

QB Energy

Sample Delivery Group: L1868693
Samples Received: 06/11/2025
Project Number:
Description: Corral Creek 4508 Investigation
Site: CORRAL CREEK 4508
Report To: Jake J. / Brett M. / Blair R. / Andy V.
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



Chris Ward
Project Manager

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

SAMPLE SUMMARY

20250610-M29-199-(TO3-BASE05)@10 L1868693-01

Collected by
Trevor Lakin

Collected date/time
06/10/25 12:19

Received date/time
06/11/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2539817	1	06/18/25 23:07	06/18/25 23:07	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2543839	1	06/27/25 08:12	07/02/25 09:13	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2541256	1	06/18/25 11:05	06/19/25 10:00	RJP	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2541264	1	06/18/25 11:07	06/19/25 18:18	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2539823	1	06/17/25 09:32	06/17/25 23:46	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2541006	5	06/18/25 17:28	06/19/25 13:38	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D	WG2539851	1	06/12/25 13:27	06/16/25 21:08	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2538169	1	06/12/25 13:27	06/14/25 00:36	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2542085	1	06/19/25 14:22	06/20/25 03:02	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2541911	1	06/19/25 10:17	06/19/25 17:01	KB	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

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	2.64		1	06/18/2025 23:07	WG2539817

1
Cp

2
Tc

Wet Chemistry by Method 7199

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.565	P1	0.200	1	07/02/2025 09:13	WG2543839

3
Ss

4
Cn

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.60		1	06/19/2025 10:00	WG2541256

5
Sr

6
Qc

Sample Narrative:

L1868693-01 WG2541256: 8.6 at 22.4C

7
Gl

8
Al

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	0.367	mmhos/cm		0.0100	1	06/19/2025 18:18	WG2541264

9
Sc

Sample Narrative:

L1868693-01 WG2541264: at 25C

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.398		0.200	1	06/17/2025 23:46	WG2539823

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	7.91		0.100	5	06/19/2025 13:38	WG2541006
Barium	244		10.0	5	06/19/2025 13:38	WG2541006
Cadmium	0.150		0.100	5	06/19/2025 13:38	WG2541006
Copper	11.5		10.0	5	06/19/2025 13:38	WG2541006
Lead	17.8		10.0	5	06/19/2025 13:38	WG2541006
Nickel	21.5		10.0	5	06/19/2025 13:38	WG2541006
Selenium	0.338		0.100	5	06/19/2025 13:38	WG2541006
Silver	ND		0.500	5	06/19/2025 13:38	WG2541006
Zinc	55.4		50.0	5	06/19/2025 13:38	WG2541006

Volatile Organic Compounds (GC) by Method 8015D

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	ND		0.100	1	06/16/2025 21:08	WG2539851
(S) a,a,a-Trifluorotoluene(FID)	96.4		77.0-120		06/16/2025 21:08	WG2539851

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	06/14/2025 00:36	WG2538169
Ethylbenzene	ND		0.0100	1	06/14/2025 00:36	WG2538169
Toluene	ND		0.0100	1	06/14/2025 00:36	WG2538169
1,2,4-Trimethylbenzene	ND		0.00500	1	06/14/2025 00:36	WG2538169
1,3,5-Trimethylbenzene	ND		0.00500	1	06/14/2025 00:36	WG2538169
Xylenes, Total	ND		0.100	1	06/14/2025 00:36	WG2538169
(S) Toluene-d8	105		75.0-131		06/14/2025 00:36	WG2538169
(S) 4-Bromofluorobenzene	92.1		67.0-138		06/14/2025 00:36	WG2538169
(S) 1,2-Dichloroethane-d4	85.4		70.0-130		06/14/2025 00:36	WG2538169

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	27.3		4.00	1	06/20/2025 03:02	WG2542085
C28-C36 Motor Oil Range	30.8		4.00	1	06/20/2025 03:02	WG2542085
(S) o-Terphenyl	47.7		18.0-148		06/20/2025 03:02	WG2542085

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0330	1	06/19/2025 17:01	WG2541911
Acenaphthene	ND		0.0330	1	06/19/2025 17:01	WG2541911
Acenaphthylene	ND		0.0330	1	06/19/2025 17:01	WG2541911
Benzo(a)anthracene	ND		0.00600	1	06/19/2025 17:01	WG2541911
Benzo(a)pyrene	ND		0.0330	1	06/19/2025 17:01	WG2541911
Benzo(b)fluoranthene	ND		0.0330	1	06/19/2025 17:01	WG2541911
Benzo(g,h,i)perylene	ND		0.0330	1	06/19/2025 17:01	WG2541911
Benzo(k)fluoranthene	ND		0.0330	1	06/19/2025 17:01	WG2541911
Chrysene	ND		0.0330	1	06/19/2025 17:01	WG2541911
Dibenz(a,h)anthracene	ND		0.0330	1	06/19/2025 17:01	WG2541911
Fluoranthene	ND		0.0330	1	06/19/2025 17:01	WG2541911
Fluorene	ND		0.0330	1	06/19/2025 17:01	WG2541911
Indeno(1,2,3-cd)pyrene	ND		0.0330	1	06/19/2025 17:01	WG2541911
Naphthalene	ND		0.00300	1	06/19/2025 17:01	WG2541911
Phenanthrene	ND		0.0330	1	06/19/2025 17:01	WG2541911
Pyrene	ND		0.0330	1	06/19/2025 17:01	WG2541911
1-Methylnaphthalene	ND		0.00300	1	06/19/2025 17:01	WG2541911
2-Methylnaphthalene	ND		0.0120	1	06/19/2025 17:01	WG2541911
(S) p-Terphenyl-d14	64.0		23.0-120		06/19/2025 17:01	WG2541911
(S) Nitrobenzene-d5	68.9		14.0-149		06/19/2025 17:01	WG2541911
(S) 2-Fluorobiphenyl	64.9		34.0-125		06/19/2025 17:01	WG2541911

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4239477-1 07/02/25 04:31

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Hexavalent Chromium	U		0.200	0.200

L1868449-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1868449-05 07/02/25 05:48 • (DUP) R4239477-7 07/02/25 05:58

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	0.269	0.236	1	13.3		20

L1868693-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1868693-01 07/02/25 09:13 • (DUP) R4239477-8 07/02/25 09:22

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	0.565	0.375	1	40.5	P1	20

Laboratory Control Sample (LCS)

(LCS) R4239477-2 07/02/25 04:40

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Hexavalent Chromium	10.0	9.98	99.8	80.0-120	

L1868375-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1868375-03 07/02/25 05:00 • (MS) R4239477-4 07/02/25 05:19 • (MSD) R4239477-5 07/02/25 05:29

	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	ND	16.8	15.2	83.8	76.0	1	75.0-125			9.77	20

L1868375-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1868375-03 07/02/25 05:00 • (MS) R4239477-6 07/02/25 05:38

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Hexavalent Chromium	643	ND	714	111	50	75.0-125	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1867434-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1867434-03 06/19/25 10:00 • (DUP) R4232752-2 06/19/25 10:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	8.08	8.08	1	0.000		1

Sample Narrative:

OS: 8.08 at 22.6C

DUP: 8.08 at 22.7C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1869433-20 Original Sample (OS) • Duplicate (DUP)

(OS) L1869433-20 06/19/25 10:00 • (DUP) R4232752-3 06/19/25 10:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	7.60	7.60	1	0.000		1

Sample Narrative:

OS: 7.6 at 22.2C

DUP: 7.6 at 22.5C

Laboratory Control Sample (LCS)

(LCS) R4232752-1 06/19/25 10:00

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	su	su	%	%	
pH	10.0	9.98	99.8	99.0-101	

Sample Narrative:

LCS: 9.98 at 21.9C

Method Blank (MB)

(MB) R4233128-1 06/19/25 18:18

Analyte	MB Result mmhos/cm	MB Qualifier	MB MDL mmhos/cm	MB RDL mmhos/cm
Specific Conductance	U		0.0100	0.0100

Sample Narrative:

BLANK: at 25C

L1868693-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1868693-01 06/19/25 18:18 • (DUP) R4233128-3 06/19/25 18:18

Analyte	Original Result mmhos/cm	DUP Result mmhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	ND	0.367	1	0.000		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1869433-19 Original Sample (OS) • Duplicate (DUP)

(OS) L1869433-19 06/19/25 18:18 • (DUP) R4233128-4 06/19/25 18:18

Analyte	Original Result mmhos/cm	DUP Result mmhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	0.348	0.348	1	0.000		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4233128-2 06/19/25 18:18

Analyte	Spike Amount mmhos/cm	LCS Result mmhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	0.581	0.594	102	90.0-110	

Sample Narrative:

LCS: at 25C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4232260-1 06/17/25 23:00

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) R4232260-2 06/17/25 23:02 • (LCSD) R4232260-3 06/17/25 23:03

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	2.00	2.08	2.11	104	211	80.0-120			1.39	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R4232882-1 06/19/25 11:54

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	0.100
Barium	U		10.0	10.0
Cadmium	U		0.100	0.100
Copper	U		10.0	10.0
Lead	U		10.0	10.0
Nickel	U		10.0	10.0
Selenium	U		0.100	0.100
Silver	U		0.500	0.500
Zinc	U		50.0	50.0

Laboratory Control Sample (LCS)

(LCS) R4232882-2 06/19/25 11:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	97.9	97.9	80.0-120	
Barium	100	97.7	97.7	80.0-120	
Cadmium	100	101	101	80.0-120	
Copper	100	100	100	80.0-120	
Lead	100	98.1	98.1	80.0-120	
Nickel	100	102	102	80.0-120	
Selenium	100	96.2	96.2	80.0-120	
Silver	20.0	20.1	100	80.0-120	
Zinc	100	97.3	97.3	80.0-120	

L1868489-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1868489-10 06/19/25 12:01 • (MS) R4232882-5 06/19/25 12:10 • (MSD) R4232882-6 06/19/25 12:13

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	1.64	98.0	96.2	96.3	94.5	5	75.0-125			1.83	20
Barium	100	46.3	143	146	96.9	100	5	75.0-125			2.26	20
Cadmium	100	ND	101	97.5	101	97.5	5	75.0-125			3.56	20
Copper	100	ND	108	104	108	104	5	75.0-125			4.50	20
Lead	100	ND	99.1	98.7	99.1	98.7	5	75.0-125			0.329	20
Nickel	100	ND	107	105	107	105	5	75.0-125			2.78	20
Selenium	100	0.311	96.0	94.2	95.7	93.9	5	75.0-125			1.95	20
Silver	20.0	ND	19.9	19.6	99.4	97.8	5	75.0-125			1.68	20
Zinc	100	ND	116	114	116	114	5	75.0-125			1.77	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4231682-2 06/16/25 16:25

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0800	0.100
(S) a,a,a-Trifluorotoluene(FID)	97.4			77.0-120

Laboratory Control Sample (LCS)

(LCS) R4231682-1 06/16/25 15:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.00	4.64	92.8	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			105	77.0-120	

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R4232224-3 06/13/25 21:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.00100	0.00100
Ethylbenzene	U		0.0100	0.0100
Toluene	U		0.0100	0.0100
1,2,4-Trimethylbenzene	U		0.00500	0.00500
1,3,5-Trimethylbenzene	U		0.00500	0.00500
Xylenes, Total	U		0.100	0.100
(S) Toluene-d8	105			75.0-131
(S) 4-Bromofluorobenzene	93.2			67.0-138
(S) 1,2-Dichloroethane-d4	86.8			70.0-130

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

(LCS) R4232224-1 06/13/25 20:10 • (LCSD) R4232224-2 06/13/25 20:30

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 %
Benzene	0.125	0.117	0.121	93.6	96.8	70.0-123			3.36	20
Ethylbenzene	0.125	0.123	0.127	98.4	102	74.0-126			3.20	20
Toluene	0.125	0.132	0.135	106	108	75.0-121			2.25	20
1,2,4-Trimethylbenzene	0.125	0.122	0.132	97.6	106	70.0-126			7.87	20
1,3,5-Trimethylbenzene	0.125	0.121	0.128	96.8	102	73.0-127			5.62	20
Xylenes, Total	0.375	0.345	0.359	92.0	95.7	72.0-127			3.98	20
(S) Toluene-d8				104	105	75.0-131				
(S) 4-Bromofluorobenzene				91.3	89.8	67.0-138				
(S) 1,2-Dichloroethane-d4				89.5	88.3	70.0-130				

L1868719-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1868719-06 06/14/25 02:36 • (MS) R4232224-4 06/14/25 05:14 • (MSD) R4232224-5 06/14/25 05:34

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	ND	0.0982	0.0957	78.6	76.6	1	10.0-149			2.58	37
Ethylbenzene	0.125	ND	0.107	0.106	85.6	84.8	1	10.0-160			0.939	38
Toluene	0.125	ND	0.111	0.111	88.8	88.8	1	10.0-156			0.000	38
1,2,4-Trimethylbenzene	0.125	ND	0.112	0.108	89.6	86.4	1	10.0-160			3.64	36
1,3,5-Trimethylbenzene	0.125	ND	0.111	0.106	88.8	84.8	1	10.0-160			4.61	38
Xylenes, Total	0.375	ND	0.304	0.298	81.1	79.5	1	10.0-160			1.99	38
(S) Toluene-d8					105	103		75.0-131				
(S) 4-Bromofluorobenzene					92.8	92.4		67.0-138				
(S) 1,2-Dichloroethane-d4					90.1	89.9		70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4233471-1 06/20/25 02:23

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	50.9			18.0-148

Laboratory Control Sample (LCS)

(LCS) R4233471-2 06/20/25 02:36

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	36.5	73.0	50.0-150	
(S) o-Terphenyl			66.2	18.0-148	

L1868683-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1868683-01 06/20/25 03:40 • (MS) R4233471-3 06/20/25 03:53 • (MSD) R4233471-4 06/20/25 04:05

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	10.2	37.6	41.2	54.8	62.0	1	50.0-150			9.14	20
(S) o-Terphenyl					48.9	56.5		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4234516-2 06/19/25 15:15

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.0330	0.0330
Acenaphthene	U		0.0330	0.0330
Acenaphthylene	U		0.0330	0.0330
Benzo(a)anthracene	U		0.00600	0.00600
Benzo(a)pyrene	U		0.0330	0.0330
Benzo(b)fluoranthene	U		0.0330	0.0330
Benzo(g,h,i)perylene	U		0.0330	0.0330
Benzo(k)fluoranthene	U		0.0330	0.0330
Chrysene	U		0.0330	0.0330
Dibenz(a,h)anthracene	U		0.0330	0.0330
Fluoranthene	U		0.0330	0.0330
Fluorene	U		0.0330	0.0330
Indeno(1,2,3-cd)pyrene	U		0.0330	0.0330
Naphthalene	0.00455		0.00300	0.00300
Phenanthrene	U		0.0330	0.0330
Pyrene	U		0.0330	0.0330
1-Methylnaphthalene	U		0.00300	0.00300
2-Methylnaphthalene	U		0.0120	0.0120
(S) p-Terphenyl-d14	66.3			23.0-120
(S) Nitrobenzene-d5	62.1			14.0-149
(S) 2-Fluorobiphenyl	64.3			34.0-125

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R4234516-1 06/19/25 14:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0716	89.5	50.0-126	
Acenaphthene	0.0800	0.0668	83.5	50.0-120	
Acenaphthylene	0.0800	0.0724	90.5	50.0-120	
Benzo(a)anthracene	0.0800	0.0692	86.5	45.0-120	
Benzo(a)pyrene	0.0800	0.0666	83.3	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0636	79.5	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0649	81.1	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0644	80.5	49.0-125	
Chrysene	0.0800	0.0705	88.1	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0648	81.0	47.0-125	
Fluoranthene	0.0800	0.0810	101	49.0-129	
Fluorene	0.0800	0.0762	95.3	49.0-120	

Laboratory Control Sample (LCS)

(LCS) R4234516-1 06/19/25 14:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Indeno(1,2,3-cd)pyrene	0.0800	0.0631	78.9	46.0-125	
Naphthalene	0.0800	0.0658	82.3	50.0-120	
Phenanthrene	0.0800	0.0715	89.4	47.0-120	
Pyrene	0.0800	0.0645	80.6	43.0-123	
1-Methylnaphthalene	0.0800	0.0725	90.6	51.0-121	
2-Methylnaphthalene	0.0800	0.0662	82.8	50.0-120	
(S) p-Terphenyl-d14			70.4	23.0-120	
(S) Nitrobenzene-d5			75.1	14.0-149	
(S) 2-Fluorobiphenyl			78.7	34.0-125	

L1868896-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1868896-14 06/19/25 15:32 • (MS) R4234516-3 06/19/25 15:50 • (MSD) R4234516-4 06/19/25 16:08

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0780	ND	0.0661	0.0631	84.7	80.9	1	10.0-145			4.64	30
Acenaphthene	0.0780	ND	0.0614	0.0578	78.7	74.1	1	14.0-127			6.04	27
Acenaphthylene	0.0780	ND	0.0669	0.0627	85.8	80.4	1	21.0-124			6.48	25
Benzo(a)anthracene	0.0780	ND	0.0654	0.0625	83.8	80.1	1	10.0-139			4.53	30
Benzo(a)pyrene	0.0780	ND	0.0670	0.0639	85.9	81.9	1	10.0-141			4.74	31
Benzo(b)fluoranthene	0.0780	ND	0.0608	0.0568	77.9	72.8	1	10.0-140			6.80	36
Benzo(g,h,i)perylene	0.0780	ND	0.0583	0.0557	74.7	71.4	1	10.0-140			4.56	33
Benzo(k)fluoranthene	0.0780	ND	0.0587	0.0550	75.3	70.5	1	10.0-137			6.51	31
Chrysene	0.0780	ND	0.0658	0.0630	84.4	80.8	1	10.0-145			4.35	30
Dibenz(a,h)anthracene	0.0780	ND	0.0667	0.0616	85.5	79.0	1	10.0-132			7.95	31
Fluoranthene	0.0780	ND	0.0746	0.0712	95.6	91.3	1	10.0-153			4.66	33
Fluorene	0.0780	ND	0.0705	0.0652	90.4	83.6	1	11.0-130			7.81	29
Indeno(1,2,3-cd)pyrene	0.0780	ND	0.0598	0.0572	76.7	73.3	1	10.0-137			4.44	32
Naphthalene	0.0780	ND	0.0624	0.0585	80.0	75.0	1	10.0-135			6.45	27
Phenanthrene	0.0780	ND	0.0675	0.0635	86.5	81.4	1	10.0-144			6.11	31
Pyrene	0.0780	ND	0.0610	0.0581	78.2	74.5	1	10.0-148			4.87	35
1-Methylnaphthalene	0.0780	ND	0.0665	0.0627	85.3	80.4	1	10.0-142			5.88	28
2-Methylnaphthalene	0.0780	ND	0.0628	0.0581	80.5	74.5	1	10.0-137			7.78	28
(S) p-Terphenyl-d14					67.9	60.9		23.0-120				
(S) Nitrobenzene-d5					67.9	65.7		14.0-149				
(S) 2-Fluorobiphenyl					71.3	65.8		34.0-125				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

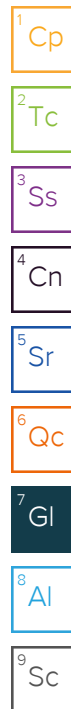
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
U (Radiochemistry)	Result + Error < MDA.
J (Radiochemistry)	Result < MDA; Result + Error > MDA.
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

P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
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ACCREDITATIONS & LOCATIONS

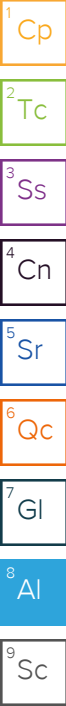
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.



Hold:	Condition: NCF / OK
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