



30-Nov-2018

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

Re: **UP 69-27 Spill**

Work Order: **1811788**

Dear Tim,

ALS Environmental received 3 samples on 10-Nov-2018 10:00 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 29.

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 998501

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RIGHT SOLUTIONS RIGHT PARTNER

Client: Entrada Consulting Group
Project: UP 69-27 Spill
Work Order: 1811788

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>
1811788-01	UP6927-SS1	Soil		11/8/2018 11:20	11/10/2018 10:00	☐
1811788-02	UP6927-SS2	Soil		11/8/2018 11:30	11/10/2018 10:00	☐
1811788-03	UP6927-BG1	Soil		11/8/2018 11:35	11/10/2018 10:00	☐

Client: Entrada Consulting Group**Project:** UP 69-27 Spill**Work Order:** 1811788**Case Narrative**

Batch 128657, Method CR6_7196_S, Sample 1811788-01A MSD: The RPD between the MS and MSD was outside the control limit for Hexavalent Chromium. The corresponding result in the parent sample should be considered estimated.

<u>Qualifier</u>	<u>Description</u>
*	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.

<u>Acronym</u>	<u>Description</u>
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

<u>Units Reported</u>	<u>Description</u>
% of sample	Percent of Sample
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	
s.u.	Standard Units

ALS Group, USA

Date: 30-Nov-18

Client: Entrada Consulting Group
Project: UP 69-27 Spill
Sample ID: UP6927-SS1
Collection Date: 11/8/2018 11:20 AM

Work Order: 1811788
Lab ID: 1811788-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID							
			Method: SW8015M		Prep: SW3546 / 11/16/18		Analyst: RP
DRO (C10-C28)	U		3.0	5.3	mg/Kg-dry	1	11/17/2018 02:50
Surr: 4-Terphenyl-d14	78.3			33-111	%REC	1	11/17/2018 02:50
GASOLINE RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW5035 / 11/14/18		Analyst: RP
GRO (C6-C10)	U		2.4	5.7	mg/Kg	1	11/16/2018 15:32
Surr: Toluene-d8	89.1			71-123	%REC	1	11/16/2018 15:32
MERCURY BY CVAA							
			Method: SW7471B		Prep: SW7471 / 11/13/18		Analyst: RSB
Mercury	0.026		0.0019	0.019	mg/Kg-dry	1	11/13/2018 18:12
METALS ANALYSIS BY ICP							
			Method: SW846 6010C		Prep: SW3050B / 11/15/18		Analyst: ABL
Arsenic	5.3		0.090	0.35	mg/Kg-dry	1	11/16/2018 01:14
Barium	190		0.14	0.35	mg/Kg-dry	1	11/16/2018 01:14
Cadmium	0.18	J	0.033	0.69	mg/Kg-dry	1	11/16/2018 01:14
Chromium	13		0.019	0.35	mg/Kg-dry	1	11/16/2018 01:14
Copper	18		0.15	0.69	mg/Kg-dry	1	11/16/2018 01:14
Lead	13		0.073	0.35	mg/Kg-dry	1	11/16/2018 01:14
Nickel	14		0.14	0.35	mg/Kg-dry	1	11/16/2018 01:14
Selenium	0.75		0.19	0.69	mg/Kg-dry	1	11/16/2018 01:14
Silver	U		0.043	0.35	mg/Kg-dry	1	11/16/2018 01:14
Zinc	75		0.069	0.87	mg/Kg-dry	1	11/27/2018 08:53
SOLUBLE CATIONS FOR SAR							
			Method: SW6020A		Prep: USDA Method 20B / 11/20/18		Analyst: STP
Calcium	530		1.7	10	mg/L	20	11/20/2018 14:32
Magnesium	45		0.14	4.0	mg/L	20	11/20/2018 14:32
Sodium	1,800		0.68	4.0	mg/L	20	11/20/2018 14:32
SODIUM ADSORPTION RATIO							
			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 11/20/18		Analyst: STP
Sodium Adsorption Ratio	20		0.010	0.010	none	1	11/20/2018
SEMI-VOLATILE ORGANIC COMPOUNDS							
			Method: SW846 8270D		Prep: SW3546 / 11/16/18		Analyst: KAW
Acenaphthene	U		0.0051	0.0071	mg/Kg-dry	1	11/20/2018 03:37
Anthracene	U		0.0050	0.0071	mg/Kg-dry	1	11/20/2018 03:37
Benzo(a)anthracene	U		0.0061	0.0071	mg/Kg-dry	1	11/20/2018 03:37
Benzo(a)pyrene	U		0.0043	0.0071	mg/Kg-dry	1	11/20/2018 03:37
Benzo(b)fluoranthene	U		0.0053	0.0071	mg/Kg-dry	1	11/20/2018 03:37
Benzo(k)fluoranthene	U		0.0054	0.0071	mg/Kg-dry	1	11/20/2018 03:37
Chrysene	U		0.0057	0.0071	mg/Kg-dry	1	11/20/2018 03:37
Dibenzo(a,h)anthracene	U		0.0038	0.0071	mg/Kg-dry	1	11/20/2018 03:37
Fluoranthene	U		0.0034	0.0071	mg/Kg-dry	1	11/20/2018 03:37

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

ALS Group, USA

Date: 30-Nov-18

Client: Entrada Consulting Group
Project: UP 69-27 Spill
Sample ID: UP6927-SS1
Collection Date: 11/8/2018 11:20 AM

Work Order: 1811788
Lab ID: 1811788-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	U		0.0051	0.0071	mg/Kg-dry	1	11/20/2018 03:37
Indeno(1,2,3-cd)pyrene	U		0.0049	0.0071	mg/Kg-dry	1	11/20/2018 03:37
Naphthalene	U		0.0045	0.0071	mg/Kg-dry	1	11/20/2018 03:37
Pyrene	U		0.0013	0.0071	mg/Kg-dry	1	11/20/2018 03:37
Surr: 2-Fluorobiphenyl	74.3			44-107	%REC	1	11/20/2018 03:37
Surr: 4-Terphenyl-d14	76.9			52-123	%REC	1	11/20/2018 03:37
Surr: Nitrobenzene-d5	60.8			41-94	%REC	1	11/20/2018 03:37
VOLATILE ORGANIC COMPOUNDS			Method: SW8260C		Prep: SW5035 / 11/14/18		Analyst: AK
Benzene	U		0.0058	0.034	mg/Kg	1	11/17/2018 09:17
Ethylbenzene	U		0.0072	0.034	mg/Kg	1	11/17/2018 09:17
m,p-Xylene	U		0.016	0.068	mg/Kg	1	11/17/2018 09:17
o-Xylene	U		0.013	0.034	mg/Kg	1	11/17/2018 09:17
Toluene	U		0.0093	0.034	mg/Kg	1	11/17/2018 09:17
Xylenes, Total	U		0.029	0.10	mg/Kg	1	11/17/2018 09:17
Surr: 1,2-Dichloroethane-d4	105			70-130	%REC	1	11/17/2018 09:17
Surr: 4-Bromofluorobenzene	93.0			70-130	%REC	1	11/17/2018 09:17
Surr: Dibromofluoromethane	83.1			70-130	%REC	1	11/17/2018 09:17
Surr: Toluene-d8	96.8			70-130	%REC	1	11/17/2018 09:17
ELECTRICAL CONDUCTIVITY (SAR)			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 11/20/18		Analyst: JB
Electrical Conductivity @ Saturation	11		0.011	0.10	mmhos/cm @25°	20	11/21/2018 00:45
CHROMIUM, TRIVALENT			Method: CALCULATION				Analyst: JB
Chromium, Trivalent	13		0.33	1.1	mg/Kg-dry	1	11/29/2018 12:45
CHROMIUM, HEXAVALENT			Method: SW7196A		Prep: SW3060A / 11/28/18		Analyst: JSH
Chromium, Hexavalent	U		0.32	1.0	mg/Kg-dry	1	11/29/2018 16:00
MOISTURE			Method: SW3550C				Analyst: JEB
Moisture	6.5	B	0.025	0.050	% of sample	1	11/21/2018 08:28
PH			Method: SW9045D		Prep: EXTRACT / 11/13/18		Analyst: JEB
pH	8.43		0.10	0.100	s.u.	1	11/13/2018 16:40

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

ALS Group, USA

Date: 30-Nov-18

Client: Entrada Consulting Group
Project: UP 69-27 Spill
Sample ID: UP6927-SS2
Collection Date: 11/8/2018 11:30 AM

Work Order: 1811788
Lab ID: 1811788-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID							
			Method: SW8015M		Prep: SW3546 / 11/16/18		Analyst: RP
DRO (C10-C28)	U		3.0	5.3	mg/Kg-dry	1	11/17/2018 02:21
Surr: 4-Terphenyl-d14	62.9			33-111	%REC	1	11/17/2018 02:21
GASOLINE RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW5035 / 11/14/18		Analyst: RP
GRO (C6-C10)	U		2.5	6.0	mg/Kg	1	11/16/2018 16:01
Surr: Toluene-d8	88.9			71-123	%REC	1	11/16/2018 16:01
MERCURY BY CVAA							
			Method: SW7471B		Prep: SW7471 / 11/13/18		Analyst: RSH
Mercury	0.036		0.0020	0.020	mg/Kg-dry	1	11/13/2018 18:15
METALS ANALYSIS BY ICP							
			Method: SW846 6010C		Prep: SW3050B / 11/15/18		Analyst: ABL
Arsenic	5.1		0.11	0.43	mg/Kg-dry	1	11/16/2018 01:20
Barium	140		0.17	0.43	mg/Kg-dry	1	11/16/2018 01:20
Cadmium	0.19	J	0.041	0.86	mg/Kg-dry	1	11/16/2018 01:20
Chromium	13		0.024	0.43	mg/Kg-dry	1	11/16/2018 01:20
Copper	16		0.19	0.86	mg/Kg-dry	1	11/16/2018 01:20
Lead	14		0.092	0.43	mg/Kg-dry	1	11/16/2018 01:20
Nickel	15		0.17	0.43	mg/Kg-dry	1	11/16/2018 01:20
Selenium	0.78	J	0.24	0.86	mg/Kg-dry	1	11/16/2018 01:20
Silver	U		0.054	0.43	mg/Kg-dry	1	11/16/2018 01:20
Zinc	71		0.060	0.75	mg/Kg-dry	1	11/27/2018 08:59
SOLUBLE CATIONS FOR SAR							
			Method: SW6020A		Prep: USDA Method 20B / 11/20/18		Analyst: STP
Calcium	1,300		1.7	10	mg/L	20	11/20/2018 14:34
Magnesium	78		0.14	4.0	mg/L	20	11/20/2018 14:34
Sodium	2,200		0.68	4.0	mg/L	20	11/20/2018 14:34
SODIUM ADSORPTION RATIO							
			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 11/20/18		Analyst: STP
Sodium Adsorption Ratio	16		0.010	0.010	none	1	11/20/2018
SEMI-VOLATILE ORGANIC COMPOUNDS							
			Method: SW846 8270D		Prep: SW3546 / 11/16/18		Analyst: KAW
Acenaphthene	U		0.0051	0.0070	mg/Kg-dry	1	11/20/2018 04:00
Anthracene	U		0.0049	0.0070	mg/Kg-dry	1	11/20/2018 04:00
Benzo(a)anthracene	U		0.0061	0.0070	mg/Kg-dry	1	11/20/2018 04:00
Benzo(a)pyrene	U		0.0043	0.0070	mg/Kg-dry	1	11/20/2018 04:00
Benzo(b)fluoranthene	U		0.0052	0.0070	mg/Kg-dry	1	11/20/2018 04:00
Benzo(k)fluoranthene	U		0.0053	0.0070	mg/Kg-dry	1	11/20/2018 04:00
Chrysene	U		0.0057	0.0070	mg/Kg-dry	1	11/20/2018 04:00
Dibenzo(a,h)anthracene	U		0.0038	0.0070	mg/Kg-dry	1	11/20/2018 04:00
Fluoranthene	U		0.0034	0.0070	mg/Kg-dry	1	11/20/2018 04:00

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

ALS Group, USA

Date: 30-Nov-18

Client: Entrada Consulting Group
Project: UP 69-27 Spill
Sample ID: UP6927-SS2
Collection Date: 11/8/2018 11:30 AM

Work Order: 1811788
Lab ID: 1811788-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	U		0.0051	0.0070	mg/Kg-dry	1	11/20/2018 04:00
Indeno(1,2,3-cd)pyrene	U		0.0049	0.0070	mg/Kg-dry	1	11/20/2018 04:00
Naphthalene	U		0.0045	0.0070	mg/Kg-dry	1	11/20/2018 04:00
Pyrene	U		0.0013	0.0070	mg/Kg-dry	1	11/20/2018 04:00
Surr: 2-Fluorobiphenyl	50.7			44-107	%REC	1	11/20/2018 04:00
Surr: 4-Terphenyl-d14	54.0			52-123	%REC	1	11/20/2018 04:00
Surr: Nitrobenzene-d5	42.8			41-94	%REC	1	11/20/2018 04:00
VOLATILE ORGANIC COMPOUNDS			Method: SW8260C		Prep: SW5035 / 11/14/18		Analyst: LSY
Benzene	U		0.0061	0.036	mg/Kg	1	11/20/2018 05:47
Ethylbenzene	U		0.0076	0.036	mg/Kg	1	11/20/2018 05:47
m,p-Xylene	U		0.017	0.072	mg/Kg	1	11/20/2018 05:47
o-Xylene	U		0.014	0.036	mg/Kg	1	11/20/2018 05:47
Toluene	U		0.0098	0.036	mg/Kg	1	11/20/2018 05:47
Xylenes, Total	U		0.031	0.11	mg/Kg	1	11/20/2018 05:47
Surr: 1,2-Dichloroethane-d4	109			70-130	%REC	1	11/20/2018 05:47
Surr: 4-Bromofluorobenzene	96.2			70-130	%REC	1	11/20/2018 05:47
Surr: Dibromofluoromethane	87.8			70-130	%REC	1	11/20/2018 05:47
Surr: Toluene-d8	96.2			70-130	%REC	1	11/20/2018 05:47
ELECTRICAL CONDUCTIVITY (SAR)			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 11/20/18		Analyst: JB
Electrical Conductivity @ Saturation	18		0.011	0.10	mmhos/cm @25°	20	11/21/2018 00:45
CHROMIUM, TRIVALENT			Method: CALCULATION				Analyst: JB
Chromium, Trivalent	12		0.34	1.1	mg/Kg-dry	1	11/29/2018 12:45
CHROMIUM, HEXAVALENT			Method: SW7196A		Prep: SW3060A / 11/28/18		Analyst: JSH
Chromium, Hexavalent	0.36	J	0.33	1.1	mg/Kg-dry	1	11/29/2018 16:00
MOISTURE			Method: SW3550C				Analyst: RBS
Moisture	9.0		0.025	0.050	% of sample	1	11/21/2018 10:28
PH			Method: SW9045D		Prep: EXTRACT / 11/13/18		Analyst: JEB
pH	8.24		0.10	0.100	s.u.	1	11/13/2018 16:40

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

ALS Group, USA

Date: 30-Nov-18

Client: Entrada Consulting Group
Project: UP 69-27 Spill
Sample ID: UP6927-BG1
Collection Date: 11/8/2018 11:35 AM

Work Order: 1811788
Lab ID: 1811788-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
Mercury	0.045		0.0021	0.021	mg/Kg-dry	1	11/13/2018 18:24
METALS ANALYSIS BY ICP							
Arsenic	5.0		0.11	0.41	mg/Kg-dry	1	11/16/2018 01:26
Barium	120		0.16	0.41	mg/Kg-dry	1	11/16/2018 01:26
Cadmium	0.17	J	0.039	0.82	mg/Kg-dry	1	11/16/2018 01:26
Chromium	11		0.023	0.41	mg/Kg-dry	1	11/16/2018 01:26
Copper	15		0.18	0.82	mg/Kg-dry	1	11/16/2018 01:26
Lead	12		0.087	0.41	mg/Kg-dry	1	11/16/2018 01:26
Nickel	15		0.16	0.41	mg/Kg-dry	1	11/16/2018 01:26
Selenium	0.94		0.23	0.82	mg/Kg-dry	1	11/16/2018 01:26
Silver	U		0.051	0.41	mg/Kg-dry	1	11/16/2018 01:26
Zinc	75		0.064	0.80	mg/Kg-dry	1	11/27/2018 09:05
SOLUBLE CATIONS FOR SAR							
Calcium	510		1.7	10	mg/L	20	11/20/2018 14:35
Magnesium	32		0.14	4.0	mg/L	20	11/20/2018 14:35
Sodium	1,400		0.68	4.0	mg/L	20	11/20/2018 14:35
SODIUM ADSORPTION RATIO							
Sodium Adsorption Ratio	16		0.010	0.010	none	1	11/20/2018
ELECTRICAL CONDUCTIVITY (SAR)							
Electrical Conductivity @ Saturation	9.8		0.011	0.10	mmhos/cm @25°	20	11/21/2018 00:45
CHROMIUM, TRIVALENT							
Chromium, Trivalent	11		0.34	1.1	mg/Kg-dry	1	11/29/2018 12:45
CHROMIUM, HEXAVALENT							
Chromium, Hexavalent	U		0.34	1.1	mg/Kg-dry	1	11/29/2018 16:00
MOISTURE							
Moisture	9.9		0.025	0.050	% of sample	1	11/21/2018 10:28
PH							
pH	8.35		0.10	0.100	s.u.	1	11/13/2018 16:40

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

Client: Entrada Consulting Group
Work Order: 1811788
Project: UP 69-27 Spill

QC BATCH REPORT

Batch ID: **128034** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: DBLKS1-128034-128034				Units: mg/Kg		Analysis Date: 11/16/2018 09:30 PM		
Client ID:		Run ID: GC8_181116A				SeqNo: 5393368		Prep Date: 11/16/2018		DF: 1
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	3.221	0	3.33	0	96.7	33-111		0		

LCS		Sample ID: DLCSS1-128034-128034				Units: mg/Kg		Analysis Date: 11/16/2018 10:28 PM		
Client ID:		Run ID: GC8_181116A				SeqNo: 5393369		Prep Date: 11/16/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	230.3	5.0	333	0	69.2	58-111		0		
Surr: 4-Terphenyl-d14	2.919	0	3.33	0	87.6	33-111		0		

MS		Sample ID: 1811784-02A MS				Units: mg/Kg		Analysis Date: 11/16/2018 10:57 PM		
Client ID:		Run ID: GC8_181116A				SeqNo: 5393370		Prep Date: 11/16/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	209.6	4.7	312.2	0	67.1	58-111		0		
Surr: 4-Terphenyl-d14	2.663	0	3.122	0	85.3	33-111		0		

MSD		Sample ID: 1811784-02A MSD				Units: mg/Kg		Analysis Date: 11/16/2018 11:26 PM		
Client ID:		Run ID: GC8_181116A				SeqNo: 5393371		Prep Date: 11/16/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	218	4.8	319.1	0	68.3	58-111	209.6	3.94	30	
Surr: 4-Terphenyl-d14	2.583	0	3.191	0	81	33-111	2.663	3.05	30	

The following samples were analyzed in this batch:

1811788-01A	1811788-02A
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Client: Entrada Consulting Group
Work Order: 1811788
Project: UP 69-27 Spill

QC BATCH REPORT

Batch ID: **127949** Instrument ID **GC9** Method: **SW8015D**

MBLK		Sample ID: MBLK-127949-127949				Units: µg/Kg-dry		Analysis Date: 11/15/2018 08:11 PM		
Client ID:		Run ID: GC9_181115A				SeqNo: 5389781		Prep Date: 11/14/2018		DF: 1
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>	4382	0	5000	0	87.6	71-123	0			

LCS		Sample ID: LCS-127949-127949				Units: µg/Kg-dry		Analysis Date: 11/15/2018 05:16 PM		
Client ID:		Run ID: GC9_181115A				SeqNo: 5389775		Prep Date: 11/14/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	482200	5,000	500000	0	96.4	71-123	0			
<i>Surr: Toluene-d8</i>	5575	0	5000	0	112	71-123	0			

MS		Sample ID: 1811788-01A MS				Units: µg/Kg-dry		Analysis Date: 11/17/2018 03:07 A		
Client ID: UP6927-SS1		Run ID: GC9_181115A				SeqNo: 5393609		Prep Date: 11/14/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	594200	5,700	569500	0	104	71-123	0			
<i>Surr: Toluene-d8</i>	5679	0	5695	0	99.7	71-123	0			

MSD		Sample ID: 1811788-01A MSD				Units: µg/Kg-dry		Analysis Date: 11/17/2018 03:36 A		
Client ID: UP6927-SS1		Run ID: GC9_181115A				SeqNo: 5393611		Prep Date: 11/14/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	591900	5,700	569500	0	104	71-123	594200	0.38	30	
<i>Surr: Toluene-d8</i>	5942	0	5695	0	104	71-123	5679	4.54	30	

The following samples were analyzed in this batch:

1811788-01A	1811788-02A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group
Work Order: 1811788
Project: UP 69-27 Spill

QC BATCH REPORT

Batch ID: **127858** Instrument ID **HG4** Method: **SW7471B**

MBLK				Sample ID: MBLK-127858-127858				Units: mg/Kg			Analysis Date: 11/13/2018 05:40 PM			
Client ID:				Run ID: HG4_181113A				SeqNo: 5384323			Prep Date: 11/13/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Mercury	0.008083	0.020								J				

LCS				Sample ID: LCS-127858-127858				Units: mg/Kg			Analysis Date: 11/13/2018 05:43 PM			
Client ID:				Run ID: HG4_181113A				SeqNo: 5384324			Prep Date: 11/13/2018		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Mercury		0.1932	0.020	0.1665	0	116	80-120	0						

MS				Sample ID: 1811791-03B MS				Units: mg/Kg			Analysis Date: 11/13/2018 06:34 PM			
Client ID:				Run ID: HG4_181113A				SeqNo: 5384345			Prep Date: 11/13/2018		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Mercury		0.1674	0.016	0.1323	0.06596	76.7	75-125	0						

MSD				Sample ID: 1811791-03B MSD				Units: mg/Kg			Analysis Date: 11/13/2018 06:37 PM			
Client ID:				Run ID: HG4_181113A				SeqNo: 5384346			Prep Date: 11/13/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Mercury	0.1631	0.016	0.1325	0.06596	73.3	75-125	0.1674	2.63	35	S				

The following samples were analyzed in this batch:

1811788-01A	1811788-02A	1811788-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group
Work Order: 1811788
Project: UP 69-27 Spill

QC BATCH REPORT

Batch ID: **128067** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK		Sample ID: MBLK-128067-128067				Units: mg/Kg		Analysis Date: 11/15/2018 11:47 PM		
Client ID:		Run ID: ICP2_181115A				SeqNo: 5388375		Prep Date: 11/15/2018		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	0.50								
Chromium	0.03678	0.25								J
Copper	U	0.50								
Lead	U	0.25								
Nickel	U	0.25								
Selenium	U	0.50								
Silver	U	0.25								
Zinc	0.1502	0.50								J

LCS		Sample ID: LCS-128067-128067				Units: mg/Kg		Analysis Date: 11/16/2018 01:57 PM		
Client ID:		Run ID: ICP2_181116A				SeqNo: 5391889		Prep Date: 11/15/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.378	0.24	4.822	0	90.8	80-120	0			
Barium	4.431	0.24	4.822	0	91.9	80-120	0			
Cadmium	4.711	0.48	4.822	0	97.7	80-120	0			
Chromium	5.3	0.24	4.822	0	110	80-120	0			
Copper	4.824	0.48	4.822	0	100	80-120	0			
Lead	4.706	0.24	4.822	0	97.6	80-120	0			
Nickel	4.802	0.24	4.822	0	99.6	80-120	0			
Selenium	4.378	0.48	4.822	0	90.8	80-120	0			
Silver	4.807	0.24	4.822	0	99.7	80-120	0			

MS		Sample ID: 1811977-01AMS				Units: mg/Kg		Analysis Date: 11/16/2018 06:17 PM		
Client ID:		Run ID: ICP2_181116A				SeqNo: 5391981		Prep Date: 11/15/2018		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	17.37	3.7	7.418	10.83	88.1	75-125	0			
Barium	8.457	3.7	7.418	1.635	92	75-125	0			
Cadmium	7.04	7.4	7.418	-0.2872	98.8	75-125	0			J
Copper	8.754	7.4	7.418	3.667	68.6	75-125	0			S
Lead	U	3.7	7.418	-21.54	290	75-125	0			S
Nickel	14.99	3.7	7.418	9.027	80.3	75-125	0			
Selenium	25	7.4	7.418	16.41	116	75-125	0			
Silver	35.61	3.7	7.418	28.97	89.4	75-125	0			

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

Client: Entrada Consulting Group
Work Order: 1811788
Project: UP 69-27 Spill

QC BATCH REPORT

Batch ID: **128067** Instrument ID **ICP2** Method: **SW846 6010C**

MS		Sample ID: 1811977-01AMS				Units: mg/Kg		Analysis Date: 11/21/2018 03:38 PM		
Client ID:		Run ID: ICP2_181121A				SeqNo: 5401298		Prep Date: 11/15/2018		DF: 100
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium	4965	37	7.418	4909	755	75-125	0			SO

MSD		Sample ID: 1811977-01AMSD				Units: mg/Kg		Analysis Date: 11/16/2018 06:23 PM		
Client ID:		Run ID: ICP2_181116A				SeqNo: 5391982		Prep Date: 11/15/2018		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	17.19	3.9	7.776	10.83	81.7	75-125	17.37	1.08	20	
Barium	7.667	3.9	7.776	1.635	77.6	75-125	8.457	9.8	20	
Cadmium	7.076	7.8	7.776	-0.2872	94.7	75-125	7.04	0	20	J
Copper	8.701	7.8	7.776	3.667	64.7	75-125	8.754	0.608	20	S
Lead	U	3.9	7.776	-21.54	277	75-125	-16.02	0	20	S
Nickel	14.46	3.9	7.776	9.027	69.9	75-125	14.99	3.54	20	S
Selenium	24.65	7.8	7.776	16.41	106	75-125	25	1.41	20	
Silver	34.84	3.9	7.776	28.97	75.4	75-125	35.61	2.19	20	

MSD		Sample ID: 1811977-01AMSD				Units: mg/Kg		Analysis Date: 11/21/2018 03:44 PM		
Client ID:		Run ID: ICP2_181121A				SeqNo: 5401300		Prep Date: 11/15/2018		DF: 100
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium	4919	39	7.776	4909	133	75-125	4965	0.924	20	SO

The following samples were analyzed in this batch:

1811788-01A	1811788-02A	1811788-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group
Work Order: 1811788
Project: UP 69-27 Spill

QC BATCH REPORT

Batch ID: **128419** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK				Sample ID: MBLK-128419-128419				Units: mg/Kg			Analysis Date: 11/27/2018 06:20 A			
Client ID:				Run ID: ICP2_181126A				SeqNo: 5404153			Prep Date: 11/26/2018		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Zinc		0.097	0.50								J			

LCS				Sample ID: LCS-128419-128419				Units: mg/Kg			Analysis Date: 11/27/2018 06:26 A			
Client ID:				Run ID: ICP2_181126A				SeqNo: 5404154			Prep Date: 11/26/2018		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Zinc		4.8	0.50	5	0	96	80-120	0						

MS		Sample ID: 18111420-01AMS					Units: mg/Kg		Analysis Date: 11/27/2018 07:17 A		
Client ID:			Run ID: ICP2_181126A			SeqNo: 5404171		Prep Date: 11/26/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Zinc	3548	0.77	7.669	3631	-1080	75-125	0			SEO	

MSD				Sample ID: 18111420-01AMSD				Units: mg/Kg			Analysis Date: 11/27/2018 07:24 A			
Client ID:				Run ID: ICP2_181126A				SeqNo: 5404172			Prep Date: 11/26/2018		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Zinc		3690	0.76	7.634	3631	778	75-125	3548	3.94	20	SEO			

The following samples were analyzed in this batch:

1811788-01A	1811788-02A	1811788-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group
Work Order: 1811788
Project: UP 69-27 Spill

QC BATCH REPORT

Batch ID: **128282** Instrument ID **ICPMS3** Method: **SW6020A**

DUP		Sample ID: 1811786-01BDUP				Units: mg/L		Analysis Date: 11/20/2018 02:27 PM		
Client ID:		Run ID: ICPMS3_181120A				SeqNo: 5396482		Prep Date: 11/20/2018		DF: 20
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	795	10	0	0	0	0-0	742.6	6.82		
Magnesium	1173	4.0	0	0	0	0-0	974.1	18.5		

DUP		Sample ID: 1811786-01BDUP				Units: mg/L		Analysis Date: 11/20/2018 06:37 PM		
Client ID:		Run ID: ICPMS3_181120A				SeqNo: 5397802		Prep Date: 11/20/2018		DF: 200
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	14010	40	0	0	0	0-0	12280	13.2		

The following samples were analyzed in this batch:

1811788-01B 1811788-02B 1811788-03B

Batch ID: **128282** Instrument ID **SAR** Method: **USDA H60 Metho**

DUP		Sample ID: 1811786-01BDUP				Units: none		Analysis Date: 11/20/2018		
Client ID:		Run ID: SAR_181120A				SeqNo: 5395498		Prep Date: 11/20/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	73.87	0.010	0	0	0		69.79	5.68	50	

The following samples were analyzed in this batch:

1811788-01B 1811788-02B 1811788-03B

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

Client: Entrada Consulting Group
Work Order: 1811788
Project: UP 69-27 Spill

QC BATCH REPORT

Batch ID: **128033** Instrument ID **SVMS5** Method: **SW846 8270D**

MBLK		Sample ID: SBLKS1-128033-128033				Units: µg/Kg		Analysis Date: 11/16/2018 06:56 PM		
Client ID:		Run ID: SVMS5_181116A				SeqNo: 5392839		Prep Date: 11/16/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	U	6.7								
Anthracene	U	6.7								
Benzo(a)anthracene	U	6.7								
Benzo(a)pyrene	U	6.7								
Benzo(b)fluoranthene	U	6.7								
Benzo(k)fluoranthene	U	6.7								
Chrysene	U	6.7								
Dibenzo(a,h)anthracene	U	6.7								
Fluoranthene	U	6.7								
Fluorene	U	6.7								
Indeno(1,2,3-cd)pyrene	U	6.7								
Naphthalene	U	6.7								
Pyrene	U	6.7								
Surr: 2-Fluorobiphenyl	2679	0	3333	0	80.4	44-107	0			
Surr: 4-Terphenyl-d14	2527	0	3333	0	75.8	52-123	0			
Surr: Nitrobenzene-d5	2234	0	3333	0	67	41-94	0			

LCS		Sample ID: SLCSS1-128033-128033				Units: µg/Kg		Analysis Date: 11/16/2018 07:19 PM		
Client ID:		Run ID: SVMS5_181116A				SeqNo: 5392849		Prep Date: 11/16/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1079	6.7	1333	0	81	55-101	0			
Anthracene	1051	6.7	1333	0	78.8	67-105	0			
Benzo(a)anthracene	1111	6.7	1333	0	83.4	68-105	0			
Benzo(a)pyrene	1052	6.7	1333	0	78.9	68-110	0			
Benzo(b)fluoranthene	1120	6.7	1333	0	84	65-110	0			
Benzo(k)fluoranthene	1124	6.7	1333	0	84.3	66-113	0			
Chrysene	1087	6.7	1333	0	81.6	68-108	0			
Dibenzo(a,h)anthracene	1104	6.7	1333	0	82.8	62-119	0			
Fluoranthene	1061	6.7	1333	0	79.6	67-106	0			
Fluorene	1124	6.7	1333	0	84.3	59-107	0			
Indeno(1,2,3-cd)pyrene	1024	6.7	1333	0	76.8	56-120	0			
Naphthalene	870	6.7	1333	0	65.3	46-98	0			
Pyrene	1173	6.7	1333	0	88	60-119	0			
Surr: 2-Fluorobiphenyl	2576	0	3333	0	77.3	44-107	0			
Surr: 4-Terphenyl-d14	2799	0	3333	0	84	52-123	0			
Surr: Nitrobenzene-d5	2069	0	3333	0	62.1	41-94	0			

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

Client: Entrada Consulting Group
Work Order: 1811788
Project: UP 69-27 Spill

QC BATCH REPORT

Batch ID: **128033** Instrument ID **SVMS5** Method: **SW846 8270D**

MS				Sample ID: 1811784-02A MS				Units: µg/Kg		Analysis Date: 11/16/2018 08:30 PM	
Client ID:			Run ID: SVMS5_181116A			SeqNo: 5392850		Prep Date: 11/16/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	1055	6.5	1303	0	81	55-101	0				
Anthracene	1002	6.5	1303	0	76.9	67-105	0				
Benzo(a)anthracene	1068	6.5	1303	0	82	68-105	0				
Benzo(a)pyrene	1034	6.5	1303	0	79.4	68-110	0				
Benzo(b)fluoranthene	1125	6.5	1303	0	86.4	65-110	0				
Benzo(k)fluoranthene	1111	6.5	1303	0	85.3	66-113	0				
Chrysene	1001	6.5	1303	0	76.9	68-108	0				
Dibenzo(a,h)anthracene	997.5	6.5	1303	0	76.6	62-119	0				
Fluoranthene	935.6	6.5	1303	0	71.8	67-106	0				
Fluorene	1093	6.5	1303	0	83.9	59-107	0				
Indeno(1,2,3-cd)pyrene	1055	6.5	1303	0	81	56-120	0				
Naphthalene	880.8	6.5	1303	0	67.6	46-98	0				
Pyrene	1056	6.5	1303	0	81.1	60-119	0				
Surr: 2-Fluorobiphenyl	2259	0	3257	0	69.3	44-107	0				
Surr: 4-Terphenyl-d14	2532	0	3257	0	77.7	52-123	0				
Surr: Nitrobenzene-d5	2615	0	3257	0	80.3	41-94	0				

MSD				Sample ID: 1811784-02A MSD				Units: µg/Kg		Analysis Date: 11/16/2018 08:54 PM	
Client ID:			Run ID: SVMS5_181116A			SeqNo: 5392851		Prep Date: 11/16/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	953.8	6.5	1293	0	73.8	55-101	1055	10.1	30		
Anthracene	996.4	6.5	1293	0	77.1	67-105	1002	0.558	30		
Benzo(a)anthracene	1075	6.5	1293	0	83.2	68-105	1068	0.64	30		
Benzo(a)pyrene	1010	6.5	1293	0	78.1	68-110	1034	2.34	30		
Benzo(b)fluoranthene	1117	6.5	1293	0	86.4	65-110	1125	0.695	30		
Benzo(k)fluoranthene	1101	6.5	1293	0	85.2	66-113	1111	0.87	30		
Chrysene	992.6	6.5	1293	0	76.8	68-108	1001	0.883	30		
Dibenzo(a,h)anthracene	1099	6.5	1293	0	85	62-119	997.5	9.71	30		
Fluoranthene	1028	6.5	1293	0	79.5	67-106	935.6	9.43	30		
Fluorene	1031	6.5	1293	0	79.7	59-107	1093	5.83	30		
Indeno(1,2,3-cd)pyrene	1173	6.5	1293	0	90.7	56-120	1055	10.5	30		
Naphthalene	830.9	6.5	1293	0	64.3	46-98	880.8	5.83	30		
Pyrene	1173	6.5	1293	0	90.7	60-119	1056	10.5	30		
Surr: 2-Fluorobiphenyl	2376	0	3233	0	73.5	44-107	2259	5.05	40		
Surr: 4-Terphenyl-d14	2689	0	3233	0	83.2	52-123	2532	6.01	40		
Surr: Nitrobenzene-d5	2339	0	3233	0	72.4	41-94	2615	11.1	40		

The following samples were analyzed in this batch:

1811788-01A 1811788-02A

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

Client: Entrada Consulting Group
Work Order: 1811788
Project: UP 69-27 Spill

QC BATCH REPORT

Batch ID: **127948** Instrument ID **VMS11** Method: **SW8260C**

MBLK Sample ID: MBLK-127948-127948				Units: µg/Kg-dry			Analysis Date: 11/15/2018 03:16 A			
Client ID:		Run ID: VMS11_181114B		SeqNo: 5390657		Prep Date: 11/14/2018		DF: 1		
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	905	0	1000	0	90.5	70-130	0			
Surr: 4-Bromofluorobenzene	978	0	1000	0	97.8	70-130	0			
Surr: Dibromofluoromethane	821.5	0	1000	0	82.2	70-130	0			
Surr: Toluene-d8	971.5	0	1000	0	97.2	70-130	0			

MBLK Sample ID: MBLK-127948-127948				Units: µg/Kg-dry			Analysis Date: 11/17/2018 05:02 A			
Client ID:		Run ID: VMS9_181116C		SeqNo: 5391843		Prep Date: 11/14/2018		DF: 1		
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	1048	0	1000	0	105	70-130	0			
Surr: 4-Bromofluorobenzene	974.5	0	1000	0	97.4	70-130	0			
Surr: Dibromofluoromethane	903	0	1000	0	90.3	70-130	0			
Surr: Toluene-d8	980	0	1000	0	98	70-130	0			

LCS Sample ID: LCS-127948-127948				Units: µg/Kg-dry			Analysis Date: 11/15/2018 02:10 A			
Client ID:		Run ID: VMS11_181114B		SeqNo: 5390656		Prep Date: 11/14/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1122	30	1000	0	112	75-125	0			
Ethylbenzene	1112	30	1000	0	111	75-125	0			
m,p-Xylene	2189	60	2000	0	109	80-125	0			
o-Xylene	1094	30	1000	0	109	75-125	0			
Toluene	1080	30	1000	0	108	70-125	0			
Xylenes, Total	3282	90	3000	0	109	75-125	0			
Surr: 1,2-Dichloroethane-d4	997	0	1000	0	99.7	70-130	0			
Surr: 4-Bromofluorobenzene	972	0	1000	0	97.2	70-130	0			
Surr: Dibromofluoromethane	1064	0	1000	0	106	70-130	0			
Surr: Toluene-d8	957	0	1000	0	95.7	70-130	0			

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

Client: Entrada Consulting Group
Work Order: 1811788
Project: UP 69-27 Spill

QC BATCH REPORT

Batch ID: **127948** Instrument ID **VMS11** Method: **SW8260C**

LCS					Sample ID: LCS-127948-127948			Units: µg/Kg-dry		Analysis Date: 11/17/2018 04:17 A	
Client ID:			Run ID: VMS9_181116C			SeqNo: 5391842		Prep Date: 11/14/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1072	30	1000	0	107	75-125	0				
Ethylbenzene	986.5	30	1000	0	98.6	75-125	0				
m,p-Xylene	1960	60	2000	0	98	80-125	0				
o-Xylene	1026	30	1000	0	103	75-125	0				
Toluene	998.5	30	1000	0	99.8	70-125	0				
Xylenes, Total	2986	90	3000	0	99.5	75-125	0				
Surr: 1,2-Dichloroethane-d4	1020	0	1000	0	102	70-130	0				
Surr: 4-Bromofluorobenzene	1043	0	1000	0	104	70-130	0				
Surr: Dibromofluoromethane	1012	0	1000	0	101	70-130	0				
Surr: Toluene-d8	989.5	0	1000	0	99	70-130	0				

MS				Sample ID: 1811788-01A MS			Units: µg/Kg-dry		Analysis Date: 11/17/2018 10:17 A		
Client ID: UP6927-SS1			Run ID: VMS9_181116C			SeqNo: 5391864		Prep Date: 11/14/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1170	34	1139	0	103	75-125	0				
Ethylbenzene	1011	34	1139	0	88.8	75-125	0				
m,p-Xylene	2067	68	2278	0	90.8	80-125	0				
o-Xylene	1037	34	1139	0	91	75-125	0				
Toluene	1022	34	1139	0	89.7	70-125	0				
Xylenes, Total	3104	100	3417	0	90.8	75-125	0				
Surr: 1,2-Dichloroethane-d4	1207	0	1139	0	106	70-130	0				
Surr: 4-Bromofluorobenzene	1117	0	1139	0	98.1	70-130	0				
Surr: Dibromofluoromethane	1035	0	1139	0	90.8	70-130	0				
Surr: Toluene-d8	1109	0	1139	0	97.4	70-130	0				

MSD					Sample ID: 1811788-01A MSD		Units: µg/Kg-dry		Analysis Date: 11/17/2018 10:32 A		
Client ID: UP6927-SS1			Run ID: VMS9_181116C			SeqNo: 5391865		Prep Date: 11/14/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	1138	34	1139	0	99.9	75-125	1170	2.81	30		
Ethylbenzene	1026	34	1139	0	90	75-125	1011	1.4	30		
m,p-Xylene	2082	68	2278	0	91.4	80-125	2067	0.686	30		
o-Xylene	1040	34	1139	0	91.3	75-125	1037	0.329	30		
Toluene	1037	34	1139	0	91	70-125	1022	1.49	30		
Xylenes, Total	3122	100	3417	0	91.4	75-125	3104	0.567	30		
Surr: 1,2-Dichloroethane-d4	1186	0	1139	0	104	70-130	1207	1.81	30		
Surr: 4-Bromofluorobenzene	1130	0	1139	0	99.2	70-130	1117	1.12	30		
Surr: Dibromofluoromethane	1082	0	1139	0	95	70-130	1035	4.41	30		
Surr: Toluene-d8	1100	0	1139	0	96.6	70-130	1109	0.825	30		

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

Client: Entrada Consulting Group
Work Order: 1811788
Project: UP 69-27 Spill

QC BATCH REPORT

Batch ID: **127948** Instrument ID **VMS11** Method: **SW8260C**

The following samples were analyzed in this batch:

1811788-01A	1811788-02A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group
Work Order: 1811788
Project: UP 69-27 Spill

QC BATCH REPORT

Batch ID: **127909** Instrument ID **WETCHEM** Method: **SW9045D**

LCS		Sample ID: LCS-127909-127909				Units: s.u.		Analysis Date: 11/13/2018 04:40 PM			
Client ID:		Run ID: WETCHEM_181113K		SeqNo: 5383402		Prep Date: 11/13/2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

pH	3.94	0.10	4	0	98.5	90-110	0				
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DUP		Sample ID: 1811459-05A DUP				Units: s.u.		Analysis Date: 11/13/2018 04:40 PM			
Client ID:		Run ID: WETCHEM_181113K		SeqNo: 5383404		Prep Date: 11/13/2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

pH	8.55	0.10	0	0	0	0-0	8.51	0.469	20	H	
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DUP		Sample ID: 1811786-03A DUP				Units: s.u.		Analysis Date: 11/13/2018 04:40 PM			
Client ID:		Run ID: WETCHEM_181113K		SeqNo: 5383417		Prep Date: 11/13/2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

pH	8.57	0.10	0	0	0	0-0	8.59	0.233	20		
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The following samples were analyzed in this batch:

1811788-01A	1811788-02A	1811788-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group
Work Order: 1811788
Project: UP 69-27 Spill

QC BATCH REPORT

Batch ID: **128282** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

DUP		Sample ID: 1811786-01BDUP				Units: mmhos/cm @25°		Analysis Date: 11/21/2018 12:45 A		
Client ID:		Run ID: WETCHEM_181121G				SeqNo: 5398488		Prep Date: 11/20/2018		DF: 20
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	61.4	0.10	0	0	0		61	0.654	50	

The following samples were analyzed in this batch:

1811788-01B	1811788-02B	1811788-03B
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group
Work Order: 1811788
Project: UP 69-27 Spill

QC BATCH REPORT

Batch ID: **128657** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-128657-128657				Units: mg/Kg		Analysis Date: 11/29/2018 04:00 PM		
Client ID:		Run ID: WETCHEM_181129P				SeqNo: 5409947		Prep Date: 11/28/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent U 1.0

LCS		Sample ID: LCS-128657-128657				Units: mg/Kg		Analysis Date: 11/29/2018 04:00 PM		
Client ID:		Run ID: WETCHEM_181129P				SeqNo: 5409948		Prep Date: 11/28/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4.36 1.0 5 0 87.2 80-120 0

MS		Sample ID: 1811788-01A MS				Units: mg/Kg		Analysis Date: 11/29/2018 04:00 PM		
Client ID: UP6927-SS1		Run ID: WETCHEM_181129P				SeqNo: 5409951		Prep Date: 11/28/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent U 1.0 5 0.1942 -3.88 75-125 0 S

MS		Sample ID: 1811788-01A MSI				Units: mg/Kg		Analysis Date: 11/29/2018 04:00 PM		
Client ID: UP6927-SS1		Run ID: WETCHEM_181129P				SeqNo: 5409953		Prep Date: 11/28/2018		DF: 100
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 2324 100 2414 0.1942 96.3 75-125 0

MS		Sample ID: 1811792-01A MS				Units: mg/Kg		Analysis Date: 11/29/2018 04:00 PM		
Client ID:		Run ID: WETCHEM_181129P				SeqNo: 5409958		Prep Date: 11/28/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 0.85 1.0 5 0.202 13 75-125 0 JS

MS		Sample ID: 1811792-01A MSI				Units: mg/Kg		Analysis Date: 11/29/2018 04:00 PM		
Client ID:		Run ID: WETCHEM_181129P				SeqNo: 5409960		Prep Date: 11/28/2018		DF: 100
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1677 100 1902 0.202 88.2 75-125 0

MSD		Sample ID: 1811788-01A MSD				Units: mg/Kg		Analysis Date: 11/29/2018 04:00 PM		
Client ID: UP6927-SS1		Run ID: WETCHEM_181129P				SeqNo: 5409952		Prep Date: 11/28/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 2.745 0.98 4.902 0.1942 52 75-125 0.2 173 20 SR

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

Client: Entrada Consulting Group
Work Order: 1811788
Project: UP 69-27 Spill

QC BATCH REPORT

Batch ID: 128657 Instrument ID WETCHEM Method: SW7196A

MSD		Sample ID: 1811792-01A MSD				Units: mg/Kg		Analysis Date: 11/29/2018 04:00 PM			
Client ID:		Run ID: WETCHEM_181129P				SeqNo: 5409959		Prep Date: 11/28/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chromium, Hexavalent	1.63	1.0	5	0.202	28.6	75-125	0.85	62.9	20	SR	

The following samples were analyzed in this batch:

1811788-01A	1811788-02A	1811788-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group
Work Order: 1811788
Project: UP 69-27 Spill

QC BATCH REPORT

Batch ID: **R249828** Instrument ID **MOIST** Method: **SW3550C**

MBLK		Sample ID: WBLKS-R249828					Units: % of sample		Analysis Date: 11/21/2018 08:28 A		
Client ID:			Run ID: MOIST_181121B			SeqNo: 5399411		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Moisture 0.1 0.050

LCS		Sample ID: LCS-R249828				Units: % of sample		Analysis Date: 11/21/2018 08:28 A		
Client ID:		Run ID: MOIST_181121B				SeqNo: 5399406		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 100 0.050 100 0 100 99.5-100.5 0 B

DUP				Sample ID: 1811592-06A DUP				Units: % of sample			Analysis Date: 11/21/2018 08:28 A			
Client ID:				Run ID: MOIST_181121B				SeqNo: 5399367			Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				

Moisture 12.68 0.050 0 0 0 0-0 11.63 8.64 10 B

DUP				Sample ID: 1811592-24A DUP				Units: % of sample			Analysis Date: 11/21/2018 08:28 A			
Client ID:				Run ID: MOIST_181121B				SeqNo: 5399389			Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				

Moisture 19.22 0.050 0 0 0 0-0 18.93 1.52 10 B

The following samples were analyzed in this batch:

1811788-01A

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

Client: Entrada Consulting Group
Work Order: 1811788
Project: UP 69-27 Spill

QC BATCH REPORT

Batch ID: **R249870** Instrument ID **MOIST** Method: **SW3550C**

MBLK		Sample ID: WBLKS-R249870				Units: % of sample		Analysis Date: 11/21/2018 10:28 A		
Client ID:		Run ID: MOIST_181121C				SeqNo: 5400253		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture U 0.050

LCS		Sample ID: LCS-R249870				Units: % of sample		Analysis Date: 11/21/2018 10:28 A		
Client ID:		Run ID: MOIST_181121C				SeqNo: 5400252		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 99.98 0.050 100 0 100 99.5-100.5 0

DUP		Sample ID: 1811969-01B DUP				Units: % of sample		Analysis Date: 11/21/2018 10:28 A		
Client ID:		Run ID: MOIST_181121C				SeqNo: 5400249		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 31.54 0.050 0 0 0 0-0 31.91 1.17 10

DUP		Sample ID: 1811971-01B DUP				Units: % of sample		Analysis Date: 11/21/2018 10:28 A		
Client ID:		Run ID: MOIST_181121C				SeqNo: 5400251		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 17.79 0.050 0 0 0 0-0 17.95 0.895 10

The following samples were analyzed in this batch:

1811788-02A 1811788-03A

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

Page 1 of 1

COC ID: 123456

- | | | |
|--|--|--|
| ☐ Cincinnati, OH
+1 513 733 5336 | ☒ Holland, MI
+1 616 399 6070 | ☐ Salt Lake City, UT
+1 801 266 7700 |
| ☐ Everett, WA
+1 425 356 2600 | ☐ Houston, TX
+1 281 530 5656 | ☐ Spring City, PA
+1 610 948 4903 |
| ☐ Fort Collins, CO
+1 970 490 1511 | ☐ Middletown, PA
+1 717 944 3541 | ☐ York, PA
+1 717 505 5280 |

ALS Project Manager:

Work Order #:

1811788

ALS Project Manager:							Work Order #:		1811788										
Customer Information			Project Information				Parameter/Method Request for Analysis												
Purchase Order			Project Name	UP 69-27 Spill			A	TPH (GRO & DRO)											
Work Order			Project Number				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 Unit C		Address	330 Grand Ave Unit C			E	Sodium Adsorption Ratio											
							F	pH											
City/State/Zip	Grand Junction, CO 81501		City/State/Zip	Grand Junction, CO 81501			G	Metals (See Attached List) CO Table 910											
Phone	970.270.2986		Phone	970.270.2986			H	Arsenic Only											
Fax			Fax				I												
e-Mail Address	tdobransky@entradainc.com		e-Mail Address	tdobransky@entradainc.com			J												
No.	Sample Description		Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold	
1	UP6927-SS1		11/08/18	1120	Soil	8	2	X	X	X	X	X	X	X					
2	UP6927-SS2		11/08/18	1130	Soil	8	2	X	X	X	X	X	X	X					
3	UP6927-BG1		11/08/18	1135	Soil	8	2				X	X	X	X					
4																			
5																			
6																			
7																			
8																			
9																			
10																			
Sampler(s): Please Print & Sign Dobransky			Shipment Method: FedEx		Required Turnaround Time: ☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other _____				Results Due Date:										
Relinquished by:		Date: 11/9/18	Time:	Received by:			Notes: Chevron Pricing Applies - Per Bruce Schlatter												
Relinquished by:		Date: 11-9-18	Time: 1830	Received by (Laboratory):			Cooler Temp. 4.8°	QC Package: (Check Box Below)											
Logged by (Laboratory):		Date: 11/12/18	Time: 1045	Checked by (Laboratory):				☒ Level II: Standard QC											
								☐ Level III: Std QC + Raw Data											
							☐ 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: **10-Nov-18 10:00**

Work Order: **1811788**

Received by: **KRW**

Checklist completed by Keith Wurenga
eSignature

12-Nov-18
Date

Reviewed by: Chad Whelton
eSignature

12-Nov-18
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):	<u>4.8/4.8 C</u>		<u>SR2</u>
Cooler(s)/Kit(s):	<u></u>		
Date/Time sample(s) sent to storage:	<u>11/12/2018 10:47:19 AM</u>		
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:	<u>-</u>		

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: