



2003113

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.

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 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.

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 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
Total phosphorus	SM4500-P	1119
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.

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SAMPLE SUMMARY REPORT

Client: Western Water and Land, Inc.
 Project: RMV 108-4 BWQ
 Sample ID: Stoakes 49368 - F
 Legal Location:
 Collection Date: 3/5/2020 12:45

Date: 17-Mar-20
 Work Order: 2003113
 Lab ID: 2003113-1
 Matrix: WATER
 Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
ALKALINITY AS CALCIUM CARBONATE			SM2320B				
BICARBONATE AS CaCO3	290		20	MG/L	1		3/12/2020
CARBONATE AS CaCO3	ND		20	MG/L	1		3/12/2020
TOTAL ALKALINITY AS CaCO3	290		20	MG/L	1		3/12/2020
BIOLOGICAL ACTIVITY REACTION TEST			BART				
IRON RELATED BACTERIA	35000		1	cfu/ml	1		3/17/2020
SLIME FORMING BACTERIA	13000		1	cfu/ml	1		3/17/2020
SULFATE REDUCING BACTERIA	500000		1	cfu/ml	1		3/17/2020
DIESEL RANGE ORGANICS			SW8015M				
Diesel Range Organics	ND		1	MG/L	1	0.36	3/10/2020 15:40
Surr: O-TERPHENYL	82		69-120	%REC	1		3/10/2020 15:40
DISSOLVED GASSES			RSK175				
METHANE	ND		1	UG/L	1	1	3/9/2020 11:48
ETHANE	ND		2	UG/L	1	2	3/9/2020 11:48
PROPANE	ND		1	UG/L	1	1	3/9/2020 11:48
GC/MS VOLATILES			SW8260_25				
BENZENE	ND		1	UG/L	1	0.3	3/9/2020 16:53
TOLUENE	ND		1	UG/L	1	0.34	3/9/2020 16:53
ETHYLBENZENE	ND		1	UG/L	1	0.33	3/9/2020 16:53
M+P-XYLENE	ND		1	UG/L	1	0.55	3/9/2020 16:53
O-XYLENE	ND		1	UG/L	1	0.34	3/9/2020 16:53
TOTAL XYLENES	ND		1	UG/L	1		3/9/2020 16:53
Surr: 4-BROMOFLUOROBENZENE	105		80-120	%REC	1		3/9/2020 16:53
Surr: DIBROMOFLUOROMETHANE	93		80-120	%REC	1		3/9/2020 16:53
Surr: TOLUENE-D8	100		80-120	%REC	1		3/9/2020 16:53
GASOLINE RANGE ORGANICS	ND		100	UG/L	1	51	3/9/2020 16:53
ION CHROMATOGRAPHY			EPA300.0				
BROMIDE	ND		0.2	MG/L	1	0.064	3/6/2020 16:18
CHLORIDE	12		0.2	MG/L	1	0.076	3/6/2020 16:18
FLUORIDE	0.17		0.1	MG/L	1	0.039	3/6/2020 16:18
NITRATE/NITRITE AS N	1.4		0.15	MG/L	1		3/6/2020 16:18
NITRATE AS N	1.4		0.2	MG/L	1	0.092	3/6/2020 16:18
NITRITE AS N	ND		0.15	MG/L	1	0.069	3/6/2020 16:18
SULFATE	69		1	MG/L	1	0.53	3/6/2020 16:18
METALS BY 200.8			EPA200.8				
BARIUM	0.083		0.001	MG/L	10	0.00049	3/10/2020 14:09
BORON	0.038	J	0.05	MG/L	10	0.026	3/10/2020 14:09
CALCIUM	66		1	MG/L	10	0.18	3/10/2020 14:09
IRON	ND		0.15	MG/L	10	0.071	3/10/2020 14:09
MAGNESIUM	26		0.1	MG/L	10	0.023	3/10/2020 14:09
MANGANESE	ND		0.004	MG/L	10	0.0021	3/10/2020 14:09

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SAMPLE SUMMARY REPORT

Client: Western Water and Land, Inc.
Project: RMV 108-4 BWQ
Sample ID: Stoakes 49368 - F
Legal Location:
Collection Date: 3/5/2020 12:45

Date: 17-Mar-20
Work Order: 2003113
Lab ID: 2003113-1
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
POTASSIUM	3.2		1	MG/L	10	0.2	3/10/2020 14:09
SELENIUM	0.0025		0.0015	MG/L	10	0.00067	3/10/2020 14:09
SODIUM	49		1	MG/L	10	0.13	3/10/2020 14:09
STRONTIUM	0.59		0.001	MG/L	10	0.00024	3/10/2020 14:09
PH			SM4500-H				Prep Date: 3/11/2020 PrepBy: KJS
PH	7.59		0.1	pH	1		3/11/2020
SPECIFIC CONDUCTANCE IN WATER			SM2510B				Prep Date: 3/10/2020 PrepBy: KJS
SPECIFIC CONDUCTIVITY	692		1	umhos/cm	1		3/10/2020
TOTAL DISSOLVED SOLIDS			SM2540C				Prep Date: 3/11/2020 PrepBy: LMC
TOTAL DISSOLVED SOLIDS	420		20	MG/L	1		3/16/2020
TOTAL PHOSPHORUS AS P			SM4500-P				Prep Date: 3/17/2020 PrepBy: LMC
TOTAL PHOSPHORUS	0.05	J	0.05	MG/L	1	0.016	3/17/2020

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SAMPLE SUMMARY REPORT

Client: Western Water and Land, Inc.
Project: RMV 108-4 BWQ
Sample ID: Trip Blank
Legal Location:
Collection Date: 3/5/2020

Date: 17-Mar-20
Work Order: 2003113
Lab ID: 2003113-2
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
GC/MS VOLATILES			SW8260_25				Prep Date: 3/16/2020 PrepBy: JXK
BENZENE	ND		1	UG/L	1	0.3	3/16/2020 19:17
TOLUENE	ND		1	UG/L	1	0.34	3/16/2020 19:17
ETHYLBENZENE	ND		1	UG/L	1	0.33	3/16/2020 19:17
M+P-XYLENE	ND		1	UG/L	1	0.55	3/16/2020 19:17
O-XYLENE	ND		1	UG/L	1	0.34	3/16/2020 19:17
TOTAL XYLENES	ND		1	UG/L	1		3/16/2020 19:17
Surr: 4-BROMOFLUOROBENZENE	109		80-120	%REC	1		3/16/2020 19:17
Surr: DIBROMOFLUOROMETHANE	93		80-120	%REC	1		3/16/2020 19:17
Surr: TOLUENE-D8	97		80-120	%REC	1		3/16/2020 19:17
GASOLINE RANGE ORGANICS	ND		100	UG/L	1	51	3/16/2020 19:17

Client: Western Water and Land, Inc.
Project: RMV 108-4 BWQ
Sample ID: Trip Blank
Legal Location:
Collection Date: 3/5/2020

Date: 17-Mar-20
Work Order: 2003113
Lab ID: 2003113-2
Matrix: WATER
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.
- 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: 3/17/2020 2:11:

Client: Western Water and Land, Inc.

QC BATCH REPORT

Work Order: 2003113

Project: RMV 108-4 BWQ

Batch ID: HC200309-91-2

Instrument ID MEE-1

Method: RSK175

LCS Sample ID: HC200309-91 Units: UG/L Analysis Date: 3/9/2020 11:19

Client ID: Run ID: HC200309-9A Prep Date: 3/9/2020 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	130	1	142		91	76-125				25	
ETHANE	221	2	267		83	70-120				25	
PROPANE	333	1	391		85	72-120				25	

LCSD Sample ID: HC200309-91 Units: UG/L Analysis Date: 3/9/2020 11:50

Client ID: Run ID: HC200309-9A Prep Date: 3/9/2020 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	151	1	142		106	76-125		130	15	25	
ETHANE	265	2	267		99	70-120		221	18	25	
PROPANE	391	1	391		100	72-120		333	16	25	

MB Sample ID: HC200309-91 Units: UG/L Analysis Date: 3/9/2020 11:23

Client ID: Run ID: HC200309-9A Prep Date: 3/9/2020 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:

2003113-1

Client: Western Water and Land, Inc.
 Work Order: 2003113
 Project: RMV 108-4 BWQ

QC BATCH REPORT

Batch ID: **HC200310-81-1** Instrument ID **FUELS-1** Method: **SW8015M**

LCS		Sample ID: HC200310-81			Units: MG/L		Analysis Date: 3/10/2020 13:29				
Client ID:		Run ID: HC200310-8A			Prep Date: 3/10/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	6.67	1.07	8.33		80	53-120				20	
Surr: O-TERPHENYL	1.39		1.67		83	69-120					

LCSD		Sample ID: HC200310-81			Units: MG/L		Analysis Date: 3/10/2020 13:51				
Client ID:		Run ID: HC200310-8A			Prep Date: 3/10/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	6.92	1.07	8.33		83	53-120		6.67	4	20	
Surr: O-TERPHENYL	1.43		1.67		86	69-120			3		

MB		Sample ID: HC200310-81			Units: MG/L		Analysis Date: 3/10/2020 13:07				
Client ID:		Run ID: HC200310-8A			Prep Date: 3/10/2020		DF: 1				
Analyte	Result	ReportLimit	MDL								
Diesel Range Organics	ND	1.1	0.37								
Surr: O-TERPHENYL	1.3			78	69-120						

The following samples were analyzed in this batch:

Client: Western Water and Land, Inc.
 Work Order: 2003113
 Project: RMV 108-4 BWQ

QC BATCH REPORT

Batch ID: **IP200309-2-8** Instrument ID **ICPMS2** Method: **EPA200.8**

LCS		Sample ID: IM200309-2			Units: MG/L		Analysis Date: 3/10/2020 12:39				
Client ID:		Run ID: IM200310-20A19			Prep Date: 3/9/2020		DF: 10				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BARIUM	0.0977	0.001	0.1		98	85-115				20	
BORON	1.05	0.05	1		105	85-115				20	
CALCIUM	10.7	1	10		107	85-115				20	
IRON	5.28	0.15	5		106	85-115				20	
MAGNESIUM	9.86	0.1	10		99	85-115				20	
MANGANESE	0.098	0.004	0.1		98	85-115				20	
POTASSIUM	4.98	1	5		100	85-115				20	
SELENIUM	0.103	0.0015	0.1		103	85-115				20	
SODIUM	9.62	1	10		96	85-115				20	
STRONTIUM	0.0975	0.001	0.1		98	85-115				20	

MB		Sample ID: FP200306-2			Units: MG/L		Analysis Date: 3/10/2020 12:33				
Client ID:		Run ID: IM200310-20A19			Prep Date: 3/9/2020		DF: 10				
Analyte	Result	ReportLimit	MDL								Qual
BARIUM	ND	0.001	0.00049								
BORON	ND	0.05	0.026								
CALCIUM	ND	1	0.18								
IRON	ND	0.15	0.071								
MAGNESIUM	ND	0.1	0.023								
MANGANESE	ND	0.004	0.0021								
POTASSIUM	ND	1	0.2								
SELENIUM	ND	0.0015	0.00067								
SODIUM	ND	1	0.13								
STRONTIUM	ND	0.001	0.00024								

The following samples were analyzed in this batch:

2003113-1

Client: Western Water and Land, Inc.
 Work Order: 2003113
 Project: RMV 108-4 BWQ

QC BATCH REPORT

Batch ID: VL200309-4-1 Instrument ID: HPV4 Method: SW8260_25

LCS		Sample ID: VL200309-4			Units: %REC		Analysis Date: 3/9/2020 11:14				
Client ID:		Run ID: VL200309-4A			Prep Date: 3/9/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	25.6		25		103	80-120					
Surr: DIBROMOFLUOROMETHANE	23.3		25		93	80-120					
Surr: TOLUENE-D8	24.8		25		99	80-120					
BENZENE	9.44	1	10		94	80-120				20	
TOLUENE	9.3	1	10		93	80-120				20	
ETHYLBENZENE	9.39	1	10		94	80-120				20	
M+P-XYLENE	19.6	1	20		98	80-120				20	
O-XYLENE	9.8	1	10		98	80-120				20	

LCSD		Sample ID: VL200309-4			Units: %REC		Analysis Date: 3/9/2020 11:35				
Client ID:		Run ID: VL200309-4A			Prep Date: 3/9/2020		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	80-120			2		
Surr: DIBROMOFLUOROMETHANE	23.3		25		93	80-120			0		
Surr: TOLUENE-D8	24.6		25		98	80-120			1		
BENZENE	9.4	1	10		94	80-120		9.44	0	20	
TOLUENE	9.16	1	10		92	80-120		9.3	2	20	
ETHYLBENZENE	9.34	1	10		93	80-120		9.39	1	20	
M+P-XYLENE	19.2	1	20		96	80-120		19.6	2	20	
O-XYLENE	9.79	1	10		98	80-120		9.8	0	20	

MB		Sample ID: VL200309-4			Units: %REC		Analysis Date: 3/9/2020 13:43				
Client ID:		Run ID: VL200309-4A			Prep Date: 3/9/2020		DF: 1				
Analyte	Result	ReportLimit	MDL								Qual
Surr: 4-BROMOFLUOROBENZENE	26.4				105	80-120					
Surr: DIBROMOFLUOROMETHANE	23.2				93	80-120					
Surr: TOLUENE-D8	24.8				99	80-120					
BENZENE	ND	1	0.3								
TOLUENE	ND	1	0.34								
ETHYLBENZENE	ND	1	0.33								
M+P-XYLENE	ND	1	0.55								
O-XYLENE	ND	1	0.34								
TOTAL XYLENES	ND	1									

The following samples were analyzed in this batch:

Client: Western Water and Land, Inc.
 Work Order: 2003113
 Project: RMV 108-4 BWQ

QC BATCH REPORT

Batch ID: VL200309-4-2 Instrument ID: HPV4 Method: SW8260_25

LCS		Sample ID: VL200309-8			Units: UG/L		Analysis Date: 3/9/2020 12:19				
Client ID:		Run ID: VL200309-4A			Prep Date: 3/9/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	1060	100	1000		106	75-121				20	

LCSD		Sample ID: VL200309-8			Units: UG/L		Analysis Date: 3/9/2020 12:40				
Client ID:		Run ID: VL200309-4A			Prep Date: 3/9/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	1040	100	1000		104	75-121		1060	2	20	

MB		Sample ID: VL200309-4			Units: UG/L		Analysis Date: 3/9/2020 13:43				
Client ID:		Run ID: VL200309-4A			Prep Date: 3/9/2020		DF: 1				
Analyte	Result	ReportLimit	MDL								
GASOLINE RANGE ORGANICS	ND	100	51								

The following samples were analyzed in this batch:

Client: Western Water and Land, Inc.
 Work Order: 2003113
 Project: RMV 108-4 BWQ

QC BATCH REPORT

Batch ID: VL200316-4-2 Instrument ID: HPV4 Method: SW8260_25

LCS		Sample ID: VL200316-4			Units: %REC		Analysis Date: 3/16/2020 16:22				
Client ID:		Run ID: VL200316-4A			Prep Date: 3/16/2020		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	80-120					
Surr: DIBROMOFLUOROMETHANE	23.5		25		94	80-120					
Surr: TOLUENE-D8	24.3		25		97	80-120					
BENZENE	11.7	1	10		117	80-120				20	
TOLUENE	11.3	1	10		113	80-120				20	
ETHYLBENZENE	11.2	1	10		112	80-120				20	
M+P-XYLENE	23.3	1	20		116	80-120				20	
O-XYLENE	11.6	1	10		116	80-120				20	

LCSD		Sample ID: VL200316-4			Units: %REC		Analysis Date: 3/16/2020 16:43				
Client ID:		Run ID: VL200316-4A			Prep Date: 3/16/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	25.7		25		103	80-120			2		
Surr: DIBROMOFLUOROMETHANE	23.4		25		94	80-120			0		
Surr: TOLUENE-D8	24.3		25		97	80-120			0		
BENZENE	11.7	1	10		117	80-120		11.7	0	20	
TOLUENE	11.3	1	10		113	80-120		11.3	0	20	
ETHYLBENZENE	11.2	1	10		112	80-120		11.2	0	20	
M+P-XYLENE	22.6	1	20		113	80-120		23.3	3	20	
O-XYLENE	11.5	1	10		115	80-120		11.6	1	20	

MB		Sample ID: VL200316-4			Units: %REC		Analysis Date: 3/16/2020 18:56				
Client ID:		Run ID: VL200316-4A			Prep Date: 3/16/2020		DF: 1				
Analyte	Result	ReportLimit	MDL								Qual
Surr: 4-BROMOFLUOROBENZENE	26.9				108	80-120					
Surr: DIBROMOFLUOROMETHANE	23.6				94	80-120					
Surr: TOLUENE-D8	24.6				98	80-120					
BENZENE	ND	1	0.3								
TOLUENE	ND	1	0.34								
ETHYLBENZENE	ND	1	0.33								
M+P-XYLENE	ND	1	0.55								
O-XYLENE	ND	1	0.34								
TOTAL XYLENES	ND	1									

The following samples were analyzed in this batch:

2003113-2

Client: Western Water and Land, Inc.
 Work Order: 2003113
 Project: RMV 108-4 BWQ

QC BATCH REPORT

Batch ID: VL200316-4-3 Instrument ID HPV4 Method: SW8260_25

LCS		Sample ID: VL200316-8			Units: UG/L		Analysis Date: 3/16/2020 17:32				
Client ID:		Run ID: VL200316-4A			Prep Date: 3/16/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	1070	100	1000		107	75-121				20	

LCSD		Sample ID: VL200316-8			Units: UG/L		Analysis Date: 3/16/2020 17:53				
Client ID:		Run ID: VL200316-4A			Prep Date: 3/16/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	1050	100	1000		105	75-121		1070	13	20	

MB		Sample ID: VL200316-4			Units: UG/L		Analysis Date: 3/16/2020 18:56				
Client ID:		Run ID: VL200316-4A			Prep Date: 3/16/2020		DF: 1				
Analyte	Result	ReportLimit	MDL								
GASOLINE RANGE ORGANICS	ND	100	51								

The following samples were analyzed in this batch:

Client: Western Water and Land, Inc.
 Work Order: 2003113
 Project: RMV 108-4 BWQ

QC BATCH REPORT

Batch ID: **AK200312-1-1** Instrument ID **NONE** Method: **SM2320B**

LCS		Sample ID: AK200312-1			Units: MG/L		Analysis Date: 3/12/2020				
Client ID:		Run ID: AK200312-1A1			Prep Date: 3/12/2020		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	97.1	5	100		97	85-115				15	

LCSD		Sample ID: AK200312-1			Units: MG/L		Analysis Date: 3/12/2020				
Client ID:		Run ID: AK200312-1A1			Prep Date: 3/12/2020		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		97.1	1	15	

MB		Sample ID: AK200312-1			Units: MG/L		Analysis Date: 3/12/2020				
Client ID:		Run ID: AK200312-1A1			Prep Date: 3/12/2020		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: 2003113
 Project: RMV 108-4 BWQ

QC BATCH REPORT

Batch ID: **IC200306-1-2** Instrument ID **IC3** Method: **EPA300.0**

LCS		Sample ID: IC200306-1			Units: MG/L		Analysis Date: 3/6/2020 09:51				
Client ID:		Run ID: IC200306-1a3			Prep Date: 3/6/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BROMIDE	9.66	0.2	10		97	90-110				15	
CHLORIDE	9.73	0.2	10		97	90-110				15	
FLUORIDE	4.83	0.1	5		97	90-110				15	
NITRATE AS N	9.75	0.2	10		98	90-110				15	
NITRITE AS N	4.98	0.15	5		99	90-110				15	
SULFATE	48.4	1	50		97	90-110				15	

LCSD		Sample ID: IC200306-1			Units: MG/L		Analysis Date: 3/6/2020 12:29				
Client ID:		Run ID: IC200306-1a3			Prep Date: 3/6/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BROMIDE	9.88	0.2	10		99	90-110		9.66	2	15	
CHLORIDE	9.79	0.2	10		98	90-110		9.73	1	15	
FLUORIDE	4.84	0.1	5		97	90-110		4.83	0	15	
NITRATE AS N	9.78	0.2	10		98	90-110		9.75	0	15	
NITRITE AS N	5.02	0.15	5		100	90-110		4.98	1	15	
SULFATE	48.6	1	50		97	90-110		48.4	0	15	

MB		Sample ID: IC200306-1			Units: MG/L		Analysis Date: 3/6/2020 10:04				
Client ID:		Run ID: IC200306-1a3			Prep Date: 3/6/2020		DF: 1				
Analyte	Result	ReportLimit	MDL								
BROMIDE	ND	0.2	0.064								
CHLORIDE	ND	0.2	0.076								
FLUORIDE	ND	0.1	0.039								
NITRATE AS N	ND	0.2	0.092								
NITRITE AS N	ND	0.15	0.069								
SULFATE	ND	1	0.53								

The following samples were analyzed in this batch:

Client: Western Water and Land, Inc.
 Work Order: 2003113
 Project: RMV 108-4 BWQ

QC BATCH REPORT

Batch ID: **pH200311-1-1** Instrument ID **pH-2** Method: **SM4500-H**

CCV		Sample ID: ccv1			Units: pH		Analysis Date: 3/11/2020				
Client ID:		Run ID: pH200311-1a1			Prep Date: 3/11/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
PH	6.99	0.1	7			6.9-7.1					

CCV		Sample ID: ccv2			Units: pH		Analysis Date: 3/11/2020				
Client ID:		Run ID: pH200311-1a1			Prep Date: 3/11/2020		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					

ICV		Sample ID: icv			Units: pH		Analysis Date: 3/11/2020				
Client ID:		Run ID: pH200311-1a1			Prep Date: 3/11/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
PH	7.08	0.1	7			6.9-7.1					

The following samples were analyzed in this batch:

2003113-1

Client: Western Water and Land, Inc.
 Work Order: 2003113
 Project: RMV 108-4 BWQ

QC BATCH REPORT

Batch ID: **SC200310-1-4** Instrument ID **pH-2** Method: **SM2510B**

CCV		Sample ID: ccv1		Units: umhos/cm			Analysis Date: 3/10/2020				
Client ID:		Run ID: SC200310-1a1			Prep Date: 3/10/2020			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
SPECIFIC CONDUCTIVITY	1420	1	1410		101	90-110					

CCV		Sample ID: ccv2		Units: umhos/cm			Analysis Date: 3/10/2020				
Client ID:		Run ID: SC200310-1a1			Prep Date: 3/10/2020			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	90-110					

ICV		Sample ID: icv		Units: umhos/cm			Analysis Date: 3/10/2020				
Client ID:		Run ID: SC200310-1a1			Prep Date: 3/10/2020			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
SPECIFIC CONDUCTIVITY	739	1	718		103	90-110					

The following samples were analyzed in this batch:

2003113-1

Client: Western Water and Land, Inc.
Work Order: 2003113
Project: RMV 108-4 BWQ

QC BATCH REPORT

Batch ID: **TD200311-1-1** Instrument ID **Balance** Method: **SM2540C**

LCS Sample ID: **TD200311-1** Units: **MG/L** Analysis Date: **3/16/2020**
 Client ID: Run ID: **TD200316-1A1** Prep Date: **3/11/2020** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	376	20	400		94	85-115				14	

MB Sample ID: **TD200311-1** Units: **MG/L** Analysis Date: **3/16/2020**
 Client ID: Run ID: **TD200316-1A1** Prep Date: **3/11/2020** DF: **1**

Analyte	Result	ReportLimit	MDL	Qual
TOTAL DISSOLVED SOLIDS	ND	20		

The following samples were analyzed in this batch:

2003113-1

Client: Western Water and Land, Inc.
 Work Order: 2003113
 Project: RMV 108-4 BWQ

QC BATCH REPORT

Batch ID: TP200317-1-1 Instrument ID Spec Method: SM4500-P

LCS		Sample ID: TP200317-1			Units: MG/L		Analysis Date: 3/17/2020				
Client ID:		Run ID: TP200317-1A2			Prep Date: 3/17/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL PHOSPHORUS	0.468	0.05	0.5		94	80-120				20	

LCSD		Sample ID: TP200317-1			Units: MG/L		Analysis Date: 3/17/2020				
Client ID:		Run ID: TP200317-1A2			Prep Date: 3/17/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL PHOSPHORUS	0.491	0.05	0.5		98	80-120		0.468	5	20	

MB		Sample ID: TP200317-1			Units: MG/L		Analysis Date: 3/17/2020				
Client ID:		Run ID: TP200317-1A2			Prep Date: 3/17/2020		DF: 1				
Analyte	Result	ReportLimit	MDL								
TOTAL PHOSPHORUS	ND	0.05	0.016								

The following samples were analyzed in this batch: