Friday, August 31, 2018

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

Re: ALS Workorder: 1807511
Project Name: TEP RMV 15-35 BWQ
Project Number:

Dear Mr. Smith:

One water sample was received from Western Water and Land, Inc., on 7/26/2018. The sample was scheduled for the following analyses:

BART	pages 1-13
Dissolved Gasses	pages 1-46
GC/MS Volatiles	pages 1-107
Inorganics	pages 1-110
Metals	pages 1-208
Total Extractable Petroleum Hydrocarbons (Diesel)	pages 1-42

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. OBrien
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

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 1807511
Client Name: Western Water and Land, Inc.
Client Project Name: TEP RMV 15-35 BWQ
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Cox 61751-F	1807511-1		WATER	24-Jul-18	10:35

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 # 1807511

PAGE 1 of 1

DISPOSAL: By Lab or Return to Client

PROJECT NAME	TEP RMV 15-35 BWQ	SAMPLER	Shelby
FACILITY NAME		PROJECT NO.	
FACILITY ID (API)		EDD FORMAT	
COMPANY NAME	Western Water & Land, Inc.	PURCHASE ORDER	
SEND REPORT TO	Bruce Smith	BILL TO COMPANY	TEP Rocky Mtn LLC
ADDRESS	743 Horizon Court, Suite 330	INVOICE ATTN TO	Tammy Gose
CITY / STATE / ZIP	Grand Junction, CO 81506	ADDRESS	1058 CR 215
PHONE	(970) 242-0170	CITY / STATE / ZIP	Parachute, CO 81635
FAX		PHONE	(970) 712-6049
E-MAIL	bsmith@westernwaterandland.com	FAX	
		E-MAIL	tgose@terraep.com

DATE: 7-24-18

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, nitrates	Total Phosphorus	Dissolved gases - HCl preserved	Dissolved gases - unpreserved	PAH's
(1)	Cox 1751-F	GW	7-24-18	1035	13	1,3	IV	1	1	3	3	1	1	1		2	

Field Parameters

	Cox 1751-F	Temp (°C)	19.49	DO (%)	49.9	SpC (uS/cm)	991	Turb (NTUs)	018		
		pH (s.u.)	7.17	DO (mg/L)	4.55	ORP (mv)	887	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:

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	S. Goodwin	Shelby Goodwin	7-24-18	1430
RECEIVED BY	C Trimble	C Trimble	7-24-18	1202
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Western Water Workorder No: 1807511

Project Manager: KO Initials: CDT Date: 7-26-18

1.	Are airbills / shipping documents present and/or removable?	DROP OFF	(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?		(YES)	NO
5.	Is the COC in agreement with samples received? (IDs, dates, times, # of samples, # of containers, matrix, requested analyses, etc.)		(YES)	NO
6.	Are short-hold samples present?		(YES)	NO
7.	Are all samples within holding times for the requested analyses?		YES	(NO)
8.	Were all sample containers received intact? (not broken or leaking)		(YES)	NO
9.	Is there sufficient sample for the requested analyses?		(YES)	NO
10.	Are all samples in the proper containers for the requested analyses?		(YES)	NO
11.	Are all aqueous samples preserved correctly, if required? (excluding volatiles)	N/A	(YES)	NO
12.	Are all aqueous non-preserved samples pH 4-9?	N/A	(YES)	NO
13.	Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) free of bubbles > 6 mm (1/4 inch) diameter? (i.e. size of green pea)	N/A	YES	(NO)
14.	Were the samples shipped on ice?		(YES)	NO
15.	Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: #1 (#3) #4	RAD ONLY	(YES)	NO

Cooler #:	1							
Temperature (°C):	5.6							
No. of custody seals on cooler:	1							
DOT Survey/ Acceptance Information — External µR/hr reading:	12							
Background µR/hr reading:	10							

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

Additional Information: **Please provide details here for any NO responses to gray-shaded boxes above, or any other issues noted:**

HEADSPACE: 1807511-1-4

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

Project Manager Signature / Date: 7/26/18

Form 201r26.xls
(06/29/2018)

*IR Gun #1, VWR SN 170560549
*IR Gun #3, VWR SN 170647571
*IR Gun #4, Oakton, SN 2372220101-0002

1807511

FROM:
WESTERN WATER & LAND (970) 242-0170
743 HORIZON CT STE 330
GRAND JUNCTION CO 81506
US

CAD: 0069941/1
DIMMED: 19 X 14 X 12 IN
BILL 3rd PARTY

TO ALS ENVIROMENTAL
225 COMMERCE DR
FORT COLLINS CO 80524 (US)
(970) 488-3058
INV:
PO: REF:
DEPT:

12-1

5.60

FedEx Ground

J18201807220 1uv

TRK# 7819 8246 6046

80524

9622 0417 3 (000 000 0000) 0 00 7819 8246 6046

1807511

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.

Dissolved Gasses:
The sample was prepared and analyzed according to method RSK-175 procedures and the current revision of SOP 449.

All acceptance criteria were met.

DRO:
The samples were 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.

BART:
The Biological Activity Reaction Test was completed with the Iron-Related Bacteria, Sulfate-Reducing Bacteria, and Slime-Forming Bacteria kit manufactured by Hach Company. The analysis was performed following the manufacturer provided instructions. If the target analyte is not detected (absent), then the sample will be reported with “ND” in the result field. If the target analyte is detected (present), then the sample will be reported with the estimated colony forming units/mL (cfu/mL) as provided by the manufacturer based on the day reaction was observed.

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 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 MCAWW, 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
Total phosphorus	365.2	1119
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

All initial and continuing calibration blanks were below the reporting limit for the requested analytes with the exception of CCB8 and CCB9 for nitrite as N. The associated sample was below the reporting limit, so no further action was taken.

All remaining acceptance criteria were met.

Client: Western Water and Land, Inc. **Date:** *17-Aug-18*
Project: TEP RMV 15-35 BWQ **Work Order:** 1807511
Sample ID: Cox 61751-F **Lab ID:** 1807511-1
Legal Location: **Matrix:** WATER
Collection Date: 7/24/2018 10:35 **Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
ALKALINITY AS CALCIUM CARBONATE			**SM2320B**		Prep Date: **7/30/2018**		PrepBy: **HMA**
BICARBONATE AS CaCO3	**370**		**20**	**MG/L**	1		7/30/2018
CARBONATE AS CaCO3	ND		20	MG/L	1		7/30/2018
TOTAL ALKALINITY AS CaCO3	**370**		**20**	**MG/L**	1		7/30/2018
BIOLOGICAL ACTIVITY REACTION TEST			**BART**		Prep Date: **7/30/2018**		PrepBy: **JML**
IRON RELATED BACTERIA	**140000**		**1**	**cfu/ml**	1		8/7/2018
SLIME FORMING BACTERIA	**350000**		**1**	**cfu/ml**	1		8/7/2018
SULFATE REDUCING BACTERIA	**ND**		**1**	**cfu/ml**	1		8/7/2018
DIESEL RANGE ORGANICS			**SW8015M**		Prep Date: **7/31/2018**		PrepBy: **LML**
Diesel Range Organics	ND		0.58	MG/L	1	0.13	7/31/2018 18:25
Surr: O-TERPHENYL	*104*		*63-126*	*%REC*	1		7/31/2018 18:25
DISSOLVED GASSES			**RSK175**		Prep Date: **8/1/2018**		PrepBy: **DMS**
METHANE	ND		1	UG/L	1	1	8/1/2018 15:26
ETHANE	ND		2	UG/L	1	2	8/1/2018 15:26
PROPANE	ND		1	UG/L	1	1	8/1/2018 15:26
GC/MS VOLATILES			**SW8260_25**		Prep Date: **7/30/2018**		PrepBy: **CJW**
BENZENE	ND		1	UG/L	1	0.3	7/30/2018 14:59
TOLUENE	ND		1	UG/L	1	0.3	7/30/2018 14:59
ETHYLBENZENE	ND		1	UG/L	1	0.3	7/30/2018 14:59
M+P-XYLENE	ND		1	UG/L	1	0.3	7/30/2018 14:59
O-XYLENE	ND		1	UG/L	1	0.3	7/30/2018 14:59
TOTAL XYLENES	ND		1	UG/L	1		7/30/2018 14:59
Surr: 4-BROMOFLUOROBENZENE	*101*		*85-115*	*%REC*	1		7/30/2018 14:59
Surr: DIBROMOFLUOROMETHANE	*97*		*84-118*	*%REC*	1		7/30/2018 14:59
Surr: TOLUENE-D8	*95*		*85-115*	*%REC*	1		7/30/2018 14:59
GASOLINE RANGE ORGANICS	ND		100	UG/L	1	30	7/30/2018 14:59
ION CHROMATOGRAPHY			**EPA300.0**		Prep Date: **7/26/2018**		PrepBy: **HMA**
BROMIDE	ND		0.2	MG/L	1	0.06	7/26/2018 20:37
CHLORIDE	**6.5**		**0.2**	**MG/L**	1	0.06	7/26/2018 20:37
FLUORIDE	**0.31**		**0.1**	**MG/L**	1	0.03	7/26/2018 20:37
NITRATE/NITRITE AS N	**1.6**		**0.1**	**MG/L**	1		7/26/2018 20:37
NITRATE AS N	**1.6**		**0.2**	**MG/L**	1	0.06	7/26/2018 20:37
NITRITE AS N	ND		0.1	MG/L	1	0.03	7/26/2018 20:37
SULFATE	**160**		**10**	**MG/L**	10	3	7/26/2018 20:56
METALS BY 200.8			**EPA200.8**		Prep Date: **8/3/2018**		PrepBy: **JML**
BARIUM	**0.052**		**0.001**	**MG/L**	10	0.000086	8/14/2018 16:27
BORON	**0.07**		**0.05**	**MG/L**	10	0.0007	8/14/2018 16:27
CALCIUM	**79**		**1**	**MG/L**	10	0.087	8/14/2018 16:27
IRON	**0.0061**	J	**0.1**	**MG/L**	10	0.00065	8/14/2018 16:27
MAGNESIUM	**55**		**0.1**	**MG/L**	10	0.014	8/14/2018 16:27
MANGANESE	**0.0082**		**0.002**	**MG/L**	10	0.000079	8/16/2018 15:24

Client:	Western Water and Land, Inc.	**Date:**	*17-Aug-18*
Project:	TEP RMV 15-35 BWQ	**Work Order:**	1807511
Sample ID:	Cox 61751-F	**Lab ID:**	1807511-1
Legal Location:		**Matrix:**	WATER
Collection Date:	7/24/2018 10:35	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
POTASSIUM	**5.8**		**1**	**MG/L**	10	0.057	8/14/2018 16:27
SELENIUM	**0.0036**		**0.001**	**MG/L**	10	0.00012	8/14/2018 16:27
SODIUM	**53**		**1**	**MG/L**	10	0.022	8/14/2018 16:27
STRONTIUM	**0.91**		**0.001**	**MG/L**	10	0.00013	8/14/2018 16:27
PH			**SM4500-H**		Prep Date: **7/27/2018**		PrepBy: **AEJ**
PH	**7.55**		**0.1**	**pH**	1		7/27/2018
SPECIFIC CONDUCTANCE IN WATER			**SM2510B**		Prep Date: **7/27/2018**		PrepBy: **AEJ**
SPECIFIC CONDUCTIVITY	**955**		**1**	**umhos/cm**	1		7/27/2018
TOTAL DISSOLVED SOLIDS			**SM2540C**		Prep Date: **7/27/2018**		PrepBy: **AEJ**
TOTAL DISSOLVED SOLIDS	**590**		**20**	**MG/L**	1		7/30/2018
TOTAL PHOSPHORUS AS P			**EPA365.2**		Prep Date: **7/31/2018**		PrepBy: **AEJ**
TOTAL PHOSPHORUS	**0.05**	J	**0.05**	**MG/L**	1	0.015	7/31/2018

Client:	Western Water and Land, Inc.	**Date:**	*17-Aug-18*
Project:	TEP RMV 15-35 BWQ	**Work Order:**	1807511
Sample ID:	Cox 61751-F	**Lab ID:**	1807511-1
Legal Location:		**Matrix:**	WATER
Collection Date:	7/24/2018 10:35	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed

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

Batch ID: **HC180731-81-1** Instrument ID **FUELS-1** Method: **SW8015M**

LCS Sample ID: **HC180731-81** Units: **MG/L** Analysis Date: **7/31/2018 19:52**

Client ID: Run ID: **HC180731-8A** Prep Date: **7/31/2018** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	7.5	0.563	7.82		96	36-150				20	
Surr: O-TERPHENYL	1.66		1.56		106	63-126					

MB Sample ID: **HC180731-81** Units: **MG/L** Analysis Date: **7/31/2018 15:54**

Client ID: Run ID: **HC180731-8A** Prep Date: **7/31/2018** DF: **1**

Analyte	Result	ReportLimit	MDL								Qual
Diesel Range Organics	ND	0.57	0.13								
Surr: O-TERPHENYL	1.63				103	63-126					

The following samples were analyzed in this batch: 1807511-1

QC BATCH REPORT

Batch ID: **HC180801-91-2** Instrument ID **MEE-1** Method: **RSK175**

LCS Sample ID: **HC180801-91** Units: **UG/L** Analysis Date: **8/1/2018 14:09**

Client ID: Run ID: **HC180801-91A** Prep Date: **8/1/2018** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	144	1	142		101	80-120				25	
ETHANE	265	2	267		99	80-120				25	
PROPANE	380	1	391		97	80-120				25	

MB Sample ID: **HC180801-91** Units: **UG/L** Analysis Date: **8/1/2018 14:13**

Client ID: Run ID: **HC180801-91A** Prep Date: **8/1/2018** DF: **1**

Analyte	Result	ReportLimit	MDL	Qual
METHANE	ND	1	1	
ETHANE	ND	2	2	
PROPANE	ND	1	1	

The following samples were analyzed in this batch: 1807511-1

Batch ID: **IP180803-1-4** Instrument ID **ICPMS2** Method: **EPA200.8**

LCS Sample ID: **IM180803-1** Units: **MG/L** Analysis Date: **8/14/2018 14:56**

Client ID: Run ID: **IM180814-11A5** Prep Date: **8/3/2018** DF: **10**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BARIUM	0.0932	0.001	0.1		93	85-115				20	
BORON	1.04	0.05	1		104	85-115				20	
CALCIUM	9.61	1	10		96	85-115				20	
IRON	4.69	0.1	5		94	85-115				20	
MAGNESIUM	9.5	0.1	10		95	85-115				20	
MANGANESE	0.0987	0.002	0.1		99	85-115				20	
POTASSIUM	4.58	1	5		92	85-115				20	
SELENIUM	0.0876	0.001	0.1		88	85-115				20	
SODIUM	9.53	1	10		95	85-115				20	
STRONTIUM	0.0912	0.001	0.1		91	85-115				20	

MB Sample ID: **FP180801-1** Units: **MG/L** Analysis Date: **8/14/2018 14:50**

Client ID: Run ID: **IM180814-11A5** Prep Date: **8/3/2018** DF: **10**

Analyte	Result	ReportLimit	MDL	Qual
BARIUM	0.00068	0.001	0.000086	J
BORON	0.024	0.05	0.0007	J
CALCIUM	ND	1	0.087	
IRON	0.018	0.1	0.00065	J
MAGNESIUM	ND	0.1	0.014	
MANGANESE	0.0013	0.002	0.000079	J
POTASSIUM	ND	1	0.057	
SELENIUM	0.0003	0.001	0.00012	J
SODIUM	-0.03	1	0.022	J
STRONTIUM	ND	0.001	0.00013	

The following samples were analyzed in this batch: 1807511-1

Batch ID: **VL180730-4-1** Instrument ID **HPV4** Method: **SW8260_25**

LCS Sample ID: **VL180730-4** Units: **%REC** Analysis Date: **7/30/2018 09:07**

Client ID: Run ID: **VL180730-4A** Prep Date: **7/30/2018** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	24.8		25		99	85-115					
Surr: DIBROMOFLUOROMETHANE	24.6		25		98	84-118					
Surr: TOLUENE-D8	23.6		25		94	85-115					
BENZENE	10.9	1	10		109	83-117				20	
TOLUENE	10.1	1	10		101	82-113				20	
ETHYLBENZENE	10.1	1	10		101	81-113				20	
M+P-XYLENE	20.3	1	20		102	82-115				20	
O-XYLENE	10.1	1	10		101	81-115				20	

LCSD Sample ID: **VL180730-4** Units: **%REC** Analysis Date: **7/30/2018 09:31**

Client ID: Run ID: **VL180730-4A** Prep Date: **7/30/2018** 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			3		
Surr: DIBROMOFLUOROMETHANE	24.3		25		97	84-118			1		
Surr: TOLUENE-D8	24.1		25		96	85-115			2		
BENZENE	11	1	10		110	83-117		10.9	1	20	
TOLUENE	10.3	1	10		103	82-113		10.1	2	20	
ETHYLBENZENE	10.3	1	10		103	81-113		10.1	2	20	
M+P-XYLENE	20.3	1	20		101	82-115		20.3	0	20	
O-XYLENE	10.1	1	10		101	81-115		10.1	0	20	

MB Sample ID: **VL180730-4** Units: **%REC** Analysis Date: **7/30/2018 12:07**

Client ID: Run ID: **VL180730-4A** Prep Date: **7/30/2018** DF: **1**

Analyte	Result	ReportLimit	MDL				Qual
Surr: 4-BROMOFLUOROBENZENE	24.9			100	85-115		
Surr: DIBROMOFLUOROMETHANE	24.4			98	84-118		
Surr: TOLUENE-D8	23.7			95	85-115		
BENZENE	ND	1	0.3				
TOLUENE	ND	1	0.3				
ETHYLBENZENE	ND	1	0.3				
M+P-XYLENE	ND	1	0.3				
O-XYLENE	ND	1	0.3				
TOTAL XYLENES	ND	1					

The following samples were analyzed in this batch: 1807511-1

Client: Western Water and Land, Inc.
Work Order: 1807511
Project: TEP RMV 15-35 BWQ

QC BATCH REPORT

Batch ID: **VL180730-4-2** Instrument ID **HPV4** Method: **SW8260_25**

LCS Sample ID: **VL180730-8** Units: **UG/L** Analysis Date: **7/30/2018**
Client ID: Run ID: **VL180730-4A** Prep Date: **7/30/2018** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	963	100	1000		96	80-120				20	

LCSD Sample ID: **VL180730-8** Units: **UG/L** Analysis Date: **7/30/2018 10:41**
Client ID: Run ID: **VL180730-4A** Prep Date: **7/30/2018** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	938	100	1000		94	80-120		963	3	20	

MB Sample ID: **VL180730-4** Units: **UG/L** Analysis Date: **7/30/2018 12:07**
Client ID: Run ID: **VL180730-4A** Prep Date: **7/30/2018** DF: **1**

Analyte	Result	ReportLimit	MDL	Qual
GASOLINE RANGE ORGANICS	ND	100	30	

The following samples were analyzed in this batch: 1807511-1

QC BATCH REPORT

Batch ID: **AK180730-1-1** Instrument ID **NONE** Method: **SM2320B**

LCS Sample ID: **AK180730-1** Units: **MG/L** Analysis Date: **7/30/2018**
Client ID: Run ID: **AK180730-1A1** Prep Date: **7/30/2018** 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	97.9	5	100		98	85-115				15	

MB Sample ID: **AK180730-1** Units: **MG/L** Analysis Date: **7/30/2018**
Client ID: Run ID: **AK180730-1A1** Prep Date: **7/30/2018** 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: 1807511-1

QC BATCH REPORT

Batch ID: **IC180726-1-3** Instrument ID **IC3** Method: **EPA300.0**

LCS Sample ID: **IC180726-1** Units: **MG/L** Analysis Date: **7/26/2018 15:50**

Client ID: Run ID: **IC180725-1A4** Prep Date: **7/26/2018** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BROMIDE	10.1	0.2	10		101	90-110				15	
CHLORIDE	10.3	0.2	10		103	90-110				15	
FLUORIDE	5.01	0.1	5		100	90-110				15	
NITRATE AS N	10.2	0.2	10		102	90-110				15	
NITRITE AS N	5.2	0.1	5		104	90-110				15	
SULFATE	51	1	50		102	90-110				15	

MB Sample ID: **IC180726-1** Units: **MG/L** Analysis Date: **7/26/2018 16:09**

Client ID: Run ID: **IC180725-1A4** Prep Date: **7/26/2018** 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	0.069	0.1	0.03	J
SULFATE	ND	1	0.3	

The following samples were analyzed in this batch: 1807511-1

QC BATCH REPORT

Batch ID: **PH180727-1-1** Instrument ID **pH-1** Method: **SM4500-H**

CCV Sample ID: **CCV2** Units: **pH** Analysis Date: **7/27/2018**
Client ID: Run ID: **ph180727-1A1** Prep Date: **7/27/2018** 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			6.9-7.1					

CCV Sample ID: **CCV** Units: **pH** Analysis Date: **7/27/2018**
Client ID: Run ID: **ph180727-1A1** Prep Date: **7/27/2018** 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			6.9-7.1					

ICV Sample ID: **ICV** Units: **pH** Analysis Date: **7/27/2018**
Client ID: Run ID: **ph180727-1A1** Prep Date: **7/27/2018** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
PH	7.01	0.1	7			6.9-7.1					

The following samples were analyzed in this batch: 1807511-1

QC BATCH REPORT

Batch ID: **SC180727-1-1** Instrument ID **pH-1** Method: **SM2510B**

CCV Sample ID: **CCV** Units: **umhos/cm** Analysis Date: **7/27/2018**
Client ID: Run ID: **SC180727-1** Prep Date: **7/27/2018** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
SPECIFIC CONDUCTIVITY	1410	1	1410		100	?71.7-1554					

ICV Sample ID: **ICV** Units: **umhos/cm** Analysis Date: **7/27/2018**
Client ID: Run ID: **SC180727-1** Prep Date: **7/27/2018** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
SPECIFIC CONDUCTIVITY	714	1	718		99	646.2-789.7					

The following samples were analyzed in this batch: 1807511-1

QC BATCH REPORT

Batch ID: **TD180727-1-1** Instrument ID **Balance** Method: **SM2540C**

LCS Sample ID: **TD180727-1** Units: **MG/L** Analysis Date: **7/30/2018**
Client ID: Run ID: **TD180730-1A1** Prep Date: **7/27/2018** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	385	20	400		96	85-115				5	

MB Sample ID: **TD180727-1** Units: **MG/L** Analysis Date: **7/30/2018**
Client ID: Run ID: **TD180730-1A1** Prep Date: **7/27/2018** DF: **1**

Analyte	Result	ReportLimit	MDL	Qual
TOTAL DISSOLVED SOLIDS	ND	20		

The following samples were analyzed in this batch: 1807511-1

QC BATCH REPORT

Batch ID: **TP180731-1-1** Instrument ID **Spec** Method: **EPA365.2**

LCS Sample ID: **TP180731-1** Units: **MG/L** Analysis Date: **7/31/2018**
Client ID: Run ID: **TP180731-1A2** Prep Date: **7/31/2018** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL PHOSPHORUS	0.472	0.05	0.5		94	80-120				20	

MB Sample ID: **TP180731-1** Units: **MG/L** Analysis Date: **7/31/2018**
Client ID: Run ID: **TP180731-1A2** Prep Date: **7/31/2018** DF: **1**

Analyte	Result	ReportLimit	MDL	Qual
TOTAL PHOSPHORUS	ND	0.05	0.015	

The following samples were analyzed in this batch: 1807511-1