

Entrada Consulting Group

Sample Delivery Group: L1390927
Samples Received: 08/14/2021
Project Number: HSC 1 BG
Description: HCS 1 BG
Site: HSC 1
Report To: Stuart Hall
240 Mesa Avenue
Grand Junction, CO 81501

Entire Report Reviewed By:



Jordan N Zito
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 National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
HSC1-BG W L1390927-01	5
HSC1-BG SW L1390927-02	6
HSC1-BG NE L1390927-03	7
Qc: Quality Control Summary	8
Wet Chemistry by Method 9045D	8
Wet Chemistry by Method 9050AMod	9
Metals (ICP) by Method 6010B	10
Gl: Glossary of Terms	11
Al: Accreditations & Locations	12
Sc: Sample Chain of Custody	13

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

SAMPLE SUMMARY

HSC1-BG W L1390927-01 Solid

Collected by
Matt Kasten

Collected date/time
08/13/21 11:00

Received date/time
08/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1723791	1	08/21/21 00:13	08/21/21 00:13	KMG	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1725274	1	08/18/21 18:00	08/18/21 20:35	WOS	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1724990	1	08/18/21 01:15	08/18/21 06:58	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1724978	1	08/18/21 08:36	08/19/21 02:49	CCE	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

HSC1-BG SW L1390927-02 Solid

Collected by
Matt Kasten

Collected date/time
08/13/21 10:55

Received date/time
08/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1723791	1	08/21/21 00:16	08/21/21 00:16	KMG	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1725274	1	08/18/21 18:00	08/18/21 20:35	WOS	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1724990	1	08/18/21 01:15	08/18/21 06:58	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1724978	1	08/18/21 08:36	08/19/21 02:52	CCE	Mt. Juliet, TN

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

HSC1-BG NE L1390927-03 Solid

Collected by
Matt Kasten

Collected date/time
08/13/21 10:55

Received date/time
08/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1723791	1	08/21/21 00:19	08/21/21 00:19	KMG	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1725274	1	08/18/21 18:00	08/18/21 20:35	WOS	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1724990	1	08/18/21 01:15	08/18/21 06:58	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1724978	1	08/18/21 08:36	08/19/21 02:55	CCE	Mt. Juliet, TN

⁹ Sc

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.



Jordan N Zito
Project Manager



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.299		1	08/21/2021 00:13	WG1723791

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.17	T8	1	08/18/2021 20:35	WG1725274

Sample Narrative:

L1390927-01 WG1725274: 8.17 at 22.7C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	295		10.0	1	08/18/2021 06:58	WG1724990

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Arsenic	2.26		0.518	2.00	1	08/19/2021 02:49	WG1724978

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.18		1	08/21/2021 00:16	WG1723791

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	9.76	T8	1	08/18/2021 20:35	WG1725274

Sample Narrative:

L1390927-02 WG1725274: 9.76 at 22.1C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	umhos/cm		umhos/cm			
Specific Conductance	354		10.0	1	08/18/2021 06:58	WG1724990

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg	mg/kg			
Arsenic	U		0.518	2.00	1	08/19/2021 02:52	WG1724978

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.97		1	08/21/2021 00:19	WG1723791

1 Cp

2 Tc

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.99	T8	1	08/18/2021 20:35	WG1725274

3 Ss

4 Cn

Sample Narrative:

L1390927-03 WG1725274: 8.99 at 22.7C

5 Sr

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	71.0		10.0	1	08/18/2021 06:58	WG1724990

6 Qc

7 Gl

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Arsenic	U		0.518	2.00	1	08/19/2021 02:55	WG1724978

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3693657-1 08/18/21 20:35

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
	su	su	%	%	
pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10.04 at 23.5C

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3693175-1 08/18/21 06:58

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

L1390924-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1390924-09 08/18/21 06:58 • (DUP) R3693175-3 08/18/21 06:58

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	266	260	1	2.59		20

L1390927-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1390927-01 08/18/21 06:58 • (DUP) R3693175-4 08/18/21 06:58

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	295	292	1	0.921		20

Laboratory Control Sample (LCS)

(LCS) R3693175-2 08/18/21 06:58

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	899	926	103	85.0-115	

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R3693759-1 08/19/21 02:06

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Arsenic	U		0.518	2.00

Laboratory Control Sample (LCS)

(LCS) R3693759-2 08/19/21 02:09

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Arsenic	100	92.9	92.9	80.0-120	

L1390862-23 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1390862-23 08/19/21 02:12 • (MS) R3693759-5 08/19/21 02:20 • (MSD) R3693759-6 08/19/21 02:23

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Arsenic	100	2.39	89.4	88.3	87.0	85.9	1	75.0-125			1.22	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
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.
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¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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

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

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

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



Entrada Consulting Group

Sample Delivery Group: L1390932
Samples Received: 08/14/2021
Project Number: HSC 1 SURFACE
Description: HSC 1 P&A
Site: HSC 1
Report To: Stuart Hall
240 Mesa Avenue
Grand Junction, CO 81501

Entire Report Reviewed By:



Chris Ward
Project Manager

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TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
HSC 1-TANK L1390932-01	5
HSC 1-METER L1390932-02	7
HSC 1-SEP L1390932-03	9
Qc: Quality Control Summary	11
Wet Chemistry by Method 7199	11
Wet Chemistry by Method 9045D	12
Wet Chemistry by Method 9050AMod	13
Metals (ICP) by Method 6010B	14
Metals (ICP) by Method 6010B-NE493 Ch 2	15
Metals (ICPMS) by Method 6020	16
Volatile Organic Compounds (GC) by Method 8015D/GRO	17
Volatile Organic Compounds (GC/MS) by Method 8260B	19
Semi-Volatile Organic Compounds (GC) by Method 8015M	20
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	21
Gl: Glossary of Terms	23
Al: Accreditations & Locations	24
Sc: Sample Chain of Custody	25

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

SAMPLE SUMMARY

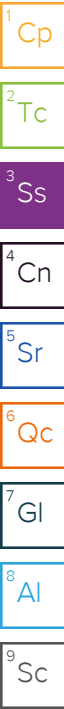
HSC 1-TANK L1390932-01 Solid

Collected by
Matt Kasten

Collected date/time
08/13/21 10:40

Received date/time
08/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1723790	1	08/21/21 02:09	08/21/21 02:09	KMG	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1723899	1	08/20/21 09:43	08/20/21 19:00	MCG	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1725275	1	08/18/21 18:00	08/18/21 20:10	WOS	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1724991	1	08/18/21 02:30	08/18/21 07:51	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1725050	1	08/18/21 10:20	08/21/21 04:48	KMG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1723789	1	08/18/21 08:29	08/20/21 23:39	KMG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1725051	5	08/18/21 10:22	08/19/21 13:29	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1726486	1	08/19/21 15:24	08/22/21 10:42	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1726849	1	08/19/21 15:24	08/21/21 02:10	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1729350	1	08/26/21 15:52	08/28/21 00:26	JDG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1729354	1	08/26/21 08:33	08/26/21 15:45	LEA	Mt. Juliet, TN



HSC 1-METER L1390932-02 Solid

Collected by
Matt Kasten

Collected date/time
08/13/21 10:45

Received date/time
08/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1723790	1	08/21/21 02:12	08/21/21 02:12	KMG	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1723899	1	08/20/21 09:43	08/20/21 19:05	MCG	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1725275	1	08/18/21 18:00	08/18/21 20:10	WOS	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1724991	1	08/18/21 02:30	08/18/21 07:51	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1725050	1	08/18/21 10:20	08/21/21 04:18	KMG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1723789	1	08/18/21 08:29	08/20/21 23:42	KMG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1725051	5	08/18/21 10:22	08/19/21 12:55	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1727312	1	08/19/21 15:24	08/23/21 07:16	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1726849	1	08/19/21 15:24	08/21/21 02:29	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1729350	1	08/26/21 15:52	08/27/21 23:47	JDG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1729354	1	08/26/21 08:33	08/26/21 16:02	LEA	Mt. Juliet, TN

HSC 1-SEP L1390932-03 Solid

Collected by
Matt Kasten

Collected date/time
08/13/21 10:48

Received date/time
08/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1723790	1	08/21/21 02:20	08/21/21 02:20	KMG	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1723899	1	08/20/21 09:43	08/20/21 19:16	MCG	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1725275	1	08/18/21 18:00	08/18/21 20:10	WOS	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1724991	1	08/18/21 02:30	08/18/21 07:51	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1725050	1	08/18/21 10:20	08/21/21 04:51	KMG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1723789	1	08/18/21 08:29	08/20/21 23:45	KMG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1725051	5	08/18/21 10:22	08/19/21 13:32	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1727312	1	08/19/21 15:24	08/23/21 07:44	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1726849	1	08/19/21 15:24	08/21/21 02:48	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1729350	1	08/26/21 15:52	08/28/21 00:00	JDG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1729354	1	08/26/21 08:33	08/26/21 16:20	LEA	Mt. Juliet, TN

CASE NARRATIVE

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



Chris Ward
Project Manager



HSC 1-TANK

Collected date/time: 08/13/21 10:40

SAMPLE RESULTS - 01

L1390932

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.47		1	08/21/2021 02:09	WG1723790

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	08/20/2021 19:00	WG1723899

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.93	T8	1	08/18/2021 20:10	WG1725275

Sample Narrative:

L1390932-01 WG1725275: 7.93 at 22.4C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	2020		10.0	1	08/18/2021 07:51	WG1724991

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	348		0.0852	0.500	1	08/21/2021 04:48	WG1725050
Cadmium	0.282	B J	0.0471	0.500	1	08/21/2021 04:48	WG1725050
Copper	30.2		0.400	2.00	1	08/21/2021 04:48	WG1725050
Lead	61.5		0.208	0.500	1	08/21/2021 04:48	WG1725050
Nickel	18.4		0.132	2.00	1	08/21/2021 04:48	WG1725050
Selenium	1.65	J	0.764	2.00	1	08/21/2021 04:48	WG1725050
Silver	U		0.127	1.00	1	08/21/2021 04:48	WG1725050
Zinc	73.5		0.832	5.00	1	08/21/2021 04:48	WG1725050

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	0.606		0.0167	0.200	1	08/20/2021 23:39	WG1723789

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.34		0.100	1.00	5	08/19/2021 13:29	WG1725051

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	U		0.0217	0.100	1	08/22/2021 10:42	WG1726486
(S) a,a,a-Trifluorotoluene(FID)	99.6			77.0-120		08/22/2021 10:42	WG1726486



HSC 1-TANK

Collected date/time: 08/13/21 10:40

SAMPLE RESULTS - 01

L1390932

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	08/21/2021 02:10	WG1726849
Toluene	U		0.00130	0.00500	1	08/21/2021 02:10	WG1726849
Ethylbenzene	U		0.000737	0.00250	1	08/21/2021 02:10	WG1726849
Xylenes, Total	U		0.000880	0.00650	1	08/21/2021 02:10	WG1726849
Naphthalene	U		0.00488	0.0125	1	08/21/2021 02:10	WG1726849
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	08/21/2021 02:10	WG1726849
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	08/21/2021 02:10	WG1726849
(S) Toluene-d8	107			75.0-131		08/21/2021 02:10	WG1726849
(S) 4-Bromofluorobenzene	103			67.0-138		08/21/2021 02:10	WG1726849
(S) 1,2-Dichloroethane-d4	105			70.0-130		08/21/2021 02:10	WG1726849

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	51.9		1.61	4.00	1	08/28/2021 00:26	WG1729350
C28-C36 Motor Oil Range	152		0.274	4.00	1	08/28/2021 00:26	WG1729350
(S) o-Terphenyl	58.3			18.0-148		08/28/2021 00:26	WG1729350

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	08/26/2021 15:45	WG1729354
Acenaphthene	U		0.00209	0.00600	1	08/26/2021 15:45	WG1729354
Acenaphthylene	U		0.00216	0.00600	1	08/26/2021 15:45	WG1729354
Benzo(a)anthracene	U		0.00173	0.00600	1	08/26/2021 15:45	WG1729354
Benzo(a)pyrene	U		0.00179	0.00600	1	08/26/2021 15:45	WG1729354
Benzo(b)fluoranthene	U		0.00153	0.00600	1	08/26/2021 15:45	WG1729354
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	08/26/2021 15:45	WG1729354
Benzo(k)fluoranthene	U		0.00215	0.00600	1	08/26/2021 15:45	WG1729354
Chrysene	U		0.00232	0.00600	1	08/26/2021 15:45	WG1729354
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	08/26/2021 15:45	WG1729354
Fluoranthene	U		0.00227	0.00600	1	08/26/2021 15:45	WG1729354
Fluorene	U		0.00205	0.00600	1	08/26/2021 15:45	WG1729354
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	08/26/2021 15:45	WG1729354
Naphthalene	U		0.00408	0.0200	1	08/26/2021 15:45	WG1729354
Phenanthrene	0.00319	U	0.00231	0.00600	1	08/26/2021 15:45	WG1729354
Pyrene	U		0.00200	0.00600	1	08/26/2021 15:45	WG1729354
1-Methylnaphthalene	U		0.00449	0.0200	1	08/26/2021 15:45	WG1729354
2-Methylnaphthalene	0.00503	U	0.00427	0.0200	1	08/26/2021 15:45	WG1729354
2-Chloronaphthalene	U		0.00466	0.0200	1	08/26/2021 15:45	WG1729354
(S) p-Terphenyl-d14	101			23.0-120		08/26/2021 15:45	WG1729354
(S) Nitrobenzene-d5	79.0			14.0-149		08/26/2021 15:45	WG1729354
(S) 2-Fluorobiphenyl	82.7			34.0-125		08/26/2021 15:45	WG1729354

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

HSC 1-METER

Collected date/time: 08/13/21 10:45

SAMPLE RESULTS - 02

L1390932

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	23.1		1	08/21/2021 02:12	WG1723790

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	08/20/2021 19:05	WG1723899

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.00	T8	1	08/18/2021 20:10	WG1725275

Sample Narrative:

L1390932-02 WG1725275: 8 at 22.7C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	7880		10.0	1	08/18/2021 07:51	WG1724991

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	309	J6 O1	0.0852	0.500	1	08/21/2021 04:18	WG1725050
Cadmium	1.45		0.0471	0.500	1	08/21/2021 04:18	WG1725050
Copper	31.1		0.400	2.00	1	08/21/2021 04:18	WG1725050
Lead	20.6		0.208	0.500	1	08/21/2021 04:18	WG1725050
Nickel	17.6		0.132	2.00	1	08/21/2021 04:18	WG1725050
Selenium	1.96	J	0.764	2.00	1	08/21/2021 04:18	WG1725050
Silver	U		0.127	1.00	1	08/21/2021 04:18	WG1725050
Zinc	114	J6 O1	0.832	5.00	1	08/21/2021 04:18	WG1725050

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

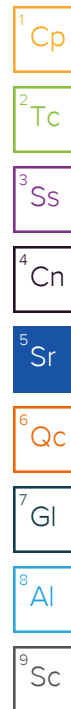
Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.557		0.0167	0.200	1	08/20/2021 23:42	WG1723789

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.65		0.100	1.00	5	08/19/2021 12:55	WG1725051

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	U		0.0217	0.100	1	08/23/2021 07:16	WG1727312
(S) a,a,a-Trifluorotoluene(FID)	102			77.0-120		08/23/2021 07:16	WG1727312



HSC 1-METER

Collected date/time: 08/13/21 10:45

SAMPLE RESULTS - 02

L1390932

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	08/21/2021 02:29	WG1726849
Toluene	U		0.00130	0.00500	1	08/21/2021 02:29	WG1726849
Ethylbenzene	U		0.000737	0.00250	1	08/21/2021 02:29	WG1726849
Xylenes, Total	U		0.000880	0.00650	1	08/21/2021 02:29	WG1726849
Naphthalene	U		0.00488	0.0125	1	08/21/2021 02:29	WG1726849
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	08/21/2021 02:29	WG1726849
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	08/21/2021 02:29	WG1726849
(S) Toluene-d8	107			75.0-131		08/21/2021 02:29	WG1726849
(S) 4-Bromofluorobenzene	104			67.0-138		08/21/2021 02:29	WG1726849
(S) 1,2-Dichloroethane-d4	104			70.0-130		08/21/2021 02:29	WG1726849

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	35.3		1.61	4.00	1	08/27/2021 23:47	WG1729350
C28-C36 Motor Oil Range	45.4		0.274	4.00	1	08/27/2021 23:47	WG1729350
(S) o-Terphenyl	66.1			18.0-148		08/27/2021 23:47	WG1729350

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	08/26/2021 16:02	WG1729354
Acenaphthene	U		0.00209	0.00600	1	08/26/2021 16:02	WG1729354
Acenaphthylene	U		0.00216	0.00600	1	08/26/2021 16:02	WG1729354
Benzo(a)anthracene	U		0.00173	0.00600	1	08/26/2021 16:02	WG1729354
Benzo(a)pyrene	U		0.00179	0.00600	1	08/26/2021 16:02	WG1729354
Benzo(b)fluoranthene	U		0.00153	0.00600	1	08/26/2021 16:02	WG1729354
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	08/26/2021 16:02	WG1729354
Benzo(k)fluoranthene	U		0.00215	0.00600	1	08/26/2021 16:02	WG1729354
Chrysene	U		0.00232	0.00600	1	08/26/2021 16:02	WG1729354
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	08/26/2021 16:02	WG1729354
Fluoranthene	U		0.00227	0.00600	1	08/26/2021 16:02	WG1729354
Fluorene	U		0.00205	0.00600	1	08/26/2021 16:02	WG1729354
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	08/26/2021 16:02	WG1729354
Naphthalene	U		0.00408	0.0200	1	08/26/2021 16:02	WG1729354
Phenanthrene	U		0.00231	0.00600	1	08/26/2021 16:02	WG1729354
Pyrene	U		0.00200	0.00600	1	08/26/2021 16:02	WG1729354
1-Methylnaphthalene	U		0.00449	0.0200	1	08/26/2021 16:02	WG1729354
2-Methylnaphthalene	U		0.00427	0.0200	1	08/26/2021 16:02	WG1729354
2-Chloronaphthalene	U		0.00466	0.0200	1	08/26/2021 16:02	WG1729354
(S) p-Terphenyl-d14	102			23.0-120		08/26/2021 16:02	WG1729354
(S) Nitrobenzene-d5	74.9			14.0-149		08/26/2021 16:02	WG1729354
(S) 2-Fluorobiphenyl	80.9			34.0-125		08/26/2021 16:02	WG1729354

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.725		1	08/21/2021 02:20	WG1723790

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.344	J	0.255	1.00	1	08/20/2021 19:16	WG1723899

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.51	T8	1	08/18/2021 20:10	WG1725275

Sample Narrative:

L1390932-03 WG1725275: 8.51 at 23.4C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	328		10.0	1	08/18/2021 07:51	WG1724991

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	363		0.0852	0.500	1	08/21/2021 04:51	WG1725050
Cadmium	1.10		0.0471	0.500	1	08/21/2021 04:51	WG1725050
Copper	33.8		0.400	2.00	1	08/21/2021 04:51	WG1725050
Lead	21.6		0.208	0.500	1	08/21/2021 04:51	WG1725050
Nickel	18.4		0.132	2.00	1	08/21/2021 04:51	WG1725050
Selenium	0.816	J	0.764	2.00	1	08/21/2021 04:51	WG1725050
Silver	U		0.127	1.00	1	08/21/2021 04:51	WG1725050
Zinc	76.1		0.832	5.00	1	08/21/2021 04:51	WG1725050

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

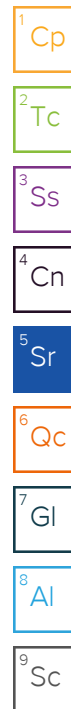
Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.496		0.0167	0.200	1	08/20/2021 23:45	WG1723789

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.09		0.100	1.00	5	08/19/2021 13:32	WG1725051

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	U		0.0217	0.100	1	08/23/2021 07:44	WG1727312
(S) a,a,a-Trifluorotoluene(FID)	98.9			77.0-120		08/23/2021 07:44	WG1727312



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	08/21/2021 02:48	WG1726849
Toluene	U		0.00130	0.00500	1	08/21/2021 02:48	WG1726849
Ethylbenzene	U		0.000737	0.00250	1	08/21/2021 02:48	WG1726849
Xylenes, Total	U		0.000880	0.00650	1	08/21/2021 02:48	WG1726849
Naphthalene	U		0.00488	0.0125	1	08/21/2021 02:48	WG1726849
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	08/21/2021 02:48	WG1726849
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	08/21/2021 02:48	WG1726849
(S) Toluene-d8	108			75.0-131		08/21/2021 02:48	WG1726849
(S) 4-Bromofluorobenzene	103			67.0-138		08/21/2021 02:48	WG1726849
(S) 1,2-Dichloroethane-d4	105			70.0-130		08/21/2021 02:48	WG1726849

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	7.37		1.61	4.00	1	08/28/2021 00:00	WG1729350
C28-C36 Motor Oil Range	25.6		0.274	4.00	1	08/28/2021 00:00	WG1729350
(S) o-Terphenyl	81.6			18.0-148		08/28/2021 00:00	WG1729350

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	08/26/2021 16:20	WG1729354
Acenaphthene	U		0.00209	0.00600	1	08/26/2021 16:20	WG1729354
Acenaphthylene	U		0.00216	0.00600	1	08/26/2021 16:20	WG1729354
Benzo(a)anthracene	U		0.00173	0.00600	1	08/26/2021 16:20	WG1729354
Benzo(a)pyrene	U		0.00179	0.00600	1	08/26/2021 16:20	WG1729354
Benzo(b)fluoranthene	U		0.00153	0.00600	1	08/26/2021 16:20	WG1729354
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	08/26/2021 16:20	WG1729354
Benzo(k)fluoranthene	U		0.00215	0.00600	1	08/26/2021 16:20	WG1729354
Chrysene	U		0.00232	0.00600	1	08/26/2021 16:20	WG1729354
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	08/26/2021 16:20	WG1729354
Fluoranthene	U		0.00227	0.00600	1	08/26/2021 16:20	WG1729354
Fluorene	U		0.00205	0.00600	1	08/26/2021 16:20	WG1729354
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	08/26/2021 16:20	WG1729354
Naphthalene	U		0.00408	0.0200	1	08/26/2021 16:20	WG1729354
Phenanthrene	U		0.00231	0.00600	1	08/26/2021 16:20	WG1729354
Pyrene	U		0.00200	0.00600	1	08/26/2021 16:20	WG1729354
1-Methylnaphthalene	U		0.00449	0.0200	1	08/26/2021 16:20	WG1729354
2-Methylnaphthalene	U		0.00427	0.0200	1	08/26/2021 16:20	WG1729354
2-Chloronaphthalene	U		0.00466	0.0200	1	08/26/2021 16:20	WG1729354
(S) p-Terphenyl-d14	105			23.0-120		08/26/2021 16:20	WG1729354
(S) Nitrobenzene-d5	81.6			14.0-149		08/26/2021 16:20	WG1729354
(S) 2-Fluorobiphenyl	99.8			34.0-125		08/26/2021 16:20	WG1729354

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3695168-1 08/20/21 15:46

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

L1390924-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1390924-01 08/20/21 17:33 • (DUP) R3695168-7 08/20/21 17:40

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

L1390932-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1390932-02 08/20/21 19:05 • (DUP) R3695168-8 08/20/21 19:10

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

Laboratory Control Sample (LCS)

(LCS) R3695168-2 08/20/21 15:51

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Hexavalent Chromium	10.0	10.2	102	80.0-120	

L1390921-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1390921-12 08/20/21 16:39 • (MS) R3695168-3 08/20/21 16:44 • (MSD) R3695168-4 08/20/21 16:50

	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	19.4	20.1	96.9	101	1	75.0-125			3.73	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Original Sample (OS) • Duplicate (DUP)

(OS) • (DUP) R3693644-2 08/18/21 20:10

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su			%		%
pH	8.85		1	0.000		1

Sample Narrative:

DUP: 8.85 at 22.9C

Original Sample (OS) • Duplicate (DUP)

(OS) • (DUP) R3693644-3 08/18/21 20:10

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su			%		%
pH	4.63		1	0.646		1

Sample Narrative:

DUP: 4.63 at 22.2C

Laboratory Control Sample (LCS)

(LCS) R3693644-1 08/18/21 20:10

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	su	su	%	%	
pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10.01 at 25C

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3693183-1 08/18/21 07:51

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

L1390931-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1390931-03 08/18/21 07:51 • (DUP) R3693183-3 08/18/21 07:51

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	521	542	1	3.95		20

L1391488-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1391488-02 08/18/21 07:51 • (DUP) R3693183-4 08/18/21 07:51

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	143	153	1	6.22		20

Laboratory Control Sample (LCS)

(LCS) R3693183-2 08/18/21 07:51

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	899	908	101	85.0-115	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3694796-1 08/21/21 04:13

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Barium	U		0.0852	0.500
Cadmium	0.0495	J	0.0471	0.500
Copper	U		0.400	2.00
Lead	U		0.208	0.500
Nickel	U		0.132	2.00
Selenium	U		0.764	2.00
Silver	U		0.127	1.00
Zinc	U		0.832	5.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3694796-2 08/21/21 04:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	104	104	80.0-120	
Cadmium	100	99.5	99.5	80.0-120	
Copper	100	104	104	80.0-120	
Lead	100	100	100	80.0-120	
Nickel	100	101	101	80.0-120	
Selenium	100	101	101	80.0-120	
Silver	20.0	20.2	101	80.0-120	
Zinc	100	98.7	98.7	80.0-120	

L1390932-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1390932-02 08/21/21 04:18 • (MS) R3694796-5 08/21/21 04:27 • (MSD) R3694796-6 08/21/21 04:29

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	309	361	409	52.2	100	1	75.0-125	J6		12.5	20
Cadmium	100	1.45	99.9	99.5	98.4	98.1	1	75.0-125			0.373	20
Copper	100	31.1	134	133	103	102	1	75.0-125			1.22	20
Lead	100	20.6	121	128	101	108	1	75.0-125			5.68	20
Nickel	100	17.6	122	121	104	103	1	75.0-125			1.09	20
Selenium	100	1.96	101	99.6	99.1	97.6	1	75.0-125			1.47	20
Silver	20.0	U	19.8	19.7	98.8	98.7	1	75.0-125			0.114	20
Zinc	100	114	187	182	73.1	68.0	1	75.0-125	J6	J6	2.76	20

Method Blank (MB)

(MB) R3694791-1 08/20/21 22:31

Analyte	MB Result mg/l	<u>MB Qualifier</u>	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) R3694791-2 08/20/21 22:33 • (LCSD) R3694791-3 08/20/21 22:36

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	0.996	0.994	99.6	99.4	80.0-120			0.224	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3693951-1 08/19/21 12:49

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

Laboratory Control Sample (LCS)

(LCS) R3693951-2 08/19/21 12:52

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	99.2	99.2	80.0-120	

L1390932-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1390932-02 08/19/21 12:55 • (MS) R3693951-5 08/19/21 13:05 • (MSD) R3693951-6 08/19/21 13:09

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	2.65	99.0	95.4	96.3	92.7	5	75.0-125			3.67	20



Method Blank (MB)

(MB) R3695242-2 08/22/21 01:57

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)	103			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3695242-1 08/22/21 01:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.84	88.0	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			106	77.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3695271-2 08/23/21 05:55

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)	97.9			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3695271-1 08/23/21 05:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.97	109	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			98.9	77.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3695058-3 08/20/21 23:58

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
Naphthalene	U		0.00488	0.0125
Toluene	U		0.00130	0.00500
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	109			75.0-131
(S) 4-Bromofluorobenzene	103			67.0-138
(S) 1,2-Dichloroethane-d4	98.1			70.0-130

