796	U	0.0437	0.0507	51.2	60.0	1	10.0-137			14.8	28
2-Chloronaphthalene	0.0796	U	0.0397	0.0425	49.7	53.2	1	29.0-120			6.81	24
(S) p-Terphenyl-d14					54.8	64.7		23.0-120				
(S) Nitrobenzene-d5					48.3	37.3		14.0-149				
(S) 2-Fluorobiphenyl					48.3	41.2		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.

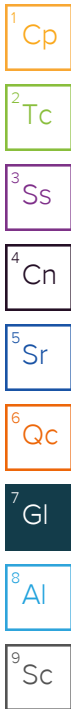
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

J	The identification of the analyte is acceptable; the reported value is an estimate.
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.



# 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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

