

Colorado Oil & Gas Conservation

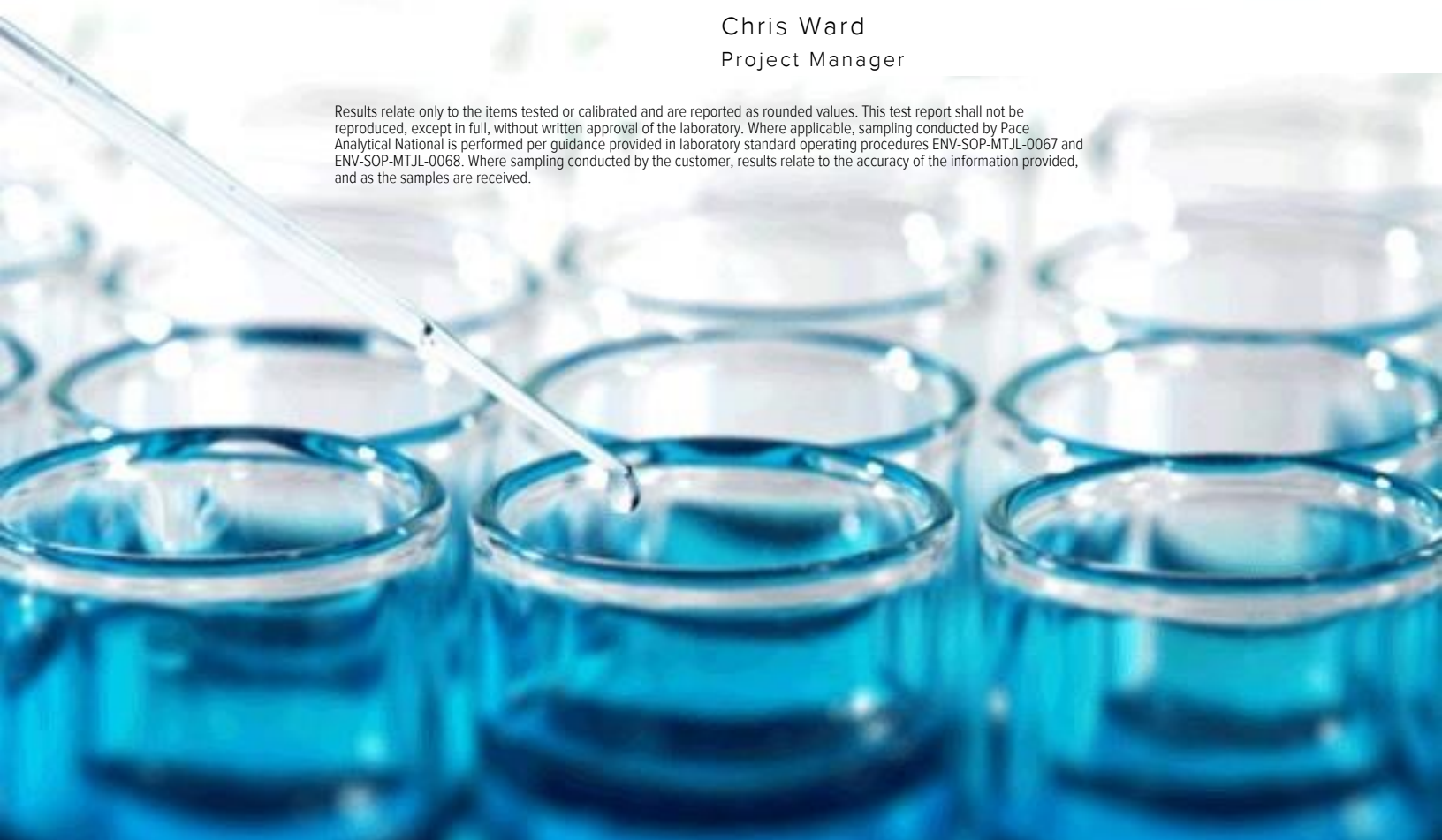
Sample Delivery Group: L1138830
Samples Received: 09/12/2019
Project Number: REM# 10228
Description: Schutz Landfarm
Site: 759945
Report To: Jim Hughes
484 Turner Drive Bldg B, Suite 1
Durango, CO 81303

Entire Report Reviewed By:

Chris Ward

Chris Ward
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.





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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



0910191245 L1138830-01 Solid

Collected by JH/AF
Collected date/time 09/10/19 12:45
Received date/time 09/12/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1345781	1	09/18/19 23:57	09/18/19 23:57	EL	Mt. Juliet, TN
Calculated Results	WG1345284	1	09/14/19 08:53	09/16/19 16:39	EL	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1345558	1	09/14/19 10:08	09/14/19 19:18	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1345555	1	09/14/19 12:39	09/14/19 22:49	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1346879	1	09/17/19 19:34	09/17/19 22:50	RDW	Mt. Juliet, TN
Mercury by Method 7471A	WG1345201	1	09/13/19 10:44	09/15/19 19:50	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1345284	1	09/14/19 08:53	09/16/19 16:39	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1348234	1	09/14/19 09:58	09/18/19 19:27	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1346275	1	09/14/19 09:58	09/15/19 20:47	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1346609	20	09/13/19 17:12	09/16/19 21:26	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1345943	1	09/14/19 17:23	09/15/19 13:08	LEA	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

0910191245 L1138830-02 Waste

Collected by JH/AF
Collected date/time 09/10/19 12:45
Received date/time 09/12/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1346860	1	09/17/19 11:11	09/17/19 11:11	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1347655	1	09/18/19 08:10	09/18/19 11:42	CCE	Mt. Juliet, TN

0910191250 L1138830-03 Solid

Collected by JH/AF
Collected date/time 09/10/19 12:50
Received date/time 09/12/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1345781	1	09/19/19 00:00	09/19/19 00:00	EL	Mt. Juliet, TN
Calculated Results	WG1345284	1	09/14/19 08:53	09/16/19 16:42	EL	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1345558	1	09/14/19 10:08	09/14/19 19:20	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1345555	1	09/14/19 12:39	09/14/19 22:49	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1346879	1	09/17/19 19:34	09/17/19 22:50	RDW	Mt. Juliet, TN
Mercury by Method 7471A	WG1345201	1	09/13/19 10:44	09/15/19 20:41	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1345284	1	09/14/19 08:53	09/16/19 16:42	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1348234	1	09/14/19 09:58	09/18/19 19:51	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1346275	1	09/14/19 09:58	09/15/19 21:07	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1346609	20	09/13/19 17:12	09/16/19 11:36	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1345943	1	09/14/19 17:23	09/15/19 13:29	LEA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1345943	20	09/14/19 17:23	09/16/19 08:15	DMG	Mt. Juliet, TN

0910191250 L1138830-04 Waste

Collected by JH/AF
Collected date/time 09/10/19 12:50
Received date/time 09/12/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1346860	1	09/17/19 11:11	09/17/19 11:11	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1347655	1	09/18/19 08:10	09/18/19 11:44	CCE	Mt. Juliet, TN



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

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.0860		1	09/18/2019 23:57	WG1345781

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Trivalent	17.1		1.00	1	09/16/2019 16:39	WG1345284

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Hexavalent	ND		2.00	1	09/14/2019 19:18	WG1345558

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.22	T8	1	09/14/2019 22:49	WG1345555

Sample Narrative:

L1138830-01 WG1345555: 8.22 at 23.4C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	170		10.0	1	09/17/2019 22:50	WG1346879

Mercury by Method 7471A

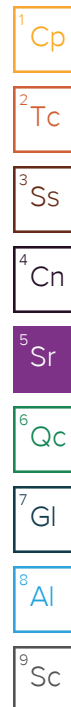
Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0300	1	09/15/2019 19:50	WG1345201

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.15		2.00	1	09/16/2019 16:39	WG1345284
Barium	101		0.500	1	09/16/2019 16:39	WG1345284
Cadmium	1.03		0.500	1	09/16/2019 16:39	WG1345284
Chromium	17.1		1.00	1	09/16/2019 16:39	WG1345284
Copper	16.2		2.00	1	09/16/2019 16:39	WG1345284
Lead	12.6		0.500	1	09/16/2019 16:39	WG1345284
Nickel	29.7		2.00	1	09/16/2019 16:39	WG1345284
Selenium	ND		2.00	1	09/16/2019 16:39	WG1345284
Silver	ND		1.00	1	09/16/2019 16:39	WG1345284
Zinc	80.6		5.00	1	09/16/2019 16:39	WG1345284

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	ND		0.100	1	09/18/2019 19:27	WG1348234
(S) a, a, a-Trifluorotoluene(FID)	87.8		77.0-120		09/18/2019 19:27	WG1348234





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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	09/15/2019 20:47	WG1346275
Toluene	ND		0.00500	1	09/15/2019 20:47	WG1346275
Ethylbenzene	ND		0.00250	1	09/15/2019 20:47	WG1346275
Total Xylenes	ND		0.00650	1	09/15/2019 20:47	WG1346275
(S) Toluene-d8	116		75.0-131		09/15/2019 20:47	WG1346275
(S) 4-Bromofluorobenzene	102		67.0-138		09/15/2019 20:47	WG1346275
(S) 1,2-Dichloroethane-d4	111		70.0-130		09/15/2019 20:47	WG1346275

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 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	926		80.0	20	09/16/2019 21:26	WG1346609
(S) o-Terphenyl	0.000	J7	18.0-148		09/16/2019 21:26	WG1346609

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	09/15/2019 13:08	WG1345943
Acenaphthene	ND		0.00600	1	09/15/2019 13:08	WG1345943
Acenaphthylene	ND		0.00600	1	09/15/2019 13:08	WG1345943
Benzo(a)anthracene	ND		0.00600	1	09/15/2019 13:08	WG1345943
Benzo(a)pyrene	ND		0.00600	1	09/15/2019 13:08	WG1345943
Benzo(b)fluoranthene	ND		0.00600	1	09/15/2019 13:08	WG1345943
Benzo(g,h,i)perylene	0.0253		0.00600	1	09/15/2019 13:08	WG1345943
Benzo(k)fluoranthene	ND		0.00600	1	09/15/2019 13:08	WG1345943
Chrysene	ND		0.00600	1	09/15/2019 13:08	WG1345943
Dibenz(a,h)anthracene	ND		0.00600	1	09/15/2019 13:08	WG1345943
Fluoranthene	ND		0.00600	1	09/15/2019 13:08	WG1345943
Fluorene	ND		0.00600	1	09/15/2019 13:08	WG1345943
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	09/15/2019 13:08	WG1345943
Naphthalene	0.0304		0.0200	1	09/15/2019 13:08	WG1345943
Phenanthrene	ND		0.00600	1	09/15/2019 13:08	WG1345943
Pyrene	ND		0.00600	1	09/15/2019 13:08	WG1345943
1-Methylnaphthalene	0.0368		0.0200	1	09/15/2019 13:08	WG1345943
2-Methylnaphthalene	0.0417		0.0200	1	09/15/2019 13:08	WG1345943
2-Chloronaphthalene	ND		0.0200	1	09/15/2019 13:08	WG1345943
(S) p-Terphenyl-d14	66.9		23.0-120		09/15/2019 13:08	WG1345943
(S) Nitrobenzene-d5	81.4		14.0-149		09/15/2019 13:08	WG1345943
(S) 2-Fluorobiphenyl	60.4		34.0-125		09/15/2019 13:08	WG1345943



Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		9/17/2019 11:11:52 AM	WG1346860
Fluid	1		9/17/2019 11:11:52 AM	WG1346860
Initial pH	8.43		9/17/2019 11:11:52 AM	WG1346860
Final pH	6.04		9/17/2019 11:11:52 AM	WG1346860

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Boron	ND		2.00		1	09/18/2019 11:42	WG1347655

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.0877		1	09/19/2019 00:00	WG1345781

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Trivalent	16.7		1.00	1	09/16/2019 16:42	WG1345284

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Hexavalent	ND		2.00	1	09/14/2019 19:20	WG1345558

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.90	T8	1	09/14/2019 22:49	WG1345555

Sample Narrative:

L1138830-03 WG1345555: 7.9 at 23.3C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	199		10.0	1	09/17/2019 22:50	WG1346879

Mercury by Method 7471A

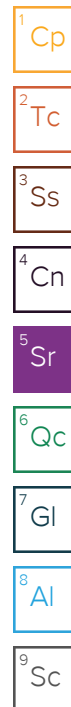
Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0300	1	09/15/2019 20:41	WG1345201

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.36		2.00	1	09/16/2019 16:42	WG1345284
Barium	101		0.500	1	09/16/2019 16:42	WG1345284
Cadmium	0.942		0.500	1	09/16/2019 16:42	WG1345284
Chromium	16.7		1.00	1	09/16/2019 16:42	WG1345284
Copper	15.4		2.00	1	09/16/2019 16:42	WG1345284
Lead	13.5		0.500	1	09/16/2019 16:42	WG1345284
Nickel	26.8		2.00	1	09/16/2019 16:42	WG1345284
Selenium	ND		2.00	1	09/16/2019 16:42	WG1345284
Silver	ND		1.00	1	09/16/2019 16:42	WG1345284
Zinc	75.9		5.00	1	09/16/2019 16:42	WG1345284

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	ND		0.100	1	09/18/2019 19:51	WG1348234
(S) a, a, a-Trifluorotoluene(FID)	85.9		77.0-120		09/18/2019 19:51	WG1348234





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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	09/15/2019 21:07	WG1346275
Toluene	ND		0.00500	1	09/15/2019 21:07	WG1346275
Ethylbenzene	ND		0.00250	1	09/15/2019 21:07	WG1346275
Total Xylenes	ND		0.00650	1	09/15/2019 21:07	WG1346275
(S) Toluene-d8	113		75.0-131		09/15/2019 21:07	WG1346275
(S) 4-Bromofluorobenzene	103		67.0-138		09/15/2019 21:07	WG1346275
(S) 1,2-Dichloroethane-d4	106		70.0-130		09/15/2019 21:07	WG1346275

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 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	1950		80.0	20	09/16/2019 11:36	WG1346609
(S) o-Terphenyl	104	J7	18.0-148		09/16/2019 11:36	WG1346609

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	09/15/2019 13:29	WG1345943
Acenaphthene	ND		0.00600	1	09/15/2019 13:29	WG1345943
Acenaphthylene	ND		0.00600	1	09/15/2019 13:29	WG1345943
Benzo(a)anthracene	ND		0.00600	1	09/15/2019 13:29	WG1345943
Benzo(a)pyrene	ND		0.120	20	09/16/2019 08:15	WG1345943
Benzo(b)fluoranthene	ND		0.120	20	09/16/2019 08:15	WG1345943
Benzo(g,h,i)perylene	ND		0.120	20	09/16/2019 08:15	WG1345943
Benzo(k)fluoranthene	ND		0.120	20	09/16/2019 08:15	WG1345943
Chrysene	ND		0.00600	1	09/15/2019 13:29	WG1345943
Dibenz(a,h)anthracene	ND		0.120	20	09/16/2019 08:15	WG1345943
Fluoranthene	ND		0.00600	1	09/15/2019 13:29	WG1345943
Fluorene	ND		0.00600	1	09/15/2019 13:29	WG1345943
Indeno(1,2,3-cd)pyrene	ND		0.120	20	09/16/2019 08:15	WG1345943
Naphthalene	ND		0.0200	1	09/15/2019 13:29	WG1345943
Phenanthrene	ND		0.00600	1	09/15/2019 13:29	WG1345943
Pyrene	ND		0.00600	1	09/15/2019 13:29	WG1345943
1-Methylnaphthalene	ND		0.0200	1	09/15/2019 13:29	WG1345943
2-Methylnaphthalene	ND		0.0200	1	09/15/2019 13:29	WG1345943
2-Chloronaphthalene	ND		0.0200	1	09/15/2019 13:29	WG1345943
(S) p-Terphenyl-d14	80.5	J7	23.0-120		09/16/2019 08:15	WG1345943
(S) p-Terphenyl-d14	100		23.0-120		09/15/2019 13:29	WG1345943
(S) Nitrobenzene-d5	93.0		14.0-149		09/15/2019 13:29	WG1345943
(S) Nitrobenzene-d5	48.7	J7	14.0-149		09/16/2019 08:15	WG1345943
(S) 2-Fluorobiphenyl	60.6		34.0-125		09/15/2019 13:29	WG1345943
(S) 2-Fluorobiphenyl	71.9	J7	34.0-125		09/16/2019 08:15	WG1345943

Sample Narrative:

L1138830-03 WG1345943: IS/SURR failed on lower dilution.



Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		9/17/2019 11:11:52 AM	WG1346860
Fluid	1		9/17/2019 11:11:52 AM	WG1346860
Initial pH	8.39		9/17/2019 11:11:52 AM	WG1346860
Final pH	6.06		9/17/2019 11:11:52 AM	WG1346860

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Boron	ND		2.00		1	09/18/2019 11:44	WG1347655

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3450684-1 09/14/19 19:11

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chromium,Hexavalent	U		0.640	2.00

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

L1138965-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1138965-05 09/14/19 19:22 • (DUP) R3450684-3 09/14/19 19:22

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

L1139020-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1139020-05 09/14/19 19:33 • (DUP) R3450684-7 09/14/19 19:33

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

Laboratory Control Sample (LCS)

(LCS) R3450684-2 09/14/19 19:13

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Chromium,Hexavalent	24.0	25.3	105	80.0-120	

L1138965-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1138965-05 09/14/19 19:22 • (MS) R3450684-4 09/14/19 19:23 • (MSD) R3450684-5 09/14/19 19:23

	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	%	%		%			%	%
Chromium,Hexavalent	20.0	U	18.5	17.9	92.5	89.5	1	75.0-125			3.31	20

L1138965-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L1138965-05 09/14/19 19:22 • (MS) R3450684-8 09/14/19 19:42

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Chromium,Hexavalent	6580	U	565	8.59	50	75.0-125	J6

L1138830-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1138830-01 09/14/19 22:49 • (DUP) R3450692-2 09/14/19 22:49

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	8.22	8.18	1	0.488		1

Sample Narrative:
OS: 8.22 at 23.4C
DUP: 8.18 at 23.5C

L1139068-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1139068-05 09/14/19 22:49 • (DUP) R3450692-3 09/14/19 22:49

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	7.20	7.47	1	3.68	J3	1

Sample Narrative:
OS: 7.2 at 23.1C
DUP: 7.47 at 23.1C

Laboratory Control Sample (LCS)

(LCS) R3450692-1 09/14/19 22:49

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	su	su	%	%	
pH	10.0	9.96	99.6	99.0-101	

Sample Narrative:
LCS: 9.96 at 23.1C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3451703-1 09/17/19 22:50

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

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1138575-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1138575-01 09/17/19 22:50 • (DUP) R3451703-3 09/17/19 22:50

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	90.8	90.7	1	0.110		20

L1139640-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1139640-01 09/17/19 22:50 • (DUP) R3451703-4 09/17/19 22:50

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	543	544	1	0.184		20

Laboratory Control Sample (LCS)

(LCS) R3451703-2 09/17/19 22:50

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	393	392	99.7	85.0-115	



Method Blank (MB)

(MB) R3450882-1 09/15/19 19:42

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Mercury	U		0.00280	0.0300

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

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

(LCS) R3450882-2 09/15/19 19:45 • (LCSD) R3450882-3 09/15/19 19:47

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Mercury	0.500	0.452	0.462	90.3	92.5	80.0-120			2.39	20

L1138830-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1138830-01 09/15/19 19:50 • (MS) R3450882-4 09/15/19 19:52 • (MSD) R3450882-5 09/15/19 20:00

	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	%	%		%			%	%
Mercury	0.500	ND	0.439	0.462	84.1	88.8	1	75.0-125			5.17	20



Method Blank (MB)

(MB) R3451331-1 09/16/19 15:26

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.460	2.00
Barium	U		0.170	0.500
Cadmium	U		0.0700	0.500
Chromium	U		0.140	1.00
Copper	U		0.530	2.00
Lead	U		0.190	0.500
Nickel	U		0.490	2.00
Selenium	U		0.620	2.00
Silver	U		0.120	1.00
Zinc	U		0.590	5.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

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

(LCS) R3451331-2 09/16/19 15:28 • (LCSD) R3451331-3 09/16/19 15:31

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 %
Arsenic	100	95.3	99.6	95.3	99.6	80.0-120			4.42	20
Barium	100	102	107	102	107	80.0-120			4.82	20
Cadmium	100	95.9	101	95.9	101	80.0-120			4.99	20
Chromium	100	98.9	104	98.9	104	80.0-120			4.95	20
Copper	100	98.2	103	98.2	103	80.0-120			5.18	20
Lead	100	97.7	102	97.7	102	80.0-120			4.71	20
Nickel	100	99.0	104	99.0	104	80.0-120			5.00	20
Selenium	100	95.5	100	95.5	100	80.0-120			4.81	20
Silver	20.0	19.3	20.3	96.6	101	80.0-120			4.85	20
Zinc	100	96.9	102	96.9	102	80.0-120			4.72	20

L1138819-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1138819-02 09/16/19 15:33 • (MS) R3451331-6 09/16/19 15:41 • (MSD) R3451331-7 09/16/19 15:43

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	546	19.9	496	527	87.3	93.0	1	75.0-125			6.07	20
Barium	546	66.0	565	600	91.5	98.0	1	75.0-125			6.01	20
Cadmium	546	ND	483	513	88.6	93.9	1	75.0-125			5.87	20
Chromium	546	11.4	498	526	89.3	94.4	1	75.0-125			5.47	20
Copper	546	30.6	553	582	95.7	101	1	75.0-125			5.16	20
Lead	546	ND	500	530	91.6	97.1	1	75.0-125			5.91	20



L1138819-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1138819-02 09/16/19 15:33 • (MS) R3451331-6 09/16/19 15:41 • (MSD) R3451331-7 09/16/19 15:43

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Nickel	546	38.0	552	585	94.1	100	1	75.0-125			5.90	20
Selenium	546	ND	488	518	88.5	94.0	1	75.0-125			6.00	20
Silver	109	ND	96.8	103	88.7	94.1	1	75.0-125			5.90	20
Zinc	546	69.7	551	585	88.3	94.4	1	75.0-125			5.89	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3451951-1 09/18/19 10:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron	U		0.667	2.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

(LCS) R3451951-2 09/18/19 10:34 • (LCSD) R3451951-3 09/18/19 10:37

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 %
Boron	10.0	9.62	9.77	96.2	97.7	80.0-120			1.56	20

L1138024-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1138024-09 09/18/19 10:39 • (MS) R3451951-5 09/18/19 10:45 • (MSD) R3451951-6 09/18/19 10:47

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron	10.0	ND	10.0	9.82	100	98.2	1	75.0-125			2.25	20

L1138659-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1138659-02 09/18/19 10:50 • (MS) R3451951-7 09/18/19 10:52 • (MSD) R3451951-8 09/18/19 10:55

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron	10.0	ND	9.74	9.65	97.4	96.5	1	75.0-125			0.965	20

Method Blank (MB)

(MB) R3452301-2 09/18/19 16:19

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)	95.7			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3452301-1 09/18/19 15:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.36	97.4	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			100	77.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3451869-2 09/15/19 18:03

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000400	0.00100
Ethylbenzene	U		0.000530	0.00250
Toluene	U		0.00125	0.00500
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	119			75.0-131
(S) 4-Bromofluorobenzene	95.6			67.0-138
(S) 1,2-Dichloroethane-d4	103			70.0-130

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3451869-1 09/15/19 17:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.103	82.1	70.0-123	
Ethylbenzene	0.125	0.125	100	74.0-126	
Toluene	0.125	0.119	95.6	75.0-121	
Xylenes, Total	0.375	0.353	94.1	72.0-127	
(S) Toluene-d8			108	75.0-131	
(S) 4-Bromofluorobenzene			96.4	67.0-138	
(S) 1,2-Dichloroethane-d4			110	70.0-130	

L1138661-33 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1138661-33 09/15/19 19:46 • (MS) R3451869-3 09/16/19 01:12 • (MSD) R3451869-4 09/16/19 01:33

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	0.0707	0.0399	56.6	31.9	1	10.0-149		J3	55.8	37
Ethylbenzene	0.125	ND	0.101	0.0513	80.4	41.1	1	10.0-160		J3	64.8	38
Toluene	0.125	ND	0.0905	0.0579	72.4	46.3	1	10.0-156		J3	44.0	38
Xylenes, Total	0.375	ND	0.288	0.152	76.8	40.5	1	10.0-160		J3	61.9	38
(S) Toluene-d8					111	117		75.0-131				
(S) 4-Bromofluorobenzene					101	97.1		67.0-138				
(S) 1,2-Dichloroethane-d4					107	104		70.0-130				



Method Blank (MB)

(MB) R3451313-1 09/16/19 17:12

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) High Fraction	U		0.769	4.00
(S) o-Terphenyl	106			18.0-148

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3451313-2 09/16/19 17:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) High Fraction	50.0	39.9	79.8	50.0-150	
(S) o-Terphenyl			94.1	18.0-148	

Method Blank (MB)

(MB) R3450880-2 09/15/19 10:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.000600	0.00600
Acenaphthene	U		0.000600	0.00600
Acenaphthylene	U		0.000600	0.00600
Benzo(a)anthracene	U		0.000600	0.00600
Benzo(a)pyrene	U		0.000600	0.00600
Benzo(b)fluoranthene	U		0.000600	0.00600
Benzo(g,h,i)perylene	U		0.000600	0.00600
Benzo(k)fluoranthene	U		0.000600	0.00600
Chrysene	U		0.000600	0.00600
Dibenz(a,h)anthracene	U		0.000600	0.00600
Fluoranthene	U		0.000600	0.00600
Fluorene	U		0.000600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.000600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.000600	0.00600
Pyrene	U		0.000600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
2-Chloronaphthalene	U		0.00200	0.0200
(S) Nitrobenzene-d5	61.9			14.0-149
(S) 2-Fluorobiphenyl	62.0			34.0-125
(S) p-Terphenyl-d14	78.1			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) R3450880-1 09/15/19 09:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0703	87.9	50.0-126	
Acenaphthene	0.0800	0.0676	84.5	50.0-120	
Acenaphthylene	0.0800	0.0728	91.0	50.0-120	
Benzo(a)anthracene	0.0800	0.0684	85.5	45.0-120	
Benzo(a)pyrene	0.0800	0.0559	69.9	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0604	75.5	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0562	70.3	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0762	95.3	49.0-125	
Chrysene	0.0800	0.0673	84.1	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0571	71.4	47.0-125	
Fluoranthene	0.0800	0.0674	84.3	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3450880-1 09/15/19 09:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Fluorene	0.0800	0.0658	82.3	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0580	72.5	46.0-125	
Naphthalene	0.0800	0.0656	82.0	50.0-120	
Phenanthrene	0.0800	0.0637	79.6	47.0-120	
Pyrene	0.0800	0.0686	85.8	43.0-123	
1-Methylnaphthalene	0.0800	0.0664	83.0	51.0-121	
2-Methylnaphthalene	0.0800	0.0624	78.0	50.0-120	
2-Chloronaphthalene	0.0800	0.0621	77.6	50.0-120	
(S) Nitrobenzene-d5			81.8	14.0-149	
(S) 2-Fluorobiphenyl			70.9	34.0-125	
(S) p-Terphenyl-d14			78.9	23.0-120	

L1138777-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1138777-08 09/15/19 16:56 • (MS) R3450880-3 09/15/19 17:16 • (MSD) R3450880-4 09/15/19 17:37

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Anthracene	0.0930	0.248	0.429	0.191	195	0.000	1	10.0-145	<u>J5</u>	<u>J3 J6</u>	76.9	30
Acenaphthene	0.0930	0.135	0.327	0.140	206	5.00	1	14.0-127	<u>J5</u>	<u>J3 J6</u>	80.3	27
Acenaphthylene	0.0930	U	0.0699	0.0695	75.1	74.8	1	21.0-124			0.500	25
Benzo(a)anthracene	0.0930	0.779	0.951	0.509	185	0.000	1	10.0-139	<u>V</u>	<u>J3 V</u>	60.5	30
Benzo(a)pyrene	0.0930	0.649	0.792	0.462	154	0.000	1	10.0-141	<u>V</u>	<u>J3 V</u>	52.7	31
Benzo(b)fluoranthene	0.0930	0.950	1.12	0.664	183	0.000	1	10.0-140	<u>V</u>	<u>J3 V</u>	51.1	36
Benzo(g,h,i)perylene	0.0930	0.437	0.503	0.307	71.3	0.000	1	10.0-140		<u>J3 V</u>	48.5	33
Benzo(k)fluoranthene	0.0930	0.324	0.407	0.233	88.7	0.000	1	10.0-137		<u>J3 J6</u>	54.5	31
Chrysene	0.0930	0.725	0.885	0.500	171	0.000	1	10.0-145	<u>V</u>	<u>J3 V</u>	55.6	30
Dibenz(a,h)anthracene	0.0930	0.127	0.192	0.131	70.0	5.00	1	10.0-132		<u>J3 J6</u>	37.4	31
Fluoranthene	0.0930	1.36	1.59	0.795	250	0.000	1	10.0-153	<u>V</u>	<u>J3 V</u>	66.8	33
Fluorene	0.0930	0.113	0.298	0.123	199	11.2	1	11.0-130	<u>J5</u>	<u>J3</u>	82.9	29
Indeno(1,2,3-cd)pyrene	0.0930	0.387	0.459	0.284	77.5	0.000	1	10.0-137		<u>J3 V</u>	47.3	32
Naphthalene	0.0930	0.0742	0.279	0.101	220	28.6	1	10.0-135	<u>J5</u>	<u>J3</u>	93.8	27
Phenanthrene	0.0930	1.04	1.50	0.572	495	0.000	1	10.0-144	<u>V</u>	<u>J3 V</u>	89.6	31
Pyrene	0.0930	1.34	1.52	0.795	200	0.000	1	10.0-148	<u>V</u>	<u>J3 V</u>	62.8	35
1-Methylnaphthalene	0.0930	0.0190	0.120	0.0705	108	55.4	1	10.0-142		<u>J3</u>	51.8	28
2-Methylnaphthalene	0.0930	0.0260	0.157	0.0741	141	51.6	1	10.0-137	<u>J5</u>	<u>J3</u>	71.8	28
2-Chloronaphthalene	0.0930	U	0.0612	0.0609	65.8	65.5	1	29.0-120			0.381	24
(S) Nitrobenzene-d5					70.0	81.3		14.0-149				
(S) 2-Fluorobiphenyl					60.9	69.1		34.0-125				
(S) p-Terphenyl-d14					76.1	82.9		23.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



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

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
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.
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

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.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
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 Gl

8 Al

9 Sc



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* 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 National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	n/a
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}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana ¹	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

Third Party Federal Accreditations

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

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Colorado Oil & Gas Conservation

707 Wapiti Court, Ste 204
Rifle, CO 81650

Billing Information:

Attn: Accounts Payable
1120 Lincoln St., Suite 801
Denver, CO 80203

Report to:
Jim Hughes

Email To: jimo.hughes@state.co.us

Project

Description: Schutz Landfarm

City/State

Collected: CO

Phone: 970-625-2497

Fax: 970-625-5682

Client Project #

REM # 10228

Lab Project #

COILGASRCO-TABLE910

Collected by (print):

Jim Hughes/Alan Fiskow

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

Same Day200%
Next Day100%
Two Day50%
Three Day25%

Date Results Needed

Email? ☐ No ☒ Yes

FAX? ☐ No ☐ Yes

No.
of
Cntrs

Sample ID

Comp/Grab

Matrix *

Depth

Date

Time

No.
of
Cntrs

0910191245

G

SS

0-12"

9/10/19

1245

5

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

0910191245

G

SS

0-12"

9/10/19

1245

1

0910191250

G

SS

0-12"

9/10/19

1250

5

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

0910191250

G

SS

0-12"

9/10/19

1250

1

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

Remarks: AGICP, ASICP, BAICP, CDICP, CRICP, CUICP, HG, NIICP, PBICP, SEICP, ZNICP

pH _____ Temp _____

Flow _____ Other _____

Hold #

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Samples returned via: ☐ UPS

☒ FedEx ☐ Courier ☐ _____

Condition:

(lab use only)

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: _____ °C Bottles Received:

2.7-1-2.8 12

COC Seal Intact:

☐ Y ☒ N ☐ NA

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date:

Time:

9/12/19 8:45

pH Checked:

NCF:



YOUR LAB OF CHOICE

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



L# L1138830

H159

Acctnum: COILGASRCO

Template: T111892

Prelogin: P551161

TSR: 288 - Daphne Richards

PB:

Shipped Via: FedEX Ground

Rem./Contaminant Sample # (lab only)


01

02

03

04

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client:	COILGASCO	L1138830	
Cooler Received/Opened On:	9/12/19	Temperature:	2.8
Received By: Cole Medley			
Signature: 			
Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	/		
COC Signed / Accurate?		/	
Bottles arrive intact?		/	
Correct bottles used?		/	
Sufficient volume sent?		/	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			