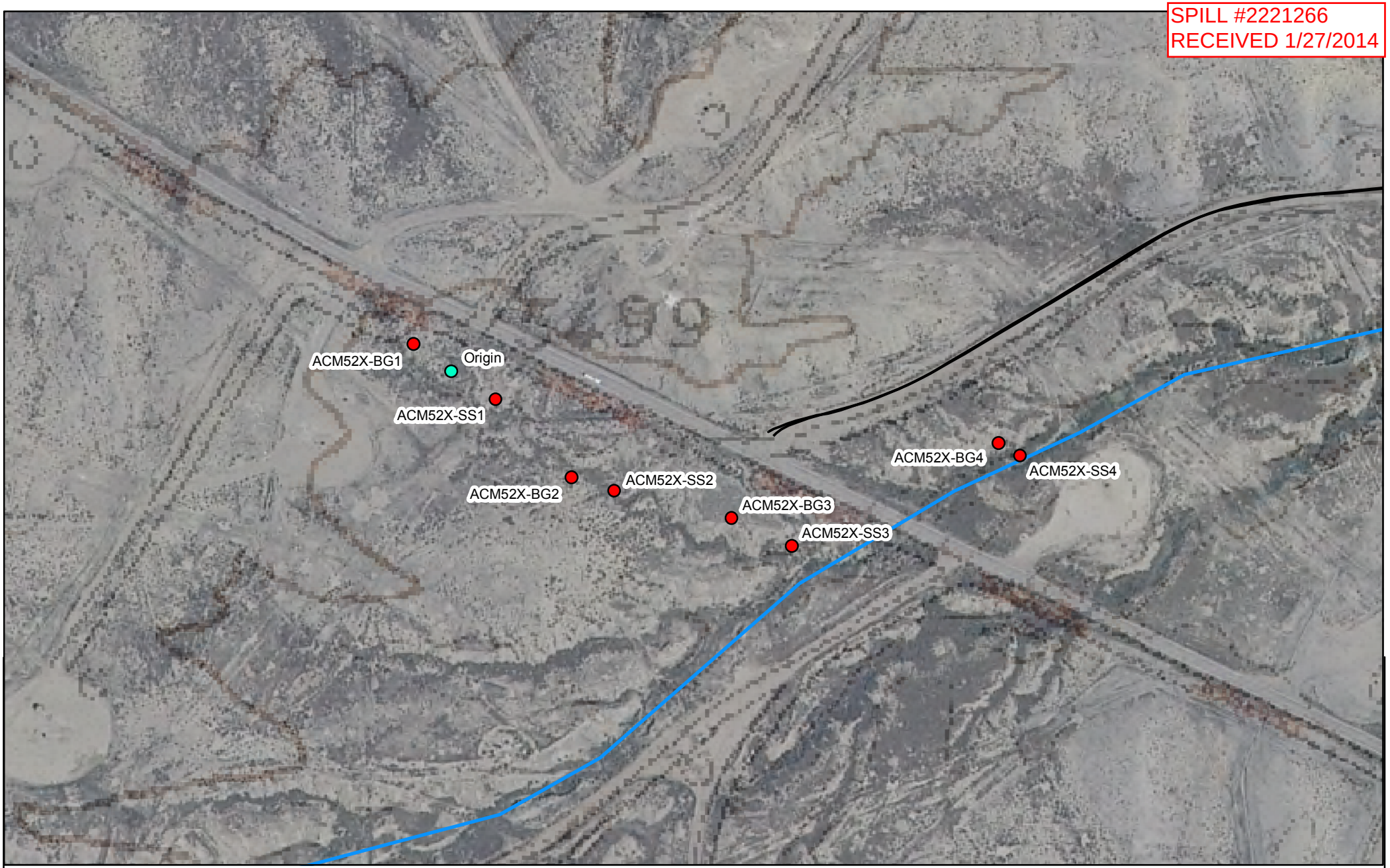
SPILL #2221266
RECEIVED 1/27/2014



Spill Origin
Soil Sample Locations
Chevron Roads
Streams

0 250 500 1,000 Feet

1 inch = 250 feet

N
W E
S

PROJECT NO:	009-0082
DRAWN BY:	Sara Stoddart
DATE:	12/12/2011

AC MCLAUGHLIN 52X
SPILL RESPONSE
CHEVRON USA, INC
RIO BLANCO COUNTY, COLORADO

OLSSON ASSOCIATES
826 21-1/2 ROAD
GRAND JUNCTION,
CO 81505
TEL 970.263.7800
FAX 970.263.7456

FIGURE
1

Table 1
AC McLaughlin 52X Spill Response
Soil Data Summary

SAMPLE SUMMARY	
Location Description	AC McLaughlin 52X Spill
Sample Type	Soil

LABORATORY DATA SUMMARY														
Sample ID	ACM52X-SS1	ACM52X-SS1	ACM52X-SS1	ACM52X-SS2	ACM52X-SS2	ACM52X-SS3	ACM52SX-SS3	ACM52SX-SS4	ACM52X-BG1	ACM52X-BG2	ACM52X-BG3	ACM52X-BG4	**COGCC TABLE 910-1 CONCENTRATION LEVELS**	**UNITS**
Depth	0-6"	0-6"	0-6"	0-6"	0-6"	0-6"	0-6"	0-6"	0-6"	0-6"	0-6"	0-6"		
Sample Date	11/30/2011	4/4/2012	7/31/2013	11/30/2011	4/4/2012	11/30/2011	4/4/2012	11/30/2011	11/30/2011	11/30/2011	11/30/2011	11/30/2011		
Analytical Parameters														
TPH														
TPH Gasoline Range Organics	0.063	NT	NT	<0.050	NT	<0.050	NT	<0.050	NT	NT	NT	NT	500	mg/kg
TPH Diesel Range Organics	6.6	NT	NT	1.0J	NT	<1.7	NT	31	NT	NT	NT	NT		
BTEX														
Benzene	<0.0050	NT	NT	<0.0050	NT	<0.0050	NT	<0.0050	NT	NT	NT	NT	0.17	mg/kg
Toluene	<0.0050	NT	NT	<0.0050	NT	<0.0050	NT	<0.0050	NT	NT	NT	NT	85	mg/kg
Ethylbenzene	<0.0050	NT	NT	<0.0050	NT	<0.0050	NT	<0.0050	NT	NT	NT	NT	100	mg/kg
Total Xylene	<0.015	NT	NT	<0.015	NT	<0.015	NT	<0.015	NT	NT	NT	NT	175	mg/kg
Metals														
Arsenic	5.43	NT	NT	5.6	NT	5.2	NT	5.0	5.43	5.0	4.09	3.74	0.39	mg/kg
Barium	78.3	NT	NT	77.5	NT	163	NT	79	82.9	NT	NT	NT	15,000	mg/kg
Cadmium	0.173J	NT	NT	0.229J	NT	0.169J	NT	0.170J	0.186J	NT	NT	NT	70	mg/kg
Chromium	6.4	NT	NT	6.57	NT	7.1	NT	7	6.58	NT	NT	NT	NA	mg/kg
Copper	7.8	NT	NT	8.52	NT	8.46	NT	8.7	8.0	NT	NT	NT	3,100	mg/kg
Lead	10.6	NT	NT	10.8	NT	11.6	NT	12.9	10.0	NT	NT	NT	400	mg/kg
Mercury	11.1	NT	NT	14.8	NT	20.2	NT	11	15.6	NT	NT	NT	23	mg/kg
Nickel	10.6	NT	NT	11.2	NT	11	NT	10.5	10.4	NT	NT	NT	1,600	mg/kg
Selenium	1.77	NT	NT	0.679	NT	0.889	NT	1	1.33	NT	NT	NT	390	mg/kg
Silver	<0.483	NT	NT	<0.463	NT	<0.446	NT	<0.454	<0.465	NT	NT	NT	390	mg/kg
Zinc	43.7	NT	NT	45.5	NT	47.3	NT	48	41.2	NT	NT	NT	23,000	mg/kg
SAR Metals Analysis														
Calcium	124	4.63	1430	135	NT	343	4.0	116	96.8	NT	NT	NT	NA	mg/L
Magnesium	<25.0	1.17	26.3	<25.0	NT	36.6	0.78	<0.25	29.4	NT	NT	NT	NA	mg/L
Sodium	788	50.02	57.9	283	NT	1,990	0.47	197	68	NT	NT	NT	NA	mg/L
Sodium Adsorption Ratio	19.5	29.4	0.4	6.71	NT	27.3	0.30	5.04	1.55	NT	NT	NT	<12	
Polynuclear Aromatic Hyrdrocarbons														
Acenaphthene	<0.0066	NT	NT	<0.0066	NT	0.0026J	NT	<0.0066	NT	NT	NT	NT	1,000	mg/kg
Anthracene	<0.0066	NT	NT	<0.0066	NT	<0.0066	NT	<0.0066	NT	NT	NT	NT	1,000	mg/kg
Benzo(a)anthracene	<0.0066	NT	NT	<0.0066	NT	<0.0066	NT	0.0049J	NT	NT	NT	NT	0.22	mg/kg
Benzo(a)pyrene	<0.0066	NT	NT	<0.0066	NT	<0.0066	NT	0.0060J	NT	NT	NT	NT	0.022	mg/kg
Benzo(b)fluoranthene	<0.0066	NT	NT	<0.0066	NT	<0.0066	NT	0.0091	NT	NT	NT	NT	0.22	mg/kg
Benzo(k)fluoranthene	<0.0066	NT	NT	<0.0066	NT	<0.0066	NT	0.0032J	NT	NT	NT	NT	2.2	mg/kg
Chrysene	<0.0066	NT	NT	<0.0066	NT	<0.0066	NT	0.014	NT	NT	NT	NT	22	mg/kg
Dibenzo(a,h)anthracene	<0.0066	NT	NT	<0.0066	NT	<0.0066	NT	<0.0066	NT	NT	NT	NT	0.022	mg/kg
Fluoranthene	<0.0066	NT	NT	<0.0066	NT	0.0019J	NT	0.0079	NT	NT	NT	NT	1,000	mg/kg
Fluorene	<0.0066	NT	NT	<0.0066	NT	<0.0066	NT	0.0041J	NT	NT	NT	NT	1,000	mg/kg
Indeno(1,2,3-cd)pyrene	<0.0066	NT	NT	<0.0066	NT	<0.0066	NT	0.0056J	NT	NT	NT	NT	0.22	mg/kg
Napthalene	<0.0066	NT	NT	0.0021J	NT	0.015	NT	0.0076	NT	NT	NT	NT	23	mg/kg
Pyrene	<0.0066	NT	NT	<0.0066	NT	<0.0066	NT	0.0093	NT	NT	NT	NT	1,000	mg/kg
General Chemistry														
Chromium, Hexavalent	<2.00	NT	NT	<1.99	NT	<1.99	NT	<2.00	<2.00	NT	NT	NT	23	mg/kg
Chromium, Trivalent	6.42	NT	NT	6.57	NT	7	NT	6.88	6.58	NT	NT	NT	120,000	mg/kg
Specific Conductivity	35.7	3.62	NT	4.14	0.62	24.7	0.76	1.56	1.68	NT	NT	NT	<4 or 2 x the background	mmhos/cm
pH	8.36	NT	NT	8.61	NT	8.44	NT	9.19	8.24	NT	NT	NT	6-9	su

mg/kg - milligrams per kilogram
mg/L - milligrams per liter
J - Analyte detected below quantitation limit
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

12-Aug-2013

Tim Dobransky
Olsson Associates
760 Horizon Drive, Suite 102
Grand Junction, Colorado 81506

Tel: (970) 263-7800
Fax: (970) 263-7456

Re: AC McLaughlin 22 Spill 9.0082.203.203004 Work Order: **1308188**

Dear Tim,

ALS Environmental received 1 sample on 03-Aug-2013 09:35 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 11.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Electronically approved by: Jumoke M. Lawal

Sonia West
Project Manager

Certificate No: T104704231-13-12

ALS Environmental

Date: 12-Aug-13

Client: Olsson Associates
Project: AC McLaughlin 22 Spill 9.0082.203.203004
Work Order: **1308188**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1308188-01	ACM52X-SS1	Soil		7/31/2013 14:40	8/3/2013 09:35	☐

Client: Olsson Associates
Project: AC McLaughlin 22 Spill 9.0082.203.203004
Work Order: 1308188

Case Narrative

No Exceptions

ALS Environmental

Date: *12-Aug-13*

Client: Olsson Associates

Project: AC McLaughlin 22 Spill 9.0082.203.203004 **Work Order:** 1308188

Sample ID: ACM52X-SS1 **Lab ID:** 1308188-01

Collection Date: 7/31/2013 02:40 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Prep	Date Analyzed
LA 29B - 1:1 SOLUBLE CATIONS FOR SAR			**LA29B-6020**		La29B-6020		Analyst: **ALR**
Calcium	**1,430**		**4.99**	**mg/L**	10	8/8/2013	8/12/2013 02:23 PM
Magnesium	**26.3**		**4.99**	**mg/L**	10	8/8/2013	8/12/2013 02:23 PM
Sodium	**57.9**		**4.99**	**mg/L**	10	8/8/2013	8/12/2013 02:23 PM
LA29B SODIUM ADSORPTION RATIO			**LA29B SAR**		La29B-6020		Analyst: **ALR**
Sodium Adsorption Ratio	**0.415**		**0.0100**	**meq/meq**	1	8/8/2013	8/12/2013

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

Work Order: 1308188
Client: Olsson Associates
Project: AC McLaughlin 22 Spill 9.0082.203004

DATES REPORT

Sample ID	Client Sample ID	Matrix	Collection Date	TCLP Date	Prep Date	Analysis Date
Batch ID 72131	**Test Name:** La 29B - 1:1 Soluble Cations for SAR					
1308188-01A	ACM52X-SS1	Soil	7/31/2013 2:40:00 PM		8/8/2013 06:00 PM	8/12/2013 02:23 PM
Batch ID 72131A	**Test Name:** La29B Sodium Adsorption Ratio					
1308188-01A	ACM52X-SS1	Soil	7/31/2013 2:40:00 PM		8/8/2013 06:00 PM	8/12/2013

Batch ID: **72131** Instrument ID **ICP7500** Method: **La29B-6020**

MBLK Sample ID: **BLK-SAR-080913-72131** Units: **mg/L** Analysis Date: **8/12/2013 12:42 PM**

Client ID: Run ID: **ICP7500_130812A** SeqNo: **3318762** Prep Date: **8/8/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	U	0.500								
Magnesium	U	0.500								
Sodium	U	0.500								

LCS Sample ID: **LCS-SAR-080913-72131** Units: **mg/L** Analysis Date: **8/12/2013 12:47 PM**

Client ID: Run ID: **ICP7500_130812A** SeqNo: **3318763** Prep Date: **8/8/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	9.695	0.500	10	0	97	80-120				
Magnesium	9.303	0.500	10	0	93	80-120				
Sodium	9.368	0.500	10	0	93.7	80-120				

DUP Sample ID: **1308176-01ADUP** Units: **mg/L** Analysis Date: **8/12/2013 02:03 PM**

Client ID: Run ID: **ICP7500_130812A** SeqNo: **3318778** Prep Date: **8/8/2013** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	128.2	4.99					125.7	2.02	30	
Magnesium	6.882	4.99					6.789	1.35	30	
Sodium	20.73	4.99					19.89	4.13	30	

The following samples were analyzed in this batch: 1308188-01A

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

Client: Olsson Associates
Work Order: 1308188
Project: AC McLaughlin 22 Spill 9.0082.203.203004

QC BATCH REPORT

Batch ID: **72131A** Instrument ID **MISC-Metals** Method: **La29B SAR**

DUP Sample ID: **1308176-01ADUP** Units: **meq/meq** Analysis Date: **8/12/2013**
Client ID: Run ID: **MISC-METALS_130812** SeqNo: **3318700** Prep Date: **8/8/2013** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	0.483	0.0100					0.468	3.15	30	

The following samples were analyzed in this batch: 1308188-01A

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

ALS Environmental

Date: 12-Aug-13

Client: Olsson Associates
Project: AC McLaughlin 22 Spill 9.0082.203.203004
WorkOrder: **1308188**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
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

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
meq/meq	
mg/L	Milligrams per Liter

ALS Environmental

Sample Receipt Checklist

Client Name: **OLSSON ASSOC - GRAND JUNC** Date/Time Received: **03-Aug-13 09:35**

Work Order: **1308188** Received by: **RDH**

Checklist completed by Johnnie B. Allen (eSignature) 05-Aug-13 (Date) Reviewed by: Sonia West (eSignature) 05-Aug-13 (Date)

Matrices: soil
Carrier name: FedEx Saturday Priority

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 ☐	

Temperature(s)/Thermometer(s): 4.6 C/4.6 C; 5.4 C/5.4 C;5.3 C/5.3 C u/c IR 1

Cooler(s)/Kit(s): Large Blue/White;Large Blue/White;Medium Blue/White;

Date/Time sample(s) sent to storage: 08/05/13 14:25

Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑

pH adjusted by:

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

Chain of Custody Form

ALS Environmental

Page 1 of 1

COC ID: 123456

☐ Cincinnati, OH +1 513 733 5336
☐ Everett, WA +1 425 356 2600
☐ Fort Collins, CO +1 970 490 1511

1308188

OLSSON ASSOC - GRAND JUNCTION: Olsson Associates

Project: AC McLaughlin 22 Spill 9.0082.203.203004

ALS Project Manager:

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	AC McLaughlin 22 Spill Followup	A	TPH (GRO & DRO)
Work Order		Project Number	9.0082.203.203004	B	BTEX
Company Name	Olsson Associates	Bill To Company	Olsson Associates	C	PAH (See Attached List)
Send Report To	Tim Dobransky	Invoice Attn	Tim Dobransky	D	Electrical Conductivity
Address	760 Horizon Drive STE 102	Address	760 Horizon Drive STE 102	E	Sodium Adsorption Ratio
				F	pH
City/State/Zip	Grand Junction, CO	City/State/Zip	Grand Junction, CO	G	Metals (See Attached List)
Phone	970.263.7800	Phone	970.263.7800	H	Arsenic Only
Fax	970.263.7456	Fax	970.263.7456	I	Napthalene Only
e-Mail Address	tdobransky@oaconsulting.com	e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	ACM52X-SS1	07/31/13	1440	Soil	NA	1					X						
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign: Tim 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: 8/2/13	Time: 1700	Received by:	Notes: Chevron Pricing Applies - Per Bruce Schlatter
Relinquished by:	Date:	Time:	Received by (Laboratory): 8/2/13 0935	Cooler Temp.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

QC Package: (Check Box Below)

- x 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.

Copyright 2011 by ALS Group

ORIGIN ID: GJTA (970) 270-2986
TIM DOBRANSKY
OLSSON ASSOCIATES, INC.
760 HORIZON DRIVE STE 102

GRAND JUNCTION, CO 81506
UNITED STATES US

SHIP DATE: 02AUG13
ACTWGT: 75.0 LB MAN
CAD: 390082/CAFE2508

BILL SENDER

TO SAMPLE RECEIVING
ALS ENVIRONMENTAL
10450 STANCLIFF RD. #210

HOUSTON TX 77099
(281) 530-5656
PO: 9.0082.203.203004

FedEx Express

2 of 3
MPS# 0263 5632 6808 2949
Mstr# 5632 6808 2938

SATURDAY 12:00P
PRIORITY OVERNIGHT

0201

XØ SGRA

77099
TX-US IAH

ORIGIN ID: GJTA (970) 270-2986
TIM DOBRANSKY
OLSSON ASSOCIATES, INC.
760 HORIZON DRIVE STE 102

GRAND JUNCTION, CO 81506
UNITED STATES US

SHIP DATE: 02AUG13
ACTWGT: 75.0 LB MAN
CAD: 390082/CAFE2608

BILL SENDER

TO SAMPLE RECEIVING
ALS ENVIRONMENTAL
10450 STANCLIFF RD. #210

HOUSTON TX 77099
(281) 530-5656
PO: 9.0082.203.203004

FedEx Express

3 of 3
MPS# 0263 5632 6808 2950
Mstr# 5632 6808 2938

SATURDAY 12:00P
PRIORITY OVERNIGHT

0201

XØ SGRA

77099
TX-US IAH

Part # 156148-434 NRNT 06-07

ORIGIN ID: GJTA (970) 270-2986
TIM DOBRANSKY
OLSSON ASSOCIATES, INC.
760 HORIZON DRIVE STE 102

GRAND JUNCTION, CO 81506
UNITED STATES US

SHIP DATE: 02AUG13
ACTWGT: 75.0 LB MAN
CAD: 390082/CAFE2608

BILL SENDER

TO SAMPLE RECEIVING
ALS ENVIRONMENTAL
10450 STANCLIFF RD. #210

HOUSTON TX 77099
(281) 530-5656
PO: 9.0082.203.203004

FedEx Express

1 of 3
TRK# 0201 5632 6808 2938
MASTER

SATURDAY 12:00P
PRIORITY OVERNIGHT

XØ SGRA

77099
TX-US IAH

Part # 156148-434 NRNT 06-07

ACCUTEST LABORATORIES
CUSTODY SEAL
Signature: [illegible]
Date: 8/2/13

ACCUTEST LABORATORIES
CUSTODY SEAL
Signature: [illegible]
Date: 8/2/13