

Utah Gas Corporation

Sample Delivery Group: L1416960
Samples Received: 10/12/2021
Project Number: DPU 7712
Description: Utah Gas Cop. DPU 7712
Site: DPU 7712
Report To: Robert Bleil
1125 Escalante Drive
Rangely, CO 81648

Entire Report Reviewed By:

[Preliminary Report]

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

SB-01 @ 20' L1416960-01 Solid

Collected by: Nick Cholas
 Collected date/time: 10/07/21 15:15
 Received date/time: 10/12/21 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1760796	1000	10/15/21 20:26	10/21/21 09:20	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1760430	10	10/21/21 08:46	10/21/21 16:38	TJD	Mt. Juliet, TN



SB-01 @ 40' L1416960-02 Solid

Collected by: Nick Cholas
 Collected date/time: 10/07/21 15:30
 Received date/time: 10/12/21 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1760796	5000	10/15/21 20:26	10/21/21 09:44	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1760430	10	10/21/21 08:46	10/21/21 16:51	TJD	Mt. Juliet, TN

SB-01 @ 60' L1416960-03 Solid

Collected by: Nick Cholas
 Collected date/time: 10/07/21 16:15
 Received date/time: 10/12/21 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1759167	1	10/21/21 12:08	10/21/21 12:08	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1758622	1	10/18/21 18:00	10/19/21 14:03	MCG	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1758322	1	10/16/21 15:33	10/18/21 15:36	CRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1758626	1	10/18/21 03:01	10/18/21 19:43	AMH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1758951	1	10/18/21 19:14	10/19/21 11:31	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1759161	1	10/20/21 08:30	10/26/21 16:47	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1758960	5	10/18/21 19:19	10/19/21 09:08	JDG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1760796	2000	10/15/21 20:26	10/21/21 10:07	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1758532	40	10/15/21 20:26	10/17/21 23:10	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1760438	10	10/21/21 11:19	10/21/21 19:21	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1760452	1	10/21/21 08:30	10/22/21 10:06	AAT	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1760452	10	10/21/21 08:30	10/23/21 15:45	AAT	Mt. Juliet, TN

SB-02 @ 20' L1416960-04 Solid

Collected by: Nick Cholas
 Collected date/time: 10/08/21 11:00
 Received date/time: 10/12/21 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1760036	100	10/15/21 20:26	10/21/21 01:40	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1760438	10	10/21/21 11:19	10/21/21 19:09	JAS	Mt. Juliet, TN

SB-02 @ 40' L1416960-05 Solid

Collected by: Nick Cholas
 Collected date/time: 10/08/21 11:30
 Received date/time: 10/12/21 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1760036	250	10/15/21 20:26	10/21/21 02:03	GLN	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1766266	5000	10/15/21 20:26	10/30/21 14:14	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1760438	10	10/21/21 11:19	10/21/21 19:34	JAS	Mt. Juliet, TN

SB-02 @ 60' L1416960-06 Solid

Collected by: Nick Cholas
 Collected date/time: 10/08/21 12:00
 Received date/time: 10/12/21 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1759167	1	10/21/21 12:11	10/21/21 12:11	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1759816	1	10/19/21 17:00	10/20/21 14:35	SCM	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1758322	1	10/16/21 15:33	10/18/21 15:36	CRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1758626	1	10/18/21 03:01	10/18/21 19:43	AMH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1758951	1	10/18/21 19:14	10/19/21 11:34	CCE	Mt. Juliet, TN

SAMPLE SUMMARY

SB-02 @ 60' L1416960-06 Solid

Collected by Nick Cholas Collected date/time 10/08/21 12:00 Received date/time 10/12/21 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1759161	1	10/20/21 08:30	10/26/21 16:50	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1758960	5	10/18/21 19:19	10/19/21 09:11	JDG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1760036	500	10/15/21 20:26	10/21/21 02:26	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1758532	40	10/15/21 20:26	10/17/21 23:29	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1760438	10	10/21/21 11:19	10/21/21 18:56	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1761251	1	10/22/21 12:47	10/22/21 20:29	AAT	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1761251	10	10/22/21 12:47	10/23/21 16:05	AAT	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

SB-03 @ 20' L1416960-07 Solid

Collected by Nick Cholas Collected date/time 10/08/21 12:30 Received date/time 10/12/21 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1760036	100	10/15/21 20:26	10/21/21 02:50	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1760438	10	10/21/21 11:19	10/21/21 19:58	JAS	Mt. Juliet, TN

SB-03 @ 40' L1416960-08 Solid

Collected by Nick Cholas Collected date/time 10/08/21 13:00 Received date/time 10/12/21 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1760036	500	10/15/21 20:26	10/21/21 03:13	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1760438	10	10/21/21 11:19	10/21/21 19:46	JAS	Mt. Juliet, TN

SB-03 @ 60' L1416960-09 Solid

Collected by Nick Cholas Collected date/time 10/08/21 13:30 Received date/time 10/12/21 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1759167	1	10/21/21 12:14	10/21/21 12:14	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1759816	1	10/19/21 17:00	10/20/21 14:40	SCM	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1758322	1	10/16/21 15:33	10/18/21 15:36	CRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1758626	1	10/18/21 03:01	10/18/21 19:43	AMH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1758951	1	10/18/21 19:14	10/19/21 11:37	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1759161	1	10/20/21 08:30	10/26/21 16:53	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1758960	5	10/18/21 19:19	10/19/21 09:14	JDG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1760036	500	10/15/21 20:26	10/21/21 03:37	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1758532	40	10/15/21 20:26	10/17/21 23:48	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1761237	5	10/22/21 18:46	10/23/21 17:11	WCR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1761251	1	10/22/21 12:47	10/22/21 20:47	AAT	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1761251	10	10/22/21 12:47	10/23/21 16:25	AAT	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.

[Preliminary Report]

Chris Ward
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	1760		21.7	100	1000	10/21/2021 09:20	WG1760796
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	90.5			77.0-120		10/21/2021 09:20	WG1760796

1 Cp

2 Tc

3 Ss

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	1720		16.1	40.0	10	10/21/2021 16:38	WG1760430
C28-C36 Motor Oil Range	643		2.74	40.0	10	10/21/2021 16:38	WG1760430
(S) <i>o</i> -Terphenyl	177	<u>J1</u>		18.0-148		10/21/2021 16:38	WG1760430

4 Cn

5 Sr

6 Qc

Sample Narrative:

L1416960-01 WG1760430: Surrogate failure due to matrix interference

7 Gl

8 Al

9 Sc

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	7810		109	500	5000	10/21/2021 09:44	WG1760796
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	94.5			77.0-120		10/21/2021 09:44	WG1760796

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	1770		16.1	40.0	10	10/21/2021 16:51	WG1760430
C28-C36 Motor Oil Range	432		2.74	40.0	10	10/21/2021 16:51	WG1760430
(S) <i>o</i> -Terphenyl	183	<u>J1</u>		18.0-148		10/21/2021 16:51	WG1760430

Sample Narrative:

L1416960-02 WG1760430: Surrogate failure due to matrix interference

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	7.98		1	10/21/2021 12:08	WG1759167

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	10/19/2021 14:03	WG1758622

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.86	<u>T8</u>	1	10/18/2021 15:36	WG1758322

Sample Narrative:

L1416960-03 WG1758322: 7.86 at 20.3C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1440		10.0	1	10/18/2021 19:43	WG1758626

Sample Narrative:

L1416960-03 WG1758626: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	224		0.0852	0.500	1	10/19/2021 11:31	WG1758951
Cadmium	0.322	<u>J</u>	0.0471	0.500	1	10/19/2021 11:31	WG1758951
Copper	19.6		0.400	2.00	1	10/19/2021 11:31	WG1758951
Lead	10.3		0.208	0.500	1	10/19/2021 11:31	WG1758951
Nickel	13.7		0.132	2.00	1	10/19/2021 11:31	WG1758951
Selenium	U		0.764	2.00	1	10/19/2021 11:31	WG1758951
Silver	U		0.127	1.00	1	10/19/2021 11:31	WG1758951
Zinc	46.5		0.832	5.00	1	10/19/2021 11:31	WG1758951

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

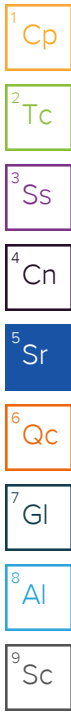
Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.133	<u>J</u>	0.0167	0.200	1	10/26/2021 16:47	WG1759161

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	11.0		0.100	1.00	5	10/19/2021 09:08	WG1758960

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	5470		43.4	200	2000	10/21/2021 10:07	WG1760796
(S) a,a,a-Trifluorotoluene(FID)	93.2			77.0-120		10/21/2021 10:07	WG1760796



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	3.03		0.0187	0.0400	40	10/17/2021 23:10	WG1758532
Toluene	33.0		0.0520	0.200	40	10/17/2021 23:10	WG1758532
Ethylbenzene	6.90		0.0295	0.100	40	10/17/2021 23:10	WG1758532
Xylenes, Total	82.5		0.0352	0.260	40	10/17/2021 23:10	WG1758532
1,2,4-Trimethylbenzene	19.3		0.0632	0.200	40	10/17/2021 23:10	WG1758532
1,3,5-Trimethylbenzene	11.2		0.0800	0.200	40	10/17/2021 23:10	WG1758532
(S) Toluene-d8	100			75.0-131		10/17/2021 23:10	WG1758532
(S) 4-Bromofluorobenzene	103			67.0-138		10/17/2021 23:10	WG1758532
(S) 1,2-Dichloroethane-d4	107			70.0-130		10/17/2021 23:10	WG1758532

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

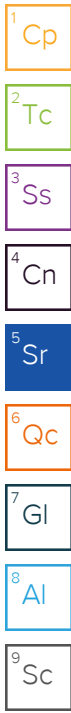
Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	1080		16.1	40.0	10	10/21/2021 19:21	WG1760438
C28-C36 Motor Oil Range	245		2.74	40.0	10	10/21/2021 19:21	WG1760438
(S) o-Terphenyl	65.5			18.0-148		10/21/2021 19:21	WG1760438

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	10/22/2021 10:06	WG1760452
Acenaphthene	0.104		0.00209	0.00600	1	10/22/2021 10:06	WG1760452
Acenaphthylene	U		0.00216	0.00600	1	10/22/2021 10:06	WG1760452
Benzo(a)anthracene	U		0.00173	0.00600	1	10/22/2021 10:06	WG1760452
Benzo(a)pyrene	0.00318	<u>U</u>	0.00179	0.00600	1	10/22/2021 10:06	WG1760452
Benzo(b)fluoranthene	0.0124		0.00153	0.00600	1	10/22/2021 10:06	WG1760452
Benzo(g,h,i)perylene	0.00465	<u>U</u>	0.00177	0.00600	1	10/22/2021 10:06	WG1760452
Benzo(k)fluoranthene	0.00356	<u>U</u>	0.00215	0.00600	1	10/22/2021 10:06	WG1760452
Chrysene	0.0432		0.00232	0.00600	1	10/22/2021 10:06	WG1760452
Dibenz(a,h)anthracene	0.00212	<u>U</u>	0.00172	0.00600	1	10/22/2021 10:06	WG1760452
Fluoranthene	0.0312		0.00227	0.00600	1	10/22/2021 10:06	WG1760452
Fluorene	0.548		0.00205	0.00600	1	10/22/2021 10:06	WG1760452
Indeno(1,2,3-cd)pyrene	0.00256	<u>U</u>	0.00181	0.00600	1	10/22/2021 10:06	WG1760452
Naphthalene	2.05		0.00408	0.0200	1	10/22/2021 10:06	WG1760452
Phenanthrene	0.602		0.00231	0.00600	1	10/22/2021 10:06	WG1760452
Pyrene	0.0362		0.00200	0.00600	1	10/22/2021 10:06	WG1760452
1-Methylnaphthalene	1.85		0.00449	0.0200	1	10/22/2021 10:06	WG1760452
2-Methylnaphthalene	6.13		0.0427	0.200	10	10/23/2021 15:45	WG1760452
2-Chloronaphthalene	U		0.00466	0.0200	1	10/22/2021 10:06	WG1760452
(S) p-Terphenyl-d14	99.2			23.0-120		10/23/2021 15:45	WG1760452
(S) p-Terphenyl-d14	87.6			23.0-120		10/22/2021 10:06	WG1760452
(S) Nitrobenzene-d5	0.000	<u>J2</u>		14.0-149		10/22/2021 10:06	WG1760452
(S) Nitrobenzene-d5	0.000	<u>J2</u>		14.0-149		10/23/2021 15:45	WG1760452
(S) 2-Fluorobiphenyl	102			34.0-125		10/23/2021 15:45	WG1760452
(S) 2-Fluorobiphenyl	109			34.0-125		10/22/2021 10:06	WG1760452

Sample Narrative:

L1416960-03 WG1760452: Surrogate failure due to matrix interference



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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	501		2.17	10.0	100	10/21/2021 01:40	WG1760036
(S) a,a,a-Trifluorotoluene(FID)	90.8			77.0-120		10/21/2021 01:40	WG1760036

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	886		16.1	40.0	10	10/21/2021 19:09	WG1760438
C28-C36 Motor Oil Range	172		2.74	40.0	10	10/21/2021 19:09	WG1760438
(S) o-Terphenyl	64.8			18.0-148		10/21/2021 19:09	WG1760438

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

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	4340	<u>E</u>	5.43	25.0	250	10/21/2021 02:03	WG1760036
TPH (GC/FID) Low Fraction	5230	<u>Q</u>	109	500	5000	10/30/2021 14:14	WG1766266
(S) a,a,a-Trifluorotoluene(FID)	8.14	<u>J2</u>		77.0-120		10/21/2021 02:03	WG1760036
(S) a,a,a-Trifluorotoluene(FID)	96.1			77.0-120		10/30/2021 14:14	WG1766266

Sample Narrative:

L1416960-05 WG1760036: Surrogate failure due to matrix interference

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	1810		16.1	40.0	10	10/21/2021 19:34	WG1760438
C28-C36 Motor Oil Range	245		2.74	40.0	10	10/21/2021 19:34	WG1760438
(S) o-Terphenyl	81.7			18.0-148		10/21/2021 19:34	WG1760438

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	4.46		1	10/21/2021 12:11	WG1759167

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	10/20/2021 14:35	WG1759816

- 5 Sr
- 6 Qc

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.57	<u>T8</u>	1	10/18/2021 15:36	WG1758322

- 7 Gl
- 8 Al

Sample Narrative:

L1416960-06 WG1758322: 7.57 at 20.2C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	2880		10.0	1	10/18/2021 19:43	WG1758626

- 9 Sc

Sample Narrative:

L1416960-06 WG1758626: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	182		0.0852	0.500	1	10/19/2021 11:34	WG1758951
Cadmium	0.338	<u>J</u>	0.0471	0.500	1	10/19/2021 11:34	WG1758951
Copper	16.8		0.400	2.00	1	10/19/2021 11:34	WG1758951
Lead	9.22		0.208	0.500	1	10/19/2021 11:34	WG1758951
Nickel	12.2		0.132	2.00	1	10/19/2021 11:34	WG1758951
Selenium	1.05	<u>J</u>	0.764	2.00	1	10/19/2021 11:34	WG1758951
Silver	U		0.127	1.00	1	10/19/2021 11:34	WG1758951
Zinc	43.2		0.832	5.00	1	10/19/2021 11:34	WG1758951

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	0.164	<u>J</u>	0.0167	0.200	1	10/26/2021 16:50	WG1759161

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	7.02		0.100	1.00	5	10/19/2021 09:11	WG1758960

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	5060		10.9	50.0	500	10/21/2021 02:26	WG1760036
(S) a,a,a-Trifluorotoluene(FID)	89.9			77.0-120		10/21/2021 02:26	WG1760036

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.533		0.0187	0.0400	40	10/17/2021 23:29	WG1758532
Toluene	9.40		0.0520	0.200	40	10/17/2021 23:29	WG1758532
Ethylbenzene	6.45		0.0295	0.100	40	10/17/2021 23:29	WG1758532
Xylenes, Total	85.9		0.0352	0.260	40	10/17/2021 23:29	WG1758532
1,2,4-Trimethylbenzene	32.7		0.0632	0.200	40	10/17/2021 23:29	WG1758532
1,3,5-Trimethylbenzene	19.9		0.0800	0.200	40	10/17/2021 23:29	WG1758532
(S) Toluene-d8	95.2			75.0-131		10/17/2021 23:29	WG1758532
(S) 4-Bromofluorobenzene	101			67.0-138		10/17/2021 23:29	WG1758532
(S) 1,2-Dichloroethane-d4	107			70.0-130		10/17/2021 23:29	WG1758532

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	938		16.1	40.0	10	10/21/2021 18:56	WG1760438
C28-C36 Motor Oil Range	152		2.74	40.0	10	10/21/2021 18:56	WG1760438
(S) o-Terphenyl	62.4			18.0-148		10/21/2021 18:56	WG1760438

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.00230	0.00600	1	10/22/2021 20:29	WG1761251
Acenaphthene	U		0.00209	0.00600	1	10/22/2021 20:29	WG1761251
Acenaphthylene	U		0.00216	0.00600	1	10/22/2021 20:29	WG1761251
Benzo(a)anthracene	U		0.00173	0.00600	1	10/22/2021 20:29	WG1761251
Benzo(a)pyrene	U		0.00179	0.00600	1	10/22/2021 20:29	WG1761251
Benzo(b)fluoranthene	0.00495	J	0.00153	0.00600	1	10/22/2021 20:29	WG1761251
Benzo(g,h,i)perylene	0.00195	J	0.00177	0.00600	1	10/22/2021 20:29	WG1761251
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/22/2021 20:29	WG1761251
Chrysene	0.0159		0.00232	0.00600	1	10/22/2021 20:29	WG1761251
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/22/2021 20:29	WG1761251
Fluoranthene	U		0.00227	0.00600	1	10/22/2021 20:29	WG1761251
Fluorene	0.160		0.00205	0.00600	1	10/22/2021 20:29	WG1761251
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/22/2021 20:29	WG1761251
Naphthalene	3.18		0.00408	0.0200	1	10/22/2021 20:29	WG1761251
Phenanthrene	0.261		0.00231	0.00600	1	10/22/2021 20:29	WG1761251
Pyrene	0.0111		0.00200	0.00600	1	10/22/2021 20:29	WG1761251
1-Methylnaphthalene	1.98		0.00449	0.0200	1	10/22/2021 20:29	WG1761251
2-Methylnaphthalene	4.08		0.0427	0.200	10	10/23/2021 16:05	WG1761251
2-Chloronaphthalene	U		0.00466	0.0200	1	10/22/2021 20:29	WG1761251
(S) p-Terphenyl-d14	102			23.0-120		10/23/2021 16:05	WG1761251
(S) p-Terphenyl-d14	93.0			23.0-120		10/22/2021 20:29	WG1761251
(S) Nitrobenzene-d5	0.000	J2		14.0-149		10/22/2021 20:29	WG1761251
(S) Nitrobenzene-d5	0.000	J2		14.0-149		10/23/2021 16:05	WG1761251
(S) 2-Fluorobiphenyl	64.5			34.0-125		10/22/2021 20:29	WG1761251
(S) 2-Fluorobiphenyl	97.7			34.0-125		10/23/2021 16:05	WG1761251

Sample Narrative:

L1416960-06 WG1761251: Surrogate failure due to matrix interference

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

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	891		2.17	10.0	100	10/21/2021 02:50	WG1760036
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	93.1			77.0-120		10/21/2021 02:50	WG1760036

- 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	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	1010		16.1	40.0	10	10/21/2021 19:58	WG1760438
C28-C36 Motor Oil Range	289		2.74	40.0	10	10/21/2021 19:58	WG1760438
(S) <i>o</i> -Terphenyl	69.0			18.0-148		10/21/2021 19:58	WG1760438

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	5050		10.9	50.0	500	10/21/2021 03:13	WG1760036
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	89.9			77.0-120		10/21/2021 03:13	WG1760036

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	2690		16.1	40.0	10	10/21/2021 19:46	WG1760438
C28-C36 Motor Oil Range	518		2.74	40.0	10	10/21/2021 19:46	WG1760438
(S) <i>o</i> -Terphenyl	86.1			18.0-148		10/21/2021 19:46	WG1760438

- 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	9.71		1	10/21/2021 12:14	WG1759167

1 Cp
2 Tc
3 Ss
4 Cn

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	10/20/2021 14:40	WG1759816

5 Sr
6 Qc

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.96	<u>T8</u>	1	10/18/2021 15:36	WG1758322

7 Gl
8 Al

Sample Narrative:

L1416960-09 WG1758322: 7.96 at 20.3C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1350		10.0	1	10/18/2021 19:43	WG1758626

9 Sc

Sample Narrative:

L1416960-09 WG1758626: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	196		0.0852	0.500	1	10/19/2021 11:37	WG1758951
Cadmium	0.361	<u>J</u>	0.0471	0.500	1	10/19/2021 11:37	WG1758951
Copper	18.5		0.400	2.00	1	10/19/2021 11:37	WG1758951
Lead	11.5		0.208	0.500	1	10/19/2021 11:37	WG1758951
Nickel	13.1		0.132	2.00	1	10/19/2021 11:37	WG1758951
Selenium	U		0.764	2.00	1	10/19/2021 11:37	WG1758951
Silver	U		0.127	1.00	1	10/19/2021 11:37	WG1758951
Zinc	45.3		0.832	5.00	1	10/19/2021 11:37	WG1758951

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	10/26/2021 16:53	WG1759161

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	8.13		0.100	1.00	5	10/19/2021 09:14	WG1758960

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	3280		10.9	50.0	500	10/21/2021 03:37	WG1760036
(S) a,a,a-Trifluorotoluene(FID)	90.9			77.0-120		10/21/2021 03:37	WG1760036

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	0.743	<u>J3</u>	0.0187	0.0400	40	10/17/2021 23:48	WG1758532
Toluene	14.2	<u>J5</u>	0.0520	0.200	40	10/17/2021 23:48	WG1758532
Ethylbenzene	4.89	<u>J5</u>	0.0295	0.100	40	10/17/2021 23:48	WG1758532
Xylenes, Total	58.3	<u>J5</u>	0.0352	0.260	40	10/17/2021 23:48	WG1758532
1,2,4-Trimethylbenzene	15.4	<u>J5</u>	0.0632	0.200	40	10/17/2021 23:48	WG1758532
1,3,5-Trimethylbenzene	9.36	<u>J5</u>	0.0800	0.200	40	10/17/2021 23:48	WG1758532
(S) Toluene-d8	99.5			75.0-131		10/17/2021 23:48	WG1758532
(S) 4-Bromofluorobenzene	103			67.0-138		10/17/2021 23:48	WG1758532
(S) 1,2-Dichloroethane-d4	109			70.0-130		10/17/2021 23:48	WG1758532

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	1170		8.05	20.0	5	10/23/2021 17:11	WG1761237
C28-C36 Motor Oil Range	265		1.37	20.0	5	10/23/2021 17:11	WG1761237
(S) o-Terphenyl	29.3			18.0-148		10/23/2021 17:11	WG1761237

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	10/22/2021 20:47	WG1761251
Acenaphthene	U		0.00209	0.00600	1	10/22/2021 20:47	WG1761251
Acenaphthylene	U		0.00216	0.00600	1	10/22/2021 20:47	WG1761251
Benzo(a)anthracene	U		0.00173	0.00600	1	10/22/2021 20:47	WG1761251
Benzo(a)pyrene	0.00369	<u>J</u>	0.00179	0.00600	1	10/22/2021 20:47	WG1761251
Benzo(b)fluoranthene	0.0155		0.00153	0.00600	1	10/22/2021 20:47	WG1761251
Benzo(g,h,i)perylene	0.00513	<u>J</u>	0.00177	0.00600	1	10/22/2021 20:47	WG1761251
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/22/2021 20:47	WG1761251
Chrysene	0.0462		0.00232	0.00600	1	10/22/2021 20:47	WG1761251
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/22/2021 20:47	WG1761251
Fluoranthene	0.0325		0.00227	0.00600	1	10/22/2021 20:47	WG1761251
Fluorene	0.309		0.00205	0.00600	1	10/22/2021 20:47	WG1761251
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/22/2021 20:47	WG1761251
Naphthalene	3.06		0.00408	0.0200	1	10/22/2021 20:47	WG1761251
Phenanthrene	0.676		0.00231	0.00600	1	10/22/2021 20:47	WG1761251
Pyrene	0.0314		0.00200	0.00600	1	10/22/2021 20:47	WG1761251
1-Methylnaphthalene	2.60		0.00449	0.0200	1	10/22/2021 20:47	WG1761251
2-Methylnaphthalene	5.56		0.0427	0.200	10	10/23/2021 16:25	WG1761251
2-Chloronaphthalene	U		0.00466	0.0200	1	10/22/2021 20:47	WG1761251
(S) p-Terphenyl-d14	82.8			23.0-120		10/22/2021 20:47	WG1761251
(S) p-Terphenyl-d14	91.0			23.0-120		10/23/2021 16:25	WG1761251
(S) Nitrobenzene-d5	0.000	<u>J2</u>		14.0-149		10/22/2021 20:47	WG1761251
(S) Nitrobenzene-d5	0.000	<u>J2</u>		14.0-149		10/23/2021 16:25	WG1761251
(S) 2-Fluorobiphenyl	52.0			34.0-125		10/22/2021 20:47	WG1761251
(S) 2-Fluorobiphenyl	80.6			34.0-125		10/23/2021 16:25	WG1761251

Sample Narrative:

L1416960-09 WG1761251: Surrogate failure due to matrix interference

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

Method Blank (MB)

(MB) R3718391-1 10/19/21 11:22

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

L1416124-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1416124-02 10/19/21 11:33 • (DUP) R3718391-3 10/19/21 11:38

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

L1416955-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1416955-01 10/19/21 13:37 • (DUP) R3718391-8 10/19/21 13:42

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) R3718391-2 10/19/21 11:27

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Hexavalent Chromium	10.0	9.88	98.8	80.0-120	

L1416937-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1416937-02 10/19/21 12:24 • (MS) R3718391-6 10/19/21 12:40

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Hexavalent Chromium	652	U	637	97.7	50	75.0-125	

L1416937-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1416937-02 10/19/21 12:24 • (MS) R3718391-4 10/19/21 12:30 • (MSD) R3718391-5 10/19/21 12:35

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	8.20	7.09	41.0	35.4	1	75.0-125	J6	J6	14.6	20

Method Blank (MB)

(MB) R3719117-1 10/20/21 14:22

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

L1416960-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1416960-09 10/20/21 14:40 • (DUP) R3719117-3 10/20/21 14:45

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

L1417574-45 Original Sample (OS) • Duplicate (DUP)

(OS) L1417574-45 10/20/21 16:29 • (DUP) R3719117-8 10/20/21 16:34

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) R3719117-2 10/20/21 14:30

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Hexavalent Chromium	10.0	9.71	97.1	80.0-120	

L1417574-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1417574-09 10/20/21 15:27 • (MS) R3719117-4 10/20/21 15:32 • (MSD) R3719117-5 10/20/21 15:37

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	22.5	35.1	37.2	63.3	73.7	1	75.0-125	J6	J6	5.77	20

L1417574-09 Original Sample (OS) • Matrix Spike (MS)

(OS) L1417574-09 10/20/21 15:27 • (MS) R3719117-6 10/20/21 15:42

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Hexavalent Chromium	648	22.5	663	98.9	50	75.0-125	

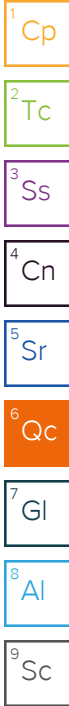
L1416937-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1416937-03 10/18/21 15:36 • (DUP) R3718040-2 10/18/21 15:36

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.74	8.74	1	0.000		1

Sample Narrative:

OS: 8.74 at 20.7C
 DUP: 8.74 at 20.7C



L1416959-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1416959-02 10/18/21 15:36 • (DUP) R3718040-3 10/18/21 15:36

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.62	7.62	1	0.000		1

Sample Narrative:

OS: 7.62 at 20.6C
 DUP: 7.62 at 20.6C

Laboratory Control Sample (LCS)

(LCS) R3718040-1 10/18/21 15:36

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

Method Blank (MB)

(MB) R3718049-1 10/18/21 19:43

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

Sample Narrative:

BLANK: at 25C

L1416939-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1416939-01 10/18/21 19:43 • (DUP) R3718049-3 10/18/21 19:43

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Specific Conductance	942	949	1	0.740		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1416959-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1416959-03 10/18/21 19:43 • (DUP) R3718049-4 10/18/21 19:43

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Specific Conductance	373	377	1	1.07		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3718049-2 10/18/21 19:43

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	268	276	103	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) R3718386-1 10/19/21 11:45

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Barium	U		0.0852	0.500
Cadmium	U		0.0471	0.500
Copper	U		0.400	2.00
Lead	U		0.208	0.500
Nickel	U		0.132	2.00
Selenium	U		0.764	2.00
Silver	U		0.127	1.00
Zinc	U		0.832	5.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

Laboratory Control Sample (LCS)

(LCS) R3718386-2 10/19/21 11:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	104	104	80.0-120	
Cadmium	100	98.4	98.4	80.0-120	
Copper	100	102	102	80.0-120	
Lead	100	98.2	98.2	80.0-120	
Nickel	100	100	100	80.0-120	
Selenium	100	102	102	80.0-120	
Silver	20.0	17.8	88.8	80.0-120	
Zinc	100	97.5	97.5	80.0-120	

⁷ Gl

⁸ Al

⁹ Sc

L1416500-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1416500-01 10/19/21 11:51 • (MS) R3718386-5 10/19/21 11:59 • (MSD) R3718386-6 10/19/21 12:02

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 %
Barium	100	375	370	373	0.000	0.000	1	75.0-125	J6	J6	0.878	20
Cadmium	100	0.437	90.3	63.1	89.8	62.7	1	75.0-125		J3 J6	35.4	20
Copper	100	13.9	105	72.9	91.0	59.0	1	75.0-125		J3 J6	36.0	20
Lead	100	9.06	95.4	67.6	86.3	58.5	1	75.0-125		J3 J6	34.2	20
Nickel	100	14.8	105	72.2	90.5	57.4	1	75.0-125		J3 J6	37.4	20
Selenium	100	U	93.9	66.5	93.9	66.5	1	75.0-125		J3 J6	34.2	20
Silver	20.0	U	16.8	11.7	84.0	58.4	1	75.0-125		J3 J6	36.0	20
Zinc	100	48.4	123	90.0	74.4	41.6	1	75.0-125	J6	J3 J6	30.8	20

Method Blank (MB)

(MB) R3721722-1 10/26/21 16:39

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) R3721722-2 10/26/21 16:42 • (LCSD) R3721722-3 10/26/21 16:44

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	1.00	1.00	100	100	80.0-120			0.214	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3718160-1 10/19/21 08:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00

¹Cp

²Tc

³Ss

Laboratory Control Sample (LCS)

(LCS) R3718160-2 10/19/21 08:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	94.7	94.7	80.0-120	

⁴Cn

⁵Sr

L1416500-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1416500-01 10/19/21 08:35 • (MS) R3718160-5 10/19/21 08:45 • (MSD) R3718160-6 10/19/21 08:48

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	6.36	91.7	62.0	85.3	55.7	5	75.0-125		<u>J3 J6</u>	38.6	20

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3723367-2 10/20/21 20:12

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.617	↓	0.543	2.50
(S) a,a,a-Trifluorotoluene(FID)	96.6			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3723367-1 10/20/21 19:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.82	106	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			105	77.0-120	

L1417497-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1417497-01 10/20/21 20:35 • (MS) R3723367-3 10/21/21 04:24 • (MSD) R3723367-4 10/21/21 04:47

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 %
TPH (GC/FID) Low Fraction	168	U	92.0	111	54.8	66.1	30.5	10.0-151			18.7	28
(S) a,a,a-Trifluorotoluene(FID)					99.1	100		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) R3719843-2 10/21/21 07:00

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0245	↓	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	96.1			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3719843-1 10/21/21 06:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.25	95.5	72.0-127	
(S) 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) R3723448-3 10/30/21 11:44

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0424	↓	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	99.2			77.0-120

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

(LCS) R3723448-1 10/30/21 10:34 • (LCSD) R3723448-2 10/30/21 10:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.21	5.44	94.7	98.9	72.0-127			4.32	20
(S) a,a,a-Trifluorotoluene(FID)				106	106	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) R3720770-2 10/17/21 17:36

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	107			75.0-131
(S) 4-Bromofluorobenzene	101			67.0-138
(S) 1,2-Dichloroethane-d4	104			70.0-130

Laboratory Control Sample (LCS)

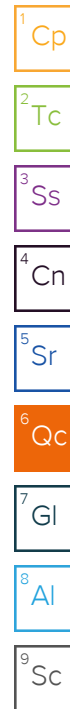
(LCS) R3720770-1 10/17/21 16:38

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
Benzene	0.125	0.121	96.8	70.0-123	
Ethylbenzene	0.125	0.114	91.2	74.0-126	
Toluene	0.125	0.121	96.8	75.0-121	
1,2,4-Trimethylbenzene	0.125	0.119	95.2	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.115	92.0	73.0-127	
Xylenes, Total	0.375	0.363	96.8	72.0-127	
(S) Toluene-d8			103	75.0-131	
(S) 4-Bromofluorobenzene			101	67.0-138	
(S) 1,2-Dichloroethane-d4			109	70.0-130	

L1416960-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1416960-09 10/17/21 23:48 • (MS) R3720770-3 10/18/21 00:45 • (MSD) R3720770-4 10/18/21 01:04

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	%	%		%			%	%
Benzene	5.00	0.743	6.72	3.52	120	55.5	40	10.0-149		J3	62.5	37
Ethylbenzene	5.00	4.89	13.4	10.9	170	120	40	10.0-160	J5		20.6	38
Toluene	5.00	14.2	28.8	27.6	292	268	40	10.0-156	J5	J5	4.26	38
1,2,4-Trimethylbenzene	5.00	15.4	35.4	32.1	400	334	40	10.0-160	J5	J5	9.78	36
1,3,5-Trimethylbenzene	5.00	9.36	23.3	20.0	279	213	40	10.0-160	J5	J5	15.2	38
Xylenes, Total	15.0	58.3	117	109	391	338	40	10.0-160	J5	J5	7.08	38
(S) Toluene-d8					93.2	95.4		75.0-131				
(S) 4-Bromofluorobenzene					95.8	103		67.0-138				
(S) 1,2-Dichloroethane-d4					111	108		70.0-130				



Method Blank (MB)

(MB) R3719811-1 10/21/21 13:09

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
<i>(S) o-Terphenyl</i>	83.8			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3719811-2 10/21/21 13:22

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
C10-C28 Diesel Range	50.0	43.2	86.4	50.0-150	
<i>(S) o-Terphenyl</i>			118	18.0-148	

L1416579-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1416579-07 10/21/21 13:48 • (MS) R3719811-3 10/21/21 14:01 • (MSD) R3719811-4 10/21/21 14:14

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
C10-C28 Diesel Range	48.6	U	43.6	40.7	89.7	84.3	1	50.0-150			6.88	20
<i>(S) o-Terphenyl</i>					115	109		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) R3719992-1 10/21/21 15:15

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	0.556	J	0.274	4.00
(S) o-Terphenyl	92.9			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3719992-2 10/21/21 15:27

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
C10-C28 Diesel Range	50.0	37.2	74.4	50.0-150	
(S) o-Terphenyl			89.8	18.0-148	

L1416579-23 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1416579-23 10/21/21 17:43 • (MS) R3719992-3 10/21/21 17:55 • (MSD) R3719992-4 10/21/21 18:07

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	47.7	U	38.9	44.0	81.6	92.2	1	50.0-150			12.3	20
(S) o-Terphenyl					87.4	98.4		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) R3720469-1 10/22/21 23:27

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>	63.1			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3720469-2 10/22/21 23:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	31.0	62.0	50.0-150	
<i>(S) o-Terphenyl</i>			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) R3719910-2 10/21/21 12:28

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) Nitrobenzene-d5	70.7			14.0-149
(S) 2-Fluorobiphenyl	82.6			34.0-125
(S) p-Terphenyl-d14	105			23.0-120

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3720247-1 10/22/21 08:47

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

Method Blank (MB)

(MB) R3720247-1 10/22/21 08:47

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
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) Nitrobenzene-d5	68.1			14.0-149
(S) 2-Fluorobiphenyl	83.9			34.0-125
(S) p-Terphenyl-d14	105			23.0-120

Laboratory Control Sample (LCS)

(LCS) R3719910-1 10/21/21 12:08

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0603	75.4	50.0-126	
Acenaphthene	0.0800	0.0596	74.5	50.0-120	
Acenaphthylene	0.0800	0.0654	81.8	50.0-120	
Benzo(a)anthracene	0.0800	0.0619	77.4	45.0-120	
Benzo(a)pyrene	0.0800	0.0523	65.4	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0497	62.1	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0507	63.4	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0521	65.1	49.0-125	
Chrysene	0.0800	0.0591	73.9	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0516	64.5	47.0-125	
Fluoranthene	0.0800	0.0630	78.8	49.0-129	
Fluorene	0.0800	0.0605	75.6	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0542	67.8	46.0-125	
Naphthalene	0.0800	0.0603	75.4	50.0-120	
Phenanthrene	0.0800	0.0578	72.3	47.0-120	
Pyrene	0.0800	0.0598	74.8	43.0-123	
1-Methylnaphthalene	0.0800	0.0635	79.4	51.0-121	
2-Methylnaphthalene	0.0800	0.0587	73.4	50.0-120	
2-Chloronaphthalene	0.0800	0.0571	71.4	50.0-120	
(S) Nitrobenzene-d5			75.1	14.0-149	
(S) 2-Fluorobiphenyl			84.8	34.0-125	
(S) p-Terphenyl-d14			104	23.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1416120-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1416120-10 10/21/21 14:27 • (MS) R3719910-3 10/21/21 14:47 • (MSD) R3719910-4 10/21/21 15:07

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	0.0776	U	0.0486	0.0489	62.6	63.0	1	10.0-145			0.615	30
Acenaphthene	0.0776	0.0493	0.0730	0.0796	30.5	39.0	1	14.0-127			8.65	27
Acenaphthylene	0.0776	U	0.0704	0.0728	90.7	93.8	1	21.0-124			3.35	25
Benzo(a)anthracene	0.0776	0.0224	0.0699	0.0727	61.2	64.8	1	10.0-139			3.93	30
Benzo(a)pyrene	0.0776	0.0102	0.0560	0.0569	59.0	60.2	1	10.0-141			1.59	31
Benzo(b)fluoranthene	0.0776	0.00838	0.0488	0.0499	52.1	53.5	1	10.0-140			2.23	36
Benzo(g,h,i)perylene	0.0776	0.00440	0.0443	0.0437	57.1	56.3	1	10.0-140			1.36	33
Benzo(k)fluoranthene	0.0776	0.00288	0.0467	0.0452	60.2	58.2	1	10.0-137			3.26	31
Chrysene	0.0776	0.0403	0.0959	0.116	71.6	97.6	1	10.0-145			19.0	30
Dibenz(a,h)anthracene	0.0776	U	0.0461	0.0462	59.4	59.5	1	10.0-132			0.217	31
Fluoranthene	0.0776	0.174	0.155	0.191	0.000	21.9	1	10.0-153	J6		20.8	33
Fluorene	0.0776	0.160	0.139	0.165	0.000	6.44	1	11.0-130	J6	J6	17.1	29
Indeno(1,2,3-cd)pyrene	0.0776	0.00264	0.0449	0.0451	57.9	58.1	1	10.0-137			0.444	32
Naphthalene	0.0776	0.168	0.147	0.209	0.000	52.8	1	10.0-135	J6	J3	34.8	27
Phenanthrene	0.0776	U	0.0625	0.0626	80.5	80.7	1	10.0-144			0.160	31
Pyrene	0.0776	0.248	0.194	0.246	0.000	0.000	1	10.0-148	J6	J6	23.6	35
1-Methylnaphthalene	0.0776	0.181	0.147	0.217	0.000	46.4	1	10.0-142	J6	J3	38.5	28
2-Methylnaphthalene	0.0776	0.109	0.111	0.139	2.58	38.7	1	10.0-137	J6		22.4	28
2-Chloronaphthalene	0.0776	U	0.0441	0.0403	56.8	51.9	1	29.0-120			9.00	24
(S) Nitrobenzene-d5					98.8	118		14.0-149				
(S) 2-Fluorobiphenyl					64.6	63.5		34.0-125				
(S) p-Terphenyl-d14					99.8	99.4		23.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3720385-2 10/22/21 16:26

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) Nitrobenzene-d5	124			14.0-149
(S) 2-Fluorobiphenyl	92.8			34.0-125
(S) p-Terphenyl-d14	115			23.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3720385-1 10/22/21 16:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0593	74.1	50.0-126	
Acenaphthene	0.0800	0.0581	72.6	50.0-120	
Acenaphthylene	0.0800	0.0624	78.0	50.0-120	
Benzo(a)anthracene	0.0800	0.0613	76.6	45.0-120	
Benzo(a)pyrene	0.0800	0.0531	66.4	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0579	72.4	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0558	69.8	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0564	70.5	49.0-125	
Chrysene	0.0800	0.0599	74.9	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0579	72.4	47.0-125	
Fluoranthene	0.0800	0.0562	70.3	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3720385-1 10/22/21 16:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Fluorene	0.0800	0.0596	74.5	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0586	73.3	46.0-125	
Naphthalene	0.0800	0.0759	94.9	50.0-120	
Phenanthrene	0.0800	0.0622	77.8	47.0-120	
Pyrene	0.0800	0.0567	70.9	43.0-123	
1-Methylnaphthalene	0.0800	0.0604	75.5	51.0-121	
2-Methylnaphthalene	0.0800	0.0597	74.6	50.0-120	
2-Chloronaphthalene	0.0800	0.0592	74.0	50.0-120	
(S) Nitrobenzene-d5			119	14.0-149	
(S) 2-Fluorobiphenyl			88.8	34.0-125	
(S) p-Terphenyl-d14			102	23.0-120	

L1416888-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1416888-01 10/22/21 19:02 • (MS) R3720385-3 10/22/21 19:20 • (MSD) R3720385-4 10/22/21 19:37

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Anthracene	0.0768	0.00273	0.0542	0.0523	70.6	69.2	1	10.0-145			3.57	30
Acenaphthene	0.0768	U	0.0548	0.0496	71.4	65.6	1	14.0-127			9.96	27
Acenaphthylene	0.0768	U	0.0519	0.0458	67.6	60.6	1	21.0-124			12.5	25
Benzo(a)anthracene	0.0768	0.00699	0.0615	0.0684	71.0	81.2	1	10.0-139			10.6	30
Benzo(a)pyrene	0.0768	0.00510	0.0568	0.0543	74.0	71.8	1	10.0-141			4.50	31
Benzo(b)fluoranthene	0.0768	0.00790	0.0748	0.0627	87.1	72.5	1	10.0-140			17.6	36
Benzo(g,h,i)perylene	0.0768	0.00406	0.0540	0.0499	70.3	66.0	1	10.0-140			7.89	33
Benzo(k)fluoranthene	0.0768	0.00268	0.0641	0.0528	83.5	69.8	1	10.0-137			19.3	31
Chrysene	0.0768	0.00771	0.0666	0.0687	76.7	80.7	1	10.0-145			3.10	30
Dibenz(a,h)anthracene	0.0768	U	0.0499	0.0465	65.0	61.5	1	10.0-132			7.05	31
Fluoranthene	0.0768	0.0153	0.0772	0.114	80.6	131	1	10.0-153		J3	38.5	33
Fluorene	0.0768	0.00241	0.0589	0.0531	76.7	70.2	1	11.0-130			10.4	29
Indeno(1,2,3-cd)pyrene	0.0768	0.00400	0.0558	0.0517	72.7	68.4	1	10.0-137			7.63	32
Naphthalene	0.0768	U	0.0616	0.0537	80.2	71.0	1	10.0-135			13.7	27
Phenanthrene	0.0768	0.0147	0.0758	0.0942	79.6	105	1	10.0-144			21.6	31
Pyrene	0.0768	0.0123	0.0765	0.0983	83.6	114	1	10.0-148			24.9	35
1-Methylnaphthalene	0.0768	U	0.0576	0.0486	75.0	64.3	1	10.0-142			16.9	28
2-Methylnaphthalene	0.0768	U	0.0562	0.0467	73.2	61.8	1	10.0-137			18.5	28
2-Chloronaphthalene	0.0768	U	0.0527	0.0465	68.5	61.4	1	29.0-120			12.5	24
(S) Nitrobenzene-d5					108	106		14.0-149				
(S) 2-Fluorobiphenyl					76.7	75.3		34.0-125				
(S) p-Terphenyl-d14					90.3	84.4		23.0-120				

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

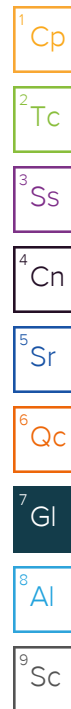
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
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.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
Q	Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.
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

Client:
HRL Compliance Solutions Inc.
2385 F 1/2 RD
Grand Junction, CO 81505

Billing Info:
Utah Gas Corp.
1125 Escalante Dr.
Rangely, CO 81648

Analysis / Container / Preservative

Page 1 of 1

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

Report To:
 Kris Rowe/ Nick Cholas

E-Mail:
 krowe@hrlcomp.com/ ncholas@hrlcomp.com

Project Description:
Utah Gas Cop. DPU 7712

City/State Collected:
COLORADO

Phone: 970-243-3271
 Fax: 970-243-4380

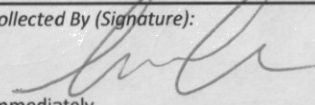
Client Project #:
DPU 7712

Lab Project #

Collected By:
Nick Cholas

Site/Facility ID:
DPU 7712

P.O. #

Collected By (Signature):

 Immediately
 Packed on Ice N ___ Y X

Rush ? (lab must be notified)
 ___ Same Day----- (200%)
 ___ Next Day----- (100%)
 ___ Two Day----- (50%)
 ___ Three Day----- (25%)

Date Results Needed
Standard 5 Day TAT
 Email? ___ No X Yes
 Fax? X No ___ Yes

COGCC Table 915-1

TPH (DRO/ GRO/ORO)

L#
K032
 Table #
 Acct #: UTAHGASRCO
 Template:
 Prelogin:
 TSR: Chris Ward
 PB: **L1416960**
 Shipped Via:

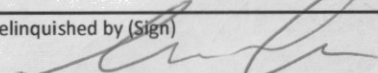
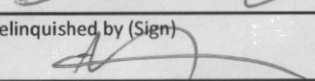
Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. Of Cntrs
SB-01 @ 20'	Grab	SS	20'	10/7/2021	1515	2
SB-01 @ 40'	Grab	SS	40'	10/7/2021	1530	2
SB-01 @ 60'	Grab	SS	60'	10/7/2021	1615	2
SB-02 @ 20'	Grab	SS	20'	10/8/2021	1100	2
SB-02 @ 40'	Grab	SS	40'	10/8/2021	1130	2
SB-02 @ 60'	Grab	SS	60'	10/8/2021	1200	2
SB-03 @ 20'	Grab	SS	20'	10/8/2021	1230	2
SB-03 @ 40'	Grab	SS	40'	10/8/2021	1300	2
SB-03 @ 60'	Grab	SS	60'	10/8/2021	1330	2

Rem/Contaminant	Sample #
	-01
	-02
	-03
	-04
	-05
	-06
	-07
	-08
	-09

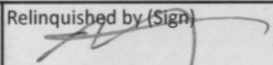
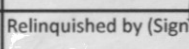
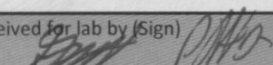
Sample Receipt Checklist
 COC Seal Present/Intact: Y N If Applicable
 COC Signed/Accurate: Y N VOA Zero Headspace: Y N
 Bottles arrive intact: Y N Pres. Correct/Check: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 RAD Screen <0.5 mR/hr: Y N

*Matrix **SS**-Soil **GW**-Groundwater **WW**-WasteWater **DW**-Drinking Water **OT**-Other

Remarks:

Relinquished by (Sign)

 Relinquished by (Sign)

 Relinquished by (Sign)

Date: 10-11-21
 Time: 1615
 Date: 10/11
 Time: 1800
 Date:

Relinquished by (Sign)

 Relinquished by (Sign)

 Received for Lab by (Sign)

 Date: 10-12-21
 Time: 0915

Samples Returned Via
 ___ UPS ___ FedEx
 Temp: °C # Bot
 1.10-1.1
 Condition: (Lab Use)
 COC Seal Intact ___ Y ___ N
 pH Checked NCF: