Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

December 15, 2020

Entrada Consulting Group

Sample Delivery Group:	L1292853
Samples Received:	12/04/2020
Project Number:	
Description:	Pad 11

Report To: Stuart Hall
240 Mesa Avenue
Grand Junction, CO 81501

Entire Report Reviewed By: Chris Ward

Chris Ward
Project Manager

P11-SS1 L1292853-01 Solid

Collected by: R. Johnson | Collected date/time: 12/03/20 09:50 | Received date/time: 12/04/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1587065	1	12/10/20 11:12	12/10/20 11:12	KMG	Mt. Juliet, TN
Calculated Results	WG1590119	1	12/10/20 20:01	12/15/20 00:26	KPS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1589653	1	12/10/20 18:04	12/15/20 00:26	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1589704	1	12/12/20 20:09	12/13/20 01:46	BJD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1587109	1	12/05/20 12:17	12/05/20 15:00	SRG	Mt. Juliet, TN
Mercury by Method 7471A	WG1590332	1	12/11/20 10:27	12/12/20 08:58	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1590119	1	12/10/20 20:01	12/11/20 10:48	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1588330	1	12/05/20 21:28	12/09/20 01:54	TPR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1589976	1	12/10/20 23:27	12/11/20 13:18	DMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1590154	1	12/11/20 07:29	12/11/20 13:25	KME	Mt. Juliet, TN

P11-SS2 L1292853-02 Solid

Collected by: R. Johnson | Collected date/time: 12/03/20 10:15 | Received date/time: 12/04/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1587065	1	12/10/20 11:15	12/10/20 11:15	KMG	Mt. Juliet, TN
Calculated Results	WG1590119	1	12/10/20 20:01	12/15/20 00:26	KPS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1589653	1	12/10/20 18:04	12/15/20 00:26	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1589704	1	12/12/20 20:09	12/13/20 01:46	BJD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1587109	1	12/05/20 12:17	12/05/20 15:00	SRG	Mt. Juliet, TN
Mercury by Method 7471A	WG1590332	1	12/11/20 10:27	12/12/20 09:01	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1590119	1	12/10/20 20:01	12/11/20 10:50	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1588330	1	12/05/20 21:28	12/09/20 02:15	TPR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1589976	1	12/10/20 23:27	12/11/20 12:26	DMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1590154	1	12/11/20 07:29	12/11/20 13:44	KME	Mt. Juliet, TN

P11-SS3 L1292853-03 Solid

Collected by: R. Johnson | Collected date/time: 12/03/20 10:50 | Received date/time: 12/04/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1587065	1	12/10/20 11:18	12/10/20 11:18	KMG	Mt. Juliet, TN
Calculated Results	WG1590119	1	12/10/20 20:01	12/15/20 00:27	KPS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1589653	1	12/10/20 18:04	12/15/20 00:27	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1589705	1	12/12/20 19:05	12/12/20 21:15	BJD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1587109	1	12/05/20 12:17	12/05/20 15:00	SRG	Mt. Juliet, TN
Mercury by Method 7471A	WG1590332	1	12/11/20 10:27	12/12/20 09:03	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1590119	1	12/10/20 20:01	12/11/20 10:53	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1588330	1	12/05/20 21:28	12/09/20 02:57	TPR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1589976	1	12/10/20 23:27	12/11/20 12:39	DMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1590154	1	12/11/20 07:29	12/11/20 14:04	KME	Mt. Juliet, TN

P11-SS4 L1292853-04 Solid

Collected by: R. Johnson | Collected date/time: 12/03/20 11:25 | Received date/time: 12/04/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1587065	1	12/10/20 11:21	12/10/20 11:21	KMG	Mt. Juliet, TN
Calculated Results	WG1590119	1	12/10/20 20:01	12/15/20 00:29	KPS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1589653	1	12/10/20 18:04	12/15/20 00:29	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1589705	1	12/12/20 19:05	12/12/20 21:15	BJD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1587109	1	12/05/20 12:17	12/05/20 15:00	SRG	Mt. Juliet, TN
Mercury by Method 7471A	WG1590332	1	12/11/20 10:27	12/12/20 09:06	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1590119	1	12/10/20 20:01	12/11/20 09:38	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1588330	1	12/05/20 21:28	12/09/20 03:17	TPR	Mt. Juliet, TN

P11-SS4 L1292853-04 Solid

Collected by: R. Johnson
Collected date/time: 12/03/20 11:25
Received date/time: 12/04/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1589976	1	12/10/20 23:27	12/11/20 12:52	DMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1590154	1	12/11/20 07:29	12/11/20 14:24	KME	Mt. Juliet, TN

P11-SS5 L1292853-05 Solid

Collected by: R. Johnson
Collected date/time: 12/03/20 11:55
Received date/time: 12/04/20 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1587065	1	12/10/20 11:24	12/10/20 11:24	KMG	Mt. Juliet, TN
Calculated Results	WG1590119	1	12/10/20 20:01	12/15/20 00:29	KPS	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1589653	1	12/10/20 18:04	12/15/20 00:29	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1589705	1	12/12/20 19:05	12/12/20 21:15	BJD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1587109	1	12/05/20 12:17	12/05/20 15:00	SRG	Mt. Juliet, TN
Mercury by Method 7471A	WG1590332	1	12/11/20 10:27	12/12/20 09:08	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1590119	1	12/10/20 20:01	12/11/20 09:41	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1588330	1	12/05/20 21:28	12/09/20 03:38	TPR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1589976	1	12/10/20 23:27	12/11/20 13:05	DMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1590154	1	12/11/20 07:29	12/11/20 14:43	KME	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

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.341		1	12/10/2020 11:12	WG1587065

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	12.9		1.00	1	12/15/2020 00:26	WG1590119

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	12/15/2020 00:26	WG1589653

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.44	T8	1	12/13/2020 01:46	WG1589704

Sample Narrative:
L1292853-01 WG1589704: 7.44 at 19.5C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	286		10.0	1	12/05/2020 15:00	WG1587109

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0400	1	12/12/2020 08:58	WG1590332

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.41		2.00	1	12/11/2020 10:48	WG1590119
Barium	122		0.500	1	12/11/2020 10:48	WG1590119
Cadmium	ND		0.500	1	12/11/2020 10:48	WG1590119
Chromium	12.9		1.00	1	12/11/2020 10:48	WG1590119
Copper	11.2		2.00	1	12/11/2020 10:48	WG1590119
Lead	7.22		0.500	1	12/11/2020 10:48	WG1590119
Nickel	11.6		2.00	1	12/11/2020 10:48	WG1590119
Selenium	ND		2.00	1	12/11/2020 10:48	WG1590119
Silver	ND		1.00	1	12/11/2020 10:48	WG1590119
Zinc	36.6		5.00	1	12/11/2020 10:48	WG1590119

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00212		0.000500	1	12/09/2020 01:54	WG1588330
Toluene	ND		0.00500	1	12/09/2020 01:54	WG1588330
Ethylbenzene	0.000913		0.000500	1	12/09/2020 01:54	WG1588330
Total Xylene	0.00261		0.00150	1	12/09/2020 01:54	WG1588330
TPH (GC/FID) Low Fraction	0.264		0.100	1	12/09/2020 01:54	WG1588330

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
(S) a,a,a-Trifluorotoluene(FID)	*106*		*77.0-120*		*12/09/2020 01:54*	WG1588330
(S) a,a,a-Trifluorotoluene(PID)	*99.1*		*72.0-128*		*12/09/2020 01:54*	WG1588330

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	22.4		4.00	1	12/11/2020 13:18	WG1589976
(S) o-Terphenyl	*51.1*		*18.0-148*		*12/11/2020 13:18*	WG1589976

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	12/11/2020 13:25	WG1590154
Acenaphthene	ND		0.00600	1	12/11/2020 13:25	WG1590154
Acenaphthylene	ND		0.00600	1	12/11/2020 13:25	WG1590154
Benzo(a)anthracene	ND		0.00600	1	12/11/2020 13:25	WG1590154
Benzo(a)pyrene	ND		0.00600	1	12/11/2020 13:25	WG1590154
Benzo(b)fluoranthene	ND		0.00600	1	12/11/2020 13:25	WG1590154
Benzo(g,h,i)perylene	ND		0.00600	1	12/11/2020 13:25	WG1590154
Benzo(k)fluoranthene	ND		0.00600	1	12/11/2020 13:25	WG1590154
Chrysene	ND		0.00600	1	12/11/2020 13:25	WG1590154
Dibenz(a,h)anthracene	ND		0.00600	1	12/11/2020 13:25	WG1590154
Fluoranthene	ND		0.00600	1	12/11/2020 13:25	WG1590154
Fluorene	ND		0.00600	1	12/11/2020 13:25	WG1590154
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	12/11/2020 13:25	WG1590154
Naphthalene	ND		0.0200	1	12/11/2020 13:25	WG1590154
Phenanthrene	ND		0.00600	1	12/11/2020 13:25	WG1590154
Pyrene	ND		0.00600	1	12/11/2020 13:25	WG1590154
1-Methylnaphthalene	ND		0.0200	1	12/11/2020 13:25	WG1590154
2-Methylnaphthalene	ND		0.0200	1	12/11/2020 13:25	WG1590154
2-Chloronaphthalene	ND		0.0200	1	12/11/2020 13:25	WG1590154
(S) p-Terphenyl-d14	*87.8*		*23.0-120*		*12/11/2020 13:25*	WG1590154
(S) Nitrobenzene-d5	*84.0*		*14.0-149*		*12/11/2020 13:25*	WG1590154
(S) 2-Fluorobiphenyl	*76.4*		*34.0-125*		*12/11/2020 13:25*	WG1590154

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.381		1	12/10/2020 11:15	WG1587065

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	14.3		1.00	1	12/15/2020 00:26	WG1590119

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	12/15/2020 00:26	WG1589653

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.37	T8	1	12/13/2020 01:46	WG1589704

Sample Narrative:

L1292853-02 WG1589704: 7.37 at 19.2C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	231		10.0	1	12/05/2020 15:00	WG1587109

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0400	1	12/12/2020 09:01	WG1590332

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.17		2.00	1	12/11/2020 10:50	WG1590119
Barium	125		0.500	1	12/11/2020 10:50	WG1590119
Cadmium	ND		0.500	1	12/11/2020 10:50	WG1590119
Chromium	14.3		1.00	1	12/11/2020 10:50	WG1590119
Copper	11.3		2.00	1	12/11/2020 10:50	WG1590119
Lead	6.66		0.500	1	12/11/2020 10:50	WG1590119
Nickel	11.6		2.00	1	12/11/2020 10:50	WG1590119
Selenium	ND		2.00	1	12/11/2020 10:50	WG1590119
Silver	ND		1.00	1	12/11/2020 10:50	WG1590119
Zinc	41.4		5.00	1	12/11/2020 10:50	WG1590119

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	12/09/2020 02:15	WG1588330
Toluene	ND		0.00500	1	12/09/2020 02:15	WG1588330
Ethylbenzene	ND		0.000500	1	12/09/2020 02:15	WG1588330
Total Xylene	ND		0.00150	1	12/09/2020 02:15	WG1588330
TPH (GC/FID) Low Fraction	ND		0.100	1	12/09/2020 02:15	WG1588330

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
(S) a,a,a-Trifluorotoluene(FID)	*106*		*77.0-120*		*12/09/2020 02:15*	WG1588330
(S) a,a,a-Trifluorotoluene(PID)	*97.8*		*72.0-128*		*12/09/2020 02:15*	WG1588330

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	4.89		4.00	1	12/11/2020 12:26	WG1589976
(S) o-Terphenyl	*50.5*		*18.0-148*		*12/11/2020 12:26*	WG1589976

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	12/11/2020 13:44	WG1590154
Acenaphthene	ND		0.00600	1	12/11/2020 13:44	WG1590154
Acenaphthylene	ND		0.00600	1	12/11/2020 13:44	WG1590154
Benzo(a)anthracene	ND		0.00600	1	12/11/2020 13:44	WG1590154
Benzo(a)pyrene	ND		0.00600	1	12/11/2020 13:44	WG1590154
Benzo(b)fluoranthene	ND		0.00600	1	12/11/2020 13:44	WG1590154
Benzo(g,h,i)perylene	ND		0.00600	1	12/11/2020 13:44	WG1590154
Benzo(k)fluoranthene	ND		0.00600	1	12/11/2020 13:44	WG1590154
Chrysene	ND		0.00600	1	12/11/2020 13:44	WG1590154
Dibenz(a,h)anthracene	ND		0.00600	1	12/11/2020 13:44	WG1590154
Fluoranthene	ND		0.00600	1	12/11/2020 13:44	WG1590154
Fluorene	ND		0.00600	1	12/11/2020 13:44	WG1590154
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	12/11/2020 13:44	WG1590154
Naphthalene	ND		0.0200	1	12/11/2020 13:44	WG1590154
Phenanthrene	ND		0.00600	1	12/11/2020 13:44	WG1590154
Pyrene	ND		0.00600	1	12/11/2020 13:44	WG1590154
1-Methylnaphthalene	ND		0.0200	1	12/11/2020 13:44	WG1590154
2-Methylnaphthalene	ND		0.0200	1	12/11/2020 13:44	WG1590154
2-Chloronaphthalene	ND		0.0200	1	12/11/2020 13:44	WG1590154
(S) p-Terphenyl-d14	*95.0*		*23.0-120*		*12/11/2020 13:44*	WG1590154
(S) Nitrobenzene-d5	*88.6*		*14.0-149*		*12/11/2020 13:44*	WG1590154
(S) 2-Fluorobiphenyl	*82.8*		*34.0-125*		*12/11/2020 13:44*	WG1590154

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.299		1	12/10/2020 11:18	WG1587065

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	12.8		1.00	1	12/15/2020 00:27	WG1590119

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	12/15/2020 00:27	WG1589653

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.02	T8	1	12/12/2020 21:15	WG1589705

Sample Narrative:
L1292853-03 WG1589705: 8.02 at 21.6C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	352		10.0	1	12/05/2020 15:00	WG1587109

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0400	1	12/12/2020 09:03	WG1590332

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	ND		2.00	1	12/11/2020 10:53	WG1590119
Barium	208		0.500	1	12/11/2020 10:53	WG1590119
Cadmium	ND		0.500	1	12/11/2020 10:53	WG1590119
Chromium	12.8		1.00	1	12/11/2020 10:53	WG1590119
Copper	12.9		2.00	1	12/11/2020 10:53	WG1590119
Lead	4.63		0.500	1	12/11/2020 10:53	WG1590119
Nickel	33.2		2.00	1	12/11/2020 10:53	WG1590119
Selenium	ND		2.00	1	12/11/2020 10:53	WG1590119
Silver	ND		1.00	1	12/11/2020 10:53	WG1590119
Zinc	41.5		5.00	1	12/11/2020 10:53	WG1590119

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00331		0.000500	1	12/09/2020 02:57	WG1588330
Toluene	ND		0.00500	1	12/09/2020 02:57	WG1588330
Ethylbenzene	0.00317		0.000500	1	12/09/2020 02:57	WG1588330
Total Xylene	0.00670		0.00150	1	12/09/2020 02:57	WG1588330
TPH (GC/FID) Low Fraction	0.515		0.100	1	12/09/2020 02:57	WG1588330

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
(S) a,a,a-Trifluorotoluene(FID)	*108*		*77.0-120*		*12/09/2020 02:57*	WG1588330
(S) a,a,a-Trifluorotoluene(PID)	*99.7*		*72.0-128*		*12/09/2020 02:57*	WG1588330

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	10.8		4.00	1	12/11/2020 12:39	WG1589976
(S) o-Terphenyl	*53.5*		*18.0-148*		*12/11/2020 12:39*	WG1589976

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	12/11/2020 14:04	WG1590154
Acenaphthene	ND		0.00600	1	12/11/2020 14:04	WG1590154
Acenaphthylene	ND		0.00600	1	12/11/2020 14:04	WG1590154
Benzo(a)anthracene	ND		0.00600	1	12/11/2020 14:04	WG1590154
Benzo(a)pyrene	ND		0.00600	1	12/11/2020 14:04	WG1590154
Benzo(b)fluoranthene	ND		0.00600	1	12/11/2020 14:04	WG1590154
Benzo(g,h,i)perylene	ND		0.00600	1	12/11/2020 14:04	WG1590154
Benzo(k)fluoranthene	ND		0.00600	1	12/11/2020 14:04	WG1590154
Chrysene	ND		0.00600	1	12/11/2020 14:04	WG1590154
Dibenz(a,h)anthracene	ND		0.00600	1	12/11/2020 14:04	WG1590154
Fluoranthene	ND		0.00600	1	12/11/2020 14:04	WG1590154
Fluorene	ND		0.00600	1	12/11/2020 14:04	WG1590154
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	12/11/2020 14:04	WG1590154
Naphthalene	ND		0.0200	1	12/11/2020 14:04	WG1590154
Phenanthrene	ND		0.00600	1	12/11/2020 14:04	WG1590154
Pyrene	ND		0.00600	1	12/11/2020 14:04	WG1590154
1-Methylnaphthalene	ND		0.0200	1	12/11/2020 14:04	WG1590154
2-Methylnaphthalene	ND		0.0200	1	12/11/2020 14:04	WG1590154
2-Chloronaphthalene	ND		0.0200	1	12/11/2020 14:04	WG1590154
(S) p-Terphenyl-d14	*93.6*		*23.0-120*		*12/11/2020 14:04*	WG1590154
(S) Nitrobenzene-d5	*86.7*		*14.0-149*		*12/11/2020 14:04*	WG1590154
(S) 2-Fluorobiphenyl	*81.8*		*34.0-125*		*12/11/2020 14:04*	WG1590154

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.415		1	12/10/2020 11:21	WG1587065

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	18.3		1.00	1	12/15/2020 00:29	WG1590119

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	12/15/2020 00:29	WG1589653

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.26	T8	1	12/12/2020 21:15	WG1589705

Sample Narrative:
L1292853-04 WG1589705: 8.26 at 22.7C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	253		10.0	1	12/05/2020 15:00	WG1587109

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0400	1	12/12/2020 09:06	WG1590332

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	ND		2.00	1	12/11/2020 09:38	WG1590119
Barium	132		0.500	1	12/11/2020 09:38	WG1590119
Cadmium	ND		0.500	1	12/11/2020 09:38	WG1590119
Chromium	18.3		1.00	1	12/11/2020 09:38	WG1590119
Copper	20.4		2.00	1	12/11/2020 09:38	WG1590119
Lead	10.6		0.500	1	12/11/2020 09:38	WG1590119
Nickel	16.2		2.00	1	12/11/2020 09:38	WG1590119
Selenium	ND		2.00	1	12/11/2020 09:38	WG1590119
Silver	ND		1.00	1	12/11/2020 09:38	WG1590119
Zinc	85.7		5.00	1	12/11/2020 09:38	WG1590119

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.000806		0.000500	1	12/09/2020 03:17	WG1588330
Toluene	ND		0.00500	1	12/09/2020 03:17	WG1588330
Ethylbenzene	ND		0.000500	1	12/09/2020 03:17	WG1588330
Total Xylene	ND		0.00150	1	12/09/2020 03:17	WG1588330
TPH (GC/FID) Low Fraction	ND		0.100	1	12/09/2020 03:17	WG1588330

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
(S) a,a,a-Trifluorotoluene(FID)	*107*		*77.0-120*		*12/09/2020 03:17*	WG1588330
(S) a,a,a-Trifluorotoluene(PID)	*98.0*		*72.0-128*		*12/09/2020 03:17*	WG1588330

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	7.10		4.00	1	12/11/2020 12:52	WG1589976
(S) o-Terphenyl	*59.7*		*18.0-148*		*12/11/2020 12:52*	WG1589976

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	12/11/2020 14:24	WG1590154
Acenaphthene	ND		0.00600	1	12/11/2020 14:24	WG1590154
Acenaphthylene	ND		0.00600	1	12/11/2020 14:24	WG1590154
Benzo(a)anthracene	ND		0.00600	1	12/11/2020 14:24	WG1590154
Benzo(a)pyrene	ND		0.00600	1	12/11/2020 14:24	WG1590154
Benzo(b)fluoranthene	ND		0.00600	1	12/11/2020 14:24	WG1590154
Benzo(g,h,i)perylene	ND		0.00600	1	12/11/2020 14:24	WG1590154
Benzo(k)fluoranthene	ND		0.00600	1	12/11/2020 14:24	WG1590154
Chrysene	ND		0.00600	1	12/11/2020 14:24	WG1590154
Dibenz(a,h)anthracene	ND		0.00600	1	12/11/2020 14:24	WG1590154
Fluoranthene	ND		0.00600	1	12/11/2020 14:24	WG1590154
Fluorene	ND		0.00600	1	12/11/2020 14:24	WG1590154
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	12/11/2020 14:24	WG1590154
Naphthalene	ND		0.0200	1	12/11/2020 14:24	WG1590154
Phenanthrene	ND		0.00600	1	12/11/2020 14:24	WG1590154
Pyrene	ND		0.00600	1	12/11/2020 14:24	WG1590154
1-Methylnaphthalene	ND		0.0200	1	12/11/2020 14:24	WG1590154
2-Methylnaphthalene	ND		0.0200	1	12/11/2020 14:24	WG1590154
2-Chloronaphthalene	ND		0.0200	1	12/11/2020 14:24	WG1590154
(S) p-Terphenyl-d14	*102*		*23.0-120*		*12/11/2020 14:24*	WG1590154
(S) Nitrobenzene-d5	*90.7*		*14.0-149*		*12/11/2020 14:24*	WG1590154
(S) 2-Fluorobiphenyl	*87.1*		*34.0-125*		*12/11/2020 14:24*	WG1590154

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.483		1	12/10/2020 11:24	WG1587065

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium,Trivalent	15.4		1.00	1	12/15/2020 00:29	WG1590119

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	12/15/2020 00:29	WG1589653

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.15	T8	1	12/12/2020 21:15	WG1589705

Sample Narrative:

L1292853-05 WG1589705: 8.15 at 22.6C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	242		10.0	1	12/05/2020 15:00	WG1587109

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0400	1	12/12/2020 09:08	WG1590332

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	ND		2.00	1	12/11/2020 09:41	WG1590119
Barium	193		0.500	1	12/11/2020 09:41	WG1590119
Cadmium	ND		0.500	1	12/11/2020 09:41	WG1590119
Chromium	15.4		1.00	1	12/11/2020 09:41	WG1590119
Copper	15.2		2.00	1	12/11/2020 09:41	WG1590119
Lead	10.9		0.500	1	12/11/2020 09:41	WG1590119
Nickel	16.1		2.00	1	12/11/2020 09:41	WG1590119
Selenium	ND		2.00	1	12/11/2020 09:41	WG1590119
Silver	ND		1.00	1	12/11/2020 09:41	WG1590119
Zinc	57.0		5.00	1	12/11/2020 09:41	WG1590119

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00222		0.000500	1	12/09/2020 03:38	WG1588330
Toluene	ND		0.00500	1	12/09/2020 03:38	WG1588330
Ethylbenzene	ND		0.000500	1	12/09/2020 03:38	WG1588330
Total Xylene	0.00156		0.00150	1	12/09/2020 03:38	WG1588330
TPH (GC/FID) Low Fraction	ND		0.100	1	12/09/2020 03:38	WG1588330

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
(S) a,a,a-Trifluorotoluene(FID)	*107*		*77.0-120*		*12/09/2020 03:38*	WG1588330
(S) a,a,a-Trifluorotoluene(PID)	*98.1*		*72.0-128*		*12/09/2020 03:38*	WG1588330

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	12.0		4.00	1	12/11/2020 13:05	WG1589976
(S) o-Terphenyl	*55.4*		*18.0-148*		*12/11/2020 13:05*	WG1589976

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	12/11/2020 14:43	WG1590154
Acenaphthene	ND		0.00600	1	12/11/2020 14:43	WG1590154
Acenaphthylene	ND		0.00600	1	12/11/2020 14:43	WG1590154
Benzo(a)anthracene	ND		0.00600	1	12/11/2020 14:43	WG1590154
Benzo(a)pyrene	ND		0.00600	1	12/11/2020 14:43	WG1590154
Benzo(b)fluoranthene	ND		0.00600	1	12/11/2020 14:43	WG1590154
Benzo(g,h,i)perylene	ND		0.00600	1	12/11/2020 14:43	WG1590154
Benzo(k)fluoranthene	ND		0.00600	1	12/11/2020 14:43	WG1590154
Chrysene	ND		0.00600	1	12/11/2020 14:43	WG1590154
Dibenz(a,h)anthracene	ND		0.00600	1	12/11/2020 14:43	WG1590154
Fluoranthene	ND		0.00600	1	12/11/2020 14:43	WG1590154
Fluorene	ND		0.00600	1	12/11/2020 14:43	WG1590154
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	12/11/2020 14:43	WG1590154
Naphthalene	ND		0.0200	1	12/11/2020 14:43	WG1590154
Phenanthrene	ND		0.00600	1	12/11/2020 14:43	WG1590154
Pyrene	ND		0.00600	1	12/11/2020 14:43	WG1590154
1-Methylnaphthalene	ND		0.0200	1	12/11/2020 14:43	WG1590154
2-Methylnaphthalene	ND		0.0200	1	12/11/2020 14:43	WG1590154
2-Chloronaphthalene	ND		0.0200	1	12/11/2020 14:43	WG1590154
(S) p-Terphenyl-d14	*89.0*		*23.0-120*		*12/11/2020 14:43*	WG1590154
(S) Nitrobenzene-d5	*87.6*		*14.0-149*		*12/11/2020 14:43*	WG1590154
(S) 2-Fluorobiphenyl	*80.6*		*34.0-125*		*12/11/2020 14:43*	WG1590154

Method Blank (MB)

(MB) R3603393-1 12/15/20 00:23

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

L1292781-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1292781-23 12/15/20 00:24 • (DUP) R3603393-3 12/15/20 00:24

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

L1292902-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1292902-06 12/15/20 00:32 • (DUP) R3603393-8 12/15/20 00:32

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

Laboratory Control Sample (LCS)

(LCS) R3603393-2 12/15/20 00:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chromium,Hexavalent	24.0	22.0	91.8	80.0-120	

L1292781-25 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1292781-25 12/15/20 00:24 • (MS) R3603393-4 12/15/20 00:24 • (MSD) R3603393-5 12/15/20 00:25

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 %
Chromium,Hexavalent	20.0	ND	17.9	16.6	89.7	82.8	1	75.0-125			8.02	20

L1292781-25 Original Sample (OS) • Matrix Spike (MS)

(OS) L1292781-25 12/15/20 00:24 • (MS) R3603393-6 12/15/20 00:25

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chromium,Hexavalent	644	ND	616	95.7	50	75.0-125	

L1292588-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1292588-01 12/13/20 01:46 • (DUP) R3602875-2 12/13/20 01:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.28	8.26	1	0.242		1

Sample Narrative:

OS: 8.28 at 20C

DUP: 8.26 at 19.9C

L1292853-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1292853-02 12/13/20 01:46 • (DUP) R3602875-3 12/13/20 01:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.37	7.39	1	0.271		1

Sample Narrative:

OS: 7.37 at 19.2C

DUP: 7.39 at 19.2C

Laboratory Control Sample (LCS)

(LCS) R3602875-1 12/13/20 01:46

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

Sample Narrative:

LCS: 10.06 at 18.4C

L1292805-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1292805-01 12/12/20 21:15 • (DUP) R3602855-2 12/12/20 21:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.01	7.05	1	0.569		1

Sample Narrative:

OS: 7.01 at 22.4C

DUP: 7.05 at 22.2C

L1293417-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1293417-02 12/12/20 21:15 • (DUP) R3602855-3 12/12/20 21:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.43	8.42	1	0.119		1

Sample Narrative:

OS: 8.43 at 22.3C

DUP: 8.42 at 22.1C

Laboratory Control Sample (LCS)

(LCS) R3602855-1 12/12/20 21:15

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

Sample Narrative:

LCS: 10.06 at 20.1C

Method Blank (MB)

(MB) R3600663-1 12/05/20 15:00

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

L1292236-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1292236-01 12/05/20 15:00 • (DUP) R3600663-3 12/05/20 15:00

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	1860	1860	1	0.162		20

L1292639-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1292639-01 12/05/20 15:00 • (DUP) R3600663-4 12/05/20 15:00

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	35.3	30.8	1	13.6		20

Laboratory Control Sample (LCS)

(LCS) R3600663-2 12/05/20 15:00

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	483	481	99.6	85.0-115	

Method Blank (MB)

(MB) R3602807-1 12/12/20 07:54

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3602807-2 12/12/20 07:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.500	0.500	100	80.0-120	

L1292812-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1292812-01 12/12/20 08:00 • (MS) R3602807-3 12/12/20 08:02 • (MSD) R3602807-4 12/12/20 08:05

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 %
Mercury	0.500	ND	0.497	0.478	99.4	95.5	1	75.0-125			3.97	20

L1292840-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1292840-15 12/12/20 08:07 • (MS) R3602807-5 12/12/20 08:10 • (MSD) R3602807-6 12/12/20 08:12

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 %
Mercury	0.500	ND	0.528	0.488	106	97.5	1	75.0-125			7.86	20

Method Blank (MB)

(MB) R3602557-1 12/11/20 09:57

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.518	2.00
Barium	U		0.0852	0.500
Cadmium	U		0.0471	0.500
Chromium	U		0.133	1.00
Copper	U		0.400	2.00
Lead	U		0.208	0.500
Nickel	U		0.132	2.00
Selenium	U		0.764	2.00
Silver	U		0.127	1.00
Zinc	U		0.832	5.00

Laboratory Control Sample (LCS)

(LCS) R3602557-2 12/11/20 10:00

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	86.9	86.9	80.0-120	
Barium	100	91.9	91.9	80.0-120	
Cadmium	100	88.4	88.4	80.0-120	
Chromium	100	92.1	92.1	80.0-120	
Copper	100	93.4	93.4	80.0-120	
Lead	100	89.3	89.3	80.0-120	
Nickel	100	91.1	91.1	80.0-120	
Selenium	100	87.9	87.9	80.0-120	
Silver	20.0	17.8	89.0	80.0-120	
Zinc	100	89.0	89.0	80.0-120	

L1292812-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1292812-01 12/11/20 10:02 • (MS) R3602557-5 12/11/20 10:10 • (MSD) R3602557-6 12/11/20 10:12

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	ND	89.6	89.2	88.7	88.2	1	75.0-125			0.510	20
Barium	100	47.1	155	141	108	93.5	1	75.0-125			9.53	20
Cadmium	100	ND	90.3	89.8	90.2	89.7	1	75.0-125			0.577	20
Chromium	100	3.80	98.2	96.0	94.4	92.2	1	75.0-125			2.23	20
Copper	100	2.29	98.9	95.9	96.6	93.6	1	75.0-125			3.15	20
Lead	100	3.05	95.1	94.4	92.1	91.3	1	75.0-125			0.800	20
Nickel	100	3.42	98.7	97.3	95.3	93.9	1	75.0-125			1.43	20

L1292812-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1292812-01 12/11/20 10:02 • (MS) R3602557-5 12/11/20 10:10 • (MSD) R3602557-6 12/11/20 10:12

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 %
Selenium	100	ND	89.6	88.5	89.6	88.5	1	75.0-125			1.33	20
Silver	20.0	ND	18.0	17.7	90.2	88.6	1	75.0-125			1.89	20
Zinc	100	10.5	103	98.6	92.2	88.1	1	75.0-125			3.99	20

Method Blank (MB)

(MB) R3601687-3 12/08/20 21:14

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000120	0.000500
Toluene	U		0.000150	0.00500
Ethylbenzene	U		0.000110	0.000500
Total Xylene	U		0.000460	0.00150
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*111*			*77.0-120*
(S) a,a,a-Trifluorotoluene(PID)	*102*			*72.0-128*

Laboratory Control Sample (LCS)

(LCS) R3601687-1 12/08/20 19:47

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.76	105	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*105*	*77.0-120*	
(S) a,a,a-Trifluorotoluene(PID)			*108*	*72.0-128*	

Laboratory Control Sample (LCS)

(LCS) R3601687-2 12/08/20 20:08

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.0500	0.0487	97.4	76.0-121	
Toluene	0.0500	0.0468	93.6	80.0-120	
Ethylbenzene	0.0500	0.0453	90.6	80.0-124	
Total Xylene	0.150	0.155	103	37.0-160	
(S) a,a,a-Trifluorotoluene(FID)			*113*	*77.0-120*	
(S) a,a,a-Trifluorotoluene(PID)			*101*	*72.0-128*	

L1292941-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1292941-07 12/09/20 05:02 • (MS) R3601687-4 12/09/20 06:25 • (MSD) R3601687-5 12/09/20 06:46

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	1.72	ND	1.34	1.82	77.9	106	34.3	10.0-155			30.4	32
Toluene	1.72	ND	1.35	1.84	78.5	107	34.3	10.0-160			30.7	34
Ethylbenzene	1.72	ND	1.40	1.91	81.4	111	34.3	10.0-160			30.8	32
Total Xylene	5.15	ND	4.43	6.04	86.0	117	34.3	10.0-160			30.8	32
(S) a,a,a-Trifluorotoluene(FID)					*111*	*113*		*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)					*102*	*101*		*72.0-128*				

L1292941-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1292941-07 12/09/20 05:02 • (MS) R3601687-6 12/09/20 07:07 • (MSD) R3601687-7 12/09/20 07:28

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	189	ND	179	178	94.7	94.2	34.3	10.0-151			0.560	28
(S) a,a,a-Trifluorotoluene(FID)					*104*	*105*		*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)					*109*	*109*		*72.0-128*				

Method Blank (MB)

(MB) R3602526-1 12/11/20 08:11

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	*70.4*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3602526-2 12/11/20 08:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) High Fraction	50.0	41.8	83.6	50.0-150	
(S) o-Terphenyl			*94.3*	*18.0-148*	

L1292853-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1292853-01 12/11/20 13:18 • (MS) R3602526-3 12/11/20 13:30 • (MSD) R3602526-4 12/11/20 13:43

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 %
TPH (GC/FID) High Fraction	50.0	22.4	64.4	58.1	84.0	71.4	1	50.0-150			10.3	20
(S) o-Terphenyl					*60.7*	*48.3*		*18.0-148*				

Method Blank (MB)

(MB) R3602718-2 12/11/20 11:08

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	*82.3*			*14.0-149*
(S) 2-Fluorobiphenyl	*82.0*			*34.0-125*
(S) p-Terphenyl-d14	*98.7*			*23.0-120*

Laboratory Control Sample (LCS)

(LCS) R3602718-1 12/11/20 10:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0656	82.0	50.0-126	
Acenaphthene	0.0800	0.0680	85.0	50.0-120	
Acenaphthylene	0.0800	0.0722	90.3	50.0-120	
Benzo(a)anthracene	0.0800	0.0702	87.8	45.0-120	
Benzo(a)pyrene	0.0800	0.0560	70.0	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0680	85.0	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0663	82.9	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0663	82.9	49.0-125	
Chrysene	0.0800	0.0701	87.6	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0699	87.4	47.0-125	
Fluoranthene	0.0800	0.0682	85.3	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3602718-1 12/11/20 10:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0717	89.6	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0682	85.3	46.0-125	
Naphthalene	0.0800	0.0689	86.1	50.0-120	
Phenanthrene	0.0800	0.0694	86.8	47.0-120	
Pyrene	0.0800	0.0711	88.9	43.0-123	
1-Methylnaphthalene	0.0800	0.0702	87.8	51.0-121	
2-Methylnaphthalene	0.0800	0.0667	83.4	50.0-120	
2-Chloronaphthalene	0.0800	0.0679	84.9	50.0-120	
(S) Nitrobenzene-d5			*91.5*	*14.0-149*	
(S) 2-Fluorobiphenyl			*89.7*	*34.0-125*	
(S) p-Terphenyl-d14			*107*	*23.0-120*	

L1292797-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1292797-01 12/11/20 11:27 • (MS) R3602718-3 12/11/20 11:47 • (MSD) R3602718-4 12/11/20 12:06

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0800	ND	0.0629	0.0644	78.6	80.5	1	10.0-145			2.36	30
Acenaphthene	0.0800	ND	0.0643	0.0645	80.4	80.6	1	14.0-127			0.311	27
Acenaphthylene	0.0800	ND	0.0681	0.0690	85.1	86.3	1	21.0-124			1.31	25
Benzo(a)anthracene	0.0800	ND	0.0694	0.0695	86.8	86.9	1	10.0-139			0.144	30
Benzo(a)pyrene	0.0800	ND	0.0645	0.0630	80.6	78.8	1	10.0-141			2.35	31
Benzo(b)fluoranthene	0.0800	ND	0.0628	0.0634	78.5	79.3	1	10.0-140			0.951	36
Benzo(g,h,i)perylene	0.0800	ND	0.0629	0.0618	78.6	77.3	1	10.0-140			1.76	33
Benzo(k)fluoranthene	0.0800	ND	0.0620	0.0638	77.5	79.8	1	10.0-137			2.86	31
Chrysene	0.0800	ND	0.0668	0.0677	83.5	84.6	1	10.0-145			1.34	30
Dibenz(a,h)anthracene	0.0800	ND	0.0634	0.0646	79.3	80.7	1	10.0-132			1.87	31
Fluoranthene	0.0800	ND	0.0663	0.0665	82.9	83.1	1	10.0-153			0.301	33
Fluorene	0.0800	ND	0.0674	0.0686	84.3	85.8	1	11.0-130			1.76	29
Indeno(1,2,3-cd)pyrene	0.0800	ND	0.0661	0.0653	82.6	81.6	1	10.0-137			1.22	32
Naphthalene	0.0800	ND	0.0774	0.0659	96.8	82.4	1	10.0-135			16.1	27
Phenanthrene	0.0800	ND	0.0671	0.0663	83.9	82.9	1	10.0-144			1.20	31
Pyrene	0.0800	ND	0.0664	0.0686	83.0	85.8	1	10.0-148			3.26	35
1-Methylnaphthalene	0.0800	ND	0.0696	0.0668	87.0	83.5	1	10.0-142			4.11	28
2-Methylnaphthalene	0.0800	ND	0.0683	0.0634	85.4	79.3	1	10.0-137			7.44	28
2-Chloronaphthalene	0.0800	ND	0.0645	0.0642	80.6	80.3	1	29.0-120			0.466	24
(S) Nitrobenzene-d5					*85.7*	*89.0*		*14.0-149*				
(S) 2-Fluorobiphenyl					*84.3*	*86.6*		*34.0-125*				
(S) p-Terphenyl-d14					*97.5*	*102*		*23.0-120*				

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
T8	Sample(s) received past/too close to holding time expiration.

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	LAO00356
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

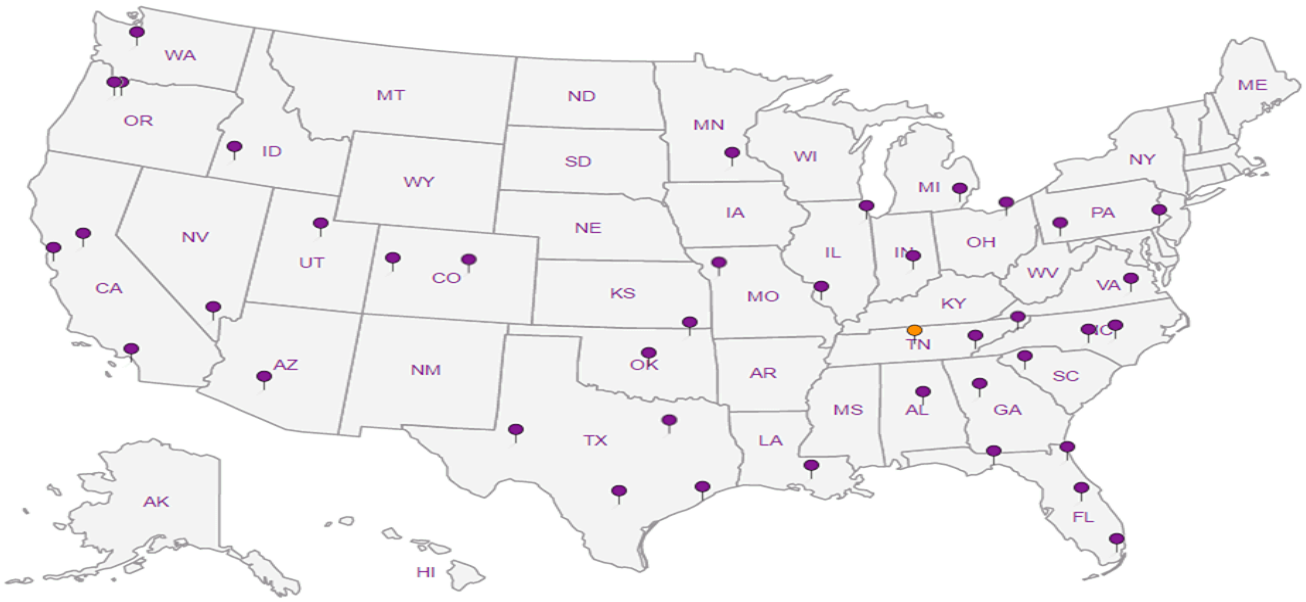
Third Party Federal Accreditations

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.



Company Name/Address:
Entrada Consulting Group
330 Grand Avenue, Suite C
Grand Junction, CO 81501

Billing Information:

Report to: **Stuart Hall**

Email To: shall@entradainc.com

Project Description: Pad 11

City/State Collected: Collbran CO

Phone: **970-712-7329**
Fax:

Client Project #

Lab Project #

Collected by (print): R. Shaw

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No ✓Yes
FAX? ✓No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX	TPH DRO/GRO	PAH	SAR, Specific Conductivity, pH	RCRA8 Metals + Cu, Ni,	Cr3, Cr6	Arsenic				Rem./Contaminant	Sample # (lab only)
P11-SS1	Grab	SS	0-6"	12/3/20	0950	3	X	X	X	X	X	X	X					-01
P11-SS2	"	"	"	"	1015	3	X	X	X	X	X	X	X					02
P11-SS3	"	"	"	"	1050	3	X	X	X	X	X	X	X					03
P11-SS4	"	"	"	"	1125	3	X	X	X	X	X	X	X					04
P11-SS5	"	"	"	"	1155	3	X	X	X	X	X	X	X					05

Sample Receipt Checklist

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

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

pH _____ Temp _____

Remarks: 1676 2750 5457

Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	12/3/20	1630	
Relinquished by : (Signature)	Date: 12/3/2020	Time: 1710	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: WWA 4°C Bottles Received: 15

Date: 120420 Time: 0930

Condition: (lab use only) (OK)

COC Seal Intact: ___Y ✓BS N ✓NA

pH Checked: NCF:

Chain of Custody Page 1 of 1

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

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Cooler:
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