

Legend

● Origin ● Soil Sample Location — Spill Path ▨ Spill Areas

0 250 500
Ft

1 inch = 250 ft


Project No: 018-065	MB Larson C 3-25 Spill Response Chevron USA, Inc. Rio Blanco County, Colorado SW/4 SW/4 Sec 25 T2S R102W NE/4 NE/4 Sec 35 T2S R102W	 <div>330 Grand Avenue, Unit C Grand Junction, CO 81501 970-549-1015</div>	Figure
Map By: NDB			1
Date: 7/12/2019			

Table 1
MB Larson C3-25 Spill
Soil Data Summary

SAMPLE SUMMARY	
Location Description	MB Larson C3-25 Spill
Sample Type	Soil

LABORATORY DATA SUMMARY							
Sample ID	MBLAR325-SS1	MBLAR325-SS2	MBLAR325-SS3	MBLAR325-SS4	MBLC325-BG1	COGCC TABLE 910-1 CONCENTRATION LEVELS	UNITS
Depth	0-6"	0-6"	0-6"	0-6"	0-6"		
Sample Date	6/17/2019	6/17/2019	6/17/2019	6/17/2019	10/25/2018		
Analytical Parameters							
SAR Metals Analysis							
Calcium	680	930	910	200	750	NA	mg/L
Magnesium	59	80	72	27	13	NA	mg/L
Sodium	2400	690	250	380	5.8	NA	mg/L
Sodium Adsorption Ratio	24	5.8	2.1	6.8	0.057	<12	ratio
General Chemistry							
Specific Conductivity	17	8.4	6.9	3.0	4.9	<4 or 2 x the background	mmhos/cm
pH	7.91	7.68	7.87	8.64	7.63	6-9	su

mg/kg - milligrams per kilogram
mg/L - milligrams per liter
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



30-Jun-2019

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

Re: **MB Larson 3-25 Spill**

Work Order: **19061291**

Dear Tim,

ALS Environmental received 4 samples on 19-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 12.

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

RIGHT SOLUTIONS RIGHT PARTNER

Client: Entrada Consulting Group
Project: MB Larson 3-25 Spill
Work Order: 19061291

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>
19061291-01	MBLAR325-SS1	Soil		6/17/2019 11:10	6/19/2019 09:30	<input type="checkbox"/>
19061291-02	MBLAR325-SS2	Soil		6/17/2019 11:20	6/19/2019 09:30	<input type="checkbox"/>
19061291-03	MBLAR325-SS3	Soil		6/17/2019 11:30	6/19/2019 09:30	<input type="checkbox"/>
19061291-04	MBLAR325-SS4	Soil		6/17/2019 11:40	6/19/2019 09:30	<input type="checkbox"/>

<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>
°C	Degrees Celcius
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-Jun-19

Client: Entrada Consulting Group
Project: MB Larson 3-25 Spill
Sample ID: MBLAR325-SS1
Collection Date: 6/17/2019 11:10 AM

Work Order: 19061291
Lab ID: 19061291-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
SOLUBLE CATIONS FOR SAR							
			Method: SW6020A		Prep: USDA Method 20B / 6/27/19		Analyst: ABL
Calcium	680		0.86	5.0	mg/L	10	6/27/2019 17:40
Magnesium	59		0.068	2.0	mg/L	10	6/27/2019 17:40
Sodium	2,400		3.4	20	mg/L	100	6/28/2019 13:28
SODIUM ADSORPTION RATIO							
			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 6/27/19		Analyst: STP
Sodium Adsorption Ratio	24		0.010	0.010	none	1	6/27/2019
ELECTRICAL CONDUCTIVITY (SAR)							
			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 6/27/19		Analyst: JB
Electrical Conductivity @ Saturation	17		0.011	0.10	mmhos/cm @25°	20	6/28/2019 15:15
PH							
			Method: SW9045D		Prep: EXTRACT / 6/20/19		Analyst: DNW
pH	7.91		0.10	0.100	s.u.	1	6/18/2019 14:45
Temperature	22.7		0.10	0.100	°C	1	6/18/2019 14:45

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

ALS Group, USA

Date: 30-Jun-19

Client: Entrada Consulting Group
Project: MB Larson 3-25 Spill
Sample ID: MBLAR325-SS2
Collection Date: 6/17/2019 11:20 AM

Work Order: 19061291
Lab ID: 19061291-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<hr/>							
SOLUBLE CATIONS FOR SAR			Method: SW6020A		Prep: USDA Method 20B / 6/27/19		Analyst: ABL
Calcium	930		0.86	5.0	mg/L	10	6/27/2019 17:43
Magnesium	80		0.068	2.0	mg/L	10	6/27/2019 17:43
Sodium	690		0.34	2.0	mg/L	10	6/27/2019 17:43
SODIUM ADSORPTION RATIO			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 6/27/19		Analyst: STP
Sodium Adsorption Ratio	5.8		0.010	0.010	none	1	6/27/2019
ELECTRICAL CONDUCTIVITY (SAR)			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 6/27/19		Analyst: JB
Electrical Conductivity @ Saturation	8.4		0.011	0.10	mmhos/cm @25°	20	6/28/2019 15:15
PH			Method: SW9045D		Prep: EXTRACT / 6/20/19		Analyst: DNW
pH	7.68		0.10	0.100	s.u.	1	6/18/2019 14:45
Temperature	22.7		0.10	0.100	°C	1	6/18/2019 14:45

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

ALS Group, USA**Date:** 30-Jun-19

Client: Entrada Consulting Group
Project: MB Larson 3-25 Spill
Sample ID: MBLAR325-SS3
Collection Date: 6/17/2019 11:30 AM

Work Order: 19061291
Lab ID: 19061291-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<hr/>							
SOLUBLE CATIONS FOR SAR			Method: SW6020A		Prep: USDA Method 20B / 6/27/19		Analyst: ABL
Calcium	910		0.86	5.0	mg/L	10	6/27/2019 17:45
Magnesium	72		0.068	2.0	mg/L	10	6/27/2019 17:45
Sodium	250		0.34	2.0	mg/L	10	6/27/2019 17:45
SODIUM ADSORPTION RATIO			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 6/27/19		Analyst: STP
Sodium Adsorption Ratio	2.1		0.010	0.010	none	1	6/27/2019
ELECTRICAL CONDUCTIVITY (SAR)			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 6/27/19		Analyst: JB
Electrical Conductivity @ Saturation	6.9		0.011	0.10	mmhos/cm @25°	20	6/28/2019 15:15
PH			Method: SW9045D		Prep: EXTRACT / 6/20/19		Analyst: DNW
pH	7.87		0.10	0.100	s.u.	1	6/18/2019 14:45
Temperature	22.4		0.10	0.100	°C	1	6/18/2019 14:45

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

ALS Group, USA**Date:** 30-Jun-19

Client: Entrada Consulting Group
Project: MB Larson 3-25 Spill
Sample ID: MBLAR325-SS4
Collection Date: 6/17/2019 11:40 AM

Work Order: 19061291
Lab ID: 19061291-04
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<hr/>							
SOLUBLE CATIONS FOR SAR			Method: SW6020A		Prep: USDA Method 20B / 6/27/19		Analyst: ABL
Calcium	200		0.86	5.0	mg/L	10	6/27/2019 17:50
Magnesium	27		0.068	2.0	mg/L	10	6/27/2019 17:50
Sodium	380		0.34	2.0	mg/L	10	6/27/2019 17:50
SODIUM ADSORPTION RATIO			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 6/27/19		Analyst: STP
Sodium Adsorption Ratio	6.8		0.010	0.010	none	1	6/27/2019
ELECTRICAL CONDUCTIVITY (SAR)			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 6/27/19		Analyst: JB
Electrical Conductivity @ Saturation	3.0		0.011	0.10	mmhos/cm @25°	20	6/28/2019 15:15
PH			Method: SW9045D		Prep: EXTRACT / 6/20/19		Analyst: DNW
pH	8.64		0.10	0.100	s.u.	1	6/18/2019 14:45
Temperature	22.5		0.10	0.100	°C	1	6/18/2019 14:45

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

Client: Entrada Consulting Group
Work Order: 19061291
Project: MB Larson 3-25 Spill

QC BATCH REPORT

Batch ID: **138379** Instrument ID **ICPMS3** Method: **SW6020A**

DUP		Sample ID: 19061291-01ADUP				Units: mg/L		Analysis Date: 6/27/2019 05:41 PM		
Client ID: MBLAR325-SS1		Run ID: ICPMS3_190627A				SeqNo: 5747616		Prep Date: 6/27/2019		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	628	5.0	0	0	0	0-0	675.4	7.27		
Magnesium	48.93	2.0	0	0	0	0-0	58.67	18.1		

DUP		Sample ID: 19061291-01ADUP				Units: mg/L		Analysis Date: 6/28/2019 01:30 PM		
Client ID: MBLAR325-SS1		Run ID: ICPMS3_190628A				SeqNo: 5749265		Prep Date: 6/27/2019		DF: 100
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	1936	20	0	0	0	0-0	2422	22.3		

The following samples were analyzed in this batch:

19061291-01A	19061291-02A	19061291-03A
19061291-04A		

Batch ID: **138379** Instrument ID **SAR** Method: **USDA H60 Metho**

DUP		Sample ID: 19061291-01ADUP				Units: none		Analysis Date: 6/27/2019		
Client ID: MBLAR325-SS1		Run ID: SAR_190627A				SeqNo: 5746419		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
Sodium Adsorption Ratio	20.03	0.010	0	0	0		24	18.1	50	

The following samples were analyzed in this batch:

19061291-01A	19061291-02A	19061291-03A
19061291-04A		

Client: Entrada Consulting Group
Work Order: 19061291
Project: MB Larson 3-25 Spill

QC BATCH REPORT

Batch ID: **137922** Instrument ID **WETCHEM** Method: **SW9045D**

DUP		Sample ID: 19061253-01A DUP				Units: s.u.		Analysis Date: 6/18/2019 02:45 PM		
Client ID:		Run ID: WETCHEM_190620W				SeqNo: 5729396		Prep Date: 6/20/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.9	0.10	0	0	0	0-0	7.87	0.38	20	
Temperature	22.5	0.10	0	0	0		22.6	0.443		

DUP		Sample ID: 19061291-02A DUP				Units: s.u.		Analysis Date: 6/18/2019 02:45 PM		
Client ID: MBLAR325-SS2		Run ID: WETCHEM_190620W				SeqNo: 5729400		Prep Date: 6/20/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.77	0.10	0	0	0	0-0	7.68	1.17	20	
Temperature	22.7	0.10	0	0	0		22.7	0		

The following samples were analyzed in this batch:

19061291-01A	19061291-02A	19061291-03A
19061291-04A		

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

Client: Entrada Consulting Group
Work Order: 19061291
Project: MB Larson 3-25 Spill

QC BATCH REPORT

Batch ID: **138379** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

DUP		Sample ID: 19061291-01A DUP				Units: mmhos/cm @25°		Analysis Date: 6/28/2019 03:15 PM		
Client ID: MBLAR325-SS1		Run ID: WETCHEM_190628N				SeqNo: 5750154		Prep Date: 6/27/2019		DF: 20
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	17.38	0.10	0	0	0		17	2.21	50	

The following samples were analyzed in this batch:

19061291-01A	19061291-02A	19061291-03A
19061291-04A		

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



Chain of Custody Form

Page 1 of 1

COC ID: 123456

- | | | |
|--|--|--|
| <input type="checkbox"/> Cincinnati, OH
+1 513 733 5336 | <input checked="" type="checkbox"/> Holland, MI
+1 616 399 6070 | <input type="checkbox"/> Salt Lake City, UT
+1 801 266 7700 |
| <input type="checkbox"/> Everett, WA
+1 425 356 2600 | <input type="checkbox"/> Houston, TX
+1 281 530 5656 | <input type="checkbox"/> Spring City, PA
+1 610 948 4903 |
| <input type="checkbox"/> Fort Collins, CO
+1 970 490 1511 | <input type="checkbox"/> Middletown, PA
+1 717 944 5541 | <input type="checkbox"/> York, PA
+1 717 505 5280 |

ALS Project Manager:				Work Order #: 19061291															
Customer Information				Project Information				Parameter/Method Request for Analysis											
Purchase Order				Project Name: MB Larson 3-25 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	MBLAR325-SS1	06/17/19	1110	Soil	8	1				X	X	X							
2	MBLAR325-SS2	06/17/19	1120	Soil	8	1				X	X	X							
3	MBLAR325-SS3	06/17/19	1130	Soil	8	1				X	X	X							
4	MBLAR325-SS4	06/17/19	1140	Soil	8	1				X	X	X							
5																			
6																			
7																			
8																			
9																			
10																			

Sampler(s): Please Print & Sign Tim Dobransky				Shipment Method: FedEx		Required Turnaround Time: <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				Results Due Date:			
Relinquished by: [Signature]		Date: 6/17/19		Time:		Received by: [Signature]		Notes: Chevron Pricing Applies - Per Bruce Schlatter				QC Package: (Check Box Below)	
Relinquished by: [Signature]		Date: 6-18-19		Time: 1830		Received by (Laboratory): [Signature]		Cooler Temp.		<input checked="" type="checkbox"/> Level II: Standard QC			
Logged by (Laboratory): [Signature]		Date: 6/19/19		Time: 1500		Checked by (Laboratory): [Signature]		SP2 3.8e		<input type="checkbox"/> Level III: Std QC + Raw Data			
Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035										<input type="checkbox"/> Level IV: SW846 CLP-Like			
										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: **19-Jun-19 09:30**

Work Order: **19061291**

Received by: **DS**

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

Reviewed by: Chad Whelton 19-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>3.8/3.8 c</u>		<u>SR2</u>
Cooler(s)/Kit(s):	<u></u>		
Date/Time sample(s) sent to storage:	<u>6/19/2019 2:59:11 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:



14-Nov-2018

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

Re: **MB Larson C 3-25 Spill**

Work Order: **18101898**

Dear Tim,

ALS Environmental received 4 samples on 27-Oct-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 27.

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

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

Environmental 

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RIGHT SOLUTIONS RIGHT PARTNER

Client: Entrada Consulting Group
Project: MB Larson C 3-25 Spill
Work Order: 18101898

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>
18101898-01	MBLC325-SS1	Soil		10/25/2018 08:45	10/27/2018 10:00	<input type="checkbox"/>
18101898-02	MBLC325-SS2	Soil		10/25/2018 08:55	10/27/2018 10:00	<input type="checkbox"/>
18101898-03	MBLC325-SS3	Soil		10/25/2018 09:05	10/27/2018 10:00	<input type="checkbox"/>
18101898-04	MBLC325-BG1	Soil		10/25/2018 09:15	10/27/2018 10:00	<input type="checkbox"/>

Client: Entrada Consulting Group
Project: MB Larson C 3-25 Spill
Work Order: 18101898

Case Narrative

Batch 127577, Method SVO_8270_S, Samples 18101898-01A and -02A: The PAHs reporting limits are elevated due to dilution needed to eliminate matrix-related interference.

Batch 127590, Method ICP_6010_S, Sample 18101898-04A 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 127590, Method ICP_6010_S, Sample 18101898-04A 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 127690, Method CR6_7196_S, Sample 18101898-04A MS/MSD: The MS/MSD recovery was below the lower control limit for Hexavalent Chromium. The corresponding result in the parent sample may be biased low.

<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: 14-Nov-18

Client: Entrada Consulting Group
Project: MB Larson C 3-25 Spill
Sample ID: MBLC325-SS1
Collection Date: 10/25/2018 08:45 AM

Work Order: 18101898
Lab ID: 18101898-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID							
			Method: SW8015M		Prep: SW3546 / 11/8/18		Analyst: RP
DRO (C10-C28)	28		3.3	5.8	mg/Kg-dry	1	11/9/2018 22:07
Surr: 4-Terphenyl-d14	83.1			33-111	%REC	1	11/9/2018 22:07
GASOLINE RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW5035 / 10/31/18		Analyst: RP
GRO (C6-C10)	U		2.8	6.6	mg/Kg	1	11/1/2018 23:17
Surr: Toluene-d8	104			71-123	%REC	1	11/1/2018 23:17
MERCURY BY CVAA							
			Method: SW7471B		Prep: SW7471 / 10/30/18		Analyst: RSB
Mercury	0.14		0.0022	0.022	mg/Kg-dry	1	10/31/2018 14:03
METALS ANALYSIS BY ICP							
			Method: SW846 6010C		Prep: SW3050B / 11/7/18		Analyst: ABL
Arsenic	6.7		0.12	0.45	mg/Kg-dry	1	11/8/2018 05:39
Barium	440		0.18	0.45	mg/Kg-dry	1	11/8/2018 05:39
Cadmium	0.22	J	0.044	0.91	mg/Kg-dry	1	11/8/2018 05:39
Chromium	10		0.025	0.45	mg/Kg-dry	1	11/8/2018 18:13
Copper	16		0.20	0.91	mg/Kg-dry	1	11/8/2018 05:39
Lead	24		0.096	0.45	mg/Kg-dry	1	11/8/2018 05:39
Nickel	16		0.18	0.45	mg/Kg-dry	1	11/8/2018 05:39
Selenium	1.0		0.25	0.91	mg/Kg-dry	1	11/8/2018 05:39
Silver	U		0.056	0.45	mg/Kg-dry	1	11/8/2018 05:39
Zinc	80		0.073	0.91	mg/Kg-dry	1	11/8/2018 05:39
SOLUBLE CATIONS FOR SAR							
			Method: SW6020A		Prep: USDA Method 20B / 11/7/18		Analyst: STP
Calcium	630		0.86	5.0	mg/L	10	11/7/2018 18:30
Magnesium	74		0.068	2.0	mg/L	10	11/7/2018 18:30
Sodium	660		0.34	2.0	mg/L	10	11/7/2018 18:30
SODIUM ADSORPTION RATIO							
			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 11/7/18		Analyst: STP
Sodium Adsorption Ratio	6.6		0.010	0.010	none	1	11/7/2018
SEMI-VOLATILE ORGANIC COMPOUNDS							
			Method: SW846 8270D		Prep: SW3546 / 11/8/18		Analyst: KAW
Acenaphthene	U		0.027	0.038	mg/Kg-dry	5	11/9/2018 23:42
Anthracene	U		0.027	0.038	mg/Kg-dry	5	11/9/2018 23:42
Benzo(a)anthracene	U		0.033	0.038	mg/Kg-dry	5	11/9/2018 23:42
Benzo(a)pyrene	U		0.023	0.038	mg/Kg-dry	5	11/9/2018 23:42
Benzo(b)fluoranthene	U		0.028	0.038	mg/Kg-dry	5	11/9/2018 23:42
Benzo(k)fluoranthene	U		0.029	0.038	mg/Kg-dry	5	11/9/2018 23:42
Chrysene	U		0.031	0.038	mg/Kg-dry	5	11/9/2018 23:42
Dibenzo(a,h)anthracene	U		0.020	0.038	mg/Kg-dry	5	11/9/2018 23:42
Fluoranthene	U		0.018	0.038	mg/Kg-dry	5	11/9/2018 23:42

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

ALS Group, USA

Date: 14-Nov-18

Client: Entrada Consulting Group
Project: MB Larson C 3-25 Spill
Sample ID: MBLC325-SS1
Collection Date: 10/25/2018 08:45 AM

Work Order: 18101898
Lab ID: 18101898-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	U		0.028	0.038	mg/Kg-dry	5	11/9/2018 23:42
Indeno(1,2,3-cd)pyrene	U		0.026	0.038	mg/Kg-dry	5	11/9/2018 23:42
Naphthalene	U		0.024	0.038	mg/Kg-dry	5	11/9/2018 23:42
Pyrene	U		0.0069	0.038	mg/Kg-dry	5	11/9/2018 23:42
Surr: 2-Fluorobiphenyl	65.2			44-107	%REC	5	11/9/2018 23:42
Surr: 4-Terphenyl-d14	59.5			52-123	%REC	5	11/9/2018 23:42
Surr: Nitrobenzene-d5	54.0			41-94	%REC	5	11/9/2018 23:42
VOLATILE ORGANIC COMPOUNDS			Method: SW8260C		Prep: SW5035 / 10/31/18		Analyst: PM
Benzene	U		0.0068	0.040	mg/Kg	1	11/7/2018 15:45
Ethylbenzene	U		0.0084	0.040	mg/Kg	1	11/7/2018 15:45
m,p-Xylene	0.034	J	0.019	0.080	mg/Kg	1	11/7/2018 15:45
o-Xylene	0.019	J	0.015	0.040	mg/Kg	1	11/7/2018 15:45
Toluene	U		0.011	0.040	mg/Kg	1	11/7/2018 15:45
Xylenes, Total	0.053	J	0.034	0.12	mg/Kg	1	11/7/2018 15:45
Surr: 1,2-Dichloroethane-d4	101			70-130	%REC	1	11/7/2018 15:45
Surr: 4-Bromofluorobenzene	97.6			70-130	%REC	1	11/7/2018 15:45
Surr: Dibromofluoromethane	91.8			70-130	%REC	1	11/7/2018 15:45
Surr: Toluene-d8	98.3			70-130	%REC	1	11/7/2018 15:45
ELECTRICAL CONDUCTIVITY (SAR)			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 11/7/18		Analyst: EE
Electrical Conductivity @ Saturation	0.80		0.011	0.10	mmhos/cm @25°	20	11/8/2018 13:00
CHROMIUM, TRIVALENT			Method: CALCULATION				Analyst: MB
Chromium, Trivalent	9.9		0.36	1.2	mg/Kg-dry	1	11/13/2018 18:45
CHROMIUM, HEXAVALENT			Method: SW7196A		Prep: SW3060A / 11/9/18		Analyst: JEB
Chromium, Hexavalent	0.54	J	0.36	1.2	mg/Kg-dry	1	11/9/2018 12:05
MOISTURE			Method: SW3550C				Analyst: RBS
Moisture	14		0.025	0.050	% of sample	1	11/8/2018 18:52
PH			Method: SW9045D		Prep: EXTRACT / 11/1/18		Analyst: RZM
pH	7.84		0.10	0.100	s.u.	1	11/2/2018 10:53

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

ALS Group, USA

Date: 14-Nov-18

Client: Entrada Consulting Group
Project: MB Larson C 3-25 Spill
Sample ID: MBLC325-SS2
Collection Date: 10/25/2018 08:55 AM

Work Order: 18101898
Lab ID: 18101898-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID							
			Method: SW8015M		Prep: SW3546 / 11/8/18		Analyst: RP
DRO (C10-C28)	5.1	J	3.5	6.1	mg/Kg-dry	1	11/9/2018 23:05
Surr: 4-Terphenyl-d14	62.7			33-111	%REC	1	11/9/2018 23:05
GASOLINE RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW5035 / 10/31/18		Analyst: RP
GRO (C6-C10)	U		3.0	7.2	mg/Kg	1	11/1/2018 23:46
Surr: Toluene-d8	99.1			71-123	%REC	1	11/1/2018 23:46
MERCURY BY CVAA							
			Method: SW7471B		Prep: SW7471 / 10/30/18		Analyst: RSB
Mercury	0.027		0.0024	0.024	mg/Kg-dry	1	10/31/2018 14:05
METALS ANALYSIS BY ICP							
			Method: SW846 6010C		Prep: SW3050B / 11/7/18		Analyst: ABL
Arsenic	7.0		0.11	0.42	mg/Kg-dry	1	11/8/2018 05:45
Barium	150		0.17	0.42	mg/Kg-dry	1	11/8/2018 05:45
Cadmium	0.25	J	0.041	0.85	mg/Kg-dry	1	11/8/2018 05:45
Chromium	11		0.024	0.42	mg/Kg-dry	1	11/8/2018 18:19
Copper	15		0.19	0.85	mg/Kg-dry	1	11/8/2018 05:45
Lead	21		0.090	0.42	mg/Kg-dry	1	11/8/2018 05:45
Nickel	14		0.17	0.42	mg/Kg-dry	1	11/8/2018 05:45
Selenium	0.92		0.24	0.85	mg/Kg-dry	1	11/8/2018 05:45
Silver	U		0.053	0.42	mg/Kg-dry	1	11/8/2018 05:45
Zinc	86		0.068	0.85	mg/Kg-dry	1	11/8/2018 05:45
SOLUBLE CATIONS FOR SAR							
			Method: SW6020A		Prep: USDA Method 20B / 11/7/18		Analyst: STP
Calcium	120		0.86	5.0	mg/L	10	11/7/2018 18:32
Magnesium	28		0.068	2.0	mg/L	10	11/7/2018 18:32
Sodium	140		0.34	2.0	mg/L	10	11/7/2018 18:32
SODIUM ADSORPTION RATIO							
			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 11/7/18		Analyst: STP
Sodium Adsorption Ratio	3.1		0.010	0.010	none	1	11/7/2018
SEMI-VOLATILE ORGANIC COMPOUNDS							
			Method: SW846 8270D		Prep: SW3546 / 11/8/18		Analyst: KAW
Acenaphthene	U		0.029	0.040	mg/Kg-dry	5	11/10/2018 00:29
Anthracene	U		0.028	0.040	mg/Kg-dry	5	11/10/2018 00:29
Benzo(a)anthracene	U		0.034	0.040	mg/Kg-dry	5	11/10/2018 00:29
Benzo(a)pyrene	U		0.024	0.040	mg/Kg-dry	5	11/10/2018 00:29
Benzo(b)fluoranthene	U		0.029	0.040	mg/Kg-dry	5	11/10/2018 00:29
Benzo(k)fluoranthene	U		0.030	0.040	mg/Kg-dry	5	11/10/2018 00:29
Chrysene	U		0.032	0.040	mg/Kg-dry	5	11/10/2018 00:29
Dibenzo(a,h)anthracene	U		0.021	0.040	mg/Kg-dry	5	11/10/2018 00:29
Fluoranthene	U		0.019	0.040	mg/Kg-dry	5	11/10/2018 00:29

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

ALS Group, USA

Date: 14-Nov-18

Client: Entrada Consulting Group
Project: MB Larson C 3-25 Spill
Sample ID: MBLC325-SS2
Collection Date: 10/25/2018 08:55 AM

Work Order: 18101898
Lab ID: 18101898-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	U		0.029	0.040	mg/Kg-dry	5	11/10/2018 00:29
Indeno(1,2,3-cd)pyrene	U		0.028	0.040	mg/Kg-dry	5	11/10/2018 00:29
Naphthalene	U		0.025	0.040	mg/Kg-dry	5	11/10/2018 00:29
Pyrene	U		0.0072	0.040	mg/Kg-dry	5	11/10/2018 00:29
Surr: 2-Fluorobiphenyl	51.9			44-107	%REC	5	11/10/2018 00:29
Surr: 4-Terphenyl-d14	56.8			52-123	%REC	5	11/10/2018 00:29
Surr: Nitrobenzene-d5	40.2	S		41-94	%REC	5	11/10/2018 00:29
VOLATILE ORGANIC COMPOUNDS			Method: SW8260C		Prep: SW5035 / 10/31/18		Analyst: PM
Benzene	U		0.0074	0.043	mg/Kg	1	11/7/2018 16:00
Ethylbenzene	U		0.0091	0.043	mg/Kg	1	11/7/2018 16:00
m,p-Xylene	0.037	J	0.021	0.086	mg/Kg	1	11/7/2018 16:00
o-Xylene	0.022	J	0.017	0.043	mg/Kg	1	11/7/2018 16:00
Toluene	U		0.012	0.043	mg/Kg	1	11/7/2018 16:00
Xylenes, Total	0.059	J	0.037	0.13	mg/Kg	1	11/7/2018 16:00
Surr: 1,2-Dichloroethane-d4	102			70-130	%REC	1	11/7/2018 16:00
Surr: 4-Bromofluorobenzene	96.8			70-130	%REC	1	11/7/2018 16:00
Surr: Dibromofluoromethane	89.3			70-130	%REC	1	11/7/2018 16:00
Surr: Toluene-d8	98.8			70-130	%REC	1	11/7/2018 16:00
ELECTRICAL CONDUCTIVITY (SAR)			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 11/7/18		Analyst: EE
Electrical Conductivity @ Saturation	1.8		0.011	0.10	mmhos/cm @25°	20	11/8/2018 13:00
CHROMIUM, TRIVALENT			Method: CALCULATION				Analyst: MB
Chromium, Trivalent	9.6		0.38	1.2	mg/Kg-dry	1	11/13/2018 18:45
CHROMIUM, HEXAVALENT			Method: SW7196A		Prep: SW3060A / 11/9/18		Analyst: JEB
Chromium, Hexavalent	0.90	J	0.38	1.2	mg/Kg-dry	1	11/9/2018 12:05
MOISTURE			Method: SW3550C				Analyst: RBS
Moisture	18		0.025	0.050	% of sample	1	11/8/2018 18:52
PH			Method: SW9045D		Prep: EXTRACT / 11/1/18		Analyst: RZM
pH	7.95		0.10	0.100	s.u.	1	11/2/2018 10:53

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

ALS Group, USA

Date: 14-Nov-18

Client: Entrada Consulting Group
Project: MB Larson C 3-25 Spill
Sample ID: MBLC325-SS3
Collection Date: 10/25/2018 09:05 AM

Work Order: 18101898
Lab ID: 18101898-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID							
			Method: SW8015M		Prep: SW3546 / 11/8/18		Analyst: RP
DRO (C10-C28)	U		3.4	6.0	mg/Kg-dry	1	11/9/2018 23:34
Surr: 4-Terphenyl-d14	84.4			33-111	%REC	1	11/9/2018 23:34
GASOLINE RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW5035 / 10/31/18		Analyst: RP
GRO (C6-C10)	U		2.9	6.9	mg/Kg	1	11/2/2018 12:15
Surr: Toluene-d8	99.7			71-123	%REC	1	11/2/2018 12:15
MERCURY BY CVAA							
			Method: SW7471B		Prep: SW7471 / 10/30/18		Analyst: RSB
Mercury	0.030		0.0023	0.023	mg/Kg-dry	1	10/31/2018 14:14
METALS ANALYSIS BY ICP							
			Method: SW846 6010C		Prep: SW3050B / 11/7/18		Analyst: ABL
Arsenic	7.2		0.12	0.47	mg/Kg-dry	1	11/8/2018 05:51
Barium	100		0.19	0.47	mg/Kg-dry	1	11/8/2018 05:51
Cadmium	0.24	J	0.045	0.94	mg/Kg-dry	1	11/8/2018 05:51
Chromium	11		0.026	0.47	mg/Kg-dry	1	11/8/2018 18:25
Copper	15		0.21	0.94	mg/Kg-dry	1	11/8/2018 05:51
Lead	12		0.099	0.47	mg/Kg-dry	1	11/8/2018 05:51
Nickel	14		0.19	0.47	mg/Kg-dry	1	11/8/2018 05:51
Selenium	0.98		0.26	0.94	mg/Kg-dry	1	11/8/2018 05:51
Silver	U		0.058	0.47	mg/Kg-dry	1	11/8/2018 05:51
Zinc	71		0.075	0.94	mg/Kg-dry	1	11/8/2018 05:51
SOLUBLE CATIONS FOR SAR							
			Method: SW6020A		Prep: USDA Method 20B / 11/7/18		Analyst: STP
Calcium	580		0.86	5.0	mg/L	10	11/7/2018 18:38
Magnesium	65		0.068	2.0	mg/L	10	11/7/2018 18:38
Sodium	430		0.34	2.0	mg/L	10	11/7/2018 18:38
SODIUM ADSORPTION RATIO							
			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 11/7/18		Analyst: STP
Sodium Adsorption Ratio	4.5		0.010	0.010	none	1	11/7/2018
SEMI-VOLATILE ORGANIC COMPOUNDS							
			Method: SW846 8270D		Prep: SW3546 / 11/8/18		Analyst: KAW
Acenaphthene	U		0.0058	0.0080	mg/Kg-dry	1	11/10/2018 00:05
Anthracene	U		0.0056	0.0080	mg/Kg-dry	1	11/10/2018 00:05
Benzo(a)anthracene	U		0.0069	0.0080	mg/Kg-dry	1	11/10/2018 00:05
Benzo(a)pyrene	U		0.0049	0.0080	mg/Kg-dry	1	11/10/2018 00:05
Benzo(b)fluoranthene	U		0.0059	0.0080	mg/Kg-dry	1	11/10/2018 00:05
Benzo(k)fluoranthene	U		0.0060	0.0080	mg/Kg-dry	1	11/10/2018 00:05
Chrysene	U		0.0064	0.0080	mg/Kg-dry	1	11/10/2018 00:05
Dibenzo(a,h)anthracene	U		0.0043	0.0080	mg/Kg-dry	1	11/10/2018 00:05
Fluoranthene	U		0.0038	0.0080	mg/Kg-dry	1	11/10/2018 00:05

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

ALS Group, USA

Date: 14-Nov-18

Client: Entrada Consulting Group
Project: MB Larson C 3-25 Spill
Sample ID: MBLC325-SS3
Collection Date: 10/25/2018 09:05 AM

Work Order: 18101898
Lab ID: 18101898-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	U		0.0058	0.0080	mg/Kg-dry	1	11/10/2018 00:05
Indeno(1,2,3-cd)pyrene	U		0.0055	0.0080	mg/Kg-dry	1	11/10/2018 00:05
Naphthalene	U		0.0051	0.0080	mg/Kg-dry	1	11/10/2018 00:05
Pyrene	U		0.0014	0.0080	mg/Kg-dry	1	11/10/2018 00:05
Surr: 2-Fluorobiphenyl	69.6			44-107	%REC	1	11/10/2018 00:05
Surr: 4-Terphenyl-d14	74.9			52-123	%REC	1	11/10/2018 00:05
Surr: Nitrobenzene-d5	57.6			41-94	%REC	1	11/10/2018 00:05
VOLATILE ORGANIC COMPOUNDS			Method: SW8260C		Prep: SW5035 / 10/31/18		Analyst: PM
Benzene	U		0.0071	0.041	mg/Kg	1	11/7/2018 16:15
Ethylbenzene	U		0.0087	0.041	mg/Kg	1	11/7/2018 16:15
m,p-Xylene	U		0.020	0.083	mg/Kg	1	11/7/2018 16:15
o-Xylene	U		0.016	0.041	mg/Kg	1	11/7/2018 16:15
Toluene	U		0.011	0.041	mg/Kg	1	11/7/2018 16:15
Xylenes, Total	U		0.036	0.12	mg/Kg	1	11/7/2018 16:15
Surr: 1,2-Dichloroethane-d4	102			70-130	%REC	1	11/7/2018 16:15
Surr: 4-Bromofluorobenzene	97.3			70-130	%REC	1	11/7/2018 16:15
Surr: Dibromofluoromethane	90.1			70-130	%REC	1	11/7/2018 16:15
Surr: Toluene-d8	98.5			70-130	%REC	1	11/7/2018 16:15
ELECTRICAL CONDUCTIVITY (SAR)			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 11/7/18		Analyst: EE
Electrical Conductivity @ Saturation	6.7		0.011	0.10	mmhos/cm @25°	20	11/8/2018 13:00
CHROMIUM, TRIVALENT			Method: CALCULATION				Analyst: MB
Chromium, Trivalent	9.6		0.37	1.2	mg/Kg-dry	1	11/13/2018 18:45
CHROMIUM, HEXAVALENT			Method: SW7196A		Prep: SW3060A / 11/9/18		Analyst: JEB
Chromium, Hexavalent	1.0	J	0.36	1.2	mg/Kg-dry	1	11/9/2018 12:05
MOISTURE			Method: SW3550C				Analyst: RBS
Moisture	16		0.025	0.050	% of sample	1	11/8/2018 18:52
PH			Method: SW9045D		Prep: EXTRACT / 11/1/18		Analyst: RZM
pH	7.91		0.10	0.100	s.u.	1	11/2/2018 10:53

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

ALS Group, USA

Date: 14-Nov-18

Client: Entrada Consulting Group
Project: MB Larson C 3-25 Spill
Sample ID: MBLC325-BG1
Collection Date: 10/25/2018 09:15 AM

Work Order: 18101898
Lab ID: 18101898-04
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
Mercury	0.030		0.0021	0.021	mg/Kg-dry	1	10/31/2018 14:16
METALS ANALYSIS BY ICP							
Arsenic	6.2		0.10	0.40	mg/Kg-dry	1	11/8/2018 05:57
Barium	100		0.16	0.40	mg/Kg-dry	1	11/8/2018 05:57
Cadmium	0.21	J	0.038	0.79	mg/Kg-dry	1	11/8/2018 05:57
Chromium	9.5		0.022	0.40	mg/Kg-dry	1	11/8/2018 18:31
Copper	13		0.17	0.79	mg/Kg-dry	1	11/8/2018 05:57
Lead	11		0.084	0.40	mg/Kg-dry	1	11/8/2018 05:57
Nickel	12		0.16	0.40	mg/Kg-dry	1	11/8/2018 05:57
Selenium	0.89		0.22	0.79	mg/Kg-dry	1	11/8/2018 05:57
Silver	U		0.049	0.40	mg/Kg-dry	1	11/8/2018 05:57
Zinc	63		0.063	0.79	mg/Kg-dry	1	11/8/2018 05:57
SOLUBLE CATIONS FOR SAR							
Calcium	750		0.86	5.0	mg/L	10	11/7/2018 18:40
Magnesium	13		0.068	2.0	mg/L	10	11/7/2018 18:40
Sodium	5.8		0.34	2.0	mg/L	10	11/7/2018 18:40
SODIUM ADSORPTION RATIO							
Sodium Adsorption Ratio	0.057		0.010	0.010	none	1	11/7/2018
ELECTRICAL CONDUCTIVITY (SAR)							
Electrical Conductivity @ Saturation	4.9		0.011	0.10	mmhos/cm @25°	20	11/8/2018 13:00
CHROMIUM, TRIVALENT							
Chromium, Trivalent	8.8		0.36	1.1	mg/Kg-dry	1	11/13/2018 18:45
CHROMIUM, HEXAVALENT							
Chromium, Hexavalent	0.68	J	0.36	1.2	mg/Kg-dry	1	11/9/2018 12:05
MOISTURE							
Moisture	13		0.025	0.050	% of sample	1	11/8/2018 18:52
PH							
pH	7.63		0.10	0.100	s.u.	1	11/2/2018 10:53

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

Client: Entrada Consulting Group
Work Order: 18101898
Project: MB Larson C 3-25 Spill

QC BATCH REPORT

Batch ID: **127578** Instrument ID **GC8** Method: **SW8015M**

MBLK		Sample ID: SBLKS1-127578-127578				Units: mg/Kg		Analysis Date: 11/9/2018 03:47 PM		
Client ID:		Run ID: GC8_181109C				SeqNo: 5378469		Prep Date: 11/8/2018		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	2.711	0	3.33	0	81.4	33-111		0		

LCS		Sample ID: SLCSS1-127578-127578				Units: mg/Kg		Analysis Date: 11/9/2018 04:16 PM		
Client ID:		Run ID: GC8_181109C				SeqNo: 5378470		Prep Date: 11/8/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	207.5	5.0	333	0	62.3	58-111		0		
Surr: 4-Terphenyl-d14	2.67	0	3.33	0	80.2	33-111		0		

MS		Sample ID: 18101897-01A MS				Units: mg/Kg		Analysis Date: 11/9/2018 04:46 PM		
Client ID:		Run ID: GC8_181109C				SeqNo: 5378471		Prep Date: 11/8/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	213	4.8	321.3	0	66.3	58-111		0		
Surr: 4-Terphenyl-d14	2.416	0	3.213	0	75.2	33-111		0		

MSD		Sample ID: 18101897-01A MSD				Units: mg/Kg		Analysis Date: 11/9/2018 05:44 PM		
Client ID:		Run ID: GC8_181109C				SeqNo: 5378472		Prep Date: 11/8/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)	229.5	4.8	321.1	0	71.5	58-111	213	7.42	30	
Surr: 4-Terphenyl-d14	2.282	0	3.211	0	71.1	33-111	2.416	5.7	30	

The following samples were analyzed in this batch:

18101898-01A	18101898-02A	18101898-03A
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Client: Entrada Consulting Group
Work Order: 18101898
Project: MB Larson C 3-25 Spill

QC BATCH REPORT

Batch ID: **127151** Instrument ID **GC9** Method: **SW8015D**

MBLK		Sample ID: MBLK-127151-127151				Units: µg/Kg-dry		Analysis Date: 11/1/2018 05:00 PM		
Client ID:		Run ID: GC9_181101B				SeqNo: 5361942		Prep Date: 10/31/2018		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								
Surr: Toluene-d8	5157	0	5000	0	103	71-123	0			

LCS		Sample ID: LCS-127151-127151				Units: µg/Kg-dry		Analysis Date: 11/1/2018 04:02 PM		
Client ID:		Run ID: GC9_181101B				SeqNo: 5361941		Prep Date: 10/31/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	557800	5,000	500000	0	112	71-123	0			
Surr: Toluene-d8	4852	0	5000	0	97	71-123	0			

MS		Sample ID: 18101887-01A MS				Units: µg/Kg-dry		Analysis Date: 11/2/2018 12:44 PM		
Client ID:		Run ID: GC9_181101B				SeqNo: 5361958		Prep Date: 10/31/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	717700	6,800	676500	0	106	71-123	0			
Surr: Toluene-d8	7096	0	6765	0	105	71-123	0			

MSD		Sample ID: 18101887-01A MSD				Units: µg/Kg-dry		Analysis Date: 11/2/2018 01:12 AM		
Client ID:		Run ID: GC9_181101B				SeqNo: 5361956		Prep Date: 10/31/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	759500	6,800	676500	0	112	71-123	717700	5.66	30	
Surr: Toluene-d8	6684	0	6765	0	98.8	71-123	7096	5.98	30	

The following samples were analyzed in this batch:

18101898-01A	18101898-02A	18101898-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group
Work Order: 18101898
Project: MB Larson C 3-25 Spill

QC BATCH REPORT

Batch ID: **127081** Instrument ID **HG1** Method: **SW7471B**

MBLK				Sample ID: MBLK-127081-127081				Units: mg/Kg			Analysis Date: 10/31/2018 01:27 PM			
Client ID:				Run ID: HG1_181031A				SeqNo: 5355990			Prep Date: 10/30/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Mercury	0.005	0.020								J				

LCS				Sample ID: LCS-127081-127081				Units: mg/Kg			Analysis Date: 10/31/2018 01:29 PM			
Client ID:				Run ID: HG1_181031A				SeqNo: 5355991			Prep Date: 10/30/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Mercury	0.1583	0.020	0.1665	0	95.1	80-120	0							

MS				Sample ID: 18101894-02A MS				Units: mg/Kg			Analysis Date: 10/31/2018 01:40 PM			
Client ID:				Run ID: HG1_181031A				SeqNo: 5355995			Prep Date: 10/30/2018		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Mercury		0.152	0.017	0.1446	0	105	75-125	0						

MSD				Sample ID: 18101894-02A MSD				Units: mg/Kg			Analysis Date: 10/31/2018 01:51 PM			
Client ID:				Run ID: HG1_181031A				SeqNo: 5356182			Prep Date: 10/30/2018		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Mercury		0.149	0.017	0.1431	0.01877	91	75-125	0.152	1.96	35				

The following samples were analyzed in this batch:

18101898-01A	18101898-02A	18101898-03A
18101898-04A		

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

Client: Entrada Consulting Group
Work Order: 18101898
Project: MB Larson C 3-25 Spill

QC BATCH REPORT

Batch ID: **127590** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK		Sample ID: MBLK-127590-127590				Units: mg/Kg		Analysis Date: 11/8/2018 03:25 AM		
Client ID:		Run ID: ICP2_181107A				SeqNo: 5373040		Prep Date: 11/7/2018		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	0.03445	0.25								J
Copper	U	0.50								
Lead	U	0.25								
Nickel	U	0.25								
Selenium	U	0.50								
Silver	0.053	0.25								J
Zinc	0.097	0.50								J

LCS		Sample ID: LCS-127590-127590				Units: mg/Kg		Analysis Date: 11/8/2018 03:32 AM		
Client ID:		Run ID: ICP2_181107A				SeqNo: 5373041		Prep Date: 11/7/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.845	0.25	5	0	96.9	80-120	0			
Barium	5.265	0.25	5	0	105	80-120	0			
Cadmium	5.037	0.50	5	0	101	80-120	0			
Copper	5.245	0.50	5	0	105	80-120	0			
Lead	5.22	0.25	5	0	104	80-120	0			
Nickel	5.268	0.25	5	0	105	80-120	0			
Selenium	4.69	0.50	5	0	93.8	80-120	0			
Silver	5.09	0.25	5	0	102	80-120	0			
Zinc	5.161	0.50	5	0	103	80-120	0			

LCS		Sample ID: LCS-127590-127590				Units: mg/Kg		Analysis Date: 11/8/2018 12:31 PM		
Client ID:		Run ID: ICP2_181108A				SeqNo: 5375608		Prep Date: 11/7/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium	5.434	0.25	5	0	109	80-120	0			

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

Client: Entrada Consulting Group
 Work Order: 18101898
 Project: MB Larson C 3-25 Spill

QC BATCH REPORT

Batch ID: 127590 Instrument ID ICP2 Method: SW846 6010C

MS Sample ID: 18101898-04AMS				Units: mg/Kg		Analysis Date: 11/8/2018 06:03 AM				
Client ID: MBLC325-BG1		Run ID: ICP2_181107A		SeqNo: 5373071		Prep Date: 11/7/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	12.08	0.34	6.887	5.434	96.6	75-125	0			
Barium	100.8	0.34	6.887	87.07	199	75-125	0			SO
Cadmium	6.667	0.69	6.887	0.1798	94.2	75-125	0			
Copper	18.52	0.69	6.887	11.3	105	75-125	0			
Lead	15.35	0.34	6.887	9.419	86.1	75-125	0			
Nickel	17.19	0.34	6.887	10.83	92.4	75-125	0			
Selenium	7.188	0.69	6.887	0.7782	93.1	75-125	0			
Silver	7.337	0.34	6.887	-0.02032	107	75-125	0			
Zinc	64.26	0.69	6.887	54.46	142	75-125	0			SO

MS Sample ID: 18101898-04AMS				Units: mg/Kg		Analysis Date: 11/8/2018 06:37 PM				
Client ID: MBLC325-BG1		Run ID: ICP2_181108A		SeqNo: 5375672		Prep Date: 11/7/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium	18.97	0.34	6.887	8.246	156	75-125	0			S

MSD Sample ID: 18101898-04AMSD				Units: mg/Kg		Analysis Date: 11/8/2018 06:09 AM				
Client ID: MBLC325-BG1		Run ID: ICP2_181107A		SeqNo: 5373072		Prep Date: 11/7/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	11.94	0.34	6.897	5.434	94.3	75-125	12.08	1.24	20	
Barium	98.37	0.34	6.897	87.07	164	75-125	100.8	2.41	20	SO
Cadmium	6.623	0.69	6.897	0.1798	93.4	75-125	6.667	0.661	20	
Copper	18.23	0.69	6.897	11.3	101	75-125	18.52	1.61	20	
Lead	15	0.34	6.897	9.419	80.9	75-125	15.35	2.29	20	
Nickel	17.17	0.34	6.897	10.83	91.8	75-125	17.19	0.168	20	
Selenium	7.198	0.69	6.897	0.7782	93.1	75-125	7.188	0.138	20	
Silver	7.293	0.34	6.897	-0.02032	106	75-125	7.337	0.595	20	
Zinc	63.96	0.69	6.897	54.46	138	75-125	64.26	0.461	20	SO

MSD Sample ID: 18101898-04AMSD				Units: mg/Kg		Analysis Date: 11/8/2018 06:43 PM				
Client ID: MBLC325-BG1		Run ID: ICP2_181108A		SeqNo: 5375673		Prep Date: 11/7/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium	18.76	0.34	6.897	8.246	152	75-125	18.97	1.13	20	S

The following samples were analyzed in this batch:

18101898-01A	18101898-02A	18101898-03A
18101898-04A		

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

Client: Entrada Consulting Group
Work Order: 18101898
Project: MB Larson C 3-25 Spill

QC BATCH REPORT

Batch ID: **127575** Instrument ID **ICPMS3** Method: **SW6020A**

DUP		Sample ID: 18101898-04BDUP				Units: mg/L		Analysis Date: 11/7/2018 06:41 PM		
Client ID: MBLC325-BG1		Run ID: ICPMS3_181107A				SeqNo: 5373196		Prep Date: 11/7/2018		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	744.2	5.0	0	0	0	0-0	753.9	1.29		
Magnesium	12.83	2.0	0	0	0	0-0	12.78	0.376		
Sodium	5.251	2.0	0	0	0	0-0	5.809	10.1		

The following samples were analyzed in this batch:

18101898-01B	18101898-02B	18101898-03B
18101898-04B		

Batch ID: **127575** Instrument ID **SAR** Method: **USDA H60 Metho**

DUP		Sample ID: 18101898-04BDUP				Units: none		Analysis Date: 11/7/2018		
Client ID: MBLC325-BG1		Run ID: SAR_181107A				SeqNo: 5374446		Prep Date: 11/7/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	0.05226	0.010	0	0	0		0.05746	9.48	50	

The following samples were analyzed in this batch:

18101898-01B	18101898-02B	18101898-03B
18101898-04B		

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

Client: Entrada Consulting Group
Work Order: 18101898
Project: MB Larson C 3-25 Spill

QC BATCH REPORT

Batch ID: **127577** Instrument ID **SVMS9** Method: **SW846 8270D**

MBLK		Sample ID: SBLKS1-127577-127577				Units: µg/Kg		Analysis Date: 11/9/2018 10:57 AM		
Client ID:		Run ID: SVMS9_181109A				SeqNo: 5376972		Prep Date: 11/8/2018		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	2146	0	3333	0	64.4	44-107	0			
Surr: 4-Terphenyl-d14	2851	0	3333	0	85.5	52-123	0			
Surr: Nitrobenzene-d5	1763	0	3333	0	52.9	41-94	0			

LCS		Sample ID: SLCSS1-127577-127577				Units: µg/Kg		Analysis Date: 11/9/2018 11:20 AM		
Client ID:		Run ID: SVMS9_181109A				SeqNo: 5376973		Prep Date: 11/8/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1106	6.7	1333	0	83	55-101	0			
Anthracene	1035	6.7	1333	0	77.7	67-105	0			
Benzo(a)anthracene	1100	6.7	1333	0	82.5	68-105	0			
Benzo(a)pyrene	1065	6.7	1333	0	79.9	68-110	0			
Benzo(b)fluoranthene	1061	6.7	1333	0	79.6	65-110	0			
Benzo(k)fluoranthene	1071	6.7	1333	0	80.3	66-113	0			
Chrysene	1081	6.7	1333	0	81.1	68-108	0			
Dibenzo(a,h)anthracene	1145	6.7	1333	0	85.9	62-119	0			
Fluoranthene	1011	6.7	1333	0	75.9	67-106	0			
Fluorene	1133	6.7	1333	0	85	59-107	0			
Indeno(1,2,3-cd)pyrene	1151	6.7	1333	0	86.4	56-120	0			
Naphthalene	948	6.7	1333	0	71.1	46-98	0			
Pyrene	1066	6.7	1333	0	80	60-119	0			
Surr: 2-Fluorobiphenyl	2624	0	3333	0	78.7	44-107	0			
Surr: 4-Terphenyl-d14	2582	0	3333	0	77.5	52-123	0			
Surr: Nitrobenzene-d5	2221	0	3333	0	66.6	41-94	0			

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

Client: Entrada Consulting Group
 Work Order: 18101898
 Project: MB Larson C 3-25 Spill

QC BATCH REPORT

Batch ID: 127577 Instrument ID SVMS9 Method: SW846 8270D

MS				Sample ID: 18101897-01A MS				Units: µg/Kg		Analysis Date: 11/9/2018 08:14 PM	
Client ID:			Run ID: SVMS9_181109A			SeqNo: 5380380		Prep Date: 11/8/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	1001	6.5	1297	0	77.2	55-101	0				
Anthracene	987.1	6.5	1297	0	76.1	67-105	0				
Benzo(a)anthracene	1095	6.5	1297	0	84.5	68-105	0				
Benzo(a)pyrene	1079	6.5	1297	0	83.2	68-110	0				
Benzo(b)fluoranthene	1031	6.5	1297	0	79.5	65-110	0				
Benzo(k)fluoranthene	989	6.5	1297	0	76.3	66-113	0				
Chrysene	1021	6.5	1297	0	78.8	68-108	0				
Dibenzo(a,h)anthracene	1123	6.5	1297	0	86.6	62-119	0				
Fluoranthene	1001	6.5	1297	0	77.2	67-106	0				
Fluorene	1065	6.5	1297	0	82.1	59-107	0				
Indeno(1,2,3-cd)pyrene	1180	6.5	1297	0	91	56-120	0				
Naphthalene	867.8	6.5	1297	0	66.9	46-98	0				
Pyrene	1009	6.5	1297	0	77.8	60-119	0				
Surr: 2-Fluorobiphenyl	2442	0	3242	0	75.3	44-107	0				
Surr: 4-Terphenyl-d14	2496	0	3242	0	77	52-123	0				
Surr: Nitrobenzene-d5	2097	0	3242	0	64.7	41-94	0				

MSD				Sample ID: 18101897-01A MSD				Units: µg/Kg		Analysis Date: 11/9/2018 08:37 PM	
Client ID:			Run ID: SVMS9_181109A			SeqNo: 5380381		Prep Date: 11/8/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	676.6	6.4	1286	0	52.6	55-101	1001	38.7	30	SR	
Anthracene	724.2	6.4	1286	0	56.3	67-105	987.1	30.7	30	SR	
Benzo(a)anthracene	807.8	6.4	1286	0	62.8	68-105	1095	30.2	30	SR	
Benzo(a)pyrene	816.8	6.4	1286	0	63.5	68-110	1079	27.6	30	S	
Benzo(b)fluoranthene	760.8	6.4	1286	0	59.2	65-110	1031	30.2	30	SR	
Benzo(k)fluoranthene	763.4	6.4	1286	0	59.4	66-113	989	25.8	30	S	
Chrysene	756.3	6.4	1286	0	58.8	68-108	1021	29.8	30	S	
Dibenzo(a,h)anthracene	840.6	6.4	1286	0	65.4	62-119	1123	28.7	30		
Fluoranthene	738.3	6.4	1286	0	57.4	67-106	1001	30.2	30	SR	
Fluorene	728.7	6.4	1286	0	56.7	59-107	1065	37.5	30	SR	
Indeno(1,2,3-cd)pyrene	898.5	6.4	1286	0	69.9	56-120	1180	27.1	30		
Naphthalene	547.3	6.4	1286	0	42.6	46-98	867.8	45.3	30	SR	
Pyrene	759.5	6.4	1286	0	59.1	60-119	1009	28.2	30	S	
Surr: 2-Fluorobiphenyl	1769	0	3215	0	55	44-107	2442	32	40		
Surr: 4-Terphenyl-d14	2055	0	3215	0	63.9	52-123	2496	19.4	40		
Surr: Nitrobenzene-d5	1475	0	3215	0	45.9	41-94	2097	34.8	40		

The following samples were analyzed in this batch:

18101898-01A	18101898-02A	18101898-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group
 Work Order: 18101898
 Project: MB Larson C 3-25 Spill

QC BATCH REPORT

Batch ID: 127150 Instrument ID VMS9 Method: SW8260C

Sample ID: MBLK-127150-127150				Units: µg/Kg-dry			Analysis Date: 11/2/2018 09:13 PM			
Client ID:		Run ID: VMS9_181102A			SeqNo: 5363840		Prep Date: 10/31/2018		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	28.5	60								J
o-Xylene	12.5	30								J
Toluene	U	30								
Xylenes, Total	40	90								J
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>998.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>99.8</i>	<i>70-130</i>	<i>0</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>959</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>95.9</i>	<i>70-130</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>916.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>91.6</i>	<i>70-130</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>980.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>98</i>	<i>70-130</i>	<i>0</i>			

LCS				Sample ID: LCS-127150-127150			Units: µg/Kg-dry		Analysis Date: 11/2/2018 08:14 PM		
Client ID:			Run ID: VMS9_181102A			SeqNo: 5363838		Prep Date: 10/31/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	940.5	30	1000	0	94	75-125	0				
Ethylbenzene	957.5	30	1000	0	95.8	75-125	0				
m,p-Xylene	1824	60	2000	0	91.2	80-125	0				
o-Xylene	928.5	30	1000	0	92.8	75-125	0				
Toluene	938.5	30	1000	0	93.8	70-125	0				
Xylenes, Total	2752	90	3000	0	91.7	75-125	0				
Surr: 1,2-Dichloroethane-d4	990	0	1000	0	99	70-130	0				
Surr: 4-Bromofluorobenzene	989.5	0	1000	0	99	70-130	0				
Surr: Dibromofluoromethane	1014	0	1000	0	101	70-130	0				
Surr: Toluene-d8	994.5	0	1000	0	99.4	70-130	0				

MS				Sample ID: 18101887-01A MS		Units: µg/Kg-dry		Analysis Date: 11/5/2018 08:00 AM		
Client ID:			Run ID: VMS9_181104B			SeqNo: 5365344		Prep Date: 10/31/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1387	41	1353	0	102	75-125		0		
Ethylbenzene	1412	41	1353	0	104	75-125		0		
m,p-Xylene	2721	81	2706	34.5	99.3	80-125		0		
o-Xylene	1350	41	1353	22.32	98.2	75-125		0		
Toluene	1325	41	1353	0	98	70-125		0		
Xylenes, Total	4071	120	4059	56	98.9	75-125		0		
Surr: 1,2-Dichloroethane-d4	1359	0	1353	0	100	70-130		0		
Surr: 4-Bromofluorobenzene	1355	0	1353	0	100	70-130		0		
Surr: Dibromofluoromethane	1214	0	1353	0	89.8	70-130		0		
Surr: Toluene-d8	1318	0	1353	0	97.4	70-130		0		

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

Client: Entrada Consulting Group
Work Order: 18101898
Project: MB Larson C 3-25 Spill

QC BATCH REPORT

Batch ID: **127150** Instrument ID **VMS9** Method: **SW8260C**

MSD				Sample ID: 18101887-01A MSD			Units: µg/Kg-dry		Analysis Date: 11/5/2018 08:15 AM	
Client ID:			Run ID: VMS9_181104B			SeqNo: 5365346		Prep Date: 10/31/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1310	41	1353	0	96.8	75-125	1387	5.67	30	
Ethylbenzene	1338	41	1353	0	98.9	75-125	1412	5.41	30	
m,p-Xylene	2544	81	2706	34.5	92.7	80-125	2721	6.73	30	
o-Xylene	1293	41	1353	22.32	93.9	75-125	1350	4.35	30	
Toluene	1247	41	1353	0	92.2	70-125	1325	6.1	30	
Xylenes, Total	3836	120	4059	56	93.1	75-125	4071	5.94	30	
Surr: 1,2-Dichloroethane-d4	1343	0	1353	0	99.3	70-130	1359	1.15	30	
Surr: 4-Bromofluorobenzene	1372	0	1353	0	101	70-130	1355	1.24	30	
Surr: Dibromofluoromethane	1251	0	1353	0	92.4	70-130	1214	2.96	30	
Surr: Toluene-d8	1321	0	1353	0	97.6	70-130	1318	0.256	30	

The following samples were analyzed in this batch:

18101898-01A	18101898-02A	18101898-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Entrada Consulting Group
Work Order: 18101898
Project: MB Larson C 3-25 Spill

QC BATCH REPORT

Batch ID: **127266** Instrument ID **WETCHEM** Method: **SW9045D**

LCS				Sample ID: LCS-127266-127266				Units: s.u.			Analysis Date: 11/2/2018 10:53 AM			
Client ID:				Run ID: WETCHEM_181102C				SeqNo: 5362520			Prep Date: 11/1/2018		DF: 1	
Analyte				Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH 3.91 0.10 4 0 97.8 90-110 0

DUP		Sample ID: 18101897-01A DUP					Units: s.u.		Analysis Date: 11/2/2018 10:53 AM		
Client ID:		Run ID: WETCHEM_181102C			SeqNo: 5362535		Prep Date: 11/1/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

pH 7.82 0.10 0 0 0 0-0 7.8 0.256 20

DUP				Sample ID: 18101898-03A DUP				Units: s.u.		Analysis Date: 11/2/2018 10:53 AM			
Client ID: MBLC325-SS3				Run ID: WETCHEM_181102C				SeqNo: 5362541		Prep Date: 11/1/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			

pH 7.89 0.10 0 0 0 0-0 7.91 0.253 20

The following samples were analyzed in this batch:

18101898-01A	18101898-02A	18101898-03A
18101898-04A		

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

Client: Entrada Consulting Group
Work Order: 18101898
Project: MB Larson C 3-25 Spill

QC BATCH REPORT

Batch ID: **127575** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

DUP		Sample ID: 18101898-04BDUP				Units: mmhos/cm @25°		Analysis Date: 11/8/2018 01:00 PM		
Client ID: MBLC325-BG1			Run ID: WETCHEM_181108H			SeqNo: 5374725		Prep Date: 11/7/2018		DF: 20
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	4.72	0.10	0	0	0		4.92	4.15	50	

The following samples were analyzed in this batch:

18101898-01B	18101898-02B	18101898-03B
18101898-04B		

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

Client: Entrada Consulting Group
Work Order: 18101898
Project: MB Larson C 3-25 Spill

QC BATCH REPORT

Batch ID: **127690** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-127690-127690				Units: mg/Kg		Analysis Date: 11/9/2018 12:05 PM		
Client ID:		Run ID: WETCHEM_181109F		SeqNo: 5377215		Prep Date: 11/9/2018		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-127690-127690				Units: mg/Kg		Analysis Date: 11/9/2018 12:05 PM		
Client ID:		Run ID: WETCHEM_181109F		SeqNo: 5377216		Prep Date: 11/9/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4.23 1.0 5 0 84.6 80-120 0

MS		Sample ID: 18101898-04A MS				Units: mg/Kg		Analysis Date: 11/9/2018 12:05 PM		
Client ID: MBLC325-BG1		Run ID: WETCHEM_181109F		SeqNo: 5377227		Prep Date: 11/9/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 3.354 1.0 5.051 0.596 54.6 75-125 0 S

MS		Sample ID: 18101898-04A MSI				Units: mg/Kg		Analysis Date: 11/9/2018 12:05 PM		
Client ID: MBLC325-BG1		Run ID: WETCHEM_181109F		SeqNo: 5377229		Prep Date: 11/9/2018		DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 1813 100 2364 0.596 76.7 75-125 0

MSD		Sample ID: 18101898-04A MSD				Units: mg/Kg		Analysis Date: 11/9/2018 12:05 PM		
Client ID: MBLC325-BG1		Run ID: WETCHEM_181109F		SeqNo: 5377228		Prep Date: 11/9/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 3.97 1.0 5 0.596 67.5 75-125 3.354 16.8 20 S

The following samples were analyzed in this batch:

18101898-01A	18101898-02A	18101898-03A
18101898-04A		

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

Client: Entrada Consulting Group
 Work Order: 18101898
 Project: MB Larson C 3-25 Spill

QC BATCH REPORT

Batch ID: **R248907** Instrument ID **MOIST** Method: **SW3550C**

MBLK		Sample ID: WBLKS-R248907				Units: % of sample		Analysis Date: 11/8/2018 06:52 PM		
Client ID:		Run ID: MOIST_181108B				SeqNo: 5376616		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	0.03	0.050								J

LCS		Sample ID: LCS-R248907				Units: % of sample		Analysis Date: 11/8/2018 06:52 PM		
Client ID:		Run ID: MOIST_181108B				SeqNo: 5376615		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	0.050	100	0	100	99.5-100.5	0			

DUP		Sample ID: 1811541-01B DUP				Units: % of sample		Analysis Date: 11/8/2018 06:52 PM		
Client ID:		Run ID: MOIST_181108B				SeqNo: 5376609		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	20.5	0.050	0	0	0	0-0	20.65	0.729	10	

DUP		Sample ID: 1811541-04B DUP				Units: % of sample		Analysis Date: 11/8/2018 06:52 PM		
Client ID:		Run ID: MOIST_181108B				SeqNo: 5376613		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	22.05	0.050	0	0	0	0-0	22.31	1.17	10	

The following samples were analyzed in this batch:

18101898-01A	18101898-02A	18101898-03A
18101898-04A		

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



Page 1 of 1

COC ID: 123456

- | | | |
|--|--|--|
| <input type="checkbox"/> Cincinnati, OH
+1 513 733 5336 | <input checked="" type="checkbox"/> Holland, MI
+1 616 399 6070 | <input type="checkbox"/> Salt Lake City, UT
+1 801 266 7700 |
| <input type="checkbox"/> Everett, WA
+1 425 356 2600 | <input type="checkbox"/> Houston, TX
+1 281 530 5656 | <input type="checkbox"/> Spring City, PA
+1 610 948 4903 |
| <input type="checkbox"/> Fort Collins, CO
+1 970 490 1511 | <input type="checkbox"/> Middletown, PA
+1 717 944 5541 | <input type="checkbox"/> York, PA
+1 717 505 5280 |

Environmental		ALS Project Manager:				Work Order #:		18101898												
Customer Information			Project Information				Parameter/Method Request for Analysis													
Purchase Order			Project Name				A TPH (GRO & DRO)													
Work Order			Project Number				B BTEX													
Company Name			Bill To Company				C PAH (See Attached List) CO Table 910													
Send Report To			Invoice Attn.				D Electrical Conductivity													
Address			Address				E Sodium Adsorption Ratio													
							F pH													
City/State/Zip			City/State/Zip				G Metals (See Attached List) CO Table 910													
Phone			Phone				H Arsenic Only													
Fax			Fax				I													
e-Mail Address			e-Mail Address				J													
No.	Sample Description		Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold		
1	MBLC325 -SS1		10/25/18	845	Soil	8	2	X	X	X	X	X	X	X						
2	MBLC325 -SS2		10/25/18	855	Soil	8	2	X	X	X	X	X	X	X						
3	MBLC325 -SS3		10/25/18	905	Soil	8	2	X	X	X	X	X	X	X						
4	MBLC325 -BG1		10/25/18	915	Soil	8	2				X	X	X	X						
5																				
6																				
7																				
8																				
9																				
10																				
Sampler(s): Please Print & Sign			Shipment Method:			Required Turnaround Time:						Results Due Date:								
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 <input type="checkbox"/> Other _____														
Relinquished by:		Date:	Time:	Received by:			Notes: Chevron Pricing Applies - Per Bruce Schiatter													
		10/26/18																		
Relinquished by:		Date:	Time:	Received by (Laboratory):			Cooler Temp.		QC Package: (Check Box Below)											
		10-26-18	1830				5.4°		<input checked="" type="checkbox"/> Level II: Standard QC <input type="checkbox"/> Level III: Std QC + Raw Data <input type="checkbox"/> Level IV: SW846 CLP-Like <input type="checkbox"/> Other: _____											
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):																
Ken		10/27/18	1130																	
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: **27-Oct-18 10:00**

Work Order: **18101898**

Received by: **KRW**

Checklist completed by Keith Wurenga
eSignature

29-Oct-18
Date

Reviewed by: Chad Whelton
eSignature

29-Oct-18
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>5.4/5.4 C</u>		<u>SR2</u>
Cooler(s)/Kit(s):	<u></u>		
Date/Time sample(s) sent to storage:	<u>10/29/2018 1:56:50 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: