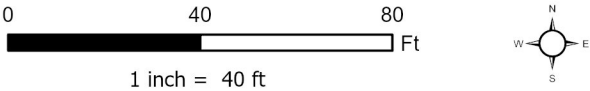




Legend

● Soil Sample Location    ▨ Spill Area



Project No: 018-065	<b>Gray A18X Spill</b> Chevron USA, Inc. Rio Blanco County, Colorado NESE Section 24 T2S R103W	 <b>ENTRADA</b> CONSULTING GROUP	330 Grand Avenue, Unit C Grand Junction, CO 81501 970-549-1015	Figure
Map By: NDB				1
Date: 7/20/2020				

**Table 1**  
**Gray A 18X Spill**  
**Soil Data Summary**

SAMPLE SUMMARY			
Location Description	Gray A 18X		
Sample Type	Grab Soil		

LABORATORY DATA SUMMARY			
Sample ID	GRAY A 18X-SS1	COGCC TABLE 910-1 CONCENTRATION LEVELS	UNITS
Depth	0-6"		
Sample Date	6/14/2019		
Analytical Parameters			
TPH			
TPH Gasoline Range Organics	<2.5	500	mg/kg
TPH Diesel Range Organics	86		
BTEX			
Benzene	<0.0051	0.17	mg/kg
Toluene	<0.0081	85	mg/kg
Ethylbenzene	<0.0063	100	mg/kg
Total Xylene	<0.040	175	mg/kg
Metals			
Arsenic	5.7	0.39	mg/kg
Barium	120	15,000	mg/kg
Cadmium	0.16 J	70	mg/kg
Chromium	11	NA	mg/kg
Copper	11	3,100	mg/kg
Lead	17	400	mg/kg
Mercury	0.043	23	mg/kg
Nickel	15	1,600	mg/kg
Selenium	1.3	390	mg/kg
Silver	0.070 J	390	mg/kg
Zinc	59	23,000	mg/kg
SAR Metals Analysis			
Calcium	490	NA	mg/L
Magnesium	160	NA	mg/L
Sodium	1000	NA	mg/L
Sodium Adsorption Ratio	10	<12	ratio
Polynuclear Aromatic Hydrocarbons			
Acenaphthene	<0.00088	1,000	mg/kg
Anthracene	0.0033 J	1,000	mg/kg
Benzo(a)anthracene	0.0037 J	0.22	mg/kg
Benzo(a)pyrene	0.0043 J	0.022	mg/kg
Benzo(b)fluoranthene	0.0044 J	0.22	mg/kg
Benzo(k)fluoranthene	0.0024 J	2.2	mg/kg
Chrysene	0.0033 J	22	mg/kg
Dibenzo(a,h)anthracene	0.0037 J	0.022	mg/kg
Fluoranthene	0.017	1,000	mg/kg
Fluorene	0.0052	1,000	mg/kg
Indeno(1,2,3-cd)pyrene	0.0033 J	0.22	mg/kg
Napthalene	<0.0020	23	mg/kg
Pyrene	0.0190	1,000	mg/kg
General Chemistry			
Chromium, Hexavalent	<0.94	23	mg/kg
Chromium, Trivalent	11	120,000	
Specific Conductivity	9.3	<4 or 2 x the background	mmhos/cm
pH	7.97	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



09-Jul-2019

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

Re: **GRAY A 18 X Spill**

Work Order: **19061619**

Dear Tim,

ALS Environmental received 1 sample on 22-Jun-2019 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 25.

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

**Client:** Entrada Consulting Group  
**Project:** GRAY A 18 X Spill  
**Work Order:** 19061619

## 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>
19061619-01	GRAY A 18X	Soil		6/14/2019 12:00	6/22/2019 09:30	<input type="checkbox"/>

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**Client:** Entrada Consulting Group  
**Project:** GRAY A 18 X Spill  
**Work Order:** 19061619

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**Case Narrative**

Batch 138153, Method PH\_9045\_S, Sample 19061619-01A: Sample holding time for pH expired before receipt by laboratory. Results should be considered estimated.

Batch 138160, Method DRLVI\_8015\_S, Sample 19061619-01A MSD: The RPD between the MS and MSD was outside the control limit for DRO. The corresponding result in the parent sample should be considered estimated.

Batch 138162, Method PNLVI\_8270\_S, Sample 19061619-01A: One or more base/neutral surrogate recoveries were below the lower control limits. The base/neutral sample results may be biased low.

Batch 138162, Method PNLVI\_8270\_S, Sample 19061619-01A MSD: The RPDs between the MS and MSD were outside the control limits for multiple compounds per the QC report. The corresponding results in the parent sample should be considered estimated.

Batch 138265, Method PNLVI\_8270\_S, Sample 19061619-01A: One or more surrogate recoveries were below the lower control limits. The sample results may be biased low.

Batch 138265, Method PNLVI\_8270\_S, Sample 19061619-01A MSD: The RPDs between the MS and MSD were outside the control limits for multiple compounds per the QC report. The corresponding results in the parent sample should be considered estimated.

Batch 138363, Method DRLVI\_8015\_S, Sample 19061619-01A: Low DRO surrogate recovery due to sample matrix effects confirmed by re-extraction.

Batch 138656, Method ICP\_6020\_S, Sample 19061619-01A MS/MSD: The MS/MSD recoveries were outside of the control limits for Barium and Zinc; however, the results in the parent sample are greater than 4x the spike amount. No qualification is required.

Batch 138656, Method ICP\_6020\_S, Sample 19061619-01A MS/MSD: The MS/MSD recovery was above the upper control limit for Chromium. The corresponding result in the parent sample may be biased high.

Batch 138656, Method ICP\_6020\_S, Sample 19061619-01A MS: The MS recoveries were outside of the control limits for Lead and Nickel. However, the MSD recoveries and the RPDs between the MS and MSD were in control. No qualification is required.

Batch 138656, Method ICP\_6020\_S, Sample 19061619-01A MSD: The MSD recovery was outside of the control limit for Arsenic. However, the MS recovery and the RPD between the

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**Client:** Entrada Consulting Group  
**Project:** GRAY A 18 X Spill  
**Work Order:** 19061619

## Case Narrative

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MS and MSD was in control. 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
µg/Kg-dry	Micrograms per Kilogram Dry Weight
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

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none	
s.u.	Standard Units



# ALS Group, USA

Date: 09-Jul-19

Client: Entrada Consulting Group  
Project: GRAY A 18 X Spill  
Sample ID: GRAY A 18X  
Collection Date: 6/14/2019 12:00 PM

Work Order: 19061619  
Lab ID: 19061619-01  
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>							
			Method: SW8015C			Prep: SW3546 / 6/27/19	Analyst: KB
DRO (C10-C28)	86		3.1	5.4	mg/Kg-dry	1	6/28/2019 23:03
Surr: 4-Terphenyl-d14	14.5	S		34-130	%REC	1	6/28/2019 23:03
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>							
			Method: SW8015D			Prep: SW5035 / 6/28/19	Analyst: KB
GRO (C6-C10)	U		2.5	6.0	mg/Kg	1	6/29/2019 13:49
Surr: Toluene-d8	95.5			71-123	%REC	1	6/29/2019 13:49
<b>MERCURY BY CVAA</b>							
			Method: SW7471B			Prep: SW7471 / 7/5/19	Analyst: RSH
Mercury	0.043		0.0019	0.019	mg/Kg-dry	1	7/8/2019 07:24
<b>METALS BY ICP-MS</b>							
			Method: SW6020A			Prep: SW3050B / 7/3/19	Analyst: STP
Arsenic	5.7		0.049	0.41	mg/Kg-dry	1	7/3/2019 17:34
Barium	120		0.38	0.41	mg/Kg-dry	1	7/3/2019 17:34
Boron	13		1.5	1.6	mg/Kg-dry	1	7/3/2019 17:34
Cadmium	0.16	J	0.025	0.16	mg/Kg-dry	1	7/3/2019 17:34
Chromium	11		0.18	0.41	mg/Kg-dry	1	7/3/2019 17:34
Copper	11		0.41	0.41	mg/Kg-dry	1	7/3/2019 17:34
Lead	17		0.20	0.41	mg/Kg-dry	1	7/3/2019 17:34
Nickel	15		0.21	0.41	mg/Kg-dry	1	7/3/2019 17:34
Selenium	1.3		0.38	0.41	mg/Kg-dry	1	7/3/2019 17:34
Silver	0.070	J	0.054	0.41	mg/Kg-dry	1	7/3/2019 17:34
Zinc	59		0.81	0.82	mg/Kg-dry	1	7/3/2019 17:34
<b>SOLUBLE CATIONS FOR SAR</b>							
			Method: SW6020A			Prep: USDA Method 20B / 7/8/19	Analyst: ABL
Calcium	490		0.86	5.0	mg/L	10	7/8/2019 16:28
Magnesium	160		0.068	2.0	mg/L	10	7/8/2019 16:28
Sodium	1,000		0.34	2.0	mg/L	10	7/8/2019 16:28
<b>SODIUM ADSORPTION RATIO</b>							
			Method: USDA H60 METHOD 2			Prep: USDA Method 20B / 7/8/19	Analyst: STP
Sodium Adsorption Ratio	10		0.010	0.010	none	1	7/8/2019
<b>POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)</b>							
			Method: SW846 8270D			Prep: SW3546 / 6/27/19	Analyst: EEW
Acenaphthene	U		0.88	4.5	µg/Kg-dry	1	6/28/2019 02:45
Anthracene	3.3	J	1.5	4.5	µg/Kg-dry	1	6/28/2019 02:45
Benzo(a)anthracene	3.7	J	1.9	4.5	µg/Kg-dry	1	6/28/2019 02:45
Benzo(a)pyrene	4.3	J	1.2	4.5	µg/Kg-dry	1	6/28/2019 02:45
Benzo(b)fluoranthene	4.4	J	1.1	4.5	µg/Kg-dry	1	6/28/2019 02:45
Benzo(k)fluoranthene	2.4	J	1.3	4.5	µg/Kg-dry	1	6/28/2019 02:45
Chrysene	3.3	J	0.93	4.5	µg/Kg-dry	1	6/28/2019 02:45
Dibenzo(a,h)anthracene	3.7	J	1.1	4.5	µg/Kg-dry	1	6/28/2019 02:45

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

# ALS Group, USA

Date: 09-Jul-19

**Client:** Entrada Consulting Group  
**Project:** GRAY A 18 X Spill  
**Sample ID:** GRAY A 18X  
**Collection Date:** 6/14/2019 12:00 PM

**Work Order:** 19061619  
**Lab ID:** 19061619-01  
**Matrix:** SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>Fluoranthene</b>	<b>17</b>		<b>0.83</b>	<b>4.5</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/28/2019 02:45
<b>Fluorene</b>	<b>5.2</b>		<b>1.5</b>	<b>4.5</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/28/2019 02:45
<b>Indeno(1,2,3-cd)pyrene</b>	<b>3.3</b>	<b>J</b>	<b>1.6</b>	<b>4.5</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/28/2019 02:45
Naphthalene	U		2.0	4.5	µg/Kg-dry	1	6/28/2019 02:45
<b>Pyrene</b>	<b>19</b>		<b>0.75</b>	<b>4.5</b>	<b>µg/Kg-dry</b>	<b>1</b>	6/28/2019 02:45
Surr: 2-Fluorobiphenyl	50.7			20-140	%REC	1	6/28/2019 02:45
Surr: 4-Terphenyl-d14	20.4	<b>S</b>		22-172	%REC	1	6/28/2019 02:45
Surr: Nitrobenzene-d5	19.6	<b>S</b>		28-140	%REC	1	6/28/2019 02:45
<b>VOLATILE ORGANIC COMPOUNDS</b>			Method: <b>SW8260C</b>		Prep: SW5035 / 6/28/19		Analyst: <b>JEB</b>
Benzene	U		0.0051	0.030	mg/Kg	1	6/29/2019 22:37
Ethylbenzene	U		0.0063	0.030	mg/Kg	1	6/29/2019 22:37
m,p-Xylene	U		0.040	0.059	mg/Kg	1	6/29/2019 22:37
o-Xylene	U		0.011	0.030	mg/Kg	1	6/29/2019 22:37
Toluene	U		0.0081	0.030	mg/Kg	1	6/29/2019 22:37
Xylenes, Total	U		0.040	0.089	mg/Kg	1	6/29/2019 22:37
Surr: 1,2-Dichloroethane-d4	92.8			70-130	%REC	1	6/29/2019 22:37
Surr: 4-Bromofluorobenzene	96.0			70-130	%REC	1	6/29/2019 22:37
Surr: Dibromofluoromethane	80.2			70-130	%REC	1	6/29/2019 22:37
Surr: Toluene-d8	94.6			70-130	%REC	1	6/29/2019 22:37
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			Method: <b>USDA H60 METHOD 2</b>		Prep: USDA Method 20B / 7/8/19		Analyst: <b>QTN</b>
Electrical Conductivity @ Saturation	<b>9.3</b>		<b>0.011</b>	<b>0.10</b>	mmhos/cm @25°	20	7/9/2019 11:00
<b>CHROMIUM, TRIVALENT</b>			Method: <b>CALCULATION</b>				Analyst: <b>MB</b>
Chromium, Trivalent	<b>11</b>		<b>0.34</b>	<b>1.1</b>	mg/Kg-dry	1	7/5/2019 12:30
<b>CHROMIUM, HEXAVALENT</b>			Method: <b>SW7196A</b>		Prep: SW3060A / 6/26/19		Analyst: <b>RZM</b>
Chromium, Hexavalent	U		0.94	1.1	mg/Kg-dry	1	6/27/2019 12:56
<b>MOISTURE</b>			Method: <b>SW3550C</b>				Analyst: <b>KTP</b>
Moisture	<b>9.5</b>		<b>0.10</b>	<b>0.10</b>	% of sample	1	6/27/2019 15:55
<b>PH</b>			Method: <b>SW9045D</b>		Prep: EXTRACT / 6/25/19		Analyst: <b>DNW</b>
pH	<b>7.97</b>	<b>H</b>	<b>0.10</b>	<b>0.100</b>	s.u.	1	6/25/2019 12:00
Temperature	<b>21.8</b>	<b>H</b>	<b>0.10</b>	<b>0.100</b>	°C	1	6/25/2019 12:00

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

**Client:** Entrada Consulting Group  
**Work Order:** 19061619  
**Project:** GRAY A 18 X Spill

**QC BATCH REPORT**

Batch ID: **138160** Instrument ID **GC8** Method: **SW8015C**

<b>MBLK</b>		Sample ID: <b>DBLKS1-138160-138160</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2019 04:49 PM</b>		
Client ID:		Run ID: <b>GC8_190625B</b>				SeqNo: <b>5740799</b>		Prep Date: <b>6/25/2019</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	5.0								
<i>Surr: 4-Terphenyl-d14</i>	3.55	0	3.33	0	107	34-130	0			

<b>LCS</b>		Sample ID: <b>DLCSS1-138160-138160</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2019 05:19 PM</b>		
Client ID:		Run ID: <b>GC8_190625B</b>				SeqNo: <b>5740800</b>		Prep Date: <b>6/25/2019</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)	377.6	5.0	333	0	113	65-122	0			
<i>Surr: 4-Terphenyl-d14</i>	3.4	0	3.33	0	102	34-130	0			

<b>MS</b>		Sample ID: <b>19061619-01A MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2019 06:17 PM</b>		
Client ID: <b>GRAY A 18X</b>		Run ID: <b>GC8_190625B</b>				SeqNo: <b>5740802</b>		Prep Date: <b>6/25/2019</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)	261.1	4.9	327.9	80.39	55.1	65-122	0			S
<i>Surr: 4-Terphenyl-d14</i>	0.5252	0	3.279	0	16	34-130	0			S

<b>MSD</b>		Sample ID: <b>19061619-01A MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/25/2019 06:46 PM</b>		
Client ID: <b>GRAY A 18X</b>		Run ID: <b>GC8_190625B</b>				SeqNo: <b>5740803</b>		Prep Date: <b>6/25/2019</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)	505.4	4.9	329.5	80.39	129	65-122	261.1	63.7	30	SR
<i>Surr: 4-Terphenyl-d14</i>	1.996	0	3.295	0	60.6	34-130	0.5252	117	30	R

The following samples were analyzed in this batch:

19061619-01A

**Client:** Entrada Consulting Group  
**Work Order:** 19061619  
**Project:** GRAY A 18 X Spill

# QC BATCH REPORT

Batch ID: **138363** Instrument ID **GC8** Method: **SW8015C**

<b>MBLK</b>		Sample ID: <b>DBLKS1-138363-138363</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/28/2019 09:26 AM</b>		
Client ID:		Run ID: <b>GC8_190628A</b>				SeqNo: <b>5749750</b>		Prep Date: <b>6/27/2019</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	5.0								
Surr: 4-Terphenyl-d14	3.567	0	3.33	0	107	34-130	0			

<b>LCS</b>		Sample ID: <b>DLCSS1-138363-138363</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/28/2019 09:55 AM</b>		
Client ID:		Run ID: <b>GC8_190628A</b>				SeqNo: <b>5749751</b>		Prep Date: <b>6/27/2019</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)	375.5	5.0	333	0	113	65-122	0			
Surr: 4-Terphenyl-d14	3.317	0	3.33	0	99.6	34-130	0			

<b>MS</b>		Sample ID: <b>19061786-01B MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/28/2019 10:53 AM</b>		
Client ID:		Run ID: <b>GC8_190628A</b>				SeqNo: <b>5749754</b>		Prep Date: <b>6/27/2019</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)	415.3	4.8	321.2	45.39	115	65-122	0			
Surr: 4-Terphenyl-d14	3.054	0	3.212	0	95.1	34-130	0			

<b>MSD</b>		Sample ID: <b>19061786-01B MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/28/2019 11:22 AM</b>		
Client ID:		Run ID: <b>GC8_190628A</b>				SeqNo: <b>5749755</b>		Prep Date: <b>6/27/2019</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)	427.6	4.8	318	45.39	120	65-122	415.3	2.93	30	
Surr: 4-Terphenyl-d14	3.008	0	3.18	0	94.6	34-130	3.054	1.52	30	

The following samples were analyzed in this batch:

19061619-01A

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

**Client:** Entrada Consulting Group  
**Work Order:** 19061619  
**Project:** GRAY A 18 X Spill

## QC BATCH REPORT

Batch ID: **138444** Instrument ID **GC10** Method: **SW8015D**

<b>MBLK</b>		Sample ID: <b>MBLK-138444-138444</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>6/29/2019 12:49 PM</b>		
Client ID:		Run ID: <b>GC10_190629A</b>				SeqNo: <b>5752409</b>		Prep Date: <b>6/28/2019</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								
<i>Surr: Toluene-d8</i>	4720	0	5000	0	94.4	71-123	0			

<b>LCS</b>		Sample ID: <b>LCS-138444-138444</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>6/29/2019 11:49 AM</b>		
Client ID:		Run ID: <b>GC10_190629A</b>				SeqNo: <b>5752407</b>		Prep Date: <b>6/28/2019</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)	538000	5,000	500000	0	108	71-123	0			
<i>Surr: Toluene-d8</i>	5477	0	5000	0	110	71-123	0			

<b>MS</b>		Sample ID: <b>19061859-08A MS</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>6/30/2019 11:36 AM</b>		
Client ID:		Run ID: <b>GC10_190629A</b>				SeqNo: <b>5752449</b>		Prep Date: <b>6/28/2019</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)	521100	4,900	488800	0	107	71-123	0			
<i>Surr: Toluene-d8</i>	5515	0	4888	0	113	71-123	0			

<b>MSD</b>		Sample ID: <b>19061859-08A MSD</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>6/30/2019 12:06 PM</b>		
Client ID:		Run ID: <b>GC10_190629A</b>				SeqNo: <b>5752450</b>		Prep Date: <b>6/28/2019</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)	577500	5,500	548800	0	105	71-123	521100	10.3	30	
<i>Surr: Toluene-d8</i>	6250	0	5488	0	114	71-123	5515	12.5	30	

The following samples were analyzed in this batch:

19061619-01A

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

Client: Entrada Consulting Group  
 Work Order: 19061619  
 Project: GRAY A 18 X Spill

## QC BATCH REPORT

Batch ID: **138779** Instrument ID **HG4** Method: **SW7471B**

MBLK		Sample ID: MBLK-138779-138779				Units: mg/Kg		Analysis Date: 7/8/2019 07:19 AM		
Client ID:		Run ID: HG4_190708A				SeqNo: 5765999		Prep Date: 7/5/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury U 0.020

LCS		Sample ID: LCS-138779-138779				Units: mg/Kg		Analysis Date: 7/8/2019 07:22 AM		
Client ID:		Run ID: HG4_190708A				SeqNo: 5766000		Prep Date: 7/5/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1594 0.020 0.1665 0 95.7 80-120 0

MS		Sample ID: 19061620-01AMS					Units: mg/Kg		Analysis Date: 7/8/2019 07:28 AM		
Client ID:			Run ID: HG4_190708A			SeqNo: 5766003		Prep Date: 7/5/2019		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Mercury 0.1699 0.018 0.1491 0.0337 91.4 75-125 0

MSD		Sample ID: 19061620-01AMSD				Units: mg/Kg		Analysis Date: 7/8/2019 07:37 AM		
Client ID:		Run ID: HG4_190708A			SeqNo: 5766007		Prep Date: 7/5/2019		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1344 0.018 0.1478 0.0337 68.1 75-125 0.1699 23.4 35 S

The following samples were analyzed in this batch:

19061619-01A

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

**Client:** Entrada Consulting Group  
**Work Order:** 19061619  
**Project:** GRAY A 18 X Spill

## QC BATCH REPORT

Batch ID: **138656** Instrument ID **ICPMS3** Method: **SW6020A**

<b>MBLK</b>		Sample ID: <b>MBLK-138656-138656</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/3/2019 05:31 PM</b>		
Client ID:		Run ID: <b>ICPMS3_190703B</b>				SeqNo: <b>5762091</b>		Prep Date: <b>7/3/2019</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								
Boron	U	0.99								
Cadmium	U	0.099								
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	0.49								

<b>LCS</b>		Sample ID: <b>LCS-138656-138656</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>7/3/2019 05:33 PM</b>		
Client ID:		Run ID: <b>ICPMS3_190703B</b>				SeqNo: <b>5762092</b>		Prep Date: <b>7/3/2019</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	5.149	0.25	4.941	0	104	80-120	0			
Barium	5.139	0.25	4.941	0	104	80-120	0			
Boron	25.84	0.99	24.7	0	105	80-120	0			
Cadmium	5.144	0.099	4.941	0	104	80-120	0			
Chromium	5.32	0.25	4.941	0	108	80-120	0			
Copper	5.255	0.25	4.941	0	106	80-120	0			
Lead	5.19	0.25	4.941	0	105	80-120	0			
Nickel	5.375	0.25	4.941	0	109	80-120	0			
Selenium	4.994	0.25	4.941	0	101	80-120	0			
Silver	5.17	0.25	4.941	0	105	80-120	0			
Zinc	5.088	0.49	4.941	0	103	80-120	0			

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



**Client:** Entrada Consulting Group  
**Work Order:** 19061619  
**Project:** GRAY A 18 X Spill

## QC BATCH REPORT

Batch ID: **138656** Instrument ID **ICPMS3** Method: **SW6020A**

MS					Sample ID: 19061619-01AMS		Units: mg/Kg		Analysis Date: 7/3/2019 05:36 PM		
Client ID: GRAY A 18X			Run ID: ICPMS3_190703B			SeqNo: 5762094		Prep Date: 7/3/2019		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	10.8	0.37	7.386	5.116	77	75-125	0				
Barium	193.2	0.37	7.386	105.6	1190	75-125	0			SEO	
Boron	50.32	1.5	36.93	12.11	103	75-125	0				
Cadmium	5.929	0.15	7.386	0.144	78.3	75-125	0				
Chromium	19.18	0.37	7.386	9.555	130	75-125	0			S	
Copper	15.66	0.37	7.386	10.07	75.7	75-125	0				
Lead	25.18	0.37	7.386	15.44	132	75-125	0			S	
Nickel	19.1	0.37	7.386	13.74	72.5	75-125	0			S	
Selenium	7.268	0.37	7.386	1.168	82.6	75-125	0				
Silver	5.721	0.37	7.386	0.06362	76.6	75-125	0				
Zinc	57.78	0.74	7.386	53.71	55.1	75-125	0			SO	

MSD				Sample ID: 19061619-01AMSD				Units: mg/Kg		Analysis Date: 7/3/2019 05:38 PM	
Client ID: GRAY A 18X			Run ID: ICPMS3_190703B		SeqNo: 5762095		Prep Date: 7/3/2019		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	10.51	0.37	7.375	5.116	73.1	75-125	10.8	2.74	20	S	
Barium	124.8	0.37	7.375	105.6	259	75-125	193.2	43	20	SRO	
Boron	50.81	1.5	36.87	12.11	105	75-125	50.32	0.977	20		
Cadmium	6.031	0.15	7.375	0.144	79.8	75-125	5.929	1.72	20	S	
Chromium	20.54	0.37	7.375	9.555	149	75-125	19.18	6.84	20		
Copper	17.27	0.37	7.375	10.07	97.6	75-125	15.66	9.77	20		
Lead	23.79	0.37	7.375	15.44	113	75-125	25.18	5.68	20		
Nickel	20.44	0.37	7.375	13.74	90.8	75-125	19.1	6.79	20		
Selenium	7.166	0.37	7.375	1.168	81.3	75-125	7.268	1.41	20		
Silver	5.81	0.37	7.375	0.06362	77.9	75-125	5.721	1.56	20	O	
Zinc	61.08	0.74	7.375	53.71	100	75-125	57.78	5.56	20		

The following samples were analyzed in this batch:

19061619-01A

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

**Client:** Entrada Consulting Group  
**Work Order:** 19061619  
**Project:** GRAY A 18 X Spill

## QC BATCH REPORT

Batch ID: **138872** Instrument ID **ICPMS3** Method: **SW6020A**

<b>DUP</b>		Sample ID: <b>19061620-01ADUP</b>				Units: <b>mg/L</b>		Analysis Date: <b>7/8/2019 04:35 PM</b>		
Client ID:		Run ID: <b>ICPMS3_190708A</b>				SeqNo: <b>5769759</b>		Prep Date: <b>7/8/2019</b>		DF: <b>10</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	1526	5.0	0	0	0	0-0	1403	8.39		
Magnesium	253	2.0	0	0	0	0-0	225	11.7		
Sodium	436.9	2.0	0	0	0	0-0	388.1	11.8		

The following samples were analyzed in this batch:

19061619-01A

Batch ID: **138872** Instrument ID **SAR** Method: **USDA H60 Metho**

<b>DUP</b>		Sample ID: <b>19061620-01ADUP</b>				Units: <b>none</b>		Analysis Date: <b>7/8/2019</b>		
Client ID:		Run ID: <b>SAR_190708A</b>				SeqNo: <b>5772261</b>		Prep Date: <b>7/8/2019</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	2.729	0.010	0	0	0		2.538	7.27	50	

The following samples were analyzed in this batch:

19061619-01A

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

**Client:** Entrada Consulting Group  
**Work Order:** 19061619  
**Project:** GRAY A 18 X Spill

## QC BATCH REPORT

Batch ID: **138162**      Instrument ID **SVMS6**      Method: **SW846 8270D**

<b>MBLK</b>		Sample ID: <b>SBLKS1-138162-138162</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>6/25/2019 04:57 PM</b>		
Client ID:		Run ID: <b>SVMS6_190625A</b>				SeqNo: <b>5742169</b>		Prep Date: <b>6/25/2019</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								
<i>Surr: 2-Fluorobiphenyl</i>	2878	0	3333	0	86.4	20-140	0			
<i>Surr: 4-Terphenyl-d14</i>	3387	0	3333	0	102	22-172	0			
<i>Surr: Nitrobenzene-d5</i>	3116	0	3333	0	93.5	28-140	0			

<b>LCS</b>		Sample ID: <b>SLCSS1-138162-138162</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>6/25/2019 05:12 PM</b>		
Client ID:		Run ID: <b>SVMS6_190625A</b>				SeqNo: <b>5742170</b>		Prep Date: <b>6/25/2019</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1219	4.2	1333	0	91.4	40-140	0			
Anthracene	1535	4.2	1333	0	115	40-140	0			
Benzo(a)anthracene	1162	4.2	1333	0	87.1	40-140	0			
Benzo(a)pyrene	1299	4.2	1333	0	97.4	40-140	0			
Benzo(b)fluoranthene	1257	4.2	1333	0	94.3	40-140	0			
Benzo(k)fluoranthene	1331	4.2	1333	0	99.9	40-140	0			
Chrysene	1162	4.2	1333	0	87.2	40-140	0			
Dibenzo(a,h)anthracene	853.9	4.2	1333	0	64.1	40-140	0			
Fluoranthene	1155	4.2	1333	0	86.6	40-140	0			
Fluorene	1331	4.2	1333	0	99.9	40-140	0			
Indeno(1,2,3-cd)pyrene	897.3	4.2	1333	0	67.3	40-140	0			
Naphthalene	1317	4.2	1333	0	98.8	40-140	0			
Pyrene	1182	4.2	1333	0	88.7	40-140	0			
<i>Surr: 2-Fluorobiphenyl</i>	3075	0	3333	0	92.3	20-140	0			
<i>Surr: 4-Terphenyl-d14</i>	3157	0	3333	0	94.7	22-172	0			
<i>Surr: Nitrobenzene-d5</i>	3396	0	3333	0	102	28-140	0			

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

**Client:** Entrada Consulting Group  
**Work Order:** 19061619  
**Project:** GRAY A 18 X Spill

## QC BATCH REPORT

Batch ID: **138162**      Instrument ID **SVMS6**      Method: **SW846 8270D**

MS				Sample ID: <b>19061619-01A MS</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>6/25/2019 05:28 PM</b>	
Client ID: <b>GRAY A 18X</b>				Run ID: <b>SVMS6_190625A</b>			SeqNo: <b>5742171</b>		Prep Date: <b>6/25/2019</b>	
									DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	824.6	4.1	1326	0	62.2	40-140	0			
Anthracene	813.1	4.1	1326	5.168	60.9	40-140	0			
Benzo(a)anthracene	419.3	4.1	1326	1.992	31.5	40-140	0			S
Benzo(a)pyrene	135.2	4.1	1326	0	10.2	40-140	0			S
Benzo(b)fluoranthene	289.1	4.1	1326	0	21.8	40-140	0			S
Benzo(k)fluoranthene	300.4	4.1	1326	0	22.7	40-140	0			S
Chrysene	355.8	4.1	1326	4.411	26.5	40-140	0			S
Dibenzo(a,h)anthracene	128.7	4.1	1326	0	9.7	40-140	0			S
Fluoranthene	535.4	4.1	1326	11.95	39.5	40-140	0			S
Fluorene	706.1	4.1	1326	2.93	53	40-140	0			
Indeno(1,2,3-cd)pyrene	149.6	4.1	1326	0	11.3	40-140	0			S
Naphthalene	1039	4.1	1326	0	78.3	40-140	0			
Pyrene	674.9	4.1	1326	12.41	50	40-140	0			
Surr: 2-Fluorobiphenyl	2424	0	3316	0	73.1	20-140	0			
Surr: 4-Terphenyl-d14	573.8	0	3316	0	17.3	22-172	0			S
Surr: Nitrobenzene-d5	980.8	0	3316	0	29.6	28-140	0			

MSD				Sample ID: <b>19061619-01A MSD</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>6/25/2019 05:43 PM</b>	
Client ID: <b>GRAY A 18X</b>				Run ID: <b>SVMS6_190625A</b>			SeqNo: <b>5742172</b>		Prep Date: <b>6/25/2019</b>	
									DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	799.8	4.0	1275	0	62.7	40-140	824.6	3.05	30	
Anthracene	906.8	4.0	1275	5.168	70.7	40-140	813.1	10.9	30	
Benzo(a)anthracene	577.1	4.0	1275	1.992	45.1	40-140	419.3	31.7	30	R
Benzo(a)pyrene	375.4	4.0	1275	0	29.5	40-140	135.2	94.1	30	SR
Benzo(b)fluoranthene	482.9	4.0	1275	0	37.9	40-140	289.1	50.2	30	SR
Benzo(k)fluoranthene	491.8	4.0	1275	0	38.6	40-140	300.4	48.3	30	SR
Chrysene	541.1	4.0	1275	4.411	42.1	40-140	355.8	41.3	30	R
Dibenzo(a,h)anthracene	316.9	4.0	1275	0	24.9	40-140	128.7	84.5	30	SR
Fluoranthene	577	4.0	1275	11.95	44.3	40-140	535.4	7.47	30	
Fluorene	740.4	4.0	1275	2.93	57.9	40-140	706.1	4.74	30	
Indeno(1,2,3-cd)pyrene	345.1	4.0	1275	0	27.1	40-140	149.6	79.1	30	SR
Naphthalene	966.7	4.0	1275	0	75.8	40-140	1039	7.19	30	
Pyrene	707.9	4.0	1275	12.41	54.6	40-140	674.9	4.78	30	
Surr: 2-Fluorobiphenyl	2290	0	3187	0	71.9	20-140	2424	5.66	0	
Surr: 4-Terphenyl-d14	1187	0	3187	0	37.2	22-172	573.8	69.6	0	
Surr: Nitrobenzene-d5	1464	0	3187	0	45.9	28-140	980.8	39.5	0	

The following samples were analyzed in this batch:

19061619-01A

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

**Client:** Entrada Consulting Group  
**Work Order:** 19061619  
**Project:** GRAY A 18 X Spill

## QC BATCH REPORT

Batch ID: **138265** Instrument ID **SVMS6** Method: **SW846 8270D**

MBLK		Sample ID: <b>SBLKS1-138265-138265</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>6/28/2019 01:43 AM</b>		
Client ID:		Run ID: <b>SVMS6_190627A</b>				SeqNo: <b>5749405</b>		Prep Date: <b>6/27/2019</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	3549	0	3333	0	106	20-140	0			
Surr: 4-Terphenyl-d14	4377	0	3333	0	131	22-172	0			
Surr: Nitrobenzene-d5	3525	0	3333	0	106	28-140	0			

LCS		Sample ID: <b>SLCSS1-138265-138265</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>6/28/2019 01:59 AM</b>		
Client ID:		Run ID: <b>SVMS6_190627A</b>				SeqNo: <b>5749426</b>		Prep Date: <b>6/27/2019</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1315	4.2	1333	0	98.6	40-140	0			
Anthracene	1835	4.2	1333	0	138	40-140	0			
Benzo(a)anthracene	1583	4.2	1333	0	119	40-140	0			
Benzo(a)pyrene	1611	4.2	1333	0	121	40-140	0			
Benzo(b)fluoranthene	1428	4.2	1333	0	107	40-140	0			
Benzo(k)fluoranthene	1472	4.2	1333	0	110	40-140	0			
Chrysene	1491	4.2	1333	0	112	40-140	0			
Dibenzo(a,h)anthracene	1446	4.2	1333	0	108	40-140	0			
Fluoranthene	1398	4.2	1333	0	105	40-140	0			
Fluorene	1365	4.2	1333	0	102	40-140	0			
Indeno(1,2,3-cd)pyrene	1486	4.2	1333	0	112	40-140	0			
Naphthalene	1386	4.2	1333	0	104	40-140	0			
Pyrene	1536	4.2	1333	0	115	40-140	0			
Surr: 2-Fluorobiphenyl	3239	0	3333	0	97.2	20-140	0			
Surr: 4-Terphenyl-d14	3767	0	3333	0	113	22-172	0			
Surr: Nitrobenzene-d5	3197	0	3333	0	95.9	28-140	0			

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

**Client:** Entrada Consulting Group  
**Work Order:** 19061619  
**Project:** GRAY A 18 X Spill

## QC BATCH REPORT

Batch ID: **138265**      Instrument ID **SVMS6**      Method: **SW846 8270D**

MS				Sample ID: 19061619-01A MS			Units: µg/Kg		Analysis Date: 6/28/2019 02:14 AM	
Client ID: GRAY A 18X				Run ID: SVMS6_190627A			SeqNo: 5749407		Prep Date: 6/27/2019	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1174	4.1	1296	0	90.6	40-140	0			
Anthracene	1450	4.1	1296	2.954	112	40-140	0			
Benzo(a)anthracene	883.7	4.1	1296	3.329	67.9	40-140	0			
Benzo(a)pyrene	242.5	4.1	1296	3.884	18.4	40-140	0			S
Benzo(b)fluoranthene	497.2	4.1	1296	3.982	38.1	40-140	0			S
Benzo(k)fluoranthene	482.1	4.1	1296	2.203	37	40-140	0			S
Chrysene	621.6	4.1	1296	2.987	47.7	40-140	0			
Dibenzo(a,h)anthracene	337.3	4.1	1296	3.362	25.8	40-140	0			S
Fluoranthene	949.4	4.1	1296	15.8	72.1	40-140	0			
Fluorene	1038	4.1	1296	4.684	79.7	40-140	0			
Indeno(1,2,3-cd)pyrene	475.3	4.1	1296	3.019	36.4	40-140	0			S
Naphthalene	1274	4.1	1296	0	98.4	40-140	0			
Pyrene	1201	4.1	1296	16.84	91.4	40-140	0			
Surr: 2-Fluorobiphenyl	3107	0	3240	0	95.9	20-140	0			
Surr: 4-Terphenyl-d14	965.6	0	3240	0	29.8	22-172	0			
Surr: Nitrobenzene-d5	1099	0	3240	0	33.9	28-140	0			

MSD				Sample ID: 19061619-01A MSD			Units: µg/Kg		Analysis Date: 6/28/2019 02:30 AM	
Client ID: GRAY A 18X				Run ID: SVMS6_190627A			SeqNo: 5749408		Prep Date: 6/27/2019	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1112	4.0	1293	0	86	40-140	1174	5.46	30	
Anthracene	1170	4.0	1293	2.954	90.3	40-140	1450	21.3	30	
Benzo(a)anthracene	500.8	4.0	1293	3.329	38.5	40-140	883.7	55.3	30	SR
Benzo(a)pyrene	154.3	4.0	1293	3.884	11.6	40-140	242.5	44.5	30	SR
Benzo(b)fluoranthene	240.1	4.0	1293	3.982	18.3	40-140	497.2	69.7	30	SR
Benzo(k)fluoranthene	242.2	4.0	1293	2.203	18.6	40-140	482.1	66.2	30	SR
Chrysene	327.3	4.0	1293	2.987	25.1	40-140	621.6	62	30	SR
Dibenzo(a,h)anthracene	201	4.0	1293	3.362	15.3	40-140	337.3	50.7	30	SR
Fluoranthene	644.3	4.0	1293	15.8	48.6	40-140	949.4	38.3	30	R
Fluorene	857.6	4.0	1293	4.684	66	40-140	1038	19	30	
Indeno(1,2,3-cd)pyrene	246.2	4.0	1293	3.019	18.8	40-140	475.3	63.5	30	SR
Naphthalene	1255	4.0	1293	0	97.1	40-140	1274	1.55	30	
Pyrene	952.9	4.0	1293	16.84	72.4	40-140	1201	23.1	30	
Surr: 2-Fluorobiphenyl	2985	0	3232	0	92.3	20-140	3107	4.02	0	
Surr: 4-Terphenyl-d14	467.6	0	3232	0	14.5	22-172	965.6	69.5	0	S
Surr: Nitrobenzene-d5	624	0	3232	0	19.3	28-140	1099	55.1	0	S

The following samples were analyzed in this batch:

19061619-01A

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

**Client:** Entrada Consulting Group  
**Work Order:** 19061619  
**Project:** GRAY A 18 X Spill

# QC BATCH REPORT

Batch ID: **138153** Instrument ID **WETCHEM** Method: **SW9045D**

LCS				Sample ID: LCS-138153-138153				Units: s.u.			Analysis Date: 6/25/2019 12:00 PM			
Client ID:				Run ID: WETCHEM_190625G				SeqNo: 5739481			Prep Date: 6/25/2019		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			

pH 3.97 0.10 4 0 99.2 90-110 0

DUP				Sample ID: 19061353-02B DUP				Units: s.u.			Analysis Date: 6/25/2019 12:00 PM			
Client ID:				Run ID: WETCHEM_190625G				SeqNo: 5739484			Prep Date: 6/25/2019		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			

pH 7.79 0.10 0 0 0 0-0 7.65 1.81 20

Temperature 21.8 0.10 0 0 0 21.9 0.458

<b>DUP</b>				Sample ID: <b>19061578-03A DUP</b>				Units: <b>s.u.</b>		Analysis Date: <b>6/25/2019 12:00 PM</b>			
Client ID:				Run ID: <b>WETCHEM_190625G</b>				SeqNo: <b>5739496</b>		Prep Date: <b>6/25/2019</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			

pH 8.36 0.10 0 0 0 0-0 8.35 0.12 20

Temperature 21.8 0.10 0 0 0 21.8 0

The following samples were analyzed in this batch:

19061619-01A

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



Client: Entrada Consulting Group  
 Work Order: 19061619  
 Project: GRAY A 18 X Spill

## QC BATCH REPORT

Batch ID: **138341** Instrument ID **WETCHEM** Method: **SW7196A**

<b>MBLK</b>		Sample ID: <b>MBLK-138341-138341</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/27/2019 12:56 PM</b>		
Client ID:		Run ID: <b>WETCHEM_190627G</b>				SeqNo: <b>5745731</b>		Prep Date: <b>6/26/2019</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 1.0

<b>LCS</b>		Sample ID: <b>LCS-138341-138341</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/27/2019 12:56 PM</b>		
Client ID:		Run ID: <b>WETCHEM_190627G</b>				SeqNo: <b>5745732</b>		Prep Date: <b>6/26/2019</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 5.06 1.0 5 0 101 80-120 0

<b>MS</b>		Sample ID: <b>19061593-01A MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/27/2019 12:56 PM</b>		
Client ID:		Run ID: <b>WETCHEM_190627G</b>				SeqNo: <b>5745742</b>		Prep Date: <b>6/26/2019</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 3.64 1.0 5 0.5446 61.9 75-125 0 S

<b>MS</b>		Sample ID: <b>19061593-01A MSI</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/27/2019 12:56 PM</b>		
Client ID:		Run ID: <b>WETCHEM_190627G</b>				SeqNo: <b>5745744</b>		Prep Date: <b>6/26/2019</b>		DF: <b>200</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4094 200 4259 0.5446 96.1 75-125 0

<b>MSD</b>		Sample ID: <b>19061593-01A MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/27/2019 12:56 PM</b>		
Client ID:		Run ID: <b>WETCHEM_190627G</b>				SeqNo: <b>5745743</b>		Prep Date: <b>6/26/2019</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 2.87 1.0 5 0.5446 46.5 75-125 4094 200 20 SR

The following samples were analyzed in this batch:

19061619-01A

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

**Client:** Entrada Consulting Group  
**Work Order:** 19061619  
**Project:** GRAY A 18 X Spill

## QC BATCH REPORT

Batch ID: **138872** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

<b>DUP</b>		Sample ID: <b>19061620-01A DUP</b>				Units: <b>mmhos/cm @25°</b>		Analysis Date: <b>7/9/2019 11:00 AM</b>		
Client ID:		Run ID: <b>WETCHEM_190709F</b>				SeqNo: <b>5771582</b>		Prep Date: <b>7/8/2019</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	11.78	0.10	0	0	0		11.04	6.49	50	

The following samples were analyzed in this batch:

19061619-01A

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

Client: Entrada Consulting Group  
 Work Order: 19061619  
 Project: GRAY A 18 X Spill

## QC BATCH REPORT

Batch ID: **R263742** Instrument ID **MOIST** Method: **SW3550C**

MBLK		Sample ID: WBLKS-R263742					Units: % of sample		Analysis Date: 6/27/2019 03:55 PM		
Client ID:			Run ID: MOIST_190627C			SeqNo: 5748606		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture U 0.10

LCS		Sample ID: LCS-R263742					Units: % of sample		Analysis Date: 6/27/2019 03:55 PM		
Client ID:			Run ID: MOIST_190627C			SeqNo: 5748605		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture 99.99 0.10 100 0 100 98-102 0

<b>DUP</b>				Sample ID: <b>19061061-14A DUP</b>				Units: <b>% of sample</b>			Analysis Date: <b>6/27/2019 03:55 PM</b>			
Client ID:				Run ID: <b>MOIST_190627C</b>				SeqNo: <b>5748586</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 11.66 0.10 0 0 0 0-0 11.9 2.04 10 H

<b>DUP</b>				Sample ID: <b>19061269-04B DUP</b>				Units: <b>% of sample</b>			Analysis Date: <b>6/27/2019 03:55 PM</b>			
Client ID:				Run ID: <b>MOIST_190627C</b>				SeqNo: <b>5748600</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 14 0.10 0 0 0 0-0 13.38 4.53 10

The following samples were analyzed in this batch:

19061619-01A

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  
+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	GRAYA18X 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, Suite 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	tdobransky@entradainc.com					I											
								J											
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold		
1	GRAY A18X	6/14/19	1200	Soil	B	1	X	X	X	X	X	X	X						
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Sampler(s): Please Print & Sign		Shipment Method:		Required Turnaround Time:		Results Due Date:	
Tim Dobransky		FedEx		<input checked="" type="checkbox"/> STD 10 Wk Days <input type="checkbox"/> 5 Wk Days <input type="checkbox"/> 2 Wk Days <input type="checkbox"/> 24 Hour			
Relinquished by:		Date:	Time:	Received by:		Notes:	
		6/21/19	1200			Chevron Pricing Applies - Per Bruce Schlatter	
Relinquished by:		Date:	Time:	Received by (Laboratory):		QC Package: (Check Box Below)	
		6-21-19	1830			<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	
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):		Cooler Temp.	
DJS		6/24/19	1200			52.2 3.0°C	
Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035							
Other: _____							

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-Jun-19 09:30**

Work Order: **19061619**

Received by: **DS**

Checklist completed by Diane Shaw 24-Jun-19  
eSignature Date

Reviewed by: Chad Whelton 24-Jun-19  
eSignature Date

Matrices: **Soil**

Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>3.0/3.0 c</u> <u>SR2</u>		
Cooler(s)/Kit(s):	<u></u>		
Date/Time sample(s) sent to storage:	<u>6/24/2019 12:07:55 PM</u>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:	<u>-</u>		

Login Notes:

-----

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: