Thursday, December 08, 2016

Bruce Smith
Western Water and Land, Inc.
743 Horizon Ct., Suite 330
Grand Junction, CO 81506

Re: ALS Workorder: 1611420
Project Name: TEP 317B
Project Number:

Dear Mr. Smith:

Two water samples were received from Western Water and Land, Inc., on 11/23/2016. The samples were scheduled for the following analyses:

GC/MS Semivolatiles
GC/MS Volatiles
Inorganics
Metals
Total Extractable Petroleum Hydrocarbons (Diesel)

The results for these analyses are contained in the enclosed reports.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Thank you for your confidence in ALS Environmental. Should you have any questions, please call.

Sincerely,

ALS Environmental
Shiloh J. Summy
Project Manager

ALS Environmental – Fort Collins is accredited by the following accreditation bodies for various testing scopes in accordance with requirements of each accreditation body. All testing is performed under the laboratory management system, which is maintained to meet these requirement and regulations. Please contact the laboratory or accreditation body for the current scope testing parameters.

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
Alaska (AK)	UST-086
Alaska (AK)	CO01099
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Connecticut (CT)	PH-0232
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
L-A-B (DoD ELAP/ISO 170250)	L2257
Louisiana (LA)	05057
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280

1611420

GC/MS Volatiles:
The samples were analyzed using GC/MS following the current revision of SOP 525 based on SW-846 Method 8260C. The samples were also analyzed for Gasoline Range Organics (GRO).

All acceptance criteria were met.

GC/MS Semivolatiles:
The sample was analyzed using GC/MS following the current revision of SOP 506 based on SW-846 Method 8270D.

All acceptance criteria were met.

DRO:
The sample was analyzed following the current revision of SOP 406 generally based on SW-846 Methods 8000C and 8015D. TEPH is a multicomponent mixture and is quantitated by summing the entire carbon range, rather than individual peaks. The carbon range integrated in this test extends from C10 to C28.

All acceptance criteria were met.

Metals:
The sample was analyzed following Methods for the Determination of Metals in Environmental Samples – Supplement 1 procedures. Analysis by ICPMS followed method 200.8 and the current revision of SOP 827.

The sample was to be analyzed for dissolved metals. The sample was filtered through a 0.45 micron filter and preserved with nitric acid to a pH less than 2 prior to analysis.

All acceptance criteria were met.

Inorganics:
The sample was analyzed following EMSL and Standard Method procedures for the current revisions of the following SOPs and methods:

Analyte	Method	SOP #
Alkalinity	SM2320B	1106
Bicarbonate	SM2320B	1106

Carbonate	SM2320B	1106
pH	SM4500-H^+ B	1126
Specific conductance	SM2510B	1128
TDS	SM2540C	1101
Bromide	300.0 Revision 2.1	1113
Chloride	300.0 Revision 2.1	1113
Fluoride	300.0 Revision 2.1	1113
Nitrate as N	300.0 Revision 2.1	1113
Nitrite as N	300.0 Revision 2.1	1113
Total nitrates	300.0 Revision 2.1	1113
Sulfate	300.0 Revision 2.1	1113

The sample was prepared and analyzed within the established hold time for each analysis with the exception of nitrate as N and nitrite as N. The sample was received with no hold time remaining.

All remaining acceptance criteria were met.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 1611420
Client Name: Western Water and Land, Inc.
Client Project Name: TEP 317B
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
B29	1611420-1		WATER	21-Nov-16	11:05
Trip Blank	1611420-2		WATER	21-Nov-16	

ALS Laboratory Group

225 Commerce Drive, Fort Collins, Colorado 80524
TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

Chain-of-Custody

Form 202r8

WORKORDER # 1611420

PAGE 1 of 1

DISPOSAL: By Lab or Return to Client

PROJECT NAME	TEP 317B	SAMPLER	Shelby
FACILITY NAME		EDD FORMAT	
FACILITY ID (API)		PURCHASE ORDER	
COMPANY NAME	Western Water & Land, Inc.	BILL TO COMPANY	TEP Rocky Mtn LLC
SEND REPORT TO	Bruce Smith	INVOICE ATTN TO	Mike Gardner
ADDRESS	743 Horizon Court, Suite 330	ADDRESS	1058 CR 215
CITY / STATE / ZIP	Grand Junction, CO 81506	CITY / STATE / ZIP	Parachute, CO 81635
PHONE	(970) 242-0170	PHONE	(970) 250-5778
FAX		FAX	
E-MAIL	bsmith@westernwaterandland.com	E-MAIL	mgardner@terraep.com

DATE: 11-21-16

TURNAROUND: standard

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	NG1	BART	BTEX/GRO	DRO	Dissolved Metals, lab filtered	Anions, Alk, TDS, pH, SpC	Total Phosphorus	Dissolved gases - HCl preserved	Dissolved gases - unpreserved	PAH's
1	B29	SW	11-21-16	1105	9	1	N			3	3	1	1				1
2	Trip Blank				2												
	JS 11/23/16																

Field Parameters

B29	Temp (°C)	5.4	DO (%)	87.7	SpC (uS/cm)	1407	Turb (NTUs)	9.82			
	pH (s.u.)	7.95	DO (mg/L)	11.02	ORP (mv)	163.1	Disch (gpm)	NM			
	Temp (°C)		DO (%)		SpC (uS/cm)		Turb (NTUs)				
	pH (s.u.)		DO (mg/L)		ORP (mv)		Disch (gpm)				

*Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analytes below.

Comments:

QC PACKAGE (check below)	
	LEVEL II (Standard QC)
	LEVEL III (Std QC + forms)
X	LEVEL IV (Std QC + forms + raw data)

Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Shelby Goodwin	11-21-16	1200
RECEIVED BY		Max Goldberg	11/23/16	10:30
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Western Water Workorder No: 1811420

Project Manager: SS Initials: SS Date: 11/23/16

1. Does this project require any special handling in addition to standard ALS procedures?		YES	(NO)
2. Are custody seals on shipping containers intact?	(NONE)	YES	NO
3. Are Custody seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		(YES)	NO
5. Are the COC and bottle labels complete and legible?		(YES)	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF	(YES)	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	N/A	(YES)	NO
9. Are all aqueous non-preserved samples pH 4-9?	N/A	(YES)	NO
10. Is there sufficient sample for the requested analyses?		(YES)	NO
11. Were all samples placed in the proper containers for the requested analyses?		(YES)	NO
12. Are all samples within holding times for the requested analyses?		(YES)	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		(YES)	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: ✓ < green pea ___ > green pea	N/A	YES	(NO)
15. Do any water samples contain sediment? Amount of sediment: ___ dusting ___ moderate ___ heavy	N/A	YES	(NO)
16. Were the samples shipped on ice?		(YES)	NO
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1
Temperature (°C):	4.0
No. of custody seals on cooler:	0
DOT Survey/ Acceptance Information — External µR/hr reading:	10
Background µR/hr reading:	11

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? **YES / NO / NA** (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

14) Sample 2-1 has headspace < green pea.

If applicable, was the client contacted? YES / NO / NA Contact: _____ Date/Time: _____

Project Manager Signature / Date: Shila Sunny

*IR Gun #2: Oakton, SN 29922500201-0066
*IR Gun #4: Oakton, SN 2372220101-0002

~~16112~~ JS 1611420

FROM: (970) 242-0170
shelby goodwin
westeren water and land
743 HORIZON CT STE 330
GRAND JUNCTION CO 81506
US

SHIP DATE: 21NOV16
ACTWGT: 29.80 LB
CAD: 6995452/SSF01722
DIMMED: 14 X 9 X 12 IN
BILL 3rd PARTY

TO shiloh summy
als
225 COMMERCE DR

FORT COLLINS CO 80524 (US)
(970) 490-1522 REF:
INV:
PO: DEPT:

10 0

FedEx
Ground
G

J162016101201uv

TRK# 7847 1493 1880

4.0°

80524

9622 0417 3 (000 000 0000) 0 00 7847 1493 1880

Client: Western Water and Land, Inc. **Date:** *08-Dec-16*
Project: TEP 317B **Work Order:** 1611420
Sample ID: B29 **Lab ID:** 1611420-1
Legal Location: **Matrix:** WATER
Collection Date: 11/21/2016 11:05 **Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
ALKALINITY AS CALCIUM CARBONATE			**SM2320B**		Prep Date: **11/29/2016**		PrepBy: **AMG**
BICARBONATE AS CaCO3	**150**		**20**	**MG/L**	1		11/30/2016
CARBONATE AS CaCO3	ND		20	MG/L	1		11/30/2016
TOTAL ALKALINITY AS CaCO3	**150**		**20**	**MG/L**	1		11/30/2016
DIESEL RANGE ORGANICS			**SW8015M**		Prep Date: **11/28/2016**		PrepBy: **JFN**
Diesel Range Organics	ND		0.6	MG/L	1	0.18	11/28/2016 17:24
Surr: O-TERPHENYL	*87*		*63-126*	*%REC*	1		11/28/2016 17:24
GC/MS SEMI-VOLATILES			**SW8270**		Prep Date: **11/28/2016**		PrepBy: **BCH**
NAPHTHALENE	ND		10	UG/L	1	3	12/1/2016 12:51
2-METHYLNAPHTHALENE	ND		10	UG/L	1	3	12/1/2016 12:51
ACENAPHTHYLENE	ND		10	UG/L	1	3	12/1/2016 12:51
ACENAPHTHENE	ND		10	UG/L	1	3	12/1/2016 12:51
FLUORENE	ND		10	UG/L	1	3	12/1/2016 12:51
PHENANTHRENE	ND		10	UG/L	1	3	12/1/2016 12:51
ANTHRACENE	ND		10	UG/L	1	3	12/1/2016 12:51
FLUORANTHENE	ND		10	UG/L	1	3	12/1/2016 12:51
PYRENE	ND		10	UG/L	1	3	12/1/2016 12:51
BENZO(A)ANTHRACENE	ND		10	UG/L	1	3	12/1/2016 12:51
CHRYSENE	ND		10	UG/L	1	3	12/1/2016 12:51
BENZO(B)FLUORANTHENE	ND		10	UG/L	1	3	12/1/2016 12:51
BENZO(K)FLUORANTHENE	ND		10	UG/L	1	3	12/1/2016 12:51
BENZO(A)PYRENE	ND		10	UG/L	1	3	12/1/2016 12:51
INDENO(1,2,3-CD)PYRENE	ND		10	UG/L	1	3	12/1/2016 12:51
DIBENZO(A,H)ANTHRACENE	ND		10	UG/L	1	3	12/1/2016 12:51
BENZO(G,H,I)PERYLENE	ND		10	UG/L	1	3	12/1/2016 12:51
Surr: NITROBENZENE-D5	*91*		*53-111*	*%REC*	1		12/1/2016 12:51
Surr: 2-FLUOROBIPHENYL	*92*		*55-108*	*%REC*	1		12/1/2016 12:51
Surr: TERPHENYL-D14	*96*		*34-139*	*%REC*	1		12/1/2016 12:51
GC/MS VOLATILES			**SW8260_25**		Prep Date: **11/28/2016**		PrepBy: **JXK**
BENZENE	ND		1	UG/L	1	0.3	11/28/2016 15:07
TOLUENE	ND		1	UG/L	1	0.3	11/28/2016 15:07
ETHYLBENZENE	ND		1	UG/L	1	0.3	11/28/2016 15:07
M+P-XYLENE	ND		1	UG/L	1	0.3	11/28/2016 15:07
O-XYLENE	ND		1	UG/L	1	0.3	11/28/2016 15:07
TOTAL XYLENES	ND		1	UG/L	1		11/28/2016 15:07
Surr: 4-BROMOFLUOROBENZENE	*102*		*85-115*	*%REC*	1		11/28/2016 15:07
Surr: DIBROMOFLUOROMETHANE	*102*		*84-118*	*%REC*	1		11/28/2016 15:07
Surr: TOLUENE-D8	*94*		*85-115*	*%REC*	1		11/28/2016 15:07
GASOLINE RANGE ORGANICS	ND		100	UG/L	1	100	11/28/2016 15:07
ION CHROMATOGRAPHY			**EPA300.0**		Prep Date: **11/25/2016**		PrepBy: **JFN**
BROMIDE	ND		0.4	MG/L	2	0.12	11/25/2016 15:59
CHLORIDE	**220**		**4**	**MG/L**	20	1.2	11/25/2016 16:14

Client: Western Water and Land, Inc. **Date:** *08-Dec-16*
Project: TEP 317B **Work Order:** 1611420
Sample ID: B29 **Lab ID:** 1611420-1
Legal Location: **Matrix:** WATER
Collection Date: 11/21/2016 11:05 **Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
FLUORIDE	**0.25**		**0.2**	**MG/L**	2	0.06	11/25/2016 15:59
NITRATE/NITRITE AS N	ND		0.1	MG/L	1		11/25/2016 15:59
NITRATE AS N	ND		0.4	MG/L	2	0.12	11/25/2016 15:59
NITRITE AS N	ND		0.2	MG/L	2	0.06	11/25/2016 15:59
SULFATE	**130**		**2**	**MG/L**	2	0.6	11/25/2016 15:59
METALS BY 200.8			**EPA200.8**		Prep Date: **11/28/2016**		PrepBy: **AJL2**
BARIUM	**0.054**		**0.001**	**MG/L**	10	0.00016	11/30/2016 07:11
BORON	**0.087**		**0.05**	**MG/L**	10	0.012	12/5/2016 14:05
CALCIUM	**71**		**1**	**MG/L**	10	0.068	11/30/2016 07:11
IRON	**0.024**	J	**0.1**	**MG/L**	10	0.0081	11/30/2016 07:11
MAGNESIUM	**15**		**0.1**	**MG/L**	10	0.018	11/30/2016 07:11
MANGANESE	**0.0035**		**0.002**	**MG/L**	10	0.00034	11/30/2016 07:11
POTASSIUM	**4**		**1**	**MG/L**	10	0.29	11/30/2016 07:11
SELENIUM	ND		0.001	MG/L	10	0.00066	11/30/2016 07:11
SODIUM	**150**		**1**	**MG/L**	10	0.2	11/30/2016 07:11
STRONTIUM	**0.67**		**0.001**	**MG/L**	10	0.0003	11/30/2016 07:11
PH			**SM4500-H**		Prep Date: **11/28/2016**		PrepBy: **AMG**
PH	**8.17**		**0.1**	**pH**	1		11/28/2016
SPECIFIC CONDUCTANCE IN WATER			**SM2510B**		Prep Date: **11/28/2016**		PrepBy: **AMG**
SPECIFIC CONDUCTIVITY	**1298**		**1**	**umhos/cm**	1		11/28/2016
TOTAL DISSOLVED SOLIDS			**SM2540C**		Prep Date: **11/28/2016**		PrepBy: **HMA**
TOTAL DISSOLVED SOLIDS	**690**		**20**	**MG/L**	1		11/29/2016

Client: Western Water and Land, Inc. **Date:** *08-Dec-16*
Project: TEP 317B **Work Order:** 1611420
Sample ID: Trip Blank **Lab ID:** 1611420-2
Legal Location: **Matrix:** WATER
Collection Date: 11/21/2016 **Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
GC/MS VOLATILES			**SW8260_25**		Prep Date: **11/28/2016**		PrepBy: **JXK**
BENZENE	ND		1	UG/L	1	0.3	11/28/2016 14:25
TOLUENE	ND		1	UG/L	1	0.3	11/28/2016 14:25
ETHYLBENZENE	ND		1	UG/L	1	0.3	11/28/2016 14:25
M+P-XYLENE	ND		1	UG/L	1	0.3	11/28/2016 14:25
O-XYLENE	ND		1	UG/L	1	0.3	11/28/2016 14:25
TOTAL XYLENES	ND		1	UG/L	1		11/28/2016 14:25
Surr: 4-BROMOFLUOROBENZENE	*101*		*85-115*	*%REC*	1		11/28/2016 14:25
Surr: DIBROMOFLUOROMETHANE	*101*		*84-118*	*%REC*	1		11/28/2016 14:25
Surr: TOLUENE-D8	*93*		*85-115*	*%REC*	1		11/28/2016 14:25
GASOLINE RANGE ORGANICS	ND		100	UG/L	1	100	11/28/2016 14:25

Client:	Western Water and Land, Inc.	**Date:**	*08-Dec-16*
Project:	TEP 317B	**Work Order:**	1611420
Sample ID:	Trip Blank	**Lab ID:**	1611420-2
Legal Location:		**Matrix:**	WATER
Collection Date:	11/21/2016	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed

Explanation of Qualifiers

Radiochemistry:

U or ND - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.

Y2 - Chemical Yield outside default limits.

W - DER is greater than Warning Limit of 1.42

* - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.
# - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.

G - Sample density differs by more than 15% of LCS density.

D - DER is greater than Control Limit

M - Requested MDC not met.

LT - Result is less than requested MDC but greater than achieved MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS, Matrix Spike Recovery within control limits.

N - Matrix Spike Recovery outside control limits

NC - Not Calculated for duplicate results less than 5 times MDC

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Inorganics:

B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).

U or ND - Indicates that the compound was analyzed for but not detected.

E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.

M - Duplicate injection precision was not met.

N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.

Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.

* - Duplicate analysis (relative percent difference) not within control limits.

S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

Organics:

U or ND - Indicates that the compound was analyzed for but not detected.

B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.

E - Analyte concentration exceeds the upper level of the calibration range.

J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).

A - A tentatively identified compound is a suspected aldol-condensation product.

X - The analyte was diluted below an accurate quantitation level.

* - The spike recovery is equal to or outside the control criteria used.

+ - The relative percent difference (RPD) equals or exceeds the control criteria.

G - A pattern resembling gasoline was detected in this sample.

D - A pattern resembling diesel was detected in this sample.

M - A pattern resembling motor oil was detected in this sample.

C - A pattern resembling crude oil was detected in this sample.

4 - A pattern resembling JP-4 was detected in this sample.

5 - A pattern resembling JP-5 was detected in this sample.

H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.

L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.

Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
- gasoline
- JP-8
- diesel
- mineral spirits
- motor oil
- Stoddard solvent
- bunker C

Batch ID: **HC161128-100-1** Instrument ID **FUELS-1** Method: **SW8015M**

DUP Sample ID: **1611420-1** Units: **MG/L** Analysis Date: **11/28/2016 17:43**

Client ID: **B29** Run ID: **HC161128-7A** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	ND	0.589						0.6		30	
Surr: O-TERPHENYL	0.733		0.818		90	63-126					

LCS Sample ID: **HC161128-100** Units: **MG/L** Analysis Date: **11/28/2016 16:47**

Client ID: Run ID: **HC161128-7A** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	7.8	0.587	8.16		96	36-150				20	
Surr: O-TERPHENYL	0.757		0.816		93	63-126					

LCSD Sample ID: **HC161128-100** Units: **MG/L** Analysis Date: **11/28/2016 17:05**

Client ID: Run ID: **HC161128-7A** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	8.02	0.591	8.2		98	36-150		7.8	3	20	
Surr: O-TERPHENYL	0.77		0.82		94	63-126			2		

MB Sample ID: **HC161128-100** Units: **MG/L** Analysis Date: **11/28/2016 16:28**

Client ID: Run ID: **HC161128-7A** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	ND	0.6									
Surr: O-TERPHENYL	0.745		0.829		90	63-126					

The following samples were analyzed in this batch: 1611420-1

QC BATCH REPORT

Batch ID: **IP161128-6-1** Instrument ID **ICPMS2** Method: **EPA200.8**

LCS Sample ID: **IM161128-6** Units: **MG/L** Analysis Date: **11/30/2016 06:24**

Client ID: Run ID: **IM161129-10A12** Prep Date: **11/28/2016** DF: **10**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BARIUM	0.104	0.001	0.1		104	85-115				20	
CALCIUM	9.63	1	10		96	85-115				20	
IRON	5.17	0.1	5		103	85-115				20	
MAGNESIUM	9.48	0.1	10		95	85-115				20	
MANGANESE	0.101	0.002	0.1		101	85-115				20	
POTASSIUM	4.97	1	5		99	85-115				20	
SELENIUM	0.0976	0.001	0.1		98	85-115				20	
SODIUM	10.6	1	10		106	85-115				20	
STRONTIUM	0.099	0.001	0.1		99	85-115				20	

MB Sample ID: **FP161128-6** Units: **MG/L** Analysis Date: **11/30/2016 06:18**

Client ID: Run ID: **IM161129-10A12** Prep Date: **11/28/2016** DF: **10**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BARIUM	ND	0.001									
CALCIUM	ND	1									
IRON	ND	0.1									
MAGNESIUM	ND	0.1									
MANGANESE	ND	0.002									
POTASSIUM	ND	1									
SELENIUM	ND	0.001									
SODIUM	ND	1									
STRONTIUM	ND	0.001									

The following samples were analyzed in this batch: 1611420-1

QC BATCH REPORT

Batch ID: **IP161128-6-1** Instrument ID **ICPMS2** Method: **EPA200.8**

LCS Sample ID: **IM161128-6** Units: **MG/L** Analysis Date: **12/5/2016 14:02**
Client ID: Run ID: **IM161205-10A7** Prep Date: **11/28/2016** DF: **10**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BORON	0.981	0.05	1		98	85-115				20	

MB Sample ID: **FP161128-6** Units: **MG/L** Analysis Date: **12/5/2016 13:56**
Client ID: Run ID: **IM161205-10A7** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BORON	0.0023	0.005									J

The following samples were analyzed in this batch: 1611420-1

QC BATCH REPORT

Batch ID: **EX161128-1-1** Instrument ID **HPSV3** Method: **SW8270**

LCS Sample ID: **EX161128-1** Units: **UG/L** Analysis Date: **12/1/2016 12:06**

Client ID: Run ID: **SV161201-3** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
NAPHTHALENE	41.1	10	50		82	60-100				20	
2-METHYLNAPHTHALENE	39.7	10	50		79	62-100				20	
ACENAPHTHYLENE	45.1	10	50		90	67-108				20	
ACENAPHTHENE	46.6	10	50		93	60-108				20	
FLUORENE	46.5	10	50		93	64-116				20	
PHENANTHRENE	46.2	10	50		92	64-113				20	
ANTHRACENE	45.9	10	50		92	72-108				20	
FLUORANTHENE	46.7	10	50		93	63-122				20	
PYRENE	45.6	10	50		91	60-113				20	
BENZO(A)ANTHRACENE	46.7	10	50		93	69-107				20	
CHRYSENE	48.2	10	50		96	68-114				20	
BENZO(B)FLUORANTHENE	49.6	10	50		99	67-111				20	
BENZO(K)FLUORANTHENE	45.5	10	50		91	65-118				20	
BENZO(A)PYRENE	43.8	10	50		88	62-104				20	
INDENO(1,2,3-CD)PYRENE	45.7	10	50		91	54-124				20	
DIBENZO(A,H)ANTHRACENE	47.7	10	50		95	57-126				20	
BENZO(G,H,I)PERYLENE	44	10	50		88	52-124				20	
Surr: NITROBENZENE-D5	48.3		50		97	53-111					
Surr: 2-FLUOROBIPHENYL	46.5		50		93	55-108					
Surr: TERPHENYL-D14	47.1		50		94	34-139					

Batch ID: **EX161128-1-1** Instrument ID **HPSV3** Method: **SW8270**

LCSD Sample ID: **EX161128-1** Units: **UG/L** Analysis Date: **12/1/2016 12:29**

Client ID: Run ID: **SV161201-3** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
NAPHTHALENE	43.2	10	50		86	60-100		41.1	5	20	
2-METHYLNAPHTHALENE	41.7	10	50		83	62-100		39.7	5	20	
ACENAPHTHYLENE	47.2	10	50		94	67-108		45.1	5	20	
ACENAPHTHENE	48.3	10	50		97	60-108		46.6	4	20	
FLUORENE	49.2	10	50		98	64-116		46.5	6	20	
PHENANTHRENE	49	10	50		98	64-113		46.2	6	20	
ANTHRACENE	48.4	10	50		97	72-108		45.9	5	20	
FLUORANTHENE	50.7	10	50		101	63-122		46.7	8	20	
PYRENE	48.7	10	50		97	60-113		45.6	7	20	
BENZO(A)ANTHRACENE	49.3	10	50		99	69-107		46.7	5	20	
CHRYSENE	50.8	10	50		102	68-114		48.2	5	20	
BENZO(B)FLUORANTHENE	51	10	50		102	67-111		49.6	3	20	
BENZO(K)FLUORANTHENE	49.6	10	50		99	65-118		45.5	9	20	
BENZO(A)PYRENE	47.3	10	50		95	62-104		43.8	8	20	
INDENO(1,2,3-CD)PYRENE	49.1	10	50		98	54-124		45.7	7	20	
DIBENZO(A,H)ANTHRACENE	50.7	10	50		101	57-126		47.7	6	20	
BENZO(G,H,I)PERYLENE	46.5	10	50		93	52-124		44	5	20	
Surr: NITROBENZENE-D5	50		50		100	53-111			4		
Surr: 2-FLUOROBIPHENYL	47.6		50		95	55-108			2		
Surr: TERPHENYL-D14	48.9		50		98	34-139			4		

QC BATCH REPORT

Batch ID: **EX161128-1-1** Instrument ID **HPSV3** Method: **SW8270**

MB Sample ID: **EX161128-1** Units: **UG/L** Analysis Date: **12/1/2016 11:43**

Client ID: Run ID: **SV161201-3** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
NAPHTHALENE	ND	10									
2-METHYLNAPHTHALENE	ND	10									
ACENAPHTHYLENE	ND	10									
ACENAPHTHENE	ND	10									
FLUORENE	ND	10									
PHENANTHRENE	ND	10									
ANTHRACENE	ND	10									
FLUORANTHENE	ND	10									
PYRENE	ND	10									
BENZO(A)ANTHRACENE	ND	10									
CHRYSENE	ND	10									
BENZO(B)FLUORANTHENE	ND	10									
BENZO(K)FLUORANTHENE	ND	10									
BENZO(A)PYRENE	ND	10									
INDENO(1,2,3-CD)PYRENE	ND	10									
DIBENZO(A,H)ANTHRACENE	ND	10									
BENZO(G,H,I)PERYLENE	ND	10									
Surr: NITROBENZENE-D5	44.8		50		90	53-111					
Surr: 2-FLUOROBIPHENYL	43.9		50		88	55-108					
Surr: TERPHENYL-D14	46		50		92	34-139					

The following samples were analyzed in this batch: 1611420-1

Batch ID: **VL161128-3-2** Instrument ID **HPV1** Method: **SW8260_25**

LCS Sample ID: **VL161128-3** Units: **%REC** Analysis Date: **11/28/2016 10:07**

Client ID: Run ID: **VL161128-3A** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	24.3		25		97	85-115					
Surr: DIBROMOFLUOROMETHANE	24.8		25		99	84-118					
Surr: TOLUENE-D8	23.2		25		93	85-115					
BENZENE	10.5	1	10		105	83-117				20	
TOLUENE	10.5	1	10		105	82-113				20	
ETHYLBENZENE	10.6	1	10		106	81-113				20	
M+P-XYLENE	20.9	1	20		104	82-115				20	
O-XYLENE	10.5	1	10		105	81-115				20	

LCSD Sample ID: **VL161128-3** Units: **%REC** Analysis Date: **11/28/2016 10:28**

Client ID: Run ID: **VL161128-3A** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	24.3		25		97	85-115			0		
Surr: DIBROMOFLUOROMETHANE	25		25		100	84-118			1		
Surr: TOLUENE-D8	23.2		25		93	85-115			0		
BENZENE	10.4	1	10		104	83-117		10.5	1	20	
TOLUENE	10.3	1	10		103	82-113		10.5	1	20	
ETHYLBENZENE	10.4	1	10		104	81-113		10.6	2	20	
M+P-XYLENE	20.6	1	20		103	82-115		20.9	1	20	
O-XYLENE	10.4	1	10		104	81-115		10.5	1	20	

MB Sample ID: **VL161128-3** Units: **%REC** Analysis Date: **11/28/2016 13:00**

Client ID: Run ID: **VL161128-3A** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	25.5		25		102	85-115					
Surr: DIBROMOFLUOROMETHANE	25.3		25		101	84-118					
Surr: TOLUENE-D8	23.5		25		94	85-115					
BENZENE	ND	1									
TOLUENE	ND	1									
ETHYLBENZENE	ND	1									
M+P-XYLENE	ND	1									
O-XYLENE	ND	1									
TOTAL XYLENES	ND	1									

The following samples were analyzed in this batch: 1611420-1 1611420-2

Client: Western Water and Land, Inc.
Work Order: 1611420
Project: TEP 317B

QC BATCH REPORT

Batch ID: **VL161128-3-6** Instrument ID **HPV1** Method: **SW8260_25**

LCS Sample ID: **VL161128-6** Units: **UG/L** Analysis Date: **11/28/2016 11:35**
Client ID: Run ID: **VL161128-3A** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	967	100	1000		97	80-120				20	

LCSD Sample ID: **VL161128-6** Units: **UG/L** Analysis Date: **11/28/2016 11:56**
Client ID: Run ID: **VL161128-3A** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	965	100	1000		96	80-120		967	0	20	

MB Sample ID: **VL161128-3** Units: **UG/L** Analysis Date: **11/28/2016 13:00**
Client ID: Run ID: **VL161128-3A** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	ND	100									

The following samples were analyzed in this batch: 1611420-1 1611420-2

QC BATCH REPORT

Batch ID: **AK161129-1-3** Instrument ID **NONE** Method: **SM2320B**

LCS Sample ID: **AK161129-1** Units: **MG/L** Analysis Date: **11/30/2016**
Client ID: Run ID: **ak161129-1a1** Prep Date: **11/29/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL ALKALINITY AS CaCO3	98.3	5	100		98	85-115				15	

MB Sample ID: **AK161129-1** Units: **MG/L** Analysis Date: **11/30/2016**
Client ID: Run ID: **ak161129-1a1** Prep Date: **11/29/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BICARBONATE AS CaCO3	ND	5									
CARBONATE AS CaCO3	ND	5									
TOTAL ALKALINITY AS CaCO3	ND	5									

The following samples were analyzed in this batch: 1611420-1

QC BATCH REPORT

Batch ID: **IC161125-1-1** Instrument ID **IC-2** Method: **EPA300.0**

LCS Sample ID: **IC161125-1** Units: **MG/L** Analysis Date: **11/25/2016 15:29**

Client ID: Run ID: **IC161125-1A2** Prep Date: **11/25/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BROMIDE	5	0.2	5		100	90-110				15	
CHLORIDE	5	0.2	5		100	90-110				15	
FLUORIDE	1.89	0.1	2		95	90-110				15	
NITRATE AS N	4.95	0.2	5		99	90-110				15	
NITRITE AS N	2.01	0.1	2		100	90-110				15	
SULFATE	20	1	20		100	90-110				15	

MB Sample ID: **IC161125-1** Units: **MG/L** Analysis Date: **11/25/2016 15:44**

Client ID: Run ID: **IC161125-1A2** Prep Date: **11/25/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BROMIDE	ND	0.2									
CHLORIDE	ND	0.2									
FLUORIDE	ND	0.1									
NITRATE AS N	ND	0.2									
NITRITE AS N	ND	0.1									
SULFATE	ND	1									

The following samples were analyzed in this batch: 1611420-1

QC BATCH REPORT

Batch ID: **ph161128-1-1** Instrument ID **pH-1** Method: **SM4500-H**

CCV Sample ID: **CCV** Units: **pH** Analysis Date: **11/28/2016**
Client ID: Run ID: **ph161128-1a1** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
PH	7.04	0.1	7			6.9-7.1					

DUP Sample ID: **1611420-1** Units: **pH** Analysis Date: **11/28/2016**
Client ID: **B29** Run ID: **ph161128-1a1** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
PH	8.17	0.1						8.17		0.2	

ICV Sample ID: **ICV** Units: **pH** Analysis Date: **11/28/2016**
Client ID: Run ID: **ph161128-1a1** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
PH	6.97	0.1	7			6.95-7.05					

The following samples were analyzed in this batch: 1611420-1

Client: Western Water and Land, Inc.
Work Order: 1611420
Project: TEP 317B

QC BATCH REPORT

Batch ID: **sc161128-1-1** Instrument ID **pH-2** Method: **SM2510B**

CCV Sample ID: **CCV** Units: **umhos/cm** Analysis Date: **11/28/2016**
Client ID: Run ID: **sc161128-1a1** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
SPECIFIC CONDUCTIVITY	1400	1	1410		99	?71.7-1554					

DUP Sample ID: **1611420-1** Units: **umhos/cm** Analysis Date: **11/28/2016**
Client ID: **B29** Run ID: **sc161128-1a1** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
SPECIFIC CONDUCTIVITY	1265	1						1298	3	10	

ICV Sample ID: **ICV** Units: **umhos/cm** Analysis Date: **11/28/2016**
Client ID: Run ID: **sc161128-1a1** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
SPECIFIC CONDUCTIVITY	715	1	718		100	646.2-789.7					

The following samples were analyzed in this batch: 1611420-1

Client: Western Water and Land, Inc.
Work Order: 1611420
Project: TEP 317B

QC BATCH REPORT

Batch ID: **TD161128-1-1** Instrument ID **Balance** Method: **SM2540C**

DUP Sample ID: **1611420-1** Units: **MG/L** Analysis Date: **11/29/2016**
Client ID: **B29** Run ID: **TD161128-1a1** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	686	20						690	0	5	

LCS Sample ID: **TD161128-1** Units: **MG/L** Analysis Date: **11/29/2016**
Client ID: Run ID: **TD161128-1a1** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	401	20	400		100	85-115				5	

MB Sample ID: **TD161128-1** Units: **MG/L** Analysis Date: **11/29/2016**
Client ID: Run ID: **TD161128-1a1** Prep Date: **11/28/2016** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	ND	20									

The following samples were analyzed in this batch: 1611420-1