27-Mar-2015

Blair Rollins
Oxy USA WTP LP
760 Horizon Dr.
Grand Junction, CO 81506

Re: **697-17-50 Spill** Work Order: **1503873**

Dear Blair,

ALS Environmental received 2 samples on 14-Mar-2015 10:30 AM for the analyses presented in the following report.

This is a REVISED REPORT. The Case Narrative provides information discussing the reason for issuing a revised report. The total number of pages in this revision is 27.

If you have any questions regarding these test results, please feel free to contact me.

Sincerely,

Chad Whelton

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Certificate No: MN 532786

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ALS Group USA, Corp

Date: 27-Mar-15

Client: Oxy USA WTP LP
Project: 697-17-50 Spill
Work Order: **1503873**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1503873-01	South East	Soil		3/12/2015 10:00	3/14/2015 10:30	☐
1503873-02	West	Soil		3/12/2015 10:15	3/14/2015 10:30	☐

ALS Group USA, Corp

Date: 27-Mar-15

Client: Oxy USA WTP LP
Project: 697-17-50 Spill
Work Order: 1503873

Case Narrative

Batch 68803, Method SVO_8270_S, Sample 1503873-01B and -02B: The reporting limits for PAHs are elevated due to dilution for high concentrations of non-target analytes.

Revised report sent 3/27/15 due to a client the need for an MDL report.

ALS Group USA, Corp

Date: 27-Mar-15

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 is present at an estimated concentration between the MDL and Report Limit
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
X	Analyte was detected in the Method Blank between the MDL and PQL, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
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

Units Reported	Description
% of sample	Percent of Sample
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, Corp

Date: *27-Mar-15*

Client: Oxy USA WTP LP
Project: 697-17-50 Spill
Sample ID: South East
Collection Date: 3/12/2015 10:00 AM

Work Order: 1503873
Lab ID: 1503873-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015M**			Prep: SW3541 / 3/18/15		Analyst: **IT**
DRO (C10-C28)	**110**		**1.5**	**4.6**	**mg/Kg-dry**	1	3/18/2015 19:20
Surr: 4-Terphenyl-d14	*63.9*			*39-133*	*%REC*	1	3/18/2015 19:20
GASOLINE RANGE ORGANICS BY GC-FID		Method: **SW8015D**			Prep: SW5035 / 3/17/15		Analyst: **IT**
GRO (C6-C10)	ND		1.2	2.8	mg/Kg-dry	1	3/17/2015 21:25
Surr: Toluene-d8	*113*			*50-150*	*%REC*	1	3/17/2015 21:25
MERCURY BY CVAA		Method: **SW7471B**			Prep: SW7471 / 3/18/15		Analyst: **LR**
Mercury	**0.017**		**0.0012**	**0.014**	**mg/Kg-dry**	1	3/18/2015 15:07
METALS ANALYSIS BY ICP		Method: **SW846 6010C**			Prep: SW3050B / 3/18/15		Analyst: **JEC**
Arsenic	**12**		**0.92**	**3.8**	**mg/Kg-dry**	10	3/20/2015 14:16
Barium	**530**		**0.18**	**0.38**	**mg/Kg-dry**	1	3/19/2015 22:07
Cadmium	ND		0.059	0.76	mg/Kg-dry	1	3/19/2015 22:07
Chromium	**14**		**0.12**	**3.8**	**mg/Kg-dry**	10	3/20/2015 14:16
Copper	**19**		**0.041**	**0.76**	**mg/Kg-dry**	1	3/19/2015 22:07
Lead	**12**		**0.045**	**0.38**	**mg/Kg-dry**	1	3/19/2015 22:07
Nickel	**13**		**0.12**	**0.38**	**mg/Kg-dry**	1	3/19/2015 22:07
Selenium	ND		2.3	7.6	mg/Kg-dry	10	3/20/2015 14:16
Silver	ND		0.38	3.8	mg/Kg-dry	10	3/20/2015 14:16
Zinc	**61**		**1.2**	**7.6**	**mg/Kg-dry**	10	3/20/2015 14:16
SOLUBLE CATIONS FOR SAR		Method: **SW846 6010C**			Prep: USDA Method 20B / 3/19/15		Analyst: **JEC**
Calcium	**31**		**0.22**	**5.0**	**mg/L**	10	3/19/2015 14:54
Magnesium	**8.1**		**0.22**	**2.0**	**mg/L**	10	3/19/2015 14:54
Sodium	**230**		**0.24**	**2.0**	**mg/L**	10	3/19/2015 14:54
SODIUM ADSORPTION RATIO		Method: **USDA H60 METHOD 2**			Prep: USDA Method 20B / 3/19/15		Analyst: **JEC**
Exchangeable Sodium Percentage	**12**		**0.010**	**0.010**	**none**	1	3/19/2015
Sodium Adsorption Ratio	**9.7**		**0.010**	**0.010**	**none**	1	3/19/2015
SEMI-VOLATILE ORGANIC COMPOUNDS		Method: **SW846 8270D**			Prep: SW3541 / 3/19/15		Analyst: **RM**
2-Chloronaphthalene	ND		0.017	0.073	mg/Kg-dry	10	3/20/2015 03:02
2-Methylnaphthalene	ND		0.030	0.073	mg/Kg-dry	10	3/20/2015 03:02
Acenaphthene	ND		0.011	0.073	mg/Kg-dry	10	3/20/2015 03:02
Acenaphthylene	ND		0.013	0.073	mg/Kg-dry	10	3/20/2015 03:02
Anthracene	ND		0.014	0.073	mg/Kg-dry	10	3/20/2015 03:02
Benzo(a)anthracene	ND		0.014	0.073	mg/Kg-dry	10	3/20/2015 03:02
Benzo(a)pyrene	ND		0.024	0.073	mg/Kg-dry	10	3/20/2015 03:02
Benzo(b)fluoranthene	ND		0.021	0.073	mg/Kg-dry	10	3/20/2015 03:02

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

ALS Group USA, Corp

Date: *27-Mar-15*

Client: Oxy USA WTP LP
Project: 697-17-50 Spill
Sample ID: South East
Collection Date: 3/12/2015 10:00 AM

Work Order: 1503873
Lab ID: 1503873-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzo(g,h,i)perylene	ND		0.029	0.073	mg/Kg-dry	10	3/20/2015 03:02
Benzo(k)fluoranthene	ND		0.015	0.073	mg/Kg-dry	10	3/20/2015 03:02
Chrysene	ND		0.017	0.073	mg/Kg-dry	10	3/20/2015 03:02
Dibenzo(a,h)anthracene	ND		0.027	0.073	mg/Kg-dry	10	3/20/2015 03:02
Fluoranthene	ND		0.025	0.073	mg/Kg-dry	10	3/20/2015 03:02
Fluorene	ND		0.024	0.073	mg/Kg-dry	10	3/20/2015 03:02
Indeno(1,2,3-cd)pyrene	ND		0.024	0.073	mg/Kg-dry	10	3/20/2015 03:02
Naphthalene	ND		0.027	0.073	mg/Kg-dry	10	3/20/2015 03:02
Phenanthrene	ND		0.015	0.073	mg/Kg-dry	10	3/20/2015 03:02
Pyrene	ND		0.025	0.073	mg/Kg-dry	10	3/20/2015 03:02
Surr: 2-Fluorobiphenyl	*59.8*			*12-100*	*%REC*	10	3/20/2015 03:02
Surr: 4-Terphenyl-d14	*73.4*			*25-137*	*%REC*	10	3/20/2015 03:02
Surr: Nitrobenzene-d5	*50.4*			*37-107*	*%REC*	10	3/20/2015 03:02
VOLATILE ORGANIC COMPOUNDS		Method:	**SW8260B**		Prep: SW5035 / 3/17/15		Analyst: **AK**
Benzene	ND		0.013	0.033	mg/Kg-dry	1	3/18/2015 01:27
Ethylbenzene	ND		0.012	0.033	mg/Kg-dry	1	3/18/2015 01:27
m,p-Xylene	ND		0.025	0.067	mg/Kg-dry	1	3/18/2015 01:27
o-Xylene	ND		0.014	0.033	mg/Kg-dry	1	3/18/2015 01:27
Toluene	ND		0.013	0.033	mg/Kg-dry	1	3/18/2015 01:27
Xylenes, Total	ND		0.039	0.10	mg/Kg-dry	1	3/18/2015 01:27
Surr: 1,2-Dichloroethane-d4	*98.7*			*70-130*	*%REC*	1	3/18/2015 01:27
Surr: 4-Bromofluorobenzene	*96.2*			*70-130*	*%REC*	1	3/18/2015 01:27
Surr: Dibromofluoromethane	*98.0*			*70-130*	*%REC*	1	3/18/2015 01:27
Surr: Toluene-d8	*94.6*			*70-130*	*%REC*	1	3/18/2015 01:27
ELECTRICAL CONDUCTIVITY (SAR)		Method:	**USDA H60 METHOD 2**		Prep: USDA Method 20B / 3/19/15		Analyst: **JB**
Electrical Conductivity @ Saturation	**1.5**		**0.0055**	**0.050**	**mmhos/cm @25°**	10	3/19/2015 16:00
CHROMIUM, TRIVALENT		Method:	**CALCULATION**				Analyst: **MB**
Chromium, Trivalent	**14**		**0.28**	**0.56**	**mg/Kg-dry**	1	3/23/2015 10:00
CHROMIUM, HEXAVALENT		Method:	**SW7196A**		Prep: SW3060A / 3/19/15		Analyst: **MB**
Chromium, Hexavalent	ND		0.14	1.1	mg/Kg-dry	1	3/20/2015 16:00
MOISTURE		Method:	**E160.3M**				Analyst: **EVB**
Moisture	**10**		**0.025**	**0.050**	**% of sample**	1	3/18/2015 14:32
PH		Method:	**SW9045D**		Prep: EXTRACT / 3/17/15		Analyst: **JRF**
pH	**9.8**		**0**		**s.u.**	1	3/17/2015 16:00

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

ALS Group USA, Corp

Date: *27-Mar-15*

Client: Oxy USA WTP LP
Project: 697-17-50 Spill
Sample ID: West
Collection Date: 3/12/2015 10:15 AM

Work Order: 1503873
Lab ID: 1503873-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015M**			Prep: SW3541 / 3/18/15		Analyst: **IT**
DRO (C10-C28)	**130**		**1.6**	**4.9**	**mg/Kg-dry**	1	3/18/2015 19:50
Surr: 4-Terphenyl-d14	*71.7*			*39-133*	*%REC*	1	3/18/2015 19:50
GASOLINE RANGE ORGANICS BY GC-FID		Method: **SW8015D**			Prep: SW5035 / 3/17/15		Analyst: **IT**
GRO (C6-C10)	ND		1.3	3.0	mg/Kg-dry	1	3/17/2015 21:50
Surr: Toluene-d8	*111*			*50-150*	*%REC*	1	3/17/2015 21:50
MERCURY BY CVAA		Method: **SW7471B**			Prep: SW7471 / 3/18/15		Analyst: **LR**
Mercury	**0.015**	J	**0.0013**	**0.015**	**mg/Kg-dry**	1	3/18/2015 15:16
METALS ANALYSIS BY ICP		Method: **SW846 6010C**			Prep: SW3050B / 3/18/15		Analyst: **JEC**
Arsenic	**18**		**0.11**	**0.46**	**mg/Kg-dry**	1	3/19/2015 22:13
Barium	**680**		**0.21**	**0.46**	**mg/Kg-dry**	1	3/19/2015 22:13
Cadmium	ND		0.072	0.92	mg/Kg-dry	1	3/19/2015 22:13
Chromium	**17**		**0.015**	**0.46**	**mg/Kg-dry**	1	3/19/2015 22:13
Copper	**28**		**0.050**	**0.92**	**mg/Kg-dry**	1	3/19/2015 22:13
Lead	**40**		**0.055**	**0.46**	**mg/Kg-dry**	1	3/19/2015 22:13
Nickel	**16**		**0.14**	**0.46**	**mg/Kg-dry**	1	3/19/2015 22:13
Selenium	ND		0.28	0.92	mg/Kg-dry	1	3/20/2015 14:22
Silver	ND		0.046	0.46	mg/Kg-dry	1	3/19/2015 22:13
Zinc	**93**		**0.15**	**0.92**	**mg/Kg-dry**	1	3/19/2015 22:13
SOLUBLE CATIONS FOR SAR		Method: **SW846 6010C**			Prep: USDA Method 20B / 3/19/15		Analyst: **JEC**
Calcium	**160**		**0.22**	**5.0**	**mg/L**	10	3/19/2015 15:00
Magnesium	**56**		**0.22**	**2.0**	**mg/L**	10	3/19/2015 15:00
Sodium	**800**		**0.24**	**2.0**	**mg/L**	10	3/19/2015 15:00
SODIUM ADSORPTION RATIO		Method: **USDA H60 METHOD 2**			Prep: USDA Method 20B / 3/19/15		Analyst: **JEC**
Exchangeable Sodium Percentage	**16**		**0.010**	**0.010**	**none**	1	3/19/2015
Sodium Adsorption Ratio	**14**		**0.010**	**0.010**	**none**	1	3/19/2015
SEMI-VOLATILE ORGANIC COMPOUNDS		Method: **SW846 8270D**			Prep: SW3541 / 3/19/15		Analyst: **RM**
2-Chloronaphthalene	ND		0.018	0.079	mg/Kg-dry	10	3/20/2015 03:22
2-Methylnaphthalene	ND		0.033	0.079	mg/Kg-dry	10	3/20/2015 03:22
Acenaphthene	ND		0.012	0.079	mg/Kg-dry	10	3/20/2015 03:22
Acenaphthylene	ND		0.014	0.079	mg/Kg-dry	10	3/20/2015 03:22
Anthracene	ND		0.015	0.079	mg/Kg-dry	10	3/20/2015 03:22
Benzo(a)anthracene	ND		0.015	0.079	mg/Kg-dry	10	3/20/2015 03:22
Benzo(a)pyrene	ND		0.026	0.079	mg/Kg-dry	10	3/20/2015 03:22
Benzo(b)fluoranthene	ND		0.023	0.079	mg/Kg-dry	10	3/20/2015 03:22

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

ALS Group USA, Corp

Date: *27-Mar-15*

Client: Oxy USA WTP LP
Project: 697-17-50 Spill
Sample ID: West
Collection Date: 3/12/2015 10:15 AM

Work Order: 1503873
Lab ID: 1503873-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzo(g,h,i)perylene	ND		0.031	0.079	mg/Kg-dry	10	3/20/2015 03:22
Benzo(k)fluoranthene	ND		0.017	0.079	mg/Kg-dry	10	3/20/2015 03:22
Chrysene	ND		0.019	0.079	mg/Kg-dry	10	3/20/2015 03:22
Dibenzo(a,h)anthracene	ND		0.029	0.079	mg/Kg-dry	10	3/20/2015 03:22
Fluoranthene	ND		0.027	0.079	mg/Kg-dry	10	3/20/2015 03:22
Fluorene	ND		0.026	0.079	mg/Kg-dry	10	3/20/2015 03:22
Indeno(1,2,3-cd)pyrene	ND		0.026	0.079	mg/Kg-dry	10	3/20/2015 03:22
Naphthalene	ND		0.029	0.079	mg/Kg-dry	10	3/20/2015 03:22
Phenanthrene	ND		0.016	0.079	mg/Kg-dry	10	3/20/2015 03:22
Pyrene	ND		0.027	0.079	mg/Kg-dry	10	3/20/2015 03:22
Surr: 2-Fluorobiphenyl	*57.4*			*12-100*	*%REC*	10	3/20/2015 03:22
Surr: 4-Terphenyl-d14	*73.6*			*25-137*	*%REC*	10	3/20/2015 03:22
Surr: Nitrobenzene-d5	*46.0*			*37-107*	*%REC*	10	3/20/2015 03:22
VOLATILE ORGANIC COMPOUNDS		Method:	**SW8260B**		Prep: SW5035 / 3/17/15		Analyst: **AK**
Benzene	ND		0.014	0.036	mg/Kg-dry	1	3/18/2015 01:52
Ethylbenzene	ND		0.013	0.036	mg/Kg-dry	1	3/18/2015 01:52
m,p-Xylene	ND		0.027	0.072	mg/Kg-dry	1	3/18/2015 01:52
o-Xylene	ND		0.015	0.036	mg/Kg-dry	1	3/18/2015 01:52
Toluene	ND		0.014	0.036	mg/Kg-dry	1	3/18/2015 01:52
Xylenes, Total	ND		0.043	0.11	mg/Kg-dry	1	3/18/2015 01:52
Surr: 1,2-Dichloroethane-d4	*100*			*70-130*	*%REC*	1	3/18/2015 01:52
Surr: 4-Bromofluorobenzene	*97.4*			*70-130*	*%REC*	1	3/18/2015 01:52
Surr: Dibromofluoromethane	*97.8*			*70-130*	*%REC*	1	3/18/2015 01:52
Surr: Toluene-d8	*95.0*			*70-130*	*%REC*	1	3/18/2015 01:52
ELECTRICAL CONDUCTIVITY (SAR)		Method:	**USDA H60 METHOD 2**		Prep: USDA Method 20B / 3/19/15		Analyst: **JB**
Electrical Conductivity @ Saturation	**7.9**		**0.0055**	**0.050**	**mmhos/cm @25°**	10	3/19/2015 16:00
CHROMIUM, TRIVALENT		Method:	**CALCULATION**				Analyst: **MB**
Chromium, Trivalent	**16**		**0.30**	**0.60**	**mg/Kg-dry**	1	3/23/2015 10:00
CHROMIUM, HEXAVALENT		Method:	**SW7196A**		Prep: SW3060A / 3/19/15		Analyst: **MB**
Chromium, Hexavalent	ND		0.15	1.2	mg/Kg-dry	1	3/20/2015 16:00
MOISTURE		Method:	**E160.3M**				Analyst: **EVB**
Moisture	**17**		**0.025**	**0.050**	**% of sample**	1	3/18/2015 14:32
PH		Method:	**SW9045D**		Prep: EXTRACT / 3/17/15		Analyst: **JRF**
pH	**8.8**		**0**		**s.u.**	1	3/17/2015 16:00

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

Batch ID: **68746** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-68746-68746** Units: **mg/Kg** Analysis Date: **3/18/2015 05:21 PM**
Client ID: Run ID: **GC8_150318A** SeqNo: **3185940** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	ND	5.0								
Surr: 4-Terphenyl-d14	*1.496*	0	*2*	0	*74.8*	*39-133*	0			

LCS Sample ID: **DLCSS1-68746-68746** Units: **mg/Kg** Analysis Date: **3/18/2015 05:50 PM**
Client ID: Run ID: **GC8_150318A** SeqNo: **3185941** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	170.7	5.0	200	0	85.3	61-109	0			
Surr: 4-Terphenyl-d14	*1.45*	0	*2*	0	*72.5*	*39-133*	0			

MS Sample ID: **1503873-01B MS** Units: **mg/Kg** Analysis Date: **3/18/2015 06:20 PM**
Client ID: **South East** Run ID: **GC8_150318A** SeqNo: **3185942** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	324.6	8.0	319.2	95.13	71.9	48-110	0			
Surr: 4-Terphenyl-d14	*2.048*	0	*3.192*	0	*64.2*	*39-133*	0			

MSD Sample ID: **1503873-01B MSD** Units: **mg/Kg** Analysis Date: **3/18/2015 06:50 PM**
Client ID: **South East** Run ID: **GC8_150318A** SeqNo: **3185943** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	405.8	8.3	332.3	95.13	93.5	48-110	324.6	22.2	30	
Surr: 4-Terphenyl-d14	*2.505*	0	*3.323*	0	*75.4*	*39-133*	2.048	*20.1*	*30*	

The following samples were analyzed in this batch: 1503873-01B 1503873-02B

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

Client: Oxy USA WTP LP
Work Order: 1503873
Project: 697-17-50 Spill

QC BATCH REPORT

Batch ID: **68714** Instrument ID **GC9** Method: **SW8015D**

MBLK Sample ID: **MBLK-68714-68714** Units: **µg/Kg** Analysis Date: **3/17/2015 05:17 PM**
Client ID: Run ID: **GC9_150317A** SeqNo: **3182913** Prep Date: **3/17/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	2,500								
Surr: Toluene-d8	*4896*	0	*5000*	0	*97.9*	*50-150*	0			

LCS Sample ID: **LCS-68714-68714** Units: **µg/Kg** Analysis Date: **3/17/2015 04:54 PM**
Client ID: Run ID: **GC9_150317A** SeqNo: **3182912** Prep Date: **3/17/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	493800	2,500	500000	0	98.8	70-130	0			
Surr: Toluene-d8	*4812*	0	*5000*	0	*96.2*	*50-150*	0			

MS Sample ID: **1503878-01B MS** Units: **µg/Kg** Analysis Date: **3/17/2015 08:11 PM**
Client ID: Run ID: **GC9_150317A** SeqNo: **3182920** Prep Date: **3/17/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	457400	2,500	500000	0	91.5	70-130	0			
Surr: Toluene-d8	*4528*	0	*5000*	0	*90.6*	*50-150*	0			

MSD Sample ID: **1503878-01B MSD** Units: **µg/Kg** Analysis Date: **3/17/2015 08:36 PM**
Client ID: Run ID: **GC9_150317A** SeqNo: **3182921** Prep Date: **3/17/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	444400	2,500	500000	0	88.9	70-130	457400	2.88	30	
Surr: Toluene-d8	*4934*	0	*5000*	0	*98.7*	*50-150*	4528	*8.57*	*30*	

The following samples were analyzed in this batch: 1503873-01A 1503873-02A

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

Client: Oxy USA WTP LP
Work Order: 1503873
Project: 697-17-50 Spill

QC BATCH REPORT

Batch ID: **68754** Instrument ID **HG1** Method: **SW7471B**

MBLK Sample ID: **MBLK-68754-68754** Units: **mg/Kg** Analysis Date: **3/18/2015 02:17 PM**
Client ID: Run ID: **HG1_150318A** SeqNo: **3184183** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.020								

LCS Sample ID: **LCS-68754-68754** Units: **mg/Kg** Analysis Date: **3/18/2015 02:19 PM**
Client ID: Run ID: **HG1_150318A** SeqNo: **3184185** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1758	0.020	0.1665	0	106	80-120	0			

MS Sample ID: **1503768-02CMS** Units: **mg/Kg** Analysis Date: **3/18/2015 02:26 PM**
Client ID: Run ID: **HG1_150318A** SeqNo: **3184191** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1295	0.012	0.1038	0.0193	106	75-125	0			

MSD Sample ID: **1503768-02CMSD** Units: **mg/Kg** Analysis Date: **3/18/2015 02:28 PM**
Client ID: Run ID: **HG1_150318A** SeqNo: **3184192** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.132	0.013	0.1052	0.0193	107	75-125	0.1295	1.94	35	

The following samples were analyzed in this batch: 1503873-01B 1503873-02B

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

Client: Oxy USA WTP LP
Work Order: 1503873
Project: 697-17-50 Spill

QC BATCH REPORT

Batch ID: **68751** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK Sample ID: **MBLK-68751-68751** Units: **mg/L** Analysis Date: **3/19/2015 12:44 PM**
Client ID: Run ID: **ICP2_150319A** SeqNo: **3185387** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	ND	0.50								
Chromium	0.01543	0.25								J
Copper	ND	0.50								
Lead	ND	0.25								
Nickel	ND	0.25								
Selenium	ND	0.50								
Silver	ND	0.25								
Zinc	ND	0.50								

LCS Sample ID: **LCS-68751-68751** Units: **mg/L** Analysis Date: **3/19/2015 12:50 PM**
Client ID: Run ID: **ICP2_150319A** SeqNo: **3185388** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.821	0.25	5	0	96.4	80-120	0			
Barium	4.89	0.25	5	0	97.8	80-120	0			
Cadmium	4.739	0.50	5	0	94.8	80-120	0			
Chromium	5.117	0.25	5	0	102	80-120	0			
Copper	5.151	0.50	5	0	103	80-120	0			
Lead	5.16	0.25	5	0	103	80-120	0			
Nickel	5.022	0.25	5	0	100	80-120	0			
Selenium	4.912	0.50	5	0	98.2	80-120	0			
Silver	5.414	0.25	5	0	108	80-120	0			
Zinc	5.071	0.50	5	0	101	80-120	0			

MS Sample ID: **1503840-01BMS** Units: **mg/Kg** Analysis Date: **3/19/2015 01:02 PM**
Client ID: Run ID: **ICP2_150319A** SeqNo: **3185390** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	20.19	0.38	7.564	11.23	118	75-125	0			
Barium	687.6	0.38	7.564	870.1	-2410	75-125	0			SO
Cadmium	7.287	0.76	7.564	-0.008671	96.5	75-125	0			
Chromium	31.59	0.38	7.564	22.32	123	75-125	0			
Copper	29.69	0.76	7.564	21.78	105	75-125	0			
Lead	20.72	0.38	7.564	9.134	153	75-125	0			S
Nickel	28.06	0.38	7.564	15.24	169	75-125	0			S
Selenium	8.513	0.76	7.564	-0.02683	113	75-125	0			
Silver	9.255	0.38	7.564	-0.07646	123	75-125	0			
Zinc	60.48	0.76	7.564	50.87	127	75-125	0			SO

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

Client: Oxy USA WTP LP
Work Order: 1503873
Project: 697-17-50 Spill

QC BATCH REPORT

Batch ID: **68751** Instrument ID **ICP2** Method: **SW846 6010C**

MSD Sample ID: **1503840-01BMSD** Units: **mg/Kg** Analysis Date: **3/19/2015 01:07 PM**
Client ID: Run ID: **ICP2_150319A** SeqNo: **3185391** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	18.49	0.38	7.645	11.23	95	75-125	20.19	8.8	20	
Barium	591.5	0.38	7.645	870.1	-3640	75-125	687.6	15	20	SO
Cadmium	7.479	0.76	7.645	-0.008671	97.9	75-125	7.287	2.6	20	
Chromium	20.17	0.38	7.645	22.32	-28	75-125	31.59	44.1	20	SR
Copper	27.73	0.76	7.645	21.78	77.9	75-125	29.69	6.82	20	
Lead	16.33	0.38	7.645	9.134	94.2	75-125	20.72	23.7	20	R
Nickel	19.11	0.38	7.645	15.24	50.6	75-125	28.06	37.9	20	SR
Selenium	8.208	0.76	7.645	-0.02683	108	75-125	8.513	3.64	20	
Silver	9.294	0.38	7.645	-0.07646	123	75-125	9.255	0.418	20	
Zinc	58.44	0.76	7.645	50.87	99	75-125	60.48	3.43	20	O

The following samples were analyzed in this batch: 1503873-01B 1503873-02B

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

Client: Oxy USA WTP LP
Work Order: 1503873
Project: 697-17-50 Spill

QC BATCH REPORT

Batch ID: **68773** Instrument ID **ICP2** Method: **SW846 6010C**

DUP Sample ID: **1503898-01ADUP** Units: **mg/L** Analysis Date: **3/19/2015 03:11 PM**
Client ID: Run ID: **ICP2_150319A** SeqNo: **3185811** Prep Date: **3/19/2015** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	424.8	5.0	0	0	0	0-0	439.5	3.42		
Magnesium	139.3	2.0	0	0	0	0-0	144.9	3.92		
Sodium	2083	2.0	0	0	0	0-0	2152	3.23		

DUP Sample ID: **1503898-01ADUP** Units: **none** Analysis Date: **3/19/2015**
Client ID: Run ID: **SAR_150319A** SeqNo: **3185887** Prep Date: **3/19/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Exchangeable Sodium Percentage	24.14	0.010	0	0	0		24.41	1.13	50	
Sodium Adsorption Ratio	22.42	0.010	0	0	0		22.75	1.44	50	

The following samples were analyzed in this batch: 1503873-01C 1503873-02C

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

Client: Oxy USA WTP LP
Work Order: 1503873
Project: 697-17-50 Spill

QC BATCH REPORT

Batch ID: **68803** Instrument ID **SVMS8** Method: **SW846 8270D**

MBLK Sample ID: **SBLKS1-68803-68803** Units: **µg/Kg** Analysis Date: **3/19/2015 05:28 PM**
Client ID: Run ID: **SVMS8_150319A** SeqNo: **3187576** Prep Date: **3/19/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Chloronaphthalene	ND	6.7								
2-Methylnaphthalene	ND	6.7								
Acenaphthene	ND	6.7								
Acenaphthylene	ND	6.7								
Anthracene	ND	6.7								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Chrysene	ND	6.7								
Dibenzo(a,h)anthracene	ND	6.7								
Fluoranthene	ND	6.7								
Fluorene	ND	6.7								
Indeno(1,2,3-cd)pyrene	ND	6.7								
Naphthalene	ND	6.7								
Phenanthrene	ND	6.7								
Pyrene	ND	6.7								
Surr: 2-Fluorobiphenyl	*1282*	0	*1667*	0	*76.9*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1696*	0	*1667*	0	*102*	*25-137*	0			
Surr: Nitrobenzene-d5	*1453*	0	*1667*	0	*87.2*	*37-107*	0			

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

Client: Oxy USA WTP LP
Work Order: 1503873
Project: 697-17-50 Spill

QC BATCH REPORT

Batch ID: **68803** Instrument ID **SVMS8** Method: **SW846 8270D**

LCS Sample ID: **SLCSS1-68803-68803** Units: **µg/Kg** Analysis Date: **3/19/2015 05:49 PM**
Client ID: Run ID: **SVMS8_150319A** SeqNo: **3187577** Prep Date: **3/19/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Chloronaphthalene	442	6.7	666.7	0	66.3	45-105	0			
2-Methylnaphthalene	423	6.7	666.7	0	63.4	45-105	0			
Acenaphthene	456.3	6.7	666.7	0	68.4	45-110	0			
Acenaphthylene	488	6.7	666.7	0	73.2	45-105	0			
Anthracene	602	6.7	666.7	0	90.3	55-105	0			
Benzo(a)anthracene	620.3	6.7	666.7	0	93	50-110	0			
Benzo(a)pyrene	626.7	6.7	666.7	0	94	50-110	0			
Benzo(b)fluoranthene	650	6.7	666.7	0	97.5	45-115	0			
Benzo(g,h,i)perylene	596	6.7	666.7	0	89.4	40-125	0			
Benzo(k)fluoranthene	620.3	6.7	666.7	0	93	45-115	0			
Chrysene	614	6.7	666.7	0	92.1	55-110	0			
Dibenzo(a,h)anthracene	605	6.7	666.7	0	90.7	40-125	0			
Fluoranthene	608.3	6.7	666.7	0	91.2	55-115	0			
Fluorene	492	6.7	666.7	0	73.8	50-110	0			
Indeno(1,2,3-cd)pyrene	599	6.7	666.7	0	89.8	40-120	0			
Naphthalene	429.3	6.7	666.7	0	64.4	40-105	0			
Phenanthrene	543	6.7	666.7	0	81.4	50-110	0			
Pyrene	650.7	6.7	666.7	0	97.6	45-125	0			
Surr: 2-Fluorobiphenyl	*1089*	0	*1667*	0	*65.3*	*12-100*	0			
Surr: 4-Terphenyl-d14	*1611*	0	*1667*	0	*96.7*	*25-137*	0			
Surr: Nitrobenzene-d5	*1243*	0	*1667*	0	*74.6*	*37-107*	0			

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

Client: Oxy USA WTP LP
Work Order: 1503873
Project: 697-17-50 Spill

QC BATCH REPORT

Batch ID: **68803** Instrument ID **SVMS8** Method: **SW846 8270D**

MS Sample ID: **1503870-03B MS** Units: **µg/Kg** Analysis Date: **3/19/2015 07:37 PM**
Client ID: Run ID: **SVMS8_150319A** SeqNo: **3187581** Prep Date: **3/19/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Chloronaphthalene	932.4	13	1298	0	71.8	45-105	0			
2-Methylnaphthalene	930.4	13	1298	3.886	71.4	45-105	0			
Acenaphthene	868.2	13	1298	0	66.9	45-110	0			
Acenaphthylene	1028	13	1298	0	79.2	45-105	0			
Anthracene	1111	13	1298	0	85.6	55-105	0			
Benzo(a)anthracene	1171	13	1298	9.716	89.5	50-110	0			
Benzo(a)pyrene	1224	13	1298	9.716	93.6	50-110	0			
Benzo(b)fluoranthene	1174	13	1298	10.36	89.7	45-115	0			
Benzo(g,h,i)perylene	1208	13	1298	7.773	92.5	40-125	0			
Benzo(k)fluoranthene	1139	13	1298	5.83	87.3	45-115	0			
Chrysene	1123	13	1298	5.83	86.1	55-110	0			
Dibenzo(a,h)anthracene	1197	13	1298	0	92.2	40-125	0			
Fluoranthene	1105	13	1298	12.63	84.2	55-115	0			
Fluorene	973.3	13	1298	0	75	50-110	0			
Indeno(1,2,3-cd)pyrene	1276	13	1298	9.716	97.5	40-120	0			
Naphthalene	918.8	13	1298	0	70.8	40-105	0			
Phenanthrene	1026	13	1298	12.63	78.1	50-110	0			
Pyrene	1235	13	1298	11.98	94.2	45-125	0			
Surr: 2-Fluorobiphenyl	*2303*	0	*3244*	0	*71*	*12-100*	0			
Surr: 4-Terphenyl-d14	*2988*	0	*3244*	0	*92.1*	*25-137*	0			
Surr: Nitrobenzene-d5	*2662*	0	*3244*	0	*82*	*37-107*	0			

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

Client: Oxy USA WTP LP
Work Order: 1503873
Project: 697-17-50 Spill

QC BATCH REPORT

Batch ID: **68803** Instrument ID **SVMS8** Method: **SW846 8270D**

MSD Sample ID: **1503870-03B MSD** Units: **µg/Kg** Analysis Date: **3/19/2015 07:58 PM**

Client ID: Run ID: **SVMS8_150319A** SeqNo: **3187582** Prep Date: **3/19/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Chloronaphthalene	956.9	13	1262	0	75.8	45-105	932.4	2.59	30	
2-Methylnaphthalene	951.2	13	1262	3.886	75	45-105	930.4	2.21	30	
Acenaphthene	890	13	1262	0	70.5	45-110	868.2	2.48	30	
Acenaphthylene	1027	13	1262	0	81.3	45-105	1028	0.143	30	
Anthracene	1133	13	1262	0	89.7	55-105	1111	1.92	30	
Benzo(a)anthracene	1218	13	1262	9.716	95.7	50-110	1171	3.94	30	
Benzo(a)pyrene	1278	13	1262	9.716	100	50-110	1224	4.25	30	
Benzo(b)fluoranthene	1209	13	1262	10.36	94.9	45-115	1174	2.88	30	
Benzo(g,h,i)perylene	1252	13	1262	7.773	98.5	40-125	1208	3.54	30	
Benzo(k)fluoranthene	1165	13	1262	5.83	91.8	45-115	1139	2.3	30	
Chrysene	1146	13	1262	5.83	90.3	55-110	1123	2.04	30	
Dibenzo(a,h)anthracene	1241	13	1262	0	98.3	40-125	1197	3.59	30	
Fluoranthene	1136	13	1262	12.63	89	55-115	1105	2.78	30	
Fluorene	998.5	13	1262	0	79.1	50-110	973.3	2.56	30	
Indeno(1,2,3-cd)pyrene	1327	13	1262	9.716	104	40-120	1276	3.93	30	
Naphthalene	932.9	13	1262	0	73.9	40-105	918.8	1.53	30	
Phenanthrene	1037	13	1262	12.63	81.1	50-110	1026	1.09	30	
Pyrene	1260	13	1262	11.98	98.9	45-125	1235	2.06	30	
Surr: 2-Fluorobiphenyl	*2304*	0	*3156*	0	*73*	*12-100*	2303	*0.0754*	*40*	
Surr: 4-Terphenyl-d14	*3073*	0	*3156*	0	*97.4*	*25-137*	2988	*2.8*	*40*	
Surr: Nitrobenzene-d5	*2744*	0	*3156*	0	*87*	*37-107*	2662	*3.07*	*40*	

The following samples were analyzed in this batch: 1503873-01B 1503873-02B

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

Client: Oxy USA WTP LP
Work Order: 1503873
Project: 697-17-50 Spill

QC BATCH REPORT

Batch ID: **68713** Instrument ID **VMS5** Method: **SW8260B**

MBLK Sample ID: **MBLK-68713-68713** Units: **µg/Kg** Analysis Date: **3/17/2015 04:46 PM**
Client ID: Run ID: **VMS5_150317A** SeqNo: **3182178** Prep Date: **3/17/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	30								
Ethylbenzene	ND	30								
m,p-Xylene	ND	60								
o-Xylene	ND	30								
Toluene	ND	30								
Xylenes, Total	ND	90								
Surr: 1,2-Dichloroethane-d4	*984*	0	*1000*	0	*98.4*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*989.5*	0	*1000*	0	*99*	*70-130*	0			
Surr: Dibromofluoromethane	*998*	0	*1000*	0	*99.8*	*70-130*	0			
Surr: Toluene-d8	*1012*	0	*1000*	0	*101*	*70-130*	0			

LCS Sample ID: **LCS-68713-68713** Units: **µg/Kg** Analysis Date: **3/17/2015 03:29 PM**
Client ID: Run ID: **VMS5_150317A** SeqNo: **3182177** Prep Date: **3/17/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1029	30	1000	0	103	75-125	0			
Ethylbenzene	1063	30	1000	0	106	75-125	0			
m,p-Xylene	2148	60	2000	0	107	80-125	0			
o-Xylene	1062	30	1000	0	106	75-125	0			
Toluene	1042	30	1000	0	104	70-125	0			
Xylenes, Total	3211	90	3000	0	107	75-125	0			
Surr: 1,2-Dichloroethane-d4	*988*	0	*1000*	0	*98.8*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1010*	0	*1000*	0	*101*	*70-130*	0			
Surr: Dibromofluoromethane	*1016*	0	*1000*	0	*102*	*70-130*	0			
Surr: Toluene-d8	*1001*	0	*1000*	0	*100*	*70-130*	0			

MS Sample ID: **1503886-05A MS** Units: **µg/Kg** Analysis Date: **3/18/2015 11:53 PM**
Client ID: Run ID: **VMS7_150318A** SeqNo: **3185566** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1015	30	1000	17	99.8	75-125	0			
Ethylbenzene	1012	30	1000	16.5	99.5	75-125	0			
m,p-Xylene	2092	60	2000	28.5	103	80-125	0			
o-Xylene	977.5	30	1000	0	97.8	75-125	0			
Toluene	986	30	1000	0	98.6	70-125	0			
Xylenes, Total	3070	90	3000	28	101	75-125	0			
Surr: 1,2-Dichloroethane-d4	*946*	0	*1000*	0	*94.6*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1002*	0	*1000*	0	*100*	*70-130*	0			
Surr: Dibromofluoromethane	*961.5*	0	*1000*	0	*96.2*	*70-130*	0			
Surr: Toluene-d8	*941*	0	*1000*	0	*94.1*	*70-130*	0			

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

Client: Oxy USA WTP LP
Work Order: 1503873
Project: 697-17-50 Spill

QC BATCH REPORT

Batch ID: **68713** Instrument ID **VMS5** Method: **SW8260B**

MSD Sample ID: **1503886-05A MSD** Units: **µg/Kg** Analysis Date: **3/19/2015 12:18 PM**
Client ID: Run ID: **VMS7_150318A** SeqNo: **3185568** Prep Date: **3/18/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1120	30	1000	17	110	75-125	1015	9.79	30	
Ethylbenzene	1119	30	1000	16.5	110	75-125	1012	10.1	30	
m,p-Xylene	2278	60	2000	28.5	112	80-125	2092	8.51	30	
o-Xylene	1082	30	1000	0	108	75-125	977.5	10.2	30	
Toluene	1078	30	1000	0	108	70-125	986	8.87	30	
Xylenes, Total	3361	90	3000	28	111	75-125	3070	9.05	30	
Surr: 1,2-Dichloroethane-d4	*956.5*	0	*1000*	0	*95.6*	*70-130*	946	*1.1*	*30*	
Surr: 4-Bromofluorobenzene	*989*	0	*1000*	0	*98.9*	*70-130*	1002	*1.26*	*30*	
Surr: Dibromofluoromethane	*967.5*	0	*1000*	0	*96.8*	*70-130*	961.5	*0.622*	*30*	
Surr: Toluene-d8	*944.5*	0	*1000*	0	*94.4*	*70-130*	941	*0.371*	*30*	

The following samples were analyzed in this batch: 1503873-01A 1503873-02A

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

Client: Oxy USA WTP LP
Work Order: 1503873
Project: 697-17-50 Spill

QC BATCH REPORT

Batch ID: **68717** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **LCS-68717-68717** Units: **s.u.** Analysis Date: **3/17/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150317M** SeqNo: **3181743** Prep Date: **3/17/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	3.95	0	4	0	98.8	90-110	0			

DUP Sample ID: **1503833-04A DUP** Units: **s.u.** Analysis Date: **3/17/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150317M** SeqNo: **3181754** Prep Date: **3/17/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7	0	0	0	0	0-0	7.15	2.12	20	

DUP Sample ID: **1503886-05B DUP** Units: **s.u.** Analysis Date: **3/17/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150317M** SeqNo: **3181763** Prep Date: **3/17/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.87	0	0	0	0	0-0	7.88	0.127	20	H

The following samples were analyzed in this batch: 1503873-01B 1503873-02B

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

Client: Oxy USA WTP LP
Work Order: 1503873
Project: 697-17-50 Spill

QC BATCH REPORT

Batch ID: **68773** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

DUP	Sample ID: **1503898-01A DUP**					Units: **mmhos/cm @25°**		Analysis Date: **3/19/2015 04:00 PM**		
Client ID:		Run ID: **WETCHEM_150319O**				SeqNo: **3185933**		Prep Date: **3/19/2015**		DF: **10**
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	15.09	0.050	0	0	0		15.62	3.45	50	

The following samples were analyzed in this batch: 1503873-01C 1503873-02C

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

Client: Oxy USA WTP LP
Work Order: 1503873
Project: 697-17-50 Spill

QC BATCH REPORT

Batch ID: **68890** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK Sample ID: **MBLK-68890-68890** Units: **mg/Kg** Analysis Date: **3/20/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150320N** SeqNo: **3188483** Prep Date: **3/19/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	ND	1.0								

LCS Sample ID: **LCS-68890-68890** Units: **mg/Kg** Analysis Date: **3/20/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150320N** SeqNo: **3188482** Prep Date: **3/19/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	5.04	1.0	5	0	101	80-120	0			

MS Sample ID: **1503832-01B MS** Units: **mg/Kg** Analysis Date: **3/20/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150320N** SeqNo: **3188468** Prep Date: **3/19/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	4.346	0.93	4.673	0.1101	90.6	75-125	0			

MS Sample ID: **1503832-01B MSI** Units: **mg/Kg** Analysis Date: **3/20/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150320N** SeqNo: **3188470** Prep Date: **3/19/2015** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	2963	93	3203	0.1101	92.5	75-125	0			

MSD Sample ID: **1503832-01B MSD** Units: **mg/Kg** Analysis Date: **3/20/2015 04:00 PM**
Client ID: Run ID: **WETCHEM_150320N** SeqNo: **3188469** Prep Date: **3/19/2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	4.109	0.91	4.545	0.1101	88	75-125	4.346	5.6	20	

The following samples were analyzed in this batch: 1503873-01B 1503873-02B

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

Client: Oxy USA WTP LP
Work Order: 1503873
Project: 697-17-50 Spill

QC BATCH REPORT

Batch ID: **R159477** Instrument ID **MOIST** Method: **E160.3M**

MBLK Sample ID: **WBLKS-R159477** Units: **% of sample** Analysis Date: **3/18/2015 02:32 PM**
Client ID: Run ID: **MOIST_150318B** SeqNo: **3185080** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	ND	0.050								

LCS Sample ID: **LCS-R159477** Units: **% of sample** Analysis Date: **3/18/2015 02:32 PM**
Client ID: Run ID: **MOIST_150318B** SeqNo: **3185079** 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			

DUP Sample ID: **1503843-06A DUP** Units: **% of sample** Analysis Date: **3/18/2015 02:32 PM**
Client ID: Run ID: **MOIST_150318B** SeqNo: **3185062** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	9.9	0.050	0	0	0		9.7	2.04	20	

DUP Sample ID: **1503873-02B DUP** Units: **% of sample** Analysis Date: **3/18/2015 02:32 PM**
Client ID: **West** Run ID: **MOIST_150318B** SeqNo: **3185076** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	15.16	0.050	0	0	0		16.67	9.49	20	

The following samples were analyzed in this batch: 1503873-01B 1503873-02B

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

Cincinnati, OH +1 513 733 5336
Fort Collins, CO +1 970 490 1511
Everett, WA +1 425 356 2600
Holland, MI +1 616 399 6070
Houston, TX +1 281 530 5656
Spring City, PA +1 610 948 4903
South Charleston, WV +1 304 356 3168
Middletown, PA +1 717 944 5541
Salt Lake City, UT +1 801 266 7700
York, PA +1 717 505 5280

ALS Environmental

Chain of Custody Form

Page ____ of ____

COC ID: 13143

ALS Project Manager: | ALS Work Order #: 1503873

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	697-17-50 Spill	A	COGCC Table 910-1 Soil
Work Order		Project Number		B	
Company Name	OXY USA WTP LP	Bill To Company	Same as left	C	
Send Report To	Blair Rollins	Invoice Attn		D	
Address	760 Horizon Dr	Address		E	
				F	
City/State/Zip	Grand Junction, Co 81506	City/State/Zip		G	
Phone	(970) 263-3637	Phone		H	
Fax		Fax		I	
e-Mail Address	blair_rollins@oxy.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	South East	3/12/15	1000	SS		4	X										
2	West	3/12/15	1015	SS		4	X										
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Blair Rollins

Shipment Method:

Required Turnaround Time: (Check Box) ☐ Other ____ ☐ STD 10 Wk Days ☒ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour

Results Due Date:

Relinquished by:	Date: 3/12/15	Time: 1300	Received by:
Relinquished by:	Date: 3-12-15	Time: 1330	Received by (Laboratory): 3/14/15 1030
Logged by (Laboratory): DFS	Date: 3/16/15	Time: 1330	Checked by (Laboratory):

Notes:

Cooler ID	Cooler Temp
	3.0°C

QC Package: (Check One Box Below)
☐ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Date ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other ____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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From: (616) 298-1033
Nick Martinez
ALS Environmental
127 E. 1st Street

PARACHUTE, CO 81635

Origin ID: RILA

FedEx Express

J15121502230Suv

Ship Date: 12MAR15
ActWgt: 45.0 LB
CAD: 2264840/INET3610

Dims: 24 X 15 X 15 IN

Delivery Address Bar Code

Ref # 031215-1
Invoice #
PO # Parachute
Dept #

SHIP TO: (616) 399-6070

BILL SENDER

sample receiving
ALS Laboratory Group
3352 128TH AVE

HOLLAND, MI 49424

1 of 3

TRK# 0201 7731 1711 7836

MASTER

XX HLMA

FRI - 13 MAR 10:30A
PRIORITY OVERNIGHT

49424
MI-US
GRR

537J1/879A/EE4B

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Parachute Custody

Date

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **OXYUSA - CO** Date/Time Received: **14-Mar-15 10:30**

Work Order: **1503873** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 16-Mar-15 (Date) Reviewed by: Chad Whelton (eSignature) 16-Mar-15 (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):	3.0 c	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	3/16/2015 1:49:31 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction: