Legend

Background Sample Soil Sample Location Spill Path

0 400 800 Ft

1 inch = 400 ft

Project No:	021-205
Map By:	NDB
Date:	10/6/2023

AC McLaughlin 14 Lateral Spill
Scout Energy Partners
Section 14, T2N R103W, 6th PM
Rio Blanco County, Colorado

ENTRADA CONSULTING GROUP
330 Grand Avenue, Unit C
Grand Junction, CO 81501
970-549-1015

SCOUT
100 Chevron Road
Rangely, CO 81648
970-501-5157

Figure 1

Table 1
AC McLaughlin 14 Lateral Line Spill
Soil Data Summary

SAMPLE SUMMARY	
Location Description	AC McL 14 Lateral Line
Sample Type	Soil

LABORATORY DATA SUMMARY																			
Sample ID	AC MCL 14	ACM14-SS1	ACM14-SS2	ACM14-SS3	ACM14-SS4	ACM14-SS5	ACM14-SS6	ACM14-SS7	ACM14-SS8	ACM14-SS9	ACM14-SS10	ACM14-SS11	ACM14-BG1	ACM14-BG2	ACM14-BG3	ACMCL-26-BG	ECMC TABLE 915-1 CONCENTRATION LEVELS		
Depth	8'	0-1'	0-1'	0-1'	0-1'	0-1'	0-1'	0-1'	0-1'	0-1'	0-1'	0-1'	0-1'	0-1'	0-1'	0-6"			
Sample Date	1/17/2023	5/17/2023	5/17/2023	5/17/2023	5/17/2023	5/17/2023	5/17/2023	5/17/2023	5/17/2023	5/17/2023	5/17/2023	5/17/2023	5/17/2023	5/17/2023	5/17/2023	2/10/2011			
Analytical Parameters																	**Residential Soil Screening Level**	**Protection of Groundwater Screening Level**	**UNITS**
TPH																			
TPH (C6-C10)	0.0455 J	0.184	0.136	0.316	0.161	0.121	0.516	0.184	0.212	0.144	0.118	0.210	NT	NT	NT	NT	500		mg/kg
TPH (C10-C28)	13.5	4.50	<4.00	7.68	54.1	239	14.0	41.8	13.2	11.9	37.9	<4.00	NT	NT	NT	NT			
TPH (C28-C36)	16.9	20.5	2.33 J	17.2	52.9	871	32.9	61.2	22.9	33.3	128	2.03 J	NT	NT	NT	NT			
Volatile Organic Compounds																			
1,2,4-Trimethylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00683	<0.005	<0.005	<0.005	<0.005	<0.005	NT	NT	NT	NT	30	0.0081	mg/kg
1,3,5-Trimethylbenzene	<0.005	<0005	<0.005	<0.005	<0.005	<0.005	0.00695	<0.005	<0.005	<0.005	<0.005	<0.005	NT	NT	NT	NT	27	0.0087	mg/kg
Benzene	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NT	NT	NT	NT	1.2	0.0026	mg/kg
Toluene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NT	NT	NT	NT	490	0.69	mg/kg
Ethylbenzene	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	NT	NT	NT	NT	5.8	0.78	mg/kg
Total Xylene	0.000975 J	0.00171 J	0.00176 J	0.00247 J	0.00183 J	0.00245 J	0.00789	0.00232 J	0.00198 J	0.00210 J	0.00178 J	0.00628 J	NT	NT	NT	NT	58	9.9	mg/kg
Metals																			
Arsenic	7.00	6.65	5.81	6.38	6.62	6.70	5.43	5.88	6.10	5.22	5.89	5.73	6.51	6.10	6.44	4.50	0.68	0.29	mg/kg
Barium	29.0	169	133	178	139.0	190	125	143	145	122	195	94.0	204	137	175	77.7	15,000	82	mg/kg
Cadmium	<1.00	0.302 J	0.237 J	0.294 J	0.258 J	0.281 J	0.221 J	0.251 J	0.235 J	0.167 J	0.214 J	0.212 J	0.291 J	0.229 J	0.310 J	<1.3	71	0.38	mg/kg
Chromium, Hexavalent	<1.00	<1.00	<1.00	10.7	<1.00	<1.00	1.53	<1.00	<1.00	<1.00	0.425 J	<1.00	<1.00	<1.00	<1.00	1.3	0.3	0.00067	mg/kg
Copper	3.45 J	13.1	10.9	12.0	11.4	11.5	9.49	11.5	11.4	10.2	11.4	11.2	12.5	11.3	12.7	9.7	3,100	46	mg/kg
Lead	6.62	17.1	15.8	18.8	16.2	17.7	14.2	15.4	16.2	17.1	13.8	14.7	18.1	16.0	17.1	12.0	400	14	mg/kg
Nickel	6.55	21.2	15.0	16.6	16.1	16.0	13.1	15.0	15.5	13.3	14.8	14.1	15.9	14.2	16.8	9.9	1,500	26	mg/kg
Selenium	0.389 J	2.23 J	1.29 J	0.996 J	1.36 J	1.09 J	0.857 J	1.17 J	1.27 J	0.911 J	0.911 J	0.999 J	1.25 J	1.04 J	0.994 J	<6.3	390	0.26	mg/kg
Silver	<0.500	0.101 J	0.0930 J	0.0979 J	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	0.0946 J	<0.500	0.0922 J	<3.8	390	0.8	mg/kg
Zinc	24.8 J	81.3	65.3	71.8	74.4	87.9	64.0	66.4	66.9	61.0	63.4	58.4	69.1	63.0	73.9	49.9	23,000	370	mg/kg
Soil Suitability for Reclamation																			
Sodium Adsorption Ratio (SAR)	0.113	0.594	5.68	13.8	4.14	2.79	4.84	5.11	1.32	22.7	2.68	3.72	0.398	0.776	1.45	8.00	<6	<6	ratio
Electrical Conductivity (EC)	0.154	2.290	0.719	2.880	0.773	0.559	1.110	1.320	0.619	2.370	0.710	0.676	0.258	0.225	0.301	1.0	<4	<4	mmhos/cm
pH	8.40	7.75	8.33	8.55	8.80	8.14	9.12	8.66	8.96	8.41	8.96	9.15	8.23	8.36	8.59	9.72	6 - 8.3	6 - 8.3	su
Boron, Hot Water Soluble	0.594	0.666	0.578	1.52	1.100	0.667	2.37	1.91 J	1.05 J	2.40	0.994 J	2.51 J	0.527	0.476	0.879	NT	2	2	mg/kg-dry
Polynuclear Aromatic Hyrdrocarbons																			
1-Methylnaphthalene	<0.02	<0.02	<0.02	<0.02	0.079	<0.02	<0.02	<0.02	<0.02	<0.02	0.0406	<0.02	NT	NT	NT	NT	18	0.006	mg/kg
2-Methylnaphthalene	<0.02	<0.02	<0.02	<0.02	0.0249	<0.02	<0.02	<0.02	<0.02	<0.02	0.0219	<0.02	NT	NT	NT	NT	24	0.019	mg/kg
Acenaphthene	<0.006	<0.006	<0.006	<0.006	0.0084	<0.006	<0.006	<0.006	<0.006	<0.006	0.38	<0.006	NT	NT	NT	NT	360	0.55	mg/kg
Anthracene	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	1.47	<0.006	NT	NT	NT	NT	1,800	5.8	mg/kg
Benzo(a)anthracene	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	6.00	<0.006	NT	NT	NT	NT	1.1	0.011	mg/kg
Benzo(a)pyrene	<0.006	<0.006	<0.006	<0.006	0.00179 J	<0.006	<0.006	<0.006	<0.006	<0.006	5.94	<0.006	NT	NT	NT	NT	0.11	0.24	mg/kg
Benzo(b)fluoranthene	<0.006	<0.006	<0.006	<0.006	0.00247 J	0.00290 J	<0.006	<0.006	<0.006	<0.006	7.38	<0.006	NT	NT	NT	NT	1.1	0.3	mg/kg
Benzo(k)fluoranthene	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	3.15	<0.006	NT	NT	NT	NT	11	2.9	mg/kg
Chrysene	<0.006	<0.006	<0.006	<0.006	0.00701	<0.006	<0.006	<0.006	<0.006	<0.006	4.95	<0.006	NT	NT	NT	NT	110	9	mg/kg
Dibenzo(a,h)anthracene	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	0.872	<0.006	NT	NT	NT	NT	0.11	0.096	mg/kg
Fluoranthene	<0.006	<0.006	<0.006	<0.006	0.00697	<0.006	<0.006	<0.006	<0.006	<0.006	14.5	<0.006	NT	NT	NT	NT	240	8.9	mg/kg
Fluorene	<0.006	<0.006	<0.006	<0.006	0.0208	<0.006	<0.006	<0.006	<0.006	<0.006	0.282	<0.006	NT	NT	NT	NT	240	0.54	mg/kg
Indeno(1,2,3-cd)pyrene	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	4.70	<0.006	NT	NT	NT	NT	1.1	0.98	mg/kg
Napthalene	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0591	<0.02	NT	NT	NT	NT	2	0.0038	mg/kg
Pyrene	<0.006	<0.006	<0.006	<0.006	0.00798	0.00261 J	<0.006	<0.006	<0.006	<0.006	11.0	<0.006	NT	NT	NT	NT	180	1.3	mg/kg

mg/kg - milligrams per kilogram

mg/L - milligrams per liter

B - analyte detected in the associated Method Blank above the Reporting Limit

J - indicates an estimated value

H - analyzed outside of holding time

mmhos/cm - millimhos per centimeter

mv - millivolts

su - standard units

NA - not applicable

NT - parameter was not tested

Over ECMC Table 915-1 concentration levels but under BACKGROUND level.

Over ECMC Table 915-1 concentration levels and not within BACKGROUND level.

Over ECMC Table 915-1 concentration levels

ANALYTICAL REPORT

February 02, 2023

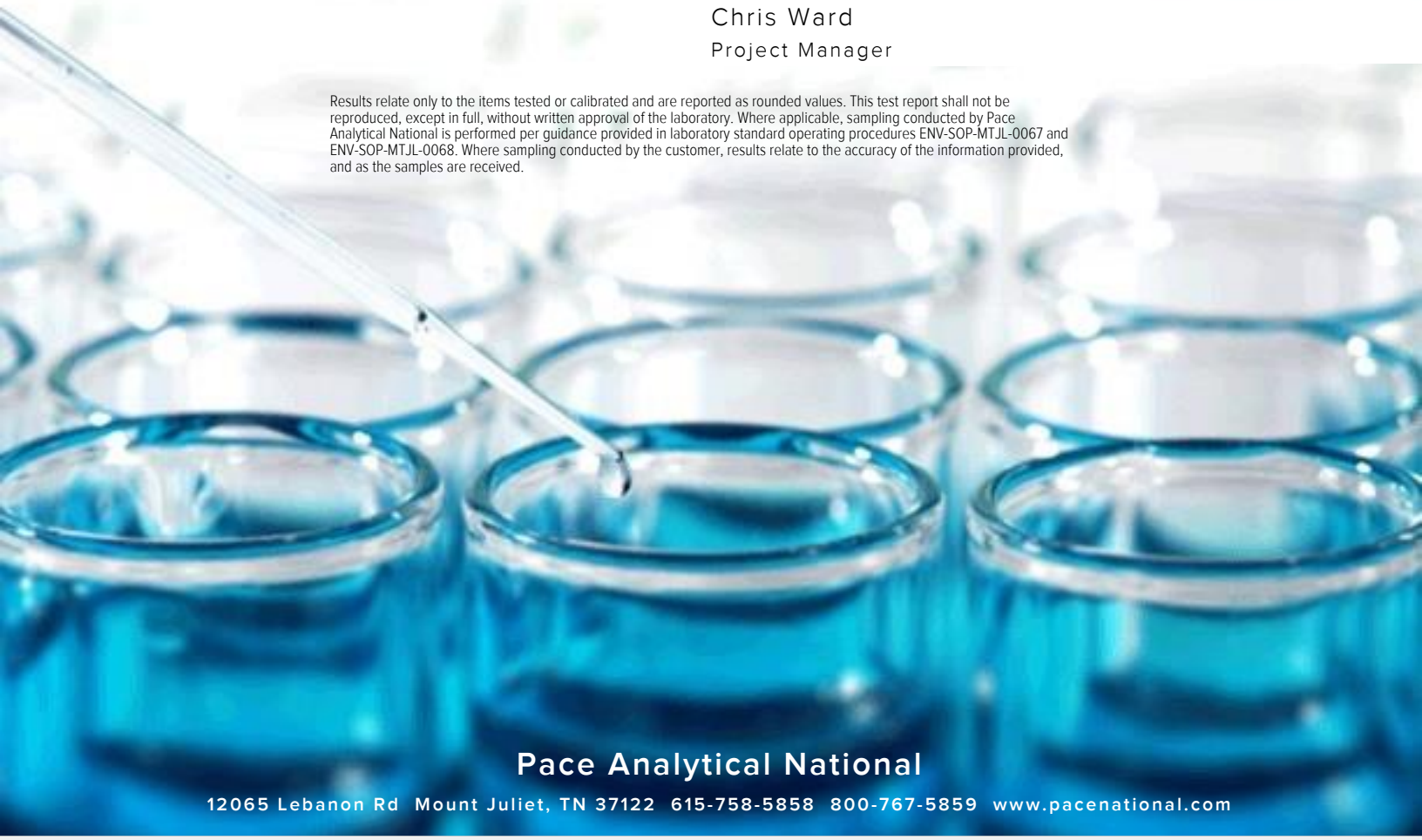
Scout Energy - Rangely, CO

Sample Delivery Group:	L1579562
Samples Received:	01/26/2023
Project Number:	
Description:	AC McLaughlin 14 Spill

Report To: Chris Patterson
100 Chevron Road
Rangely, CO 81648

Entire Report Reviewed By: Chris Ward

Chris Ward
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

SAMPLE SUMMARY

AC MCL 14 L1579562-01 Solid

Collected by: SCOUT
Collected date/time: 01/17/23 00:00
Received date/time: 01/26/23 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1995907	1	02/02/23 00:33	02/02/23 00:33	ABL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1995857	1	01/27/23 15:37	01/30/23 02:31	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1995819	1	01/27/23 14:00	01/27/23 15:52	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1998544	1	02/02/23 14:10	02/02/23 16:50	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1995677	1	01/30/23 14:28	02/01/23 18:09	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1995872	5	01/27/23 11:38	01/30/23 20:44	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1996602	1	01/26/23 16:51	01/30/23 03:08	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1995798	1	01/26/23 16:51	01/27/23 19:25	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1995592	1	01/27/23 14:36	01/28/23 11:26	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1995589	1	01/27/23 14:28	01/28/23 02:06	DSH	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

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.113		1	02/02/2023 00:33	WG1995907

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	01/30/2023 02:31	WG1995857

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.40	T8	1	01/27/2023 15:52	WG1995819

Sample Narrative:

L1579562-01 WG1995819: 8.4 at 19.1C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	154		10.0	1	02/02/2023 16:50	WG1998544

Sample Narrative:

L1579562-01 WG1998544: at 25C

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	0.594		0.0167	0.200	1	02/01/2023 18:09	WG1995677

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	7.00		0.100	1.00	5	01/30/2023 20:44	WG1995872
Barium	29.0		0.152	2.50	5	01/30/2023 20:44	WG1995872
Cadmium	U		0.0855	1.00	5	01/30/2023 20:44	WG1995872
Copper	3.45	J	0.132	5.00	5	01/30/2023 20:44	WG1995872
Lead	6.62		0.0990	2.00	5	01/30/2023 20:44	WG1995872
Nickel	6.55		0.197	2.50	5	01/30/2023 20:44	WG1995872
Selenium	0.389	J	0.180	2.50	5	01/30/2023 20:44	WG1995872
Silver	U		0.0865	0.500	5	01/30/2023 20:44	WG1995872
Zinc	24.8	J	0.740	25.0	5	01/30/2023 20:44	WG1995872

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0455	J	0.0217	0.100	1	01/30/2023 03:08	WG1996602
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*		*01/30/2023 03:08*	WG1996602

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	01/27/2023 19:25	WG1995798
Toluene	U		0.00130	0.00500	1	01/27/2023 19:25	WG1995798
Ethylbenzene	U		0.000737	0.00250	1	01/27/2023 19:25	WG1995798
Xylenes, Total	0.000975	J	0.000880	0.00650	1	01/27/2023 19:25	WG1995798
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	01/27/2023 19:25	WG1995798
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	01/27/2023 19:25	WG1995798
(S) Toluene-d8	*112*			*75.0-131*		*01/27/2023 19:25*	WG1995798
(S) 4-Bromofluorobenzene	*98.8*			*67.0-138*		*01/27/2023 19:25*	WG1995798
(S) 1,2-Dichloroethane-d4	*91.0*			*70.0-130*		*01/27/2023 19:25*	WG1995798

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	13.5		1.61	4.00	1	01/28/2023 11:26	WG1995592
C28-C36 Motor Oil Range	16.9		0.274	4.00	1	01/28/2023 11:26	WG1995592
(S) o-Terphenyl	*103*			*18.0-148*		*01/28/2023 11:26*	WG1995592

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
Acenaphthene	U		0.00209	0.00600	1	01/28/2023 02:06	WG1995589
Anthracene	U		0.00230	0.00600	1	01/28/2023 02:06	WG1995589
Benzo(a)anthracene	U		0.00173	0.00600	1	01/28/2023 02:06	WG1995589
Benzo(b)fluoranthene	U		0.00153	0.00600	1	01/28/2023 02:06	WG1995589
Benzo(k)fluoranthene	U		0.00215	0.00600	1	01/28/2023 02:06	WG1995589
Benzo(a)pyrene	U		0.00179	0.00600	1	01/28/2023 02:06	WG1995589
Chrysene	U		0.00232	0.00600	1	01/28/2023 02:06	WG1995589
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	01/28/2023 02:06	WG1995589
Fluoranthene	U		0.00227	0.00600	1	01/28/2023 02:06	WG1995589
Fluorene	U		0.00205	0.00600	1	01/28/2023 02:06	WG1995589
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	01/28/2023 02:06	WG1995589
1-Methylnaphthalene	U		0.00449	0.0200	1	01/28/2023 02:06	WG1995589
2-Methylnaphthalene	U		0.00427	0.0200	1	01/28/2023 02:06	WG1995589
Naphthalene	U		0.00408	0.0200	1	01/28/2023 02:06	WG1995589
Pyrene	U		0.00200	0.00600	1	01/28/2023 02:06	WG1995589
(S) p-Terphenyl-d14	*69.8*			*23.0-120*		*01/28/2023 02:06*	WG1995589
(S) Nitrobenzene-d5	*66.4*			*14.0-149*		*01/28/2023 02:06*	WG1995589
(S) 2-Fluorobiphenyl	*75.4*			*34.0-125*		*01/28/2023 02:06*	WG1995589

QUALITY CONTROL SUMMARY

L1579562-01

Method Blank (MB)

(MB) R3885503-1 01/30/23 01:11

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

L1579562-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1579562-01 01/30/23 02:31 • (DUP) R3885503-7 01/30/23 02:36

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

L1579612-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1579612-01 01/30/23 03:07 • (DUP) R3885503-8 01/30/23 03:13

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

Laboratory Control Sample (LCS)

(LCS) R3885503-2 01/30/23 01:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	11.1	111	80.0-120	

L1579558-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1579558-01 01/30/23 01:55 • (MS) R3885503-4 01/30/23 02:05 • (MSD) R3885503-5 01/30/23 02:10

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 %
Hexavalent Chromium	20.0	U	23.6	20.4	118	102	1	75.0-125			14.8	20

L1579558-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1579558-01 01/30/23 01:55 • (MS) R3885503-6 01/30/23 02:16

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	702	U	740	105	50	75.0-125	

L1579627-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1579627-01 01/27/23 15:52 • (DUP) R3885230-2 01/27/23 15:52

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.57	7.58	1	0.132		1

Sample Narrative:

OS: 7.57 at 19C

DUP: 7.58 at 19C

Laboratory Control Sample (LCS)

(LCS) R3885230-1 01/27/23 15:52

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	9.90	99.0	99.0-101	

Sample Narrative:

LCS: 9.9 at 18C

Method Blank (MB)

(MB) R3886965-1 02/02/23 16:50

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

L1579608-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1579608-03 02/02/23 16:50 • (DUP) R3886965-3 02/02/23 16:50

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	3680	4320	1	16.0		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3886965-2 02/02/23 16:50

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1120	99.6	85.0-115	

Sample Narrative:

LCS: at 25C

QUALITY CONTROL SUMMARY

L1579562-01

Method Blank (MB)

(MB) R3886547-1 02/01/23 17:33

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) R3886547-2 02/01/23 17:35 • (LCSD) R3886547-3 02/01/23 17:38

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	1.01	100	101	80.0-120			0.909	20

Method Blank (MB)

(MB) R3885857-1 01/30/23 19:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Copper	U		0.133	5.00
Lead	U		0.0990	2.00
Nickel	U		0.197	2.50
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

Laboratory Control Sample (LCS)

(LCS) R3885857-2 01/30/23 19:52

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	96.2	96.2	80.0-120	
Barium	100	94.6	94.6	80.0-120	
Cadmium	100	98.3	98.3	80.0-120	
Copper	100	97.7	97.7	80.0-120	
Lead	100	96.9	96.9	80.0-120	
Nickel	100	98.3	98.3	80.0-120	
Selenium	100	105	105	80.0-120	
Silver	20.0	19.3	96.7	80.0-120	
Zinc	100	94.8	94.8	80.0-120	

L1579690-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1579690-11 01/30/23 19:55 • (MS) R3885857-6 01/30/23 20:31 • (MSD) R3885857-5 01/30/23 20:08

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	4.18	83.6	86.0	79.4	81.9	5	75.0-125			2.85	20
Barium	100	142	181	222	39.3	80.6	5	75.0-125	E J6	E J3	20.5	20
Cadmium	100	0.321	87.2	92.7	86.9	92.4	5	75.0-125			6.16	20
Copper	100	16.7	95.0	103	78.3	85.9	5	75.0-125			7.72	20
Lead	100	68.9	109	127	39.9	58.4	5	75.0-125	J6	J6	15.7	20
Nickel	100	14.4	91.8	97.0	77.4	82.6	5	75.0-125			5.55	20
Selenium	100	0.592	95.5	96.5	94.9	95.9	5	75.0-125			0.981	20
Silver	20.0	U	17.4	18.0	87.2	89.8	5	75.0-125			3.00	20
Zinc	100	57.1	114	132	56.5	75.0	5	75.0-125	J6		15.0	20

Method Blank (MB)

(MB) R3885696-2 01/29/23 23:46

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) R3885696-1 01/29/23 21:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.60	83.6	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*104*	*77.0-120*	

Method Blank (MB)

(MB) R3885424-3 01/27/23 10:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	*111*			*75.0-131*
(S) 4-Bromofluorobenzene	*98.1*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*92.4*			*70.0-130*

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

(LCS) R3885424-1 01/27/23 08:55 • (LCSD) R3885424-2 01/27/23 09:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.117	0.105	93.6	84.0	70.0-123			10.8	20
Toluene	0.125	0.125	0.113	100	90.4	75.0-121			10.1	20
Ethylbenzene	0.125	0.113	0.0982	90.4	78.6	74.0-126			14.0	20
Xylenes, Total	0.375	0.342	0.305	91.2	81.3	72.0-127			11.4	20
1,2,4-Trimethylbenzene	0.125	0.108	0.0937	86.4	75.0	70.0-126			14.2	20
1,3,5-Trimethylbenzene	0.125	0.118	0.107	94.4	85.6	73.0-127			9.78	20
(S) Toluene-d8				*112*	*114*	*75.0-131*				
(S) 4-Bromofluorobenzene				*100*	*97.4*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*95.6*	*91.6*	*70.0-130*				

Method Blank (MB)

(MB) R3885377-1 01/28/23 08:57

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	*69.5*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3885377-2 01/28/23 09:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	38.3	76.6	50.0-150	
(S) o-Terphenyl			*89.6*	*18.0-148*	

L1579605-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1579605-01 01/28/23 11:59 • (MS) R3885377-3 01/28/23 12:13 • (MSD) R3885377-4 01/28/23 12:27

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	4.16	42.1	40.7	75.9	73.5	1	50.0-150			3.38	20
(S) o-Terphenyl					*80.0*	*78.9*		*18.0-148*				

Method Blank (MB)

(MB) R3885751-2 01/27/23 21:47

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00209	0.00600
Anthracene	U		0.00230	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Benzo(a)pyrene	U		0.00179	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
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
Naphthalene	U		0.00408	0.0200
Pyrene	U		0.00200	0.00600
(S) p-Terphenyl-d14	*83.2*			*23.0-120*
(S) Nitrobenzene-d5	*69.8*			*14.0-149*
(S) 2-Fluorobiphenyl	*83.9*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3885751-1 01/27/23 21:27

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0769	96.1	50.0-120	
Anthracene	0.0800	0.0714	89.3	50.0-126	
Benzo(a)anthracene	0.0800	0.0737	92.1	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0750	93.8	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0746	93.3	49.0-125	
Benzo(a)pyrene	0.0800	0.0668	83.5	42.0-120	
Chrysene	0.0800	0.0797	99.6	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0716	89.5	47.0-125	
Fluoranthene	0.0800	0.0760	95.0	49.0-129	
Fluorene	0.0800	0.0765	95.6	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0740	92.5	46.0-125	
1-Methylnaphthalene	0.0800	0.0752	94.0	51.0-121	
2-Methylnaphthalene	0.0800	0.0762	95.3	50.0-120	
Naphthalene	0.0800	0.0781	97.6	50.0-120	
Pyrene	0.0800	0.0808	101	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R3885751-1 01/27/23 21:27

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			*90.3*	*23.0-120*	
(S) Nitrobenzene-d5			*84.5*	*14.0-149*	
(S) 2-Fluorobiphenyl			*94.5*	*34.0-125*	

L1579480-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1579480-01 01/27/23 22:06 • (MS) R3885751-3 01/27/23 22:26 • (MSD) R3885751-4 01/27/23 22:46

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0784	U	0.0554	0.0549	70.7	68.6	1	14.0-127			0.907	27
Anthracene	0.0784	U	0.0497	0.0491	63.4	61.4	1	10.0-145			1.21	30
Benzo(a)anthracene	0.0784	U	0.0485	0.0475	61.9	59.4	1	10.0-139			2.08	30
Benzo(b)fluoranthene	0.0784	U	0.0474	0.0443	60.5	55.4	1	10.0-140			6.76	36
Benzo(k)fluoranthene	0.0784	U	0.0483	0.0447	61.6	55.9	1	10.0-137			7.74	31
Benzo(a)pyrene	0.0784	U	0.0510	0.0491	65.1	61.4	1	10.0-141			3.80	31
Chrysene	0.0784	U	0.0542	0.0523	69.1	65.4	1	10.0-145			3.57	30
Dibenz(a,h)anthracene	0.0784	U	0.0453	0.0427	57.8	53.4	1	10.0-132			5.91	31
Fluoranthene	0.0784	U	0.0507	0.0493	64.7	61.6	1	10.0-153			2.80	33
Fluorene	0.0784	U	0.0534	0.0545	68.1	68.1	1	11.0-130			2.04	29
Indeno(1,2,3-cd)pyrene	0.0784	U	0.0463	0.0445	59.1	55.6	1	10.0-137			3.96	32
1-Methylnaphthalene	0.0784	U	0.0564	0.0567	71.9	70.9	1	10.0-142			0.530	28
2-Methylnaphthalene	0.0784	U	0.0563	0.0570	71.8	71.3	1	10.0-137			1.24	28
Naphthalene	0.0784	U	0.0613	0.0625	78.2	78.1	1	10.0-135			1.94	27
Pyrene	0.0784	U	0.0525	0.0507	67.0	63.4	1	10.0-148			3.49	35
(S) p-Terphenyl-d14					*55.7*	*51.9*		*23.0-120*				
(S) Nitrobenzene-d5					*62.8*	*64.5*		*14.0-149*				
(S) 2-Fluorobiphenyl					*54.0*	*55.6*		*34.0-125*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

MDL	Method Detection Limit.
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
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
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.

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.

Scout Energy Partners
100 Chevron Road
Rangely, CO 81648

Billing Information: **Same as left**

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace Analytical® National Center for Testing & Innovation

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

Report to: **Chris Patterson**

Email To: **chris.patterson@scoutep.com**

Project Description: **AC McLaughlin 14 Spill**

City/State Collected: **CO**

Phone: **1-970-501-5157**
Fax:

Client Project #

Lab Project #

L # L1574562

F064

Collected by (print): **SCOUT**

Site/Facility ID #

P.O. #

Collected by (signature): **SCOUT**

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day X Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Acctnum: **SCOENERCO**
Template:
Prelogin:
TSR:
PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX, TMBs	Table 915 PAHs	Table 915 Metals	Hot Water Soluble Boron	GRO/DRO/ORO	SAR/EC/pH					Remarks	Sample # (lab only)
AC Mcl 14	Grab	SS	8'	1/17/23	N/A	1	X	X	X	X	X	X						-01

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Please prioritize organic analysis, SAR, EC, and pH if volume is insufficient.

pH _____ Temp _____
Flow _____ Other _____

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

Tracking # 6126 6537 4942

Sample Receipt Checklist
COC Seal Present/Intact: NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: ✓Y __N
Preservation Correct/Checked: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / (No) HCL / MeoH TBR
[signature]	1/24/23	1515	[signature]	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: NSA 2 °C Bottles Received: 1.7 +0 = 1.7 1
[signature]	1/24/23	1530		
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
			[signature]	1-26-23 0930

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

ANALYTICAL REPORT

May 26, 2023

Scout Energy - Rangely, CO

Sample Delivery Group: L1618107

Samples Received: 05/19/2023

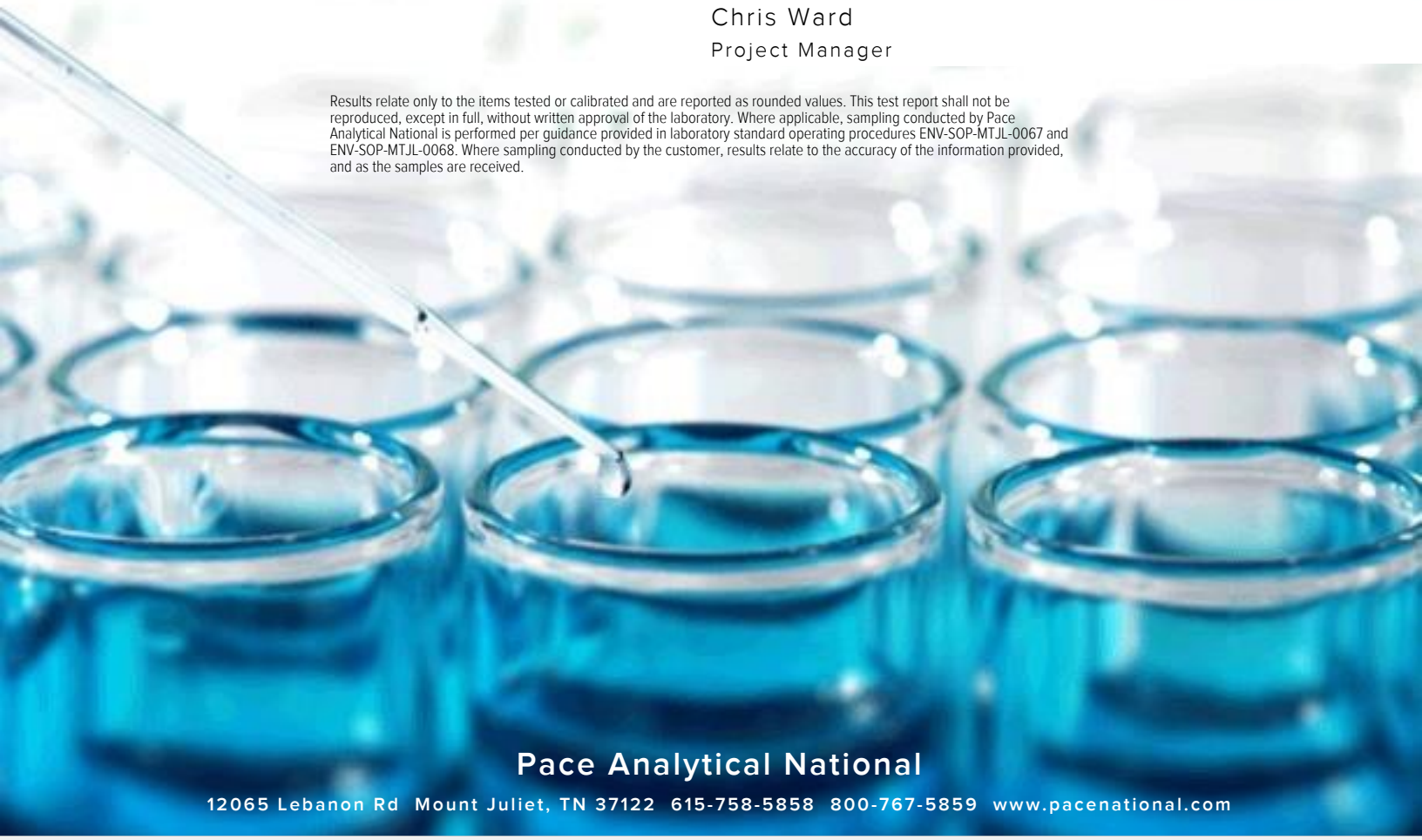
Project Number:

Description:

Report To: Chris Patterson
100 Chevron Road
Rangely, CO 81648

Entire Report Reviewed By: Chris Ward

Chris Ward
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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ACM14-SS1 L1618107-01 Solid

Collected by: M. Schlageter | Collected date/time: 05/17/23 10:40 | Received date/time: 05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2064140	1	05/25/23 12:03	05/25/23 12:03	SPL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2063539	1	05/20/23 07:35	05/22/23 06:43	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2064341	1	05/22/23 10:43	05/22/23 14:10	MCC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2063556	1	05/24/23 09:00	05/24/23 11:07	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2064143	1	05/24/23 16:19	05/25/23 11:09	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063726	20	05/20/23 17:14	05/23/23 12:48	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063726	5	05/20/23 17:14	05/23/23 10:11	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2063460	1	05/19/23 18:02	05/20/23 01:23	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2064252	1	05/19/23 18:02	05/22/23 11:52	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2063522	1	05/21/23 22:24	05/22/23 09:04	KAP	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2063880	1	05/22/23 23:10	05/23/23 09:10	DSH	Mt. Juliet, TN

ACM14-SS2 L1618107-02 Solid

Collected by: M. Schlageter | Collected date/time: 05/17/23 10:50 | Received date/time: 05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2064140	1	05/25/23 12:00	05/25/23 12:00	SPL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2063539	1	05/20/23 07:35	05/22/23 06:53	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2064341	1	05/22/23 10:43	05/22/23 14:10	MCC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2063556	1	05/24/23 09:00	05/24/23 11:07	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2064143	1	05/24/23 16:19	05/25/23 11:11	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063726	20	05/20/23 17:14	05/23/23 12:51	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063726	5	05/20/23 17:14	05/23/23 11:41	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2063460	1	05/19/23 18:02	05/20/23 01:43	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2064252	1	05/19/23 18:02	05/22/23 12:11	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2063522	1	05/21/23 22:24	05/22/23 08:12	KAP	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2063880	1	05/22/23 23:10	05/23/23 04:55	DSH	Mt. Juliet, TN

ACM14-SS3 L1618107-03 Solid

Collected by: M. Schlageter | Collected date/time: 05/17/23 11:00 | Received date/time: 05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2064140	1	05/25/23 12:14	05/25/23 12:14	SPL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2063539	1	05/20/23 07:35	05/22/23 06:59	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2064341	1	05/22/23 10:43	05/22/23 14:10	MCC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2063556	1	05/24/23 09:00	05/24/23 11:07	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2064143	5	05/24/23 16:19	05/25/23 11:14	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063726	20	05/20/23 17:14	05/23/23 12:54	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063726	5	05/20/23 17:14	05/23/23 11:44	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2063460	1	05/19/23 18:02	05/20/23 02:04	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2064252	1	05/19/23 18:02	05/22/23 12:30	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2063522	1	05/21/23 22:24	05/22/23 09:30	KAP	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2063880	1	05/22/23 23:10	05/23/23 05:15	DSH	Mt. Juliet, TN

ACM14-SS4 L1618107-04 Solid

Collected by: M. Schlageter | Collected date/time: 05/17/23 11:10 | Received date/time: 05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2064140	1	05/25/23 12:16	05/25/23 12:16	SPL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2063539	1	05/20/23 07:35	05/22/23 07:04	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2064341	1	05/22/23 10:43	05/22/23 14:10	MCC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2063556	1	05/24/23 09:00	05/24/23 11:07	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2064143	1	05/24/23 16:19	05/25/23 11:17	SPL	Mt. Juliet, TN

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

ACM14-SS4 L1618107-04 Solid

Collected by: M. Schlageter | Collected date/time: 05/17/23 11:10 | Received date/time: 05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2063726	20	05/20/23 17:14	05/23/23 12:58	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063726	5	05/20/23 17:14	05/23/23 11:48	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2063460	1	05/19/23 18:02	05/20/23 02:24	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2064252	1	05/19/23 18:02	05/22/23 12:49	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2063522	1	05/21/23 22:24	05/22/23 09:56	KAP	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2063880	1	05/22/23 23:10	05/23/23 10:09	DSH	Mt. Juliet, TN

ACM14-SS5 L1618107-05 Solid

Collected by: M. Schlageter | Collected date/time: 05/17/23 11:20 | Received date/time: 05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2064140	1	05/25/23 12:19	05/25/23 12:19	SPL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2063539	1	05/20/23 07:35	05/22/23 07:09	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2064341	1	05/22/23 10:43	05/22/23 14:10	MCC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2063556	1	05/24/23 09:00	05/24/23 11:07	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2064143	1	05/24/23 16:19	05/25/23 11:20	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063726	20	05/20/23 17:14	05/23/23 13:09	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063726	5	05/20/23 17:14	05/23/23 09:48	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2063460	1	05/19/23 18:02	05/20/23 02:45	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2064252	1	05/19/23 18:02	05/22/23 13:08	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2063522	25	05/21/23 22:24	05/22/23 11:15	KAP	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2063880	1	05/22/23 23:10	05/23/23 11:47	DSH	Mt. Juliet, TN

ACM14-SS6 L1618107-06 Solid

Collected by: M. Schlageter | Collected date/time: 05/17/23 11:30 | Received date/time: 05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2064140	1	05/25/23 12:05	05/25/23 12:05	SPL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2063539	1	05/20/23 07:35	05/22/23 07:14	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2064341	1	05/22/23 10:43	05/22/23 14:10	MCC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2063556	1	05/24/23 09:00	05/24/23 11:07	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2064143	10	05/24/23 16:19	05/25/23 11:22	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063726	20	05/20/23 17:14	05/23/23 13:12	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063726	5	05/20/23 17:14	05/23/23 11:51	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2063460	1	05/19/23 18:02	05/20/23 03:05	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2064252	1	05/19/23 18:02	05/22/23 13:27	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2063522	1	05/21/23 22:24	05/22/23 10:09	KAP	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2063880	1	05/22/23 23:10	05/23/23 11:07	DSH	Mt. Juliet, TN

ACM14-SS7 L1618107-07 Solid

Collected by: M. Schlageter | Collected date/time: 05/17/23 11:40 | Received date/time: 05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2064140	1	05/25/23 12:22	05/25/23 12:22	SPL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2063539	1	05/20/23 07:35	05/22/23 07:19	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2064341	1	05/22/23 10:43	05/22/23 14:10	MCC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2063556	1	05/24/23 09:00	05/24/23 11:07	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2064143	10	05/24/23 16:19	05/25/23 11:25	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063385	10	05/19/23 17:21	05/21/23 13:41	SJM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063385	5	05/19/23 17:21	05/21/23 11:43	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2063460	1	05/19/23 18:02	05/20/23 03:25	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2064252	1	05/19/23 18:02	05/22/23 13:47	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2063522	1	05/21/23 22:24	05/22/23 10:22	KAP	Mt. Juliet, TN

ACM14-SS7 L1618107-07 Solid

Collected by: M. Schlageter | Collected date/time: 05/17/23 11:40 | Received date/time: 05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2063880	1	05/22/23 23:10	05/23/23 10:28	DSH	Mt. Juliet, TN

ACM14-SS8 L1618107-08 Solid

Collected by: M. Schlageter | Collected date/time: 05/17/23 11:50 | Received date/time: 05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2064140	1	05/25/23 12:36	05/25/23 12:36	SPL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2063539	1	05/20/23 07:35	05/22/23 07:56	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2064341	1	05/22/23 10:43	05/22/23 14:10	MCC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2063556	1	05/24/23 09:00	05/24/23 11:07	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2064143	10	05/24/23 16:19	05/25/23 11:33	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063385	10	05/19/23 17:21	05/21/23 13:44	SJM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063385	5	05/19/23 17:21	05/21/23 11:46	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2063460	1	05/19/23 18:02	05/20/23 03:46	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2064252	1	05/19/23 18:02	05/22/23 14:06	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2063522	1	05/21/23 22:24	05/22/23 09:17	KAP	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2063880	1	05/22/23 23:10	05/23/23 05:34	DSH	Mt. Juliet, TN

ACM14-SS9 L1618107-09 Solid

Collected by: M. Schlageter | Collected date/time: 05/17/23 12:00 | Received date/time: 05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2064140	1	05/25/23 12:38	05/25/23 12:38	SPL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2063539	1	05/20/23 07:35	05/22/23 08:03	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2064341	1	05/22/23 10:43	05/22/23 14:10	MCC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2063556	1	05/24/23 09:00	05/24/23 11:07	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2064143	1	05/24/23 16:19	05/25/23 11:36	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063385	10	05/19/23 17:21	05/21/23 13:47	SJM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063385	5	05/19/23 17:21	05/21/23 11:49	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2063460	1	05/19/23 18:02	05/20/23 04:06	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2064252	1	05/19/23 18:02	05/22/23 14:25	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2063522	1	05/21/23 22:24	05/22/23 10:36	KAP	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2063880	1	05/22/23 23:10	05/23/23 10:48	DSH	Mt. Juliet, TN

ACM14-SS10 L1618107-10 Solid

Collected by: M. Schlageter | Collected date/time: 05/17/23 12:10 | Received date/time: 05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2064140	1	05/25/23 12:41	05/25/23 12:41	SPL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2063539	1	05/20/23 07:35	05/22/23 08:08	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2064341	1	05/22/23 10:43	05/22/23 14:10	MCC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2063556	1	05/24/23 09:00	05/24/23 11:07	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2064143	10	05/24/23 16:19	05/25/23 11:38	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063385	10	05/19/23 17:21	05/21/23 14:14	SJM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063385	5	05/19/23 17:21	05/21/23 12:13	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2063460	1	05/19/23 18:02	05/20/23 04:27	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2064252	1	05/19/23 18:02	05/22/23 14:44	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2063522	5	05/21/23 22:24	05/22/23 11:01	KAP	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2063880	1	05/22/23 23:10	05/23/23 11:27	DSH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2063880	10	05/22/23 23:10	05/24/23 09:42	DLH	Mt. Juliet, TN

ACM14-SS11 L1618107-11 Solid

Collected by: M. Schlageter | Collected date/time: 05/17/23 10:40 | Received date/time: 05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2064140	1	05/25/23 12:44	05/25/23 12:44	SPL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2063539	1	05/20/23 07:35	05/22/23 08:34	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2064341	1	05/22/23 10:43	05/22/23 14:10	MCC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2063556	1	05/24/23 09:00	05/24/23 11:07	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2064143	50	05/24/23 16:19	05/25/23 11:41	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063385	5	05/19/23 17:21	05/21/23 12:17	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2063460	1	05/19/23 18:02	05/20/23 04:47	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2064252	1	05/19/23 18:02	05/22/23 15:03	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2063522	1	05/21/23 22:24	05/22/23 08:25	KAP	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2063880	1	05/22/23 23:10	05/23/23 05:54	DSH	Mt. Juliet, TN

ACM14-BG1 L1618107-12 Solid

Collected by: M. Schlageter | Collected date/time: 05/17/23 10:30 | Received date/time: 05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2064140	1	05/25/23 12:49	05/25/23 12:49	SPL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2063539	1	05/20/23 07:35	05/22/23 08:39	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2064341	1	05/22/23 10:43	05/22/23 14:10	MCC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2063556	1	05/24/23 09:00	05/24/23 11:07	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2064143	1	05/24/23 16:19	05/25/23 11:44	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063385	20	05/19/23 17:21	05/21/23 14:17	SJM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063385	5	05/19/23 17:21	05/21/23 12:20	SJM	Mt. Juliet, TN

ACM14-BG2 L1618107-13 Solid

Collected by: M. Schlageter | Collected date/time: 05/17/23 11:15 | Received date/time: 05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2064140	1	05/25/23 12:52	05/25/23 12:52	SPL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2063539	1	05/20/23 07:35	05/22/23 09:00	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2064341	1	05/22/23 10:43	05/22/23 14:10	MCC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2063556	1	05/24/23 09:00	05/24/23 11:07	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2064143	1	05/24/23 16:19	05/25/23 11:47	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063385	10	05/19/23 17:21	05/21/23 14:20	SJM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063385	5	05/19/23 17:21	05/21/23 12:23	SJM	Mt. Juliet, TN

ACM14-BG3 L1618107-14 Solid

Collected by: M. Schlageter | Collected date/time: 05/17/23 12:30 | Received date/time: 05/19/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2064140	1	05/25/23 12:55	05/25/23 12:55	SPL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2063539	1	05/20/23 07:35	05/22/23 09:05	SET	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2064341	1	05/22/23 10:43	05/22/23 14:10	MCC	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2063556	1	05/24/23 09:00	05/24/23 11:07	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2064143	1	05/24/23 16:19	05/25/23 11:49	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063385	10	05/19/23 17:21	05/21/23 14:24	SJM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2063385	5	05/19/23 17:21	05/21/23 12:26	SJM	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

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.594		1	05/25/2023 12:03	WG2064140

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	05/22/2023 06:43	WG2063539

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.75	T8	1	05/22/2023 14:10	WG2064341

Sample Narrative:

L1618107-01 WG2064341: 7.75 at 20.8C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	2290		10.0	1	05/24/2023 11:07	WG2063556

Sample Narrative:

L1618107-01 WG2063556: at 25C

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	0.666		0.0167	0.200	1	05/25/2023 11:09	WG2064143

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.65		0.100	1.00	5	05/23/2023 10:11	WG2063726
Barium	169		0.608	10.0	20	05/23/2023 12:48	WG2063726
Cadmium	0.302	J	0.0855	1.00	5	05/23/2023 10:11	WG2063726
Copper	13.1		0.132	5.00	5	05/23/2023 10:11	WG2063726
Lead	17.1		0.0990	2.00	5	05/23/2023 10:11	WG2063726
Nickel	21.2		0.197	2.50	5	05/23/2023 10:11	WG2063726
Selenium	2.23	J	0.180	2.50	5	05/23/2023 10:11	WG2063726
Silver	0.101	J	0.0865	0.500	5	05/23/2023 10:11	WG2063726
Zinc	81.3		0.740	25.0	5	05/23/2023 10:11	WG2063726

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.184		0.0217	0.100	1	05/20/2023 01:23	WG2063460
(S) a,a,a-Trifluorotoluene(FID)	*88.3*			*77.0-120*		*05/20/2023 01:23*	WG2063460

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	05/22/2023 11:52	WG2064252
Toluene	U		0.00130	0.00500	1	05/22/2023 11:52	WG2064252
Ethylbenzene	U		0.000737	0.00250	1	05/22/2023 11:52	WG2064252
Xylenes, Total	0.00171	J	0.000880	0.00650	1	05/22/2023 11:52	WG2064252
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/22/2023 11:52	WG2064252
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/22/2023 11:52	WG2064252
(S) Toluene-d8	*114*			*75.0-131*		*05/22/2023 11:52*	WG2064252
(S) 4-Bromofluorobenzene	*94.1*			*67.0-138*		*05/22/2023 11:52*	WG2064252
(S) 1,2-Dichloroethane-d4	*88.9*			*70.0-130*		*05/22/2023 11:52*	WG2064252

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	4.50		1.61	4.00	1	05/22/2023 09:04	WG2063522
C28-C36 Motor Oil Range	20.5		0.274	4.00	1	05/22/2023 09:04	WG2063522
(S) o-Terphenyl	*59.5*			*18.0-148*		*05/22/2023 09:04*	WG2063522

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
Acenaphthene	U		0.00209	0.00600	1	05/23/2023 09:10	WG2063880
Anthracene	U		0.00230	0.00600	1	05/23/2023 09:10	WG2063880
Benzo(a)anthracene	U		0.00173	0.00600	1	05/23/2023 09:10	WG2063880
Benzo(b)fluoranthene	U		0.00153	0.00600	1	05/23/2023 09:10	WG2063880
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/23/2023 09:10	WG2063880
Benzo(a)pyrene	U		0.00179	0.00600	1	05/23/2023 09:10	WG2063880
Chrysene	U		0.00232	0.00600	1	05/23/2023 09:10	WG2063880
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/23/2023 09:10	WG2063880
Fluoranthene	U		0.00227	0.00600	1	05/23/2023 09:10	WG2063880
Fluorene	U		0.00205	0.00600	1	05/23/2023 09:10	WG2063880
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/23/2023 09:10	WG2063880
1-Methylnaphthalene	U		0.00449	0.0200	1	05/23/2023 09:10	WG2063880
2-Methylnaphthalene	U		0.00427	0.0200	1	05/23/2023 09:10	WG2063880
Naphthalene	U		0.00408	0.0200	1	05/23/2023 09:10	WG2063880
Pyrene	U		0.00200	0.00600	1	05/23/2023 09:10	WG2063880
(S) p-Terphenyl-d14	*62.9*			*23.0-120*		*05/23/2023 09:10*	WG2063880
(S) Nitrobenzene-d5	*64.6*			*14.0-149*		*05/23/2023 09:10*	WG2063880
(S) 2-Fluorobiphenyl	*57.1*			*34.0-125*		*05/23/2023 09:10*	WG2063880

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.68		1	05/25/2023 12:00	WG2064140

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	05/22/2023 06:53	WG2063539

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.33	T8	1	05/22/2023 14:10	WG2064341

Sample Narrative:

L1618107-02 WG2064341: 8.33 at 20.8C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	719		10.0	1	05/24/2023 11:07	WG2063556

Sample Narrative:

L1618107-02 WG2063556: at 25C

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	0.578		0.0167	0.200	1	05/25/2023 11:11	WG2064143

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.81		0.100	1.00	5	05/23/2023 11:41	WG2063726
Barium	133		0.608	10.0	20	05/23/2023 12:51	WG2063726
Cadmium	0.237	J	0.0855	1.00	5	05/23/2023 11:41	WG2063726
Copper	10.9		0.132	5.00	5	05/23/2023 11:41	WG2063726
Lead	15.8		0.0990	2.00	5	05/23/2023 11:41	WG2063726
Nickel	15.0		0.197	2.50	5	05/23/2023 11:41	WG2063726
Selenium	1.29	J	0.180	2.50	5	05/23/2023 11:41	WG2063726
Silver	0.0930	J	0.0865	0.500	5	05/23/2023 11:41	WG2063726
Zinc	65.3		0.740	25.0	5	05/23/2023 11:41	WG2063726

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.136		0.0217	0.100	1	05/20/2023 01:43	WG2063460
(S) a,a,a-Trifluorotoluene(FID)	*88.4*			*77.0-120*		*05/20/2023 01:43*	WG2063460

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	05/22/2023 12:11	WG2064252
Toluene	U		0.00130	0.00500	1	05/22/2023 12:11	WG2064252
Ethylbenzene	U		0.000737	0.00250	1	05/22/2023 12:11	WG2064252
Xylenes, Total	0.00176	J	0.000880	0.00650	1	05/22/2023 12:11	WG2064252
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/22/2023 12:11	WG2064252
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/22/2023 12:11	WG2064252
(S) Toluene-d8	*109*			*75.0-131*		*05/22/2023 12:11*	WG2064252
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*05/22/2023 12:11*	WG2064252
(S) 1,2-Dichloroethane-d4	*92.2*			*70.0-130*		*05/22/2023 12:11*	WG2064252

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	U		1.61	4.00	1	05/22/2023 08:12	WG2063522
C28-C36 Motor Oil Range	2.33	J	0.274	4.00	1	05/22/2023 08:12	WG2063522
(S) o-Terphenyl	*38.8*			*18.0-148*		*05/22/2023 08:12*	WG2063522

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
Acenaphthene	U		0.00209	0.00600	1	05/23/2023 04:55	WG2063880
Anthracene	U		0.00230	0.00600	1	05/23/2023 04:55	WG2063880
Benzo(a)anthracene	U		0.00173	0.00600	1	05/23/2023 04:55	WG2063880
Benzo(b)fluoranthene	U		0.00153	0.00600	1	05/23/2023 04:55	WG2063880
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/23/2023 04:55	WG2063880
Benzo(a)pyrene	U		0.00179	0.00600	1	05/23/2023 04:55	WG2063880
Chrysene	U		0.00232	0.00600	1	05/23/2023 04:55	WG2063880
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/23/2023 04:55	WG2063880
Fluoranthene	U		0.00227	0.00600	1	05/23/2023 04:55	WG2063880
Fluorene	U		0.00205	0.00600	1	05/23/2023 04:55	WG2063880
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/23/2023 04:55	WG2063880
1-Methylnaphthalene	U		0.00449	0.0200	1	05/23/2023 04:55	WG2063880
2-Methylnaphthalene	U		0.00427	0.0200	1	05/23/2023 04:55	WG2063880
Naphthalene	U		0.00408	0.0200	1	05/23/2023 04:55	WG2063880
Pyrene	U		0.00200	0.00600	1	05/23/2023 04:55	WG2063880
(S) p-Terphenyl-d14	*63.2*			*23.0-120*		*05/23/2023 04:55*	WG2063880
(S) Nitrobenzene-d5	*56.5*			*14.0-149*		*05/23/2023 04:55*	WG2063880
(S) 2-Fluorobiphenyl	*41.2*			*34.0-125*		*05/23/2023 04:55*	WG2063880

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	13.8		1	05/25/2023 12:14	WG2064140

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	10.7		0.255	1.00	1	05/22/2023 06:59	WG2063539

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.55	T8	1	05/22/2023 14:10	WG2064341

Sample Narrative:

L1618107-03 WG2064341: 8.55 at 20.7C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	2880		10.0	1	05/24/2023 11:07	WG2063556

Sample Narrative:

L1618107-03 WG2063556: at 25C

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	1.52		0.0835	1.00	5	05/25/2023 11:14	WG2064143

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.38		0.100	1.00	5	05/23/2023 11:44	WG2063726
Barium	178		0.608	10.0	20	05/23/2023 12:54	WG2063726
Cadmium	0.294	J	0.0855	1.00	5	05/23/2023 11:44	WG2063726
Copper	12.0		0.132	5.00	5	05/23/2023 11:44	WG2063726
Lead	18.8		0.0990	2.00	5	05/23/2023 11:44	WG2063726
Nickel	16.6		0.197	2.50	5	05/23/2023 11:44	WG2063726
Selenium	0.996	J	0.180	2.50	5	05/23/2023 11:44	WG2063726
Silver	0.0979	J	0.0865	0.500	5	05/23/2023 11:44	WG2063726
Zinc	71.8		0.740	25.0	5	05/23/2023 11:44	WG2063726

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.316		0.0217	0.100	1	05/20/2023 02:04	WG2063460
(S) a,a,a-Trifluorotoluene(FID)	*86.0*			*77.0-120*		*05/20/2023 02:04*	WG2063460

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	05/22/2023 12:30	WG2064252
Toluene	U		0.00130	0.00500	1	05/22/2023 12:30	WG2064252
Ethylbenzene	U		0.000737	0.00250	1	05/22/2023 12:30	WG2064252
Xylenes, Total	0.00247	J	0.000880	0.00650	1	05/22/2023 12:30	WG2064252
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/22/2023 12:30	WG2064252
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/22/2023 12:30	WG2064252
(S) Toluene-d8	*112*			*75.0-131*		*05/22/2023 12:30*	WG2064252
(S) 4-Bromofluorobenzene	*97.4*			*67.0-138*		*05/22/2023 12:30*	WG2064252
(S) 1,2-Dichloroethane-d4	*90.0*			*70.0-130*		*05/22/2023 12:30*	WG2064252

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	7.68		1.61	4.00	1	05/22/2023 09:30	WG2063522
C28-C36 Motor Oil Range	17.2		0.274	4.00	1	05/22/2023 09:30	WG2063522
(S) o-Terphenyl	*33.2*			*18.0-148*		*05/22/2023 09:30*	WG2063522

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
Acenaphthene	U		0.00209	0.00600	1	05/23/2023 05:15	WG2063880
Anthracene	U		0.00230	0.00600	1	05/23/2023 05:15	WG2063880
Benzo(a)anthracene	U		0.00173	0.00600	1	05/23/2023 05:15	WG2063880
Benzo(b)fluoranthene	U		0.00153	0.00600	1	05/23/2023 05:15	WG2063880
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/23/2023 05:15	WG2063880
Benzo(a)pyrene	U		0.00179	0.00600	1	05/23/2023 05:15	WG2063880
Chrysene	U		0.00232	0.00600	1	05/23/2023 05:15	WG2063880
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/23/2023 05:15	WG2063880
Fluoranthene	U		0.00227	0.00600	1	05/23/2023 05:15	WG2063880
Fluorene	U		0.00205	0.00600	1	05/23/2023 05:15	WG2063880
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/23/2023 05:15	WG2063880
1-Methylnaphthalene	U		0.00449	0.0200	1	05/23/2023 05:15	WG2063880
2-Methylnaphthalene	U		0.00427	0.0200	1	05/23/2023 05:15	WG2063880
Naphthalene	U		0.00408	0.0200	1	05/23/2023 05:15	WG2063880
Pyrene	U		0.00200	0.00600	1	05/23/2023 05:15	WG2063880
(S) p-Terphenyl-d14	*62.1*			*23.0-120*		*05/23/2023 05:15*	WG2063880
(S) Nitrobenzene-d5	*63.1*			*14.0-149*		*05/23/2023 05:15*	WG2063880
(S) 2-Fluorobiphenyl	*45.4*			*34.0-125*		*05/23/2023 05:15*	WG2063880

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	4.14		1	05/25/2023 12:16	WG2064140

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	05/22/2023 07:04	WG2063539

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.80	T8	1	05/22/2023 14:10	WG2064341

Sample Narrative:

L1618107-04 WG2064341: 8.8 at 20.8C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	773		10.0	1	05/24/2023 11:07	WG2063556

Sample Narrative:

L1618107-04 WG2063556: at 25C

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	1.10		0.0167	0.200	1	05/25/2023 11:17	WG2064143

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.62		0.100	1.00	5	05/23/2023 11:48	WG2063726
Barium	139		0.608	10.0	20	05/23/2023 12:58	WG2063726
Cadmium	0.258	J	0.0855	1.00	5	05/23/2023 11:48	WG2063726
Copper	11.4		0.132	5.00	5	05/23/2023 11:48	WG2063726
Lead	16.2		0.0990	2.00	5	05/23/2023 11:48	WG2063726
Nickel	16.1		0.197	2.50	5	05/23/2023 11:48	WG2063726
Selenium	1.36	J	0.180	2.50	5	05/23/2023 11:48	WG2063726
Silver	U		0.0865	0.500	5	05/23/2023 11:48	WG2063726
Zinc	74.4		0.740	25.0	5	05/23/2023 11:48	WG2063726

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.191		0.0217	0.100	1	05/20/2023 02:24	WG2063460
(S) a,a,a-Trifluorotoluene(FID)	*86.9*			*77.0-120*		*05/20/2023 02:24*	WG2063460

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	05/22/2023 12:49	WG2064252
Toluene	U		0.00130	0.00500	1	05/22/2023 12:49	WG2064252
Ethylbenzene	U		0.000737	0.00250	1	05/22/2023 12:49	WG2064252
Xylenes, Total	0.00183	J	0.000880	0.00650	1	05/22/2023 12:49	WG2064252
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/22/2023 12:49	WG2064252
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/22/2023 12:49	WG2064252
(S) Toluene-d8	*115*			*75.0-131*		*05/22/2023 12:49*	WG2064252
(S) 4-Bromofluorobenzene	*98.4*			*67.0-138*		*05/22/2023 12:49*	WG2064252
(S) 1,2-Dichloroethane-d4	*89.1*			*70.0-130*		*05/22/2023 12:49*	WG2064252

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	54.1		1.61	4.00	1	05/22/2023 09:56	WG2063522
C28-C36 Motor Oil Range	52.9		0.274	4.00	1	05/22/2023 09:56	WG2063522
(S) o-Terphenyl	*44.6*			*18.0-148*		*05/22/2023 09:56*	WG2063522

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
Acenaphthene	0.00840		0.00209	0.00600	1	05/23/2023 10:09	WG2063880
Anthracene	U		0.00230	0.00600	1	05/23/2023 10:09	WG2063880
Benzo(a)anthracene	U		0.00173	0.00600	1	05/23/2023 10:09	WG2063880
Benzo(b)fluoranthene	0.00247	J	0.00153	0.00600	1	05/23/2023 10:09	WG2063880
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/23/2023 10:09	WG2063880
Benzo(a)pyrene	0.00179	J	0.00179	0.00600	1	05/23/2023 10:09	WG2063880
Chrysene	0.00701		0.00232	0.00600	1	05/23/2023 10:09	WG2063880
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/23/2023 10:09	WG2063880
Fluoranthene	0.00697		0.00227	0.00600	1	05/23/2023 10:09	WG2063880
Fluorene	0.0208		0.00205	0.00600	1	05/23/2023 10:09	WG2063880
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/23/2023 10:09	WG2063880
1-Methylnaphthalene	0.0790		0.00449	0.0200	1	05/23/2023 10:09	WG2063880
2-Methylnaphthalene	0.0249		0.00427	0.0200	1	05/23/2023 10:09	WG2063880
Naphthalene	U		0.00408	0.0200	1	05/23/2023 10:09	WG2063880
Pyrene	0.00798		0.00200	0.00600	1	05/23/2023 10:09	WG2063880
(S) p-Terphenyl-d14	*55.5*			*23.0-120*		*05/23/2023 10:09*	WG2063880
(S) Nitrobenzene-d5	*128*			*14.0-149*		*05/23/2023 10:09*	WG2063880
(S) 2-Fluorobiphenyl	*55.9*			*34.0-125*		*05/23/2023 10:09*	WG2063880

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.79		1	05/25/2023 12:19	WG2064140

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	05/22/2023 07:09	WG2063539

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.14	T8	1	05/22/2023 14:10	WG2064341

Sample Narrative:

L1618107-05 WG2064341: 8.14 at 20.7C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	559		10.0	1	05/24/2023 11:07	WG2063556

Sample Narrative:

L1618107-05 WG2063556: at 25C

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	0.667		0.0167	0.200	1	05/25/2023 11:20	WG2064143

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.70		0.100	1.00	5	05/23/2023 09:48	WG2063726
Barium	190		0.608	10.0	20	05/23/2023 13:09	WG2063726
Cadmium	0.281	J	0.0855	1.00	5	05/23/2023 09:48	WG2063726
Copper	11.5		0.132	5.00	5	05/23/2023 09:48	WG2063726
Lead	17.7		0.0990	2.00	5	05/23/2023 09:48	WG2063726
Nickel	16.0		0.197	2.50	5	05/23/2023 09:48	WG2063726
Selenium	1.09	J O1	0.180	2.50	5	05/23/2023 09:48	WG2063726
Silver	U		0.0865	0.500	5	05/23/2023 09:48	WG2063726
Zinc	87.9	O1	0.740	25.0	5	05/23/2023 09:48	WG2063726

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.121		0.0217	0.100	1	05/20/2023 02:45	WG2063460
(S) a,a,a-Trifluorotoluene(FID)	*87.0*			*77.0-120*		*05/20/2023 02:45*	WG2063460

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	05/22/2023 13:08	WG2064252
Toluene	U		0.00130	0.00500	1	05/22/2023 13:08	WG2064252
Ethylbenzene	U		0.000737	0.00250	1	05/22/2023 13:08	WG2064252
Xylenes, Total	0.00245	J	0.000880	0.00650	1	05/22/2023 13:08	WG2064252
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/22/2023 13:08	WG2064252
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/22/2023 13:08	WG2064252
(S) Toluene-d8	*111*			*75.0-131*		*05/22/2023 13:08*	WG2064252
(S) 4-Bromofluorobenzene	*106*			*67.0-138*		*05/22/2023 13:08*	WG2064252
(S) 1,2-Dichloroethane-d4	*93.0*			*70.0-130*		*05/22/2023 13:08*	WG2064252

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	239	J3 V	40.3	100	25	05/22/2023 11:15	WG2063522
C28-C36 Motor Oil Range	871		6.85	100	25	05/22/2023 11:15	WG2063522
(S) o-Terphenyl	*0.000*	J7		*18.0-148*		*05/22/2023 11:15*	WG2063522

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
Acenaphthene	U		0.00209	0.00600	1	05/23/2023 11:47	WG2063880
Anthracene	U		0.00230	0.00600	1	05/23/2023 11:47	WG2063880
Benzo(a)anthracene	U		0.00173	0.00600	1	05/23/2023 11:47	WG2063880
Benzo(b)fluoranthene	0.00290	J	0.00153	0.00600	1	05/23/2023 11:47	WG2063880
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/23/2023 11:47	WG2063880
Benzo(a)pyrene	U		0.00179	0.00600	1	05/23/2023 11:47	WG2063880
Chrysene	U		0.00232	0.00600	1	05/23/2023 11:47	WG2063880
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/23/2023 11:47	WG2063880
Fluoranthene	U		0.00227	0.00600	1	05/23/2023 11:47	WG2063880
Fluorene	U		0.00205	0.00600	1	05/23/2023 11:47	WG2063880
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/23/2023 11:47	WG2063880
1-Methylnaphthalene	U		0.00449	0.0200	1	05/23/2023 11:47	WG2063880
2-Methylnaphthalene	U		0.00427	0.0200	1	05/23/2023 11:47	WG2063880
Naphthalene	U		0.00408	0.0200	1	05/23/2023 11:47	WG2063880
Pyrene	0.00261	J	0.00200	0.00600	1	05/23/2023 11:47	WG2063880
(S) p-Terphenyl-d14	*58.0*			*23.0-120*		*05/23/2023 11:47*	WG2063880
(S) Nitrobenzene-d5	*84.1*			*14.0-149*		*05/23/2023 11:47*	WG2063880
(S) 2-Fluorobiphenyl	*54.4*			*34.0-125*		*05/23/2023 11:47*	WG2063880

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	4.84		1	05/25/2023 12:05	WG2064140

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	1.53		0.255	1.00	1	05/22/2023 07:14	WG2063539

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	9.12	T8	1	05/22/2023 14:10	WG2064341

Sample Narrative:

L1618107-06 WG2064341: 9.12 at 20.7C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1110		10.0	1	05/24/2023 11:07	WG2063556

Sample Narrative:

L1618107-06 WG2063556: at 25C

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	2.37		0.167	2.00	10	05/25/2023 11:22	WG2064143

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.43		0.100	1.00	5	05/23/2023 11:51	WG2063726
Barium	125		0.608	10.0	20	05/23/2023 13:12	WG2063726
Cadmium	0.221	J	0.0855	1.00	5	05/23/2023 11:51	WG2063726
Copper	9.49		0.132	5.00	5	05/23/2023 11:51	WG2063726
Lead	14.2		0.0990	2.00	5	05/23/2023 11:51	WG2063726
Nickel	13.1		0.197	2.50	5	05/23/2023 11:51	WG2063726
Selenium	0.857	J	0.180	2.50	5	05/23/2023 11:51	WG2063726
Silver	U		0.0865	0.500	5	05/23/2023 11:51	WG2063726
Zinc	64.0		0.740	25.0	5	05/23/2023 11:51	WG2063726

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.516		0.0217	0.100	1	05/20/2023 03:05	WG2063460
(S) a,a,a-Trifluorotoluene(FID)	*84.8*			*77.0-120*		*05/20/2023 03:05*	WG2063460

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	05/22/2023 13:27	WG2064252
Toluene	U		0.00130	0.00500	1	05/22/2023 13:27	WG2064252
Ethylbenzene	U		0.000737	0.00250	1	05/22/2023 13:27	WG2064252
Xylenes, Total	0.00789		0.000880	0.00650	1	05/22/2023 13:27	WG2064252
1,2,4-Trimethylbenzene	0.00683		0.00158	0.00500	1	05/22/2023 13:27	WG2064252
1,3,5-Trimethylbenzene	0.00695		0.00200	0.00500	1	05/22/2023 13:27	WG2064252
(S) Toluene-d8	*109*			*75.0-131*		*05/22/2023 13:27*	WG2064252
(S) 4-Bromofluorobenzene	*109*			*67.0-138*		*05/22/2023 13:27*	WG2064252
(S) 1,2-Dichloroethane-d4	*92.1*			*70.0-130*		*05/22/2023 13:27*	WG2064252

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	14.0		1.61	4.00	1	05/22/2023 10:09	WG2063522
C28-C36 Motor Oil Range	32.9		0.274	4.00	1	05/22/2023 10:09	WG2063522
(S) o-Terphenyl	*58.6*			*18.0-148*		*05/22/2023 10:09*	WG2063522

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
Acenaphthene	U		0.00209	0.00600	1	05/23/2023 11:07	WG2063880
Anthracene	U		0.00230	0.00600	1	05/23/2023 11:07	WG2063880
Benzo(a)anthracene	U		0.00173	0.00600	1	05/23/2023 11:07	WG2063880
Benzo(b)fluoranthene	U		0.00153	0.00600	1	05/23/2023 11:07	WG2063880
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/23/2023 11:07	WG2063880
Benzo(a)pyrene	U		0.00179	0.00600	1	05/23/2023 11:07	WG2063880
Chrysene	U		0.00232	0.00600	1	05/23/2023 11:07	WG2063880
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/23/2023 11:07	WG2063880
Fluoranthene	U		0.00227	0.00600	1	05/23/2023 11:07	WG2063880
Fluorene	U		0.00205	0.00600	1	05/23/2023 11:07	WG2063880
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/23/2023 11:07	WG2063880
1-Methylnaphthalene	U		0.00449	0.0200	1	05/23/2023 11:07	WG2063880
2-Methylnaphthalene	U		0.00427	0.0200	1	05/23/2023 11:07	WG2063880
Naphthalene	U		0.00408	0.0200	1	05/23/2023 11:07	WG2063880
Pyrene	U		0.00200	0.00600	1	05/23/2023 11:07	WG2063880
(S) p-Terphenyl-d14	*50.4*			*23.0-120*		*05/23/2023 11:07*	WG2063880
(S) Nitrobenzene-d5	*57.5*			*14.0-149*		*05/23/2023 11:07*	WG2063880
(S) 2-Fluorobiphenyl	*35.4*			*34.0-125*		*05/23/2023 11:07*	WG2063880

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.11		1	05/25/2023 12:22	WG2064140

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	05/22/2023 07:19	WG2063539

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.66	T8	1	05/22/2023 14:10	WG2064341

Sample Narrative:

L1618107-07 WG2064341: 8.66 at 20.7C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1320		10.0	1	05/24/2023 11:07	WG2063556

Sample Narrative:

L1618107-07 WG2063556: at 25C

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	1.91	J	0.167	2.00	10	05/25/2023 11:25	WG2064143

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.88		0.100	1.00	5	05/21/2023 11:43	WG2063385
Barium	143		0.304	5.00	10	05/21/2023 13:41	WG2063385
Cadmium	0.251	J	0.0855	1.00	5	05/21/2023 11:43	WG2063385
Copper	11.5		0.132	5.00	5	05/21/2023 11:43	WG2063385
Lead	15.4		0.0990	2.00	5	05/21/2023 11:43	WG2063385
Nickel	15.0		0.197	2.50	5	05/21/2023 11:43	WG2063385
Selenium	1.17	J	0.180	2.50	5	05/21/2023 11:43	WG2063385
Silver	U		0.0865	0.500	5	05/21/2023 11:43	WG2063385
Zinc	66.4		0.740	25.0	5	05/21/2023 11:43	WG2063385

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.184		0.0217	0.100	1	05/20/2023 03:25	WG2063460
(S) a,a,a-Trifluorotoluene(FID)	*88.8*			*77.0-120*		*05/20/2023 03:25*	WG2063460

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	05/22/2023 13:47	WG2064252
Toluene	U		0.00130	0.00500	1	05/22/2023 13:47	WG2064252
Ethylbenzene	U		0.000737	0.00250	1	05/22/2023 13:47	WG2064252
Xylenes, Total	0.00232	J	0.000880	0.00650	1	05/22/2023 13:47	WG2064252
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/22/2023 13:47	WG2064252
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/22/2023 13:47	WG2064252
(S) Toluene-d8	*113*			*75.0-131*		*05/22/2023 13:47*	WG2064252
(S) 4-Bromofluorobenzene	*96.6*			*67.0-138*		*05/22/2023 13:47*	WG2064252
(S) 1,2-Dichloroethane-d4	*89.4*			*70.0-130*		*05/22/2023 13:47*	WG2064252

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	41.8		1.61	4.00	1	05/22/2023 10:22	WG2063522
C28-C36 Motor Oil Range	61.2		0.274	4.00	1	05/22/2023 10:22	WG2063522
(S) o-Terphenyl	*37.2*			*18.0-148*		*05/22/2023 10:22*	WG2063522

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
Acenaphthene	U		0.00209	0.00600	1	05/23/2023 10:28	WG2063880
Anthracene	U		0.00230	0.00600	1	05/23/2023 10:28	WG2063880
Benzo(a)anthracene	U		0.00173	0.00600	1	05/23/2023 10:28	WG2063880
Benzo(b)fluoranthene	U		0.00153	0.00600	1	05/23/2023 10:28	WG2063880
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/23/2023 10:28	WG2063880
Benzo(a)pyrene	U		0.00179	0.00600	1	05/23/2023 10:28	WG2063880
Chrysene	U		0.00232	0.00600	1	05/23/2023 10:28	WG2063880
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/23/2023 10:28	WG2063880
Fluoranthene	U		0.00227	0.00600	1	05/23/2023 10:28	WG2063880
Fluorene	U		0.00205	0.00600	1	05/23/2023 10:28	WG2063880
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/23/2023 10:28	WG2063880
1-Methylnaphthalene	U		0.00449	0.0200	1	05/23/2023 10:28	WG2063880
2-Methylnaphthalene	U		0.00427	0.0200	1	05/23/2023 10:28	WG2063880
Naphthalene	U		0.00408	0.0200	1	05/23/2023 10:28	WG2063880
Pyrene	U		0.00200	0.00600	1	05/23/2023 10:28	WG2063880
(S) p-Terphenyl-d14	*57.0*			*23.0-120*		*05/23/2023 10:28*	WG2063880
(S) Nitrobenzene-d5	*59.2*			*14.0-149*		*05/23/2023 10:28*	WG2063880
(S) 2-Fluorobiphenyl	*42.0*			*34.0-125*		*05/23/2023 10:28*	WG2063880

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.32		1	05/25/2023 12:36	WG2064140

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	05/22/2023 07:56	WG2063539

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.96	T8	1	05/22/2023 14:10	WG2064341

Sample Narrative:

L1618107-08 WG2064341: 8.96 at 20.6C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	619		10.0	1	05/24/2023 11:07	WG2063556

Sample Narrative:

L1618107-08 WG2063556: at 25C

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	1.05	J	0.167	2.00	10	05/25/2023 11:33	WG2064143

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.10		0.100	1.00	5	05/21/2023 11:46	WG2063385
Barium	145		0.304	5.00	10	05/21/2023 13:44	WG2063385
Cadmium	0.235	J	0.0855	1.00	5	05/21/2023 11:46	WG2063385
Copper	11.4		0.132	5.00	5	05/21/2023 11:46	WG2063385
Lead	16.2		0.0990	2.00	5	05/21/2023 11:46	WG2063385
Nickel	15.5		0.197	2.50	5	05/21/2023 11:46	WG2063385
Selenium	1.27	J	0.180	2.50	5	05/21/2023 11:46	WG2063385
Silver	U		0.0865	0.500	5	05/21/2023 11:46	WG2063385
Zinc	66.9		0.740	25.0	5	05/21/2023 11:46	WG2063385

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.212		0.0217	0.100	1	05/20/2023 03:46	WG2063460
(S) a,a,a-Trifluorotoluene(FID)	*88.0*			*77.0-120*		*05/20/2023 03:46*	WG2063460

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	05/22/2023 14:06	WG2064252
Toluene	U		0.00130	0.00500	1	05/22/2023 14:06	WG2064252
Ethylbenzene	U		0.000737	0.00250	1	05/22/2023 14:06	WG2064252
Xylenes, Total	0.00198	J	0.000880	0.00650	1	05/22/2023 14:06	WG2064252
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/22/2023 14:06	WG2064252
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/22/2023 14:06	WG2064252
(S) Toluene-d8	*111*			*75.0-131*		*05/22/2023 14:06*	WG2064252
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*05/22/2023 14:06*	WG2064252
(S) 1,2-Dichloroethane-d4	*93.1*			*70.0-130*		*05/22/2023 14:06*	WG2064252

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	13.2		1.61	4.00	1	05/22/2023 09:17	WG2063522
C28-C36 Motor Oil Range	22.9		0.274	4.00	1	05/22/2023 09:17	WG2063522
(S) o-Terphenyl	*49.2*			*18.0-148*		*05/22/2023 09:17*	WG2063522

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
Acenaphthene	U		0.00209	0.00600	1	05/23/2023 05:34	WG2063880
Anthracene	U		0.00230	0.00600	1	05/23/2023 05:34	WG2063880
Benzo(a)anthracene	U		0.00173	0.00600	1	05/23/2023 05:34	WG2063880
Benzo(b)fluoranthene	U		0.00153	0.00600	1	05/23/2023 05:34	WG2063880
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/23/2023 05:34	WG2063880
Benzo(a)pyrene	U		0.00179	0.00600	1	05/23/2023 05:34	WG2063880
Chrysene	U		0.00232	0.00600	1	05/23/2023 05:34	WG2063880
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/23/2023 05:34	WG2063880
Fluoranthene	U		0.00227	0.00600	1	05/23/2023 05:34	WG2063880
Fluorene	U		0.00205	0.00600	1	05/23/2023 05:34	WG2063880
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/23/2023 05:34	WG2063880
1-Methylnaphthalene	U		0.00449	0.0200	1	05/23/2023 05:34	WG2063880
2-Methylnaphthalene	U		0.00427	0.0200	1	05/23/2023 05:34	WG2063880
Naphthalene	U		0.00408	0.0200	1	05/23/2023 05:34	WG2063880
Pyrene	U		0.00200	0.00600	1	05/23/2023 05:34	WG2063880
(S) p-Terphenyl-d14	*58.0*			*23.0-120*		*05/23/2023 05:34*	WG2063880
(S) Nitrobenzene-d5	*78.9*			*14.0-149*		*05/23/2023 05:34*	WG2063880
(S) 2-Fluorobiphenyl	*50.0*			*34.0-125*		*05/23/2023 05:34*	WG2063880

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	22.7		1	05/25/2023 12:38	WG2064140

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	05/22/2023 08:03	WG2063539

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.41	T8	1	05/22/2023 14:10	WG2064341

Sample Narrative:

L1618107-09 WG2064341: 8.41 at 20.7C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	2370		10.0	1	05/24/2023 11:07	WG2063556

Sample Narrative:

L1618107-09 WG2063556: at 25C

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	2.40		0.0167	0.200	1	05/25/2023 11:36	WG2064143

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.22		0.100	1.00	5	05/21/2023 11:49	WG2063385
Barium	122		0.304	5.00	10	05/21/2023 13:47	WG2063385
Cadmium	0.167	J	0.0855	1.00	5	05/21/2023 11:49	WG2063385
Copper	10.2		0.132	5.00	5	05/21/2023 11:49	WG2063385
Lead	17.1		0.0990	2.00	5	05/21/2023 11:49	WG2063385
Nickel	13.3		0.197	2.50	5	05/21/2023 11:49	WG2063385
Selenium	0.911	J	0.180	2.50	5	05/21/2023 11:49	WG2063385
Silver	U		0.0865	0.500	5	05/21/2023 11:49	WG2063385
Zinc	61.0		0.740	25.0	5	05/21/2023 11:49	WG2063385

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.144		0.0217	0.100	1	05/20/2023 04:06	WG2063460
(S) a,a,a-Trifluorotoluene(FID)	*87.4*			*77.0-120*		*05/20/2023 04:06*	WG2063460

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	05/22/2023 14:25	WG2064252
Toluene	U		0.00130	0.00500	1	05/22/2023 14:25	WG2064252
Ethylbenzene	U		0.000737	0.00250	1	05/22/2023 14:25	WG2064252
Xylenes, Total	0.00210	J	0.000880	0.00650	1	05/22/2023 14:25	WG2064252
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/22/2023 14:25	WG2064252
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/22/2023 14:25	WG2064252
(S) Toluene-d8	*109*			*75.0-131*		*05/22/2023 14:25*	WG2064252
(S) 4-Bromofluorobenzene	*105*			*67.0-138*		*05/22/2023 14:25*	WG2064252
(S) 1,2-Dichloroethane-d4	*93.1*			*70.0-130*		*05/22/2023 14:25*	WG2064252

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	11.9		1.61	4.00	1	05/22/2023 10:36	WG2063522
C28-C36 Motor Oil Range	33.3		0.274	4.00	1	05/22/2023 10:36	WG2063522
(S) o-Terphenyl	*54.3*			*18.0-148*		*05/22/2023 10:36*	WG2063522

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
Acenaphthene	U		0.00209	0.00600	1	05/23/2023 10:48	WG2063880
Anthracene	U		0.00230	0.00600	1	05/23/2023 10:48	WG2063880
Benzo(a)anthracene	U		0.00173	0.00600	1	05/23/2023 10:48	WG2063880
Benzo(b)fluoranthene	U		0.00153	0.00600	1	05/23/2023 10:48	WG2063880
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/23/2023 10:48	WG2063880
Benzo(a)pyrene	U		0.00179	0.00600	1	05/23/2023 10:48	WG2063880
Chrysene	U		0.00232	0.00600	1	05/23/2023 10:48	WG2063880
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/23/2023 10:48	WG2063880
Fluoranthene	U		0.00227	0.00600	1	05/23/2023 10:48	WG2063880
Fluorene	U		0.00205	0.00600	1	05/23/2023 10:48	WG2063880
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/23/2023 10:48	WG2063880
1-Methylnaphthalene	U		0.00449	0.0200	1	05/23/2023 10:48	WG2063880
2-Methylnaphthalene	U		0.00427	0.0200	1	05/23/2023 10:48	WG2063880
Naphthalene	U		0.00408	0.0200	1	05/23/2023 10:48	WG2063880
Pyrene	U		0.00200	0.00600	1	05/23/2023 10:48	WG2063880
(S) p-Terphenyl-d14	*56.5*			*23.0-120*		*05/23/2023 10:48*	WG2063880
(S) Nitrobenzene-d5	*67.0*			*14.0-149*		*05/23/2023 10:48*	WG2063880
(S) 2-Fluorobiphenyl	*39.7*			*34.0-125*		*05/23/2023 10:48*	WG2063880

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.68		1	05/25/2023 12:41	WG2064140

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.425	J	0.255	1.00	1	05/22/2023 08:08	WG2063539

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.96	T8	1	05/22/2023 14:10	WG2064341

Sample Narrative:

L1618107-10 WG2064341: 8.96 at 20.5C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	710		10.0	1	05/24/2023 11:07	WG2063556

Sample Narrative:

L1618107-10 WG2063556: at 25C

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	0.994	J	0.167	2.00	10	05/25/2023 11:38	WG2064143

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.89		0.100	1.00	5	05/21/2023 12:13	WG2063385
Barium	195		0.304	5.00	10	05/21/2023 14:14	WG2063385
Cadmium	0.214	J	0.0855	1.00	5	05/21/2023 12:13	WG2063385
Copper	11.4		0.132	5.00	5	05/21/2023 12:13	WG2063385
Lead	13.8		0.0990	2.00	5	05/21/2023 12:13	WG2063385
Nickel	14.8		0.197	2.50	5	05/21/2023 12:13	WG2063385
Selenium	0.911	J	0.180	2.50	5	05/21/2023 12:13	WG2063385
Silver	U		0.0865	0.500	5	05/21/2023 12:13	WG2063385
Zinc	63.4		0.740	25.0	5	05/21/2023 12:13	WG2063385

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.118		0.0217	0.100	1	05/20/2023 04:27	WG2063460
(S) a,a,a-Trifluorotoluene(FID)	*88.0*			*77.0-120*		*05/20/2023 04:27*	WG2063460

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	05/22/2023 14:44	WG2064252
Toluene	U		0.00130	0.00500	1	05/22/2023 14:44	WG2064252
Ethylbenzene	U		0.000737	0.00250	1	05/22/2023 14:44	WG2064252
Xylenes, Total	0.00178	J	0.000880	0.00650	1	05/22/2023 14:44	WG2064252
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/22/2023 14:44	WG2064252
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/22/2023 14:44	WG2064252
(S) Toluene-d8	*114*			*75.0-131*		*05/22/2023 14:44*	WG2064252
(S) 4-Bromofluorobenzene	*98.1*			*67.0-138*		*05/22/2023 14:44*	WG2064252
(S) 1,2-Dichloroethane-d4	*91.8*			*70.0-130*		*05/22/2023 14:44*	WG2064252

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	37.9		8.05	20.0	5	05/22/2023 11:01	WG2063522
C28-C36 Motor Oil Range	128		1.37	20.0	5	05/22/2023 11:01	WG2063522
(S) o-Terphenyl	*46.5*			*18.0-148*		*05/22/2023 11:01*	WG2063522

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
Acenaphthene	0.380		0.00209	0.00600	1	05/23/2023 11:27	WG2063880
Anthracene	1.47		0.00230	0.00600	1	05/23/2023 11:27	WG2063880
Benzo(a)anthracene	6.00		0.0173	0.0600	10	05/24/2023 09:42	WG2063880
Benzo(b)fluoranthene	7.38		0.0153	0.0600	10	05/24/2023 09:42	WG2063880
Benzo(k)fluoranthene	3.15		0.00215	0.00600	1	05/23/2023 11:27	WG2063880
Benzo(a)pyrene	5.94		0.0179	0.0600	10	05/24/2023 09:42	WG2063880
Chrysene	4.95		0.0232	0.0600	10	05/24/2023 09:42	WG2063880
Dibenz(a,h)anthracene	0.872		0.00172	0.00600	1	05/23/2023 11:27	WG2063880
Fluoranthene	14.5		0.0227	0.0600	10	05/24/2023 09:42	WG2063880
Fluorene	0.282		0.00205	0.00600	1	05/23/2023 11:27	WG2063880
Indeno(1,2,3-cd)pyrene	4.70		0.0181	0.0600	10	05/24/2023 09:42	WG2063880
1-Methylnaphthalene	0.0406		0.00449	0.0200	1	05/23/2023 11:27	WG2063880
2-Methylnaphthalene	0.0219		0.00427	0.0200	1	05/23/2023 11:27	WG2063880
Naphthalene	0.0591		0.00408	0.0200	1	05/23/2023 11:27	WG2063880
Pyrene	11.0		0.0200	0.0600	10	05/24/2023 09:42	WG2063880
(S) p-Terphenyl-d14	*75.4*			*23.0-120*		*05/24/2023 09:42*	WG2063880
(S) p-Terphenyl-d14	*70.3*			*23.0-120*		*05/23/2023 11:27*	WG2063880
(S) Nitrobenzene-d5	*82.1*			*14.0-149*		*05/23/2023 11:27*	WG2063880
(S) Nitrobenzene-d5	*90.8*			*14.0-149*		*05/24/2023 09:42*	WG2063880
(S) 2-Fluorobiphenyl	*63.8*			*34.0-125*		*05/23/2023 11:27*	WG2063880
(S) 2-Fluorobiphenyl	*80.8*			*34.0-125*		*05/24/2023 09:42*	WG2063880

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.72		1	05/25/2023 12:44	WG2064140

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	05/22/2023 08:34	WG2063539

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	9.15	T8	1	05/22/2023 14:10	WG2064341

Sample Narrative:

L1618107-11 WG2064341: 9.15 at 20.6C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	676		10.0	1	05/24/2023 11:07	WG2063556

Sample Narrative:

L1618107-11 WG2063556: at 25C

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	2.51	J	0.835	10.0	50	05/25/2023 11:41	WG2064143

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.73		0.100	1.00	5	05/21/2023 12:17	WG2063385
Barium	94.0		0.152	2.50	5	05/21/2023 12:17	WG2063385
Cadmium	0.212	J	0.0855	1.00	5	05/21/2023 12:17	WG2063385
Copper	11.2		0.132	5.00	5	05/21/2023 12:17	WG2063385
Lead	14.7		0.0990	2.00	5	05/21/2023 12:17	WG2063385
Nickel	14.1		0.197	2.50	5	05/21/2023 12:17	WG2063385
Selenium	0.999	J	0.180	2.50	5	05/21/2023 12:17	WG2063385
Silver	U		0.0865	0.500	5	05/21/2023 12:17	WG2063385
Zinc	58.4		0.740	25.0	5	05/21/2023 12:17	WG2063385

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.210		0.0217	0.100	1	05/20/2023 04:47	WG2063460
(S) a,a,a-Trifluorotoluene(FID)	*89.9*			*77.0-120*		*05/20/2023 04:47*	WG2063460

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	05/22/2023 15:03	WG2064252
Toluene	U		0.00130	0.00500	1	05/22/2023 15:03	WG2064252
Ethylbenzene	U		0.000737	0.00250	1	05/22/2023 15:03	WG2064252
Xylenes, Total	0.00628	J	0.000880	0.00650	1	05/22/2023 15:03	WG2064252
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/22/2023 15:03	WG2064252
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/22/2023 15:03	WG2064252
(S) Toluene-d8	*113*			*75.0-131*		*05/22/2023 15:03*	WG2064252
(S) 4-Bromofluorobenzene	*98.7*			*67.0-138*		*05/22/2023 15:03*	WG2064252
(S) 1,2-Dichloroethane-d4	*93.7*			*70.0-130*		*05/22/2023 15:03*	WG2064252

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	U		1.61	4.00	1	05/22/2023 08:25	WG2063522
C28-C36 Motor Oil Range	2.03	J	0.274	4.00	1	05/22/2023 08:25	WG2063522
(S) o-Terphenyl	*40.1*			*18.0-148*		*05/22/2023 08:25*	WG2063522

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
Acenaphthene	U		0.00209	0.00600	1	05/23/2023 05:54	WG2063880
Anthracene	U		0.00230	0.00600	1	05/23/2023 05:54	WG2063880
Benzo(a)anthracene	U		0.00173	0.00600	1	05/23/2023 05:54	WG2063880
Benzo(b)fluoranthene	U		0.00153	0.00600	1	05/23/2023 05:54	WG2063880
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/23/2023 05:54	WG2063880
Benzo(a)pyrene	U		0.00179	0.00600	1	05/23/2023 05:54	WG2063880
Chrysene	U		0.00232	0.00600	1	05/23/2023 05:54	WG2063880
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/23/2023 05:54	WG2063880
Fluoranthene	U		0.00227	0.00600	1	05/23/2023 05:54	WG2063880
Fluorene	U		0.00205	0.00600	1	05/23/2023 05:54	WG2063880
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/23/2023 05:54	WG2063880
1-Methylnaphthalene	U		0.00449	0.0200	1	05/23/2023 05:54	WG2063880
2-Methylnaphthalene	U		0.00427	0.0200	1	05/23/2023 05:54	WG2063880
Naphthalene	U		0.00408	0.0200	1	05/23/2023 05:54	WG2063880
Pyrene	U		0.00200	0.00600	1	05/23/2023 05:54	WG2063880
(S) p-Terphenyl-d14	*79.4*			*23.0-120*		*05/23/2023 05:54*	WG2063880
(S) Nitrobenzene-d5	*63.2*			*14.0-149*		*05/23/2023 05:54*	WG2063880
(S) 2-Fluorobiphenyl	*51.8*			*34.0-125*		*05/23/2023 05:54*	WG2063880

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.398		1	05/25/2023 12:49	WG2064140

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	05/22/2023 08:39	WG2063539

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.23	T8	1	05/22/2023 14:10	WG2064341

Sample Narrative:

L1618107-12 WG2064341: 8.23 at 20.5C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	258		10.0	1	05/24/2023 11:07	WG2063556

Sample Narrative:

L1618107-12 WG2063556: at 25C

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	0.527		0.0167	0.200	1	05/25/2023 11:44	WG2064143

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.51		0.100	1.00	5	05/21/2023 12:20	WG2063385
Barium	204		0.608	10.0	20	05/21/2023 14:17	WG2063385
Cadmium	0.291	J	0.0855	1.00	5	05/21/2023 12:20	WG2063385
Copper	12.5		0.132	5.00	5	05/21/2023 12:20	WG2063385
Lead	18.1		0.0990	2.00	5	05/21/2023 12:20	WG2063385
Nickel	15.9		0.197	2.50	5	05/21/2023 12:20	WG2063385
Selenium	1.25	J	0.180	2.50	5	05/21/2023 12:20	WG2063385
Silver	0.0946	J	0.0865	0.500	5	05/21/2023 12:20	WG2063385
Zinc	69.1		0.740	25.0	5	05/21/2023 12:20	WG2063385

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.776		1	05/25/2023 12:52	WG2064140

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	05/22/2023 09:00	WG2063539

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.36	T8	1	05/22/2023 14:10	WG2064341

Sample Narrative:

L1618107-13 WG2064341: 8.36 at 20.5C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	225		10.0	1	05/24/2023 11:07	WG2063556

Sample Narrative:

L1618107-13 WG2063556: at 25C

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	0.476		0.0167	0.200	1	05/25/2023 11:47	WG2064143

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.10		0.100	1.00	5	05/21/2023 12:23	WG2063385
Barium	137		0.304	5.00	10	05/21/2023 14:20	WG2063385
Cadmium	0.229	J	0.0855	1.00	5	05/21/2023 12:23	WG2063385
Copper	11.3		0.132	5.00	5	05/21/2023 12:23	WG2063385
Lead	16.0		0.0990	2.00	5	05/21/2023 12:23	WG2063385
Nickel	14.2		0.197	2.50	5	05/21/2023 12:23	WG2063385
Selenium	1.04	J	0.180	2.50	5	05/21/2023 12:23	WG2063385
Silver	U		0.0865	0.500	5	05/21/2023 12:23	WG2063385
Zinc	63.0		0.740	25.0	5	05/21/2023 12:23	WG2063385

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.45		1	05/25/2023 12:55	WG2064140

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	05/22/2023 09:05	WG2063539

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.59	T8	1	05/22/2023 14:10	WG2064341

Sample Narrative:

L1618107-14 WG2064341: 8.59 at 20.6C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	301		10.0	1	05/24/2023 11:07	WG2063556

Sample Narrative:

L1618107-14 WG2063556: at 25C

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	0.879		0.0167	0.200	1	05/25/2023 11:49	WG2064143

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.44		0.100	1.00	5	05/21/2023 12:26	WG2063385
Barium	175		0.304	5.00	10	05/21/2023 14:24	WG2063385
Cadmium	0.310	J	0.0855	1.00	5	05/21/2023 12:26	WG2063385
Copper	12.7		0.132	5.00	5	05/21/2023 12:26	WG2063385
Lead	17.1		0.0990	2.00	5	05/21/2023 12:26	WG2063385
Nickel	16.8		0.197	2.50	5	05/21/2023 12:26	WG2063385
Selenium	0.994	J	0.180	2.50	5	05/21/2023 12:26	WG2063385
Silver	0.0922	J	0.0865	0.500	5	05/21/2023 12:26	WG2063385
Zinc	73.9		0.740	25.0	5	05/21/2023 12:26	WG2063385

Method Blank (MB)

(MB) R3927749-1 05/22/23 06:31

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

L1618107-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1618107-01 05/22/23 06:43 • (DUP) R3927749-3 05/22/23 06:48

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

L1618107-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1618107-12 05/22/23 08:39 • (DUP) R3927749-8 05/22/23 08:45

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

Laboratory Control Sample (LCS)

(LCS) R3927749-2 05/22/23 06:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	9.31	93.1	80.0-120	

L1618107-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1618107-10 05/22/23 08:08 • (MS) R3927749-5 05/22/23 08:19 • (MSD) R3927749-6 05/22/23 08:24

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 %
Hexavalent Chromium	20.0	0.425	16.0	15.0	78.1	72.9	1	75.0-125		J6	6.71	20

L1618107-10 Original Sample (OS) • Matrix Spike (MS)

(OS) L1618107-10 05/22/23 08:08 • (MS) R3927749-7 05/22/23 08:29

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	641	0.425	834	130	50	75.0-125	J5

L1618107-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1618107-01 05/22/23 14:10 • (DUP) R3927793-2 05/22/23 14:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.75	7.73	1	0.258		1

Sample Narrative:

OS: 7.75 at 20.8C

DUP: 7.73 at 20.7C

L1618109-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1618109-05 05/22/23 14:10 • (DUP) R3927793-3 05/22/23 14:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.81	7.81	1	0.000		1

Sample Narrative:

OS: 7.81 at 20.7C

DUP: 7.81 at 20.5C

Laboratory Control Sample (LCS)

(LCS) R3927793-1 05/22/23 14:10

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	9.99	99.9	99.0-101	

Sample Narrative:

LCS: 9.99 at 20.1C

Method Blank (MB)

(MB) R3928696-1 05/24/23 11:07

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

L1618107-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1618107-02 05/24/23 11:07 • (DUP) R3928696-3 05/24/23 11:07

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	719	714	1	0.698		20

Sample Narrative:
OS: at 25C
DUP: at 25C

L1618107-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1618107-12 05/24/23 11:07 • (DUP) R3928696-4 05/24/23 11:07

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	258	252	1	2.51		20

Sample Narrative:
OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3928696-2 05/24/23 11:07

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	327	330	101	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R3929363-1 05/25/23 11:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	U		0.0167	0.200

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

(LCS) R3929363-2 05/25/23 11:03 • (LCSD) R3929363-3 05/25/23 11:05

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	0.990	100	99.0	80.0-120			1.05	20

Method Blank (MB)

(MB) R3927384-1 05/21/23 10:40

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Copper	U		0.133	5.00
Lead	U		0.0990	2.00
Nickel	U		0.197	2.50
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

Laboratory Control Sample (LCS)

(LCS) R3927384-2 05/21/23 10:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	102	102	80.0-120	
Barium	100	100	100	80.0-120	
Cadmium	100	103	103	80.0-120	
Copper	100	93.9	93.9	80.0-120	
Lead	100	99.8	99.8	80.0-120	
Nickel	100	103	103	80.0-120	
Selenium	100	119	119	80.0-120	
Silver	20.0	20.5	103	80.0-120	
Zinc	100	100	100	80.0-120	

L1617920-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1617920-02 05/21/23 10:47 • (MS) R3927384-6 05/21/23 10:57 • (MSD) R3927384-7 05/21/23 11:00

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	12.5	122	119	110	107	5	75.0-125			2.80	20
Barium	100	53.3	179	182	126	128	5	75.0-125	E J5	E J5	1.58	20
Cadmium	100	U	110	112	110	112	5	75.0-125			1.47	20
Copper	100	16.9	108	105	91.0	88.3	5	75.0-125			2.57	20
Lead	100	U	101	103	101	103	5	75.0-125			2.26	20
Nickel	100	6.11	109	111	103	105	5	75.0-125			1.55	20
Silver	20.0	0.159	20.1	20.7	99.5	103	5	75.0-125			3.12	20
Zinc	100	1.95	103	106	101	104	5	75.0-125			2.24	20

Method Blank (MB)

(MB) R3928169-1 05/23/23 09:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Copper	U		0.133	5.00
Lead	U		0.0990	2.00
Nickel	U		0.197	2.50
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	3.71	J	0.740	25.0

Laboratory Control Sample (LCS)

(LCS) R3928169-2 05/23/23 09:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	106	106	80.0-120	
Barium	100	105	105	80.0-120	
Cadmium	100	106	106	80.0-120	
Copper	100	94.0	94.0	80.0-120	
Lead	100	101	101	80.0-120	
Nickel	100	107	107	80.0-120	
Selenium	100	115	115	80.0-120	
Silver	20.0	20.8	104	80.0-120	
Zinc	100	107	107	80.0-120	

L1618107-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1618107-05 05/23/23 09:48 • (MS) R3928169-5 05/23/23 09:58 • (MSD) R3928169-6 05/23/23 10:01

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	6.70	102	117	95.3	111	5	75.0-125			14.0	20
Barium	100	185	303	315	118	130	5	75.0-125	E	E J5	3.70	20
Cadmium	100	0.281	99.4	114	99.1	114	5	75.0-125			14.1	20
Copper	100	11.5	96.4	108	84.9	96.8	5	75.0-125			11.6	20
Lead	100	17.7	111	124	93.5	106	5	75.0-125			10.9	20
Nickel	100	16.0	111	126	94.6	111	5	75.0-125			13.4	20
Selenium	100	1.09	108	126	107	125	5	75.0-125			15.3	20
Silver	20.0	U	19.4	22.0	96.8	110	5	75.0-125			12.9	20
Zinc	100	87.9	179	203	90.8	115	5	75.0-125			12.9	20

Method Blank (MB)

(MB) R3927250-2 05/19/23 22:39

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)	*91.7*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3927250-1 05/19/23 21:36

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)			*101*	*77.0-120*	

Method Blank (MB)

(MB) R3928032-2 05/22/23 08:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	*110*			*75.0-131*
(S) 4-Bromofluorobenzene	*98.6*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*97.8*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3928032-1 05/22/23 07:12

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.119	95.2	70.0-123	
Toluene	0.125	0.126	101	75.0-121	
Ethylbenzene	0.125	0.134	107	74.0-126	
Xylenes, Total	0.375	0.397	106	72.0-127	
1,2,4-Trimethylbenzene	0.125	0.130	104	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.125	100	73.0-127	
(S) Toluene-d8			*108*	*75.0-131*	
(S) 4-Bromofluorobenzene			*100*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*94.1*	*70.0-130*	

L1616220-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1616220-01 05/22/23 09:20 • (MS) R3928032-3 05/22/23 15:42 • (MSD) R3928032-4 05/22/23 16:01

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.329	2.42	2.33	1670	1600	1	10.0-149	J5	J5	3.79	37
Toluene	0.125	2.11	6.60	6.93	3590	3860	1	10.0-156	E V	E V	4.88	38
Ethylbenzene	0.125	0.197	1.40	1.38	962	946	1	10.0-160	J5	J5	1.44	38
Xylenes, Total	0.375	3.53	17.0	16.9	3590	3570	1	10.0-160	V	V	0.590	38
1,2,4-Trimethylbenzene	0.125	0.666	3.51	3.90	2280	2590	1	10.0-160	E V	E V	10.5	36
1,3,5-Trimethylbenzene	0.125	0.688	2.82	3.25	1710	2050	1	10.0-160	E V	E V	14.2	38
(S) Toluene-d8					*101*	*107*		*75.0-131*				
(S) 4-Bromofluorobenzene					*115*	*105*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*92.1*	*81.3*		*70.0-130*				

Method Blank (MB)

(MB) R3927748-1 05/22/23 07:20

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	*45.0*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3927748-2 05/22/23 07:33

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	32.8	65.6	50.0-150	
(S) o-Terphenyl			*70.6*	*18.0-148*	

L1618107-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1618107-05 05/22/23 11:15 • (MS) R3927748-3 05/22/23 11:28 • (MSD) R3927748-4 05/22/23 11:41

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	239	171	233	0.000	0.000	25	50.0-150	V	J3 V	30.7	20
(S) o-Terphenyl					*0.000*	*0.000*		*18.0-148*	J7	J7		

Method Blank (MB)

(MB) R3928545-2 05/23/23 04:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00209	0.00600
Anthracene	U		0.00230	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Benzo(a)pyrene	U		0.00179	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
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
Naphthalene	U		0.00408	0.0200
Pyrene	U		0.00200	0.00600
(S) p-Terphenyl-d14	*68.6*			*23.0-120*
(S) Nitrobenzene-d5	*63.1*			*14.0-149*
(S) 2-Fluorobiphenyl	*57.4*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3928545-1 05/23/23 04:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0637	79.6	50.0-120	
Anthracene	0.0800	0.0616	77.0	50.0-126	
Benzo(a)anthracene	0.0800	0.0612	76.5	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0679	84.9	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0686	85.8	49.0-125	
Benzo(a)pyrene	0.0800	0.0633	79.1	42.0-120	
Chrysene	0.0800	0.0656	82.0	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0691	86.4	47.0-125	
Fluoranthene	0.0800	0.0647	80.9	49.0-129	
Fluorene	0.0800	0.0608	76.0	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0697	87.1	46.0-125	
1-Methylnaphthalene	0.0800	0.0687	85.9	51.0-121	
2-Methylnaphthalene	0.0800	0.0666	83.3	50.0-120	
Naphthalene	0.0800	0.0677	84.6	50.0-120	
Pyrene	0.0800	0.0660	82.5	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R3928545-1 05/23/23 04:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			*74.6*	*23.0-120*	
(S) Nitrobenzene-d5			*73.3*	*14.0-149*	
(S) 2-Fluorobiphenyl			*66.7*	*34.0-125*	

L1618109-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1618109-03 05/23/23 06:32 • (MS) R3928545-3 05/23/23 06:52 • (MSD) R3928545-4 05/23/23 07:12

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0764	U	0.0494	0.0525	64.7	69.4	1	14.0-127			6.08	27
Anthracene	0.0764	U	0.0458	0.0479	59.9	63.4	1	10.0-145			4.48	30
Benzo(a)anthracene	0.0764	U	0.0442	0.0478	57.9	63.2	1	10.0-139			7.83	30
Benzo(b)fluoranthene	0.0764	U	0.0443	0.0494	58.0	65.3	1	10.0-140			10.9	36
Benzo(k)fluoranthene	0.0764	U	0.0469	0.0487	61.4	64.4	1	10.0-137			3.77	31
Benzo(a)pyrene	0.0764	U	0.0493	0.0532	64.5	70.4	1	10.0-141			7.61	31
Chrysene	0.0764	U	0.0516	0.0536	67.5	70.9	1	10.0-145			3.80	30
Dibenz(a,h)anthracene	0.0764	U	0.0520	0.0542	68.1	71.7	1	10.0-132			4.14	31
Fluoranthene	0.0764	U	0.0461	0.0497	60.3	65.7	1	10.0-153			7.52	33
Fluorene	0.0764	U	0.0463	0.0495	60.6	65.5	1	11.0-130			6.68	29
Indeno(1,2,3-cd)pyrene	0.0764	U	0.0466	0.0506	61.0	66.9	1	10.0-137			8.23	32
1-Methylnaphthalene	0.0764	U	0.0572	0.0593	74.9	78.4	1	10.0-142			3.61	28
2-Methylnaphthalene	0.0764	U	0.0541	0.0565	70.8	74.7	1	10.0-137			4.34	28
Naphthalene	0.0764	U	0.0593	0.0605	77.6	80.0	1	10.0-135			2.00	27
Pyrene	0.0764	U	0.0465	0.0510	60.9	67.5	1	10.0-148			9.23	35
(S) p-Terphenyl-d14					*60.7*	*61.0*		*23.0-120*				
(S) Nitrobenzene-d5					*76.3*	*75.8*		*14.0-149*				
(S) 2-Fluorobiphenyl					*56.7*	*50.8*		*34.0-125*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

MDL	Method Detection Limit.
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
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
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.
V	The sample concentration is too high to evaluate accurate spike recoveries.

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	LAO000356
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.

Scout Energy Partners
100 Chevron Road
Rangely, CO 81648

Billing Information: **Same as left**

Report to: **Chris Patterson**

Email To: **chris.patterson@scoutep.com**

Project Description: **AC McLaughlin 14 Spill**

City/State Collected: **CO**

Phone: **1-970-501-5157**
Fax:

Client Project #

Lab Project #

Collected by (print): **M. Schlageter**

Site/Facility ID #

P.O. #

Collected by (signature): MS

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
X Three Day

Quote #

Date Results Needed

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX, TMBs	Table 915 PAHs	Table 915 Metals	Hot Water Soluble Boron	GRO/DRO/ORO	SAR/EC/pH					Remarks	Sample # (lab only)
ACM14-SS1	Grab	SS	0-1'	05/17/23	1040	3	X	X	X	X	X	X						-01
ACM14-SS2	Grab	SS	0-1'	05/17/23	1050	3	X	X	X	X	X	X						-02
ACM14-SS3	Grab	SS	0-1'	05/17/23	1100	3	X	X	X	X	X	X						-03
ACM14-SS4	Grab	SS	0-1'	05/17/23	1110	3	X	X	X	X	X	X						-04
ACM14-SS5	Grab	SS	0-1'	05/17/23	1120	3	X	X	X	X	X	X						-05
ACM14-SS6	Grab	SS	0-1'	05/17/23	1130	3	X	X	X	X	X	X						-06
ACM14-SS7	Grab	SS	0-1'	05/17/23	1140	3	X	X	X	X	X	X						-07
ACM14-SS8	Grab	SS	0-1'	05/17/23	1150	3	X	X	X	X	X	X						-08
ACM14-SS9	Grab	SS	0-1'	05/17/23	1200	3	X	X	X	X	X	X						-09
ACM14-SS10	Grab	SS	0-1'	05/17/23	1210	3	X	X	X	X	X	X						-10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier __ _____

Tracking # 6126 6537 3865

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

	Date:	Time:		
Relinquished by : (Signature)	5/18/23	11:15	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by : (Signature)	5/18 23	11 45	Received by: (Signature)	Temp: 2.0 °C Bottles Received: 2.0-2.0 42
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Hana Muechina	Date: 5.19.23 Time: 0905

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Chain of Custody Page ___ of ___

Pace Analytical®
National Center for Testing & Innovation

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

L # L1615107

Tab E238

Acctnum: SCOENERCO

Template:

Prelogin:

TSR:

PB:

Shipped Via:

Scout Energy Partners
100 Chevron Road
Rangely, CO 81648

Billing Information: **Same as left**

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace Analytical® National Center for Testing & Innovation

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

Report to: **Chris Patterson**

Email To: **chris.patterson@scoutep.com**

Project Description: **AC McLaughlin 14 Spill**

City/State Collected: **CO**

Phone: **1-970-501-5157**
Fax:

Client Project #

Lab Project #

L # L161810?

Table #

Collected by (print): M.Schlageter

Site/Facility ID #

P.O. #

Acctnum: **SCOENERCO**

Template:

Prelogin:

TSR:

PB:

Collected by (signature): MS

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
X Three Day

Quote #

Date Results Needed

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX, TMBs	Table 915 PAHs	Table 915 Metals	Hot Water Soluble Boron	GRO/DRO/ORO	SAR/EC/pH	Remarks	Sample # (lab only)
ACM14-SS11	Grab	SS	0-1'	05/17/23	1220	3	X	X	X	X	X	X		-11
ACM14-BG1	Grab	SS	0-1'	05/17/23	1030	3			X	X		X		-12
ACM14-BG2	Grab	SS	0-1'	05/17/23	1115	3			X	X		X		-13
ACM14-BG3	Grab	SS	0-1'	05/17/23	1230	3			X	X		X		-14

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

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

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
MSmith	5/18/23	11 15		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
	5/18/23	1145		2.0+0-2.0 42
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
			Hana Muechling	5/19/23 0905

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Mountain States ACCUTEST LABORATORIES

03/03/11

Technical Report for

Olsson Associates

009-0082_201_201004, Grand Junction, CO

AC McLaughlin 26 Spill

Accutest Job Number: D21012

Sampling Date: 02/10/11

Report to:

Olsson Associates
826 21 1/2 Road
Grand Junction, CO 81505
tdobransky@oaconsulting.com

ATTN: Tim Dobransky

Total number of pages in report: **89**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

John Hamilton
Laboratory Director

Client Service contact: Amanda Kissell 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW) UT (NELAP CO00049)

Sections: 1 2 3 4 5 6 7 8 9 10 11 12

Table of Contents

Sample Summary

Olsson Associates

Job No: D21012

009-0082_201_201004, Grand Junction, CO
Project No: AC McLaughlin 26 Spill

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
D21012-1	02/10/11	12:50	TD	02/12/11	SO	Soil	ACMCL-26-SS1(0-6")
D21012-1A	02/10/11	12:50	TD	02/12/11	SO	Soil	ACMCL-26-SS1(0-6")
D21012-2	02/10/11	13:10	TD	02/12/11	SO	Soil	ACMCL-26-SS2(0-6")
D21012-2A	02/10/11	13:10	TD	02/12/11	SO	Soil	ACMCL-26-SS2(0-6")
D21012-3	02/10/11	13:30	TD	02/12/11	SO	Soil	ACMCL-26-BG(0-6")
D21012-3A	02/10/11	13:30	TD	02/12/11	SO	Soil	ACMCL-26-BG(0-6")

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Olsson Associates	**Job No**	D21012
Site:	009-0082_201_201004, Grand Junction, CO	**Report Dat**	3/3/2011 10:02:20 AM

On 02/12/2011, three (3) samples, 0 Trip Blanks, and 0 Field Blanks were received at Accutest Mountain States (AMS) at a temperature of 2.8°C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D21012 was assigned to the project. The lab sample IDs, client sample IDs, and dates of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix SO **Batch ID:** V5V775

- All samples were analyzed within the recommended method holding time.
- The method blank for this batch meets method specific criteria.
- Samples D21155-1MS and D21155-1MSD were used as the QC samples indicated.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix SO **Batch ID:** OP3180

- All samples were extracted and analyzed within the recommended method holding time.
- Samples D21155-1MS and D21155-1MSD were used as the QC samples indicated.
- The method blank for this batch meets method specific criteria.
- Sample D21012-2: Sample dilution was required due to matrix interference.

Matrix SO **Batch ID:** OP3193

- All samples were extracted and analyzed within the recommended method holding time.
- Samples D21012-1MS and D21012-1MSD were used as the QC samples indicated.
- The method blank for this batch meets method specific criteria.
- The matrix spike (MS) recoveries of 1-Methylnaphthalene and 2-Methylnaphthalene are outside control limits. Outside control limits due to matrix interference. Refer to the lab control or spike blank for recovery information.
- The RPDs for the MS and MSD recoveries of 1-Methylnaphthalene, 2-Methylnaphthalene, and Naphthalene are outside control limits for sample OP3193-MSD. Variability of recovery may be due to sample matrix/homogeneity.

Volatiles by GC By Method SW846 8015B

Matrix SO **Batch ID:** GGB512

- All samples were analyzed within the recommended method holding time.
- Samples D21012-1MS and D21012-1MSD were used as the QC samples indicated.
- The method blank for this batch meets method specific criteria.

Extractables by GC By Method SW846-8015B

Matrix SO **Batch ID:** OP3200

- All samples were extracted and analyzed within the recommended method holding time.
- Samples D21191-1MS and D21191-1MSD were used as the QC samples indicated.
- The method blank for this batch meets method specific criteria.
- Sample OP3200-MSD has surrogates outside control limits. Probable cause due to matrix interference.

Metals By Method SW846 6010B

Matrix AQ **Batch ID:** MP4048

- All samples were digested and analyzed within the recommended method holding time.
- The method blank for this batch meets method specific criteria.
- Samples D21012-1AMS and D21012-1AMSD were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery of Sodium is outside control limits. The spike amount is low relative to the sample amount. Refer to the lab control or spike blank for recovery information.

Matrix SO **Batch ID:** MP4012

- All samples were digested and analyzed within the recommended method holding time.
- The method blank for this batch meets method specific criteria.
- Samples D21004-10MS, D21004-10MSD, and D21004-10SDL were used as the QC samples for the metals analysis.
- The matrix spike and matrix spike duplicate (MS/MSD) recoveries of Chromium, Lead, and Nickel amd the MSD recovery of Zinc are outside control limits. The spike recovery indicates possible matrix interference. Refer to the lab control or spike blank for recovery information.
- The matrix spike (MS) recovery of Barium are outside control limits. The spike amount is low relative to the sample amount. Refer to the lab control or spike blank for recovery information.
- The serial dilution RPDs for Lead and Selenium are outside control limits for sample MP4012-SD1. The percent difference acceptable is for Selenium due to low initial sample concentration (< 50 times IDL).
- MP4012-SD1 for Lead: Serial dilution indicates possible matrix interference.

Metals By Method SW846 6020

Matrix SO **Batch ID:** MP4013

- All samples were digested and analyzed within the recommended method holding time.
- The method blank for this batch meets method specific criteria.
- Samples D21004-10MS, D21004-10MSD, and D21004-10SDL were used as the QC samples for the metals analysis.

Metals By Method SW846 7471A

Matrix SO **Batch ID:** MP4031

- All samples were digested and analyzed within the recommended method holding time.
- The method blank for this batch meets method specific criteria.
- Samples D20885-1MS and D20885-1MSD were used as the QC samples for the Mercury analysis.

Wet Chemistry By Method ASTM D1498-76M

Matrix SO **Batch ID:** M:GN34144

- The data for ASTM D1498-76M meets quality control requirements.
- Redox Potential Vs H2: Analysis performed at Accutest Laboratories, Marlborough, MA.

Wet Chemistry By Method EPA 300/SW846 9056

Matrix SO **Batch ID:** GP3849

- All samples were prepared and analyzed within the recommended method holding time.
- The method blank for this batch meets method specific criteria.
- Samples D21012-3MS and D21012-3MSD were used as the QC samples for the anion analysis.

Wet Chemistry By Method LADNR29B

Matrix SO **Batch ID:** MP4048

- Sodium Adsorption Ratio: Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+(Mg meq/L)/2]

Wet Chemistry By Method SM19 2540B M

Matrix SO **Batch ID:** GN8246

- The data for SM19 2540B M meets quality control requirements.

Wet Chemistry By Method SW846 3060/7196A M

Matrix SO **Batch ID:** R6312

- The data for SW846 3060/7196A M meets quality control requirements.
- Trivalent Chromium, : Calculated as: (Chromium) - (Hexavalent Chromium)

Wet Chemistry By Method SW846 3060A/7196A

Matrix SO **Batch ID:** M:GP12639

- The data for SW846 3060A/7196A meets quality control requirements.
- Hexavalent Chromium: Analysis performed at Accutest Laboratories, Marlborough, MA.

Wet Chemistry By Method SW846 9045C

Matrix SO **Batch ID:** GN8251

- The following samples were run outside of holding time for method SW846 9045C: D21012-1, D21012-2, and D21012-3.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Accutest Mountain States	**Job No**	D21012
Site:	CORCCOGJ: AC McLaughlin 26 Spill (009-0082_201_201004)	**Report Date**	2/24/2011 10:38:58 AM

3 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 02/10/2011 and were received at Accutest on 02/12/2011 properly preserved, at 2.1 Deg. C and intact. These Samples received an Accutest job number of D21012. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Wet Chemistry By Method ASTM D1498-76M

Matrix SO **Batch ID:** GN34144

- Sample(s) D21004-10DUP were used as the QC samples for Redox Potential Vs H2.

Wet Chemistry By Method SW846 3060A/7196A

Matrix SO **Batch ID:** GP12639

- All samples were distilled within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D21155-1DUP, D21155-1MS were used as the QC samples for Chromium, Hexavalent.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(D21012).

Mountain States ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	ACMCL-26-SS1(0-6")		
Lab Sample ID:	D21012-1	**Date Sampled:**	02/10/11
Matrix:	SO - Soil	**Date Received:**	02/12/11
Method:	SW846 8260B	**Percent Solids:**	77.0
Project:	009-0082_201_201004, Grand Junction, CO		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V13323.D	1	02/21/11	DC	n/a	n/a	V5V775
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.01 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	174	80	24	ug/kg	
108-88-3	Toluene	183	160	80	ug/kg	
100-41-4	Ethylbenzene	238	160	32	ug/kg	
	m,p-Xylene	797	320	56	ug/kg	
95-47-6	o-Xylene	473	160	56	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	92%		70-130%
460-00-4	4-Bromofluorobenzene	104%		70-130%
17060-07-0	1,2-Dichloroethane-D4	107%		70-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	ACMCL-26-SS1(0-6")		
Lab Sample ID:	D21012-1	**Date Sampled:**	02/10/11
Matrix:	SO - Soil	**Date Received:**	02/12/11
Method:	SW846 8270C BY SIM SW846 3540C	**Percent Solids:**	77.0
Project:	009-0082_201_201004, Grand Junction, CO		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3G02900.D	5	02/22/11	TMB	02/21/11	OP3193	E3G103
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	43	40	ug/kg	
208-96-8	Acenaphthylene	ND	220	44	ug/kg	
120-12-7	Anthracene	ND	43	28	ug/kg	
56-55-3	Benzo(a)anthracene	ND	43	42	ug/kg	
50-32-8	Benzo(a)pyrene	ND	43	27	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	43	31	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	43	27	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	43	27	ug/kg	
218-01-9	Chrysene	ND	43	22	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	43	32	ug/kg	
206-44-0	Fluoranthene	ND	43	27	ug/kg	
86-73-7	Fluorene	ND	43	42	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	43	28	ug/kg	
90-12-0	1-Methylnaphthalene	143	43	38	ug/kg	
91-57-6	2-Methylnaphthalene	164	220	66	ug/kg	J
91-20-3	Naphthalene	96.8	220	48	ug/kg	J
85-01-8	Phenanthrene	53.8	43	34	ug/kg	
129-00-0	Pyrene	ND	43	29	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	57%		10-193%
321-60-8	2-Fluorobiphenyl	43%		20-138%
1718-51-0	Terphenyl-d14	53%		17-174%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	ACMCL-26-SS1(0-6")		
Lab Sample ID:	D21012-1	**Date Sampled:**	02/10/11
Matrix:	SO - Soil	**Date Received:**	02/12/11
Method:	SW846 8015B	**Percent Solids:**	77.0
Project:	009-0082_201_201004, Grand Junction, CO		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB9473.D	1	02/14/11	JL	n/a	n/a	GGB512
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	53.4	16	16	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	100%		60-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	ACMCL-26-SS1(0-6")		
Lab Sample ID:	D21012-1	**Date Sampled:**	02/10/11
Matrix:	SO - Soil	**Date Received:**	02/12/11
Method:	SW846-8015B SW846 3550B	**Percent Solids:**	77.0
Project:	009-0082_201_201004, Grand Junction, CO		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FE6006.D	1	02/25/11	JB	02/23/11	OP3200	GFE299
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	305	17	11	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	130%		63-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	ACMCL-26-SS1(0-6")		
Lab Sample ID:	D21012-1	**Date Sampled:**	02/10/11
Matrix:	SO - Soil	**Date Received:**	02/12/11
		Percent Solids:	77.0
Project:	009-0082_201_201004, Grand Junction, CO		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	5.7	0.54	mg/kg	5	02/14/11	02/15/11	JY	SW846 6020 [2]	SW846 3050B [6]
Barium	75.8	1.3	mg/kg	1	02/14/11	02/14/11	GJ	SW846 6010B [1]	SW846 3050B [5]
Cadmium	< 1.3	1.3	mg/kg	1	02/14/11	02/14/11	GJ	SW846 6010B [1]	SW846 3050B [5]
Chromium	8.9	1.3	mg/kg	1	02/14/11	02/15/11	GJ	SW846 6010B [3]	SW846 3050B [5]
Copper	11.2	0.67	mg/kg	1	02/14/11	02/15/11	GJ	SW846 6010B [3]	SW846 3050B [5]
Lead	15.0	6.7	mg/kg	1	02/14/11	02/14/11	GJ	SW846 6010B [1]	SW846 3050B [5]
Mercury	< 0.10	0.10	mg/kg	1	02/16/11	02/17/11	JM	SW846 7471A [4]	SW846 7471A [7]
Nickel	12.7	4.0	mg/kg	1	02/14/11	02/14/11	GJ	SW846 6010B [1]	SW846 3050B [5]
Selenium	< 6.7	6.7	mg/kg	1	02/14/11	02/15/11	GJ	SW846 6010B [3]	SW846 3050B [5]
Silver	< 4.0	4.0	mg/kg	1	02/14/11	02/14/11	GJ	SW846 6010B [1]	SW846 3050B [5]
Zinc	54.1	4.0	mg/kg	1	02/14/11	02/15/11	GJ	SW846 6010B [3]	SW846 3050B [5]

(1) Instrument QC Batch: MA1311
(2) Instrument QC Batch: MA1314
(3) Instrument QC Batch: MA1315
(4) Instrument QC Batch: MA1320
(5) Prep QC Batch: MP4012
(6) Prep QC Batch: MP4013
(7) Prep QC Batch: MP4031

RL = Reporting Limit

Report of Analysis

Client Sample ID:	ACMCL-26-SS1(0-6")		
Lab Sample ID:	D21012-1	**Date Sampled:**	02/10/11
Matrix:	SO - Soil	**Date Received:**	02/12/11
		Percent Solids:	77.0
Project:	009-0082_201_201004, Grand Junction, CO		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	2480	32	mg/kg	5	02/24/11 11:32	GH	EPA 300/SW846 9056
Chromium, Hexavalent [a]	0.70	0.51	mg/kg	1	02/21/11 16:05	AMA	SW846 3060A/7196A
Chromium, Trivalent [b]	8.2	1.8	mg/kg	1	02/21/11 16:05	AMA	SW846 3060/7196A M
Redox Potential Vs H2 [a]	229		mv	1	02/15/11	AMA	ASTM D1498-76M
Solids, Percent	77		%	1	02/14/11	SWT	SM19 2540B M
Specific Conductivity	8550	1.0	umhos/cm	1	02/22/11	JD	DEPT.OF AG, BOOK N9
pH	8.21		su	1	02/14/11 13:30	JD	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.
(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

RL = Reporting Limit

Report of Analysis

Client Sample ID:	ACMCL-26-SS1(0-6")		
Lab Sample ID:	D21012-1A	**Date Sampled:**	02/10/11
Matrix:	SO - Soil	**Date Received:**	02/12/11
		Percent Solids:	77.0
Project:	009-0082_201_201004, Grand Junction, CO		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	219	2.0	mg/l	1	02/17/11	02/17/11	GJ	SW846 6010B [1]	EPA 200.7 [2]
Magnesium	48.8	1.0	mg/l	1	02/17/11	02/17/11	GJ	SW846 6010B [1]	EPA 200.7 [2]
Sodium	1160	2.0	mg/l	1	02/17/11	02/17/11	GJ	SW846 6010B [1]	EPA 200.7 [2]

(1) Instrument QC Batch: MA1323
(2) Prep QC Batch: MP4048

RL = Reporting Limit

Report of Analysis

Client Sample ID:	ACMCL-26-SS1(0-6")		
Lab Sample ID:	D21012-1A	**Date Sampled:**	02/10/11
Matrix:	SO - Soil	**Date Received:**	02/12/11
		Percent Solids:	77.0
Project:	009-0082_201_201004, Grand Junction, CO		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio [a]	18.4		ratio	1	02/17/11 21:35	GJ	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	ACMCL-26-SS2(0-6")		
Lab Sample ID:	D21012-2	**Date Sampled:**	02/10/11
Matrix:	SO - Soil	**Date Received:**	02/12/11
Method:	SW846 8260B	**Percent Solids:**	78.2
Project:	009-0082_201_201004, Grand Junction, CO		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V13324.D	1	02/21/11	DC	n/a	n/a	V5V775
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.00 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	235	78	23	ug/kg	
108-88-3	Toluene	586	160	78	ug/kg	
100-41-4	Ethylbenzene	86.1	160	31	ug/kg	J
	m,p-Xylene	276	310	54	ug/kg	J
95-47-6	o-Xylene	111	160	54	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	94%		70-130%
460-00-4	4-Bromofluorobenzene	104%		70-130%
17060-07-0	1,2-Dichloroethane-D4	105%		70-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	ACMCL-26-SS2(0-6")		
Lab Sample ID:	D21012-2	**Date Sampled:**	02/10/11
Matrix:	SO - Soil	**Date Received:**	02/12/11
Method:	SW846 8270C BY SIM SW846 3540C	**Percent Solids:**	78.2
Project:	009-0082_201_201004, Grand Junction, CO		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3G02895.D	5	02/22/11	TMB	02/18/11	OP3180	E3G103
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	42	40	ug/kg	
208-96-8	Acenaphthylene	ND	210	44	ug/kg	
120-12-7	Anthracene	ND	42	27	ug/kg	
56-55-3	Benzo(a)anthracene	ND	42	42	ug/kg	
50-32-8	Benzo(a)pyrene	ND	42	27	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	42	31	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	42	26	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	42	27	ug/kg	
218-01-9	Chrysene	ND	42	21	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	42	31	ug/kg	
206-44-0	Fluoranthene	ND	42	26	ug/kg	
86-73-7	Fluorene	ND	42	42	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	42	28	ug/kg	
90-12-0	1-Methylnaphthalene	ND	42	38	ug/kg	
91-57-6	2-Methylnaphthalene	ND	210	65	ug/kg	
91-20-3	Naphthalene	ND	210	47	ug/kg	
85-01-8	Phenanthrene	ND	42	34	ug/kg	
129-00-0	Pyrene	ND	42	29	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	42%		10-193%
321-60-8	2-Fluorobiphenyl	38%		20-138%
1718-51-0	Terphenyl-d14	47%		17-174%

(a) Dilution required due to matrix interference.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	ACMCL-26-SS2(0-6")		
Lab Sample ID:	D21012-2	**Date Sampled:**	02/10/11
Matrix:	SO - Soil	**Date Received:**	02/12/11
Method:	SW846 8015B	**Percent Solids:**	78.2
Project:	009-0082_201_201004, Grand Junction, CO		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB9476.D	1	02/14/11	JL	n/a	n/a	GGB512
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	16	16	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	96%		60-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	ACMCL-26-SS2(0-6")		
Lab Sample ID:	D21012-2	**Date Sampled:**	02/10/11
Matrix:	SO - Soil	**Date Received:**	02/12/11
Method:	SW846-8015B SW846 3550B	**Percent Solids:**	78.2
Project:	009-0082_201_201004, Grand Junction, CO		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FE6007.D	1	02/25/11	JB	02/23/11	OP3200	GFE299
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	40.7	17	11	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	111%		63-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	ACMCL-26-SS2(0-6")		
Lab Sample ID:	D21012-2	**Date Sampled:**	02/10/11
Matrix:	SO - Soil	**Date Received:**	02/12/11
		Percent Solids:	78.2
Project:	009-0082_201_201004, Grand Junction, CO		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	5.7	0.48	mg/kg	5	02/14/11	02/15/11	JY	SW846 6020 [2]	SW846 3050B [6]
Barium	712	1.2	mg/kg	1	02/14/11	02/14/11	GJ	SW846 6010B [1]	SW846 3050B [5]
Cadmium	< 1.2	1.2	mg/kg	1	02/14/11	02/14/11	GJ	SW846 6010B [1]	SW846 3050B [5]
Chromium	14.6	1.2	mg/kg	1	02/14/11	02/14/11	GJ	SW846 6010B [1]	SW846 3050B [5]
Copper	11.8	1.2	mg/kg	1	02/14/11	02/14/11	GJ	SW846 6010B [1]	SW846 3050B [5]
Lead	16.6	6.0	mg/kg	1	02/14/11	02/14/11	GJ	SW846 6010B [1]	SW846 3050B [5]
Mercury	< 0.11	0.11	mg/kg	1	02/16/11	02/17/11	JM	SW846 7471A [4]	SW846 7471A [7]
Nickel	14.2	3.6	mg/kg	1	02/14/11	02/14/11	GJ	SW846 6010B [1]	SW846 3050B [5]
Selenium	< 6.0	6.0	mg/kg	1	02/14/11	02/15/11	GJ	SW846 6010B [3]	SW846 3050B [5]
Silver	< 3.6	3.6	mg/kg	1	02/14/11	02/14/11	GJ	SW846 6010B [1]	SW846 3050B [5]
Zinc	72.5	3.6	mg/kg	1	02/14/11	02/15/11	GJ	SW846 6010B [3]	SW846 3050B [5]

(1) Instrument QC Batch: MA1311
(2) Instrument QC Batch: MA1314
(3) Instrument QC Batch: MA1315
(4) Instrument QC Batch: MA1320
(5) Prep QC Batch: MP4012
(6) Prep QC Batch: MP4013
(7) Prep QC Batch: MP4031

RL = Reporting Limit

Report of Analysis

Client Sample ID:	ACMCL-26-SS2(0-6")		
Lab Sample ID:	D21012-2	**Date Sampled:**	02/10/11
Matrix:	SO - Soil	**Date Received:**	02/12/11
		Percent Solids:	78.2
Project:	009-0082_201_201004, Grand Junction, CO		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	3900	64	mg/kg	10	02/24/11 11:45	GH	EPA 300/SW846 9056
Chromium, Hexavalent [a]	0.80	0.50	mg/kg	1	02/21/11 16:05	AMA	SW846 3060A/7196A
Chromium, Trivalent [b]	13.8	1.7	mg/kg	1	02/21/11 16:05	AMA	SW846 3060/7196A M
Redox Potential Vs H2 [a]	239		mv	1	02/15/11	AMA	ASTM D1498-76M
Solids, Percent	78.2		%	1	02/14/11	SWT	SM19 2540B M
Specific Conductivity	13500	1.0	umhos/cm	1	02/22/11	JD	DEPT.OF AG, BOOK N9
pH	8.72		su	1	02/14/11 13:30	JD	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.
(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

RL = Reporting Limit

Report of Analysis

Client Sample ID:	ACMCL-26-SS2(0-6")		
Lab Sample ID:	D21012-2A	**Date Sampled:**	02/10/11
Matrix:	SO - Soil	**Date Received:**	02/12/11
		Percent Solids:	78.2
Project:	009-0082_201_201004, Grand Junction, CO		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	239	2.0	mg/l	1	02/17/11	02/17/11	GJ	SW846 6010B [1]	EPA 200.7 [3]
Magnesium	55.4	1.0	mg/l	1	02/17/11	02/18/11	GJ	SW846 6010B [2]	EPA 200.7 [3]
Sodium	2160	2.0	mg/l	1	02/17/11	02/18/11	GJ	SW846 6010B [2]	EPA 200.7 [3]

(1) Instrument QC Batch: MA1323
(2) Instrument QC Batch: MA1325
(3) Prep QC Batch: MP4048

RL = Reporting Limit

Report of Analysis

Client Sample ID:	ACMCL-26-SS2(0-6")		
Lab Sample ID:	D21012-2A	**Date Sampled:**	02/10/11
Matrix:	SO - Soil	**Date Received:**	02/12/11
		Percent Solids:	78.2
Project:	009-0082_201_201004, Grand Junction, CO		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio [a]	32.7		ratio	1	02/18/11 10:39	GJ	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	ACMCL-26-BG(0-6")		
Lab Sample ID:	D21012-3	**Date Sampled:**	02/10/11
Matrix:	SO - Soil	**Date Received:**	02/12/11
		Percent Solids:	81.6
Project:	009-0082_201_201004, Grand Junction, CO		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	4.5	0.50	mg/kg	5	02/14/11	02/15/11	JY	SW846 6020 [2]	SW846 3050B [6]
Barium	77.7	1.3	mg/kg	1	02/14/11	02/14/11	GJ	SW846 6010B [1]	SW846 3050B [5]
Cadmium	< 1.3	1.3	mg/kg	1	02/14/11	02/14/11	GJ	SW846 6010B [1]	SW846 3050B [5]
Chromium	9.1	1.3	mg/kg	1	02/14/11	02/14/11	GJ	SW846 6010B [1]	SW846 3050B [5]
Copper	9.7	1.3	mg/kg	1	02/14/11	02/14/11	GJ	SW846 6010B [1]	SW846 3050B [5]
Lead	12.0	6.3	mg/kg	1	02/14/11	02/14/11	GJ	SW846 6010B [1]	SW846 3050B [5]
Mercury	< 0.12	0.12	mg/kg	1	02/16/11	02/17/11	JM	SW846 7471A [4]	SW846 7471A [7]
Nickel	9.9	3.8	mg/kg	1	02/14/11	02/14/11	GJ	SW846 6010B [1]	SW846 3050B [5]
Selenium	< 6.3	6.3	mg/kg	1	02/14/11	02/15/11	GJ	SW846 6010B [3]	SW846 3050B [5]
Silver	< 3.8	3.8	mg/kg	1	02/14/11	02/14/11	GJ	SW846 6010B [1]	SW846 3050B [5]
Zinc	49.9	3.8	mg/kg	1	02/14/11	02/15/11	GJ	SW846 6010B [3]	SW846 3050B [5]

(1) Instrument QC Batch: MA1311
(2) Instrument QC Batch: MA1314
(3) Instrument QC Batch: MA1315
(4) Instrument QC Batch: MA1320
(5) Prep QC Batch: MP4012
(6) Prep QC Batch: MP4013
(7) Prep QC Batch: MP4031

RL = Reporting Limit

Report of Analysis

Client Sample ID:	ACMCL-26-BG(0-6")		
Lab Sample ID:	D21012-3	**Date Sampled:**	02/10/11
Matrix:	SO - Soil	**Date Received:**	02/12/11
		Percent Solids:	81.6
Project:	009-0082_201_201004, Grand Junction, CO		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	< 6.1	6.1	mg/kg	1	02/24/11 11:58	GH	EPA 300/SW846 9056
Chromium, Hexavalent [a]	1.3	0.48	mg/kg	1	02/21/11 16:05	AMA	SW846 3060A/7196A
Chromium, Trivalent [b]	7.8	1.8	mg/kg	1	02/21/11 16:05	AMA	SW846 3060/7196A M
Redox Potential Vs H2 [a]	254		mv	1	02/15/11	AMA	ASTM D1498-76M
Solids, Percent	81.6		%	1	02/14/11	SWT	SM19 2540B M
Specific Conductivity	1000	1.0	umhos/cm	1	02/22/11	JD	DEPT.OF AG, BOOK N9
pH	9.72		su	1	02/14/11 13:30	JD	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.
(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

RL = Reporting Limit

Report of Analysis

Client Sample ID:	ACMCL-26-BG(0-6")		
Lab Sample ID:	D21012-3A	**Date Sampled:**	02/10/11
Matrix:	SO - Soil	**Date Received:**	02/12/11
		Percent Solids:	81.6
Project:	009-0082_201_201004, Grand Junction, CO		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	21.3	2.0	mg/l	1	02/17/11	02/17/11	GJ	SW846 6010B [1]	EPA 200.7 [3]
Magnesium	5.93	1.0	mg/l	1	02/17/11	02/18/11	GJ	SW846 6010B [2]	EPA 200.7 [3]
Sodium	162	2.0	mg/l	1	02/17/11	02/18/11	GJ	SW846 6010B [2]	EPA 200.7 [3]

(1) Instrument QC Batch: MA1323
(2) Instrument QC Batch: MA1325
(3) Prep QC Batch: MP4048

RL = Reporting Limit

Report of Analysis

Client Sample ID:	ACMCL-26-BG(0-6")		
Lab Sample ID:	D21012-3A	**Date Sampled:**	02/10/11
Matrix:	SO - Soil	**Date Received:**	02/12/11
		Percent Solids:	81.6
Project:	009-0082_201_201004, Grand Junction, CO		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio [a]	8.00		ratio	1	02/18/11 10:49	GJ	LADNR29B

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST Laboratories

4036 Youngfield St., Wheat Ridge, CO 80033; 303-425-6021; 303-425-6854

FED-EX Tracking #: | Bottle Order Control #:

Accutest Quote: BS8/2010-41 | Accutest Job #: D21012

Client / Reporting Information

Company Name: Olsson Associates

Project Contact: Tim Dobransky | E-Mail: tdobransky@oaconsulting.com

Address: 826 21 1/2 Road

City: Grand Junction | State: CO | Zip: 81505

Phone No.: 970-263-7800 | Fax No.:

Samplers's Name: T. Dobransky

Project Information

Project Name / No.: AC McLaughlin 26 Spill (009-0082_201_201004)

Bill to: Olsson Assocaites | Invoice Attn.: Tim Dobransky

Address: 826 21 1/2 Road

City: Grand Junction | State: CO | Zip: 81505

Phone No.: 970-263-7800 | Fax No.:

Client Purchase Order #:

Requested Analyses

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Wastewater
SO - Soil
SL - Sludge
OI - Oil
LIQ - Liquid
SOL - Other Solid

Accutest Sample #	Field ID / Point of Collection	Collection Date	Collection Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH	HNO3	H2SO4	EnCore	NaHSO4	MeOH	NONE	TPH (GRO)	TPH (DRO)	BTEX	PAH (See List 1)	Electrical Conductivity	Sodium Adsorption Ratio	pH	Metals (See List 2)	Chloride	LAB USE ONLY
	ACMcL-26-SS1 (0-6")	2/10/2011	1250	SO	5								X	X	X	X	X	X	X	X	X	X	01
	ACMcL-26-SS2 (0-6")	2/10/2011	1310	SO	5								X	X	X	X	X	X	X	X	X	X	02
	ACMcL-26-BG (0-6")	2/10/2011	1330	SO	2								X					X	X	X	X	X	03
																							m

Turnaround Time (Business days)

- [X] 10 Day *STANDARD* — Approved By:/ Date:
- [ ] 7 Day (per contract)
- [ ] 4 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*
- [ ] Other

Real time analytical data available via Lablink

Data Deliverable Information

- [ ] Commercial "A"
- [X] Commercial "B"
- [ ] Reduced Tier 1
- [ ] Full Data Package
- [ ] TRRP-13
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results & Standard QC

Comments / Remarks

AMS FEDEX Account Number - 467721880

List 1 - Acenaphthene, Anthracene, Benzo(A)anthracene, Benzo(B)fluoranthene, Benzo(K)fluoranthene, Benzo(A)pyrene, Chrysene, Dibenzo(A,H)anthracene, Fluoranthene, Fluorene, Indeno(1,2,3,C,D)pyrene, Napthalene, Pyrene

List 2 - As, Ba, Cd, Cr3, Cr6, Cu, Pb, Hg, Ni, Se, Ag, Zn

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	2/11/11 1700	1	2		2
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3		3	4		4
Relinquished by:	Date Time:	Received By:	Custody Seal #	On Ice	Cooler Temp.
5		5			2.8

4.1 4

D21012: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D21012 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 2/14/2011 **No. Coolers:** **Client Service Action Required at Login:** No

Project: **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume rec'd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:(303) 425-6021

4036 Youngfield Street
F: (303) 425-6854

Wheat Ridge, CO
www/accutest.com

D21012: Chain of Custody
Page 2 of 2

Mountain States ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D21012
Account: CORCCOGJ Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V775-MB1	5V13317.D	1	02/21/11	DC	n/a	n/a	V5V775

The QC reported here applies to the following samples: **Method:** SW846 8260B

D21012-1, D21012-2

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/kg	
100-41-4	Ethylbenzene	ND	2.0	0.40	ug/kg	
108-88-3	Toluene	ND	2.0	1.0	ug/kg	
	m,p-Xylene	ND	4.0	0.70	ug/kg	
95-47-6	o-Xylene	ND	2.0	0.70	ug/kg	

CAS No.	Surrogate Recoveries		Limits
2037-26-5	Toluene-D8	91%	70-130%
460-00-4	4-Bromofluorobenzene	88%	70-130%
17060-07-0	1,2-Dichloroethane-D4	106%	70-130%

Blank Spike Summary

Job Number: D21012
Account: CORCCOGJ Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V775-BS1	5V13318.D	1	02/21/11	DC	n/a	n/a	V5V775

The QC reported here applies to the following samples: **Method:** SW846 8260B

D21012-1, D21012-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	56.0	112	68-130
100-41-4	Ethylbenzene	50	54.7	109	70-130
108-88-3	Toluene	50	50.4	101	70-130
	m,p-Xylene	50	49.0	98	53-130
95-47-6	o-Xylene	50	47.5	95	61-130

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	95%	70-130%
460-00-4	4-Bromofluorobenzene	103%	70-130%
17060-07-0	1,2-Dichloroethane-D4	108%	70-130%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D21012
Account: CORCCOGJ Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D21155-1MS	5V13320.D	1	02/21/11	DC	n/a	n/a	V5V775
D21155-1MSD	5V13321.D	1	02/21/11	DC	n/a	n/a	V5V775
D21155-1	5V13319.D	1	02/21/11	DC	n/a	n/a	V5V775

The QC reported here applies to the following samples: **Method:** SW846 8260B

D21012-1, D21012-2

CAS No.	Compound	D21155-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	50.8	J	4250	4650	108	5080	118	9	55-140/30
100-41-4	Ethylbenzene	46.6	J	4250	4400	102	4880	114	10	56-139/30
108-88-3	Toluene	169	J	4250	4070	92	4540	103	11	57-144/30
	m,p-Xylene	176	J	4250	4120	93	4560	103	10	47-130/30
95-47-6	o-Xylene	ND		4250	3950	93	4330	102	9	51-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D21155-1	Limits
2037-26-5	Toluene-D8	90%	94%	89%	70-130%
460-00-4	4-Bromofluorobenzene	109%	113%	98%	70-130%
17060-07-0	1,2-Dichloroethane-D4	103%	106%	106%	70-130%

Mountain States ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D21012
Account: CORCCOGJ Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP3180-MB	3G02888.D	1	02/22/11	TMB	02/18/11	OP3180	E3G103

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

D21012-2

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	6.7	6.2	ug/kg	
208-96-8	Acenaphthylene	ND	33	6.9	ug/kg	
120-12-7	Anthracene	ND	6.7	4.3	ug/kg	
56-55-3	Benzo(a)anthracene	ND	6.7	6.5	ug/kg	
50-32-8	Benzo(a)pyrene	ND	6.7	4.2	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	6.7	4.8	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	6.7	4.2	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	6.7	4.2	ug/kg	
218-01-9	Chrysene	ND	6.7	3.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	6.7	4.9	ug/kg	
206-44-0	Fluoranthene	ND	6.7	4.1	ug/kg	
86-73-7	Fluorene	ND	6.7	6.5	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	6.7	4.4	ug/kg	
90-12-0	1-Methylnaphthalene	ND	6.7	5.9	ug/kg	
91-57-6	2-Methylnaphthalene	ND	33	10	ug/kg	
91-20-3	Naphthalene	ND	33	7.4	ug/kg	
85-01-8	Phenanthrene	ND	6.7	5.3	ug/kg	
129-00-0	Pyrene	ND	6.7	4.5	ug/kg	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	65%	10-193%
321-60-8	2-Fluorobiphenyl	51%	20-138%
1718-51-0	Terphenyl-d14	60%	17-174%

Method Blank Summary

Job Number: D21012
Account: CORCCOGJ Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP3193-MB	3G02898.D	1	02/22/11	TMB	02/21/11	OP3193	E3G103

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

D21012-1

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	6.7	6.2	ug/kg	
208-96-8	Acenaphthylene	ND	33	6.9	ug/kg	
120-12-7	Anthracene	ND	6.7	4.3	ug/kg	
56-55-3	Benzo(a)anthracene	ND	6.7	6.5	ug/kg	
50-32-8	Benzo(a)pyrene	ND	6.7	4.2	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	6.7	4.8	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	6.7	4.2	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	6.7	4.2	ug/kg	
218-01-9	Chrysene	ND	6.7	3.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	6.7	4.9	ug/kg	
206-44-0	Fluoranthene	ND	6.7	4.1	ug/kg	
86-73-7	Fluorene	ND	6.7	6.5	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	6.7	4.4	ug/kg	
90-12-0	1-Methylnaphthalene	ND	6.7	5.9	ug/kg	
91-57-6	2-Methylnaphthalene	ND	33	10	ug/kg	
91-20-3	Naphthalene	ND	33	7.4	ug/kg	
85-01-8	Phenanthrene	ND	6.7	5.3	ug/kg	
129-00-0	Pyrene	ND	6.7	4.5	ug/kg	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	47%	10-193%
321-60-8	2-Fluorobiphenyl	38%	20-138%
1718-51-0	Terphenyl-d14	54%	17-174%

Blank Spike Summary

Job Number: D21012
Account: CORCCOGJ Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP3180-BS	3G02889.D	1	02/22/11	TMB	02/18/11	OP3180	E3G103

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

D21012-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	83.3	44.3	53	40-136
208-96-8	Acenaphthylene	83.3	43.2	52	42-139
120-12-7	Anthracene	83.3	44.5	53	40-141
56-55-3	Benzo(a)anthracene	83.3	46.2	55	38-143
50-32-8	Benzo(a)pyrene	83.3	40.7	49	39-145
205-99-2	Benzo(b)fluoranthene	83.3	38.1	46	38-151
191-24-2	Benzo(g,h,i)perylene	83.3	40.6	49	35-136
207-08-9	Benzo(k)fluoranthene	83.3	44.7	54	38-147
218-01-9	Chrysene	83.3	44.6	54	39-137
53-70-3	Dibenzo(a,h)anthracene	83.3	39.9	48	35-139
206-44-0	Fluoranthene	83.3	47.6	57	34-132
86-73-7	Fluorene	83.3	44.5	53	41-136
193-39-5	Indeno(1,2,3-cd)pyrene	83.3	40.4	48	31-144
90-12-0	1-Methylnaphthalene	83.3	43.4	52	36-130
91-57-6	2-Methylnaphthalene	83.3	43.0	52	40-131
91-20-3	Naphthalene	83.3	47.1	57	36-130
85-01-8	Phenanthrene	83.3	42.8	51	40-135
129-00-0	Pyrene	83.3	42.1	51	29-157

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	61%	10-193%
321-60-8	2-Fluorobiphenyl	45%	20-138%
1718-51-0	Terphenyl-d14	51%	17-174%

Blank Spike Summary

Job Number: D21012
Account: CORCCOGJ Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP3193-BS	3G02899.D	1	02/22/11	TMB	02/21/11	OP3193	E3G103

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

D21012-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	83.3	43.5	52	40-136
208-96-8	Acenaphthylene	83.3	48.7	58	42-139
120-12-7	Anthracene	83.3	51.6	62	40-141
56-55-3	Benzo(a)anthracene	83.3	64.5	77	38-143
50-32-8	Benzo(a)pyrene	83.3	58.4	70	39-145
205-99-2	Benzo(b)fluoranthene	83.3	57.6	69	38-151
191-24-2	Benzo(g,h,i)perylene	83.3	37.2	45	35-136
207-08-9	Benzo(k)fluoranthene	83.3	49.6	60	38-147
218-01-9	Chrysene	83.3	49.2	59	39-137
53-70-3	Dibenzo(a,h)anthracene	83.3	45.9	55	35-139
206-44-0	Fluoranthene	83.3	55.7	67	34-132
86-73-7	Fluorene	83.3	49.3	59	41-136
193-39-5	Indeno(1,2,3-cd)pyrene	83.3	60.4	72	31-144
90-12-0	1-Methylnaphthalene	83.3	39.8	48	36-130
91-57-6	2-Methylnaphthalene	83.3	39.6	48	40-131
91-20-3	Naphthalene	83.3	44.1	53	36-130
85-01-8	Phenanthrene	83.3	45.4	54	40-135
129-00-0	Pyrene	83.3	61.3	74	29-157

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	54%	10-193%
321-60-8	2-Fluorobiphenyl	43%	20-138%
1718-51-0	Terphenyl-d14	56%	17-174%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D21012
Account: CORCCOGJ Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP3180-MS	3G02891.D	5	02/22/11	TMB	02/18/11	OP3180	E3G103
OP3180-MSD	3G02892.D	5	02/22/11	TMB	02/18/11	OP3180	E3G103
D21155-1 [a]	3G02890.D	5	02/22/11	TMB	02/18/11	OP3180	E3G103

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

D21012-2

CAS No.	Compound	D21155-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		113	52.7	47	54.5	49	3	20-151/30
208-96-8	Acenaphthylene	ND		113	67.6	60	72.3	65	7	23-156/30
120-12-7	Anthracene	ND		113	68.3	61	71.7	64	5	25-149/30
56-55-3	Benzo(a)anthracene	ND		113	87.5	78	88.9	79	2	22-157/30
50-32-8	Benzo(a)pyrene	ND		113	77.4	69	78.9	70	2	23-153/30
205-99-2	Benzo(b)fluoranthene	ND		113	67.9	60	70.7	63	4	22-161/30
191-24-2	Benzo(g,h,i)perylene	ND		113	55.6	49	56.6	51	2	20-158/30
207-08-9	Benzo(k)fluoranthene	ND		113	73.7	65	66.1	59	11	17-161/30
218-01-9	Chrysene	ND		113	51.1	45	51.6	46	1	16-159/30
53-70-3	Dibenzo(a,h)anthracene	ND		113	56.4	50	63.1	56	11	21-154/30
206-44-0	Fluoranthene	ND		113	88.5	79	90.8	81	3	16-140/30
86-73-7	Fluorene	ND		113	61.9	55	64.3	57	4	15-153/30
193-39-5	Indeno(1,2,3-cd)pyrene	ND		113	63.7	57	51.9	46	20	21-159/30
90-12-0	1-Methylnaphthalene	ND		113	64.9	58	73.0	65	12	10-148/30
91-57-6	2-Methylnaphthalene	ND		113	80.2	71	97.0	87	19	10-181/30
91-20-3	Naphthalene	ND		113	70.9	63	74.2	66	5	10-176/30
85-01-8	Phenanthrene	ND		113	56.6	50	58.6	52	3	22-152/30
129-00-0	Pyrene	ND		113	55.8	50	57.3	51	3	10-200/30

CAS No.	Surrogate Recoveries	MS	MSD	D21155-1	Limits
4165-60-0	Nitrobenzene-d5	48%	49%	57%	10-193%
321-60-8	2-Fluorobiphenyl	38%	39%	45%	20-138%
1718-51-0	Terphenyl-d14	42%	42%	46%	17-174%

(a) Dilution required due to matrix interference.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D21012
Account: CORCCOGJ Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP3193-MS	3G02901.D	5	02/22/11	TMB	02/21/11	OP3193	E3G103
OP3193-MSD	3G02902.D	5	02/22/11	TMB	02/21/11	OP3193	E3G103
D21012-1	3G02900.D	5	02/22/11	TMB	02/21/11	OP3193	E3G103

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

D21012-1

CAS No.	Compound	D21012-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		108	66.6	62	66.5	61	0	20-151/30
208-96-8	Acenaphthylene	ND		108	82.5	76	80.7	75	2	23-156/30
120-12-7	Anthracene	ND		108	84.1	78	79.9	74	5	25-149/30
56-55-3	Benzo(a)anthracene	ND		108	110	102	105	97	5	22-157/30
50-32-8	Benzo(a)pyrene	ND		108	103	95	98.3	91	5	23-153/30
205-99-2	Benzo(b)fluoranthene	ND		108	94.1	87	93.5	86	1	22-161/30
191-24-2	Benzo(g,h,i)perylene	ND		108	67.6	63	62.0	57	9	20-158/30
207-08-9	Benzo(k)fluoranthene	ND		108	81.6	76	79.5	73	3	17-161/30
218-01-9	Chrysene	ND		108	70.8	66	73.2	68	3	16-159/30
53-70-3	Dibenzo(a,h)anthracene	ND		108	79.2	73	81.0	75	2	21-154/30
206-44-0	Fluoranthene	ND		108	104	96	96.9	90	7	16-140/30
86-73-7	Fluorene	ND		108	88.6	82	92.1	85	4	15-153/30
193-39-5	Indeno(1,2,3-cd)pyrene	ND		108	107	99	109	101	2	21-159/30
90-12-0	1-Methylnaphthalene	143		108	149	6* [a]	231	81	43* [b]	10-148/30
91-57-6	2-Methylnaphthalene	164	J	108	165	1* [a]	259	88	44* [b]	10-181/30
91-20-3	Naphthalene	96.8	J	108	125	26	175	72	33* [b]	10-176/30
85-01-8	Phenanthrene	53.8		108	97.0	40	120	61	21	22-152/30
129-00-0	Pyrene	ND		108	87.3	81	86.5	80	1	10-200/30

CAS No.	Surrogate Recoveries	MS	MSD	D21012-1	Limits
4165-60-0	Nitrobenzene-d5	59%	59%	57%	10-193%
321-60-8	2-Fluorobiphenyl	43%	42%	43%	20-138%
1718-51-0	Terphenyl-d14	52%	49%	53%	17-174%

(a) Outside control limits due to matrix interference. Refer to Blank Spike.
(b) Variability of recovery may be due to sample matrix/homogeneity.

Mountain States ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D21012
Account: CORCCOGJ Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB512-MB	GB9471.D	1	02/14/11	JL	n/a	n/a	GGB512

The QC reported here applies to the following samples: **Method:** SW846 8015B

D21012-1, D21012-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	10	10	mg/kg	

CAS No.	Surrogate Recoveries		Limits
120-82-1	1,2,4-Trichlorobenzene	98%	60-140%

Blank Spike Summary

Job Number: D21012
Account: CORCCOGJ Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB512-BS	GB9472.D	1	02/14/11	JL	n/a	n/a	GGB512

The QC reported here applies to the following samples: **Method:** SW846 8015B

D21012-1, D21012-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	110	101	92	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	111%	60-140%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D21012
Account: CORCCOGJ Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D21012-1MS	GB9474.D	1	02/14/11	JL	n/a	n/a	GGB512
D21012-1MSD	GB9475.D	1	02/14/11	JL	n/a	n/a	GGB512
D21012-1	GB9473.D	1	02/14/11	JL	n/a	n/a	GGB512

The QC reported here applies to the following samples: **Method:** SW846 8015B

D21012-1, D21012-2

CAS No.	Compound	D21012-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	53.4		176	216	93	212	90	2	62-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D21012-1	Limits
120-82-1	1,2,4-Trichlorobenzene	106%	100%	100%	60-140%

Mountain States ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D21012
Account: CORCCOGJ Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP3200-MB	FE5977.D	1	02/24/11	JB	02/23/11	OP3200	GFE299

The QC reported here applies to the following samples: **Method:** SW846-8015B

D21012-1, D21012-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	13	8.7	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	128%	63-130%

Blank Spike Summary

Job Number: D21012
Account: CORCCOGJ Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP3200-BS	FE5997.D	1	02/24/11	JB	02/23/11	OP3200	GFE299

The QC reported here applies to the following samples: **Method:** SW846-8015B

D21012-1, D21012-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	681	102	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	126%	63-130%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D21012
Account: CORCCOGJ Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP3200-MS	FE5998.D	1	02/24/11	JB	02/23/11	OP3200	GFE299
OP3200-MSD	FE5999.D	1	02/24/11	JB	02/23/11	OP3200	GFE299
D21191-1	FE6000.D	1	02/24/11	JB	02/23/11	OP3200	GFE299

The QC reported here applies to the following samples: **Method:** SW846-8015B

D21012-1, D21012-2

CAS No.	Compound	D21191-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	26.4		721	736	98	725	97	2	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D21191-1	Limits
84-15-1	o-Terphenyl	128%	132%*	129%	63-130%

8.3.1

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Mountain States ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4012
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 02/14/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.7	2		
Antimony	3.0	.17	.5		
Arsenic	2.5	.28	.72		
Barium	1.0	.014	.05	0.030	<1.0
Beryllium	1.0	.14	.21		
Boron	5.0	.35	.91		
Cadmium	1.0	.022	.12	0.090	<1.0
Calcium	40	1.7	2.7		
Chromium	1.0	.027	.18	0.060	<1.0
Cobalt	0.50	.048	.058		
Copper	0.50	.16	.38	0.60	<1.0
Iron	7.0	.77	.91		
Lead	5.0	.13	.24	0.070	<5.0
Lithium	0.20	.076	.09		
Magnesium	20	.58	.93		
Manganese	0.50	.021	.028		
Molybdenum	1.0	.041	.16		
Nickel	3.0	.038	.075	0.010	<3.0
Phosphorus	10	1.5	3.5		
Potassium	200	38	130		
Selenium	5.0	.28	.54	0.33	<5.0
Silicon	5.0	1.2	.68		
Silver	3.0	.098	.068	-0.040	<3.0
Sodium	40	23	6.3		
Strontium	5.0	.0091	.02		
Thallium	1.0	.31	.21		
Tin	5.0	1.4	.56		
Titanium	1.0	.0098	.041		
Uranium	5.0	.22	.53		
Vanadium	1.0	.027	.034		
Zinc	3.0	.076	.49	0.030	<3.0

Associated samples MP4012: D21012-1, D21012-2, D21012-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4012 Methods: SW846 6010B
Matrix Type: SOLID Units: mg/kg

Prep Date:

Metal

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4012
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 02/14/11

Metal	D21004-10 Original	MS	Spikelot MPICPALL	% Rec	QC Limits
Aluminum	anr				
Antimony	anr				
Arsenic	anr				
Barium	3380	5800	269	799.3(a)	75-125
Beryllium	anr				
Boron					
Cadmium	2.5	53.9	67.3	76.3	75-125
Calcium					
Chromium	21.5	71.9	67.3	74.9N(b)	75-125
Cobalt					
Copper	21.0	75.8	67.3	81.4	75-125
Iron	anr				
Lead	19.5	117	135	72.4N(b)	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum	anr				
Nickel	15.4	63.8	67.3	71.9N(b)	75-125
Phosphorus	anr				
Potassium	anr				
Selenium	14.5	174	135	118.4	75-125
Silicon					
Silver	0.0	21.7	26.9	80.6	75-125
Sodium					
Strontium					
Thallium	anr				
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	54.6	107	67.3	77.8	75-125

Associated samples MP4012: D21012-1, D21012-2, D21012-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4012 Methods: SW846 6010B
Matrix Type: SOLID Units: mg/kg

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
(b) Spike recovery indicates possible matrix interference.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4012 Methods: SW846 6010B
Matrix Type: SOLID Units: mg/kg

Prep Date: 02/14/11

Metal	D21004-10 Original	MSD	Spikelot MPICPALL	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	anr					
Barium	3380	5600	269	724.9(a)	3.5	20
Beryllium	anr					
Boron						
Cadmium	2.5	53.9	67.3	76.3	0.0	20
Calcium						
Chromium	21.5	71.4	67.3	74.1N(b)	0.7	20
Cobalt						
Copper	21.0	77.3	67.3	83.6	2.0	20
Iron	anr					
Lead	19.5	119	135	73.9N(b)	1.7	20
Lithium						
Magnesium						
Manganese						
Molybdenum	anr					
Nickel	15.4	63.0	67.3	70.7N(b)	1.3	20
Phosphorus	anr					
Potassium	anr					
Selenium	14.5	167	135	113.3	4.1	20
Silicon						
Silver	0.0	21.7	26.9	80.6	0.0	20
Sodium						
Strontium						
Thallium	anr					
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	54.6	105	67.3	74.9N(c)	1.9	20

Associated samples MP4012: D21012-1, D21012-2, D21012-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4012
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
(b) Spike recovery indicates possible matrix interference.
(c) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4012
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 02/14/11

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	177	200	88.5	80-120
Beryllium	anr			
Boron				
Cadmium	41.3	50	82.6	80-120
Calcium				
Chromium	44.1	50	88.2	80-120
Cobalt				
Copper	46.2	50	92.4	80-120
Iron	anr			
Lead	86.6	100	86.6	80-120
Lithium				
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	42.4	50	84.8	80-120
Phosphorus	anr			
Potassium	anr			
Selenium	89.0	100	89.0	80-120
Silicon				
Silver	17.1	20	85.5	80-120
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	43.2	50	86.4	80-120

Associated samples MP4012: D21012-1, D21012-2, D21012-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4012
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4012 Methods: SW846 6010B
Matrix Type: SOLID Units: ug/l

Prep Date: 02/14/11

Metal	D21004-10 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	24200	27400	1.9	0-10
Beryllium	anr			
Boron				
Cadmium	18.1	17.5	3.3	0-10
Calcium				
Chromium	158	163	3.0	0-10
Cobalt				
Copper	155	140	9.4	0-10
Iron	anr			
Lead	143	125	13.2*(a)	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	113	119	4.9	0-10
Phosphorus	anr			
Potassium	anr			
Selenium	55.1	215	67.3 (b)	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	304	413	2.7	0-10

Associated samples MP4012: D21012-1, D21012-2, D21012-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SERIAL DILUTION RESULTS SUMMARY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4012
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.
(b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4013
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 02/14/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	25	.14	1.2		
Antimony	0.20	.001	.0095		
Arsenic	0.40	.049	.22	0.022	<0.40
Barium	1.0	.0035	.1		
Beryllium	0.10	.0075	.014		
Boron	20	.97	1		
Cadmium	0.050	.023	.048		
Calcium	200	1.8	8.2		
Chromium	1.0	.021	.24		
Cobalt	0.10	.0033	.003		
Copper	1.0	.011	.063		
Iron	20	.81	3.7		
Lead	0.25	.0012	.015		
Magnesium	50	.067	2.6		
Manganese	0.50	.007	.029		
Molybdenum	0.50	.0044	.023		
Nickel	1.0	.0029	.031		
Phosphorus	30	1.8	3.5		
Potassium	100	2	3.2		
Selenium	0.20	.075	.19		
Silver	0.050	.0008	.002		
Sodium	250	.8	4.4		
Strontium	10	.004	.04		
Thallium	0.10	.015	.02		
Tin	5.0	.006	.028		
Titanium	1.0	.035	.062		
Uranium	0.25	.00038	.0009		
Vanadium	2.0	.052	.29		
Zinc	5.0	.039	.12		

Associated samples MP4013: D21012-1, D21012-2, D21012-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4013
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 02/14/11

Metal	D21004-10 Original	MS	Spikelot MPICPALL	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	8.1	124	135	86.1	60-119
Barium					
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP4013: D21012-1, D21012-2, D21012-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4013 Methods: SW846 6020
Matrix Type: SOLID Units: mg/kg

Prep Date: 02/14/11

Metal	D21004-10 Original	MSD	Spikelot MPICPALL	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	8.1	125	135	86.8	0.8	20
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP4013: D21012-1, D21012-2, D21012-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4013
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 02/14/11

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	99.9	100	99.9	80-120
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP4013: D21012-1, D21012-2, D21012-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4013
Matrix Type: SOLID

Methods: SW846 6020
Units: ug/l

Prep Date: 02/14/11

Metal	D21004-10 Original	SDL 5:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	59.9	54.9	8.3	0-10
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP4013: D21012-1, D21012-2, D21012-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4031 Methods: SW846 7471A
Matrix Type: SOLID Units: mg/kg

Prep Date: 02/16/11

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.10	.0011	.013	-0.0014	<0.10

Associated samples MP4031: D21012-1, D21012-2, D21012-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4031 Methods: SW846 7471A
Matrix Type: SOLID Units: mg/kg

Prep Date: 02/16/11

Metal	D20885-1 Original	MS	Spikelot HGWSR1	% Rec	QC Limits
Mercury	0.38	0.87	0.479	102.2	85-115

Associated samples MP4031: D21012-1, D21012-2, D21012-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4031 Methods: SW846 7471A
Matrix Type: SOLID Units: mg/kg

Prep Date: 02/16/11

Metal	D20885-1 Original	MSD	Spikelot HGWSR1	% Rec	MSD RPD	QC Limit
Mercury	0.38	0.87	0.47	104.2	0.0	20

Associated samples MP4031: D21012-1, D21012-2, D21012-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4031
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 02/16/11

Metal	BSP Result	Spikelot HGWSR1	% Rec	QC Limits
Mercury	0.39	0.4	97.5	80-120

Associated samples MP4031: D21012-1, D21012-2, D21012-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4048
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date: 02/17/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	500	35	250		
Antimony	150	8.5	65		
Arsenic	130	14	33		
Barium	50	.7	12		
Beryllium	50	7	22		
Boron	250	18	93		
Cadmium	50	1.1	6		
Calcium	2000	85	46	22.5	<2000
Chromium	50	1.4	8		
Cobalt	25	2.4	1.5		
Copper	25	8	14		
Iron	350	39	50		
Lead	250	6.5	16		
Lithium	10	3.8	8		
Magnesium	1000	29	62	-130	<1000
Manganese	25	1.1	3.5		
Molybdenum	50	2.1	6		
Nickel	150	1.9	3		
Phosphorus	500	75	270		
Potassium	5000	1900	2700		
Selenium	250	14	36		
Silicon	250	60	100		
Silver	150	4.9	1.5		
Sodium	2000	1200	110	-130	<2000
Strontium	25	.46	17		
Thallium	50	16	11		
Tin	250	70	22		
Titanium	50	.49	3.5		
Uranium	250	11	20		
Vanadium	50	1.4	1.5		
Zinc	150	3.8	8.5		

Associated samples MP4048: D21012-1A, D21012-2A, D21012-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4048
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4048
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date: 02/17/11

Metal	D21012-1A Original MS		Spikelot MPICPALL	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium					
Calcium	219000	361000	125000	113.6	75-125
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Lithium					
Magnesium	48800	174000	125000	100.2	75-125
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium					
Silicon					
Silver					
Sodium	1160000	1350000	125000	152.0(a)	75-125
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP4048: D21012-1A, D21012-2A, D21012-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4048
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4048
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date: 02/17/11

Metal	D21012-1A Original	MSD	Spikelot MPICPALL	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium						
Calcium	219000	354000	125000	108.0	2.0	20
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Lithium						
Magnesium	48800	174000	125000	100.2	0.0	20
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium						
Silicon						
Silver						
Sodium	1160000	1320000	125000	128.0(a)	2.2	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP4048: D21012-1A, D21012-2A, D21012-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4048
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4048
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date: 02/17/11

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	129000	125000	103.2	80-120
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	122000	125000	97.6	80-120
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	124000	125000	99.2	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP4048: D21012-1A, D21012-2A, D21012-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

QC Batch ID: MP4048
Matrix Type: AQUEOUS

Methods: LADNR29B, SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

Mountain States ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP3849/GN8422	5.0	0.0	mg/kg	200	185	92.5	90-110%
Specific Conductivity	GP3822/GN8367			umhos/cm	9985	10200	102.2	90-110%
pH	GN8251			su	8.00	8.00	100.0	99.3-100.7%
pH	GN8251			su	8.00	8.00	100.0	99.3-100.7%

Associated Samples:
Batch GN8251: D21012-1, D21012-2, D21012-3
Batch GP3822: D21012-1, D21012-2, D21012-3
Batch GP3849: D21012-1, D21012-2, D21012-3
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP3849/GN8422	D21012-3	mg/kg	4.3	123	122	96.0	80-120%

Associated Samples:
Batch GP3849: D21012-1, D21012-2, D21012-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D21012
Account: CORCCOGJ - Olsson Associates
Project: 009-0082_201_201004, Grand Junction, CO

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Chloride	GP3849/GN8422	D21012-3	mg/kg	4.3	123	120	1.7	20%

Associated Samples:
Batch GP3849: D21012-1, D21012-2, D21012-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

(Accutest Labs of New England, Inc.)

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

Accutest Job #:	D21012
Accutest Quote #:	
AMS P.O. #:	
Project No.:	

Client Information			Subcontract Laboratory Information		
Name: Accutest Mountain States (AMS)			Name: Accutest - New England		
Address: 4036 Youngfield St.			Address: 495 Technology Center West, BLDG C		
City: Wheat Ridge,	State: CO	Zip: 80033	City: Marlborough	State: MA	Zip: 01752
Send Report to: Tiffany Pham			Contact: Sample Management		
Any questions contact: Amanda Kissell					
Phone/Fax #: (303) 425-6021; (303)425-6854			Phone: (508) 481-6200		

Field ID / Point of Collection	Collection Date	Collection Time		Matrix	# of bottles	Preservation HCL	NaOH	HNO3	H2SO4	None	EH	XCRA				Comments
D21012 -1	2/10/11	12:50 PM		Soil	1						X	X				
-2	2/10/11	1:10 PM		Soil	1						X	X				
-3	2/10/11	1:30 PM		Soil	1						X	X				
-																
-																

Turnaround Information

- [X] 10 Business Day Standard — Approved By:
- [ ] Other _____ (Days)

10 Day Turnaround Hardcopy, RUSH is FAX Data unless previously approved.

Data Deliverable Information

- [ ] Commercial "A"
- [ ] Commercial "B"
- [x] Commercial "BN"
- [ ] Reduced Tier 1
- [ ] Full Tier 1
- [ ] PDF
- [ ] Compact Disk Deliverable
- [ ] Electronic Delivery: _____
- [ ] State Forms
- [ ] Other (Specify) _____

Comments / Remarks

Please use Colorado regulations and RLs.

ISA

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by:	Date & Time:	Received By:	Date & Time:
1	[signature]	2/14/11	FedEx	
2	FedEx	2/15/11 10:15	[signature]	2/15/11 10:15
3				

For Subcontract Laboratory Use Only

Seal #:

Headspace: Yes ☐ No ☐ NA ☐

Preserved where applicable: ☐

Temperature °C 2.1°C On Ice ☑

11.1 11

D21012: Chain of Custody
Page 1 of 2
Accutest Labs of New England, Inc.

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D21012 **Client:** AMS **Immediate Client Services Action Required:** No

Date / Time Received: 2/15/2011 **Delivery Method:** **Client Service Action Required at Login:** No

Project: N/A **No. Coolers:** 1 **Airbill #'s:** N/A

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Mountain States ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

(Accutest Labs of New England, Inc.)

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D21012
Account: ALMS - Accutest Mountain States
Project: CORCCOGJ: 009-0082_201_201004, Grand Junction, CO

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GP12639/GN34184	0.40	0.0	mg/kg	12	10.7	89.2	80-120%
Chromium, Hexavalent	GP12639/GN34184			mg/kg	1060	1070	100.9	80-120%

Associated Samples:
Batch GP12639: D21012-1, D21012-2, D21012-3
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D21012
Account: ALMS - Accutest Mountain States
Project: CORCCOGJ: 009-0082_201_201004, Grand Junction, CO

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GP12639/GN34184	D21155-1	mg/kg	0.0	0.0	0.0	0-20%
Redox Potential Vs H2	GN34144	D21004-10	mv	178	173	2.8	0-20%

Associated Samples:
Batch GN34144: D21012-1, D21012-2, D21012-3
Batch GP12639: D21012-1, D21012-2, D21012-3
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D21012
Account: ALMS - Accutest Mountain States
Project: CORCCOGJ: 009-0082_201_201004, Grand Junction, CO

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GP12639/GN34184	D21155-1	mg/kg	0.0	15.9	13.9	87.4	75-125%
Chromium, Hexavalent	GP12639/GN34184	D21155-1	mg/kg	0.0	1730	1770	102.2	75-125%

Associated Samples:
Batch GP12639: D21012-1, D21012-2, D21012-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits