



Monday, April 16, 2018

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

Re: ALS Workorder: 1803304
Project Name: TEP RU 13-6 317B
Project Number:

Dear Mr. Smith:

One surface water sample was received from Western Water and Land, Inc., on 3/15/2018. The sample was scheduled for the following analyses:

GC/MS Semivolatiles	pages 1-93
GC/MS Volatiles	pages 1-136
Inorganics	pages 1-86
Metals	pages 1-159
Total Extractable Petroleum Hydrocarbons (Diesel)	pages 1-45

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
Katie M. O'Brien
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



1803304

GC/MS Volatiles:

The sample was analyzed using GC/MS following the current revision of SOP 525 based on SW-846 Method 8260C. The sample was 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 two 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:

<u>Analyte</u>	<u>Method</u>	<u>SOP #</u>
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
Sulfate	300.0 Revision 2.1	1113

All acceptance criteria were met.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 1803304

Client Name: Western Water and Land, Inc.

Client Project Name: TEP RU 13-6 317B

Client Project Number:

Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Beaver Cr2	1803304-1		SurfaceW	14-Mar-18	9:40



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 2026

WORKORDER # **1803304**

PROJECT NAME	TEP 2013-4 3178	SAMPLER PROJECT NO.	Shelby	DATE	3-14-18	TURNAROUND	Standard	PAGE	1	of	1	DISPOSAL	By Lab or Return to Client
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	Tammy Gose										
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) 712-6049										
FAX		FAX											
E-MAIL	bsmith@westernwaterandland.com	E-MAIL	tgose@terraep.com										

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, nitrates	Total Phosphorus	Dissolved gases - HCl preserved	Dissolved gases - unpreserved	PAH's	
2	Beaver Cr 2	SW	3-14-18	0914	9	1	1V											

Field Parameters

Temp (°C)	0.75	DO (%)	88.6	SpC (uS/cm)	386	Turb (NTUs)	2.35
pH (s.u.)	6.50	DO (mg/L)	12.22	ORP (mv)	242.3	Disch (gpm)	
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:

Wells: RW 313-4 & RW 513-4

RELINQUISHED BY	Signature	PRINTED NAME	Shelby Goodwin	DATE	3-14-18	TIME	12:30
RECEIVED BY	Signature	PRINTED NAME	N.A.	DATE	3-14-18	TIME	12:50
RELINQUISHED BY	Signature	PRINTED NAME	N.M.	DATE	3-14-18	TIME	1:30
RECEIVED BY	Signature	PRINTED NAME	C. Trimble	DATE	3-15-18	TIME	09:2
RELINQUISHED BY							
RECEIVED BY							

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



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Western Water

Workorder No: 1803303

Project Manager: [Signature]

Initials: CDJ Date: 3-15-18

1. Does this project require any special handling in addition to standard ALS procedures?		YES	<input checked="" type="radio"/> NO
2. Are custody seals on shipping containers intact?	<input checked="" type="radio"/> NONE	YES	NO
3. Are Custody seals on sample containers intact?	<input checked="" type="radio"/> NONE	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		<input checked="" type="radio"/> YES	NO
5. Are the COC and bottle labels complete and legible?		<input checked="" type="radio"/> YES	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		<input checked="" type="radio"/> YES	NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF	<input checked="" type="radio"/> YES	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	<input checked="" type="radio"/> N/A	YES	NO
9. Are all aqueous non-preserved samples pH 4-9?	<u>COC</u> <u>3-15-18</u> <input checked="" type="radio"/> N/A	<input checked="" type="radio"/> YES	NO
10. Is there sufficient sample for the requested analyses?		<input checked="" type="radio"/> YES	NO
11. Were all samples placed in the proper containers for the requested analyses?		<input checked="" type="radio"/> YES	NO
12. Are all samples within holding times for the requested analyses?		<input checked="" type="radio"/> YES	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		<input checked="" type="radio"/> 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	<input checked="" type="radio"/> YES	NO
15. Do any water samples contain sediment? Amount Amount of sediment: ___ dusting ___ moderate ___ heavy	N/A	YES	<input checked="" type="radio"/> NO
16. Were the samples shipped on ice?		<input checked="" type="radio"/> YES	NO
17. Were cooler temperatures measured at 0.1-6.0°C?	IR gun used*: #1 <input checked="" type="radio"/> #3 #4	RAD ONLY	<input checked="" type="radio"/> YES NO
Cooler #: <u>1</u>			
Temperature (°C): <u>12</u>			
No. of custody seals on cooler: <u>0</u>			
External µR/hr reading: <u>9</u>			
Background µR/hr reading: <u>9</u>			
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? <input checked="" type="radio"/> 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.

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

Project Manager Signature / Date: [Signature] 3/15/18

1803303

ORIGIN ID:GJTA (616) 298-1033
NICK MARTINEZ
127 E 1ST ST
PARACHUTE, CO 81635
UNITED STATES US

SHIP DATE: 14MAR18
ACTWGT: 28.70 LB
CAD: 006994171/SSFE1822
DIMS: 16x14x12 IN
BILL THIRD PARTY

SHIP/SUB/ADDRESS
Part # 156297-435-1172 EXT 00118

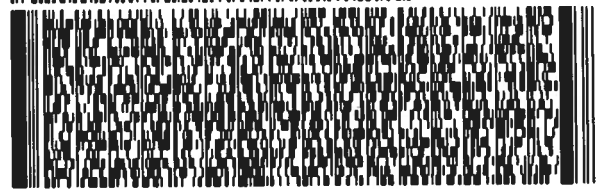
TO **ALS ENVIRONMENTAL**
225 COMMERCE DR
FORT COLLINS CO 80524

9-0-

(970) 305-2407
INU:
PO:

REF:

DEPT:



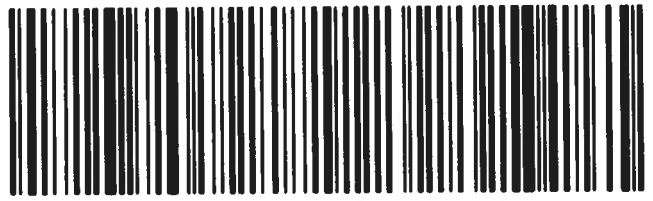
TRK# 7800 7200 6015
0201

THU - 15 MAR 3:00P
STANDARD OVERNIGHT

XH FTCA

1.2⁰

80524
CO-US DEN



ALS -- Fort Collins

SAMPLE SUMMARY REPORT

Client: Western Water and Land, Inc.
 Project: TEP RU 13-6 317B
 Sample ID: Beaver Cr2
 Legal Location:
 Collection Date: 3/14/2018 09:40

Date: 31-Mar-18
 Work Order: 1803304
 Lab ID: 1803304-1
 Matrix: SURFACEWAT
 Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
ALKALINITY AS CALCIUM CARBONATE			SM2320B		Prep Date: 3/17/2018		PrepBy: HMA
BICARBONATE AS CaCO3	170		20	MG/L	1		3/17/2018
CARBONATE AS CaCO3	ND		20	MG/L	1		3/17/2018
TOTAL ALKALINITY AS CaCO3	170		20	MG/L	1		3/17/2018
DIESEL RANGE ORGANICS			SW8015M		Prep Date: 3/16/2018		PrepBy: JFN
Diesel Range Organics	ND		0.57	MG/L	1	0.16	3/17/2018 02:59
Surr: O-TERPHENYL	105		63-126	%REC	1		3/17/2018 02:59
GC/MS SEMI-VOLATILES			SW8270		Prep Date: 3/16/2018		PrepBy: BCH
NAPHTHALENE	ND		9.5	UG/L	1	2.8	3/28/2018 16:31
2-METHYLNAPHTHALENE	ND		9.5	UG/L	1	2.8	3/28/2018 16:31
ACENAPHTHYLENE	ND		9.5	UG/L	1	2.8	3/28/2018 16:31
ACENAPHTHENE	ND		9.5	UG/L	1	2.8	3/28/2018 16:31
FLUORENE	ND		9.5	UG/L	1	2.8	3/28/2018 16:31
PHENANTHRENE	ND		9.5	UG/L	1	2.8	3/28/2018 16:31
ANTHRACENE	ND		9.5	UG/L	1	2.8	3/28/2018 16:31
FLUORANTHENE	ND		9.5	UG/L	1	2.8	3/28/2018 16:31
PYRENE	ND		9.5	UG/L	1	2.8	3/28/2018 16:31
BENZO(A)ANTHRACENE	ND		9.5	UG/L	1	2.8	3/28/2018 16:31
CHRYSENE	ND		9.5	UG/L	1	2.8	3/28/2018 16:31
BENZO(B)FLUORANTHENE	ND		9.5	UG/L	1	2.8	3/28/2018 16:31
BENZO(K)FLUORANTHENE	ND		9.5	UG/L	1	2.8	3/28/2018 16:31
BENZO(A)PYRENE	ND		9.5	UG/L	1	2.8	3/28/2018 16:31
INDENO(1,2,3-CD)PYRENE	ND		9.5	UG/L	1	2.8	3/28/2018 16:31
DIBENZO(A,H)ANTHRACENE	ND		9.5	UG/L	1	2.8	3/28/2018 16:31
BENZO(G,H,I)PERYLENE	ND		9.5	UG/L	1	2.8	3/28/2018 16:31
Surr: NITROBENZENE-D5	91		53-111	%REC	1		3/28/2018 16:31
Surr: 2-FLUOROBIPHENYL	78		55-108	%REC	1		3/28/2018 16:31
Surr: TERPHENYL-D14	59		34-139	%REC	1		3/28/2018 16:31
GC/MS VOLATILES			SW8260_25		Prep Date: 3/27/2018		PrepBy: CJW
BENZENE	ND		1	UG/L	1	0.32	3/27/2018 16:06
TOLUENE	ND		1	UG/L	1	0.31	3/27/2018 16:06
ETHYLBENZENE	ND		1	UG/L	1	0.31	3/27/2018 16:06
M+P-XYLENE	ND		1	UG/L	1	0.31	3/27/2018 16:06
O-XYLENE	ND		1	UG/L	1	0.31	3/27/2018 16:06
TOTAL XYLENES	ND		1	UG/L	1		3/27/2018 16:06
Surr: 4-BROMOFLUOROBENZENE	99		85-115	%REC	1		3/27/2018 16:06
Surr: DIBROMOFLUOROMETHANE	102		84-118	%REC	1		3/27/2018 16:06
Surr: TOLUENE-D8	98		85-115	%REC	1		3/27/2018 16:06
GASOLINE RANGE ORGANICS	ND		100	UG/L	1	47	3/27/2018 16:06
ION CHROMATOGRAPHY			EPA300.0		Prep Date: 3/15/2018		PrepBy: HMA
BROMIDE	ND		0.2	MG/L	1	0.06	3/15/2018 22:33
CHLORIDE	3.1		0.2	MG/L	1	0.06	3/15/2018 22:33

ALS -- Fort Collins

SAMPLE SUMMARY REPORT

Client: Western Water and Land, Inc.
Project: TEP RU 13-6 317B
Sample ID: Beaver Cr2
Legal Location:
Collection Date: 3/14/2018 09:40

Date: 31-Mar-18
Work Order: 1803304
Lab ID: 1803304-1
Matrix: SURFACEWAT
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
FLUORIDE	0.081	J	0.1	MG/L	1	0.03	3/15/2018 22:33
NITRATE AS N	0.43		0.2	MG/L	1	0.06	3/15/2018 22:33
NITRITE AS N	ND		0.1	MG/L	1	0.03	3/15/2018 22:33
SULFATE	20		1	MG/L	1	0.15	3/15/2018 22:33
METALS BY 200.8			SW6020				Prep Date: 3/23/2018 PrepBy: JML
BARIUM	0.053		0.001	MG/L	10	0.0039	3/27/2018 10:52
BORON	ND		0.05	MG/L	10	0.048	3/27/2018 10:52
CALCIUM	46		1	MG/L	10	0.88	3/27/2018 10:52
IRON	ND		0.1	MG/L	10	0.094	3/27/2018 10:52
MAGNESIUM	11		0.1	MG/L	10	0.14	3/27/2018 10:52
MANGANESE	ND		0.002	MG/L	10	0.0031	3/27/2018 10:52
POTASSIUM	0.81	J	1	MG/L	10	0.69	3/27/2018 10:52
SELENIUM	ND		0.001	MG/L	10	0.0022	3/27/2018 10:52
SODIUM	14		1	MG/L	10	0.78	3/27/2018 10:52
STRONTIUM	0.31		0.001	MG/L	10	0.0018	3/27/2018 10:52
PH			SM4500-H				Prep Date: 3/16/2018 PrepBy: HMA
PH	8.2		0.1	pH	1		3/16/2018
SPECIFIC CONDUCTANCE IN WATER			SM2510B				Prep Date: 3/16/2018 PrepBy: HMA
SPECIFIC CONDUCTIVITY	360		1	umhos/cm	1		3/16/2018
TOTAL DISSOLVED SOLIDS			SM2540C				Prep Date: 3/15/2018 PrepBy: HMA
TOTAL DISSOLVED SOLIDS	200		20	MG/L	1		3/17/2018

Client: Western Water and Land, Inc.
Project: TEP RU 13-6 317B
Sample ID: Beaver Cr2
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Date: 31-Mar-18
Work Order: 1803304
Lab ID: 1803304-1
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Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
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Explanation of Qualifiers

Radiochemistry:

- "Report Limit" is the MDC
- 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

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SAMPLE SUMMARY REPORT

Client: Western Water and Land, Inc.
Project: TEP RU 13-6 317B
Sample ID: Beaver Cr2
Legal Location:
Collection Date: 3/14/2018 09:40

Date: 31-Mar-18
Work Order: 1803304
Lab ID: 1803304-1
Matrix: SURFACEWAT
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
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ALS -- Fort Collins

Date: 3/31/2018 7:30:

Client: Western Water and Land, Inc.

QC BATCH REPORT

Work Order: 1803304

Project: TEP RU 13-6 317B

Batch ID: **HC180316-81-1** Instrument ID **FUELS-1** Method: **SW8015M**

LCS		Sample ID: HC180316-81			Units: MG/L		Analysis Date: 3/17/2018 03:42				
Client ID:		Run ID: HC180316-81A					Prep Date: 3/16/2018		DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
Diesel Range Organics	7.84	0.564	7.84		100	36-150				20	
Surr: O-TERPHENYL	1.6		1.57		102	63-126					

LCSD		Sample ID: HC180316-81			Units: MG/L		Analysis Date: 3/17/2018 04:04				
Client ID:		Run ID: HC180316-81A					Prep Date: 3/16/2018		DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
Diesel Range Organics	8	0.561	7.8		103	36-150		7.84	2	20	
Surr: O-TERPHENYL	1.6		1.56		102	63-126			0		

MB		Sample ID: HC180316-81			Units: MG/L		Analysis Date: 3/17/2018 00:06				
Client ID:		Run ID: HC180316-81A					Prep Date: 3/16/2018		DF: 1		
Analyte	Result	ReportLimit	MDL								
Diesel Range Organics	ND	0.58	0.16								
Surr: O-TERPHENYL	1.6			99	63-126						

MS		Sample ID: 1803304-1			Units: MG/L		Analysis Date: 3/17/2018 03:21				
Client ID: Beaver Cr2		Run ID: HC180316-81A					Prep Date: 3/16/2018		DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
Diesel Range Organics	7.2	0.572	7.94	0.57	91	36-150				20	
Surr: O-TERPHENYL	1.56		1.59		98	63-126					

The following samples were analyzed in this batch:

Client: Western Water and Land, Inc.
 Work Order: 1803304
 Project: TEP RU 13-6 317B

QC BATCH REPORT

Batch ID: **IP180323-1-2** Instrument ID **ICPMS2** Method: **SW6020**

LCS		Sample ID: IM180323-1			Units: MG/L		Analysis Date: 3/27/2018 10:43				
Client ID:		Run ID: IM180327-10A5			Prep Date: 3/23/2018		DF: 10				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
BARIUM	0.0944	0.001	0.1		94	85-115				20	
BORON	1.04	0.05	1		104	85-115				20	
CALCIUM	9.96	1	10		100	85-115				20	
IRON	4.74	0.1	5		95	85-115				20	
MAGNESIUM	9.72	0.1	10		97	85-115				20	
MANGANESE	0.0988	0.002	0.1		99	85-115				20	
POTASSIUM	4.58	1	5.02		91	85-115				20	
SELENIUM	0.099	0.001	0.1		99	85-115				20	
SODIUM	9.53	1	10		95	85-115				20	
STRONTIUM	0.0949	0.001	0.1		95	85-115				20	

MB		Sample ID: FP180319-1			Units: MG/L		Analysis Date: 3/27/2018 10:37				
Client ID:		Run ID: IM180327-10A5			Prep Date: 3/23/2018		DF: 10				
Analyte	Result	ReportLimit	MDL								Qual
BARIUM	ND	0.001	0.0039								
BORON	ND	0.05	0.048								
CALCIUM	ND	1	0.88								
IRON	ND	0.1	0.094								
MAGNESIUM	ND	0.1	0.14								
MANGANESE	ND	0.002	0.0031								
POTASSIUM	ND	1	0.69								
SELENIUM	ND	0.001	0.0022								
SODIUM	ND	1	0.78								
STRONTIUM	ND	0.001	0.0018								

The following samples were analyzed in this batch:

1803304-1

Client: Western Water and Land, Inc.
 Work Order: 1803304
 Project: TEP RU 13-6 317B

QC BATCH REPORT

Batch ID: EX180316-1-2 Instrument ID HPSV4 Method: SW8270

LCS Sample ID: EX180316-1 Units: UG/L Analysis Date: 3/28/2018 16:10
 Client ID: Run ID: SV180328-44 Prep Date: 3/16/2018 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
NAPHTHALENE	42.1	10	50		84	60-100				20	
2-METHYLNAPHTHALENE	41.2	10	50		82	62-100				20	
ACENAPHTHYLENE	42.7	10	50		85	67-108				20	
ACENAPHTHENE	40.9	10	50		82	60-108				20	
FLUORENE	40.8	10	50		82	64-116				20	
PHENANTHRENE	43.3	10	50		87	64-113				20	
ANTHRACENE	39.7	10	50		79	72-108				20	
FLUORANTHENE	44.3	10	50		89	63-122				20	
PYRENE	50.5	10	50		101	60-113				20	
BENZO(A)ANTHRACENE	42.9	10	50		86	69-107				20	
CHRYSENE	48.8	10	50		98	68-114				20	
BENZO(B)FLUORANTHENE	47.2	10	50		94	67-111				20	
BENZO(K)FLUORANTHENE	42.9	10	50		86	65-118				20	
BENZO(A)PYRENE	43.3	10	50		87	62-104				20	
INDENO(1,2,3-CD)PYRENE	53.5	10	50		107	54-124				20	
DIBENZO(A,H)ANTHRACENE	48.1	10	50		96	57-126				20	
BENZO(G,H,I)PERYLENE	46.9	10	50		94	52-124				20	
Surr: NITROBENZENE-D5	45.9		50		92	53-111					
Surr: 2-FLUOROBIPHENYL	39.3		50		79	55-108					
Surr: TERPHENYL-D14	39.9		50		80	34-139					

Client: Western Water and Land, Inc.
 Work Order: 1803304
 Project: TEP RU 13-6 317B

QC BATCH REPORT

Batch ID: **EX180316-1-2** Instrument ID **HPSV4** Method: **SW8270**

MB Sample ID: **EX180316-1** Units: **UG/L** Analysis Date: **3/28/2018 15:49**
 Client ID: Run ID: **SV180328-44** Prep Date: **3/16/2018** DF: **1**

Analyte	Result	ReportLimit	MDL	Qual
NAPHTHALENE	ND	10	3	
2-METHYLNAPHTHALENE	ND	10	3	
ACENAPHTHYLENE	ND	10	3	
ACENAPHTHENE	ND	10	3	
FLUORENE	ND	10	3	
PHENANTHRENE	ND	10	3	
ANTHRACENE	ND	10	3	
FLUORANTHENE	ND	10	3	
PYRENE	ND	10	3	
BENZO(A)ANTHRACENE	ND	10	3	
CHRYSENE	ND	10	3	
BENZO(B)FLUORANTHENE	ND	10	3	
BENZO(K)FLUORANTHENE	ND	10	3	
BENZO(A)PYRENE	ND	10	3	
INDENO(1,2,3-CD)PYRENE	ND	10	3	
DIBENZO(A,H)ANTHRACENE	ND	10	3	
BENZO(G,H,I)PERYLENE	ND	10	3	
Surr: NITROBENZENE-D5	43.3			87 53-111
Surr: 2-FLUOROBIPHENYL	35.5			71 55-108
Surr: TERPHENYL-D14	38.4			77 34-139

The following samples were analyzed in this batch:

1803304-1

Client: Western Water and Land, Inc.
 Work Order: 1803304
 Project: TEP RU 13-6 317B

QC BATCH REPORT

Batch ID: VL180327-4-1 Instrument ID: HPV4 Method: SW8260_25

LCS		Sample ID: VL180327-4			Units: %REC		Analysis Date: 3/27/2018 11:24				
Client ID:		Run ID: VL180327-8A			Prep Date: 3/27/2018		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	24.1		25		97	85-115					
Surr: DIBROMOFLUOROMETHANE	25.9		25		103	84-118					
Surr: TOLUENE-D8	24.9		25		100	85-115					
BENZENE	10	1	10		100	83-117				20	
TOLUENE	9.52	1	10		95	82-113				20	
ETHYLBENZENE	9.61	1	10		96	81-113				20	
M+P-XYLENE	18.5	1	20		92	82-115				20	
O-XYLENE	9.15	1	10		92	81-115				20	

LCSD		Sample ID: VL180327-4			Units: %REC		Analysis Date: 3/27/2018 11:48				
Client ID:		Run ID: VL180327-8A			Prep Date: 3/27/2018		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	24.2		25		97	85-115			0		
Surr: DIBROMOFLUOROMETHANE	26.1		25		104	84-118			1		
Surr: TOLUENE-D8	25.2		25		101	85-115			1		
BENZENE	9.59	1	10		96	83-117		10	5	20	
TOLUENE	9.1	1	10		91	82-113		9.52	5	20	
ETHYLBENZENE	9.07	1	10		91	81-113		9.61	6	20	
M+P-XYLENE	17.6	1	20		88	82-115		18.5	5	20	
O-XYLENE	8.8	1	10		88	81-115		9.15	4	20	

MB		Sample ID: VL180327-4			Units: %REC		Analysis Date: 3/27/2018 14:48								
Client ID:		Run ID: VL180327-8A			Prep Date: 3/27/2018		DF: 1								
Analyte	Result	ReportLimit	MDL									Qual			
Surr: 4-BROMOFLUOROBENZENE	25.5				102	85-115									
Surr: DIBROMOFLUOROMETHANE	25.3				101	84-118									
Surr: TOLUENE-D8	25				100	85-115									
BENZENE	ND	1	0.32												
TOLUENE	ND	1	0.31												
ETHYLBENZENE	ND	1	0.31												
M+P-XYLENE	ND	1	0.31												
O-XYLENE	ND	1	0.31												
TOTAL XYLENES	ND	1													

The following samples were analyzed in this batch:

1803304-1

Client: Western Water and Land, Inc.
 Work Order: 1803304
 Project: TEP RU 13-6 317B

QC BATCH REPORT

Batch ID: VL180327-4-2 Instrument ID: HPV4 Method: SW8260_25

LCS		Sample ID: VL180327-8			Units: UG/L		Analysis Date: 3/27/2018 12:36				
Client ID:		Run ID: VL180327-8A			Prep Date: 3/27/2018		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	853	100	1000		86	80-120				20	

LCSD		Sample ID: VL180327-8			Units: UG/L		Analysis Date: 3/27/2018 13:00				
Client ID:		Run ID: VL180327-8A			Prep Date: 3/27/2018		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	850	100	1000		86	80-120		853	0	20	

MB		Sample ID: VL180327-4			Units: UG/L		Analysis Date: 3/27/2018 14:48				
Client ID:		Run ID: VL180327-8A			Prep Date: 3/27/2018		DF: 1				
Analyte	Result	ReportLimit	MDL								
GASOLINE RANGE ORGANICS	ND	100	47								

The following samples were analyzed in this batch:

Client: Western Water and Land, Inc.
 Work Order: 1803304
 Project: TEP RU 13-6 317B

QC BATCH REPORT

Batch ID: **AK180317-1-5** Instrument ID **NONE** Method: **SM2320B**

DUP Sample ID: **1803304-1** Units: **MG/L** Analysis Date: **3/17/2018**
 Client ID: **Beaver Cr2** Run ID: **AK180317-1A1** Prep Date: **3/17/2018** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
BICARBONATE AS CaCO3	170	20						170	1	15	
CARBONATE AS CaCO3	ND	20						20		15	
TOTAL ALKALINITY AS CaCO3	170	20						170	1	15	

LCS Sample ID: **AK180317-1** Units: **MG/L** Analysis Date: **3/17/2018**
 Client ID: Run ID: **AK180317-1A1** Prep Date: **3/17/2018** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
TOTAL ALKALINITY AS CaCO3	99.9	5	100		100	85-115				15	

MB Sample ID: **AK180317-1** Units: **MG/L** Analysis Date: **3/17/2018**
 Client ID: Run ID: **AK180317-1A1** Prep Date: **3/17/2018** DF: **1**

Analyte	Result	ReportLimit	MDL	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:

Client: Western Water and Land, Inc.
 Work Order: 1803304
 Project: TEP RU 13-6 317B

QC BATCH REPORT

Batch ID: **IC180315-1-2** Instrument ID **IC3** Method: **EPA300.0**

LCS		Sample ID: IC180315-1			Units: MG/L		Analysis Date: 3/15/2018 16:07				
Client ID:		Run ID: IC180315-1A3			Prep Date: 3/15/2018		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
BROMIDE	9.82	0.2	10		98	90-110				15	
CHLORIDE	10.1	0.2	10		101	90-110				15	
FLUORIDE	5	0.1	5		100	90-110				15	
NITRATE AS N	10.1	0.2	10		101	90-110				15	
NITRITE AS N	4.98	0.1	5		99	90-110				15	
SULFATE	50.3	1	50		101	90-110				15	

MB		Sample ID: IC180315-1			Units: MG/L		Analysis Date: 3/15/2018 16:21				
Client ID:		Run ID: IC180315-1A3			Prep Date: 3/15/2018		DF: 1				
Analyte	Result	ReportLimit	MDL								Qual
BROMIDE	ND	0.2	0.06								
CHLORIDE	ND	0.2	0.06								
FLUORIDE	ND	0.1	0.03								
NITRATE AS N	ND	0.2	0.06								
NITRITE AS N	ND	0.1	0.03								
SULFATE	ND	1	0.15								

The following samples were analyzed in this batch:

1803304-1

Client: Western Water and Land, Inc.
 Work Order: 1803304
 Project: TEP RU 13-6 317B

QC BATCH REPORT

Batch ID: **PH180316-1-2** Instrument ID **pH-1** Method: **SM4500-H**

CCV		Sample ID: CCV			Units: pH		Analysis Date: 3/16/2018				
Client ID:		Run ID: PH180316-1A1			Prep Date: 3/16/2018		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
PH	6.95	0.1	7			6.9-7.1					

ICV		Sample ID: ICV			Units: pH		Analysis Date: 3/16/2018				
Client ID:		Run ID: PH180316-1A1			Prep Date: 3/16/2018		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
PH	7.04	0.1	7			6.95-7.05					

The following samples were analyzed in this batch:

1803304-1

Client: Western Water and Land, Inc.
 Work Order: 1803304
 Project: TEP RU 13-6 317B

QC BATCH REPORT

Batch ID: **SC180316-1-1** Instrument ID **pH-1** Method: **SM2510B**

CCV	Sample ID: CCV				Units: umhos/cm	Analysis Date: 3/16/2018					
Client ID:		Run ID: SC180316-1A1				Prep Date: 3/16/2018		DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
SPECIFIC CONDUCTIVITY	1440	1	1410		102	71.7-1554					

ICV	Sample ID: ICV				Units: umhos/cm	Analysis Date: 3/16/2018					
Client ID:		Run ID: SC180316-1A1				Prep Date: 3/16/2018		DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
SPECIFIC CONDUCTIVITY	706	1	718		98	46.2-789.7					

The following samples were analyzed in this batch:

1803304-1

Client: Western Water and Land, Inc.
 Work Order: 1803304
 Project: TEP RU 13-6 317B

QC BATCH REPORT

Batch ID: **TD180315-1-2** Instrument ID **Balance** Method: **SM2540C**

LCS Sample ID: **TD180315-1** Units: **MG/L** Analysis Date: **3/17/2018**
 Client ID: Run ID: **TD180317-1A1** Prep Date: **3/15/2018** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	375	20	400		94	85-115				5	

MB Sample ID: **TD180315-1** Units: **MG/L** Analysis Date: **3/17/2018**
 Client ID: Run ID: **TD180317-1A1** Prep Date: **3/15/2018** DF: **1**

Analyte	Result	ReportLimit	MDL	Qual
TOTAL DISSOLVED SOLIDS	ND	20		

The following samples were analyzed in this batch:

1803304-1