

Terra Energy Partners

Sample Delivery Group: L1472324
Samples Received: 03/17/2022
Project Number: TEP
Description: Terra Energy Partners - DOE 2-M-36
Site: DOE 2-M-36
Report To: Mike Gardner & Kis Rowe
1058 County Road 215
Parachute, CO 81635

Entire Report Reviewed By:



Chris Ward
Project Manager

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

SAMPLE SUMMARY

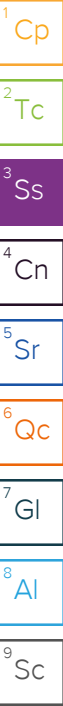
SL-1 L1472324-01 Solid

Collected by
Mike Gardener

Collected date/time
03/15/22 12:00

Received date/time
03/17/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1835063	1	03/22/22 13:07	03/22/22 13:07	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1835990	1	03/22/22 00:30	03/22/22 17:26	JER	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1834785	1	03/18/22 14:00	03/19/22 14:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1834475	1	03/20/22 02:20	03/20/22 07:44	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1834218	1	03/21/22 16:07	03/22/22 10:56	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1835066	1	03/20/22 12:40	03/22/22 08:43	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1834220	5	03/21/22 16:45	03/21/22 21:28	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1834814	1	03/18/22 10:33	03/19/22 20:17	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1835098	1	03/18/22 10:33	03/19/22 15:05	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1834979	1	03/19/22 15:44	03/20/22 17:28	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1834975	1	03/19/22 04:34	03/19/22 15:27	AMG	Mt. Juliet, TN



BKGD 1 L1472324-02 Solid

Collected by
Mike Gardener

Collected date/time
03/15/22 12:30

Received date/time
03/17/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1836109	1	03/23/22 09:12	03/23/22 09:12	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1834785	1	03/18/22 14:00	03/19/22 14:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1834475	1	03/20/22 02:20	03/20/22 07:44	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1835038	1	03/19/22 10:08	03/19/22 14:47	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1835038	20	03/19/22 10:08	03/19/22 16:03	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1834394	1	03/20/22 09:32	03/21/22 11:13	ZSA	Mt. Juliet, TN

BKGD 2 L1472324-03 Solid

Collected by
Mike Gardener

Collected date/time
03/15/22 13:00

Received date/time
03/17/22 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1836109	1	03/22/22 23:17	03/22/22 23:17	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1834785	1	03/18/22 14:00	03/19/22 14:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1834475	1	03/20/22 02:20	03/20/22 07:44	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1835038	10.1	03/19/22 10:08	03/19/22 16:41	ELN	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1834394	1	03/20/22 09:32	03/21/22 11:16	ZSA	Mt. Juliet, TN

CASE NARRATIVE

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



Chris Ward
Project Manager



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	14.9		1	03/22/2022 13:07	WG1835063

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	03/22/2022 17:26	WG1835990

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.98	T8	1	03/19/2022 14:00	WG1834785

Sample Narrative:

L1472324-01 WG1834785: 7.98 at 19.7C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	5450		10.0	1	03/20/2022 07:44	WG1834475

Sample Narrative:

L1472324-01 WG1834475: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	89.9		0.0852	0.500	1	03/22/2022 10:56	WG1834218
Cadmium	0.421	J	0.0471	0.500	1	03/22/2022 10:56	WG1834218
Copper	8.05		0.400	2.00	1	03/22/2022 10:56	WG1834218
Lead	7.26		0.208	0.500	1	03/22/2022 10:56	WG1834218
Nickel	8.81		0.132	2.00	1	03/22/2022 10:56	WG1834218
Selenium	1.20	J	0.764	2.00	1	03/22/2022 10:56	WG1834218
Silver	U		0.127	1.00	1	03/22/2022 10:56	WG1834218
Zinc	32.4		0.832	5.00	1	03/22/2022 10:56	WG1834218

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	0.428		0.0167	0.200	1	03/22/2022 08:43	WG1835066

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	8.06		0.100	1.00	5	03/21/2022 21:28	WG1834220

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	0.210		0.0217	0.100	1	03/19/2022 20:17	WG1834814
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	97.4			77.0-120		03/19/2022 20:17	WG1834814



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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acetone	U		0.0365	0.0500	1	03/19/2022 15:05	WG1835098
Acrylonitrile	U		0.00361	0.0125	1	03/19/2022 15:05	WG1835098
Benzene	U		0.000467	0.00100	1	03/19/2022 15:05	WG1835098
Bromobenzene	U		0.000900	0.0125	1	03/19/2022 15:05	WG1835098
Bromodichloromethane	U		0.000725	0.00250	1	03/19/2022 15:05	WG1835098
Bromoform	U		0.00117	0.0250	1	03/19/2022 15:05	WG1835098
Bromomethane	U		0.00197	0.0125	1	03/19/2022 15:05	WG1835098
n-Butylbenzene	U		0.00525	0.0125	1	03/19/2022 15:05	WG1835098
sec-Butylbenzene	U		0.00288	0.0125	1	03/19/2022 15:05	WG1835098
tert-Butylbenzene	U		0.00195	0.00500	1	03/19/2022 15:05	WG1835098
Carbon tetrachloride	U		0.000898	0.00500	1	03/19/2022 15:05	WG1835098
Chlorobenzene	U		0.000210	0.00250	1	03/19/2022 15:05	WG1835098
Chlorodibromomethane	U		0.000612	0.00250	1	03/19/2022 15:05	WG1835098
Chloroethane	U		0.00170	0.00500	1	03/19/2022 15:05	WG1835098
Chloroform	U		0.00103	0.00250	1	03/19/2022 15:05	WG1835098
Chloromethane	U		0.00435	0.0125	1	03/19/2022 15:05	WG1835098
2-Chlorotoluene	U		0.000865	0.00250	1	03/19/2022 15:05	WG1835098
4-Chlorotoluene	U		0.000450	0.00500	1	03/19/2022 15:05	WG1835098
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250	1	03/19/2022 15:05	WG1835098
1,2-Dibromoethane	U		0.000648	0.00250	1	03/19/2022 15:05	WG1835098
Dibromomethane	U		0.000750	0.00500	1	03/19/2022 15:05	WG1835098
1,2-Dichlorobenzene	U		0.000425	0.00500	1	03/19/2022 15:05	WG1835098
1,3-Dichlorobenzene	U		0.000600	0.00500	1	03/19/2022 15:05	WG1835098
1,4-Dichlorobenzene	U		0.000700	0.00500	1	03/19/2022 15:05	WG1835098
Dichlorodifluoromethane	U		0.00161	0.00250	1	03/19/2022 15:05	WG1835098
1,1-Dichloroethane	U		0.000491	0.00250	1	03/19/2022 15:05	WG1835098
1,2-Dichloroethane	U		0.000649	0.00250	1	03/19/2022 15:05	WG1835098
1,1-Dichloroethene	U		0.000606	0.00250	1	03/19/2022 15:05	WG1835098
cis-1,2-Dichloroethene	U		0.000734	0.00250	1	03/19/2022 15:05	WG1835098
trans-1,2-Dichloroethene	U		0.00104	0.00500	1	03/19/2022 15:05	WG1835098
1,2-Dichloropropane	U		0.00142	0.00500	1	03/19/2022 15:05	WG1835098
1,1-Dichloropropene	U		0.000809	0.00250	1	03/19/2022 15:05	WG1835098
1,3-Dichloropropane	U		0.000501	0.00500	1	03/19/2022 15:05	WG1835098
cis-1,3-Dichloropropene	U		0.000757	0.00250	1	03/19/2022 15:05	WG1835098
trans-1,3-Dichloropropene	U		0.00114	0.00500	1	03/19/2022 15:05	WG1835098
2,2-Dichloropropane	U		0.00138	0.00250	1	03/19/2022 15:05	WG1835098
Di-isopropyl ether	U		0.000410	0.00100	1	03/19/2022 15:05	WG1835098
Ethylbenzene	U		0.000737	0.00250	1	03/19/2022 15:05	WG1835098
Hexachloro-1,3-butadiene	U		0.00600	0.0250	1	03/19/2022 15:05	WG1835098
Isopropylbenzene	U		0.000425	0.00250	1	03/19/2022 15:05	WG1835098
p-Isopropyltoluene	U		0.00255	0.00500	1	03/19/2022 15:05	WG1835098
2-Butanone (MEK)	U		0.0635	0.100	1	03/19/2022 15:05	WG1835098
Methylene Chloride	U		0.00664	0.0250	1	03/19/2022 15:05	WG1835098
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250	1	03/19/2022 15:05	WG1835098
Methyl tert-butyl ether	U		0.000350	0.00100	1	03/19/2022 15:05	WG1835098
Naphthalene	U		0.00488	0.0125	1	03/19/2022 15:05	WG1835098
n-Propylbenzene	U		0.000950	0.00500	1	03/19/2022 15:05	WG1835098
Styrene	U		0.000229	0.0125	1	03/19/2022 15:05	WG1835098
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250	1	03/19/2022 15:05	WG1835098
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250	1	03/19/2022 15:05	WG1835098
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250	1	03/19/2022 15:05	WG1835098
Tetrachloroethene	U		0.000896	0.00250	1	03/19/2022 15:05	WG1835098
Toluene	U		0.00130	0.00500	1	03/19/2022 15:05	WG1835098
1,2,3-Trichlorobenzene	U	J4	0.00733	0.0125	1	03/19/2022 15:05	WG1835098
1,2,4-Trichlorobenzene	U	J4	0.00440	0.0125	1	03/19/2022 15:05	WG1835098
1,1,1-Trichloroethane	U		0.000923	0.00250	1	03/19/2022 15:05	WG1835098

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
1,1,2-Trichloroethane	U		0.000597	0.00250	1	03/19/2022 15:05	WG1835098
Trichloroethene	U		0.000584	0.00100	1	03/19/2022 15:05	WG1835098
Trichlorofluoromethane	U		0.000827	0.00250	1	03/19/2022 15:05	WG1835098
1,2,3-Trichloropropane	U		0.00162	0.0125	1	03/19/2022 15:05	WG1835098
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	03/19/2022 15:05	WG1835098
1,2,3-Trimethylbenzene	U		0.00158	0.00500	1	03/19/2022 15:05	WG1835098
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	03/19/2022 15:05	WG1835098
Vinyl chloride	U		0.00116	0.00250	1	03/19/2022 15:05	WG1835098
Xylenes, Total	U		0.000880	0.00650	1	03/19/2022 15:05	WG1835098
(S) Toluene-d8	104			75.0-131		03/19/2022 15:05	WG1835098
(S) 4-Bromofluorobenzene	98.1			67.0-138		03/19/2022 15:05	WG1835098
(S) 1,2-Dichloroethane-d4	92.8			70.0-130		03/19/2022 15:05	WG1835098

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	U		1.61	4.00	1	03/20/2022 17:28	WG1834979
C28-C36 Motor Oil Range	0.406	J	0.274	4.00	1	03/20/2022 17:28	WG1834979
(S) o-Terphenyl	33.7			18.0-148		03/20/2022 17:28	WG1834979

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	03/19/2022 15:27	WG1834975
Acenaphthene	U		0.00209	0.00600	1	03/19/2022 15:27	WG1834975
Acenaphthylene	U		0.00216	0.00600	1	03/19/2022 15:27	WG1834975
Benzo(a)anthracene	U		0.00173	0.00600	1	03/19/2022 15:27	WG1834975
Benzo(a)pyrene	U		0.00179	0.00600	1	03/19/2022 15:27	WG1834975
Benzo(b)fluoranthene	U		0.00153	0.00600	1	03/19/2022 15:27	WG1834975
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	03/19/2022 15:27	WG1834975
Benzo(k)fluoranthene	U		0.00215	0.00600	1	03/19/2022 15:27	WG1834975
Chrysene	U		0.00232	0.00600	1	03/19/2022 15:27	WG1834975
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	03/19/2022 15:27	WG1834975
Fluoranthene	U		0.00227	0.00600	1	03/19/2022 15:27	WG1834975
Fluorene	U		0.00205	0.00600	1	03/19/2022 15:27	WG1834975
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	03/19/2022 15:27	WG1834975
Naphthalene	U		0.00408	0.0200	1	03/19/2022 15:27	WG1834975
Phenanthrene	U		0.00231	0.00600	1	03/19/2022 15:27	WG1834975
Pyrene	U		0.00200	0.00600	1	03/19/2022 15:27	WG1834975
1-Methylnaphthalene	U		0.00449	0.0200	1	03/19/2022 15:27	WG1834975
2-Methylnaphthalene	U		0.00427	0.0200	1	03/19/2022 15:27	WG1834975
2-Chloronaphthalene	U		0.00466	0.0200	1	03/19/2022 15:27	WG1834975
(S) p-Terphenyl-d14	60.2			23.0-120		03/19/2022 15:27	WG1834975
(S) Nitrobenzene-d5	77.6			14.0-149		03/19/2022 15:27	WG1834975
(S) 2-Fluorobiphenyl	40.8			34.0-125		03/19/2022 15:27	WG1834975

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	41.6		1	03/23/2022 09:12	WG1836109

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.41	T8	1	03/19/2022 14:00	WG1834785

Sample Narrative:

L1472324-02 WG1834785: 8.41 at 20C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	umhos/cm		umhos/cm			
	16200		10.0	1	03/20/2022 07:44	WG1834475

Sample Narrative:

L1472324-02 WG1834475: at 25C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg	mg/kg			
Bromide	U		3.55	10.0	1	03/19/2022 14:47	WG1835038
Chloride	784		9.20	20.0	1	03/19/2022 14:47	WG1835038
Fluoride	1.42	J	0.860	2.00	1	03/19/2022 14:47	WG1835038
Nitrate as (N)	12.1	P1	0.557	10.0	1	03/19/2022 14:47	WG1835038
Nitrite as (N)	U		0.505	10.0	1	03/19/2022 14:47	WG1835038
Sulfate	15100		258	1000	20	03/19/2022 16:03	WG1835038

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg	mg/kg			
Arsenic	8.59		0.518	2.00	1	03/21/2022 11:13	WG1834394
Calcium	36500		10.6	100	1	03/21/2022 11:13	WG1834394
Iron	15700		2.24	10.0	1	03/21/2022 11:13	WG1834394
Magnesium	7970		7.38	100	1	03/21/2022 11:13	WG1834394
Potassium	2270		20.9	100	1	03/21/2022 11:13	WG1834394
Sodium	5910		41.2	100	1	03/21/2022 11:13	WG1834394

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	61.0		1	03/22/2022 23:17	WG1836109

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.62	<u>T8</u>	1	03/19/2022 14:00	WG1834785

Sample Narrative:

L1472324-03 WG1834785: 8.62 at 19.9C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	umhos/cm		umhos/cm			
	12100		10.0	1	03/20/2022 07:44	WG1834475

Sample Narrative:

L1472324-03 WG1834475: at 25C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg	mg/kg			
Bromide	U		35.8	101	10.1	03/19/2022 16:41	WG1835038
Chloride	U		92.9	202	10.1	03/19/2022 16:41	WG1835038
Fluoride	U		8.69	20.2	10.1	03/19/2022 16:41	WG1835038
Nitrate as (N)	11.3	<u>J</u>	5.62	101	10.1	03/19/2022 16:41	WG1835038
Nitrite as (N)	U		5.10	101	10.1	03/19/2022 16:41	WG1835038
Sulfate	9260		130	505	10.1	03/19/2022 16:41	WG1835038

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg	mg/kg			
Arsenic	U		0.518	2.00	1	03/21/2022 11:16	WG1834394
Calcium	17600		10.6	100	1	03/21/2022 11:16	WG1834394
Iron	20100		2.24	10.0	1	03/21/2022 11:16	WG1834394
Magnesium	5040		7.38	100	1	03/21/2022 11:16	WG1834394
Potassium	2700		20.9	100	1	03/21/2022 11:16	WG1834394
Sodium	6490		41.2	100	1	03/21/2022 11:16	WG1834394

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3772989-1 03/22/22 16:52

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

L1472457-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1472457-02 03/22/22 18:33 • (DUP) R3772989-7 03/22/22 18:38

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

L1472464-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1472464-04 03/22/22 19:20 • (DUP) R3772989-8 03/22/22 19:25

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

Laboratory Control Sample (LCS)

(LCS) R3772989-2 03/22/22 17:00

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Hexavalent Chromium	10.0	9.89	98.9	80.0-120	

L1472337-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1472337-01 03/22/22 17:31 • (MS) R3772989-3 03/22/22 17:36 • (MSD) R3772989-4 03/22/22 17:41

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Hexavalent Chromium	20.0	U	0.704	0.899	3.52	4.50	1	75.0-125	J6	J3 J6	24.4	20

Sample Narrative:

OS: Sample is a reducer.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1472337-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1472337-01 03/22/22 17:31 • (MS) R3772989-5 03/22/22 17:57

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>
Hexavalent Chromium	661	U	173	26.1	50	75.0-125	<u>J6</u>

Sample Narrative:

OS: Sample is a reducer.

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1471182-48 Original Sample (OS) • Duplicate (DUP)

(OS) L1471182-48 03/19/22 14:00 • (DUP) R3771680-2 03/19/22 14:00

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	7.79	7.81	1	0.256		1

Sample Narrative:

OS: 7.79 at 20.3C

DUP: 7.81 at 20.3C



L1472785-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1472785-01 03/19/22 14:00 • (DUP) R3771680-4 03/19/22 14:00

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	6.80	6.80	1	0.000		1

Sample Narrative:

OS: 6.8 at 20.2C

DUP: 6.8 at 20.2C

Laboratory Control Sample (LCS)

(LCS) R3771680-1 03/19/22 14:00

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	su	su	%	%	
pH	10.0	9.92	99.2	99.0-101	

Sample Narrative:

LCS: 9.92 at 19C

Method Blank (MB)

(MB) R3771731-1 03/20/22 07:44

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

L1471637-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1471637-08 03/20/22 07:44 • (DUP) R3771731-3 03/20/22 07:44

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	4360	4630	1	6.01		20

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

L1472324-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1472324-03 03/20/22 07:44 • (DUP) R3771731-4 03/20/22 07:44

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	12100	12600	1	3.32		20

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

Laboratory Control Sample (LCS)

(LCS) R3771731-2 03/20/22 07:44

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	268	266	99.1	85.0-115	

Sample Narrative:
LCS: at 25C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3772083-1 03/19/22 12:14

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Bromide	U		3.55	10.0
Chloride	U		9.20	20.0
Fluoride	U		0.860	2.00
Nitrate	U		0.557	10.0
Nitrite	U		0.505	10.0
Sulfate	U		12.9	50.0

L1472324-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1472324-02 03/19/22 14:47 • (DUP) R3772083-3 03/19/22 15:06

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	U	U	1	0.000		15
Chloride	784	779	1	0.633		15
Fluoride	1.42	1.33	1	6.41	J	15
Nitrate	12.1	U	1	69.7	J P1	15
Nitrite	U	U	1	0.000		15

L1472324-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1472324-02 03/19/22 16:03 • (DUP) R3772083-4 03/19/22 16:22

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	15100	15100	20	0.319		15

L1472445-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1472445-03 03/19/22 17:37 • (DUP) R3772083-5 03/19/22 17:56

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Bromide	U	U	1.01	0.000		15
Chloride	U	U	1.01	0.000		15
Fluoride	7.28	7.72	1.01	5.89		15
Nitrate	1.07	U	1.01	6.92	J	15
Nitrite	U	U	1.01	0.000		15
Sulfate	47.1	51.5	1.01	8.96		15

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3772083-2 03/19/22 12:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Bromide	200	192	95.8	80.0-120	
Chloride	200	203	101	80.0-120	
Fluoride	20.0	18.6	93.2	80.0-120	
Nitrate	20.0	18.5	92.6	80.0-120	
Nitrite	20.0	19.9	99.6	80.0-120	
Sulfate	200	197	98.4	80.0-120	

L1472445-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1472445-03 03/19/22 17:37 • (MS) R3772083-6 03/19/22 18:15 • (MSD) R3772083-7 03/19/22 18:34

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 %
Bromide	500	U	520	511	104	102	1	80.0-120			1.73	15
Chloride	500	U	523	514	105	103	1	80.0-120			1.89	15
Fluoride	50.0	7.28	30.5	30.9	46.5	47.2	1	80.0-120	J6	J6	1.16	15
Nitrate	50.0	1.07	51.2	50.0	100	97.9	1	80.0-120			2.26	15
Nitrite	50.0	U	54.0	53.1	108	106	1	80.0-120			1.71	15
Sulfate	500	47.1	561	550	103	101	1	80.0-120			1.97	15

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3772552-1 03/22/22 10:32

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

Laboratory Control Sample (LCS)

(LCS) R3772552-2 03/22/22 10:39

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	90.2	90.2	80.0-120	
Cadmium	100	85.7	85.7	80.0-120	
Copper	100	87.7	87.7	80.0-120	
Lead	100	85.9	85.9	80.0-120	
Nickel	100	86.8	86.8	80.0-120	
Selenium	100	86.6	86.6	80.0-120	
Silver	20.0	17.4	87.1	80.0-120	
Zinc	100	85.6	85.6	80.0-120	

L1471161-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1471161-01 03/22/22 10:42 • (MS) R3772552-5 03/22/22 10:51 • (MSD) R3772552-6 03/22/22 10:53

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	1650	1550	1410	0.000	0.000	1	75.0-125	V	V	8.82	20
Cadmium	100	0.127	92.5	90.2	92.4	90.1	1	75.0-125			2.53	20
Copper	100	21.8	113	109	91.4	87.2	1	75.0-125			3.70	20
Lead	100	12.2	103	98.6	90.6	86.4	1	75.0-125			4.16	20
Nickel	100	13.6	103	102	89.5	87.9	1	75.0-125			1.58	20
Selenium	100	1.53	94.1	91.8	92.5	90.2	1	75.0-125			2.47	20
Silver	20.0	U	18.8	18.3	93.8	91.6	1	75.0-125			2.37	20
Zinc	100	44.4	127	125	82.6	80.6	1	75.0-125			1.59	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3772148-1 03/21/22 09:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.518	2.00
Calcium	U		10.6	100
Iron	U		2.24	10.0
Magnesium	U		7.38	100
Potassium	50.2	U	20.9	100
Sodium	60.2	U	41.2	100

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

Laboratory Control Sample (LCS)

(LCS) R3772148-2 03/21/22 09:50

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	90.1	90.1	80.0-120	
Calcium	1000	955	95.5	80.0-120	
Iron	1000	945	94.5	80.0-120	
Magnesium	1000	1000	100	80.0-120	
Potassium	1000	981	98.1	80.0-120	
Sodium	1000	996	99.6	80.0-120	

6
Qc

7
Gl

8
Al

9
Sc

L1471647-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1471647-01 03/21/22 09:54 • (MS) R3772148-5 03/21/22 10:03 • (MSD) R3772148-6 03/21/22 10:06

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	8.04	109	114	101	106	1	75.0-125			4.42	20
Calcium	1000	43100	53100	62600	1000	1950	1	75.0-125	V	V	16.4	20
Iron	1000	48200	36100	41300	0.000	0.000	1	75.0-125	V	V	13.6	20
Magnesium	1000	2800	3580	3740	78.1	94.6	1	75.0-125			4.51	20
Potassium	1000	860	1950	2010	109	115	1	75.0-125			3.07	20
Sodium	1000	896	1570	1460	67.0	56.8	1	75.0-125	J6	J6	6.71	20

Method Blank (MB)

(MB) R3772551-1 03/22/22 08:34

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) R3772551-2 03/22/22 08:37 • (LCSD) R3772551-3 03/22/22 08:39

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.03	0.995	103	99.5	80.0-120			3.56	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3772318-1 03/21/22 21:03

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

Laboratory Control Sample (LCS)

(LCS) R3772318-2 03/21/22 21:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	89.2	89.2	80.0-120	

L1471161-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1471161-01 03/21/22 21:10 • (MS) R3772318-5 03/21/22 21:20 • (MSD) R3772318-6 03/21/22 21:24

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	14.2	95.4	92.2	81.3	78.0	5	75.0-125			3.48	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3771774-2 03/19/22 17:11

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

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

(LCS) R3771774-1 03/19/22 15:36 • (LCSD) R3771774-5 03/20/22 02:45

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	4.79	5.33	87.1	96.9	72.0-127			10.7	20
(S) a,a,a-Trifluorotoluene(FID)				104	104	77.0-120				

L1472733-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1472733-19 03/19/22 19:54 • (MS) R3771774-3 03/20/22 01:59 • (MSD) R3771774-4 03/20/22 02:22

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	5.50	0.0436	2.72	3.19	48.7	57.2	1	10.0-151			15.9	28
(S) a,a,a-Trifluorotoluene(FID)					99.7	101		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) R3771867-2 03/19/22 12:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00250
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3771867-2 03/19/22 12:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	107			75.0-131
(S) 4-Bromofluorobenzene	94.9			67.0-138
(S) 1,2-Dichloroethane-d4	89.0			70.0-130

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3771867-1 03/19/22 11:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.701	112	10.0-160	
Acrylonitrile	0.625	0.679	109	45.0-153	
Benzene	0.125	0.112	89.6	70.0-123	
Bromobenzene	0.125	0.109	87.2	73.0-121	
Bromodichloromethane	0.125	0.110	88.0	73.0-121	

Laboratory Control Sample (LCS)

(LCS) R3771867-1 03/19/22 11:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Bromoform	0.125	0.114	91.2	64.0-132	
Bromomethane	0.125	0.137	110	56.0-147	
n-Butylbenzene	0.125	0.0948	75.8	68.0-135	
sec-Butylbenzene	0.125	0.0998	79.8	74.0-130	
tert-Butylbenzene	0.125	0.0946	75.7	75.0-127	
Carbon tetrachloride	0.125	0.118	94.4	66.0-128	
Chlorobenzene	0.125	0.108	86.4	76.0-128	
Chlorodibromomethane	0.125	0.120	96.0	74.0-127	
Chloroethane	0.125	0.123	98.4	61.0-134	
Chloroform	0.125	0.113	90.4	72.0-123	
Chloromethane	0.125	0.109	87.2	51.0-138	
2-Chlorotoluene	0.125	0.110	88.0	75.0-124	
4-Chlorotoluene	0.125	0.105	84.0	75.0-124	
1,2-Dibromo-3-Chloropropane	0.125	0.0950	76.0	59.0-130	
1,2-Dibromoethane	0.125	0.115	92.0	74.0-128	
Dibromomethane	0.125	0.118	94.4	75.0-122	
1,2-Dichlorobenzene	0.125	0.0974	77.9	76.0-124	
1,3-Dichlorobenzene	0.125	0.0976	78.1	76.0-125	
1,4-Dichlorobenzene	0.125	0.0985	78.8	77.0-121	
Dichlorodifluoromethane	0.125	0.128	102	43.0-156	
1,1-Dichloroethane	0.125	0.109	87.2	70.0-127	
1,2-Dichloroethane	0.125	0.115	92.0	65.0-131	
1,1-Dichloroethene	0.125	0.105	84.0	65.0-131	
cis-1,2-Dichloroethene	0.125	0.119	95.2	73.0-125	
trans-1,2-Dichloroethene	0.125	0.114	91.2	71.0-125	
1,2-Dichloropropane	0.125	0.106	84.8	74.0-125	
1,1-Dichloropropene	0.125	0.112	89.6	73.0-125	
1,3-Dichloropropane	0.125	0.107	85.6	80.0-125	
cis-1,3-Dichloropropene	0.125	0.106	84.8	76.0-127	
trans-1,3-Dichloropropene	0.125	0.103	82.4	73.0-127	
2,2-Dichloropropane	0.125	0.129	103	59.0-135	
Di-isopropyl ether	0.125	0.0980	78.4	60.0-136	
Ethylbenzene	0.125	0.103	82.4	74.0-126	
Hexachloro-1,3-butadiene	0.125	0.0763	61.0	57.0-150	
Isopropylbenzene	0.125	0.103	82.4	72.0-127	
p-Isopropyltoluene	0.125	0.0966	77.3	72.0-133	
2-Butanone (MEK)	0.625	0.539	86.2	30.0-160	
Methylene Chloride	0.125	0.115	92.0	68.0-123	
4-Methyl-2-pentanone (MIBK)	0.625	0.511	81.8	56.0-143	
Methyl tert-butyl ether	0.125	0.115	92.0	66.0-132	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3771867-1 03/19/22 11:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Naphthalene	0.125	0.0756	60.5	59.0-130	
n-Propylbenzene	0.125	0.102	81.6	74.0-126	
Styrene	0.125	0.0976	78.1	72.0-127	
1,1,1,2-Tetrachloroethane	0.125	0.103	82.4	74.0-129	
1,1,2,2-Tetrachloroethane	0.125	0.115	92.0	68.0-128	
1,1,2-Trichlorotrifluoroethane	0.125	0.121	96.8	61.0-139	
Tetrachloroethene	0.125	0.105	84.0	70.0-136	
Toluene	0.125	0.106	84.8	75.0-121	
1,2,3-Trichlorobenzene	0.125	0.0640	51.2	59.0-139	J4
1,2,4-Trichlorobenzene	0.125	0.0710	56.8	62.0-137	J4
1,1,1-Trichloroethane	0.125	0.120	96.0	69.0-126	
1,1,2-Trichloroethane	0.125	0.110	88.0	78.0-123	
Trichloroethene	0.125	0.122	97.6	76.0-126	
Trichlorofluoromethane	0.125	0.118	94.4	61.0-142	
1,2,3-Trichloropropane	0.125	0.117	93.6	67.0-129	
1,2,4-Trimethylbenzene	0.125	0.0931	74.5	70.0-126	
1,2,3-Trimethylbenzene	0.125	0.0932	74.6	74.0-124	
1,3,5-Trimethylbenzene	0.125	0.0970	77.6	73.0-127	
Vinyl chloride	0.125	0.139	111	63.0-134	
Xylenes, Total	0.375	0.311	82.9	72.0-127	
(S) Toluene-d8			103	75.0-131	
(S) 4-Bromofluorobenzene			101	67.0-138	
(S) 1,2-Dichloroethane-d4			97.2	70.0-130	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1472190-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1472190-06 03/19/22 21:05 • (MS) R3771867-3 03/19/22 21:24 • (MSD) R3771867-4 03/19/22 21:43

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 %
Acetone	0.625	U	0.241	0.525	38.6	84.0	1	10.0-160		J3	74.2	40
Acrylonitrile	0.625	U	0.527	0.653	84.3	104	1	10.0-160			21.4	40
Benzene	0.125	U	0.0942	0.0774	75.4	61.9	1	10.0-149			19.6	37
Bromobenzene	0.125	U	0.0940	0.0870	75.2	69.6	1	10.0-156			7.73	38
Bromodichloromethane	0.125	U	0.0967	0.0912	77.4	73.0	1	10.0-143			5.85	37
Bromoform	0.125	U	0.0977	0.0996	78.2	79.7	1	10.0-146			1.93	36
Bromomethane	0.125	U	0.0829	0.0589	66.3	47.1	1	10.0-149			33.9	38
n-Butylbenzene	0.125	U	0.0795	0.0780	63.6	62.4	1	10.0-160			1.90	40
sec-Butylbenzene	0.125	U	0.0859	0.0793	68.7	63.4	1	10.0-159			7.99	39
tert-Butylbenzene	0.125	U	0.0835	0.0717	66.8	57.4	1	10.0-156			15.2	39

L1472190-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1472190-06 03/19/22 21:05 • (MS) R3771867-3 03/19/22 21:24 • (MSD) R3771867-4 03/19/22 21:43

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 %
Carbon tetrachloride	0.125	U	0.0918	0.0715	73.4	57.2	1	10.0-145			24.9	37
Chlorobenzene	0.125	U	0.0932	0.0849	74.6	67.9	1	10.0-152			9.32	39
Chlorodibromomethane	0.125	U	0.108	0.104	86.4	83.2	1	10.0-146			3.77	37
Chloroethane	0.125	U	0.0516	0.0400	41.3	32.0	1	10.0-146			25.3	40
Chloroform	0.125	U	0.0894	0.0789	71.5	63.1	1	10.0-146			12.5	37
Chloromethane	0.125	U	0.0711	0.0528	56.9	42.2	1	10.0-159			29.5	37
2-Chlorotoluene	0.125	U	0.0896	0.0795	71.7	63.6	1	10.0-159			11.9	38
4-Chlorotoluene	0.125	U	0.0896	0.0814	71.7	65.1	1	10.0-155			9.59	39
1,2-Dibromo-3-Chloropropane	0.125	U	0.0896	0.0845	71.7	67.6	1	10.0-151			5.86	39
1,2-Dibromoethane	0.125	U	0.117	0.111	93.6	88.8	1	10.0-148			5.26	34
Dibromomethane	0.125	U	0.0981	0.100	78.5	80.0	1	10.0-147			1.92	35
1,2-Dichlorobenzene	0.125	U	0.0905	0.0851	72.4	68.1	1	10.0-155			6.15	37
1,3-Dichlorobenzene	0.125	U	0.0869	0.0822	69.5	65.8	1	10.0-153			5.56	38
1,4-Dichlorobenzene	0.125	U	0.0880	0.0862	70.4	69.0	1	10.0-151			2.07	38
Dichlorodifluoromethane	0.125	U	0.0740	0.0532	59.2	42.6	1	10.0-160			32.7	35
1,1-Dichloroethane	0.125	U	0.0834	0.0715	66.7	57.2	1	10.0-147			15.4	37
1,2-Dichloroethane	0.125	U	0.107	0.107	85.6	85.6	1	10.0-148			0.000	35
1,1-Dichloroethene	0.125	U	0.0903	0.0684	72.2	54.7	1	10.0-155			27.6	37
cis-1,2-Dichloroethene	0.125	U	0.0875	0.0829	70.0	66.3	1	10.0-149			5.40	37
trans-1,2-Dichloroethene	0.125	U	0.0812	0.0688	65.0	55.0	1	10.0-150			16.5	37
1,2-Dichloropropane	0.125	U	0.0880	0.0806	70.4	64.5	1	10.0-148			8.78	37
1,1-Dichloropropene	0.125	U	0.0816	0.0670	65.3	53.6	1	10.0-153			19.7	35
1,3-Dichloropropane	0.125	U	0.104	0.0983	83.2	78.6	1	10.0-154			5.64	35
cis-1,3-Dichloropropene	0.125	U	0.0932	0.0893	74.6	71.4	1	10.0-151			4.27	37
trans-1,3-Dichloropropene	0.125	U	0.0997	0.0890	79.8	71.2	1	10.0-148			11.3	37
2,2-Dichloropropane	0.125	U	0.0819	0.0660	65.5	52.8	1	10.0-138			21.5	36
Di-isopropyl ether	0.125	U	0.0815	0.0740	65.2	59.2	1	10.0-147			9.65	36
Ethylbenzene	0.125	U	0.0877	0.0718	70.2	57.4	1	10.0-160			19.9	38
Hexachloro-1,3-butadiene	0.125	U	0.0846	0.0757	67.7	60.6	1	10.0-160			11.1	40
Isopropylbenzene	0.125	U	0.0833	0.0725	66.6	58.0	1	10.0-155			13.9	38
p-Isopropyltoluene	0.125	U	0.0833	0.0787	66.6	63.0	1	10.0-160			5.68	40
2-Butanone (MEK)	0.625	U	0.278	0.683	44.5	109	1	10.0-160		J3	84.3	40
Methylene Chloride	0.125	0.0103	0.0611	0.0546	40.6	35.4	1	10.0-141			11.2	37
4-Methyl-2-pentanone (MIBK)	0.625	U	0.442	0.466	70.7	74.6	1	10.0-160			5.29	35
Methyl tert-butyl ether	0.125	U	0.0912	0.0927	73.0	74.2	1	11.0-147			1.63	35
Naphthalene	0.125	U	0.0681	0.0680	54.5	54.4	1	10.0-160			0.147	36
n-Propylbenzene	0.125	U	0.0867	0.0732	69.4	58.6	1	10.0-158			16.9	38
Styrene	0.125	U	0.0803	0.0753	64.2	60.2	1	10.0-160			6.43	40
1,1,1,2-Tetrachloroethane	0.125	U	0.0908	0.0789	72.6	63.1	1	10.0-149			14.0	39
1,1,2,2-Tetrachloroethane	0.125	U	0.110	0.105	88.0	84.0	1	10.0-160			4.65	35

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1472190-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1472190-06 03/19/22 21:05 • (MS) R3771867-3 03/19/22 21:24 • (MSD) R3771867-4 03/19/22 21:43

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 %
1,1,2-Trichlorotrifluoroethane	0.125	U	0.0970	0.0671	77.6	53.7	1	10.0-160		J3	36.4	36
Tetrachloroethene	0.125	U	0.0984	0.0716	78.7	57.3	1	10.0-156			31.5	39
Toluene	0.125	U	0.0914	0.0745	73.1	59.6	1	10.0-156			20.4	38
1,2,3-Trichlorobenzene	0.125	U	0.0665	0.0592	53.2	47.4	1	10.0-160			11.6	40
1,2,4-Trichlorobenzene	0.125	U	0.0769	0.0685	61.5	54.8	1	10.0-160			11.6	40
1,1,1-Trichloroethane	0.125	U	0.0939	0.0765	75.1	61.2	1	10.0-144			20.4	35
1,1,2-Trichloroethane	0.125	U	0.104	0.0969	83.2	77.5	1	10.0-160			7.07	35
Trichloroethene	0.125	U	0.0951	0.0817	76.1	65.4	1	10.0-156			15.2	38
Trichlorofluoromethane	0.125	U	0.0777	0.0564	62.2	45.1	1	10.0-160			31.8	40
1,2,3-Trichloropropane	0.125	U	0.109	0.113	87.2	90.4	1	10.0-156			3.60	35
1,2,4-Trimethylbenzene	0.125	U	0.0815	0.0726	65.2	58.1	1	10.0-160			11.6	36
1,2,3-Trimethylbenzene	0.125	U	0.0821	0.0746	65.7	59.7	1	10.0-160			9.57	36
1,3,5-Trimethylbenzene	0.125	U	0.0847	0.0751	67.8	60.1	1	10.0-160			12.0	38
Vinyl chloride	0.125	U	0.0948	0.0641	75.8	51.3	1	10.0-160		J3	38.6	37
Xylenes, Total	0.375	U	0.258	0.220	68.8	58.7	1	10.0-160			15.9	38
(S) Toluene-d8					109	102		75.0-131				
(S) 4-Bromofluorobenzene					97.5	99.9		67.0-138				
(S) 1,2-Dichloroethane-d4					94.1	98.6		70.0-130				

1
Cp

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Tc

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Method Blank (MB)

(MB) R3771872-1 03/20/22 10:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	49.8			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3771872-2 03/20/22 10:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	26.7	53.4	50.0-150	
(S) o-Terphenyl			59.5	18.0-148	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3772124-2 03/19/22 11:36

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	99.9			23.0-120
(S) Nitrobenzene-d5	87.8			14.0-149
(S) 2-Fluorobiphenyl	90.8			34.0-125

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3772124-1 03/19/22 11:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0737	92.1	50.0-126	
Acenaphthene	0.0800	0.0734	91.8	50.0-120	
Acenaphthylene	0.0800	0.0745	93.1	50.0-120	
Benzo(a)anthracene	0.0800	0.0794	99.3	45.0-120	
Benzo(a)pyrene	0.0800	0.0653	81.6	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0684	85.5	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0648	81.0	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0687	85.9	49.0-125	
Chrysene	0.0800	0.0740	92.5	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0675	84.4	47.0-125	
Fluoranthene	0.0800	0.0785	98.1	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3772124-1 03/19/22 11:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0734	91.8	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0751	93.9	46.0-125	
Naphthalene	0.0800	0.0689	86.1	50.0-120	
Phenanthrene	0.0800	0.0705	88.1	47.0-120	
Pyrene	0.0800	0.0788	98.5	43.0-123	
1-Methylnaphthalene	0.0800	0.0733	91.6	51.0-121	
2-Methylnaphthalene	0.0800	0.0756	94.5	50.0-120	
2-Chloronaphthalene	0.0800	0.0694	86.8	50.0-120	
(S) p-Terphenyl-d14			103	23.0-120	
(S) Nitrobenzene-d5			93.3	14.0-149	
(S) 2-Fluorobiphenyl			94.6	34.0-125	

L1471428-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1471428-05 03/19/22 13:22 • (MS) R3772124-3 03/19/22 13:40 • (MSD) R3772124-4 03/19/22 13:58

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	0.0800	U	0.0614	0.0583	76.8	72.9	1	10.0-145			5.18	30
Acenaphthene	0.0800	U	0.0634	0.0618	79.3	77.3	1	14.0-127			2.56	27
Acenaphthylene	0.0800	U	0.0645	0.0620	80.6	77.5	1	21.0-124			3.95	25
Benzo(a)anthracene	0.0800	U	0.0619	0.0595	77.4	74.4	1	10.0-139			3.95	30
Benzo(a)pyrene	0.0800	U	0.0628	0.0613	78.5	76.6	1	10.0-141			2.42	31
Benzo(b)fluoranthene	0.0800	U	0.0553	0.0564	69.1	70.5	1	10.0-140			1.97	36
Benzo(g,h,i)perylene	0.0800	U	0.0563	0.0566	70.4	70.8	1	10.0-140			0.531	33
Benzo(k)fluoranthene	0.0800	U	0.0565	0.0545	70.6	68.1	1	10.0-137			3.60	31
Chrysene	0.0800	U	0.0612	0.0596	76.5	74.5	1	10.0-145			2.65	30
Dibenz(a,h)anthracene	0.0800	U	0.0561	0.0560	70.1	70.0	1	10.0-132			0.178	31
Fluoranthene	0.0800	U	0.0626	0.0602	78.3	75.3	1	10.0-153			3.91	33
Fluorene	0.0800	U	0.0612	0.0597	76.5	74.6	1	11.0-130			2.48	29
Indeno(1,2,3-cd)pyrene	0.0800	U	0.0616	0.0611	77.0	76.4	1	10.0-137			0.815	32
Naphthalene	0.0800	U	0.0632	0.0600	79.0	75.0	1	10.0-135			5.19	27
Phenanthrene	0.0800	U	0.0606	0.0569	75.8	71.1	1	10.0-144			6.30	31
Pyrene	0.0800	U	0.0654	0.0627	81.8	78.4	1	10.0-148			4.22	35
1-Methylnaphthalene	0.0800	U	0.0647	0.0623	80.9	77.9	1	10.0-142			3.78	28
2-Methylnaphthalene	0.0800	U	0.0668	0.0638	83.5	79.8	1	10.0-137			4.59	28
2-Chloronaphthalene	0.0800	U	0.0619	0.0594	77.4	74.3	1	29.0-120			4.12	24
(S) p-Terphenyl-d14					85.1	55.5		23.0-120				
(S) Nitrobenzene-d5					84.7	76.9		14.0-149				
(S) 2-Fluorobiphenyl					82.3	60.2		34.0-125				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ GI

⁸ AI

⁹ Sc

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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

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

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

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

