

**HRL Compliance Solutions- CO**

Sample Delivery Group: L1374151  
Samples Received: 07/02/2021  
Project Number: RL BAYLESS  
Description: RL Bayless-Philidelphia Creek #18-Pit Closure  
Site: PC 18-PIT CLOSURE  
Report To: Kris Rowe  
2385 F ½ Road  
Grand Junction, CO 81505

Entire Report Reviewed By:



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.

**Pace Analytical National**12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 [www.pacenational.com](http://www.pacenational.com)

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<sup>5</sup> Sr
<sup>6</sup> Qc
<sup>7</sup> Gl
<sup>8</sup> Al
<sup>9</sup> Sc

# SAMPLE SUMMARY

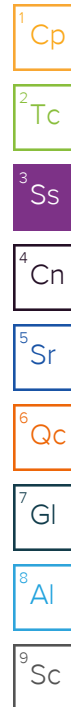
## PIT BOTTOM @5FT L1374151-01 Solid

Collected by  
Nick Cholas

Collected date/time  
07/01/21 09:15

Received date/time  
07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1700073	1	07/08/21 00:39	07/08/21 00:39	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1700335	1	07/08/21 11:46	07/09/21 16:42	MCG	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1703135	1	07/10/21 11:00	07/11/21 15:00	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1701051	1	07/08/21 03:00	07/08/21 06:11	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1703135	1	07/10/21 11:00	07/11/21 15:00	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1701051	1	07/08/21 03:00	07/08/21 06:11	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1701955	1	07/08/21 16:22	07/09/21 17:14	KMG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1700069	5	07/05/21 14:43	07/10/21 18:53	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1701948	5	07/08/21 16:20	07/09/21 14:37	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1702550	1	07/07/21 10:52	07/10/21 09:08	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1701862	1	07/07/21 10:52	07/08/21 11:03	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1706787	1	07/09/21 06:39	07/10/21 17:06	CLG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1702146	1	07/08/21 22:30	07/09/21 15:52	AAT	Mt. Juliet, TN



## NORTH SIDE WALL @ 3FT L1374151-02 Solid

Collected by  
Nick Cholas

Collected date/time  
07/01/21 09:30

Received date/time  
07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1700073	1	07/08/21 00:41	07/08/21 00:41	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1703135	1	07/10/21 11:00	07/11/21 15:00	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1701051	1	07/08/21 03:00	07/08/21 06:11	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1703135	1	07/10/21 11:00	07/11/21 15:00	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1701051	1	07/08/21 03:00	07/08/21 06:11	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1703082	1	07/07/21 10:52	07/11/21 00:04	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1707666	1	07/09/21 06:39	07/11/21 04:38	CLG	Mt. Juliet, TN

## EAST SIDE WALL @ 3FT L1374151-03 Solid

Collected by  
Nick Cholas

Collected date/time  
07/01/21 10:00

Received date/time  
07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1700073	1	07/08/21 00:44	07/08/21 00:44	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1703135	1	07/10/21 11:00	07/11/21 15:00	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1701051	1	07/08/21 03:00	07/08/21 06:11	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1703135	1	07/10/21 11:00	07/11/21 15:00	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1701051	1	07/08/21 03:00	07/08/21 06:11	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1703082	1	07/07/21 10:52	07/11/21 00:28	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1707666	1	07/09/21 06:39	07/11/21 03:33	CLG	Mt. Juliet, TN

## SOUTH SIDE WALL @ 3FT L1374151-04 Solid

Collected by  
Nick Cholas

Collected date/time  
07/01/21 09:45

Received date/time  
07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1700073	1	07/08/21 00:47	07/08/21 00:47	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1703135	1	07/10/21 11:00	07/11/21 15:00	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1701051	1	07/08/21 03:00	07/08/21 06:11	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1703135	1	07/10/21 11:00	07/11/21 15:00	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1701051	1	07/08/21 03:00	07/08/21 06:11	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1703082	1	07/07/21 10:52	07/11/21 00:52	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1707666	1	07/09/21 06:39	07/11/21 03:46	CLG	Mt. Juliet, TN

# SAMPLE SUMMARY

WEST SIDE WALL @ 3FT L1374151-05 Solid

Collected by  
Nick Cholas

Collected date/time  
07/01/21 10:15

Received date/time  
07/02/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1700073	1	07/08/21 00:55	07/08/21 00:55	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1703135	1	07/10/21 11:00	07/11/21 15:00	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1701051	1	07/08/21 03:00	07/08/21 06:11	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1703135	1	07/10/21 11:00	07/11/21 15:00	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1701051	1	07/08/21 03:00	07/08/21 06:11	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1703082	1	07/07/21 10:52	07/11/21 01:16	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1707666	1	07/09/21 06:39	07/11/21 03:59	CLG	Mt. Juliet, TN

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

ACCOUNT:

HRL Compliance Solutions- CO

PROJECT:

RL BAYLESS

SDG:

L1374151

DATE/TIME:

07/19/21 11:22

PAGE:

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# 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



## PIT BOTTOM @5FT

Collected date/time: 07/01/21 09:15

## SAMPLE RESULTS - 01

L1374151

## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	51.2		1	07/08/2021 00:39	WG1700073

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	07/09/2021 16:42	<a href="#">WG1700335</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.89	<a href="#">T8</a>	1	07/11/2021 15:00	<a href="#">WG1703135</a>

## Sample Narrative:

L1374151-01 WG1703135: 8.89 at 21.5C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	4490		10.0	1	07/08/2021 06:11	<a href="#">WG1701051</a>

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	84.7		0.0852	0.500	1	07/09/2021 17:14	<a href="#">WG1701955</a>
Cadmium	0.147	<a href="#">J</a>	0.0471	0.500	1	07/09/2021 17:14	<a href="#">WG1701955</a>
Copper	7.46		0.400	2.00	1	07/09/2021 17:14	<a href="#">WG1701955</a>
Lead	7.90		0.208	0.500	1	07/09/2021 17:14	<a href="#">WG1701955</a>
Nickel	8.61		0.132	2.00	1	07/09/2021 17:14	<a href="#">WG1701955</a>
Selenium	U		0.764	2.00	1	07/09/2021 17:14	<a href="#">WG1701955</a>
Silver	U		0.127	1.00	1	07/09/2021 17:14	<a href="#">WG1701955</a>
Zinc	39.0		0.832	5.00	1	07/09/2021 17:14	<a href="#">WG1701955</a>

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

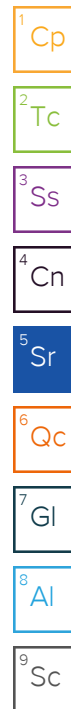
Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.499	<a href="#">J</a>	0.0835	1.00	5	07/10/2021 18:53	<a href="#">WG1700069</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.86		0.100	1.00	5	07/09/2021 14:37	<a href="#">WG1701948</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0850	<a href="#">J</a>	0.0217	0.100	1	07/10/2021 09:08	<a href="#">WG1702550</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	102			77.0-120		07/10/2021 09:08	<a href="#">WG1702550</a>



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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	07/08/2021 11:03	<a href="#">WG1701862</a>
Toluene	U		0.00130	0.00500	1	07/08/2021 11:03	<a href="#">WG1701862</a>
Ethylbenzene	U		0.000737	0.00250	1	07/08/2021 11:03	<a href="#">WG1701862</a>
Xylenes, Total	0.00793		0.000880	0.00650	1	07/08/2021 11:03	<a href="#">WG1701862</a>
1,2,4-Trimethylbenzene	0.0107	<u>B</u>	0.00158	0.00500	1	07/08/2021 11:03	<a href="#">WG1701862</a>
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	07/08/2021 11:03	<a href="#">WG1701862</a>
(S) Toluene-d8	103			75.0-131		07/08/2021 11:03	<a href="#">WG1701862</a>
(S) 4-Bromofluorobenzene	104			67.0-138		07/08/2021 11:03	<a href="#">WG1701862</a>
(S) 1,2-Dichloroethane-d4	104			70.0-130		07/08/2021 11:03	<a href="#">WG1701862</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	2.97	<u>J</u>	1.61	4.00	1	07/10/2021 17:06	<a href="#">WG1706787</a>
C28-C36 Motor Oil Range	5.69		0.274	4.00	1	07/10/2021 17:06	<a href="#">WG1706787</a>
(S) o-Terphenyl	60.4			18.0-148		07/10/2021 17:06	<a href="#">WG1706787</a>

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00230	0.00600	1	07/09/2021 15:52	<a href="#">WG1702146</a>
Acenaphthene	U		0.00209	0.00600	1	07/09/2021 15:52	<a href="#">WG1702146</a>
Acenaphthylene	U		0.00216	0.00600	1	07/09/2021 15:52	<a href="#">WG1702146</a>
Benzo(a)anthracene	U		0.00173	0.00600	1	07/09/2021 15:52	<a href="#">WG1702146</a>
Benzo(a)pyrene	U		0.00179	0.00600	1	07/09/2021 15:52	<a href="#">WG1702146</a>
Benzo(b)fluoranthene	U		0.00153	0.00600	1	07/09/2021 15:52	<a href="#">WG1702146</a>
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	07/09/2021 15:52	<a href="#">WG1702146</a>
Benzo(k)fluoranthene	U		0.00215	0.00600	1	07/09/2021 15:52	<a href="#">WG1702146</a>
Chrysene	U		0.00232	0.00600	1	07/09/2021 15:52	<a href="#">WG1702146</a>
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	07/09/2021 15:52	<a href="#">WG1702146</a>
Fluoranthene	U		0.00227	0.00600	1	07/09/2021 15:52	<a href="#">WG1702146</a>
Fluorene	U		0.00205	0.00600	1	07/09/2021 15:52	<a href="#">WG1702146</a>
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	07/09/2021 15:52	<a href="#">WG1702146</a>
Naphthalene	U		0.00408	0.0200	1	07/09/2021 15:52	<a href="#">WG1702146</a>
Phenanthrene	U		0.00231	0.00600	1	07/09/2021 15:52	<a href="#">WG1702146</a>
Pyrene	U		0.00200	0.00600	1	07/09/2021 15:52	<a href="#">WG1702146</a>
1-Methylnaphthalene	U		0.00449	0.0200	1	07/09/2021 15:52	<a href="#">WG1702146</a>
2-Methylnaphthalene	U		0.00427	0.0200	1	07/09/2021 15:52	<a href="#">WG1702146</a>
2-Chloronaphthalene	U		0.00466	0.0200	1	07/09/2021 15:52	<a href="#">WG1702146</a>
(S) p-Terphenyl-d14	98.4			23.0-120		07/09/2021 15:52	<a href="#">WG1702146</a>
(S) Nitrobenzene-d5	90.6			14.0-149		07/09/2021 15:52	<a href="#">WG1702146</a>
(S) 2-Fluorobiphenyl	80.0			34.0-125		07/09/2021 15:52	<a href="#">WG1702146</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	70.3		1	07/08/2021 00:41	WG1700073

## Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	9.05	T8	1	07/11/2021 15:00	WG1703135

## Sample Narrative:

L1374151-02 WG1703135: 9.05 at 21.5C

## Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	umhos/cm		umhos/cm			
Specific Conductance	5540		10.0	1	07/08/2021 06:11	WG1701051

## Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	mg/kg		mg/kg			
Benzene	0.00161		0.000500	1	07/11/2021 00:04	WG1703082
Toluene	ND		0.00500	1	07/11/2021 00:04	WG1703082
Ethylbenzene	ND		0.000500	1	07/11/2021 00:04	WG1703082
Total Xylene	ND		0.00150	1	07/11/2021 00:04	WG1703082
TPH (GC/FID) Low Fraction	ND		0.100	1	07/11/2021 00:04	WG1703082
(S) a,a,a-Trifluorotoluene(FID)	106		77.0-120		07/11/2021 00:04	WG1703082
(S) a,a,a-Trifluorotoluene(PID)	105		72.0-128		07/11/2021 00:04	WG1703082

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	mg/kg		mg/kg			
C10-C28 Diesel Range	9.09		4.00	1	07/11/2021 04:38	WG1707666
C28-C40 Oil Range	22.6		4.00	1	07/11/2021 04:38	WG1707666
(S) o-Terphenyl	58.0		18.0-148		07/11/2021 04:38	WG1707666

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	7.01		1	07/08/2021 00:44	WG1700073

## Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	9.56	<a href="#">T8</a>	1	07/11/2021 15:00	<a href="#">WG1703135</a>

## Sample Narrative:

L1374151-03 WG1703135: 9.56 at 21.5C

## Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	umhos/cm		umhos/cm			
Specific Conductance	919		10.0	1	07/08/2021 06:11	<a href="#">WG1701051</a>

## Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	0.00218		0.000500	1	07/11/2021 00:28	<a href="#">WG1703082</a>
Toluene	ND		0.00500	1	07/11/2021 00:28	<a href="#">WG1703082</a>
Ethylbenzene	ND		0.000500	1	07/11/2021 00:28	<a href="#">WG1703082</a>
Total Xylene	ND		0.00150	1	07/11/2021 00:28	<a href="#">WG1703082</a>
TPH (GC/FID) Low Fraction	ND		0.100	1	07/11/2021 00:28	<a href="#">WG1703082</a>
(S) a,a,a-Trifluorotoluene(FID)	105		77.0-120		07/11/2021 00:28	<a href="#">WG1703082</a>
(S) a,a,a-Trifluorotoluene(PID)	104		72.0-128		07/11/2021 00:28	<a href="#">WG1703082</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	ND		4.00	1	07/11/2021 03:33	<a href="#">WG1707666</a>
C28-C40 Oil Range	6.98		4.00	1	07/11/2021 03:33	<a href="#">WG1707666</a>
(S) o-Terphenyl	55.9		18.0-148		07/11/2021 03:33	<a href="#">WG1707666</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	7.01		1	07/08/2021 00:47	WG1700073

## Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	9.61	T8	1	07/11/2021 15:00	WG1703135

## Sample Narrative:

L1374151-04 WG1703135: 9.61 at 21.4C

## Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	umhos/cm		umhos/cm			
	785		10.0	1	07/08/2021 06:11	WG1701051

## Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	mg/kg		mg/kg			
	0.00301		0.000500	1	07/11/2021 00:52	WG1703082
Toluene	ND		0.00500	1	07/11/2021 00:52	WG1703082
Ethylbenzene	ND		0.000500	1	07/11/2021 00:52	WG1703082
Total Xylene	ND		0.00150	1	07/11/2021 00:52	WG1703082
TPH (GC/FID) Low Fraction	ND		0.100	1	07/11/2021 00:52	WG1703082
(S) a,a,a-Trifluorotoluene(FID)	105		77.0-120		07/11/2021 00:52	WG1703082
(S) a,a,a-Trifluorotoluene(PID)	105		72.0-128		07/11/2021 00:52	WG1703082

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	mg/kg		mg/kg			
	ND		4.00	1	07/11/2021 03:46	WG1707666
C28-C40 Oil Range	6.09		4.00	1	07/11/2021 03:46	WG1707666
(S) o-Terphenyl	67.9		18.0-148		07/11/2021 03:46	WG1707666

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	44.6		1	07/08/2021 00:55	WG1700073

## Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.64	T8	1	07/11/2021 15:00	WG1703135

## Sample Narrative:

L1374151-05 WG1703135: 8.64 at 21.6C

## Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	umhos/cm		umhos/cm			
	4240		10.0	1	07/08/2021 06:11	WG1701051

## Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	0.00201		0.000500	1	07/11/2021 01:16	WG1703082
Toluene	ND		0.00500	1	07/11/2021 01:16	WG1703082
Ethylbenzene	ND		0.000500	1	07/11/2021 01:16	WG1703082
Total Xylene	ND		0.00150	1	07/11/2021 01:16	WG1703082
TPH (GC/FID) Low Fraction	ND		0.100	1	07/11/2021 01:16	WG1703082
(S) a,a,a-Trifluorotoluene(FID)	106		77.0-120		07/11/2021 01:16	WG1703082
(S) a,a,a-Trifluorotoluene(PID)	105		72.0-128		07/11/2021 01:16	WG1703082

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	ND		4.00	1	07/11/2021 03:59	WG1707666
C28-C40 Oil Range	8.00		4.00	1	07/11/2021 03:59	WG1707666
(S) o-Terphenyl	68.1		18.0-148		07/11/2021 03:59	WG1707666

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3677717-1 07/09/21 14:25

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

L1372240-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1372240-02 07/09/21 14:43 • (DUP) R3677717-3 07/09/21 14:48

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	0.376	0.371	1	1.34	⌵	20

L1372494-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1372494-03 07/09/21 16:32 • (DUP) R3677717-4 07/09/21 16:37

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	1.08	1.07	1	0.440		20

Laboratory Control Sample (LCS)

(LCS) R3677717-2 07/09/21 14:33

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Hexavalent Chromium	10.0	10.7	107	80.0-120	

L1374151-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1374151-01 07/09/21 16:42 • (MS) R3677717-5 07/09/21 16:48 • (MSD) R3677717-6 07/09/21 16:53

	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	20.8	21.3	104	107	1	75.0-125			2.35	20

L1374151-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1374151-01 07/09/21 16:42 • (MS) R3677717-7 07/09/21 16:58

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Hexavalent Chromium	643	U	690	107	50	75.0-125	

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

L1374031-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1374031-02 07/11/21 15:00 • (DUP) R3678049-2 07/11/21 15:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	8.93	8.94	1	0.112		1

Sample Narrative:

OS: 8.93 at 22C

DUP: 8.94 at 22.1C

L1374146-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1374146-01 07/11/21 15:00 • (DUP) R3678049-3 07/11/21 15:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	6.70	6.74	1	0.595		1

Sample Narrative:

OS: 6.7 at 21.6C

DUP: 6.74 at 21.4C

Laboratory Control Sample (LCS)

(LCS) R3678049-1 07/11/21 15:00

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	su	su	%	%	
pH	10.0	10.1	101	99.0-101	

Sample Narrative:

LCS: 10.06 at 21.5C

L1374031-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1374031-02 07/11/21 15:00 • (DUP) R3678049-2 07/11/21 15:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	8.93	8.94	1	0.112		1

Sample Narrative:

OS: 8.93 at 22C

DUP: 8.94 at 22.1C



L1374146-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1374146-01 07/11/21 15:00 • (DUP) R3678049-3 07/11/21 15:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	6.70	6.74	1	0.595		1

Sample Narrative:

OS: 6.7 at 21.6C

DUP: 6.74 at 21.4C

Laboratory Control Sample (LCS)

(LCS) R3678049-1 07/11/21 15:00

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	su	su	%	%	
pH	10.0	10.1	101	99.0-101	

Sample Narrative:

LCS: 10.06 at 21.5C

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3676846-1 07/08/21 06:11

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

L1373412-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1373412-01 07/08/21 06:11 • (DUP) R3676846-3 07/08/21 06:11

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	735	720	1	2.06		20

L1374154-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1374154-01 07/08/21 06:11 • (DUP) R3676846-4 07/08/21 06:11

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	155	167	1	7.14		20

Laboratory Control Sample (LCS)

(LCS) R3676846-2 07/08/21 06:11

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	899	884	98.3	85.0-115	

Method Blank (MB)

(MB) R3676846-1 07/08/21 06:11

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

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1373412-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1373412-01 07/08/21 06:11 • (DUP) R3676846-3 07/08/21 06:11

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	umhos/cm	umhos/cm		%		%
Specific Conductance	735	720	1	2.06		20

L1374154-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1374154-01 07/08/21 06:11 • (DUP) R3676846-4 07/08/21 06:11

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	umhos/cm	umhos/cm		%		%
Specific Conductance	155	167	1	7.14		20

Laboratory Control Sample (LCS)

(LCS) R3676846-2 07/08/21 06:11

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	umhos/cm	umhos/cm	%	%	
Specific Conductance	899	884	98.3	85.0-115	

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3677795-1 07/09/21 16:30

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	0.319	J	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

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3677795-2 07/09/21 16:33

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	99.6	99.6	80.0-120	
Cadmium	100	95.4	95.4	80.0-120	
Copper	100	96.2	96.2	80.0-120	
Lead	100	96.0	96.0	80.0-120	
Nickel	100	98.7	98.7	80.0-120	
Selenium	100	94.0	94.0	80.0-120	
Silver	20.0	17.2	85.8	80.0-120	
Zinc	100	95.0	95.0	80.0-120	

L1373997-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1373997-01 07/09/21 16:36 • (MS) R3677795-5 07/09/21 16:45 • (MSD) R3677795-6 07/09/21 16:48

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	100	187	541	311	353	123	1	75.0-125	J5	J3	54.0	20
Cadmium	100	0.293	103	103	103	102	1	75.0-125			0.761	20
Copper	100	18.6	124	120	106	101	1	75.0-125			3.87	20
Lead	100	8.80	114	112	105	104	1	75.0-125			1.42	20
Nickel	100	20.7	131	127	110	107	1	75.0-125			2.53	20
Selenium	100	1.89	104	102	102	99.8	1	75.0-125			1.83	20
Silver	20.0	U	18.5	18.2	92.5	91.2	1	75.0-125			1.34	20
Zinc	100	41.8	138	136	96.4	94.4	1	75.0-125			1.44	20

Method Blank (MB)

(MB) R3678014-1 07/10/21 17:43

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) R3678014-2 07/10/21 17:46 • (LCSD) R3678014-3 07/10/21 17:48

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	0.988	0.998	98.8	99.8	80.0-120			1.04	20

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3677629-1 07/09/21 13:43

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

Laboratory Control Sample (LCS)

(LCS) R3677629-2 07/09/21 13:46

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Arsenic	100	98.5	98.5	80.0-120	

L1373997-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1373997-01 07/09/21 13:50 • (MS) R3677629-5 07/09/21 14:00 • (MSD) R3677629-6 07/09/21 14:03

	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	%	%		%			%	%
Arsenic	100	20.8	132	120	111	99.0	5	75.0-125			9.68	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R3678292-3 07/10/21 17:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000120	0.000500
Toluene	0.000167	U	0.000150	0.00500
Ethylbenzene	U		0.000110	0.000500
Total Xylene	U		0.000460	0.00150
TPH (GC/FID) Low Fraction	0.0348	U	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	109			77.0-120
(S) a,a,a-Trifluorotoluene(PID)	112			72.0-128

Laboratory Control Sample (LCS)

(LCS) R3678292-1 07/10/21 14:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0483	96.6	76.0-121	
Toluene	0.0500	0.0493	98.6	80.0-120	
Ethylbenzene	0.0500	0.0520	104	80.0-124	
Total Xylene	0.150	0.157	105	37.0-160	
(S) a,a,a-Trifluorotoluene(FID)			108	77.0-120	
(S) a,a,a-Trifluorotoluene(PID)			106	72.0-128	

Laboratory Control Sample (LCS)

(LCS) R3678292-2 07/10/21 15:00

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.81	106	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			118	77.0-120	
(S) a,a,a-Trifluorotoluene(PID)			116	72.0-128	

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

L1373986-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1373986-03 07/11/21 02:03 • (MS) R3678292-4 07/11/21 03:38 • (MSD) R3678292-5 07/11/21 04:02

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	1100	280	945	1180	60.5	81.8	200	10.0-151			22.1	28
(S) a,a,a-Trifluorotoluene(FID)					111	115		77.0-120				
(S) a,a,a-Trifluorotoluene(PID)					112	114		72.0-128				

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3677953-2 07/10/21 02:41

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)	109			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3677953-1 07/10/21 01:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.39	98.0	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			102	77.0-120	

L1373945-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1373945-02 07/10/21 03:45 • (MS) R3677953-3 07/10/21 10:56 • (MSD) R3677953-4 07/10/21 11:17

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	136	U	52.5	53.6	48.2	49.2	25	10.0-151			2.07	28
(S) a,a,a-Trifluorotoluene(FID)					99.4	99.6		77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3678018-2 07/08/21 06:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
1,2,4-Trimethylbenzene	0.00450	U	0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	106			75.0-131
(S) 4-Bromofluorobenzene	95.1			67.0-138
(S) 1,2-Dichloroethane-d4	102			70.0-130

Laboratory Control Sample (LCS)

(LCS) R3678018-1 07/08/21 06:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.120	96.0	70.0-123	
Ethylbenzene	0.125	0.122	97.6	74.0-126	
Toluene	0.125	0.117	93.6	75.0-121	
1,2,4-Trimethylbenzene	0.125	0.148	118	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.126	101	73.0-127	
Xylenes, Total	0.375	0.367	97.9	72.0-127	
(S) Toluene-d8			98.9	75.0-131	
(S) 4-Bromofluorobenzene			96.2	67.0-138	
(S) 1,2-Dichloroethane-d4			110	70.0-130	

L1374151-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1374151-01 07/08/21 11:03 • (MS) R3678018-3 07/08/21 17:24 • (MSD) R3678018-4 07/08/21 17:43

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 %
Benzene	0.125	U	0.0861	0.117	68.9	93.6	1	10.0-149			30.4	37
Ethylbenzene	0.125	U	0.0822	0.111	65.8	88.8	1	10.0-160			29.8	38
Toluene	0.125	U	0.0813	0.114	65.0	91.2	1	10.0-156			33.5	38
1,2,4-Trimethylbenzene	0.125	0.0107	0.0982	0.121	70.0	88.2	1	10.0-160			20.8	36
1,3,5-Trimethylbenzene	0.125	U	0.0895	0.128	71.6	102	1	10.0-160			35.4	38
Xylenes, Total	0.375	0.00793	0.268	0.354	69.4	92.3	1	10.0-160			27.7	38
(S) Toluene-d8					100	102		75.0-131				
(S) 4-Bromofluorobenzene					99.3	95.1		67.0-138				
(S) 1,2-Dichloroethane-d4					104	101		70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3680937-1 07/11/21 01:09

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-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	71.8			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3680937-2 07/11/21 01:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	39.4	78.8	50.0-150	
(S) o-Terphenyl			85.9	18.0-148	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3680446-1 07/11/21 01:09

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	71.8			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3680446-2 07/11/21 01:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	39.4	78.8	50.0-150	
(S) o-Terphenyl			85.9	18.0-148	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3678250-2 07/09/21 10:11

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	96.3			14.0-149
(S) 2-Fluorobiphenyl	86.1			34.0-125
(S) p-Terphenyl-d14	104			23.0-120

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3678250-1 07/09/21 09:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0773	96.6	50.0-126	
Acenaphthene	0.0800	0.0767	95.9	50.0-120	
Acenaphthylene	0.0800	0.0788	98.5	50.0-120	
Benzo(a)anthracene	0.0800	0.0759	94.9	45.0-120	
Benzo(a)pyrene	0.0800	0.0712	89.0	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0845	106	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0868	109	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0877	110	49.0-125	
Chrysene	0.0800	0.0825	103	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0861	108	47.0-125	
Fluoranthene	0.0800	0.0780	97.5	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3678250-1 07/09/21 09:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0780	97.5	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0844	105	46.0-125	
Naphthalene	0.0800	0.0752	94.0	50.0-120	
Phenanthrene	0.0800	0.0783	97.9	47.0-120	
Pyrene	0.0800	0.0824	103	43.0-123	
1-Methylnaphthalene	0.0800	0.0752	94.0	51.0-121	
2-Methylnaphthalene	0.0800	0.0720	90.0	50.0-120	
2-Chloronaphthalene	0.0800	0.0744	93.0	50.0-120	
(S) Nitrobenzene-d5			100	14.0-149	
(S) 2-Fluorobiphenyl			89.3	34.0-125	
(S) p-Terphenyl-d14			106	23.0-120	

L1373448-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1373448-05 07/09/21 11:23 • (MS) R3678250-3 07/09/21 11:41 • (MSD) R3678250-4 07/09/21 11:58

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	0.0772	U	0.0487	0.0505	63.1	66.1	1	10.0-145			3.63	30
Acenaphthene	0.0772	U	0.0495	0.0529	64.1	69.2	1	14.0-127			6.64	27
Acenaphthylene	0.0772	U	0.0505	0.0535	65.4	70.0	1	21.0-124			5.77	25
Benzo(a)anthracene	0.0772	U	0.0482	0.0490	62.4	64.1	1	10.0-139			1.65	30
Benzo(a)pyrene	0.0772	U	0.0516	0.0528	66.8	69.1	1	10.0-141			2.30	31
Benzo(b)fluoranthene	0.0772	U	0.0543	0.0555	70.3	72.6	1	10.0-140			2.19	36
Benzo(g,h,i)perylene	0.0772	U	0.0594	0.0601	76.9	78.7	1	10.0-140			1.17	33
Benzo(k)fluoranthene	0.0772	U	0.0598	0.0609	77.5	79.7	1	10.0-137			1.82	31
Chrysene	0.0772	U	0.0574	0.0580	74.4	75.9	1	10.0-145			1.04	30
Dibenz(a,h)anthracene	0.0772	U	0.0572	0.0571	74.1	74.7	1	10.0-132			0.175	31
Fluoranthene	0.0772	U	0.0484	0.0504	62.7	66.0	1	10.0-153			4.05	33
Fluorene	0.0772	U	0.0491	0.0527	63.6	69.0	1	11.0-130			7.07	29
Indeno(1,2,3-cd)pyrene	0.0772	U	0.0517	0.0508	67.0	66.5	1	10.0-137			1.76	32
Naphthalene	0.0772	U	0.0518	0.0534	66.6	69.4	1	10.0-135			3.04	27
Phenanthrene	0.0772	U	0.0491	0.0518	63.6	67.8	1	10.0-144			5.35	31
Pyrene	0.0772	U	0.0524	0.0547	67.9	71.6	1	10.0-148			4.30	35
1-Methylnaphthalene	0.0772	U	0.0506	0.0530	65.2	69.0	1	10.0-142			4.63	28
2-Methylnaphthalene	0.0772	U	0.0491	0.0511	63.3	66.6	1	10.0-137			3.99	28
2-Chloronaphthalene	0.0772	U	0.0497	0.0535	64.3	70.0	1	29.0-120			7.36	24
(S) Nitrobenzene-d5					80.5	81.3		14.0-149				
(S) 2-Fluorobiphenyl					72.5	75.1		34.0-125				
(S) p-Terphenyl-d14					82.5	84.7		23.0-120				

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

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

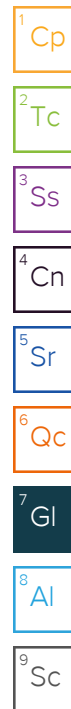
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

### Abbreviations and Definitions

MDL	Method Detection Limit.
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

B	The same analyte is found in the associated blank.
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.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
T8	Sample(s) received past/too close to holding time expiration.



# ACCREDITATIONS & LOCATIONS

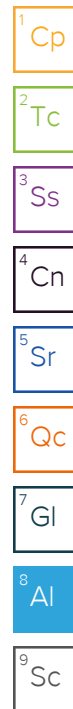
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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

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

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

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



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