



## 2106184

### **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).

The method blank VL210621-3MB had gasoline range organics detected above the reporting limit. This compound was detected in the associated samples, so the data were flagged.

All remaining acceptance criteria were met.

### **Dissolved Gasses:**

The samples were 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 samples were 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 samples were to be analyzed for dissolved metals. The samples were 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 samples were 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 <sup>+</sup> B	1126
Specific conductance	SM2510B	1128
Total phosphorus	SM4500-P	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

The samples were prepared and analyzed within the established hold time for each analysis with the exception of nitrate as N. Due to run QC failure, the samples were analyzed outside of hold time for nitrate as N. (See NCR #15286)

All remaining acceptance criteria were met.

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SAMPLE SUMMARY REPORT

Client: Western Water and Land, Inc.  
 Project: Monument Ridge  
 Sample ID: Mikowski 64327-F  
 Legal Location:  
 Collection Date: 6/7/2021 11:35

Date: 07-Jul-21  
 Work Order: 2106184  
 Lab ID: 2106184-1  
 Matrix: WATER  
 Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
<b>ALKALINITY AS CALCIUM CARBONATE</b>			<b>SM2320B</b>				Prep Date: <b>6/21/2021</b> PrepBy: <b>BMK</b>
BICARBONATE AS CaCO3	330		20	MG/L	1		6/21/2021
CARBONATE AS CaCO3	ND		20	MG/L	1		6/21/2021
TOTAL ALKALINITY AS CaCO3	330		20	MG/L	1		6/21/2021
<b>BIOLOGICAL ACTIVITY REACTION TEST</b>			<b>BART</b>				Prep Date: <b>6/9/2021</b> PrepBy: <b>ZRH</b>
IRON RELATED BACTERIA	140000		1	cfu/ml	1		6/17/2021
SLIME FORMING BACTERIA	ND		1	cfu/ml	1		6/17/2021
SULFATE REDUCING BACTERIA	ND		1	cfu/ml	1		6/17/2021
<b>DIESEL RANGE ORGANICS</b>			<b>SW8015M</b>				Prep Date: <b>6/14/2021</b> PrepBy: <b>JRS</b>
Diesel Range Organics	ND		1	MG/L	1	0.52	6/29/2021 17:40
Surr: O-TERPHENYL	84		69-120	%REC	1		6/29/2021 17:40
<b>DISSOLVED GASSES</b>			<b>RSK175</b>				Prep Date: <b>6/18/2021</b> PrepBy: <b>JRS</b>
METHANE	ND		1	UG/L	1	1	6/18/2021 17:08
ETHANE	ND		2	UG/L	1	2	6/18/2021 17:08
PROPANE	ND		1	UG/L	1	1	6/18/2021 17:08
<b>GC/MS VOLATILES</b>			<b>SW8260_25</b>				Prep Date: <b>6/21/2021</b> PrepBy: <b>AEW</b>
BENZENE	ND		1	UG/L	1	0.3	6/21/2021 13:15
TOLUENE	ND		1	UG/L	1	0.34	6/21/2021 13:15
ETHYLBENZENE	ND		1	UG/L	1	0.33	6/21/2021 13:15
M+P-XYLENE	ND		1	UG/L	1	0.55	6/21/2021 13:15
O-XYLENE	ND		1	UG/L	1	0.34	6/21/2021 13:15
TOTAL XYLENES	ND		1	UG/L	1		6/21/2021 13:15
Surr: 4-BROMOFLUOROBENZENE	98		80-120	%REC	1		6/21/2021 13:15
Surr: DIBROMOFLUOROMETHANE	101		80-120	%REC	1		6/21/2021 13:15
Surr: TOLUENE-D8	100		80-120	%REC	1		6/21/2021 13:15
<b>GASOLINE RANGE ORGANICS</b>	400	B	100	UG/L	1	51	6/21/2021 13:15
<b>ION CHROMATOGRAPHY</b>			<b>EPA300.0</b>				Prep Date: <b>6/9/2021</b> PrepBy: <b>LMC</b>
BROMIDE	0.21		0.2	MG/L	1	0.064	6/9/2021 09:25
CHLORIDE	3.3		0.2	MG/L	1	0.076	6/9/2021 09:25
FLUORIDE	0.44		0.1	MG/L	1	0.039	6/9/2021 09:25
NITRATE/NITRITE AS N	1.5		0.15	MG/L	1		6/9/2021 09:25
NITRATE AS N	1.5		0.2	MG/L	1	0.092	6/14/2021 18:32
NITRITE AS N	ND		0.15	MG/L	1	0.069	6/9/2021 09:25
SULFATE	32		1	MG/L	1	0.53	6/9/2021 09:25
<b>DISSOLVED METALS BY 200.8</b>			<b>EPA200.8</b>				Prep Date: <b>6/22/2021</b> PrepBy: <b>JML</b>
BARIUM	0.04		0.001	MG/L	10	0.00049	6/23/2021 17:05
BORON	0.12		0.05	MG/L	10	0.026	6/23/2021 17:05
CALCIUM	43		1	MG/L	10	0.18	6/23/2021 17:05
IRON	ND		0.15	MG/L	10	0.071	6/23/2021 17:05
MAGNESIUM	34		0.1	MG/L	10	0.023	6/23/2021 17:05
MANGANESE	ND		0.004	MG/L	10	0.0021	6/23/2021 17:05

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**SAMPLE SUMMARY REPORT**

**Client:** Western Water and Land, Inc.  
**Project:** Monument Ridge  
**Sample ID:** Mikowski 64327-F  
**Legal Location:**  
**Collection Date:** 6/7/2021 11:35

**Date:** 07-Jul-21  
**Work Order:** 2106184  
**Lab ID:** 2106184-1  
**Matrix:** WATER

**Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
POTASSIUM	3		1	MG/L	10	0.2	6/23/2021 17:05
SELENIUM	0.00088	J	0.0015	MG/L	10	0.00067	6/23/2021 17:05
SODIUM	55		1	MG/L	10	0.13	6/23/2021 17:05
STRONTIUM	0.66		0.001	MG/L	10	0.00024	6/23/2021 17:05
PH			SM4500-H				Prep Date: 6/15/2021 PrepBy: BMK
PH	8.3		0.1	pH	1		6/15/2021
SPECIFIC CONDUCTANCE IN WATER			SM2510B				Prep Date: 6/16/2021 PrepBy: BMK
SPECIFIC CONDUCTIVITY	1381		1	umhos/cm	1		6/16/2021
TOTAL DISSOLVED SOLIDS			SM2540C				Prep Date: 6/11/2021 PrepBy: BMK
TOTAL DISSOLVED SOLIDS	360		20	MG/L	1		6/11/2021
TOTAL PHOSPHORUS AS P			SM4500-P				Prep Date: 6/18/2021 PrepBy: LMC
TOTAL PHOSPHORUS	0.03	J	0.05	MG/L	1	0.016	6/18/2021

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# SAMPLE SUMMARY REPORT

**Client:** Western Water and Land, Inc.  
**Project:** Monument Ridge  
**Sample ID:** Richardson 57703-F  
**Legal Location:**  
**Collection Date:** 6/7/2021 14:10

**Date:** 07-Jul-21  
**Work Order:** 2106184  
**Lab ID:** 2106184-2  
**Matrix:** WATER  
**Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
<b>ALKALINITY AS CALCIUM CARBONATE</b>			<b>SM2320B</b>		Prep Date: <b>6/21/2021</b>		PrepBy: <b>BMK</b>
BICARBONATE AS CaCO3	410		20	MG/L	1		6/21/2021
CARBONATE AS CaCO3	ND		20	MG/L	1		6/21/2021
TOTAL ALKALINITY AS CaCO3	410		20	MG/L	1		6/21/2021
<b>BIOLOGICAL ACTIVITY REACTION TEST</b>			<b>BART</b>		Prep Date: <b>6/9/2021</b>		PrepBy: <b>ZRH</b>
IRON RELATED BACTERIA	35000		1	cfu/ml	1		6/17/2021
SLIME FORMING BACTERIA	67000		1	cfu/ml	1		6/17/2021
SULFATE REDUCING BACTERIA	115000		1	cfu/ml	1		6/17/2021
<b>DIESEL RANGE ORGANICS</b>			<b>SW8015M</b>		Prep Date: <b>6/14/2021</b>		PrepBy: <b>JRS</b>
Diesel Range Organics	ND		1	MG/L	1	0.52	6/29/2021 18:01
Surr: O-TERPHENYL	96		69-120	%REC	1		6/29/2021 18:01
<b>DISSOLVED GASSES</b>			<b>RSK175</b>		Prep Date: <b>6/18/2021</b>		PrepBy: <b>JRS</b>
METHANE	ND		1	UG/L	1	1	6/18/2021 17:11
ETHANE	ND		2	UG/L	1	2	6/18/2021 17:11
PROPANE	ND		1	UG/L	1	1	6/18/2021 17:11
<b>GC/MS VOLATILES</b>			<b>SW8260_25</b>		Prep Date: <b>6/21/2021</b>		PrepBy: <b>AEW</b>
BENZENE	ND		1	UG/L	1	0.3	6/21/2021 13:38
TOLUENE	ND		1	UG/L	1	0.34	6/21/2021 13:38
ETHYLBENZENE	ND		1	UG/L	1	0.33	6/21/2021 13:38
M+P-XYLENE	ND		1	UG/L	1	0.55	6/21/2021 13:38
O-XYLENE	ND		1	UG/L	1	0.34	6/21/2021 13:38
TOTAL XYLENES	ND		1	UG/L	1		6/21/2021 13:38
Surr: 4-BROMOFLUOROBENZENE	98		80-120	%REC	1		6/21/2021 13:38
Surr: DIBROMOFLUOROMETHANE	103		80-120	%REC	1		6/21/2021 13:38
Surr: TOLUENE-D8	101		80-120	%REC	1		6/21/2021 13:38
<b>GASOLINE RANGE ORGANICS</b>	<b>370</b>	<b>B</b>	<b>100</b>	<b>UG/L</b>	<b>1</b>	<b>51</b>	<b>6/21/2021 13:38</b>
<b>ION CHROMATOGRAPHY</b>			<b>EPA300.0</b>		Prep Date: <b>6/9/2021</b>		PrepBy: <b>LMC</b>
BROMIDE	ND		1	MG/L	5	0.32	6/9/2021 09:51
CHLORIDE	8.6		1	MG/L	5	0.38	6/9/2021 09:51
FLUORIDE	0.35	J	0.5	MG/L	5	0.2	6/9/2021 09:51
NITRATE/NITRITE AS N	0.69		0.15	MG/L	1		6/9/2021 09:51
NITRATE AS N	0.69		0.2	MG/L	1	0.092	6/14/2021 18:45
NITRITE AS N	ND		0.75	MG/L	5	0.34	6/9/2021 09:51
SULFATE	200		5	MG/L	5	2.6	6/9/2021 09:51
<b>DISSOLVED METALS BY 200.8</b>			<b>EPA200.8</b>		Prep Date: <b>6/22/2021</b>		PrepBy: <b>JML</b>
BARIUM	0.015		0.001	MG/L	10	0.00049	6/23/2021 17:08
BORON	0.15		0.05	MG/L	10	0.026	6/23/2021 17:08
CALCIUM	55		1	MG/L	10	0.18	6/23/2021 17:08
IRON	ND		0.15	MG/L	10	0.071	6/23/2021 17:08
MAGNESIUM	41		0.1	MG/L	10	0.023	6/23/2021 17:08
MANGANESE	ND		0.004	MG/L	10	0.0021	6/23/2021 17:08

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**SAMPLE SUMMARY REPORT**

**Client:** Western Water and Land, Inc.  
**Project:** Monument Ridge  
**Sample ID:** Richardson 57703-F  
**Legal Location:**  
**Collection Date:** 6/7/2021 14:10

**Date:** 07-Jul-21  
**Work Order:** 2106184  
**Lab ID:** 2106184-2  
**Matrix:** WATER

**Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
POTASSIUM	2.3		1	MG/L	10	0.2	6/23/2021 17:08
SELENIUM	0.0027		0.0015	MG/L	10	0.00067	6/23/2021 17:08
SODIUM	140		1	MG/L	10	0.13	6/23/2021 17:08
STRONTIUM	0.9		0.001	MG/L	10	0.00024	6/23/2021 17:08
<b>PH</b>			<b>SM4500-H</b>		Prep Date: <b>6/15/2021</b>		PrepBy: <b>BMK</b>
PH	8.25		0.1	pH	1		6/15/2021
<b>SPECIFIC CONDUCTANCE IN WATER</b>			<b>SM2510B</b>		Prep Date: <b>6/16/2021</b>		PrepBy: <b>BMK</b>
SPECIFIC CONDUCTIVITY	2240		1	umhos/cm	1		6/16/2021
<b>TOTAL DISSOLVED SOLIDS</b>			<b>SM2540C</b>		Prep Date: <b>6/11/2021</b>		PrepBy: <b>BMK</b>
TOTAL DISSOLVED SOLIDS	690		40	MG/L	1		6/11/2021
<b>TOTAL PHOSPHORUS AS P</b>			<b>SM4500-P</b>		Prep Date: <b>6/18/2021</b>		PrepBy: <b>LMC</b>
TOTAL PHOSPHORUS	ND		0.05	MG/L	1	0.016	6/18/2021

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**SAMPLE SUMMARY REPORT**

**Client:** Western Water and Land, Inc.  
**Project:** Monument Ridge  
**Sample ID:** Trip Blank  
**Legal Location:**  
**Collection Date:** 6/7/2021

**Date:** 07-Jul-21  
**Work Order:** 2106184  
**Lab ID:** 2106184-3  
**Matrix:** WATER  
**Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
<b>GC/MS VOLATILES</b>			<b>SW8260_25</b>				Prep Date: <b>6/21/2021</b> PrepBy: <b>AEW</b>
BENZENE	ND		1	UG/L	1	0.3	6/21/2021 14:02
TOLUENE	ND		1	UG/L	1	0.34	6/21/2021 14:02
ETHYLBENZENE	ND		1	UG/L	1	0.33	6/21/2021 14:02
M+P-XYLENE	ND		1	UG/L	1	0.55	6/21/2021 14:02
O-XYLENE	ND		1	UG/L	1	0.34	6/21/2021 14:02
TOTAL XYLENES	ND		1	UG/L	1		6/21/2021 14:02
Surr: 4-BROMOFLUOROBENZENE	99		80-120	%REC	1		6/21/2021 14:02
Surr: DIBROMOFLUOROMETHANE	103		80-120	%REC	1		6/21/2021 14:02
Surr: TOLUENE-D8	99		80-120	%REC	1		6/21/2021 14:02
<b>GASOLINE RANGE ORGANICS</b>	<b>350</b>	<b>B</b>	<b>100</b>	<b>UG/L</b>	<b>1</b>	<b>51</b>	<b>6/21/2021 14:02</b>

**Client:** Western Water and Land, Inc.  
**Project:** Monument Ridge  
**Sample ID:** Trip Blank  
**Legal Location:**  
**Collection Date:** 6/7/2021

**Date:** 07-Jul-21  
**Work Order:** 2106184  
**Lab ID:** 2106184-3  
**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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**SAMPLE SUMMARY REPORT**

**Client:** Western Water and Land, Inc.  
**Project:** Monument Ridge  
**Sample ID:** Trip Blank  
**Legal Location:**  
**Collection Date:** 6/7/2021

**Date:** 07-Jul-21  
**Work Order:** 2106184  
**Lab ID:** 2106184-3  
**Matrix:** WATER  
**Percent Moisture:**

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<b>Analyses</b>	<b>Result</b>	<b>Qual</b>	<b>Report Limit</b>	<b>Units</b>	<b>Dilution Factor</b>	<b>MDL</b>	<b>Date Analyzed</b>
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Date: 7/7/2021 4:56:5

Client: Western Water and Land, Inc.

QC BATCH REPORT

Work Order: 2106184

Project: Monument Ridge

Batch ID: **HC210614-81-1** Instrument ID **FUELS-1** Method: **SW8015M**

LCS		Sample ID: <b>HC210614-81</b>			Units: <b>MG/L</b>		Analysis Date: <b>6/29/2021 16:37</b>				
Client ID:		Run ID: <b>HC210629-81A</b>					Prep Date: <b>6/14/2021</b>		DF: <b>1</b>		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	7.04	1.07	8.33		84	53-120				20	
Surr: O-TERPHENYL	1.67		1.67		100	69-120					

LCSD		Sample ID: <b>HC210614-81</b>			Units: <b>MG/L</b>		Analysis Date: <b>6/29/2021 16:58</b>				
Client ID:		Run ID: <b>HC210629-81A</b>					Prep Date: <b>6/14/2021</b>		DF: <b>1</b>		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	6.33	1.07	8.33		76	53-120		7.04	10	20	
Surr: O-TERPHENYL	1.57		1.67		94	69-120			7		

MB		Sample ID: <b>HC210614-81</b>			Units: <b>MG/L</b>		Analysis Date: <b>6/29/2021 16:16</b>				
Client ID:		Run ID: <b>HC210629-81A</b>					Prep Date: <b>6/14/2021</b>		DF: <b>1</b>		
Analyte	Result	ReportLimit	MDL								
Diesel Range Organics	ND	1.1	0.54								
Surr: O-TERPHENYL	1.55			93	69-120						

The following samples were analyzed in this batch:

Client: Western Water and Land, Inc.  
 Work Order: 2106184  
 Project: Monument Ridge

# QC BATCH REPORT

Batch ID: **HC210618-91-2** Instrument ID **MEE-1** Method: **RSK175**

LCS		Sample ID: <b>HC210618-91</b>			Units: <b>UG/L</b>		Analysis Date: <b>6/18/2021 14:56</b>				
Client ID:		Run ID: <b>HC210618-91B</b>			Prep Date: <b>6/18/2021</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	160	1	142		112	76-125				25	
ETHANE	301	2	267		113	70-120				25	
PROPANE	449	1	391		115	72-120				25	

LCSD		Sample ID: <b>HC210618-91</b>			Units: <b>UG/L</b>		Analysis Date: <b>6/18/2021 17:04</b>				
Client ID:		Run ID: <b>HC210618-91B</b>			Prep Date: <b>6/18/2021</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	160	1	142		112	76-125		160	0	25	
ETHANE	301	2	267		113	70-120		301	0	25	
PROPANE	447	1	391		114	72-120		449	0	25	

MB		Sample ID: <b>HC210618-91</b>			Units: <b>UG/L</b>		Analysis Date: <b>6/18/2021 16:19</b>				
Client ID:		Run ID: <b>HC210618-91B</b>			Prep Date: <b>6/18/2021</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	MDL								
METHANE	ND	1	1								
ETHANE	ND	2	2								
PROPANE	ND	1	1								

The following samples were analyzed in this batch: 2106184-1 2106184-2

Client: Western Water and Land, Inc.  
 Work Order: 2106184  
 Project: Monument Ridge

# QC BATCH REPORT

Batch ID: **IP210622-1-2** Instrument ID **ICPMS2** Method: **EPA200.8**

LCS		Sample ID: <b>IM210622-1</b>			Units: <b>MG/L</b>		Analysis Date: <b>6/23/2021 16:50</b>				
Client ID:		Run ID: <b>IM210623-10A6</b>			Prep Date: <b>6/22/2021</b>		DF: <b>10</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BARIUM	0.0919	0.001	0.1		92	85-115				20	
BORON	0.983	0.05	1		98	85-115				20	
CALCIUM	10.1	1	10		101	85-115				20	
IRON	4.81	0.15	5		96	85-115				20	
MAGNESIUM	9.5	0.1	10		95	85-115				20	
MANGANESE	0.0904	0.004	0.1		90	85-115				20	
POTASSIUM	5.01	1	5		100	85-115				20	
SELENIUM	0.0946	0.0015	0.1		95	85-115				20	
SODIUM	10	1	10		100	85-115				20	
STRONTIUM	0.0989	0.001	0.1		99	85-115				20	

LCSD		Sample ID: <b>IM210622-1</b>			Units: <b>MG/L</b>		Analysis Date: <b>6/23/2021 16:56</b>				
Client ID:		Run ID: <b>IM210623-10A6</b>			Prep Date: <b>6/22/2021</b>		DF: <b>10</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BARIUM	0.096	0.001	0.1		96	85-115		0.0919	4	20	
BORON	0.951	0.05	1		95	85-115		0.983	3	20	
CALCIUM	10.5	1	10		105	85-115		10.1	3	20	
IRON	4.78	0.15	5		96	85-115		4.81	1	20	
MAGNESIUM	9.25	0.1	10		93	85-115		9.5	3	20	
MANGANESE	0.0902	0.004	0.1		90	85-115		0.0904	0	20	
POTASSIUM	5.03	1	5		101	85-115		5.01	0	20	
SELENIUM	0.0964	0.0015	0.1		96	85-115		0.0946	2	20	
SODIUM	9.87	1	10		99	85-115		10	2	20	
STRONTIUM	0.0955	0.001	0.1		96	85-115		0.0989	4	20	

**Client:** Western Water and Land, Inc.  
**Work Order:** 2106184  
**Project:** Monument Ridge

## QC BATCH REPORT

Batch ID: **IP210622-1-2**      Instrument ID **ICPMS2**      Method: **EPA200.8**

**MB**      Sample ID: **FP210618-1**      Units: **MG/L**      Analysis Date: **6/23/2021 16:44**  
 Client ID:      Run ID: **IM210623-10A6**      Prep Date: **6/22/2021**      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	0.11	0.15	0.071	J
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:

2106184-1	2106184-2
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Client: Western Water and Land, Inc.  
 Work Order: 2106184  
 Project: Monument Ridge

# QC BATCH REPORT

Batch ID: VL210621-3-2 Instrument ID: HPV1 Method: SW8260\_25

LCS		Sample ID: VL210621-3			Units: %REC		Analysis Date: 6/21/2021 10:36				
Client ID:		Run ID: VL210621-3A			Prep Date: 6/21/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	24.3		25		97	80-120					
Surr: DIBROMOFLUOROMETHANE	26.4		25		106	80-120					
Surr: TOLUENE-D8	24.8		25		99	80-120					
BENZENE	10.6	1	10		106	80-120				20	
TOLUENE	10.1	1	10		101	80-120				20	
ETHYLBENZENE	10.2	1	10		102	80-120				20	
M+P-XYLENE	20	1	20		100	80-120				20	
O-XYLENE	9.84	1	10		98	80-120				20	

LCSD		Sample ID: VL210621-3			Units: %REC		Analysis Date: 6/21/2021 11:48				
Client ID:		Run ID: VL210621-3A			Prep Date: 6/21/2021		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		25		96	80-120			1		
Surr: DIBROMOFLUOROMETHANE	25.5		25		102	80-120			3		
Surr: TOLUENE-D8	24.9		25		100	80-120			1		
BENZENE	10.4	1	10		104	80-120		10.6	2	20	
TOLUENE	10.3	1	10		103	80-120		10.1	2	20	
ETHYLBENZENE	10.4	1	10		104	80-120		10.2	2	20	
M+P-XYLENE	20.2	1	20		101	80-120		20	1	20	
O-XYLENE	10.3	1	10		103	80-120		9.84	5	20	

MB		Sample ID: VL210621-3			Units: %REC		Analysis Date: 6/21/2021 11:25				
Client ID:		Run ID: VL210621-3A			Prep Date: 6/21/2021		DF: 1				
Analyte	Result	ReportLimit	MDL								Qual
Surr: 4-BROMOFLUOROBENZENE	24.6				98	80-120					
Surr: DIBROMOFLUOROMETHANE	25.7				103	80-120					
Surr: TOLUENE-D8	25.1				101	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: 2106184-1      2106184-2      2106184-3

Client: Western Water and Land, Inc.  
 Work Order: 2106184  
 Project: Monument Ridge

# QC BATCH REPORT

Batch ID: VL210621-3-3 Instrument ID HPV1 Method: SW8260\_25

LCS		Sample ID: VL210621-33			Units: UG/L		Analysis Date: 6/21/2021 12:12				
Client ID:		Run ID: VL210621-3A			Prep Date: 6/21/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	1110	100	1000		111	75-121				20	

LCSD		Sample ID: VL210621-33			Units: UG/L		Analysis Date: 6/21/2021 12:35				
Client ID:		Run ID: VL210621-3A			Prep Date: 6/21/2021		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		1110	4	20	

MB		Sample ID: VL210621-3			Units: UG/L		Analysis Date: 6/21/2021 11:25				
Client ID:		Run ID: VL210621-3A			Prep Date: 6/21/2021		DF: 1				
Analyte	Result	ReportLimit	MDL								
GASOLINE RANGE ORGANICS	390	100	51								

The following samples were analyzed in this batch: 2106184-1      2106184-2      2106184-3

Client: Western Water and Land, Inc.  
 Work Order: 2106184  
 Project: Monument Ridge

# QC BATCH REPORT

Batch ID: **AK210621-1-1** Instrument ID **NONE** Method: **SM2320B**

**DUP** Sample ID: **2106184-1** Units: **MG/L** Analysis Date: **6/21/2021**  
 Client ID: **Mikowski 64327-F** Run ID: **AK210621-3A1** Prep Date: **6/21/2021** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BICARBONATE AS CaCO3	324	20						330	1	15	
CARBONATE AS CaCO3	ND	20						20		15	
TOTAL ALKALINITY AS CaCO3	324	20						330	1	15	

**LCS** Sample ID: **AK210621-1** Units: **MG/L** Analysis Date: **6/21/2021**  
 Client ID: Run ID: **AK210621-3A1** Prep Date: **6/21/2021** 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	96.6	5	100		96	85-115				15	

**MB** Sample ID: **AK210621-1** Units: **MG/L** Analysis Date: **6/21/2021**  
 Client ID: Run ID: **AK210621-3A1** Prep Date: **6/21/2021** 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: 2106184-1 2106184-2

Client: Western Water and Land, Inc.  
 Work Order: 2106184  
 Project: Monument Ridge

# QC BATCH REPORT

Batch ID: **IC210609-1-2** Instrument ID **IC3** Method: **EPA300.0**

LCS		Sample ID: <b>IC210609-1</b>			Units: <b>MG/L</b>		Analysis Date: <b>6/9/2021 08:58</b>				
Client ID:		Run ID: <b>IC210609-1A2</b>			Prep Date: <b>6/9/2021</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BROMIDE	9.12	0.2	10		91	90-110				15	
CHLORIDE	9.85	0.2	10		99	90-110				15	
FLUORIDE	4.88	0.1	5		98	90-110				15	
NITRITE AS N	4.99	0.15	4.99		100	90-110				15	
SULFATE	48.5	1	50		97	90-110				15	

LCSD		Sample ID: <b>IC210609-1</b>			Units: <b>MG/L</b>		Analysis Date: <b>6/9/2021 11:37</b>				
Client ID:		Run ID: <b>IC210609-1A2</b>			Prep Date: <b>6/9/2021</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BROMIDE	9.21	0.2	10		92	90-110		9.12	1	15	
CHLORIDE	9.87	0.2	10		99	90-110		9.85	0	15	
FLUORIDE	4.96	0.1	5		99	90-110		4.88	2	15	
NITRITE AS N	4.98	0.15	4.99		100	90-110		4.99	0	15	
SULFATE	48.5	1	50		97	90-110		48.5	0	15	

MB		Sample ID: <b>IC210609-1</b>			Units: <b>MG/L</b>		Analysis Date: <b>6/9/2021 09:11</b>				
Client ID:		Run ID: <b>IC210609-1A2</b>			Prep Date: <b>6/9/2021</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	MDL								
BROMIDE	ND	0.2	0.064								
CHLORIDE	ND	0.2	0.076								
FLUORIDE	ND	0.1	0.039								
NITRITE AS N	ND	0.15	0.069								
SULFATE	ND	1	0.53								

The following samples were analyzed in this batch: 2106184-1 2106184-2

Client: Western Water and Land, Inc.  
 Work Order: 2106184  
 Project: Monument Ridge

# QC BATCH REPORT

Batch ID: **IC210614-1-2** Instrument ID **IC3** Method: **EPA300.0**

LCS		Sample ID: <b>IC210614-1</b>			Units: <b>MG/L</b>		Analysis Date: <b>6/14/2021 20:31</b>				
Client ID:		Run ID: <b>IC210614-1A2</b>			Prep Date: <b>6/14/2021</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
NITRATE AS N	10.3	0.2	10		103	90-110				15	

LCSD		Sample ID: <b>IC210614-1</b>			Units: <b>MG/L</b>		Analysis Date: <b>6/14/2021 22:59</b>				
Client ID:		Run ID: <b>IC210614-1A2</b>			Prep Date: <b>6/14/2021</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
NITRATE AS N	10.4	0.2	10		104	90-110		10.3	1	15	

MB		Sample ID: <b>IC210614-1</b>			Units: <b>MG/L</b>		Analysis Date: <b>6/14/2021 20:45</b>				
Client ID:		Run ID: <b>IC210614-1A2</b>			Prep Date: <b>6/14/2021</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	MDL								
NITRATE AS N	ND	0.2	0.092								

The following samples were analyzed in this batch:

2106184-1	2106184-2
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Client: Western Water and Land, Inc.  
 Work Order: 2106184  
 Project: Monument Ridge

## QC BATCH REPORT

Batch ID: **pH210615-3-1** Instrument ID **pH-2** Method: **SM4500-H**

CCV		Sample ID: <b>CCV</b>			Units: <b>pH</b>		Analysis Date: <b>6/15/2021</b>				
Client ID:		Run ID: <b>pH210615-3A1</b>			Prep Date: <b>6/15/2021</b>		DF: <b>1</b>				
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					

DUP		Sample ID: <b>2106184-1</b>			Units: <b>pH</b>		Analysis Date: <b>6/15/2021</b>				
Client ID: <b>Mikowski 64327-F</b>		Run ID: <b>pH210615-3A1</b>			Prep Date: <b>6/15/2021</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
PH	8.22	0.1							8.3		

ICV		Sample ID: <b>ICV</b>			Units: <b>pH</b>		Analysis Date: <b>6/15/2021</b>				
Client ID:		Run ID: <b>pH210615-3A1</b>			Prep Date: <b>6/15/2021</b>		DF: <b>1</b>				
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					

The following samples were analyzed in this batch:

2106184-1	2106184-2
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**Client:** Western Water and Land, Inc.  
**Work Order:** 2106184  
**Project:** Monument Ridge

## QC BATCH REPORT

Batch ID: **SC210616-1-1**      Instrument ID **pH-2**      Method: **SM2510B**

<b>CCV</b>	Sample ID: <b>CCV1</b>						Units: <b>umhos/cm</b>	Analysis Date: <b>6/16/2021</b>			
Client ID:		Run ID: <b>SC210616-1A1</b>			Prep Date: <b>6/16/2021</b>			DF: <b>1</b>			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
SPECIFIC CONDUCTIVITY	1380	1	1410		98	90-110					

<b>ICV</b>	Sample ID: <b>ICV</b>						Units: <b>umhos/cm</b>	Analysis Date: <b>6/16/2021</b>			
Client ID:		Run ID: <b>SC210616-1A1</b>			Prep Date: <b>6/16/2021</b>			DF: <b>1</b>			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
SPECIFIC CONDUCTIVITY	724	1	718		101	90-110					

The following samples were analyzed in this batch:

2106184-1	2106184-2
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Client: Western Water and Land, Inc.  
 Work Order: 2106184  
 Project: Monument Ridge

## QC BATCH REPORT

Batch ID: TD210611-1-1 Instrument ID Balance Method: SM2540C

DUP		Sample ID: 2106184-1		Units: MG/L		Analysis Date: 6/11/2021					
Client ID: Mikowski 64327-F		Run ID: TD210611-1A1		Prep Date: 6/11/2021			DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	362	20						360	1	14	

LCS		Sample ID: TD210611-1		Units: MG/L		Analysis Date: 6/11/2021					
Client ID:		Run ID: TD210611-1A1		Prep Date: 6/11/2021			DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	401	20	400		100	85-115				14	

LCSD		Sample ID: TD210611-1		Units: MG/L		Analysis Date: 6/11/2021					
Client ID:		Run ID: TD210611-1A1		Prep Date: 6/11/2021			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		401	2	14	

MB		Sample ID: TD210611-1		Units: MG/L		Analysis Date: 6/11/2021					
Client ID:		Run ID: TD210611-1A1		Prep Date: 6/11/2021			DF: 1				
Analyte	Result	ReportLimit	MDL								
TOTAL DISSOLVED SOLIDS	ND	20									

The following samples were analyzed in this batch:

2106184-1	2106184-2
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Client: Western Water and Land, Inc.  
 Work Order: 2106184  
 Project: Monument Ridge

## QC BATCH REPORT

Batch ID: TP210618-2-1 Instrument ID Spec Method: SM4500-P

LCS		Sample ID: TP210618-2			Units: MG/L		Analysis Date: 6/18/2021				
Client ID:		Run ID: TP210618-1A3			Prep Date: 6/18/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL PHOSPHORUS	0.517	0.05	0.5		103	80-120				20	

LCSD		Sample ID: TP210618-2			Units: MG/L		Analysis Date: 6/18/2021				
Client ID:		Run ID: TP210618-1A3			Prep Date: 6/18/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL PHOSPHORUS	0.512	0.05	0.5		102	80-120		0.517	1	20	

MB		Sample ID: TP210618-2			Units: MG/L		Analysis Date: 6/18/2021					
Client ID:		Run ID: TP210618-1A3			Prep Date: 6/18/2021		DF: 1					
Analyte	Result	ReportLimit	MDL									Qual
TOTAL PHOSPHORUS	ND	0.05	0.016									

MS		Sample ID: 2106184-1			Units: MG/L		Analysis Date: 6/18/2021				
Client ID: Mikowski 64327-F		Run ID: TP210618-1A3			Prep Date: 6/18/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL PHOSPHORUS	0.268	0.05	0.25	0.03	95	80-120				20	

MSD		Sample ID: 2106184-1			Units: MG/L		Analysis Date: 6/18/2021				
Client ID: Mikowski 64327-F		Run ID: TP210618-1A3			Prep Date: 6/18/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL PHOSPHORUS	0.271	0.05	0.25	0.03	96	80-120		0.268	1	20	

The following samples were analyzed in this batch:

2106184-1	2106184-2
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**CONTROLLED**  
NON-CONFORMANCE REPORT

**Non-Conformance**

**Initiated By:** Lisa M. Champagne on 7/7/2021

**Event Type:** Hold Time Exceeded

**Event Explanation:** Sample originally ran in hold, however, due to CCV failure for NO3 sample reanalyzed for NO3 out of holding time.

**Action To**

**Prevent Recurrence:** Not Applicable

**Corrective Action**

**Corrective Action:**

**Department Manager Approval:**

**Approval Date:**

**Corrective Action Comments:**

**Workorders Affected**

Workorder -- Procedure

Approved By

Approval Date

2106184 -- EPA300.0

No client contact information.

PENDING

**Associated Batches**

The samples were originally associated with the following Batch(es):

All rework was completed in the following Batch(es):

IC210614-1A2 created on 6/14/2021  
IC210614-1A1 created on 6/14/2021

**Not Applicable**

**NCR Approval**

**Project Manager Approval:**

**Department Manager Approval:**

**QA Manager Approval:**