



1709111

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 two prior to analysis.

All initial and continuing calibration verifications were within the acceptance criteria for the requested analyte with the exception of CCV9 for calcium, iron and selenium. None of the samples associated with this order number were bracketed by this CCV.

All remaining 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
Total Nitrates	300.0 Revision 2.1	1113
Sulfate	300.0 Revision 2.1	1113

All acceptance criteria were met.

ALS -- Fort Collins

SAMPLE SUMMARY REPORT

Client: Western Water and Land, Inc.
 Project: TEP 317B: GV 80-4
 Sample ID: ~~B2~~ BM 2
 Legal Location:
 Collection Date: 9/6/2017 13:30

Date: 26-Sep-17
 Work Order: 1709111
 Lab ID: 1709111-1
 Matrix: WATER
 Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
ALKALINITY AS CALCIUM CARBONATE			SM2320B		Prep Date: 9/19/2017		PrepBy: SKC
BICARBONATE AS CaCO3	100		20	MG/L	1		9/19/2017
CARBONATE AS CaCO3	ND		20	MG/L	1		9/19/2017
TOTAL ALKALINITY AS CaCO3	100		20	MG/L	1		9/19/2017
DIESEL RANGE ORGANICS			SW8015M		Prep Date: 9/8/2017		PrepBy: JFN
Diesel Range Organics	ND		0.59	MG/L	1	0.17	9/8/2017 20:45
Surr: O-TERPHENYL	97		63-126	%REC	1		9/8/2017 20:45
GC/MS SEMI-VOLATILES			SW8270		Prep Date: 9/8/2017		PrepBy: LML
NAPHTHALENE	ND		10	UG/L	1	3	9/14/2017 13:17
2-METHYLNAPHTHALENE	ND		10	UG/L	1	3	9/14/2017 13:17
ACENAPHTHYLENE	ND		10	UG/L	1	3	9/14/2017 13:17
ACENAPHTHENE	ND		10	UG/L	1	3	9/14/2017 13:17
FLUORENE	ND		10	UG/L	1	3	9/14/2017 13:17
PHENANTHRENE	ND		10	UG/L	1	3	9/14/2017 13:17
ANTHRACENE	ND		10	UG/L	1	3	9/14/2017 13:17
FLUORANTHENE	ND		10	UG/L	1	3	9/14/2017 13:17
PYRENE	ND		10	UG/L	1	3	9/14/2017 13:17
BENZO(A)ANTHRACENE	ND		10	UG/L	1	3	9/14/2017 13:17
CHRYSENE	ND		10	UG/L	1	3	9/14/2017 13:17
BENZO(B)FLUORANTHENE	ND		10	UG/L	1	3	9/14/2017 13:17
BENZO(K)FLUORANTHENE	ND		10	UG/L	1	3	9/14/2017 13:17
BENZO(A)PYRENE	ND		10	UG/L	1	3	9/14/2017 13:17
INDENO(1,2,3-CD)PYRENE	ND		10	UG/L	1	3	9/14/2017 13:17
DIBENZO(A,H)ANTHRACENE	ND		10	UG/L	1	3	9/14/2017 13:17
BENZO(G,H,I)PERYLENE	ND		10	UG/L	1	3	9/14/2017 13:17
Surr: NITROBENZENE-D5	84		53-111	%REC	1		9/14/2017 13:17
Surr: 2-FLUOROBIPHENYL	76		55-108	%REC	1		9/14/2017 13:17
Surr: TERPHENYL-D14	85		34-139	%REC	1		9/14/2017 13:17
GC/MS VOLATILES			SW8260_25		Prep Date: 9/15/2017		PrepBy: JXK
BENZENE	ND		1	UG/L	1	0.32	9/15/2017 15:20
TOLUENE	ND		1	UG/L	1	0.31	9/15/2017 15:20
ETHYLBENZENE	ND		1	UG/L	1	0.31	9/15/2017 15:20
M+P-XYLENE	ND		1	UG/L	1	0.31	9/15/2017 15:20
O-XYLENE	ND		1	UG/L	1	0.31	9/15/2017 15:20
TOTAL XYLENES	ND		1	UG/L	1		9/15/2017 15:20
Surr: 4-BROMOFLUOROBENZENE	101		85-115	%REC	1		9/15/2017 15:20
Surr: DIBROMOFLUOROMETHANE	101		84-118	%REC	1		9/15/2017 15:20
Surr: TOLUENE-D8	94		85-115	%REC	1		9/15/2017 15:20
GASOLINE RANGE ORGANICS	ND		100	UG/L	1	47	9/15/2017 15:20
ION CHROMATOGRAPHY			EPA300.0		Prep Date: 9/7/2017		PrepBy: AMG
BROMIDE	ND		0.2	MG/L	1	0.06	9/7/2017 18:34
CHLORIDE	120		2	MG/L	10	0.6	9/12/2017 12:39

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SAMPLE SUMMARY REPORT

Client: Western Water and Land, Inc.
 Project: TEP 317B: GV 80-4
 Sample ID: ~~B2~~ BM 2
 Legal Location:
 Collection Date: 9/6/2017 13:30

Date: 26-Sep-17
 Work Order: 1709111
 Lab ID: 1709111-1
 Matrix: WATER
 Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
FLUORIDE	0.23		0.1	MG/L	1	0.03	9/7/2017 18:34
NITRATE/NITRITE AS N	ND		0.1	MG/L	1		9/7/2017 18:34
NITRATE AS N	ND		0.2	MG/L	1	0.06	9/7/2017 18:34
NITRITE AS N	ND		0.1	MG/L	1	0.03	9/7/2017 18:34
SULFATE	89		1	MG/L	1	0.15	9/7/2017 18:34
METALS BY 200.8			EPA200.8			Prep Date: 9/12/2017	PrepBy: JML
BARIUM	0.047		0.001	MG/L	10	0.0006	9/14/2017 02:37
BORON	0.045	J	0.05	MG/L	10	0.015	9/14/2017 02:37
CALCIUM	56		1	MG/L	10	0.3	9/14/2017 02:37
IRON	ND		0.1	MG/L	10	0.044	9/14/2017 02:37
MAGNESIUM	10		0.1	MG/L	10	0.03	9/14/2017 02:37
MANGANESE	0.002	J	0.002	MG/L	10	0.0006	9/14/2017 02:37
POTASSIUM	2.8		1	MG/L	10	0.3	9/14/2017 02:37
SELENIUM	0.00042	J	0.001	MG/L	10	0.0003	9/14/2017 02:37
SODIUM	89		1	MG/L	10	0.3	9/14/2017 02:37
STRONTIUM	0.45		0.001	MG/L	10	0.00049	9/14/2017 02:37
PH			SM4500-H			Prep Date: 9/8/2017	PrepBy: SKC
PH	8.26		0.1	pH	1		9/8/2017
SPECIFIC CONDUCTANCE IN WATER			SM2510B			Prep Date: 9/7/2017	PrepBy: SKC
SPECIFIC CONDUCTIVITY	904		1	umhos/cm	1		9/7/2017
TOTAL DISSOLVED SOLIDS			SM2540C			Prep Date: 9/12/2017	PrepBy: HMA
TOTAL DISSOLVED SOLIDS	460		20	MG/L	1		9/13/2017

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SAMPLE SUMMARY REPORT

Client: Western Water and Land, Inc.
Project: TEP 317B: GV 80-4
Sample ID: Trip Blank
Legal Location:
Collection Date: 9/6/2017

Date: 26-Sep-17
Work Order: 1709111
Lab ID: 1709111-2
Matrix: WATER

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
GC/MS VOLATILES			SW8260_25				Prep Date: 9/15/2017 PrepBy: JJK
BENZENE	ND			1 UG/L	1	0.32	9/15/2017 15:44
TOLUENE	ND			1 UG/L	1	0.31	9/15/2017 15:44
ETHYLBENZENE	ND			1 UG/L	1	0.31	9/15/2017 15:44
M+P-XYLENE	ND			1 UG/L	1	0.31	9/15/2017 15:44
O-XYLENE	ND			1 UG/L	1	0.31	9/15/2017 15:44
TOTAL XYLENES	ND			1 UG/L	1		9/15/2017 15:44
<i>Surr: 4-BROMOFLUOROBENZENE</i>	100		85-115 %REC		1		9/15/2017 15:44
<i>Surr: DIBROMOFLUOROMETHANE</i>	103		84-118 %REC		1		9/15/2017 15:44
<i>Surr: TOLUENE-D8</i>	92		85-115 %REC		1		9/15/2017 15:44
GASOLINE RANGE ORGANICS	ND			100 UG/L	1	47	9/15/2017 15:44

Client: Western Water and Land, Inc.
Project: TEP 317B: GV 80-4
Sample ID: Trip Blank
Legal Location:
Collection Date: 9/6/2017

Date: 26-Sep-17
Work Order: 1709111
Lab ID: 1709111-2
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
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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

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Date: 9/26/2017 1:04:

Client: Western Water and Land, Inc.

QC BATCH REPORT

Work Order: 1709111

Project: TEP 317B: GV 80-4

Batch ID: **HC170908-101-1** Instrument ID: **FUELS-1** Method: **SW8015M**

LCS		Sample ID: HC170908-101			Units: MG/L		Analysis Date: 9/8/2017 17:56				
Client ID:		Run ID: HC170908-8A					Prep Date: 9/8/2017		DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	7.41	0.586	8.14		91	36-150				20	
Surr: O-TERPHENYL	0.753		0.814		93	63-126					

LCSD		Sample ID: HC170908-101			Units: MG/L		Analysis Date: 9/8/2017 18:17				
Client ID:		Run ID: HC170908-8A					Prep Date: 9/8/2017		DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	8.88	0.602	8.36		106	36-150		7.41	18	20	
Surr: O-TERPHENYL	0.903		0.836		108	63-126			18		

MB		Sample ID: HC170908-101			Units: MG/L		Analysis Date: 9/8/2017 18:38				
Client ID:		Run ID: HC170908-8A					Prep Date: 9/8/2017		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	0.735		0.838		88	63-126					

The following samples were analyzed in this batch:

Client: Western Water and Land, Inc.
 Work Order: 1709111
 Project: TEP 317B: GV 80-4

QC BATCH REPORT

Batch ID: **IP170912-2-3** Instrument ID: **ICPMS2** Method: **EPA200.8**

LCS		Sample ID: IM170912-2			Units: MG/L		Analysis Date: 9/14/2017 01:49				
Client ID:		Run ID: IM170913-10A12			Prep Date: 9/12/2017		DF: 10				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BARIUM	0.0945	0.001	0.1		94	85-115				20	
BORON	0.889	0.05	1		89	85-115				20	
CALCIUM	10.3	1	10		103	85-115				20	
IRON	4.99	0.1	5		100	85-115				20	
MAGNESIUM	9.24	0.1	10		92	85-115				20	
MANGANESE	0.0919	0.002	0.1		92	85-115				20	
POTASSIUM	4.35	1	5.02		87	85-115				20	
SELENIUM	0.0896	0.001	0.1		90	85-115				20	
SODIUM	8.64	1	10		86	85-115				20	
STRONTIUM	0.0932	0.001	0.1		93	85-115				20	

MB		Sample ID: FP170908-2			Units: MG/L		Analysis Date: 9/14/2017 01:43				
Client ID:		Run ID: IM170913-10A12			Prep Date: 9/12/2017		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									
BORON	0.02	0.05									J
CALCIUM	ND	1									
IRON	0.052	0.1									J
MAGNESIUM	ND	0.1									
MANGANESE	ND	0.002									
POTASSIUM	ND	1									
SELENIUM	ND	0.001									
SODIUM	-0.35	1									J
STRONTIUM	ND	0.001									

The following samples were analyzed in this batch:

1709111-1

Client: Western Water and Land, Inc.
 Work Order: 1709111
 Project: TEP 317B: GV 80-4

QC BATCH REPORT

Batch ID: **EX170908-2-1** Instrument ID: **HPSV4** Method: **SW8270**

LCS		Sample ID: EX170908-2			Units: UG/L		Analysis Date: 9/14/2017 12:22				
Client ID:		Run ID: SV170914-4			Prep Date: 9/8/2017		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
NAPHTHALENE	35.6	10	50		71	60-100				20	
2-METHYLNAPHTHALENE	39.5	10	50		79	62-100				20	
ACENAPHTHYLENE	41.8	10	50		84	67-108				20	
ACENAPHTHENE	41.3	10	50		83	60-108				20	
FLUORENE	45.7	10	50		91	64-116				20	
PHENANTHRENE	44.9	10	50		90	64-113				20	
ANTHRACENE	44.5	10	50		89	72-108				20	
FLUORANTHENE	47.1	10	50		94	63-122				20	
PYRENE	44.9	10	50		90	60-113				20	
BENZO(A)ANTHRACENE	45.7	10	50		91	69-107				20	
CHRYSENE	46.8	10	50		94	68-114				20	
BENZO(B)FLUORANTHENE	45.1	10	50		90	67-111				20	
BENZO(K)FLUORANTHENE	43.7	10	50		87	65-118				20	
BENZO(A)PYRENE	42	10	50		84	62-104				20	
INDENO(1,2,3-CD)PYRENE	44.5	10	50		89	54-124				20	
DIBENZO(A,H)ANTHRACENE	45.3	10	50		91	57-126				20	
BENZO(G,H,I)PERYLENE	45	10	50		90	52-124				20	
Surr: NITROBENZENE-D5	43.2		50		86	53-111					
Surr: 2-FLUOROBIPHENYL	42		50		84	55-108					
Surr: TERPHENYL-D14	47.3		50		95	34-139					

Client: Western Water and Land, Inc.
 Work Order: 1709111
 Project: TEP 317B: GV 80-4

QC BATCH REPORT

Batch ID: EX170908-2-1 Instrument ID: HPSV4 Method: SW8270

LCSD Sample ID: EX170908-2 Units: UG/L Analysis Date: 9/14/2017 13:49
 Client ID: Run ID: SV170914-4 Prep Date: 9/8/2017 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
NAPHTHALENE	36.6	10	50		73	60-100		35.6	3	20	
2-METHYLNAPHTHALENE	40.2	10	50		80	62-100		39.5	2	20	
ACENAPHTHYLENE	41.8	10	50		84	67-108		41.8	0	20	
ACENAPHTHENE	41.3	10	50		83	60-108		41.3	0	20	
FLUORENE	46	10	50		92	64-116		45.7	1	20	
PHENANTHRENE	46.9	10	50		94	64-113		44.9	4	20	
ANTHRACENE	47	10	50		94	72-108		44.5	5	20	
FLUORANTHENE	48.8	10	50		98	63-122		47.1	4	20	
PYRENE	44.4	10	50		89	60-113		44.9	1	20	
BENZO(A)ANTHRACENE	45.8	10	50		92	69-107		45.7	0	20	
CHRYSENE	46.6	10	50		93	68-114		46.8	0	20	
BENZO(B)FLUORANTHENE	42.8	10	50		86	67-111		45.1	5	20	
BENZO(K)FLUORANTHENE	45.8	10	50		92	65-118		43.7	5	20	
BENZO(A)PYRENE	41.7	10	50		83	62-104		42	1	20	
INDENO(1,2,3-CD)PYRENE	44.6	10	50		89	54-124		44.5	0	20	
DIBENZO(A,H)ANTHRACENE	45.4	10	50		91	57-126		45.3	0	20	
BENZO(G,H,I)PERYLENE	45	10	50		90	52-124		45	0	20	
Surr: NITROBENZENE-D5	45.1		50		90	53-111				4	
Surr: 2-FLUOROBIPHENYL	43.3		50		87	55-108				3	
Surr: TERPHENYL-D14	47		50		94	34-139				1	

Client: Western Water and Land, Inc.
 Work Order: 1709111
 Project: TEP 317B: GV 80-4

QC BATCH REPORT

Batch ID: **EX170908-2-1** Instrument ID: **HPSV4** Method: **SW8270**

MB Sample ID: **EX170908-2** Units: **UG/L** Analysis Date: **9/14/2017 12:03**
 Client ID: Run ID: **SV170914-4** Prep Date: **9/8/2017** 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	38.7		50		77	53-111					
Surr: 2-FLUOROBIPHENYL	35		50		70	55-108					
Surr: TERPHENYL-D14	48.5		50		97	34-139					

The following samples were analyzed in this batch:

1709111-1

Client: Western Water and Land, Inc.
 Work Order: 1709111
 Project: TEP 317B: GV 80-4

QC BATCH REPORT

Batch ID: **v1170915-4-2** Instrument ID: **HPV4** Method: **SW8260_25**

LCS		Sample ID: v1170915-4			Units: %REC		Analysis Date: 9/15/2017 11:23				
Client ID:		Run ID: VL170915-4A			Prep Date: 9/15/2017		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		25		100	85-115					
Surr: DIBROMOFLUOROMETHANE	25.3		25		101	84-118					
Surr: TOLUENE-D8	23.5		25		94	85-115					
BENZENE	10.9	1	10		109	83-117				20	
TOLUENE	9.91	1	10		99	82-113				20	
ETHYLBENZENE	9.67	1	10		97	81-113				20	
M+P-XYLENE	20.1	1	20		100	82-115				20	
O-XYLENE	10.1	1	10		101	81-115				20	

LCSD		Sample ID: v1170915-4			Units: %REC		Analysis Date: 9/15/2017 11:47				
Client ID:		Run ID: VL170915-4A			Prep Date: 9/15/2017		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	24.9		25		100	85-115			0		
Surr: DIBROMOFLUOROMETHANE	25.6		25		102	84-118			1		
Surr: TOLUENE-D8	23.4		25		94	85-115			0		
BENZENE	10.9	1	10		109	83-117		10.9	0	20	
TOLUENE	9.75	1	10		97	82-113		9.91	2	20	
ETHYLBENZENE	9.49	1	10		95	81-113		9.67	2	20	
M+P-XYLENE	19.4	1	20		97	82-115		20.1	3	20	
O-XYLENE	9.87	1	10		99	81-115		10.1	2	20	

MB		Sample ID: v1170915-4			Units: %REC		Analysis Date: 9/15/2017 14:09				
Client ID:		Run ID: VL170915-4A			Prep Date: 9/15/2017		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	25.3		25		101	85-115					
Surr: DIBROMOFLUOROMETHANE	25.3		25		101	84-118					
Surr: TOLUENE-D8	23.7		25		95	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: 1709111-1 1709111-2

Client: Western Water and Land, Inc.
 Work Order: 1709111
 Project: TEP 317B: GV 80-4

QC BATCH REPORT

Batch ID: **v1170915-4-5** Instrument ID: **HPV4** Method: **SW8260_25**

LCS		Sample ID: v1170915-8			Units: UG/L		Analysis Date: 9/15/2017 12:34				
Client ID:		Run ID: VL170915-4A			Prep Date: 9/15/2017		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	870	100	1000		87	80-120				20	

LCSD		Sample ID: v1170915-8			Units: UG/L		Analysis Date: 9/15/2017 12:58				
Client ID:		Run ID: VL170915-4A			Prep Date: 9/15/2017		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	876	100	1000		88	80-120		870	1	20	

MB		Sample ID: v1170915-4			Units: UG/L		Analysis Date: 9/15/2017 14:09				
Client ID:		Run ID: VL170915-4A			Prep Date: 9/15/2017		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: 1709111-1 1709111-2

Client: Western Water and Land, Inc.
Work Order: 1709111
Project: TEP 317B: GV 80-4

QC BATCH REPORT

Batch ID: **AK170919-1-3** Instrument ID: **NONE** Method: **SM2320B**

LCS		Sample ID: AK170919-1			Units: MG/L		Analysis Date: 9/19/2017				
Client ID:		Run ID: AK170919-1a1			Prep Date: 9/19/2017		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	94.8	5	100		95	85-115				15	

MB		Sample ID: AK170919-1			Units: MG/L		Analysis Date: 9/19/2017				
Client ID:		Run ID: AK170919-1a1			Prep Date: 9/19/2017		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:

1709111-1

Client: Western Water and Land, Inc.
 Work Order: 1709111
 Project: TEP 317B: GV 80-4

QC BATCH REPORT

Batch ID: **IC170907-2-4** Instrument ID: **IC3** Method: **EPA300.0**

LCS		Sample ID: IC170907-2			Units: MG/L		Analysis Date: 9/7/2017 18:04				
Client ID:		Run ID: IC170907-1a4			Prep Date: 9/7/2017		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BROMIDE	4.55	0.2	5		91	90-110				15	
CHLORIDE	4.81	0.2	5		96	90-110				15	
FLUORIDE	1.82	0.1	2		91	90-110				15	
NITRATE AS N	4.92	0.2	5		99	90-110				15	
NITRITE AS N	1.93	0.1	2		96	90-110				15	
SULFATE	20.1	1	20		101	90-110				15	

MB		Sample ID: IC170907-2			Units: MG/L		Analysis Date: 9/7/2017 17:49				
Client ID:		Run ID: IC170907-1a4			Prep Date: 9/7/2017		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:

Client: Western Water and Land, Inc.
Work Order: 1709111
Project: TEP 317B: GV 80-4

QC BATCH REPORT

Batch ID: **PH170908-1-1** Instrument ID: **pH-1** Method: **SM4500-H**

CCV	Sample ID: CCV					Units: pH	Analysis Date: 9/8/2017				
Client ID:		Run ID: PH170908-1				Prep Date: 9/8/2017			DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
PH	7.03	0.1	7			6.9-7.1					

ICV	Sample ID: ICV					Units: pH	Analysis Date: 9/8/2017				
Client ID:		Run ID: PH170908-1				Prep Date: 9/8/2017			DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
PH	7.03	0.1	7			6.95-7.05					

The following samples were analyzed in this batch:

1709111-1

Client: Western Water and Land, Inc.
Work Order: 1709111
Project: TEP 317B: GV 80-4

QC BATCH REPORT

Batch ID: **SC170907-1-1** Instrument ID: **pH-2** Method: **SM2510B**

CCV	Sample ID: CCV					Units: umhos/cm	Analysis Date: 9/7/2017				
Client ID:		Run ID: SC170907-1A1				Prep Date: 9/7/2017		DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
SPECIFIC CONDUCTIVITY	1430	1	1410		101	71.7-1554					

ICV	Sample ID: ICV					Units: umhos/cm	Analysis Date: 9/7/2017				
Client ID:		Run ID: SC170907-1A1				Prep Date: 9/7/2017		DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
SPECIFIC CONDUCTIVITY	731	1	718		102	46.2-789.7					

The following samples were analyzed in this batch:

1709111-1

Client: Western Water and Land, Inc.
 Work Order: 1709111
 Project: TEP 317B: GV 80-4

QC BATCH REPORT

Batch ID: **TD170912-1-1** Instrument ID: **Balance** Method: **SM2540C**

LCS		Sample ID: TD170912-1			Units: MG/L		Analysis Date: 9/13/2017				
Client ID:		Run ID: TD170913-1A1			Prep Date: 9/12/2017		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	

LCSD		Sample ID: TD170912-1			Units: MG/L		Analysis Date: 9/13/2017				
Client ID:		Run ID: TD170913-1A1			Prep Date: 9/12/2017		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	393	20	400		98	85-115		385	2	5	

MB		Sample ID: TD170912-1			Units: MG/L		Analysis Date: 9/13/2017				
Client ID:		Run ID: TD170913-1A1			Prep Date: 9/12/2017		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:

1709111-1