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

(LCS) R3695058-1 08/20/21 22:41 • (LCSD) R3695058-2 08/20/21 23:00

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.121	0.121	96.8	96.8	70.0-123			0.000	20
Ethylbenzene	0.125	0.127	0.129	102	103	74.0-126			1.56	20
Naphthalene	0.125	0.134	0.132	107	106	59.0-130			1.50	20
Toluene	0.125	0.129	0.128	103	102	75.0-121			0.778	20
1,2,4-Trimethylbenzene	0.125	0.127	0.124	102	99.2	70.0-126			2.39	20
1,3,5-Trimethylbenzene	0.125	0.122	0.121	97.6	96.8	73.0-127			0.823	20
Xylenes, Total	0.375	0.402	0.396	107	106	72.0-127			1.50	20
(S) Toluene-d8				107	106	75.0-131				
(S) 4-Bromofluorobenzene				105	106	67.0-138				
(S) 1,2-Dichloroethane-d4				108	107	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) R3697657-1 08/27/21 21:22

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	66.1			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3697657-2 08/27/21 21:36

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	41.3	82.6	50.0-150	
(S) o-Terphenyl			75.1	18.0-148	

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R3697000-2 08/26/21 13:42

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	90.9			34.0-125
(S) p-Terphenyl-d14	122	J1		23.0-120

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3697000-1 08/26/21 13:25

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0711	88.9	50.0-126	
Acenaphthene	0.0800	0.0702	87.8	50.0-120	
Acenaphthylene	0.0800	0.0742	92.8	50.0-120	
Benzo(a)anthracene	0.0800	0.0728	91.0	45.0-120	
Benzo(a)pyrene	0.0800	0.0582	72.8	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0692	86.5	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0692	86.5	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0692	86.5	49.0-125	
Chrysene	0.0800	0.0714	89.3	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0661	82.6	47.0-125	
Fluoranthene	0.0800	0.0647	80.9	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3697000-1 08/26/21 13:25

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Fluorene	0.0800	0.0691	86.4	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0669	83.6	46.0-125	
Naphthalene	0.0800	0.0705	88.1	50.0-120	
Phenanthrene	0.0800	0.0730	91.3	47.0-120	
Pyrene	0.0800	0.0680	85.0	43.0-123	
1-Methylnaphthalene	0.0800	0.0699	87.4	51.0-121	
2-Methylnaphthalene	0.0800	0.0681	85.1	50.0-120	
2-Chloronaphthalene	0.0800	0.0740	92.5	50.0-120	
(S) Nitrobenzene-d5			90.3	14.0-149	
(S) 2-Fluorobiphenyl			95.0	34.0-125	
(S) p-Terphenyl-d14			102	23.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

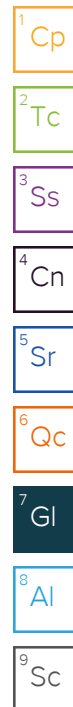
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
T8	Sample(s) received past/too close to holding time expiration.



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122


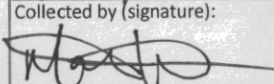
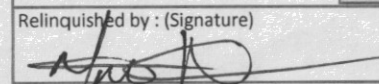
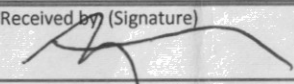
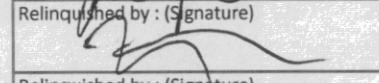
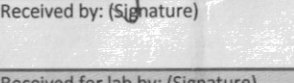
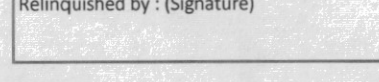
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Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina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

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

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

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



Entrada Consulting Group 240 Mesa Avenue Grand Junction, CO 81501				Billing Information:				Pres Chk	Analysis / Container / Preservative										Chain of Custody Page <u>1</u> of <u>1</u>	
				Stuart Hall 240 Mesa Ave. Grand Junction, CO 81501															 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859	
Report to: Stuart Hall				Email To: shall@entradainc.com;															SDG # <u>1390932</u> 1049	
Project Description: <u>HSC 1 P&A</u>				City/State Collected: <u>Mesa, CO</u>		Please Circle: PT MT CT ET														
Phone: 970-640-0568		Client Project # <u>HSC 1 Surface</u>		Lab Project # ENTCONGJCO-915																
Collected by (print): <u>Nat Kach</u>		Site/Facility ID # <u>HSC 1</u>		P.O. #																
Collected by (signature): 		Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day		Quote #															Acctnum: ENTCONGJCO Template: T180603 Prelogin: P822819 PM: 824 - Chris Ward PB:	
Immediately Packed on Ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/>				Date Results Needed																
Sample ID		Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs											Shipped Via: FedEX Ground		
																		Remarks Sample # (lab only)		
<u>HSC 1 - TANK</u>		<u>Grab</u>	<u>SS</u>	<u>0-6"</u>	<u>8/13/21</u>	<u>1040</u>	<u>3</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>						<u>-01</u>		
<u>HSC 1 - Meter</u>		<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>1045</u>	<u>3</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>						<u>-02</u>		
<u>HSC 1 - SEP</u>		<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>1048</u>	<u>3</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>						<u>-03</u>		
* Matrix:		Remarks:				pH _____ Temp _____				Sample Receipt Checklist COC Seal Present/Intact: <u>NP</u> <input type="checkbox"/> Y <input type="checkbox"/> N COC Signed/Accurate: <u>Y</u> <input type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <u>Y</u> <input type="checkbox"/> Y <input type="checkbox"/> N Correct bottles used: <u>Y</u> <input type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <u>Y</u> <input type="checkbox"/> Y <input type="checkbox"/> N If Applicable VOA Zero Headspace: <u>Y</u> <input type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <u>Y</u> <input type="checkbox"/> Y <input type="checkbox"/> N RAD Screen <0.5 mR/hr: <u>Y</u> <input type="checkbox"/> Y <input type="checkbox"/> N										
SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other _____						Flow _____ Other _____														
Samples returned via:		Tracking # <u>5016 1232 3992</u>																		
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)		Trip Blank Received: Yes / No		HCL / MeOH TBR						Bottles Received: <u>9</u> Temp: <u>10.2°C</u> If preservation required by Login: Date/Time						
		<u>8/13/21</u>	<u>1800</u>																	
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)		Temp: <u>10.2°C</u>														
		<u>8/13/21</u>	<u>1600</u>			<u>1.1 ± 0.1</u>														
Relinquished by: (Signature)		Date:	Time:	Received for lab by: (Signature)		Date:	Time:	Hold:						Condition: <u>NCF 100</u>						
				<u>Josine Ingueta</u>		<u>8/14/21</u>	<u>900</u>													

August 27, 2021

Entrada Consulting Group

Sample Delivery Group: L1392701
Samples Received: 08/19/2021
Project Number: HSC1 BG
Description: HSC1 BG
Site: HSC1
Report To: Stuart Hall
240 Mesa Avenue
Grand Junction, CO 81501

Entire Report Reviewed By:



Jordan N Zito
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

TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
HSC BG S L1392701-01	5
HSC BG SW L1392701-02	6
HSC BG E L1392701-03	7
Qc: Quality Control Summary	8
Wet Chemistry by Method 9045D	8
Wet Chemistry by Method 9050AMod	9
Metals (ICP) by Method 6010B	10
Gl: Glossary of Terms	12
Al: Accreditations & Locations	13
Sc: Sample Chain of Custody	14

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

SAMPLE SUMMARY

HSC BG S L1392701-01 Solid

Collected by
Matt Kasten

Collected date/time
08/18/21 10:00

Received date/time
08/19/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1726659	1	08/24/21 23:55	08/24/21 23:55	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1727882	1	08/26/21 12:23	08/27/21 08:45	KAB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1727886	1	08/23/21 13:37	08/23/21 19:36	AMH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1726931	1	08/23/21 07:47	08/25/21 21:33	CCE	Mt. Juliet, TN

HSC BG SW L1392701-02 Solid

Collected by
Matt Kasten

Collected date/time
08/18/21 10:05

Received date/time
08/19/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1726659	1	08/24/21 23:58	08/24/21 23:58	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1727882	1	08/26/21 12:23	08/27/21 08:45	KAB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1727886	1	08/23/21 13:37	08/23/21 19:36	AMH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1726929	1	08/23/21 07:39	08/25/21 16:11	CCE	Mt. Juliet, TN

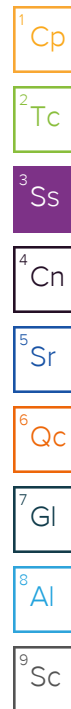
HSC BG E L1392701-03 Solid

Collected by
Matt Kasten

Collected date/time
08/18/21 10:10

Received date/time
08/19/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1726659	1	08/25/21 00:01	08/25/21 00:01	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1727882	1	08/26/21 12:23	08/27/21 08:45	KAB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1727886	1	08/23/21 13:37	08/23/21 19:36	AMH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1726929	1	08/23/21 07:39	08/25/21 16:24	CCE	Mt. Juliet, TN



CASE NARRATIVE

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



Jordan N Zito
Project Manager



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	4.12		1	08/24/2021 23:55	WG1726659

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	8.01	T8	1	08/27/2021 08:45	WG1727882

Sample Narrative:

L1392701-01 WG1727882: 8.01 at 23.8C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	umhos/cm		umhos/cm			
	1640		10.0	1	08/23/2021 19:36	WG1727886

Sample Narrative:

L1392701-01 WG1727886: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	mg/kg		mg/kg			
	2.39		2.00	1	08/25/2021 21:33	WG1726931

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	14.0		1	08/24/2021 23:58	WG1726659

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.62	T8	1	08/27/2021 08:45	WG1727882

Sample Narrative:

L1392701-02 WG1727882: 7.62 at 23.8C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	<u>Qualifier</u>	RDL umhos/cm	Dilution	Analysis date / time	<u>Batch</u>
Specific Conductance	5170		10.0	1	08/23/2021 19:36	WG1727886

Sample Narrative:

L1392701-02 WG1727886: at 25C

Metals (ICP) by Method 6010B

	Result	<u>Qualifier</u>	RDL	Dilution	Analysis	<u>Batch</u>
Analyte	mg/kg		mg/kg		date / time	
Arsenic	ND		2.00	1	08/25/2021 16:11	WG1726929

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	11.6		1	08/25/2021 00:01	WG1726659

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	9.79	T8	1	08/27/2021 08:45	WG1727882

Sample Narrative:

L1392701-03 WG1727882: 9.79 at 23.9C

Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	umhos/cm		umhos/cm			
	865		10.0	1	08/23/2021 19:36	WG1727886

Sample Narrative:

L1392701-03 WG1727886: at 25C

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic	mg/kg		mg/kg			
	ND		2.00	1	08/25/2021 16:24	WG1726929

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

L1392113-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1392113-02 08/27/21 08:45 • (DUP) R3697173-2 08/27/21 08:45

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	8.29	8.26	1	0.363		1

Sample Narrative:

OS: 8.29 at 24.2C

DUP: 8.26 at 24.5C

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1392113-17 Original Sample (OS) • Duplicate (DUP)

(OS) L1392113-17 08/27/21 08:45 • (DUP) R3697173-3 08/27/21 08:45

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	7.73	7.91	1	2.30	J3	1

Sample Narrative:

OS: 7.73 at 23.9C

DUP: 7.91 at 23.9C

Laboratory Control Sample (LCS)

(LCS) R3697173-1 08/27/21 08:45

	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 23.5C

Method Blank (MB)

(MB) R3695445-1 08/23/21 19:36

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

Sample Narrative:

BLANK: at 25C

L1392967-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1392967-04 08/23/21 19:36 • (DUP) R3695445-3 08/23/21 19:36

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	1080	1180	1	8.51		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1392971-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1392971-02 08/23/21 19:36 • (DUP) R3695445-4 08/23/21 19:36

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	302	304	1	0.660		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3695445-2 08/23/21 19:36

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	899	921	102	85.0-115	

Sample Narrative:

LCS: at 25C

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R3696706-1 08/25/21 16:05

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Arsenic	U		0.518	2.00

Laboratory Control Sample (LCS)

(LCS) R3696706-2 08/25/21 16:08

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Arsenic	100	95.0	95.0	80.0-120	

L1392701-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1392701-02 08/25/21 16:11 • (MS) R3696706-5 08/25/21 16:19 • (MSD) R3696706-6 08/25/21 16:22

	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	ND	91.8	93.8	90.8	92.9	1	75.0-125			2.22	20

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R3696709-1 08/25/21 20:52

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Arsenic	U		0.518	2.00

Laboratory Control Sample (LCS)

(LCS) R3696709-2 08/25/21 20:55

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Arsenic	100	99.6	99.6	80.0-120	

L1392674-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1392674-19 08/25/21 20:58 • (MS) R3696709-5 08/25/21 21:07 • (MSD) R3696709-6 08/25/21 21:09

	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	4.85	98.6	98.5	93.7	93.6	1	75.0-125			0.0697	20

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

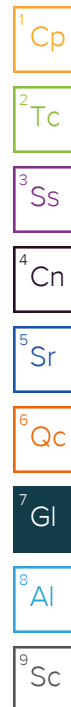
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J3	The associated batch QC was outside the established quality control range for precision.
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 ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

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

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

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



[illegible]

Entrada Consulting Group

Sample Delivery Group: L1392716

Samples Received: 08/19/2021

Project Number:

Description: HSC 1

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

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 National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
HSC 1 -WH/FL-5' L1392716-01	5
Qc: Quality Control Summary	7
Wet Chemistry by Method 7199	7
Wet Chemistry by Method 9045D	8
Wet Chemistry by Method 9050AMod	9
Metals (ICP) by Method 6010B	10
Metals (ICP) by Method 6010B-NE493 Ch 2	11
Metals (ICPMS) by Method 6020	12
Volatile Organic Compounds (GC) by Method 8015D/GRO	13
Volatile Organic Compounds (GC/MS) by Method 8260B	14
Semi-Volatile Organic Compounds (GC) by Method 8015M	15
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	16
Gl: Glossary of Terms	18
Al: Accreditations & Locations	19
Sc: Sample Chain of Custody	20

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

SAMPLE SUMMARY

HSC 1 -WH/FL-5' L1392716-01 Solid

Collected by
Matt Kasten

Collected date/time
08/18/21 09:30

Received date/time
08/19/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1726659	1	08/25/21 00:12	08/25/21 00:12	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1727027	1	08/23/21 12:32	08/24/21 18:05	GB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1730562	1	08/27/21 13:00	08/27/21 15:40	CRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1727886	1	08/23/21 13:37	08/23/21 19:36	AMH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1727069	1	08/22/21 07:14	08/25/21 04:52	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1726661	1	08/22/21 15:55	08/25/21 13:10	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1727068	5	08/22/21 07:16	08/22/21 21:37	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1729508	1	08/23/21 09:30	08/26/21 08:13	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1727908	1	08/23/21 09:30	08/23/21 14:02	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1731350	1	08/29/21 09:22	08/30/21 00:27	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1730313	1	08/27/21 09:15	08/27/21 18:47	LEA	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

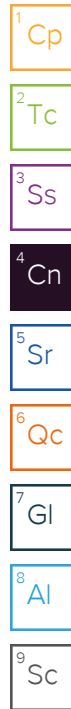
⁹Sc

CASE NARRATIVE

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



Chris Ward
Project Manager



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.34		1	08/25/2021 00:12	WG1726659

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	08/24/2021 18:05	WG1727027

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.92	T8	1	08/27/2021 15:40	WG1730562

Sample Narrative:

L1392716-01 WG1730562: 8.92 at 23.7C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	384		10.0	1	08/23/2021 19:36	WG1727886

Sample Narrative:

L1392716-01 WG1727886: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	428		0.0852	0.500	1	08/25/2021 04:52	WG1727069
Cadmium	0.178	J	0.0471	0.500	1	08/25/2021 04:52	WG1727069
Copper	17.0		0.400	2.00	1	08/25/2021 04:52	WG1727069
Lead	12.4		0.208	0.500	1	08/25/2021 04:52	WG1727069
Nickel	11.8		0.132	2.00	1	08/25/2021 04:52	WG1727069
Selenium	U		0.764	2.00	1	08/25/2021 04:52	WG1727069
Silver	U		0.127	1.00	1	08/25/2021 04:52	WG1727069
Zinc	42.2		0.832	5.00	1	08/25/2021 04:52	WG1727069

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	0.342		0.0167	0.200	1	08/25/2021 13:10	WG1726661

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.81		0.100	1.00	5	08/22/2021 21:37	WG1727068

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	U		0.0217	0.100	1	08/26/2021 08:13	WG1729508
(S) a,a,a-Trifluorotoluene(FID)	96.7			77.0-120		08/26/2021 08:13	WG1729508

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	08/23/2021 14:02	WG1727908
Toluene	U		0.00130	0.00500	1	08/23/2021 14:02	WG1727908
Ethylbenzene	U		0.000737	0.00250	1	08/23/2021 14:02	WG1727908
Xylenes, Total	U		0.000880	0.00650	1	08/23/2021 14:02	WG1727908
Naphthalene	U		0.00488	0.0125	1	08/23/2021 14:02	WG1727908
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	08/23/2021 14:02	WG1727908
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	08/23/2021 14:02	WG1727908
(S) Toluene-d8	105			75.0-131		08/23/2021 14:02	WG1727908
(S) 4-Bromofluorobenzene	81.9			67.0-138		08/23/2021 14:02	WG1727908
(S) 1,2-Dichloroethane-d4	114			70.0-130		08/23/2021 14:02	WG1727908

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	25.4		1.61	4.00	1	08/30/2021 00:27	WG1731350
C28-C36 Motor Oil Range	67.1		0.274	4.00	1	08/30/2021 00:27	WG1731350
(S) o-Terphenyl	78.4			18.0-148		08/30/2021 00:27	WG1731350

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	08/27/2021 18:47	WG1730313
Acenaphthene	U		0.00209	0.00600	1	08/27/2021 18:47	WG1730313
Acenaphthylene	U		0.00216	0.00600	1	08/27/2021 18:47	WG1730313
Benzo(a)anthracene	U		0.00173	0.00600	1	08/27/2021 18:47	WG1730313
Benzo(a)pyrene	U		0.00179	0.00600	1	08/27/2021 18:47	WG1730313
Benzo(b)fluoranthene	U		0.00153	0.00600	1	08/27/2021 18:47	WG1730313
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	08/27/2021 18:47	WG1730313
Benzo(k)fluoranthene	U		0.00215	0.00600	1	08/27/2021 18:47	WG1730313
Chrysene	U		0.00232	0.00600	1	08/27/2021 18:47	WG1730313
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	08/27/2021 18:47	WG1730313
Fluoranthene	U		0.00227	0.00600	1	08/27/2021 18:47	WG1730313
Fluorene	U		0.00205	0.00600	1	08/27/2021 18:47	WG1730313
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	08/27/2021 18:47	WG1730313
Naphthalene	U		0.00408	0.0200	1	08/27/2021 18:47	WG1730313
Phenanthrene	U		0.00231	0.00600	1	08/27/2021 18:47	WG1730313
Pyrene	U		0.00200	0.00600	1	08/27/2021 18:47	WG1730313
1-Methylnaphthalene	U		0.00449	0.0200	1	08/27/2021 18:47	WG1730313
2-Methylnaphthalene	U		0.00427	0.0200	1	08/27/2021 18:47	WG1730313
2-Chloronaphthalene	U		0.00466	0.0200	1	08/27/2021 18:47	WG1730313
(S) p-Terphenyl-d14	99.8			23.0-120		08/27/2021 18:47	WG1730313
(S) Nitrobenzene-d5	86.2			14.0-149		08/27/2021 18:47	WG1730313
(S) 2-Fluorobiphenyl	85.1			34.0-125		08/27/2021 18:47	WG1730313

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3696104-1 08/24/21 17:32

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

Laboratory Control Sample (LCS)

(LCS) R3696104-2 08/24/21 17:39

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Hexavalent Chromium	10.0	10.0	100	80.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1392716-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1392716-01 08/27/21 15:40 • (DUP) R3697456-2 08/27/21 15:40

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	8.92	8.91	1	0.112		1

Sample Narrative:

OS: 8.92 at 23.7C

DUP: 8.91 at 24.1C

L1392967-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1392967-05 08/27/21 15:40 • (DUP) R3697456-3 08/27/21 15:40

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	7.95	7.96	1	0.126		1

Sample Narrative:

OS: 7.95 at 23.3C

DUP: 7.96 at 23.7C

Laboratory Control Sample (LCS)

(LCS) R3697456-1 08/27/21 15:40

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

Sample Narrative:

LCS: 10.06 at 23.4C



Method Blank (MB)

(MB) R3695445-1 08/23/21 19:36

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

Sample Narrative:
BLANK: at 25C

Laboratory Control Sample (LCS)

(LCS) R3695445-2 08/23/21 19:36

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	899	921	102	85.0-115	

Sample Narrative:
LCS: at 25C

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R3696014-1 08/25/21 03:55

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

Laboratory Control Sample (LCS)

(LCS) R3696014-2 08/25/21 03:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	105	105	80.0-120	
Cadmium	100	101	101	80.0-120	
Copper	100	106	106	80.0-120	
Lead	100	102	102	80.0-120	
Nickel	100	103	103	80.0-120	
Selenium	100	100	100	80.0-120	
Silver	20.0	18.0	90.2	80.0-120	
Zinc	100	98.0	98.0	80.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3696222-1 08/25/21 10:36

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) R3696222-2 08/25/21 10:39 • (LCSD) R3696222-3 08/25/21 10:41

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.00	1.04	100	104	80.0-120			3.75	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3695007-1 08/22/21 20:27

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

¹Cp

²Tc

³Ss

Laboratory Control Sample (LCS)

(LCS) R3695007-2 08/22/21 20:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Arsenic	100	93.8	93.8	80.0-120	

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3697174-3 08/26/21 03:42

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)	96.8			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3697174-2 08/26/21 02:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.94	89.8	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			95.9	77.0-120	

1
Cp

2
Tc

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Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R3698198-2 08/23/21 12:55

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
Naphthalene	U		0.00488	0.0125
Toluene	U		0.00130	0.00500
1,2,4-Trimethylbenzene	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	81.2			67.0-138
(S) 1,2-Dichloroethane-d4	111			70.0-130

Laboratory Control Sample (LCS)

(LCS) R3698198-1 08/23/21 11:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.122	97.6	70.0-123	
Ethylbenzene	0.125	0.105	84.0	74.0-126	
Naphthalene	0.125	0.0815	65.2	59.0-130	
Toluene	0.125	0.120	96.0	75.0-121	
1,2,4-Trimethylbenzene	0.125	0.123	98.4	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.131	105	73.0-127	
Xylenes, Total	0.375	0.303	80.8	72.0-127	
(S) Toluene-d8			99.9	75.0-131	
(S) 4-Bromofluorobenzene			89.1	67.0-138	
(S) 1,2-Dichloroethane-d4			123	70.0-130	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3697899-1 08/29/21 23:35

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	84.1			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3697899-2 08/29/21 23:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	46.3	92.6	50.0-150	
(S) o-Terphenyl			80.9	18.0-148	

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R3697852-2 08/27/21 17:47

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	97.4			14.0-149
(S) 2-Fluorobiphenyl	109			34.0-125
(S) p-Terphenyl-d14	134	J1		23.0-120

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3697852-1 08/27/21 17:28

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0787	98.4	50.0-126	
Acenaphthene	0.0800	0.0836	105	50.0-120	
Acenaphthylene	0.0800	0.0892	112	50.0-120	
Benzo(a)anthracene	0.0800	0.0804	101	45.0-120	
Benzo(a)pyrene	0.0800	0.0786	98.2	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0901	113	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0841	105	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0871	109	49.0-125	
Chrysene	0.0800	0.0859	107	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0820	103	47.0-125	
Fluoranthene	0.0800	0.0785	98.1	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3697852-1 08/27/21 17:28

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Fluorene	0.0800	0.0835	104	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0790	98.8	46.0-125	
Naphthalene	0.0800	0.0826	103	50.0-120	
Phenanthrene	0.0800	0.0783	97.9	47.0-120	
Pyrene	0.0800	0.0877	110	43.0-123	
1-Methylnaphthalene	0.0800	0.0836	105	51.0-121	
2-Methylnaphthalene	0.0800	0.0772	96.5	50.0-120	
2-Chloronaphthalene	0.0800	0.0816	102	50.0-120	
(S) Nitrobenzene-d5			94.0	14.0-149	
(S) 2-Fluorobiphenyl			103	34.0-125	
(S) p-Terphenyl-d14			121	23.0-120	J1

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
T8	Sample(s) received past/too close to holding time expiration.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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

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

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

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



[illegible]

Entrada Consulting Group

Sample Delivery Group: L1392721
Samples Received: 08/19/2021
Project Number: HSC 1 PIT
Description: HSC 1 PIT

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

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 National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
HSC 1 PIT BOX-8' L1392721-01	5
Qc: Quality Control Summary	7
Wet Chemistry by Method 7199	7
Wet Chemistry by Method 9045D	8
Wet Chemistry by Method 9050AMod	9
Metals (ICP) by Method 6010B	10
Metals (ICP) by Method 6010B-NE493 Ch 2	11
Metals (ICPMS) by Method 6020	12
Volatile Organic Compounds (GC) by Method 8015D/GRO	13
Volatile Organic Compounds (GC/MS) by Method 8260B	14
Semi-Volatile Organic Compounds (GC) by Method 8015M	16
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	17
Gl: Glossary of Terms	19
Al: Accreditations & Locations	20
Sc: Sample Chain of Custody	21



SAMPLE SUMMARY

HSC 1 PIT BOX-8' L1392721-01 Solid

Collected by
Matt Kasten

Collected date/time
08/18/21 10:20

Received date/time
08/19/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1726659	1	08/24/21 23:04	08/24/21 23:04	CCE	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1727027	1	08/23/21 12:32	08/24/21 18:10	GB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1730562	1	08/27/21 13:00	08/27/21 15:40	CRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1727886	1	08/23/21 13:37	08/23/21 19:36	AMH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1727069	1	08/22/21 07:14	08/25/21 04:55	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1726661	1	08/22/21 15:55	08/25/21 13:14	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1727068	5	08/22/21 07:16	08/22/21 21:41	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1729508	1	08/23/21 09:30	08/26/21 08:37	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1727908	1	08/23/21 09:30	08/23/21 14:21	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1731350	1	08/29/21 09:22	08/30/21 01:19	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1730313	1	08/27/21 09:15	08/27/21 19:07	LEA	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

CASE NARRATIVE

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



Chris Ward
Project Manager



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.13		1	08/24/2021 23:04	WG1726659

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	08/24/2021 18:10	WG1727027

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.88	T8	1	08/27/2021 15:40	WG1730562

Sample Narrative:

L1392721-01 WG1730562: 7.88 at 23.8C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	2530		10.0	1	08/23/2021 19:36	WG1727886

Sample Narrative:

L1392721-01 WG1727886: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	192		0.0852	0.500	1	08/25/2021 04:55	WG1727069
Cadmium	0.315	J	0.0471	0.500	1	08/25/2021 04:55	WG1727069
Copper	20.8		0.400	2.00	1	08/25/2021 04:55	WG1727069
Lead	14.7		0.208	0.500	1	08/25/2021 04:55	WG1727069
Nickel	16.4		0.132	2.00	1	08/25/2021 04:55	WG1727069
Selenium	U		0.764	2.00	1	08/25/2021 04:55	WG1727069
Silver	U		0.127	1.00	1	08/25/2021 04:55	WG1727069
Zinc	54.6		0.832	5.00	1	08/25/2021 04:55	WG1727069

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	0.626		0.0167	0.200	1	08/25/2021 13:14	WG1726661

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.96		0.100	1.00	5	08/22/2021 21:41	WG1727068

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	U		0.0217	0.100	1	08/26/2021 08:37	WG1729508
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	96.7			77.0-120		08/26/2021 08:37	WG1729508



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	08/23/2021 14:21	WG1727908
Toluene	U		0.00130	0.00500	1	08/23/2021 14:21	WG1727908
Ethylbenzene	U		0.000737	0.00250	1	08/23/2021 14:21	WG1727908
Xylenes, Total	U		0.000880	0.00650	1	08/23/2021 14:21	WG1727908
Naphthalene	U		0.00488	0.0125	1	08/23/2021 14:21	WG1727908
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	08/23/2021 14:21	WG1727908
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	08/23/2021 14:21	WG1727908
(S) Toluene-d8	106			75.0-131		08/23/2021 14:21	WG1727908
(S) 4-Bromofluorobenzene	80.1			67.0-138		08/23/2021 14:21	WG1727908
(S) 1,2-Dichloroethane-d4	111			70.0-130		08/23/2021 14:21	WG1727908

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	34.3		1.61	4.00	1	08/30/2021 01:19	WG1731350
C28-C36 Motor Oil Range	76.5		0.274	4.00	1	08/30/2021 01:19	WG1731350
(S) o-Terphenyl	72.3			18.0-148		08/30/2021 01:19	WG1731350

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	08/27/2021 19:07	WG1730313
Acenaphthene	U		0.00209	0.00600	1	08/27/2021 19:07	WG1730313
Acenaphthylene	U		0.00216	0.00600	1	08/27/2021 19:07	WG1730313
Benzo(a)anthracene	U		0.00173	0.00600	1	08/27/2021 19:07	WG1730313
Benzo(a)pyrene	U		0.00179	0.00600	1	08/27/2021 19:07	WG1730313
Benzo(b)fluoranthene	U		0.00153	0.00600	1	08/27/2021 19:07	WG1730313
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	08/27/2021 19:07	WG1730313
Benzo(k)fluoranthene	U		0.00215	0.00600	1	08/27/2021 19:07	WG1730313
Chrysene	U		0.00232	0.00600	1	08/27/2021 19:07	WG1730313
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	08/27/2021 19:07	WG1730313
Fluoranthene	U		0.00227	0.00600	1	08/27/2021 19:07	WG1730313
Fluorene	U		0.00205	0.00600	1	08/27/2021 19:07	WG1730313
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	08/27/2021 19:07	WG1730313
Naphthalene	U		0.00408	0.0200	1	08/27/2021 19:07	WG1730313
Phenanthrene	U		0.00231	0.00600	1	08/27/2021 19:07	WG1730313
Pyrene	U		0.00200	0.00600	1	08/27/2021 19:07	WG1730313
1-Methylnaphthalene	U		0.00449	0.0200	1	08/27/2021 19:07	WG1730313
2-Methylnaphthalene	U		0.00427	0.0200	1	08/27/2021 19:07	WG1730313
2-Chloronaphthalene	U		0.00466	0.0200	1	08/27/2021 19:07	WG1730313
(S) p-Terphenyl-d14	96.2			23.0-120		08/27/2021 19:07	WG1730313
(S) Nitrobenzene-d5	81.7			14.0-149		08/27/2021 19:07	WG1730313
(S) 2-Fluorobiphenyl	88.2			34.0-125		08/27/2021 19:07	WG1730313

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3696104-1 08/24/21 17:32

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

L1392658-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1392658-05 08/24/21 17:44 • (DUP) R3696104-3 08/24/21 17:50

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

Original Sample (OS) • Duplicate (DUP)

(OS) • (DUP) R3696104-8 08/24/21 19:59

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

Laboratory Control Sample (LCS)

(LCS) R3696104-2 08/24/21 17:39

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Hexavalent Chromium	10.0	10.0	100	80.0-120	

L1392793-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1392793-13 08/24/21 18:41 • (MS) R3696104-4 08/24/21 18:47 • (MSD) R3696104-5 08/24/21 18:52

	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	0.904	19.4	19.7	92.3	93.8	1	75.0-125			1.55	20

L1392793-13 Original Sample (OS) • Matrix Spike (MS)

(OS) L1392793-13 08/24/21 18:41 • (MS) R3696104-6 08/24/21 18:57

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Hexavalent Chromium	653	0.904	611	93.6	50	75.0-125	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Original Sample (OS) • Duplicate (DUP)

(OS) • (DUP) R3697456-2 08/27/21 15:40

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su			%		%
pH	8.91		1	0.112		1

Sample Narrative:

DUP: 8.91 at 24.1C

Original Sample (OS) • Duplicate (DUP)

(OS) • (DUP) R3697456-3 08/27/21 15:40

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su			%		%
pH	7.96		1	0.126		1

Sample Narrative:

DUP: 7.96 at 23.7C

Laboratory Control Sample (LCS)

(LCS) R3697456-1 08/27/21 15:40

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

Sample Narrative:

LCS: 10.06 at 23.4C

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3695445-1 08/23/21 19:36

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

Sample Narrative:
BLANK: at 25C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Original Sample (OS) • Duplicate (DUP)

(OS) • (DUP) R3695445-3 08/23/21 19:36

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
		umhos/cm		%		%
Specific Conductance		1180	1	8.51		20

Sample Narrative:
DUP: at 25C

Original Sample (OS) • Duplicate (DUP)

(OS) • (DUP) R3695445-4 08/23/21 19:36

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
		umhos/cm		%		%
Specific Conductance		304	1	0.660		20

Sample Narrative:
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3695445-2 08/23/21 19:36

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	899	921	102	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3696014-1 08/25/21 03:55

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

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3696014-2 08/25/21 03:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	105	105	80.0-120	
Cadmium	100	101	101	80.0-120	
Copper	100	106	106	80.0-120	
Lead	100	102	102	80.0-120	
Nickel	100	103	103	80.0-120	
Selenium	100	100	100	80.0-120	
Silver	20.0	18.0	90.2	80.0-120	
Zinc	100	98.0	98.0	80.0-120	

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) • (MS) R3696014-5 08/25/21 04:09 • (MSD) R3696014-6 08/25/21 04:12

Analyte	Spike Amount mg/kg	Original Result	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	100		1870	2040	0.000	0.000	1	75.0-125	V	V	8.65	20
Cadmium	100		93.2	93.3	93.2	93.3	1	75.0-125			0.0683	20
Copper	100		114	113	95.7	95.3	1	75.0-125			0.367	20
Lead	100		111	112	83.1	83.9	1	75.0-125			0.769	20
Nickel	100		115	115	98.8	98.9	1	75.0-125			0.0729	20
Selenium	100		92.3	93.5	92.3	93.5	1	75.0-125			1.31	20
Silver	20.0		17.4	17.5	87.2	87.5	1	75.0-125			0.231	20
Zinc	100		117	117	74.1	74.7	1	75.0-125	J6	J6	0.561	20

Method Blank (MB)

(MB) R3696222-1 08/25/21 10:36

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) R3696222-2 08/25/21 10:39 • (LCSD) R3696222-3 08/25/21 10:41

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.00	1.04	100	104	80.0-120			3.75	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3695007-1 08/22/21 20:27

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

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

Laboratory Control Sample (LCS)

(LCS) R3695007-2 08/22/21 20:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	93.8	93.8	80.0-120	

⁷Gl

⁸Al

L1392658-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1392658-01 08/22/21 20:34 • (MS) R3695007-5 08/22/21 20:44 • (MSD) R3695007-6 08/22/21 20:47

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	5.32	88.3	86.5	83.0	81.2	5	75.0-125			2.07	20

⁹Sc

Method Blank (MB)

(MB) R3697174-3 08/26/21 03:42

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)	96.8			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3697174-2 08/26/21 02:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.94	89.8	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			95.9	77.0-120	

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) • (MS) R3697174-6 08/26/21 12:58 • (MSD) R3697174-7 08/26/21 13:22

Analyte	Spike Amount mg/kg	Original Result	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	3.85		0.797	2.68	20.1	43.5	1	10.0-151		J3	108	28
(S) a,a,a-Trifluorotoluene(FID)					96.8	99.0		77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3698198-2 08/23/21 12:55

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
Naphthalene	U		0.00488	0.0125
Toluene	U		0.00130	0.00500
1,2,4-Trimethylbenzene	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	81.2			67.0-138
(S) 1,2-Dichloroethane-d4	111			70.0-130

Laboratory Control Sample (LCS)

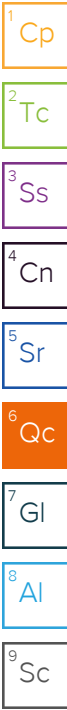
(LCS) R3698198-1 08/23/21 11:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.122	97.6	70.0-123	
Ethylbenzene	0.125	0.105	84.0	74.0-126	
Naphthalene	0.125	0.0815	65.2	59.0-130	
Toluene	0.125	0.120	96.0	75.0-121	
1,2,4-Trimethylbenzene	0.125	0.123	98.4	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.131	105	73.0-127	
Xylenes, Total	0.375	0.303	80.8	72.0-127	
(S) Toluene-d8			99.9	75.0-131	
(S) 4-Bromofluorobenzene			89.1	67.0-138	
(S) 1,2-Dichloroethane-d4			123	70.0-130	

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) • (MS) R3698198-3 08/23/21 18:46 • (MSD) R3698198-4 08/23/21 19:05

Analyte	Spike Amount mg/kg	Original Result	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		0.0663	0.102	53.0	81.6	1	10.0-149		J3	42.4	37
Ethylbenzene	0.125		0.0571	0.0921	45.7	73.7	1	10.0-160		J3	46.9	38
Naphthalene	0.125		0.0930	0.113	74.4	90.4	1	10.0-160			19.4	36
Toluene	0.125		0.0706	0.111	56.5	88.8	1	10.0-156		J3	44.5	38
1,2,4-Trimethylbenzene	0.125		0.0703	0.111	56.2	88.8	1	10.0-160		J3	44.9	36
1,3,5-Trimethylbenzene	0.125		0.0738	0.123	59.0	98.4	1	10.0-160		J3	50.0	38
Xylenes, Total	0.375		0.163	0.257	43.5	68.5	1	10.0-160		J3	44.8	38



Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) • (MS) R3698198-3 08/23/21 18:46 • (MSD) R3698198-4 08/23/21 19:05

Analyte	Spike Amount mg/kg	Original Result	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) Toluene-d8					107	106		75.0-131				
(S) 4-Bromofluorobenzene					83.3	83.1		67.0-138				
(S) 1,2-Dichloroethane-d4					116	113		70.0-130				

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3697899-1 08/29/21 23:35

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	84.1			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3697899-2 08/29/21 23:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	46.3	92.6	50.0-150	
(S) o-Terphenyl			80.9	18.0-148	

L1392845-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1392845-02 08/30/21 14:46 • (MS) R3698294-1 08/30/21 14:59 • (MSD) R3698294-2 08/30/21 15:13

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	49.0	16.7	51.3	47.9	70.6	63.0	10	50.0-150			6.85	20
(S) o-Terphenyl					80.1	77.4		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3697852-2 08/27/21 17:47

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	97.4			14.0-149
(S) 2-Fluorobiphenyl	109			34.0-125
(S) p-Terphenyl-d14	134	J1		23.0-120

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3697852-1 08/27/21 17:28

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0787	98.4	50.0-126	
Acenaphthene	0.0800	0.0836	105	50.0-120	
Acenaphthylene	0.0800	0.0892	112	50.0-120	
Benzo(a)anthracene	0.0800	0.0804	101	45.0-120	
Benzo(a)pyrene	0.0800	0.0786	98.2	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0901	113	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0841	105	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0871	109	49.0-125	
Chrysene	0.0800	0.0859	107	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0820	103	47.0-125	
Fluoranthene	0.0800	0.0785	98.1	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3697852-1 08/27/21 17:28

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0835	104	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0790	98.8	46.0-125	
Naphthalene	0.0800	0.0826	103	50.0-120	
Phenanthrene	0.0800	0.0783	97.9	47.0-120	
Pyrene	0.0800	0.0877	110	43.0-123	
1-Methylnaphthalene	0.0800	0.0836	105	51.0-121	
2-Methylnaphthalene	0.0800	0.0772	96.5	50.0-120	
2-Chloronaphthalene	0.0800	0.0816	102	50.0-120	
(S) Nitrobenzene-d5			94.0	14.0-149	
(S) 2-Fluorobiphenyl			103	34.0-125	
(S) p-Terphenyl-d14			121	23.0-120	J1

Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) • (MS) R3697852-3 08/27/21 23:45 • (MSD) R3697852-4 08/28/21 00:05

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 %
Anthracene	0.0792		0.0957	0.0607	114	69.7	1	10.0-145		J3	44.8	30
Acenaphthene	0.0792		0.0765	0.0606	96.6	76.9	1	14.0-127			23.2	27
Acenaphthylene	0.0792		0.0892	0.0742	105	86.5	1	21.0-124			18.4	25
Benzo(a)anthracene	0.0792		0.242	0.107	247	77.4	1	10.0-139	J5	J3	77.4	30
Benzo(a)pyrene	0.0792		0.250	0.116	246	77.0	1	10.0-141	J5	J3	73.2	31
Benzo(b)fluoranthene	0.0792		0.362	0.139	340	58.4	1	10.0-140	J5	J3	89.0	36
Benzo(g,h,i)perylene	0.0792		0.203	0.0950	196	59.5	1	10.0-140	J5	J3	72.5	33
Benzo(k)fluoranthene	0.0792		0.191	0.104	197	87.6	1	10.0-137	J5	J3	59.0	31
Chrysene	0.0792		0.293	0.130	302	96.4	1	10.0-145	J5	J3	77.1	30
Dibenz(a,h)anthracene	0.0792		0.0940	0.0657	108	73.1	1	10.0-132		J3	35.4	31
Fluoranthene	0.0792		0.529	0.181	524	85.0	1	10.0-153	J5	J3	98.0	33
Fluorene	0.0792		0.0770	0.0607	97.2	77.0	1	11.0-130			23.7	29
Indeno(1,2,3-cd)pyrene	0.0792		0.201	0.0904	193	53.2	1	10.0-137	J5	J3	75.9	32
Naphthalene	0.0792		0.0795	0.0670	100	85.0	1	10.0-135			17.1	27
Phenanthrene	0.0792		0.243	0.123	257	106	1	10.0-144	J5	J3	65.6	31
Pyrene	0.0792		0.455	0.176	441	88.8	1	10.0-148	J5	J3	88.4	35
1-Methylnaphthalene	0.0792		0.0768	0.0641	97.0	81.3	1	10.0-142			18.0	28
2-Methylnaphthalene	0.0792		0.0678	0.0568	85.6	72.1	1	10.0-137			17.7	28
2-Chloronaphthalene	0.0792		0.0708	0.0570	89.4	72.3	1	29.0-120			21.6	24
(S) Nitrobenzene-d5					87.5	77.8		14.0-149				
(S) 2-Fluorobiphenyl					103	89.0		34.0-125				
(S) p-Terphenyl-d14					113	100		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.

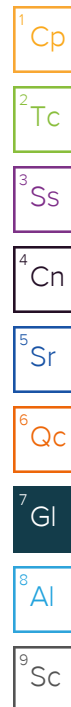
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122



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

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

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

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



Entrada Consulting Group 240 Mesa Avenue Grand Junction, CO 81501				Billing Information:				Pres Chk	Analysis / Container / Preservative										Chain of Custody Page ____ of ____	
				Stuart Hall 240 Mesa Ave. Grand Junction, CO 81501															 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859 	
Report to: Stuart Hall				Email To: shall@entradainc.com;															SDG # <u>H245</u> T <u>L1392721</u> <u>KP</u> Acctnum: <u>ENTCONJCO</u> Template: <u>T180603</u> Prelogin: <u>P822819</u> PM: <u>824 - Chris Ward</u> PB: Shipped Via: <u>FedEX Ground</u>	
Project Description: HSC1 Pit				City/State Collected:		Please Circle: PT MT CT ET														
Phone: 970-640-0568		Client Project # HSC1 Pit		Lab Project # ENTCONJCO-915																
Collected by (print): <i>Matthew Kesh</i>		Site/Facility ID # HSC1		P.O. #																
Collected by (signature): <i>[Signature]</i>		Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day		Quote #				No. of Cntrs												
Immediately Packed on Ice N ___ Y <u>X</u>		Date Results Needed																		
Sample ID		Comp/Grab	Matrix *	Depth	Date	Time														
<u>HSC1-Pit Box-8'</u>		<u>Grab</u>	<u>SS</u>	<u>8'</u>	<u>8/18/21</u>	<u>1020</u>	<u>5</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>								
<u>KP per containers 8/19</u>							<u>(3)</u>	<u>KP 8/19</u>										<u>-01</u>		
* Matrix:		Remarks:				pH _____ Temp _____				Sample Receipt Checklist COC Seal Present/Intact: <u>MP</u> <u>Y</u> <u>N</u> COC Signed/Accurate: <u>Y</u> <u>N</u> Bottles arrive intact: <u>Y</u> <u>N</u> Correct bottles used: <u>Y</u> <u>N</u> Sufficient volume sent: <u>Y</u> <u>N</u> If Applicable VOA Zero Headspace: <u>Y</u> <u>N</u> Preservation Correct/Checked: <u>Y</u> <u>N</u> RAD Screen <0.5 mR/hr: <u>Y</u> <u>N</u>										
SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other _____						Flow _____ Other _____														
Samples returned via:		Tracking #				Temp: <u>1.1 to 1.1</u> Bottles Received: <u>3</u>				If preservation required by Login: Date/Time										
___ UPS ___ FedEx ___ Courier		<u>50161232 1430</u>				Trip Blank Received: Yes/No HCL / MeOH TBR														
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)		Trip Blank Received: Yes/No		Hold: _____ Condition: <u>NCF / OK</u>												
<i>[Signature]</i>		<u>8/18/21</u>	<u>1500</u>	<i>[Signature]</i>																
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)		Temp: <u>1.1 to 1.1</u>														
<i>[Signature]</i>		<u>8/18/21</u>	<u>1700</u>	<i>[Signature]</i>																
Relinquished by: (Signature)		Date:	Time:	Received for lab by: (Signature)		Date: <u>8/19/21</u> Time: <u>0900</u>														
<i>[Signature]</i>				<i>[Signature]</i>																