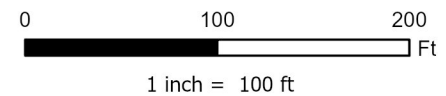


Legend

● Spill Origin    ● Soil Sample Location    ~ Spill Path



Project No: 018-065

Map By: NDB

Date: 4-3-2018

**MC Hagood A8 Spill**  
Chevron USA, Inc.  
Rio Blanco County, Colorado  
NWNW Sec 15 T2S R103W



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

Figure

1



**Table 1**  
**MC Hagood A8 Spill**  
**Soil Data Summary**

SAMPLE SUMMARY								
Location Description	MC Hagood A8							
Sample Type	Soil							
LABORATORY DATA SUMMARY								
Sample ID	MC Hagood A8X	HA8-SS1	HA8-SS2	HA8-SS3	HA8-SS4	HA8-BG1	COGCC TABLE 910-1 CONCENTRATION LEVELS	UNITS
Depth	6"	0-6"	0-6"	0-6"	0-6"	0-6"		
Sample Date	7/8/2020	7/14/2020	7/14/2020	7/14/2020	7/14/2020	7/14/2020		
Analytical Parameters								
TPH								
TPH Gasoline Range Organics	<2.9	<2.7	240	3.9 J	<3.1	NT	500	mg/kg
TPH Diesel Range Organics	4.2	6.8 J	120	130	17	NT		
BTEX								
Benzene	<0.020	<0.0067	<0.0078	<0.0064	<0.0075	NT	0.17	mg/kg
Toluene	<0.011	<0.011	<0.012	<0.010	<0.012	NT	85	mg/kg
Ethylbenzene	<0.0087	<0.0083	0.071	<0.0079	<0.0093	NT	100	mg/kg
Total Xylene	<0.055	0.063 J	0.65	<0.050	<0.059	NT	175	mg/kg
Metals								
Arsenic	6.7	5.9	5.8	5.3	6.1	2.7	0.39	mg/kg
Barium	130	110	260	180	120	60	15,000	mg/kg
Cadmium	0.14 J	0.15 J	0.15 J	0.13 J	0.18 J	0.16 J	70	mg/kg
Chromium	12	11	11	9.6	12	7.4	NA	mg/kg
Copper	13 B	11	12	11	13	13	3,100	mg/kg
Lead	18	18	20	18	19	13	400	mg/kg
Mercury	0.025	0.094	0.11	0.094	0.11	0.12	23	mg/kg
Nickel	26	13	15	14	16	11	1,600	mg/kg
Selenium	0.78	0.83	0.75	0.76	0.93	0.80	390	mg/kg
Silver	0.075 J	0.078 J	0.087 J	0.077 J	0.084 J	<0.16	390	mg/kg
Zinc	58	56	64	65	67	48	23,000	mg/kg
SAR Metals Analysis								
Calcium	3300	1500	520	190	1600	1800	NA	mg/L
Magnesium	1500	250	82	29	250	54	NA	mg/L
Sodium	11000	2400	4500	2700	5600	14	NA	mg/L
Sodium Adsorption Ratio	39	15	49	48	35	0.092	<12	ratio
Polynuclear Aromatic Hydrocarbons								
Acenaphthene	<0.0042	<0.00093	<0.0010	<0.00090	<0.0010	NT	1,000	mg/kg
Anthracene	<0.0045	<0.0016	<0.0017	<0.0016	<0.0017	NT	1,000	mg/kg
Benzo(a)anthracene	<0.0048	<0.0020	<0.0021	<0.0019	<0.0021	NT	0.22	mg/kg
Benzo(a)pyrene	<0.0040	<0.0013	<0.0014	<0.0013	<0.0014	NT	0.022	mg/kg
Benzo(b)fluoranthene	<0.0042	<0.0011	<0.0012	<0.0011	<0.0012	NT	0.22	mg/kg
Benzo(k)fluoranthene	<0.0041	<0.0014	<0.0015	<0.0014	<0.0015	NT	2.2	mg/kg
Chrysene	<0.0046	<0.00099	<0.0011	<0.00096	<0.0011	NT	22	mg/kg
Dibenzo(a,h)anthracene	<0.0040	<0.0011	<0.0012	<0.0011	<0.0012	NT	0.022	mg/kg
Fluoranthene	<0.0039	<0.00088	<0.00095	<0.00086	<0.00095	NT	1,000	mg/kg
Fluorene	<0.0039	<0.0016	<0.0017	<0.0015	<0.0017	NT	1,000	mg/kg
Indeno(1,2,3-cd)pyrene	<0.0043	<0.0017	<0.0018	<0.0017	<0.0019	NT	0.22	mg/kg
Napthalene	<0.0048	0.0047 J	0.021	<0.0020	0.0050 J	NT	23	mg/kg
Pyrene	<0.0048	<0.00079	<0.00085	<0.00077	<0.00085	NT	1,000	mg/kg
General Chemistry								
Chromium, Hexavalent	<0.99	<1.0	<1.1	<0.95	<1.0	<0.89	23	mg/kg
Chromium, Trivalent	12	11	11	9.6	12	7.4	120,000	mg/kg
Specific Conductivity	82	19	25	13	34	9.1	<4 or 2 x the background	mmhos/cm
pH	7.77	8.11	7.95	7.82	7.73	7.80	6-9	su

mg/kg - milligrams per kilogram  
mg/L - milligrams per liter  
H - analyzed outside of holding time  
J - indicates an estimated value  
mmhos/cm - millimhos per centimeter  
mv - millivolts  
su - standard units  
NA - not applicable  
NT - parameter was not tested

Over COGCC Table 910-1 concentration levels but under BACKGROUND level.

Over COGCC Table 910-1 concentration levels and not within BACKGROUND level.

Over COGCC Table 910-1 concentration levels



04-Jan-2021

Tim Dobransky  
Entrada Consulting Group  
240 Mesa Ave.  
Grand Junction, CO 81501

Re: **MC Hagood A8X Spill**

Work Order: **20122019**

Dear Tim,

ALS Environmental received 1 sample on 22-Dec-2020 12:30 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 23.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA  
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

A handwritten signature in black ink, appearing to read "Chad Whelton".

Electronically approved by: Chad Whelton

Chad Whelton  
Project Manager

## Report of Laboratory Analysis

Certificate No: MN 026-999-449

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental 

[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER

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**Client:** Entrada Consulting Group  
**Project:** MC Hagood A8X Spill  
**Work Order:** 20122019**Work Order Sample Summary**

---

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
20122019-01	MC Hagood A8X (6' Deep)	Soil		7/8/2020 12:00	12/22/2020 12:30	<input type="checkbox"/>

---

**Client:** Entrada Consulting Group  
**Project:** MC Hagood A8X Spill  
**Work Order:** 20122019

---

**Case Narrative**

Sample analyzed after hold time due to being received after expiration date. Results should be considered estimated.

Batch 170002, Method SW6020B, Sample MC Hagood A8X (6' Deep) (20122019-01A): The concentration in the Method Blank was greater than the quantitation limit for Copper. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is required.

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

<b><u>Acronym</u></b>	<b><u>Description</u></b>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<b><u>Units Reported</u></b>	<b><u>Description</u></b>
% of sample	Percent of Sample
°C	Degrees Celcius
mg/Kg	Milligrams per Kilogram
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter
mmhos/cm @25°C	Millimhos-Centimeter at 25 Degrees Celcius
none	

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s.u.      Standard Units

# ALS Group, USA

Date: 04-Jan-21

**Client:** Entrada Consulting Group  
**Project:** MC Hagood A8X Spill  
**Sample ID:** MC Hagood A8X (6' Deep)  
**Collection Date:** 7/8/2020 12:00 PM

**Work Order:** 20122019  
**Lab ID:** 20122019-01  
**Matrix:** SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>							
			Method: <b>SW8015D</b>			Prep: SW3550 / 12/24/20	Analyst: <b>JZB</b>
<b>DRO (C10-C28)</b>	<b>4.2</b>	JH	<b>3.4</b>	<b>12</b>	<b>mg/Kg-dry</b>	1	12/27/2020 01:14
Surr: 4-Terphenyl-d14	76.6			33-111	%REC	1	12/27/2020 01:14
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>							
			Method: <b>SW8015D</b>			Prep: SW5035 / 12/23/20	Analyst: <b>JZB</b>
<b>GRO (C6-C10)</b>	U	H	2.9	6.9	mg/Kg	1	12/24/2020 00:12
Surr: Toluene-d8	101			71-123	%REC	1	12/24/2020 00:12
<b>MERCURY BY CVAA</b>							
			Method: <b>SW7471B</b>			Prep: SW7471 / 12/23/20	Analyst: <b>MAC</b>
<b>Mercury</b>	<b>0.025</b>	H	<b>0.013</b>	<b>0.020</b>	<b>mg/Kg-dry</b>	1	12/23/2020 16:13
<b>METALS BY ICP-MS</b>							
			Method: <b>SW6020B</b>			Prep: SW3050B / 12/29/20	Analyst: <b>STP</b>
<b>Arsenic</b>	<b>6.7</b>		<b>0.050</b>	<b>0.42</b>	<b>mg/Kg-dry</b>	1	12/29/2020 17:51
<b>Barium</b>	<b>130</b>		<b>0.38</b>	<b>0.42</b>	<b>mg/Kg-dry</b>	1	12/29/2020 17:51
<b>Cadmium</b>	<b>0.14</b>	J	<b>0.025</b>	<b>0.17</b>	<b>mg/Kg-dry</b>	1	12/29/2020 17:51
<b>Chromium</b>	<b>12</b>		<b>0.18</b>	<b>0.42</b>	<b>mg/Kg-dry</b>	1	12/29/2020 17:51
<b>Copper</b>	<b>13</b>	B	<b>0.42</b>	<b>0.42</b>	<b>mg/Kg-dry</b>	1	12/30/2020 17:37
<b>Lead</b>	<b>18</b>		<b>0.20</b>	<b>0.42</b>	<b>mg/Kg-dry</b>	1	12/29/2020 17:51
<b>Nickel</b>	<b>26</b>		<b>2.2</b>	<b>4.2</b>	<b>mg/Kg-dry</b>	10	12/30/2020 17:28
<b>Selenium</b>	<b>0.78</b>		<b>0.38</b>	<b>0.42</b>	<b>mg/Kg-dry</b>	1	12/29/2020 17:51
<b>Silver</b>	<b>0.075</b>	J	<b>0.055</b>	<b>0.42</b>	<b>mg/Kg-dry</b>	1	12/29/2020 17:51
<b>Zinc</b>	<b>58</b>		<b>0.82</b>	<b>0.83</b>	<b>mg/Kg-dry</b>	1	12/29/2020 17:51
<b>SOLUBLE CATIONS FOR SAR</b>							
			Method: <b>SW6020B</b>			Prep: USDA Method 20B / 12/29/20	Analyst: <b>STP</b>
<b>Calcium</b>	<b>3,300</b>		<b>25</b>	<b>50</b>	<b>mg/L</b>	100	12/29/2020 15:52
<b>Magnesium</b>	<b>1,500</b>		<b>0.50</b>	<b>2.0</b>	<b>mg/L</b>	10	12/29/2020 15:27
<b>Sodium</b>	<b>11,000</b>		<b>18</b>	<b>20</b>	<b>mg/L</b>	100	12/29/2020 15:52
<b>SODIUM ADSORPTION RATIO</b>							
			Method: <b>USDA H60 METHOD 2</b>			Prep: USDA Method 20B / 12/29/20	Analyst: <b>STP</b>
<b>Sodium Adsorption Ratio</b>	<b>39</b>		<b>0.010</b>	<b>0.010</b>	<b>none</b>	1	12/29/2020
<b>POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)</b>							
			Method: <b>SW8270E</b>			Prep: SW3546 / 12/24/20	Analyst: <b>JZB</b>
<b>Acenaphthene</b>	U	H	0.0042	0.0050	mg/Kg-dry	1	12/26/2020 21:24
<b>Anthracene</b>	U	H	0.0045	0.0050	mg/Kg-dry	1	12/26/2020 21:24
<b>Benzo(a)anthracene</b>	U	H	0.0048	0.0050	mg/Kg-dry	1	12/26/2020 21:24
<b>Benzo(a)pyrene</b>	U	H	0.0040	0.0050	mg/Kg-dry	1	12/26/2020 21:24
<b>Benzo(b)fluoranthene</b>	U	H	0.0042	0.0050	mg/Kg-dry	1	12/26/2020 21:24
<b>Benzo(k)fluoranthene</b>	U	H	0.0041	0.0050	mg/Kg-dry	1	12/26/2020 21:24
<b>Chrysene</b>	U	H	0.0046	0.0050	mg/Kg-dry	1	12/26/2020 21:24
<b>Dibenzo(a,h)anthracene</b>	U	H	0.0040	0.0050	mg/Kg-dry	1	12/26/2020 21:24
<b>Fluoranthene</b>	U	H	0.0039	0.0050	mg/Kg-dry	1	12/26/2020 21:24

**Note:** See Qualifiers page for a list of qualifiers and their definitions.



# ALS Group, USA

Date: 04-Jan-21

**Client:** Entrada Consulting Group  
**Project:** MC Hagood A8X Spill  
**Sample ID:** MC Hagood A8X (6' Deep)  
**Collection Date:** 7/8/2020 12:00 PM

**Work Order:** 20122019  
**Lab ID:** 20122019-01  
**Matrix:** SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	U	H	0.0039	0.0050	mg/Kg-dry	1	12/26/2020 21:24
Indeno(1,2,3-cd)pyrene	U	H	0.0043	0.0050	mg/Kg-dry	1	12/26/2020 21:24
Naphthalene	U	H	0.0048	0.0050	mg/Kg-dry	1	12/26/2020 21:24
Pyrene	U	H	0.0048	0.0050	mg/Kg-dry	1	12/26/2020 21:24
Surr: 2-Fluorobiphenyl	84.9			20-140	%REC	1	12/26/2020 21:24
Surr: 4-Terphenyl-d14	55.9			22-172	%REC	1	12/26/2020 21:24
Surr: Nitrobenzene-d5	72.7			28-140	%REC	1	12/26/2020 21:24
<b>VOLATILE ORGANIC COMPOUNDS</b>			Method: <b>SW8260C</b>		Prep: SW5035 / 12/23/20		Analyst: <b>JNS</b>
Benzene	U	H	0.020	0.041	mg/Kg-dry	1	12/29/2020 09:21
Ethylbenzene	U	H	0.0087	0.041	mg/Kg-dry	1	12/29/2020 09:21
m,p-Xylene	U	H	0.055	0.083	mg/Kg-dry	1	12/29/2020 09:21
o-Xylene	U	H	0.016	0.041	mg/Kg-dry	1	12/29/2020 09:21
Toluene	U	H	0.011	0.041	mg/Kg-dry	1	12/29/2020 09:21
Xylenes, Total	U	H	0.055	0.12	mg/Kg-dry	1	12/29/2020 09:21
Surr: 1,2-Dichloroethane-d4	96.2			70-130	%REC	1	12/29/2020 09:21
Surr: 4-Bromofluorobenzene	104			70-130	%REC	1	12/29/2020 09:21
Surr: Dibromofluoromethane	93.5			70-130	%REC	1	12/29/2020 09:21
Surr: Toluene-d8	88.4			70-130	%REC	1	12/29/2020 09:21
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			Method: <b>USDA H60 METHOD 2</b>		Prep: USDA Method 20B / 12/29/20		Analyst: <b>QTN</b>
Electrical Conductivity @ Saturation	82		0.025	0.22	mmhos/cm @25°	45	12/29/2020 18:25
<b>CHROMIUM, TRIVALENT</b>			Method: <b>CALCULATION</b>				Analyst: <b>JB</b>
Chromium, Trivalent	12	H	1.0	1.2	mg/Kg-dry	1	12/30/2020 14:50
<b>CHROMIUM, HEXAVALENT</b>			Method: <b>SW7196A</b>		Prep: SW3060A / 12/29/20		Analyst: <b>KTP</b>
Chromium, Hexavalent	U	H	0.99	1.2	mg/Kg-dry	1	12/29/2020 16:10
<b>MOISTURE</b>			Method: <b>SW3550C</b>				Analyst: <b>KTP</b>
Moisture	16	H	0.10	0.10	% of sample	1	12/28/2020 13:33
<b>SOIL PH MEASURED IN WATER AT NOTED TEMP.</b>			Method: <b>SW9045D</b>		Prep: SW9045D / 12/23/20		Analyst: <b>QTN</b>
pH	7.77	H	0.10	0.100	s.u.	1	12/24/2020 10:32
Temperature	20.9	H	0.10	0.100	°C	1	12/24/2020 10:32

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**Client:** Entrada Consulting Group  
**Work Order:** 20122019  
**Project:** MC Hagood A8X Spill

# QC BATCH REPORT

Batch ID: **169872** Instrument ID **GC8** Method: **SW8015D**

MBLK				Sample ID: <b>DBLKS1-169872-169872</b>		Units: <b>mg/Kg</b>	Analysis Date: <b>12/26/2020 04:44 PM</b>			
Client ID:		Run ID: <b>GC8_201226A</b>		SeqNo: <b>7026724</b>		Prep Date: <b>12/24/2020</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	U	10								
Surr: 4-Terphenyl-d14	3.285	0	3.33	0	98.6	33-111	0			

LCS				Sample ID: <b>DLCSS1-169872-169872</b>		Units: <b>mg/Kg</b>	Analysis Date: <b>12/26/2020 05:23 PM</b>			
Client ID:		Run ID: <b>GC8_201226A</b>		SeqNo: <b>7026725</b>		Prep Date: <b>12/24/2020</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	311.7	10	333	0	93.6	80-121	0			
Surr: 4-Terphenyl-d14	3.031	0	3.33	0	91	33-111	0			

MS				Sample ID: <b>20121839-01A MS</b>		Units: <b>mg/Kg</b>	Analysis Date: <b>12/26/2020 06:03 PM</b>			
Client ID:		Run ID: <b>GC8_201226A</b>		SeqNo: <b>7026726</b>		Prep Date: <b>12/24/2020</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	292.3	9.9	329.9	0.7494	88.4	80-121	0			
Surr: 4-Terphenyl-d14	2.661	0	3.299	0	80.7	33-111	0			

MSD				Sample ID: <b>20121839-01A MSD</b>		Units: <b>mg/Kg</b>	Analysis Date: <b>12/26/2020 06:42 PM</b>			
Client ID:		Run ID: <b>GC8_201226A</b>		SeqNo: <b>7026727</b>		Prep Date: <b>12/24/2020</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	292.9	9.9	329.6	0.7494	88.7	80-121	292.3	0.21	30	
Surr: 4-Terphenyl-d14	2.686	0	3.296	0	81.5	33-111	2.661	0.938	30	

The following samples were analyzed in this batch:

20122019-01A

Client: Entrada Consulting Group  
 Work Order: 20122019  
 Project: MC Hagood A8X Spill

## QC BATCH REPORT

Batch ID: **169791** Instrument ID **GC9** Method: **SW8015D**

<b>MBLK</b>		Sample ID: <b>MBLK-169791-169791</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>12/23/2020 11:00 PM</b>		
Client ID:		Run ID: <b>GC9_201223A</b>				SeqNo: <b>7022734</b>		Prep Date: <b>12/23/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	U	5,000								
Surr: Toluene-d8	4915	0	5000	0	98.3	71-123	0			

<b>LCS</b>		Sample ID: <b>LCS-169791-169791</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>12/23/2020 10:12 PM</b>		
Client ID:		Run ID: <b>GC9_201223A</b>				SeqNo: <b>7022759</b>		Prep Date: <b>12/23/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	227800	5,000	250000	0	91.1	71-123	0			
Surr: Toluene-d8	4342	0	5000	0	86.8	71-123	0			

<b>MS</b>		Sample ID: <b>20122015-01A MS</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>12/24/2020 01:01 AM</b>		
Client ID:		Run ID: <b>GC9_201223A</b>				SeqNo: <b>7022739</b>		Prep Date: <b>12/23/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	394500	7,500	375800	0	105	71-123	0			H
Surr: Toluene-d8	6728	0	7516	0	89.5	71-123	0			

<b>MSD</b>		Sample ID: <b>20122015-01A MSD</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>12/24/2020 01:24 AM</b>		
Client ID:		Run ID: <b>GC9_201223A</b>				SeqNo: <b>7022740</b>		Prep Date: <b>12/23/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	366200	7,500	376700	0	97.2	71-123	394500	7.44	30	H
Surr: Toluene-d8	6427	0	7534	0	85.3	71-123	6728	4.57	30	

The following samples were analyzed in this batch: 20122019-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group  
 Work Order: 20122019  
 Project: MC Hagood A8X Spill

## QC BATCH REPORT

Batch ID: **169808** Instrument ID **HG4** Method: **SW7471B**

<b>MBLK</b>		Sample ID: <b>MBLK-169808-169808</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>12/23/2020 03:15 PM</b>		
Client ID:		Run ID: <b>HG4_201223A</b>				SeqNo: <b>7022464</b>		Prep Date: <b>12/23/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury U 0.020

<b>LCS</b>		Sample ID: <b>LCS-169808-169808</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>12/23/2020 03:17 PM</b>		
Client ID:		Run ID: <b>HG4_201223A</b>				SeqNo: <b>7022465</b>		Prep Date: <b>12/23/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.17 0.020 0.1665 0 102 80-120 0

<b>MS</b>		Sample ID: <b>20121788-22AMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>12/23/2020 03:54 PM</b>		
Client ID:		Run ID: <b>HG4_201223A</b>				SeqNo: <b>7022486</b>		Prep Date: <b>12/23/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1764 0.018 0.15 0.03777 92.4 75-125 0

<b>MSD</b>		Sample ID: <b>20121788-22AMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>12/23/2020 03:56 PM</b>		
Client ID:		Run ID: <b>HG4_201223A</b>				SeqNo: <b>7022487</b>		Prep Date: <b>12/23/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1865 0.018 0.1528 0.03777 97.4 75-125 0.1764 5.58 35

The following samples were analyzed in this batch:

20122019-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group  
 Work Order: 20122019  
 Project: MC Hagood A8X Spill

## QC BATCH REPORT

Batch ID: **170002** Instrument ID **ICPMS3** Method: **SW6020B**

Sample ID: <b>MBLK-170002-170002</b>				Units: <b>mg/Kg</b>			Analysis Date: <b>12/29/2020 05:03 PM</b>			
Client ID:		Run ID: <b>ICPMS3_201229B</b>			SeqNo: <b>7036386</b>		Prep Date: <b>12/29/2020</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.25								
Barium	U	0.25								
Cadmium	U	0.10								
Chromium	U	0.25								
Lead	U	0.25								
Nickel	U	0.25								
Selenium	U	0.25								
Silver	U	0.25								
Zinc	U	0.50								

MBLK				Sample ID: MBLK-170002-170002				Units: mg/Kg		Analysis Date: 12/30/2020 04:07 PM		
Client ID:		Run ID: ICPMS3_201230B				SeqNo: 7041034		Prep Date: 12/29/2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		
Copper	0.3007	0.25										

LCS				Sample ID: LCS-170002-170002				Units: mg/Kg			Analysis Date: 12/29/2020 05:05 PM		
Client ID:			Run ID: ICPMS3_201229B				SeqNo: 7036387		Prep Date: 12/29/2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Arsenic	5.198	0.25	5	0	104	80-120	0						
Barium	5.34	0.25	5	0	107	80-120	0						
Cadmium	5.118	0.10	5	0	102	80-120	0						
Chromium	5.368	0.25	5	0	107	80-120	0						
Copper	4.831	0.25	5	0	96.6	80-120	0						
Lead	5.389	0.25	5	0	108	80-120	0						
Nickel	5.165	0.25	5	0	103	80-120	0						
Selenium	5.13	0.25	5	0	103	80-120	0						
Silver	5.104	0.25	5	0	102	80-120	0						
Zinc	5.058	0.50	5	0	101	80-120	0						

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group  
 Work Order: 20122019  
 Project: MC Hagood A8X Spill

## QC BATCH REPORT

Batch ID: 170002 Instrument ID ICPMS3 Method: SW6020B

MS					Sample ID: 20121930-05BMS		Units: mg/Kg		Analysis Date: 12/29/2020 05:38 PM		
Client ID:			Run ID: ICPMS3_201229B			SeqNo: 7036406		Prep Date: 12/29/2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	10.43	0.36	7.184	3.013	103	75-125	0				
Barium	41.78	0.36	7.184	30.99	150	75-125	0			SO	
Cadmium	6.303	0.14	7.184	0.121	86.1	75-125	0				
Chromium	17.1	0.36	7.184	8.737	116	75-125	0				
Lead	18.31	0.36	7.184	14.95	46.7	75-125	0			S	
Nickel	13.4	0.36	7.184	6.563	95.2	75-125	0				
Selenium	7.252	0.36	7.184	0.283	97	75-125	0				
Silver	6.161	0.36	7.184	0.02316	85.4	75-125	0				
Zinc	32.85	0.72	7.184	25.83	97.6	75-125	0				

MS				Sample ID: 20121930-05BMS			Units: mg/Kg		Analysis Date: 12/30/2020 05:07 PM		
Client ID:		Run ID: ICPMS3_201230B			SeqNo: 7041070		Prep Date: 12/29/2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Copper	13.58	0.36	7.184	5.669	110	75-125	0			B	

MSD				Sample ID: 20121930-05BMSD			Units: mg/Kg		Analysis Date: 12/29/2020 05:40 PM		
Client ID:			Run ID: ICPMS3_201229B			SeqNo: 7036407		Prep Date: 12/29/2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	10.69	0.37	7.31	3.013	105	75-125	10.43	2.49	20		
Barium	48.18	0.37	7.31	30.99	235	75-125	41.78	14.2	20	SO	
Cadmium	6.465	0.15	7.31	0.121	86.8	75-125	6.303	2.53	20		
Chromium	16.87	0.37	7.31	8.737	111	75-125	17.1	1.39	20		
Lead	18.74	0.37	7.31	14.95	51.8	75-125	18.31	2.32	20	S	
Nickel	13.44	0.37	7.31	6.563	94	75-125	13.4	0.259	20		
Selenium	7.286	0.37	7.31	0.283	95.8	75-125	7.252	0.462	20		
Silver	6.336	0.37	7.31	0.02316	86.4	75-125	6.161	2.79	20		
Zinc	33.02	0.73	7.31	25.83	98.3	75-125	32.85	0.526	20		

MSD				Sample ID: 20121930-05BMSD			Units: mg/Kg		Analysis Date: 12/30/2020 05:09 PM		
Client ID:		Run ID: ICPMS3_201230B			SeqNo: 7041071		Prep Date: 12/29/2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Copper	13.87	0.37	7.31	5.669	112	75-125	13.58	2.14	20	B	

The following samples were analyzed in this batch: 20122019-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



Client: Entrada Consulting Group  
 Work Order: 20122019  
 Project: MC Hagood A8X Spill

## QC BATCH REPORT

Batch ID: **170019** Instrument ID **ICPMS3** Method: **SW6020B**

DUP				Sample ID: 20122018-01A dup				Units: mg/L		Analysis Date: 12/29/2020 03:25 PM			
Client ID:				Run ID: ICPMS3_201229A				SeqNo: 7035145		Prep Date: 12/29/2020		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Calcium	1462	5.0	0	0	0	0-0	1526	4.28					
Magnesium	269.9	2.0	0	0	0	0-0	273.9	1.44					

DUP				Sample ID: 20122018-01A dup			Units: mg/L		Analysis Date: 12/29/2020 03:51 PM		
Client ID:		Run ID: ICPMS3_201229A			SeqNo: 7035153		Prep Date: 12/29/2020		DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Sodium	4607	20	0	0	0	0-0	4519	1.95			

The following samples were analyzed in this batch:

20122019-01A

Batch ID: **170019** Instrument ID **SAR** Method: **USDA H60 Method**

DUP				Sample ID: 20122018-01A dup				Units: none		Analysis Date: 12/29/2020	
Client ID:			Run ID: SAR_201229A			SeqNo: 7034995		Prep Date: 12/29/2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Sodium Adsorption Ratio	29.05	0.010	0	0	0		28.59	1.6	50		

The following samples were analyzed in this batch:

20122019-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group  
 Work Order: 20122019  
 Project: MC Hagood A8X Spill

## QC BATCH REPORT

Batch ID: **169853** Instrument ID **SVMS6** Method: **SW8270E**

MBLK				Sample ID: <b>SBLKS1-169853-169853</b>		Units: <b>µg/Kg</b>		Analysis Date: <b>12/26/2020 03:37 PM</b>		
Client ID:				Run ID: <b>SVMS6_201226A</b>		SeqNo: <b>7029335</b>		Prep Date: <b>12/24/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	U	4.2								
Anthracene	U	4.2								
Benzo(a)anthracene	U	4.2								
Benzo(a)pyrene	U	4.2								
Benzo(b)fluoranthene	U	4.2								
Benzo(k)fluoranthene	U	4.2								
Chrysene	U	4.2								
Dibenzo(a,h)anthracene	U	4.2								
Fluoranthene	U	4.2								
Fluorene	U	4.2								
Indeno(1,2,3-cd)pyrene	U	4.2								
Naphthalene	U	4.2								
Pyrene	U	4.2								
Surr: 2-Fluorobiphenyl	2664	0	3333	0	79.9	20-140	0			
Surr: 4-Terphenyl-d14	2637	0	3333	0	79.1	22-172	0			
Surr: Nitrobenzene-d5	2355	0	3333	0	70.7	28-140	0			

LCS				Sample ID: <b>SLCSS1-169853-169853</b>		Units: <b>µg/Kg</b>		Analysis Date: <b>12/26/2020 03:53 PM</b>		
Client ID:				Run ID: <b>SVMS6_201226A</b>		SeqNo: <b>7029336</b>		Prep Date: <b>12/24/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1055	4.2	1333	0	79.1	40-140	0			
Anthracene	1126	4.2	1333	0	84.5	40-140	0			
Benzo(a)anthracene	1140	4.2	1333	0	85.5	40-140	0			
Benzo(a)pyrene	1078	4.2	1333	0	80.9	40-140	0			
Benzo(b)fluoranthene	1095	4.2	1333	0	82.1	40-140	0			
Benzo(k)fluoranthene	1081	4.2	1333	0	81.1	40-140	0			
Chrysene	1142	4.2	1333	0	85.7	40-140	0			
Dibenzo(a,h)anthracene	1151	4.2	1333	0	86.4	40-140	0			
Fluoranthene	1194	4.2	1333	0	89.6	40-140	0			
Fluorene	1001	4.2	1333	0	75.1	40-140	0			
Indeno(1,2,3-cd)pyrene	1105	4.2	1333	0	82.9	40-140	0			
Naphthalene	1133	4.2	1333	0	85	40-140	0			
Pyrene	865.1	4.2	1333	0	64.9	40-140	0			
Surr: 2-Fluorobiphenyl	3092	0	3333	0	92.8	20-140	0			
Surr: 4-Terphenyl-d14	2825	0	3333	0	84.8	22-172	0			
Surr: Nitrobenzene-d5	2065	0	3333	0	62	28-140	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group  
 Work Order: 20122019  
 Project: MC Hagood A8X Spill

## QC BATCH REPORT

Batch ID: **169853** Instrument ID **SVMS6** Method: **SW8270E**

MS				Sample ID: <b>20121841-01B MS</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>12/26/2020 04:09 PM</b>	
Client ID:		Run ID: <b>SVMS6_201226A</b>			SeqNo: <b>7029337</b>		Prep Date: <b>12/24/2020</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1039	4.2	1329	3.525	78	40-140	0			
Anthracene	1119	4.2	1329	11.64	83.4	40-140	0			
Benzo(a)anthracene	1075	4.2	1329	25.59	79	40-140	0			
Benzo(a)pyrene	910.5	4.2	1329	21.87	66.9	40-140	0			
Benzo(b)fluoranthene	993.5	4.2	1329	31.88	72.4	40-140	0			
Benzo(k)fluoranthene	955.2	4.2	1329	12.76	70.9	40-140	0			
Chrysene	1091	4.2	1329	27.06	80	40-140	0			
Dibenzo(a,h)anthracene	1057	4.2	1329	5.206	79.2	40-140	0			
Fluoranthene	1111	4.2	1329	45.48	80.2	40-140	0			
Fluorene	1039	4.2	1329	3.363	77.9	40-140	0			
Indeno(1,2,3-cd)pyrene	997.8	4.2	1329	20.74	73.5	40-140	0			
Naphthalene	1106	4.2	1329	0	83.2	40-140	0			
Pyrene	991.6	4.2	1329	47.68	71	40-140	0			
Surr: 2-Fluorobiphenyl	2800	0	3322	0	84.3	20-140	0			
Surr: 4-Terphenyl-d14	2878	0	3322	0	86.6	22-172	0			
Surr: Nitrobenzene-d5	2306	0	3322	0	69.4	28-140	0			

MSD				Sample ID: <b>20121841-01B MSD</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>12/26/2020 04:25 PM</b>	
Client ID:		Run ID: <b>SVMS6_201226A</b>			SeqNo: <b>7029338</b>		Prep Date: <b>12/24/2020</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1056	4.1	1297	3.525	81.2	40-140	1039	1.56	30	
Anthracene	1138	4.1	1297	11.64	86.9	40-140	1119	1.7	30	
Benzo(a)anthracene	1101	4.1	1297	25.59	82.9	40-140	1075	2.36	30	
Benzo(a)pyrene	954.8	4.1	1297	21.87	71.9	40-140	910.5	4.75	30	
Benzo(b)fluoranthene	1046	4.1	1297	31.88	78.3	40-140	993.5	5.2	30	
Benzo(k)fluoranthene	974.5	4.1	1297	12.76	74.2	40-140	955.2	2	30	
Chrysene	1128	4.1	1297	27.06	84.9	40-140	1091	3.41	30	
Dibenzo(a,h)anthracene	1125	4.1	1297	5.206	86.4	40-140	1057	6.18	30	
Fluoranthene	1122	4.1	1297	45.48	83	40-140	1111	0.928	30	
Fluorene	1062	4.1	1297	3.363	81.6	40-140	1039	2.21	30	
Indeno(1,2,3-cd)pyrene	1045	4.1	1297	20.74	79	40-140	997.8	4.61	30	
Naphthalene	1133	4.1	1297	0	87.4	40-140	1106	2.47	30	
Pyrene	996.3	4.1	1297	47.68	73.2	40-140	991.6	0.469	30	
Surr: 2-Fluorobiphenyl	2891	0	3242	0	89.2	20-140	2800	3.2	30	
Surr: 4-Terphenyl-d14	2947	0	3242	0	90.9	22-172	2878	2.38	30	
Surr: Nitrobenzene-d5	2484	0	3242	0	76.6	28-140	2306	7.42	30	

The following samples were analyzed in this batch:

20122019-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group  
 Work Order: 20122019  
 Project: MC Hagood A8X Spill

# QC BATCH REPORT

Batch ID: **169782** Instrument ID **VMS8** Method: **SW8260C**

MBLK Sample ID: <b>MBLK-169782-169782</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>12/30/2020 04:52 AM</b>				
Client ID:		Run ID: <b>VMS8_201229B</b>		SeqNo: <b>7037901</b>		Prep Date: <b>12/23/2020</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	30	0	0	0	0-0	0			
Ethylbenzene	U	30	0	0	0	0-0	0			
m,p-Xylene	U	60	0	0	0	0-0	0			
o-Xylene	U	30	0	0	0	0-0	0			
Toluene	U	30	0	0	0	0-0	0			
Xylenes, Total	U	90	0	0	0	0-0	0			
Surr: 1,2-Dichloroethane-d4	1008	0	1000	0	101	70-130	0			
Surr: 4-Bromofluorobenzene	1039	0	1000	0	104	70-130	0			
Surr: Dibromofluoromethane	1014	0	1000	0	101	70-130	0			
Surr: Toluene-d8	1014	0	1000	0	101	70-130	0			

LCS Sample ID: <b>LCS-169782-169782</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>12/30/2020 04:03 AM</b>				
Client ID:		Run ID: <b>VMS8_201229B</b>		SeqNo: <b>7037899</b>		Prep Date: <b>12/23/2020</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	919	30	1000	0	91.9	75-125	0			
Ethylbenzene	924.5	30	1000	0	92.4	75-125	0			
m,p-Xylene	1875	60	2000	0	93.8	80-125	0			
o-Xylene	948.5	30	1000	0	94.8	75-125	0			
Toluene	931.5	30	1000	0	93.2	70-125	0			
Xylenes, Total	2824	90	3000	0	94.1	75-125	0			
Surr: 1,2-Dichloroethane-d4	984.5	0	1000	0	98.4	70-130	0			
Surr: 4-Bromofluorobenzene	989	0	1000	0	98.9	70-130	0			
Surr: Dibromofluoromethane	1014	0	1000	0	101	70-130	0			
Surr: Toluene-d8	999	0	1000	0	99.9	70-130	0			

MS Sample ID: <b>20122015-01A MS</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>12/30/2020 10:34 AM</b>				
Client ID:		Run ID: <b>VMS8_201229B</b>		SeqNo: <b>7037922</b>		Prep Date: <b>12/23/2020</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1411	45	1503	0	93.8	75-125	0			H
Ethylbenzene	1448	45	1503	0	96.3	75-125	0			H
m,p-Xylene	2891	90	3006	0	96.2	80-125	0			H
o-Xylene	1448	45	1503	0	96.3	75-125	0			H
Toluene	1431	45	1503	0	95.2	70-125	0			H
Xylenes, Total	4338	140	4510	0	96.2	75-125	0			H
Surr: 1,2-Dichloroethane-d4	1505	0	1503	0	100	70-130	0			
Surr: 4-Bromofluorobenzene	1523	0	1503	0	101	70-130	0			
Surr: Dibromofluoromethane	1511	0	1503	0	100	70-130	0			
Surr: Toluene-d8	1495	0	1503	0	99.4	70-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Entrada Consulting Group  
**Work Order:** 20122019  
**Project:** MC Hagood A8X Spill

## QC BATCH REPORT

Batch ID: **169782** Instrument ID **VMS8** Method: **SW8260C**

MSD				Sample ID: 20122015-01A MSD		Units: µg/Kg-dry		Analysis Date: 12/30/2020 10:51 AM		
Client ID:		Run ID: VMS8_201229B		SeqNo: 7037923		Prep Date: 12/23/2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1517	45	1507	0	101	75-125	1411	7.23	30	H
Ethylbenzene	1519	45	1507	0	101	75-125	1448	4.81	30	H
m,p-Xylene	3011	90	3014	0	99.9	80-125	2891	4.07	30	H
o-Xylene	1500	45	1507	0	99.5	75-125	1448	3.56	30	H
Toluene	1474	45	1507	0	97.8	70-125	1431	2.94	30	H
Xylenes, Total	4511	140	4520	0	99.8	75-125	4338	3.9	30	H
Surr: 1,2-Dichloroethane-d4	1477	0	1507	0	98	70-130	1505	1.93	30	
Surr: 4-Bromofluorobenzene	1544	0	1507	0	102	70-130	1523	1.37	30	
Surr: Dibromofluoromethane	1505	0	1507	0	99.9	70-130	1511	0.407	30	
Surr: Toluene-d8	1485	0	1507	0	98.5	70-130	1495	0.667	30	

The following samples were analyzed in this batch:

20122019-01A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Entrada Consulting Group  
**Work Order:** 20122019  
**Project:** MC Hagood A8X Spill

## QC BATCH REPORT

Batch ID: **169839** Instrument ID **WETCHEM** Method: **SW9045D**

LCS				Sample ID: LCS-169839-169839				Units: s.u.		Analysis Date: 12/24/2020 10:32 AM			
Client ID:			Run ID: WETCHEM_201224C			SeqNo: 7024590			Prep Date: 12/23/2020		DF: 1		
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		
pH		4.03	0.10	4	0	101	90-110	0					

DUP				Sample ID: 20122039-01A DUP				Units: s.u.		Analysis Date: 12/24/2020 10:32 AM			
Client ID:				Run ID: WETCHEM_201224C				SeqNo: 7024596		Prep Date: 12/23/2020		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		
pH		7.54	0.10	0	0	0	0-0	7.48	0.799	20			
Temperature		20.7	0.10	0	0	0		20.7	0				

The following samples were analyzed in this batch:

20122019-01A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.



**Client:** Entrada Consulting Group  
**Work Order:** 20122019  
**Project:** MC Hagood A8X Spill

## QC BATCH REPORT

Batch ID: **170019** Instrument ID **WETCHEM** Method: **USDA H60 Method**

<b>DUP</b>		Sample ID: <b>20122018-01A DUP</b>				Units: <b>mmhos/cm @25°</b>		Analysis Date: <b>12/29/2020 06:25 PM</b>		
Client ID:		Run ID: <b>WETCHEM_201229T</b>		SeqNo: <b>7035822</b>		Prep Date: <b>12/29/2020</b>		DF: <b>20</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	31.66	0.10	0	0	0		31.18	1.53	50	

The following samples were analyzed in this batch:

20122019-01A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group  
 Work Order: 20122019  
 Project: MC Hagood A8X Spill

## QC BATCH REPORT

Batch ID: **170029** Instrument ID **WETCHEM** Method: **SW7196A**

<b>MBLK</b>		Sample ID: <b>MBLK-170029-170029</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>12/29/2020 04:10 PM</b>		
Client ID:		Run ID: <b>WETCHEM_201229P</b>				SeqNo: <b>7035279</b>		Prep Date: <b>12/29/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent U 0.99

<b>LCS</b>		Sample ID: <b>LCS-170029-170029</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>12/29/2020 04:10 PM</b>		
Client ID:		Run ID: <b>WETCHEM_201229P</b>				SeqNo: <b>7035280</b>		Prep Date: <b>12/29/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 5.129 0.99 4.95 0 104 80-120 0

<b>MS</b>		Sample ID: <b>20122018-01A MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>12/29/2020 04:10 PM</b>		
Client ID:		Run ID: <b>WETCHEM_201229P</b>				SeqNo: <b>7035283</b>		Prep Date: <b>12/29/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 5.598 0.98 4.902 0.02941 114 75-125 0 H

<b>MS</b>		Sample ID: <b>20122018-01A MSI</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>12/29/2020 04:10 PM</b>		
Client ID:		Run ID: <b>WETCHEM_201229P</b>				SeqNo: <b>7035285</b>		Prep Date: <b>12/29/2020</b>		DF: <b>100</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 2068 97 1890 0.02941 109 75-125 0 H

<b>MSD</b>		Sample ID: <b>20122018-01A MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>12/29/2020 04:10 PM</b>		
Client ID:		Run ID: <b>WETCHEM_201229P</b>				SeqNo: <b>7035284</b>		Prep Date: <b>12/29/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 5.267 0.99 4.95 0.02941 106 75-125 5.598 6.09 20 H

The following samples were analyzed in this batch:

20122019-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Entrada Consulting Group  
**Work Order:** 20122019  
**Project:** MC Hagood A8X Spill

## QC BATCH REPORT

Batch ID: **R306890** Instrument ID **MOIST** Method: **SW3550C**

<b>MBLK</b>		Sample ID: <b>WBLKS-R306890</b>				Units: % of sample		Analysis Date: <b>12/28/2020 01:33 PM</b>		
Client ID:		Run ID: <b>MOIST_201228D</b>				SeqNo: <b>7032043</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

<b>LCS</b>		Sample ID: <b>LCS-R306890</b>				Units: % of sample		Analysis Date: <b>12/28/2020 01:33 PM</b>		
Client ID:		Run ID: <b>MOIST_201228D</b>				SeqNo: <b>7032042</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

<b>DUP</b>		Sample ID: <b>20122019-01A DUP</b>				Units: % of sample		Analysis Date: <b>12/28/2020 01:33 PM</b>		
Client ID: <b>MC Hagood A8X (6' Deep)</b>		Run ID: <b>MOIST_201228D</b>				SeqNo: <b>7032038</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	15.88	0.10	0	0	0	0-0	16.26	2.36	10	H

The following samples were analyzed in this batch:

20122019-01A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.



# Chain of Custody Form

Page 1 of 1

COC ID: 123456

☐ Cincinnati, OH  
+1 513 733 5336

☐ Everett, WA  
+1 425 356 2600

☐ Fort Collins, CO  
+1 970 490 1511

☒ Holland, MI  
+1 616 399 6070

☐ Houston, TX  
+1 281 530 5656

☐ Middletown, PA  
+1 717 944 5541

☐ Salt Lake City, UT  
+1 801 266 7700

☐ Spring City, PA  
+1 610 948 4903

☐ York, PA  
+1 717 505 5280

Customer Information		Project Information					Parameter/Method Request for Analysis												
Purchase Order		Project Name	MC Hagood A8X Spill					A TPH (GRO & DRO)											
Work Order		Project Number	018-065					B BTEX											
Company Name	Entrada Consulting Group	Billed To Company	Entrada Consulting Group					C PAH (See Attached List) CO Table 910											
Send Report To	Tim Dobransky	Invoice Attn.	Tim Dobransky					D Electrical Conductivity											
Address	330 Grand Ave, STE C	Address						E Sodium Adsorption Ratio											
City/State/Zip	Grand Junction, CO 81501	City/State/Zip						F pH											
Phone	970.270.2986	Phone						G Metals (See Attached List) CO Table 910											
Fax		Fax						H Arsenic Only											
e-Mail Address	tdobransky@entradaeng.com	e-Mail Address						I											
								J											
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold		
1	MC Hagood A8X (6' Deep)	07/08/20	1200	Soil	8	1	X	X	X	X	X	X	X						
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Sampler(s): Please Print & Sign CVX		Shipment Method: FedEx		Required Turnaround Time: <input type="checkbox"/> STD 10 Wk Days <input checked="" type="checkbox"/> 5 Wk Days <input type="checkbox"/> 2 Wk Days <input type="checkbox"/> 24 Hour		Results Due Date:		
Relinquished by:		Date: 12/21/20	Time:		Received by:		Notes: Chevron Pricing Applies - Per Bruce Schlatte	
Relinquished by:		Date: 12-21-20	Time: 1430		Received by Laboratory:		Cooler Temp. 1.9°	
Logged by (Laboratory):		Date: 12/22/20	Time: 1525		Checked by (Laboratory):		QC Package: (Check Box Below)	
						<input checked="" type="checkbox"/> Level II: Standard QC <input type="checkbox"/> Level III: Std QC + Raw Data <input type="checkbox"/> Level IV: SW846 CLP-Like <input type="checkbox"/> Other:		
Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035								

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.

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Sample Receipt Checklist

Client Name: **ENTRADA**

Date/Time Received: **22-Dec-20 12:30**

Work Order: **20122019**

Received by: **KRW**

Checklist completed by **Keith Wierenga**

22-Dec-20

Reviewed by: **Chad Whelton**

22-Dec-20

eSignature

Date

eSignature

Date

Matrices: **Soil**

Carrier name: **FedEx**

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐

Sample(s) received on ice? Yes ☒ No ☐

Temperature(s)/Thermometer(s): **1.9/2.9 C** **IR3**

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage: **12/22/2020 3:28:59 PM**

Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☒

Water - pH acceptable upon receipt? Yes ☐ No ☐ N/A ☒

pH adjusted? Yes ☐ No ☐ N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



28-Jul-2020

Tim Dobransky  
Entrada Consulting Group  
240 Mesa Ave.  
Grand Junction, CO 81501

Re: **MC Hagood A8 Spill (018-065)**

Work Order: **20071388**

Dear Tim,

ALS Environmental received 5 samples on 18-Jul-2020 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 34.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA  
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

A handwritten signature in black ink, appearing to read "Chad Whelton".

Electronically approved by: Chad Whelton

Chad Whelton  
Project Manager

## Report of Laboratory Analysis

Certificate No: MN 026-999-449

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental 

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RIGHT SOLUTIONS RIGHT PARTNER



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**Client:** Entrada Consulting Group  
**Project:** MC Hagood A8 Spill (018-065)  
**Work Order:** 20071388

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**Work Order Sample Summary**

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<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
20071388-01	HA8-SS1	Soil		7/14/2020 10:15	7/18/2020 09:30	<input type="checkbox"/>
20071388-02	HA8-SS2	Soil		7/14/2020 10:30	7/18/2020 09:30	<input type="checkbox"/>
20071388-03	HA8-SS3	Soil		7/14/2020 10:45	7/18/2020 09:30	<input type="checkbox"/>
20071388-04	HA8-SS4	Soil		7/14/2020 11:00	7/18/2020 09:30	<input type="checkbox"/>
20071388-05	HA8-BG1	Soil		7/14/2020 11:15	7/18/2020 09:30	<input type="checkbox"/>

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**Client:** Entrada Consulting Group  
**Project:** MC Hagood A8 Spill (018-065)  
**Work Order:** 20071388

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**Case Narrative**

Batch 159363, Method PNLVI\_8270\_S, Samples 20071388-02A and -03A: One or more PAH surrogate recoveries were below the lower control limits. The sample results may be biased low.

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

<b><u>Acronym</u></b>	<b><u>Description</u></b>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<b><u>Units Reported</u></b>	<b><u>Description</u></b>
% of sample	Percent of Sample
°C	Degrees Celcius
mg/Kg	Milligrams per Kilogram
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter
mmhos/cm @25°C	Millimhos-Centimeter at 25 Degrees Celcius
none	

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s.u.	Standard Units
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# ALS Group, USA

Date: 28-Jul-20

**Client:** Entrada Consulting Group  
**Project:** MC Hagood A8 Spill (018-065)  
**Sample ID:** HA8-SS1  
**Collection Date:** 7/14/2020 10:15 AM

**Work Order:** 20071388  
**Lab ID:** 20071388-01  
**Matrix:** SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>							
			Method: <b>SW8015D</b>		Prep: SW3550 / 7/23/20		Analyst: <b>JZB</b>
<b>DRO (C10-C28)</b>	<b>6.8</b>	J	<b>3.3</b>	<b>12</b>	<b>mg/Kg-dry</b>	1	7/23/2020 22:02
Surr: 4-Terphenyl-d14	60.2			33-111	%REC	1	7/23/2020 22:02
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>							
			Method: <b>SW8015D</b>		Prep: SW5035 / 7/21/20		Analyst: <b>JZB</b>
<b>GRO (C6-C10)</b>	U		2.7	6.5	mg/Kg	1	7/21/2020 20:37
Surr: Toluene-d8	90.3			71-123	%REC	1	7/21/2020 20:37
<b>MERCURY BY CVAA</b>							
			Method: <b>SW7471B</b>		Prep: SW7471 / 7/24/20		Analyst: <b>MAC</b>
<b>Mercury</b>	<b>0.094</b>		<b>0.014</b>	<b>0.021</b>	<b>mg/Kg-dry</b>	1	7/24/2020 11:54
<b>METALS BY ICP-MS</b>							
			Method: <b>SW6020B</b>		Prep: SW3050B / 7/23/20		Analyst: <b>STP</b>
<b>Arsenic</b>	<b>5.9</b>		<b>0.057</b>	<b>0.47</b>	<b>mg/Kg-dry</b>	1	7/24/2020 22:30
<b>Barium</b>	<b>110</b>		<b>0.44</b>	<b>0.47</b>	<b>mg/Kg-dry</b>	1	7/24/2020 22:30
<b>Cadmium</b>	<b>0.15</b>	J	<b>0.028</b>	<b>0.19</b>	<b>mg/Kg-dry</b>	1	7/24/2020 22:30
<b>Chromium</b>	<b>11</b>		<b>0.21</b>	<b>0.47</b>	<b>mg/Kg-dry</b>	1	7/27/2020 17:04
<b>Copper</b>	<b>11</b>		<b>0.47</b>	<b>0.47</b>	<b>mg/Kg-dry</b>	1	7/24/2020 22:30
<b>Lead</b>	<b>18</b>		<b>0.23</b>	<b>0.47</b>	<b>mg/Kg-dry</b>	1	7/24/2020 22:30
<b>Nickel</b>	<b>13</b>		<b>0.25</b>	<b>0.47</b>	<b>mg/Kg-dry</b>	1	7/24/2020 22:30
<b>Selenium</b>	<b>0.83</b>		<b>0.44</b>	<b>0.47</b>	<b>mg/Kg-dry</b>	1	7/24/2020 22:30
<b>Silver</b>	<b>0.078</b>	J	<b>0.063</b>	<b>0.47</b>	<b>mg/Kg-dry</b>	1	7/24/2020 22:30
<b>Zinc</b>	<b>56</b>		<b>0.93</b>	<b>0.95</b>	<b>mg/Kg-dry</b>	1	7/24/2020 22:30
<b>SOLUBLE CATIONS FOR SAR</b>							
			Method: <b>SW6020B</b>		Prep: USDA Method 20B / 7/24/20		Analyst: <b>STP</b>
<b>Calcium</b>	<b>1,500</b>		<b>2.5</b>	<b>5.0</b>	<b>mg/L</b>	10	7/24/2020 16:40
<b>Magnesium</b>	<b>250</b>		<b>0.50</b>	<b>2.0</b>	<b>mg/L</b>	10	7/24/2020 16:40
<b>Sodium</b>	<b>2,400</b>		<b>4.5</b>	<b>20</b>	<b>mg/L</b>	100	7/27/2020 16:19
<b>SODIUM ADSORPTION RATIO</b>							
			Method: <b>USDA H60 METHOD 2</b>		Prep: USDA Method 20B / 7/24/20		Analyst: <b>STP</b>
<b>Sodium Adsorption Ratio</b>	<b>15</b>		<b>0.010</b>	<b>0.010</b>	<b>none</b>	1	7/24/2020
<b>POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)</b>							
			Method: <b>SW8270E</b>		Prep: SW3546 / 7/21/20		Analyst: <b>EEW</b>
<b>Acenaphthene</b>	U		0.00093	0.0048	mg/Kg-dry	1	7/22/2020 00:28
<b>Anthracene</b>	U		0.0016	0.0048	mg/Kg-dry	1	7/22/2020 00:28
<b>Benzo(a)anthracene</b>	U		0.0020	0.0048	mg/Kg-dry	1	7/22/2020 00:28
<b>Benzo(a)pyrene</b>	U		0.0013	0.0048	mg/Kg-dry	1	7/22/2020 00:28
<b>Benzo(b)fluoranthene</b>	U		0.0011	0.0048	mg/Kg-dry	1	7/22/2020 00:28
<b>Benzo(k)fluoranthene</b>	U		0.0014	0.0048	mg/Kg-dry	1	7/22/2020 00:28
<b>Chrysene</b>	U		0.00099	0.0048	mg/Kg-dry	1	7/22/2020 00:28
<b>Dibenzo(a,h)anthracene</b>	U		0.0011	0.0048	mg/Kg-dry	1	7/22/2020 00:28
<b>Fluoranthene</b>	U		0.00088	0.0048	mg/Kg-dry	1	7/22/2020 00:28

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group, USA

Date: 28-Jul-20

**Client:** Entrada Consulting Group  
**Project:** MC Hagood A8 Spill (018-065)  
**Sample ID:** HA8-SS1  
**Collection Date:** 7/14/2020 10:15 AM

**Work Order:** 20071388  
**Lab ID:** 20071388-01  
**Matrix:** SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	U		0.0016	0.0048	mg/Kg-dry	1	7/22/2020 00:28
Indeno(1,2,3-cd)pyrene	U		0.0017	0.0048	mg/Kg-dry	1	7/22/2020 00:28
<b>Naphthalene</b>	<b>0.0047</b>	<b>J</b>	<b>0.0021</b>	<b>0.0048</b>	<b>mg/Kg-dry</b>	1	7/22/2020 00:28
Pyrene	U		0.00079	0.0048	mg/Kg-dry	1	7/22/2020 00:28
Surr: 2-Fluorobiphenyl	66.7			20-140	%REC	1	7/22/2020 00:28
Surr: 4-Terphenyl-d14	23.7			22-172	%REC	1	7/22/2020 00:28
Surr: Nitrobenzene-d5	33.2			28-140	%REC	1	7/22/2020 00:28
<b>VOLATILE ORGANIC COMPOUNDS</b>			Method: <b>SW8260C</b>		Prep: SW5035 / 7/21/20		Analyst: <b>SJB</b>
Benzene	U		0.0067	0.039	mg/Kg-dry	1	7/22/2020 02:27
Ethylbenzene	U		0.0083	0.039	mg/Kg-dry	1	7/22/2020 02:27
<b>m,p-Xylene</b>	<b>0.063</b>	<b>J</b>	<b>0.052</b>	<b>0.079</b>	<b>mg/Kg-dry</b>	1	7/22/2020 02:27
o-Xylene	U		0.015	0.039	mg/Kg-dry	1	7/22/2020 02:27
Toluene	U		0.011	0.039	mg/Kg-dry	1	7/22/2020 02:27
<b>Xylenes, Total</b>	<b>0.063</b>	<b>J</b>	<b>0.052</b>	<b>0.12</b>	<b>mg/Kg-dry</b>	1	7/22/2020 02:27
Surr: 1,2-Dichloroethane-d4	96.3			70-130	%REC	1	7/22/2020 02:27
Surr: 4-Bromofluorobenzene	99.4			70-130	%REC	1	7/22/2020 02:27
Surr: Dibromofluoromethane	91.9			70-130	%REC	1	7/22/2020 02:27
Surr: Toluene-d8	95.8			70-130	%REC	1	7/22/2020 02:27
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			Method: <b>USDA H60 METHOD 2</b>		Prep: USDA Method 20B / 7/24/20		Analyst: <b>QTN</b>
<b>Electrical Conductivity @ Saturation</b>	<b>19</b>		<b>0.011</b>	<b>0.10</b>	<b>mmhos/cm @25°</b>	20	7/24/2020 14:25
<b>CHROMIUM, TRIVALENT</b>			Method: <b>CALCULATION</b>				Analyst: <b>CAC</b>
<b>Chromium, Trivalent</b>	<b>11</b>		<b>1.0</b>	<b>1.2</b>	<b>mg/Kg-dry</b>	1	7/28/2020 11:00
<b>CHROMIUM, HEXAVALENT</b>			Method: <b>SW7196A</b>		Prep: SW3060A / 7/21/20		Analyst: <b>KTP</b>
<b>Chromium, Hexavalent</b>	<b>U</b>		<b>1.0</b>	<b>1.2</b>	<b>mg/Kg-dry</b>	1	7/22/2020 15:39
<b>MOISTURE</b>			Method: <b>SW3550C</b>				Analyst: <b>KTP</b>
<b>Moisture</b>	<b>15</b>		<b>0.10</b>	<b>0.10</b>	<b>% of sample</b>	1	7/23/2020 11:00
<b>PH</b>			Method: <b>SW9045D</b>		Prep: EXTRACT / 7/20/20		Analyst: <b>QTN</b>
<b>pH</b>	<b>8.11</b>		<b>0.10</b>	<b>0.100</b>	<b>s.u.</b>	1	7/21/2020 11:05
<b>Temperature</b>	<b>20.4</b>		<b>0.10</b>	<b>0.100</b>	<b>°C</b>	1	7/21/2020 11:05

**Note:** See Qualifiers page for a list of qualifiers and their definitions.



# ALS Group, USA

Date: 28-Jul-20

**Client:** Entrada Consulting Group  
**Project:** MC Hagood A8 Spill (018-065)  
**Sample ID:** HA8-SS2  
**Collection Date:** 7/14/2020 10:30 AM

**Work Order:** 20071388  
**Lab ID:** 20071388-02  
**Matrix:** SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>							
			Method: <b>SW8015D</b>		Prep: SW3550 / 7/23/20		Analyst: <b>JZB</b>
<b>DRO (C10-C28)</b>	<b>120</b>		<b>14</b>	<b>50</b>	<b>mg/Kg-dry</b>	4	7/24/2020 14:22
Surr: 4-Terphenyl-d14	47.2			33-111	%REC	4	7/24/2020 14:22
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>							
			Method: <b>SW8015D</b>		Prep: SW5035 / 7/21/20		Analyst: <b>JZB</b>
<b>GRO (C6-C10)</b>	<b>240</b>		<b>3.2</b>	<b>7.6</b>	<b>mg/Kg</b>	1	7/21/2020 21:00
Surr: Toluene-d8	106			71-123	%REC	1	7/21/2020 21:00
<b>MERCURY BY CVAA</b>							
			Method: <b>SW7471B</b>		Prep: SW7471 / 7/24/20		Analyst: <b>MAC</b>
<b>Mercury</b>	<b>0.11</b>		<b>0.016</b>	<b>0.023</b>	<b>mg/Kg-dry</b>	1	7/24/2020 11:56
<b>METALS BY ICP-MS</b>							
			Method: <b>SW6020B</b>		Prep: SW3050B / 7/23/20		Analyst: <b>STP</b>
<b>Arsenic</b>	<b>5.8</b>		<b>0.053</b>	<b>0.45</b>	<b>mg/Kg-dry</b>	1	7/24/2020 22:35
<b>Barium</b>	<b>260</b>		<b>4.1</b>	<b>4.5</b>	<b>mg/Kg-dry</b>	10	7/27/2020 16:51
<b>Cadmium</b>	<b>0.15</b>	J	<b>0.027</b>	<b>0.18</b>	<b>mg/Kg-dry</b>	1	7/24/2020 22:35
<b>Chromium</b>	<b>11</b>		<b>0.20</b>	<b>0.45</b>	<b>mg/Kg-dry</b>	1	7/27/2020 17:05
<b>Copper</b>	<b>12</b>		<b>0.45</b>	<b>0.45</b>	<b>mg/Kg-dry</b>	1	7/27/2020 17:05
<b>Lead</b>	<b>20</b>		<b>0.21</b>	<b>0.45</b>	<b>mg/Kg-dry</b>	1	7/24/2020 22:35
<b>Nickel</b>	<b>15</b>		<b>0.23</b>	<b>0.45</b>	<b>mg/Kg-dry</b>	1	7/27/2020 17:05
<b>Selenium</b>	<b>0.75</b>		<b>0.41</b>	<b>0.45</b>	<b>mg/Kg-dry</b>	1	7/24/2020 22:35
<b>Silver</b>	<b>0.087</b>	J	<b>0.059</b>	<b>0.45</b>	<b>mg/Kg-dry</b>	1	7/24/2020 22:35
<b>Zinc</b>	<b>64</b>		<b>0.87</b>	<b>0.89</b>	<b>mg/Kg-dry</b>	1	7/27/2020 17:05
<b>SOLUBLE CATIONS FOR SAR</b>							
			Method: <b>SW6020B</b>		Prep: USDA Method 20B / 7/24/20		Analyst: <b>STP</b>
<b>Calcium</b>	<b>520</b>		<b>2.5</b>	<b>5.0</b>	<b>mg/L</b>	10	7/24/2020 16:41
<b>Magnesium</b>	<b>82</b>		<b>0.50</b>	<b>2.0</b>	<b>mg/L</b>	10	7/24/2020 16:41
<b>Sodium</b>	<b>4,500</b>		<b>4.5</b>	<b>20</b>	<b>mg/L</b>	100	7/27/2020 16:20
<b>SODIUM ADSORPTION RATIO</b>							
			Method: <b>USDA H60 METHOD 2</b>		Prep: USDA Method 20B / 7/24/20		Analyst: <b>STP</b>
<b>Sodium Adsorption Ratio</b>	<b>49</b>		<b>0.010</b>	<b>0.010</b>	<b>none</b>	1	7/24/2020
<b>POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)</b>							
			Method: <b>SW8270E</b>		Prep: SW3546 / 7/21/20		Analyst: <b>EEW</b>
Acenaphthene	U		0.0010	0.0051	mg/Kg-dry	1	7/22/2020 00:44
Anthracene	U		0.0017	0.0051	mg/Kg-dry	1	7/22/2020 00:44
Benzo(a)anthracene	U		0.0021	0.0051	mg/Kg-dry	1	7/22/2020 00:44
Benzo(a)pyrene	U		0.0014	0.0051	mg/Kg-dry	1	7/22/2020 00:44
Benzo(b)fluoranthene	U		0.0012	0.0051	mg/Kg-dry	1	7/22/2020 00:44
Benzo(k)fluoranthene	U		0.0015	0.0051	mg/Kg-dry	1	7/22/2020 00:44
Chrysene	U		0.0011	0.0051	mg/Kg-dry	1	7/22/2020 00:44
Dibenzo(a,h)anthracene	U		0.0012	0.0051	mg/Kg-dry	1	7/22/2020 00:44
Fluoranthene	U		0.00095	0.0051	mg/Kg-dry	1	7/22/2020 00:44

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group, USA

Date: 28-Jul-20

**Client:** Entrada Consulting Group  
**Project:** MC Hagood A8 Spill (018-065)  
**Sample ID:** HA8-SS2  
**Collection Date:** 7/14/2020 10:30 AM

**Work Order:** 20071388  
**Lab ID:** 20071388-02  
**Matrix:** SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	U		0.0017	0.0051	mg/Kg-dry	1	7/22/2020 00:44
Indeno(1,2,3-cd)pyrene	U		0.0018	0.0051	mg/Kg-dry	1	7/22/2020 00:44
<b>Naphthalene</b>	<b>0.021</b>		<b>0.0022</b>	<b>0.0051</b>	<b>mg/Kg-dry</b>	1	7/22/2020 00:44
Pyrene	U		0.00085	0.0051	mg/Kg-dry	1	7/22/2020 00:44
Surr: 2-Fluorobiphenyl	88.6			20-140	%REC	1	7/22/2020 00:44
Surr: 4-Terphenyl-d14	14.8	S		22-172	%REC	1	7/22/2020 00:44
Surr: Nitrobenzene-d5	78.1			28-140	%REC	1	7/22/2020 00:44
<b>VOLATILE ORGANIC COMPOUNDS</b>			Method: <b>SW8260C</b>		Prep: SW5035 / 7/21/20		Analyst: <b>SJB</b>
Benzene	U		0.0078	0.045	mg/Kg-dry	1	7/22/2020 02:48
<b>Ethylbenzene</b>	<b>0.071</b>		<b>0.0096</b>	<b>0.045</b>	<b>mg/Kg-dry</b>	1	7/22/2020 02:48
<b>m,p-Xylene</b>	<b>0.40</b>		<b>0.061</b>	<b>0.091</b>	<b>mg/Kg-dry</b>	1	7/22/2020 02:48
<b>o-Xylene</b>	<b>0.25</b>		<b>0.018</b>	<b>0.045</b>	<b>mg/Kg-dry</b>	1	7/22/2020 02:48
Toluene	U		0.012	0.045	mg/Kg-dry	1	7/22/2020 02:48
<b>Xylenes, Total</b>	<b>0.65</b>		<b>0.061</b>	<b>0.14</b>	<b>mg/Kg-dry</b>	1	7/22/2020 02:48
Surr: 1,2-Dichloroethane-d4	91.5			70-130	%REC	1	7/22/2020 02:48
Surr: 4-Bromofluorobenzene	112			70-130	%REC	1	7/22/2020 02:48
Surr: Dibromofluoromethane	91.2			70-130	%REC	1	7/22/2020 02:48
Surr: Toluene-d8	97.2			70-130	%REC	1	7/22/2020 02:48
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			Method: <b>USDA H60 METHOD 2</b>		Prep: USDA Method 20B / 7/24/20		Analyst: <b>QTN</b>
<b>Electrical Conductivity @ Saturation</b>	<b>25</b>		<b>0.011</b>	<b>0.10</b>	<b>mmhos/cm @25°</b>	20	7/24/2020 14:25
<b>CHROMIUM, TRIVALENT</b>			Method: <b>CALCULATION</b>				Analyst: <b>CAC</b>
<b>Chromium, Trivalent</b>	<b>11</b>		<b>1.1</b>	<b>1.3</b>	<b>mg/Kg-dry</b>	1	7/28/2020 11:00
<b>CHROMIUM, HEXAVALENT</b>			Method: <b>SW7196A</b>		Prep: SW3060A / 7/21/20		Analyst: <b>KTP</b>
<b>Chromium, Hexavalent</b>	U		1.1	1.3	mg/Kg-dry	1	7/22/2020 15:39
<b>MOISTURE</b>			Method: <b>SW3550C</b>				Analyst: <b>KTP</b>
<b>Moisture</b>	<b>21</b>		<b>0.10</b>	<b>0.10</b>	<b>% of sample</b>	1	7/23/2020 11:00
<b>PH</b>			Method: <b>SW9045D</b>		Prep: EXTRACT / 7/20/20		Analyst: <b>QTN</b>
<b>pH</b>	<b>7.95</b>		<b>0.10</b>	<b>0.100</b>	<b>s.u.</b>	1	7/21/2020 11:05
<b>Temperature</b>	<b>20.3</b>		<b>0.10</b>	<b>0.100</b>	<b>°C</b>	1	7/21/2020 11:05

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group, USA

Date: 28-Jul-20

**Client:** Entrada Consulting Group  
**Project:** MC Hagood A8 Spill (018-065)  
**Sample ID:** HA8-SS3  
**Collection Date:** 7/14/2020 10:45 AM

**Work Order:** 20071388  
**Lab ID:** 20071388-03  
**Matrix:** SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>							
			Method: <b>SW8015D</b>		Prep: SW3550 / 7/23/20		Analyst: <b>JZB</b>
<b>DRO (C10-C28)</b>	<b>130</b>		<b>13</b>	<b>45</b>	<b>mg/Kg-dry</b>	<b>4</b>	7/24/2020 11:46
Surr: 4-Terphenyl-d14	41.8			33-111	%REC	4	7/24/2020 11:46
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>							
			Method: <b>SW8015D</b>		Prep: SW5035 / 7/21/20		Analyst: <b>JZB</b>
<b>GRO (C6-C10)</b>	<b>3.9</b>	J	<b>2.6</b>	<b>6.2</b>	<b>mg/Kg</b>	<b>1</b>	7/21/2020 21:22
Surr: Toluene-d8	94.4			71-123	%REC	1	7/21/2020 21:22
<b>MERCURY BY CVAA</b>							
			Method: <b>SW7471B</b>		Prep: SW7471 / 7/24/20		Analyst: <b>MAC</b>
<b>Mercury</b>	<b>0.094</b>		<b>0.014</b>	<b>0.020</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/24/2020 11:58
<b>METALS BY ICP-MS</b>							
			Method: <b>SW6020B</b>		Prep: SW3050B / 7/23/20		Analyst: <b>STP</b>
<b>Arsenic</b>	<b>5.3</b>		<b>0.048</b>	<b>0.40</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/24/2020 22:37
<b>Barium</b>	<b>180</b>		<b>3.7</b>	<b>4.0</b>	<b>mg/Kg-dry</b>	<b>10</b>	7/27/2020 16:53
<b>Cadmium</b>	<b>0.13</b>	J	<b>0.024</b>	<b>0.16</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/24/2020 22:37
<b>Chromium</b>	<b>9.6</b>		<b>0.18</b>	<b>0.40</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/27/2020 17:07
<b>Copper</b>	<b>11</b>		<b>0.40</b>	<b>0.40</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/27/2020 17:07
<b>Lead</b>	<b>18</b>		<b>0.19</b>	<b>0.40</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/24/2020 22:37
<b>Nickel</b>	<b>14</b>		<b>0.21</b>	<b>0.40</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/27/2020 17:07
<b>Selenium</b>	<b>0.76</b>		<b>0.37</b>	<b>0.40</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/24/2020 22:37
<b>Silver</b>	<b>0.077</b>	J	<b>0.053</b>	<b>0.40</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/24/2020 22:37
<b>Zinc</b>	<b>65</b>		<b>0.78</b>	<b>0.80</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/27/2020 17:07
<b>SOLUBLE CATIONS FOR SAR</b>							
			Method: <b>SW6020B</b>		Prep: USDA Method 20B / 7/24/20		Analyst: <b>STP</b>
<b>Calcium</b>	<b>190</b>		<b>2.5</b>	<b>5.0</b>	<b>mg/L</b>	<b>10</b>	7/24/2020 16:43
<b>Magnesium</b>	<b>29</b>		<b>0.50</b>	<b>2.0</b>	<b>mg/L</b>	<b>10</b>	7/24/2020 16:43
<b>Sodium</b>	<b>2,700</b>		<b>4.5</b>	<b>20</b>	<b>mg/L</b>	<b>100</b>	7/27/2020 16:22
<b>SODIUM ADSORPTION RATIO</b>							
			Method: <b>USDA H60 METHOD 2</b>		Prep: USDA Method 20B / 7/24/20		Analyst: <b>STP</b>
<b>Sodium Adsorption Ratio</b>	<b>48</b>		<b>0.010</b>	<b>0.010</b>	<b>none</b>	<b>1</b>	7/24/2020
<b>POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)</b>							
			Method: <b>SW8270E</b>		Prep: SW3546 / 7/21/20		Analyst: <b>EEW</b>
Acenaphthene	U		0.00090	0.0046	mg/Kg-dry	1	7/22/2020 00:59
Anthracene	U		0.0016	0.0046	mg/Kg-dry	1	7/22/2020 00:59
Benzo(a)anthracene	U		0.0019	0.0046	mg/Kg-dry	1	7/22/2020 00:59
Benzo(a)pyrene	U		0.0013	0.0046	mg/Kg-dry	1	7/22/2020 00:59
Benzo(b)fluoranthene	U		0.0011	0.0046	mg/Kg-dry	1	7/22/2020 00:59
Benzo(k)fluoranthene	U		0.0014	0.0046	mg/Kg-dry	1	7/22/2020 00:59
Chrysene	U		0.00096	0.0046	mg/Kg-dry	1	7/22/2020 00:59
Dibenzo(a,h)anthracene	U		0.0011	0.0046	mg/Kg-dry	1	7/22/2020 00:59
Fluoranthene	U		0.00086	0.0046	mg/Kg-dry	1	7/22/2020 00:59

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group, USA

Date: 28-Jul-20

**Client:** Entrada Consulting Group  
**Project:** MC Hagood A8 Spill (018-065)  
**Sample ID:** HA8-SS3  
**Collection Date:** 7/14/2020 10:45 AM

**Work Order:** 20071388  
**Lab ID:** 20071388-03  
**Matrix:** SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	U		0.0015	0.0046	mg/Kg-dry	1	7/22/2020 00:59
Indeno(1,2,3-cd)pyrene	U		0.0017	0.0046	mg/Kg-dry	1	7/22/2020 00:59
Naphthalene	U		0.0020	0.0046	mg/Kg-dry	1	7/22/2020 00:59
Pyrene	U		0.00077	0.0046	mg/Kg-dry	1	7/22/2020 00:59
Surr: 2-Fluorobiphenyl	17.5	S		20-140	%REC	1	7/22/2020 00:59
Surr: 4-Terphenyl-d14	7.78	S		22-172	%REC	1	7/22/2020 00:59
Surr: Nitrobenzene-d5	17.5	S		28-140	%REC	1	7/22/2020 00:59
<b>VOLATILE ORGANIC COMPOUNDS</b>			Method: <b>SW8260C</b>		Prep: SW5035 / 7/21/20		Analyst: <b>SJB</b>
Benzene	U		0.0064	0.037	mg/Kg-dry	1	7/22/2020 03:08
Ethylbenzene	U		0.0079	0.037	mg/Kg-dry	1	7/22/2020 03:08
m,p-Xylene	U		0.050	0.075	mg/Kg-dry	1	7/22/2020 03:08
o-Xylene	U		0.014	0.037	mg/Kg-dry	1	7/22/2020 03:08
Toluene	U		0.010	0.037	mg/Kg-dry	1	7/22/2020 03:08
Xylenes, Total	U		0.050	0.11	mg/Kg-dry	1	7/22/2020 03:08
Surr: 1,2-Dichloroethane-d4	92.5			70-130	%REC	1	7/22/2020 03:08
Surr: 4-Bromofluorobenzene	102			70-130	%REC	1	7/22/2020 03:08
Surr: Dibromofluoromethane	89.1			70-130	%REC	1	7/22/2020 03:08
Surr: Toluene-d8	97.8			70-130	%REC	1	7/22/2020 03:08
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			Method: <b>USDA H60 METHOD 2</b>		Prep: USDA Method 20B / 7/24/20		Analyst: <b>QTN</b>
Electrical Conductivity @ Saturation	13		0.011	0.10	mmhos/cm @25°	20	7/24/2020 14:25
<b>CHROMIUM, TRIVALENT</b>			Method: <b>CALCULATION</b>				Analyst: <b>CAC</b>
Chromium, Trivalent	9.6		0.97	1.1	mg/Kg-dry	1	7/28/2020 11:00
<b>CHROMIUM, HEXAVALENT</b>			Method: <b>SW7196A</b>		Prep: SW3060A / 7/21/20		Analyst: <b>KTP</b>
Chromium, Hexavalent	U		0.95	1.1	mg/Kg-dry	1	7/22/2020 15:39
<b>MOISTURE</b>			Method: <b>SW3550C</b>				Analyst: <b>KTP</b>
Moisture	13		0.10	0.10	% of sample	1	7/23/2020 11:00
<b>PH</b>			Method: <b>SW9045D</b>		Prep: EXTRACT / 7/20/20		Analyst: <b>QTN</b>
pH	7.82		0.10	0.100	s.u.	1	7/21/2020 11:05
Temperature	20.3		0.10	0.100	°C	1	7/21/2020 11:05

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group, USA

Date: 28-Jul-20

**Client:** Entrada Consulting Group  
**Project:** MC Hagood A8 Spill (018-065)  
**Sample ID:** HA8-SS4  
**Collection Date:** 7/14/2020 11:00 AM

**Work Order:** 20071388  
**Lab ID:** 20071388-04  
**Matrix:** SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>							
			Method: <b>SW8015D</b>		Prep: SW3550 / 7/23/20		Analyst: <b>JZB</b>
<b>DRO (C10-C28)</b>	<b>17</b>		<b>3.5</b>	<b>12</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/23/2020 23:59
Surr: 4-Terphenyl-d14	59.3			33-111	%REC	1	7/23/2020 23:59
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>							
			Method: <b>SW8015D</b>		Prep: SW5035 / 7/21/20		Analyst: <b>JZB</b>
<b>GRO (C6-C10)</b>	<b>U</b>		<b>3.1</b>	<b>7.3</b>	<b>mg/Kg</b>	<b>1</b>	7/21/2020 23:16
Surr: Toluene-d8	89.1			71-123	%REC	1	7/21/2020 23:16
<b>MERCURY BY CVAA</b>							
			Method: <b>SW7471B</b>		Prep: SW7471 / 7/24/20		Analyst: <b>MAC</b>
<b>Mercury</b>	<b>0.11</b>		<b>0.014</b>	<b>0.021</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/24/2020 12:00
<b>METALS BY ICP-MS</b>							
			Method: <b>SW6020B</b>		Prep: SW3050B / 7/23/20		Analyst: <b>STP</b>
<b>Arsenic</b>	<b>6.1</b>		<b>0.056</b>	<b>0.47</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/24/2020 22:45
<b>Barium</b>	<b>120</b>		<b>0.43</b>	<b>0.47</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/24/2020 22:45
<b>Cadmium</b>	<b>0.18</b>	J	<b>0.028</b>	<b>0.19</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/24/2020 22:45
<b>Chromium</b>	<b>12</b>		<b>0.20</b>	<b>0.47</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/27/2020 18:17
<b>Copper</b>	<b>13</b>		<b>0.47</b>	<b>0.47</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/27/2020 18:17
<b>Lead</b>	<b>19</b>		<b>0.22</b>	<b>0.47</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/24/2020 22:45
<b>Nickel</b>	<b>16</b>		<b>0.24</b>	<b>0.47</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/27/2020 18:17
<b>Selenium</b>	<b>0.93</b>		<b>0.43</b>	<b>0.47</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/24/2020 22:45
<b>Silver</b>	<b>0.084</b>	J	<b>0.061</b>	<b>0.47</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/24/2020 22:45
<b>Zinc</b>	<b>67</b>		<b>0.91</b>	<b>0.93</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/27/2020 18:17
<b>SOLUBLE CATIONS FOR SAR</b>							
			Method: <b>SW6020B</b>		Prep: USDA Method 20B / 7/24/20		Analyst: <b>STP</b>
<b>Calcium</b>	<b>1,600</b>		<b>2.5</b>	<b>5.0</b>	<b>mg/L</b>	<b>10</b>	7/24/2020 16:45
<b>Magnesium</b>	<b>250</b>		<b>0.50</b>	<b>2.0</b>	<b>mg/L</b>	<b>10</b>	7/24/2020 16:45
<b>Sodium</b>	<b>5,600</b>		<b>4.5</b>	<b>20</b>	<b>mg/L</b>	<b>100</b>	7/27/2020 16:24
<b>SODIUM ADSORPTION RATIO</b>							
			Method: <b>USDA H60 METHOD 2</b>		Prep: USDA Method 20B / 7/24/20		Analyst: <b>STP</b>
<b>Sodium Adsorption Ratio</b>	<b>35</b>		<b>0.010</b>	<b>0.010</b>	<b>none</b>	<b>1</b>	7/24/2020
<b>POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)</b>							
			Method: <b>SW8270E</b>		Prep: SW3546 / 7/21/20		Analyst: <b>EEW</b>
<b>Acenaphthene</b>	<b>U</b>		<b>0.0010</b>	<b>0.0051</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/22/2020 01:15
<b>Anthracene</b>	<b>U</b>		<b>0.0017</b>	<b>0.0051</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/22/2020 01:15
<b>Benzo(a)anthracene</b>	<b>U</b>		<b>0.0021</b>	<b>0.0051</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/22/2020 01:15
<b>Benzo(a)pyrene</b>	<b>U</b>		<b>0.0014</b>	<b>0.0051</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/22/2020 01:15
<b>Benzo(b)fluoranthene</b>	<b>U</b>		<b>0.0012</b>	<b>0.0051</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/22/2020 01:15
<b>Benzo(k)fluoranthene</b>	<b>U</b>		<b>0.0015</b>	<b>0.0051</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/22/2020 01:15
<b>Chrysene</b>	<b>U</b>		<b>0.0011</b>	<b>0.0051</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/22/2020 01:15
<b>Dibenzo(a,h)anthracene</b>	<b>U</b>		<b>0.0012</b>	<b>0.0051</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/22/2020 01:15
<b>Fluoranthene</b>	<b>U</b>		<b>0.00095</b>	<b>0.0051</b>	<b>mg/Kg-dry</b>	<b>1</b>	7/22/2020 01:15

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group, USA

Date: 28-Jul-20

**Client:** Entrada Consulting Group  
**Project:** MC Hagood A8 Spill (018-065)  
**Sample ID:** HA8-SS4  
**Collection Date:** 7/14/2020 11:00 AM

**Work Order:** 20071388  
**Lab ID:** 20071388-04  
**Matrix:** SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	U		0.0017	0.0051	mg/Kg-dry	1	7/22/2020 01:15
Indeno(1,2,3-cd)pyrene	U		0.0019	0.0051	mg/Kg-dry	1	7/22/2020 01:15
<b>Naphthalene</b>	<b>0.0050</b>	<b>J</b>	<b>0.0022</b>	<b>0.0051</b>	<b>mg/Kg-dry</b>	<b>1</b>	<b>7/22/2020 01:15</b>
Pyrene	U		0.00085	0.0051	mg/Kg-dry	1	7/22/2020 01:15
Surr: 2-Fluorobiphenyl	82.3			20-140	%REC	1	7/22/2020 01:15
Surr: 4-Terphenyl-d14	24.2			22-172	%REC	1	7/22/2020 01:15
Surr: Nitrobenzene-d5	33.1			28-140	%REC	1	7/22/2020 01:15
<b>VOLATILE ORGANIC COMPOUNDS</b>			Method: <b>SW8260C</b>		Prep: SW5035 / 7/21/20		Analyst: <b>SJB</b>
Benzene	U		0.0075	0.044	mg/Kg-dry	1	7/22/2020 03:28
Ethylbenzene	U		0.0093	0.044	mg/Kg-dry	1	7/22/2020 03:28
m,p-Xylene	U		0.059	0.088	mg/Kg-dry	1	7/22/2020 03:28
o-Xylene	U		0.017	0.044	mg/Kg-dry	1	7/22/2020 03:28
Toluene	U		0.012	0.044	mg/Kg-dry	1	7/22/2020 03:28
Xylenes, Total	U		0.059	0.13	mg/Kg-dry	1	7/22/2020 03:28
Surr: 1,2-Dichloroethane-d4	93.7			70-130	%REC	1	7/22/2020 03:28
Surr: 4-Bromofluorobenzene	97.9			70-130	%REC	1	7/22/2020 03:28
Surr: Dibromofluoromethane	94.4			70-130	%REC	1	7/22/2020 03:28
Surr: Toluene-d8	96.5			70-130	%REC	1	7/22/2020 03:28
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			Method: <b>USDA H60 METHOD 2</b>		Prep: USDA Method 20B / 7/24/20		Analyst: <b>QTN</b>
Electrical Conductivity @ Saturation	<b>34</b>		<b>0.011</b>	<b>0.10</b>	mmhos/cm @25°	20	7/24/2020 14:25
<b>CHROMIUM, TRIVALENT</b>			Method: <b>CALCULATION</b>				Analyst: <b>CAC</b>
Chromium, Trivalent	<b>12</b>		<b>1.1</b>	<b>1.3</b>	mg/Kg-dry	1	7/28/2020 11:00
<b>CHROMIUM, HEXAVALENT</b>			Method: <b>SW7196A</b>		Prep: SW3060A / 7/21/20		Analyst: <b>KTP</b>
Chromium, Hexavalent	U		1.0	1.2	mg/Kg-dry	1	7/22/2020 15:39
<b>MOISTURE</b>			Method: <b>SW3550C</b>				Analyst: <b>KTP</b>
Moisture	<b>20</b>		<b>0.10</b>	<b>0.10</b>	% of sample	1	7/23/2020 11:00
<b>PH</b>			Method: <b>SW9045D</b>		Prep: EXTRACT / 7/20/20		Analyst: <b>QTN</b>
pH	<b>7.73</b>		<b>0.10</b>	<b>0.100</b>	s.u.	1	7/21/2020 11:05
Temperature	<b>20.3</b>		<b>0.10</b>	<b>0.100</b>	°C	1	7/21/2020 11:05

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group, USA

Date: 28-Jul-20

Client: Entrada Consulting Group  
Project: MC Hagood A8 Spill (018-065)  
Sample ID: HA8-BG1  
Collection Date: 7/14/2020 11:15 AM

Work Order: 20071388  
Lab ID: 20071388-05  
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>MERCURY BY CVAA</b>							
Mercury	0.12		0.013	0.019	mg/Kg-dry	1	7/24/2020 12:02
<b>METALS ANALYSIS BY ICP</b>							
Arsenic	2.7		0.087	0.33	mg/Kg-dry	1	7/24/2020 15:32
Barium	60		0.41	0.67	mg/Kg-dry	1	7/24/2020 15:32
Boron	18		0.80	1.3	mg/Kg-dry	1	7/24/2020 15:32
Cadmium	0.16	J	0.11	0.67	mg/Kg-dry	1	7/24/2020 15:32
Chromium	7.4		0.20	0.33	mg/Kg-dry	1	7/24/2020 15:32
Copper	13		0.49	0.67	mg/Kg-dry	1	7/24/2020 15:32
Lead	13		0.27	0.33	mg/Kg-dry	1	7/24/2020 15:32
Nickel	11		0.13	0.33	mg/Kg-dry	1	7/24/2020 15:32
Selenium	0.80		0.19	0.67	mg/Kg-dry	1	7/24/2020 15:32
Silver	U		0.16	0.33	mg/Kg-dry	1	7/24/2020 15:32
Zinc	48		0.64	0.67	mg/Kg-dry	1	7/24/2020 15:32
<b>SOLUBLE CATIONS FOR SAR</b>							
Calcium	1,800		2.5	5.0	mg/L	10	7/24/2020 16:46
Magnesium	54		0.50	2.0	mg/L	10	7/24/2020 16:46
Sodium	14		0.45	2.0	mg/L	10	7/24/2020 16:46
<b>SODIUM ADSORPTION RATIO</b>							
Sodium Adsorption Ratio	0.092		0.010	0.010	none	1	7/24/2020
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>							
Electrical Conductivity @ Saturation	9.1		0.011	0.10	mmhos/cm @25°	20	7/24/2020 14:25
<b>CHROMIUM, TRIVALENT</b>							
Chromium, Trivalent	7.4		0.90	1.1	mg/Kg-dry	1	7/28/2020 11:00
<b>CHROMIUM, HEXAVALENT</b>							
Chromium, Hexavalent	U		0.89	1.1	mg/Kg-dry	1	7/22/2020 15:39
<b>MOISTURE</b>							
Moisture	5.9		0.10	0.10	% of sample	1	7/23/2020 11:00
<b>PH</b>							
pH	7.80		0.10	0.100	s.u.	1	7/21/2020 11:05
Temperature	20.2		0.10	0.100	°C	1	7/21/2020 11:05

Note: See Qualifiers page for a list of qualifiers and their definitions.

**Client:** Entrada Consulting Group  
**Work Order:** 20071388  
**Project:** MC Hagood A8 Spill (018-065)

**QC BATCH REPORT**

Batch ID: **159493** Instrument ID **GC8** Method: **SW8015D**

MBLK		Sample ID: DBLKS1-159493-159493				Units: mg/Kg		Analysis Date: 7/23/2020 07:25 PM		
Client ID:		Run ID: GC8_200723A		SeqNo: 6585182		Prep Date: 7/23/2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	4.289	10								J
Surr: 4-Terphenyl-d14	2.367	0	3.33	0	71.1	33-111	0			

LCS				Sample ID: <b>DLCSS1-159493-159493</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/23/2020 08:04 PM</b>			
Client ID:			Run ID: <b>GC8_200723A</b>			SeqNo: <b>6585183</b>		Prep Date: <b>7/23/2020</b>		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
DRO (C10-C28)	340.3	10	333	0	102	80-121	0						
<i>Surr: 4-Terphenyl-d14</i>	<i>1.944</i>	0	3.33	0	58.4	33-111	0						

MS				Sample ID: 20071387-01A MS			Units: mg/Kg		Analysis Date: 7/24/2020 01:04 PM		
Client ID:			Run ID: GC8_200723A			SeqNo: 6586759		Prep Date: 7/23/2020		DF: 4	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
DRO (C10-C28)	3512	39	328.7	3557	-13.8	80-121	0			SO	
Surr: 4-Terphenyl-d14	3.237	0	3.287	0	98.5	33-111	0				

MSD				Sample ID: 20071387-01A MSD			Units: mg/Kg		Analysis Date: 7/24/2020 01:43 PM		
Client ID:			Run ID: GC8_200723A			SeqNo: 6586760		Prep Date: 7/23/2020		DF: 4	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
DRO (C10-C28)	4633	40	329.3	3557	327	80-121	3512	27.5	30	SO	
Surr: 4-Terphenyl-d14	2.887	0	3.293	0	87.7	33-111	3.237	11.4	30		

The following samples were analyzed in this batch:

20071388-01A	20071388-02A	20071388-03A
20071388-04A		



Client: Entrada Consulting Group  
 Work Order: 20071388  
 Project: MC Hagood A8 Spill (018-065)

## QC BATCH REPORT

Batch ID: **159375** Instrument ID **GC9** Method: **SW8015D**

<b>MBLK</b>		Sample ID: <b>MBLK-159375-159375</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>7/21/2020 07:06 PM</b>		
Client ID:		Run ID: <b>GC9_200721B</b>				SeqNo: <b>6582038</b>		Prep Date: <b>7/21/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	U	5,000	0	0	0		0			
<i>Surr: Toluene-d8</i>	<i>4770</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>95.4</i>	<i>71-123</i>	<i>0</i>			

<b>LCS</b>		Sample ID: <b>LCS-159375-159375</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>7/21/2020 10:53 PM</b>		
Client ID:		Run ID: <b>GC9_200721B</b>				SeqNo: <b>6582061</b>		Prep Date: <b>7/21/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	203200	5,000	250000	0	81.3	71-123	0			
<i>Surr: Toluene-d8</i>	<i>4316</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>86.3</i>	<i>71-123</i>	<i>0</i>			

<b>MS</b>		Sample ID: <b>20071387-01A MS</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>7/21/2020 09:45 PM</b>		
Client ID:		Run ID: <b>GC9_200721B</b>				SeqNo: <b>6582045</b>		Prep Date: <b>7/21/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	274800	5,200	261200	0	105	71-123	0			
<i>Surr: Toluene-d8</i>	<i>4892</i>	<i>0</i>	<i>5225</i>	<i>0</i>	<i>93.6</i>	<i>71-123</i>	<i>0</i>			

<b>MSD</b>		Sample ID: <b>20071387-01A MSD</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>7/21/2020 10:08 PM</b>		
Client ID:		Run ID: <b>GC9_200721B</b>				SeqNo: <b>6582046</b>		Prep Date: <b>7/21/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	239600	5,200	261200	0	91.7	71-123	274800	13.7	30	
<i>Surr: Toluene-d8</i>	<i>4631</i>	<i>0</i>	<i>5225</i>	<i>0</i>	<i>88.6</i>	<i>71-123</i>	<i>4892</i>	<i>5.48</i>	<i>30</i>	

The following samples were analyzed in this batch:

20071388-01A	20071388-02A	20071388-03A
20071388-04A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group  
 Work Order: 20071388  
 Project: MC Hagood A8 Spill (018-065)

## QC BATCH REPORT

Batch ID: **159508** Instrument ID **HG4** Method: **SW7471B**

<b>MBLK</b>		Sample ID: <b>MBLK-159508-159508</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/24/2020 11:48 AM</b>		
Client ID:		Run ID: <b>HG4_200724A</b>				SeqNo: <b>6586312</b>		Prep Date: <b>7/24/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.020								

<b>LCS</b>		Sample ID: <b>LCS-159508-159508</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/24/2020 11:50 AM</b>		
Client ID:		Run ID: <b>HG4_200724A</b>				SeqNo: <b>6586313</b>		Prep Date: <b>7/24/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1592	0.020	0.1665	0	95.6	80-120	0			

<b>MS</b>		Sample ID: <b>20071388-05AMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/24/2020 12:04 PM</b>		
Client ID: <b>HA8-BG1</b>		Run ID: <b>HG4_200724A</b>				SeqNo: <b>6586320</b>		Prep Date: <b>7/24/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.2674	0.018	0.148	0.1175	101	75-125	0			

<b>MSD</b>		Sample ID: <b>20071388-05AMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/24/2020 12:06 PM</b>		
Client ID: <b>HA8-BG1</b>		Run ID: <b>HG4_200724A</b>				SeqNo: <b>6586321</b>		Prep Date: <b>7/24/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.261	0.017	0.1421	0.1175	101	75-125	0.2674	2.42	35	

The following samples were analyzed in this batch:

20071388-01A	20071388-02A	20071388-03A
20071388-04A	20071388-05A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Entrada Consulting Group  
**Work Order:** 20071388  
**Project:** MC Hagood A8 Spill (018-065)

## QC BATCH REPORT

Batch ID: **159539** Instrument ID **ICP2** Method: **SW6010D**

MBLK				Sample ID: MBLK-159539-159539			Units: mg/Kg		Analysis Date: 7/24/2020 03:22 PM		
Client ID:			Run ID: ICP2_200724A			SeqNo: 6586842		Prep Date: 7/23/2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	U	0.25									
Barium	U	0.50									
Boron	U	1.0									
Cadmium	U	0.50									
Chromium	U	0.25									
Copper	U	0.50									
Lead	U	0.25									
Nickel	U	0.25									
Selenium	U	0.50									
Silver	U	0.25									
Zinc	U	0.50									

LCS				Sample ID: LCS-159539-159539			Units: mg/Kg		Analysis Date: 7/24/2020 03:27 PM		
Client ID:		Run ID: ICP2_200724A			SeqNo: 6586843		Prep Date: 7/23/2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	5.199	0.25	5	0	104	80-120	0				
Barium	5.734	0.50	5	0	115	80-120	0				
Boron	26.49	1.0	25	0	106	80-120	0				
Cadmium	5.282	0.50	5	0	106	80-120	0				
Chromium	5.645	0.25	5	0	113	80-120	0				
Copper	5.66	0.50	5	0	113	80-120	0				
Lead	5.544	0.25	5	0	111	80-120	0				
Nickel	5.291	0.25	5	0	106	80-120	0				
Selenium	5.069	0.50	5	0	101	80-120	0				
Silver	5.33	0.25	5	0	107	80-120	0				
Zinc	4.885	0.50	5	0	97.7	80-120	0				

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group  
 Work Order: 20071388  
 Project: MC Hagood A8 Spill (018-065)

## QC BATCH REPORT

Batch ID: **159539** Instrument ID **ICP2** Method: **SW6010D**

MS				Sample ID: 20071393-03AMS			Units: mg/Kg		Analysis Date: 7/24/2020 04:01 PM		
Client ID:			Run ID: ICP2_200724A			SeqNo: 6586848		Prep Date: 7/23/2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	10.91	0.39	7.788	4.02	88.5	75-125	0				
Barium	51.13	0.78	7.788	38.25	165	75-125	0			SO	
Boron	52.92	1.6	38.94	10.62	109	75-125	0				
Cadmium	8.123	0.78	7.788	0.2585	101	75-125	0				
Chromium	21.35	0.39	7.788	11.17	131	75-125	0			S	
Copper	23.23	0.78	7.788	13.84	121	75-125	0				
Lead	19	0.39	7.788	9.789	118	75-125	0				
Nickel	20.08	0.39	7.788	11.63	109	75-125	0				
Selenium	7.749	0.78	7.788	0.3207	95.4	75-125	0				
Silver	8.511	0.39	7.788	-0.0832	110	75-125	0				
Zinc	40.66	0.78	7.788	28.92	151	75-125	0			S	

MSD				Sample ID: 20071393-03AMSD			Units: mg/Kg		Analysis Date: 7/24/2020 04:06 PM		
Client ID:		Run ID: ICP2_200724A			SeqNo: 6586849		Prep Date: 7/23/2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	11.58	0.41	8.197	4.02	92.2	75-125	10.91	5.94	20	SO	
Barium	52.35	0.82	8.197	38.25	172	75-125	51.13	2.36	20		
Boron	54.54	1.6	40.98	10.62	107	75-125	52.92	3.01	20		
Cadmium	8.47	0.82	8.197	0.2585	100	75-125	8.123	4.18	20	S	
Chromium	22.14	0.41	8.197	11.17	134	75-125	21.35	3.62	20		
Copper	24.38	0.82	8.197	13.84	129	75-125	23.23	4.84	20		
Lead	19.58	0.41	8.197	9.789	119	75-125	19	2.99	20	S	
Nickel	20.76	0.41	8.197	11.63	111	75-125	20.08	3.28	20		
Selenium	7.934	0.82	8.197	0.3207	92.9	75-125	7.749	2.36	20		
Silver	8.888	0.41	8.197	-0.0832	109	75-125	8.511	4.34	20	S	
Zinc	41.25	0.82	8.197	28.92	150	75-125	40.66	1.45	20		

The following samples were analyzed in this batch:

20071388-05A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group  
 Work Order: 20071388  
 Project: MC Hagood A8 Spill (018-065)

## QC BATCH REPORT

Batch ID: **159527** Instrument ID **ICPMS3** Method: **SW6020B**

Sample ID: MBLK-159527-159527				Units: mg/Kg		Analysis Date: 7/24/2020 09:18 PM				
Client ID:		Run ID: ICPMS3_200724B			SeqNo: 6587736		Prep Date: 7/23/2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.25								
Barium	U	0.25								
Cadmium	U	0.10								
Chromium	U	0.25								
Copper	U	0.25								
Lead	U	0.25								
Nickel	U	0.25								
Selenium	U	0.25								
Silver	U	0.25								
Zinc	U	0.50								

LCS				Sample ID: LCS-159527-159527				Units: mg/Kg		Analysis Date: 7/24/2020 09:20 PM		
Client ID:			Run ID: ICPMS3_200724B			SeqNo: 6587737		Prep Date: 7/23/2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		
Arsenic	4.982	0.25	5	0	99.6	80-120	0					
Barium	5.282	0.25	5	0	106	80-120	0					
Cadmium	5.301	0.10	5	0	106	80-120	0					
Chromium	5.035	0.25	5	0	101	80-120	0					
Copper	5.156	0.25	5	0	103	80-120	0					
Lead	5.281	0.25	5	0	106	80-120	0					
Nickel	5.069	0.25	5	0	101	80-120	0					
Selenium	5.026	0.25	5	0	101	80-120	0					
Silver	5.436	0.25	5	0	109	80-120	0					
Zinc	4.925	0.50	5	0	98.5	80-120	0					

MS				Sample ID: 20071216-01BMS			Units: mg/Kg		Analysis Date: 7/24/2020 09:38 PM		
Client ID:			Run ID: ICPMS3_200724B			SeqNo: 6587747		Prep Date: 7/23/2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	8.229	0.39	7.837	0.6978	96.1	75-125	0				
Barium	13.62	0.39	7.837	4.411	118	75-125	0				
Cadmium	7.612	0.16	7.837	0.004383	97.1	75-125	0				
Chromium	9.652	0.39	7.837	1.877	99.2	75-125	0				
Copper	9.783	0.39	7.837	2.335	95	75-125	0				
Lead	9.864	0.39	7.837	1.648	105	75-125	0				
Nickel	10.1	0.39	7.837	2.772	93.5	75-125	0				
Selenium	7.369	0.39	7.837	0.06169	93.2	75-125	0				
Silver	7.631	0.39	7.837	0.007955	97.3	75-125	0				
Zinc	13.92	0.78	7.837	6.491	94.8	75-125	0				

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Entrada Consulting Group  
**Work Order:** 20071388  
**Project:** MC Hagood A8 Spill (018-065)

## QC BATCH REPORT

Batch ID: **159527** Instrument ID **ICPMS3** Method: **SW6020B**

MSD		Sample ID: <b>20071216-01BMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/24/2020 09:39 PM</b>		
Client ID:		Run ID: <b>ICPMS3_200724B</b>				SeqNo: <b>6587748</b>		Prep Date: <b>7/23/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	8.511	0.41	8.157	0.6978	95.8	75-125	8.229	3.37	20	
Barium	14.17	0.41	8.157	4.411	120	75-125	13.62	3.93	20	
Cadmium	8.003	0.16	8.157	0.004383	98.1	75-125	7.612	5	20	
Chromium	10.23	0.41	8.157	1.877	102	75-125	9.652	5.86	20	
Copper	10.07	0.41	8.157	2.335	94.9	75-125	9.783	2.93	20	
Lead	10.18	0.41	8.157	1.648	105	75-125	9.864	3.15	20	
Nickel	10.45	0.41	8.157	2.772	94.1	75-125	10.1	3.39	20	
Selenium	8.013	0.41	8.157	0.06169	97.5	75-125	7.369	8.38	20	
Silver	8.033	0.41	8.157	0.007955	98.4	75-125	7.631	5.13	20	
Zinc	14.09	0.82	8.157	6.491	93.2	75-125	13.92	1.18	20	

The following samples were analyzed in this batch:

20071388-01A      20071388-02A      20071388-03A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group  
 Work Order: 20071388  
 Project: MC Hagood A8 Spill (018-065)

## QC BATCH REPORT

Batch ID: **159528** Instrument ID **ICPMS3** Method: **SW6020B**

MBLK				Sample ID: MBLK-159528-159528				Units: mg/Kg		Analysis Date: 7/24/2020 10:42 PM	
Client ID:			Run ID: ICPMS3_200724B				SeqNo: 6587773		Prep Date: 7/23/2020		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	U	0.25									
Barium	U	0.25									
Cadmium	U	0.10									
Lead	U	0.25									
Selenium	U	0.25									
Silver	U	0.25									

MBLK				Sample ID: MBLK-159528-159528				Units: mg/Kg		Analysis Date: 7/27/2020 05:12 PM		
Client ID:			Run ID: ICPMS3_200727B			SeqNo: 6590243		Prep Date: 7/23/2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		
Chromium	U	0.25										
Copper	U	0.25										
Nickel	U	0.25										
Zinc	U	0.50										

LCS					Sample ID: LCS-159528-159528			Units: mg/Kg		Analysis Date: 7/24/2020 10:44 PM		
Client ID:			Run ID: ICPMS3_200724B			SeqNo: 6587774		Prep Date: 7/23/2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		
Arsenic	4.833	0.25	5	0	96.7	80-120	0					
Barium	5.442	0.25	5	0	109	80-120	0					
Cadmium	5.35	0.10	5	0	107	80-120	0					
Lead	5.286	0.25	5	0	106	80-120	0					
Selenium	4.769	0.25	5	0	95.4	80-120	0					
Silver	5.374	0.25	5	0	107	80-120	0					

LCS				Sample ID: LCS-159528-159528				Units: mg/Kg			Analysis Date: 7/27/2020 05:14 PM			
Client ID:				Run ID: ICPMS3_200727B				SeqNo: 6590244			Prep Date: 7/23/2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Chromium	5.41	0.25	5	0	108	80-120	0							
Copper	5.427	0.25	5	0	109	80-120	0							
Nickel	5.366	0.25	5	0	107	80-120	0							
Zinc	5.211	0.50	5	0	104	80-120	0							

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Entrada Consulting Group  
**Work Order:** 20071388  
**Project:** MC Hagood A8 Spill (018-065)

## QC BATCH REPORT

Batch ID: **159528** Instrument ID **ICPMS3** Method: **SW6020B**

MS					Sample ID: 20071559-02AMS		Units: mg/Kg		Analysis Date: 7/24/2020 10:50 PM		
Client ID:			Run ID: ICPMS3_200724B			SeqNo: 6587778		Prep Date: 7/23/2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	13.85	0.34	6.878	7.408	93.6	75-125	0				
Cadmium	6.381	0.14	6.878	0.5002	85.5	75-125	0				
Lead	53.85	0.34	6.878	42.06	171	75-125	0			SO	
Selenium	5.801	0.34	6.878	0.8405	72.1	75-125	0			S	
Silver	5.836	0.34	6.878	0.03506	84.3	75-125	0				

MS					Sample ID: 20071559-02AMS			Units: mg/Kg		Analysis Date: 7/27/2020 05:49 PM		
Client ID:			Run ID: ICPMS3_200727B			SeqNo: 6590266		Prep Date: 7/23/2020		DF: 10		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		
Barium	283.8	3.4	6.878	139.2	2100	75-125	0			SO		
Copper	26.48	3.4	6.878	15.2	164	75-125	0			S		
Nickel	31.34	3.4	6.878	17.27	205	75-125	0			S		

MS				Sample ID: 20071559-02AMS				Units: mg/Kg		Analysis Date: 7/27/2020 06:22 PM		
Client ID:			Run ID: ICPMS3_200727B			SeqNo: 6590286		Prep Date: 7/23/2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		
Chromium	26.9	0.34	6.878	17.73	133	75-125	0			S		
Zinc	69.03	0.69	6.878	57.39	169	75-125	0			SO		

MSD					Sample ID: 20071559-02AMSD		Units: mg/Kg		Analysis Date: 7/24/2020 11:23 PM		
Client ID:			Run ID: ICPMS3_200724B			SeqNo: 6587798		Prep Date: 7/23/2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	14.47	0.34	6.868	7.408	103	75-125	13.85	4.41	20		
Cadmium	6.408	0.14	6.868	0.5002	86	75-125	6.381	0.433	20		
Chromium	28.68	0.34	6.868	14.88	201	75-125	22.99	22	20	SR	
Copper	23.64	0.34	6.868	13.47	148	75-125	18.44	24.7	20	SR	
Lead	47.95	0.34	6.868	42.06	85.7	75-125	53.85	11.6	20	O	
Nickel	26.55	0.34	6.868	15.1	167	75-125	22.06	18.5	20	S	
Selenium	6.383	0.34	6.868	0.8405	80.7	75-125	5.801	9.56	20		
Silver	6.033	0.34	6.868	0.03506	87.3	75-125	5.836	3.31	20		
Zinc	75.11	0.69	6.868	50.48	359	75-125	62.24	18.7	20	SO	

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.



**Client:** Entrada Consulting Group  
**Work Order:** 20071388  
**Project:** MC Hagood A8 Spill (018-065)

## QC BATCH REPORT

Batch ID: **159528** Instrument ID **ICPMS3** Method: **SW6020B**

MSD				Sample ID: <b>20071559-02AMSD</b>			Units: <b>mg/Kg</b>		Analysis Date: <b>7/27/2020 05:50 PM</b>	
Client ID:		Run ID: <b>ICPMS3_200727B</b>			SeqNo: <b>6590267</b>		Prep Date: <b>7/23/2020</b>		DF: <b>10</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	144	3.4	6.868	139.2	70	75-125	280.1	64.2	20	SRO
Copper	29.03	3.4	6.868	15.2	201	75-125	20.62	33.9	20	SR
Nickel	33.28	3.4	6.868	17.27	233	75-125	24.83	29.1	20	SR

The following samples were analyzed in this batch: | 20071388-04A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group  
 Work Order: 20071388  
 Project: MC Hagood A8 Spill (018-065)

## QC BATCH REPORT

Batch ID: **159588** Instrument ID **ICPMS3** Method: **SW6020B**

DUP		Sample ID: <b>20071385-01BDUP</b>				Units: <b>mg/L</b>		Analysis Date: <b>7/24/2020 04:32 PM</b>		
Client ID:		Run ID: <b>ICPMS3_200724A</b>				SeqNo: <b>6587512</b>		Prep Date: <b>7/24/2020</b>		DF: <b>10</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	1093	5.0	0	0	0	0-0	822.2	28.3		
Magnesium	128.5	2.0	0	0	0	0-0	91.15	34		
Sodium	1412	2.0	0	0	0	0-0	992.2	34.9		

The following samples were analyzed in this batch:

20071388-01B	20071388-02B	20071388-03B
20071388-04B	20071388-05B	

Batch ID: **159588** Instrument ID **SAR** Method: **USDA H60 Metho**

DUP		Sample ID: <b>20071385-01BDUP</b>				Units: <b>none</b>		Analysis Date: <b>7/24/2020</b>		
Client ID:		Run ID: <b>SAR_200724A</b>				SeqNo: <b>6590672</b>		Prep Date: <b>7/24/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	10.77	0.010	0	0	0		8.762	20.5	50	

The following samples were analyzed in this batch:

20071388-01B	20071388-02B	20071388-03B
20071388-04B	20071388-05B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group  
 Work Order: 20071388  
 Project: MC Hagood A8 Spill (018-065)

# QC BATCH REPORT

Batch ID: **159363** Instrument ID **SVMS6** Method: **SW8270E**

MBLK				Sample ID: SBLKS1-159363-159363				Units: µg/Kg			Analysis Date: 7/21/2020 07:18 PM		
Client ID:			Run ID: SVMS6_200721A				SeqNo: 6578963		Prep Date: 7/21/2020		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Acenaphthene	U	4.2											
Anthracene	U	4.2											
Benzo(a)anthracene	U	4.2											
Benzo(a)pyrene	U	4.2											
Benzo(b)fluoranthene	U	4.2											
Benzo(k)fluoranthene	U	4.2											
Chrysene	U	4.2											
Dibenzo(a,h)anthracene	U	4.2											
Fluoranthene	U	4.2											
Fluorene	U	4.2											
Indeno(1,2,3-cd)pyrene	U	4.2											
Naphthalene	U	4.2											
Pyrene	U	4.2											
Surr: 2-Fluorobiphenyl	3304	0	3333	0	99.1	20-140	0						
Surr: 4-Terphenyl-d14	4194	0	3333	0	126	22-172	0						
Surr: Nitrobenzene-d5	3067	0	3333	0	92	28-140	0						

LCS				Sample ID: SLCSS1-159363-159363		Units: µg/Kg		Analysis Date: 7/21/2020 07:35 PM		
Client ID:		Run ID: SVMS6_200721A			SeqNo: 6578964		Prep Date: 7/21/2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1162	4.2	1333		0	87.2	40-140	0		
Anthracene	1212	4.2	1333		0	91	40-140	0		
Benzo(a)anthracene	1178	4.2	1333		0	88.4	40-140	0		
Benzo(a)pyrene	1022	4.2	1333		0	76.7	40-140	0		
Benzo(b)fluoranthene	1014	4.2	1333		0	76.1	40-140	0		
Benzo(k)fluoranthene	1042	4.2	1333		0	78.2	40-140	0		
Chrysene	1142	4.2	1333		0	85.7	40-140	0		
Dibenzo(a,h)anthracene	1112	4.2	1333		0	83.4	40-140	0		
Fluoranthene	1110	4.2	1333		0	83.3	40-140	0		
Fluorene	1177	4.2	1333		0	88.3	40-140	0		
Indeno(1,2,3-cd)pyrene	1170	4.2	1333		0	87.8	40-140	0		
Naphthalene	1170	4.2	1333		0	87.8	40-140	0		
Pyrene	1354	4.2	1333		0	102	40-140	0		
Surr: 2-Fluorobiphenyl	3213	0	3333		0	96.4	20-140	0		
Surr: 4-Terphenyl-d14	4125	0	3333		0	124	22-172	0		
Surr: Nitrobenzene-d5	2615	0	3333		0	78.5	28-140	0		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group  
 Work Order: 20071388  
 Project: MC Hagood A8 Spill (018-065)

## QC BATCH REPORT

Batch ID: **159363** Instrument ID **SVMS6** Method: **SW8270E**

MS				Sample ID: <b>20071351-09B MS</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>7/21/2020 07:50 PM</b>	
Client ID:		Run ID: <b>SVMS6_200721A</b>			SeqNo: <b>6578965</b>		Prep Date: <b>7/21/2020</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1198	4.1	1312	0	91.3	40-140	0			
Anthracene	1253	4.1	1312	0	95.5	40-140	0			
Benzo(a)anthracene	1236	4.1	1312	0	94.2	40-140	0			
Benzo(a)pyrene	1104	4.1	1312	0	84.1	40-140	0			
Benzo(b)fluoranthene	1119	4.1	1312	0	85.3	40-140	0			
Benzo(k)fluoranthene	1147	4.1	1312	0	87.4	40-140	0			
Chrysene	1194	4.1	1312	0	91	40-140	0			
Dibenzo(a,h)anthracene	1110	4.1	1312	0	84.6	40-140	0			
Fluoranthene	1209	4.1	1312	0	92.1	40-140	0			
Fluorene	1206	4.1	1312	0	91.9	40-140	0			
Indeno(1,2,3-cd)pyrene	1185	4.1	1312	0	90.3	40-140	0			
Naphthalene	1257	4.1	1312	0	95.8	40-140	0			
Pyrene	1252	4.1	1312	0	95.4	40-140	0			
Surr: 2-Fluorobiphenyl	3280	0	3281	0	100	20-140	0			
Surr: 4-Terphenyl-d14	3816	0	3281	0	116	22-172	0			
Surr: Nitrobenzene-d5	3056	0	3281	0	93.1	28-140	0			

MSD				Sample ID: <b>20071351-09B MSD</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>7/21/2020 08:05 PM</b>	
Client ID:		Run ID: <b>SVMS6_200721A</b>			SeqNo: <b>6578966</b>		Prep Date: <b>7/21/2020</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1210	4.0	1290	0	93.8	40-140	1198	0.938	30	
Anthracene	1262	4.0	1290	0	97.8	40-140	1253	0.659	30	
Benzo(a)anthracene	1259	4.0	1290	0	97.6	40-140	1236	1.82	30	
Benzo(a)pyrene	1119	4.0	1290	0	86.7	40-140	1104	1.31	30	
Benzo(b)fluoranthene	1163	4.0	1290	0	90.1	40-140	1119	3.79	30	
Benzo(k)fluoranthene	1139	4.0	1290	0	88.3	40-140	1147	0.73	30	
Chrysene	1192	4.0	1290	0	92.4	40-140	1194	0.204	30	
Dibenzo(a,h)anthracene	1121	4.0	1290	0	86.9	40-140	1110	1.05	30	
Fluoranthene	1194	4.0	1290	0	92.6	40-140	1209	1.24	30	
Fluorene	1226	4.0	1290	0	95.1	40-140	1206	1.66	30	
Indeno(1,2,3-cd)pyrene	1178	4.0	1290	0	91.3	40-140	1185	0.567	30	
Naphthalene	1260	4.0	1290	0	97.7	40-140	1257	0.283	30	
Pyrene	1265	4.0	1290	0	98	40-140	1252	0.965	30	
Surr: 2-Fluorobiphenyl	3260	0	3225	0	101	20-140	3280	0.61	30	
Surr: 4-Terphenyl-d14	3730	0	3225	0	116	22-172	3816	2.28	30	
Surr: Nitrobenzene-d5	3009	0	3225	0	93.3	28-140	3056	1.55	30	

The following samples were analyzed in this batch:

20071388-01A	20071388-02A	20071388-03A
20071388-04A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group  
 Work Order: 20071388  
 Project: MC Hagood A8 Spill (018-065)

# QC BATCH REPORT

Batch ID: **159372** Instrument ID **VMS10** Method: **SW8260C**

MBLK Sample ID: <b>MBLK-159372-159372</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>7/21/2020 12:25 PM</b>				
Client ID:		Run ID: <b>VMS10_200721A</b>		SeqNo: <b>6579257</b>		Prep Date: <b>7/21/2020</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	30								
Ethylbenzene	U	30								
m,p-Xylene	U	60								
o-Xylene	U	30								
Toluene	U	30								
Xylenes, Total	U	90								
Surr: 1,2-Dichloroethane-d4	973.5	0	1000	0	97.4	70-130	0			
Surr: 4-Bromofluorobenzene	912.5	0	1000	0	91.2	70-130	0			
Surr: Dibromofluoromethane	954.5	0	1000	0	95.4	70-130	0			
Surr: Toluene-d8	967.5	0	1000	0	96.8	70-130	0			

LCS Sample ID: <b>LCS-159372-159372</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>7/21/2020 11:26 AM</b>				
Client ID:		Run ID: <b>VMS10_200721A</b>		SeqNo: <b>6579256</b>		Prep Date: <b>7/21/2020</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1020	30	1000	0	102	75-125	0			
Ethylbenzene	929.5	30	1000	0	93	75-125	0			
m,p-Xylene	1875	60	2000	0	93.8	80-125	0			
o-Xylene	963.5	30	1000	0	96.4	75-125	0			
Toluene	933.5	30	1000	0	93.4	70-125	0			
Xylenes, Total	2838	90	3000	0	94.6	75-125	0			
Surr: 1,2-Dichloroethane-d4	943.5	0	1000	0	94.4	70-130	0			
Surr: 4-Bromofluorobenzene	1050	0	1000	0	105	70-130	0			
Surr: Dibromofluoromethane	969.5	0	1000	0	97	70-130	0			
Surr: Toluene-d8	995.5	0	1000	0	99.6	70-130	0			

MS Sample ID: <b>20071387-01A MS</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>7/22/2020 05:28 AM</b>				
Client ID:		Run ID: <b>VMS10_200721B</b>		SeqNo: <b>6580022</b>		Prep Date: <b>7/21/2020</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1047	31	1045	0	100	75-125	0			
Ethylbenzene	872.6	31	1045	0	83.5	75-125	0			
m,p-Xylene	1745	63	2090	34.15	81.9	80-125	0			
o-Xylene	923.8	31	1045	0	88.4	75-125	0			
Toluene	887.7	31	1045	0	84.9	70-125	0			
Xylenes, Total	2669	94	3135	0	85.1	75-125	0			
Surr: 1,2-Dichloroethane-d4	1024	0	1045	0	98	70-130	0			
Surr: 4-Bromofluorobenzene	1089	0	1045	0	104	70-130	0			
Surr: Dibromofluoromethane	1055	0	1045	0	101	70-130	0			
Surr: Toluene-d8	1030	0	1045	0	98.6	70-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Entrada Consulting Group  
**Work Order:** 20071388  
**Project:** MC Hagood A8 Spill (018-065)

## QC BATCH REPORT

Batch ID: **159372**      Instrument ID **VMS10**      Method: **SW8260C**

MSD				Sample ID: <b>20071387-01A MSD</b>			Units: <b>µg/Kg-dry</b>		Analysis Date: <b>7/22/2020 05:48 AM</b>	
Client ID:				Run ID: <b>VMS10_200721B</b>			SeqNo: <b>6580023</b>		Prep Date: <b>7/21/2020</b>	
									DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1064	31	1045	0	102	75-125	1047	1.68	30	
Ethylbenzene	951.5	31	1045	0	91	75-125	872.6	8.65	30	
m,p-Xylene	1890	63	2090	34.15	88.8	80-125	1745	7.99	30	
o-Xylene	985.4	31	1045	0	94.3	75-125	923.8	6.46	30	
Toluene	924.8	31	1045	0	88.5	70-125	887.7	4.09	30	
Xylenes, Total	2876	94	3135	0	91.7	75-125	2669	7.46	30	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>994.3</i>	<i>0</i>	<i>1045</i>	<i>0</i>	<i>95.2</i>	<i>70-130</i>	<i>1024</i>	<i>2.95</i>	<i>30</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>1148</i>	<i>0</i>	<i>1045</i>	<i>0</i>	<i>110</i>	<i>70-130</i>	<i>1089</i>	<i>5.32</i>	<i>30</i>	
<i>Surr: Dibromofluoromethane</i>	<i>1000</i>	<i>0</i>	<i>1045</i>	<i>0</i>	<i>95.7</i>	<i>70-130</i>	<i>1055</i>	<i>5.39</i>	<i>30</i>	
<i>Surr: Toluene-d8</i>	<i>1035</i>	<i>0</i>	<i>1045</i>	<i>0</i>	<i>99</i>	<i>70-130</i>	<i>1030</i>	<i>0.405</i>	<i>30</i>	

The following samples were analyzed in this batch:

20071388-01A	20071388-02A	20071388-03A
20071388-04A		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group  
 Work Order: 20071388  
 Project: MC Hagood A8 Spill (018-065)

## QC BATCH REPORT

Batch ID: **159342** Instrument ID **WETCHEM** Method: **SW9045D**

<b>LCS</b>		Sample ID: <b>LCS-159342-159342</b>				Units: <b>s.u.</b>		Analysis Date: <b>7/21/2020 11:05 AM</b>		
Client ID:		Run ID: <b>WETCHEM_200721B</b>				SeqNo: <b>6577463</b>		Prep Date: <b>7/20/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	4.01	0.10	4	0	100	90-110	0			

<b>LCS</b>		Sample ID: <b>LCS-159342-159342</b>				Units: <b>s.u.</b>		Analysis Date: <b>7/21/2020 11:05 AM</b>		
Client ID:		Run ID: <b>WETCHEM_200721B</b>				SeqNo: <b>6577731</b>		Prep Date: <b>7/20/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	4.01	0.10	4	0	100	90-110	0			

<b>DUP</b>		Sample ID: <b>20071262-01A DUP</b>				Units: <b>s.u.</b>		Analysis Date: <b>7/21/2020 11:05 AM</b>		
Client ID:		Run ID: <b>WETCHEM_200721B</b>				SeqNo: <b>6577470</b>		Prep Date: <b>7/20/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.52	0.10	0	0	0	0-0	8.57	0.585	20	
Temperature	20.5	0.10	0	0	0		20.2	1.47		

<b>DUP</b>		Sample ID: <b>20071388-05A DUP</b>				Units: <b>s.u.</b>		Analysis Date: <b>7/21/2020 11:05 AM</b>		
Client ID: <b>HA8-BG1</b>		Run ID: <b>WETCHEM_200721B</b>				SeqNo: <b>6577484</b>		Prep Date: <b>7/20/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.83	0.10	0	0	0	0-0	7.8	0.384	20	
Temperature	20.3	0.10	0	0	0		20.2	0.494		

The following samples were analyzed in this batch:

20071388-01A	20071388-02A	20071388-03A
20071388-04A	20071388-05A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group  
 Work Order: 20071388  
 Project: MC Hagood A8 Spill (018-065)

## QC BATCH REPORT

Batch ID: **159369** Instrument ID **WETCHEM** Method: **SW7196A**

<b>MBLK</b>		Sample ID: <b>MBLK-159369-159369</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/22/2020 03:39 PM</b>		
Client ID:		Run ID: <b>WETCHEM_2007220</b>				SeqNo: <b>6580961</b>		Prep Date: <b>7/21/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent U 0.99

<b>LCS</b>		Sample ID: <b>LCS-159369-159369</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/22/2020 03:39 PM</b>		
Client ID:		Run ID: <b>WETCHEM_2007220</b>				SeqNo: <b>6580962</b>		Prep Date: <b>7/21/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4.76 1.0 5 0 95.2 80-120 0

<b>MS</b>		Sample ID: <b>20071388-05A MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/22/2020 03:39 PM</b>		
Client ID: <b>HA8-BG1</b>		Run ID: <b>WETCHEM_2007220</b>				SeqNo: <b>6580972</b>		Prep Date: <b>7/21/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4.621 0.97 4.854 0.297 89.1 75-125 0

<b>MS</b>		Sample ID: <b>20071388-05A MSI</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/22/2020 03:39 PM</b>		
Client ID: <b>HA8-BG1</b>		Run ID: <b>WETCHEM_2007220</b>				SeqNo: <b>6580974</b>		Prep Date: <b>7/21/2020</b>		DF: <b>100</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 2010 99 1944 0.297 103 75-125 0

<b>MSD</b>		Sample ID: <b>20071388-05A MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/22/2020 03:39 PM</b>		
Client ID: <b>HA8-BG1</b>		Run ID: <b>WETCHEM_2007220</b>				SeqNo: <b>6580973</b>		Prep Date: <b>7/21/2020</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4.667 0.98 4.902 0.297 89.1 75-125 4.621 0.976 20

The following samples were analyzed in this batch:

20071388-01A	20071388-02A	20071388-03A
20071388-04A	20071388-05A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



Client: Entrada Consulting Group  
 Work Order: 20071388  
 Project: MC Hagood A8 Spill (018-065)

## QC BATCH REPORT

Batch ID: **R293607** Instrument ID **MOIST** Method: **SW3550C**

<b>MBLK</b>		Sample ID: <b>WBLKS-R293607</b>				Units: % of sample		Analysis Date: <b>7/23/2020 11:00 AM</b>		
Client ID:		Run ID: <b>MOIST_200723A</b>				SeqNo: <b>6584907</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

<b>LCS</b>		Sample ID: <b>LCS-R293607</b>				Units: % of sample		Analysis Date: <b>7/23/2020 11:00 AM</b>		
Client ID:		Run ID: <b>MOIST_200723A</b>				SeqNo: <b>6584906</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

<b>DUP</b>		Sample ID: <b>20071301-01A DUP</b>				Units: % of sample		Analysis Date: <b>7/23/2020 11:00 AM</b>		
Client ID:		Run ID: <b>MOIST_200723A</b>				SeqNo: <b>6584892</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	2.64	0.10	0	0	0	0-0	2.53	4.26	10	

<b>DUP</b>		Sample ID: <b>20071388-05A DUP</b>				Units: % of sample		Analysis Date: <b>7/23/2020 11:00 AM</b>		
Client ID: <b>HA8-BG1</b>		Run ID: <b>MOIST_200723A</b>				SeqNo: <b>6584901</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	5.82	0.10	0	0	0	0-0	5.94	2.04	10	

The following samples were analyzed in this batch:

20071388-01A	20071388-02A	20071388-03A
20071388-04A	20071388-05A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



**Environmental**

# Chain of Custody Form

Page 1 of 1

COC ID: 123456

☐ Cincinnati, OH  
+1 513 733 5336  
☐ Everett, WA  
+1 425 356 2600  
☐ Fort Collins, CO  
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☒ Holland, MI  
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☐ Houston, TX  
+1 281 530 5656  
☐ Middletown, PA  
+1 717 944 5541

☐ Salt Lake City, UT  
+1 801 266 7700  
☐ Spring City, PA  
+1 610 948 4903  
☐ York, PA  
+1 717 505 5280

Customer Information			ALS Project Manager:				Work Order #: <u>20071388</u>											
Project Information			Parameter/Method Request for Analysis															
Purchase Order		Project Name	MC Hagood A8 Spill				A TPH (GRO & DRO)											
Work Order		Project Number	018-065				B BTEX											
Company Name	Entrada Consulting Group	Bill To Company	Entrada Consulting Group				C PAH (See Attached List) CO Table 910											
Send Report To	Tim Dobransky	Invoice Attn	Tim Dobransky				D Electrical Conductivity											
Address	330 Grand Ave, STE C	Address					E Sodium Adsorption Ratio											
City/State/Zip	Grand Junction, CO 81501	City/State/Zip					F pH											
Phone	970.270.2986	Phone					G Metals (See Attached List) CO Table 910											
Fax		Fax					H Arsenic Only											
e-Mail Address	tdobransky@entradainc.com	e-Mail Address					I											
							J											
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold	
1	HA8-SS1	07/14/20	1015	Soil	8	2	X	X	X	X	X	X	X					
2	HA8-SS2	07/14/20	1030	Soil	8	2	X	X	X	X	X	X	X					
3	HA8-SS3	07/14/20	1045	Soil	8	2	X	X	X	X	X	X	X					
4	HA8-SS4	07/14/20	1100	Soil	8	2	X	X	X	X	X	X	X					
5	HA8-BG1	07/14/20	1115	Soil	8	2				X	X	X	X					
6																		
7																		
8																		
9																		
10																		
Sampler(s): Please Print & Sign Jason McLarty			Shipment Method: FedEx		Required Turnaround Time: <input type="checkbox"/> STD 10 Wk Days <input checked="" type="checkbox"/> 5 Wk Days <input type="checkbox"/> 2 Wk Days <input type="checkbox"/> 24 Hour				Results Due Date:									
Relinquished by: J McLarty		Date: 7/16/20	Time: 1200	Received by: [Signature]		Notes: Chevron Pricing Applies - Per Bruce Schlatter												
Relinquished by: [Signature]		Date: 7-16-20	Time: 1800	Received by (Laboratory): [Signature]		Cooler Temp. 2.0°C IR3												
Logged by (Laboratory): MJG		Date: 7-20-20	Time: 12:21	Checked by (Laboratory): [Signature]		QC Package: (Check Box Below) <input checked="" type="checkbox"/> Level II: Standard QC <input type="checkbox"/> Level III: Std QC + Raw Data <input type="checkbox"/> Level IV: SW846 CLP-Like Other:												
Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035																		

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.

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Sample Receipt Checklist

Client Name: **ENTRADA**

Date/Time Received: **18-Jul-20 09:30**

Work Order: **20071388**

Received by: **MJG**

Checklist completed by **Matthew Gaylord**

20-Jul-20

Reviewed by: **Chad Whelton**

21-Jul-20

eSignature

Date

eSignature

Date

Matrices: **Soil**

Carrier name: **FedEx**

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐

Sample(s) received on ice? Yes ☒ No ☐

Temperature(s)/Thermometer(s): **2.0/2.0C** **IR3**

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage: **7/20/2020 12:29:47 PM**

Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☒

Water - pH acceptable upon receipt? Yes ☐ No ☐ N/A ☒

pH adjusted? Yes ☐ No ☐ N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: