



Friday, February 19, 2021

Max Trehus
Great Western Operating Company, LLC
4093 Specialty Place, Unit B
Longmont, CO 80504

Re: ALS Workorder: 2102084
Project Name: Wilson IC 03-339HN
Project Number:

Dear Mr. Trehus:

Two water samples were received from Great Western Operating Company, LLC, on 2/4/2021. The samples were scheduled for the following analyses:

- Dissolved Gasses
- GC/MS Volatiles
- Inorganics
- Metals
- Total Extractable Petroleum Hydrocarbons (Diesel)
- Total Volatile Petroleum Hydrocarbons (Gasoline)

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. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental.

Thank you for your confidence in ALS Environmental. Should you have any questions, please call.

Sincerely,

ALS Environmental
Katie M. O'Brien
Project Manager

Accreditations: 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
California (CA)	2926
Colorado (CO)	CO01099
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
PJ-LA (DoD ELAP/ISO 170250)	95377
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO010992018-1
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	TN02976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280

40 CFR Part 136: All analyses for Clean Water Act samples are analyzed using the 40 CFR Part 136 specified method and include all the QC requirements.



2102084

GC/MS Volatiles:

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

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.

GRO:

The sample was analyzed following the current revision of SOP 425 generally based on SW-846 Methods 8000C and 8015D. TVPH 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 C6 to C10.

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 samples were analyzed following Methods for the Determination of Metals in Environmental Samples – Supplement 1 procedures. Analysis by Trace ICP followed method 200.7 and the current revision of SOP 834.

Sample 2102084-2 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
TDS	SM2540C	1101
Chloride	300.0 Revision 2.1	1113
Sulfate	300.0 Revision 2.1	1113

All acceptance criteria were met.

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Sample Number(s) Cross-Reference Table

OrderNum: 2102084

Client Name: Great Western Operating Company, LLC

Client Project Name: Wilson IC 03-339HN

Client Project Number:

Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
03-339HN A through E, G	2102084-1		WATER	03-Feb-21	11:28
03-339HN F	2102084-2		WATER	03-Feb-21	11:28



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client Name/ID: **Great Western** Workorder No: **2102084**
 Project Manager: **KMO** Initials: **TEM** Date: **2/4/21**


1. Are airbills / shipping documents present and/or removable?	<input checked="" type="checkbox"/> Drop Off	<input type="checkbox"/> YES	<input type="checkbox"/> NO
2. Are custody seals on shipping containers intact?	<input checked="" type="checkbox"/> NONE	<input type="checkbox"/> YES	<input type="checkbox"/> NO*
3. Are custody seals on sample containers intact?	<input checked="" type="checkbox"/> NONE	<input type="checkbox"/> YES	<input type="checkbox"/> NO*
4. Is there a COC (chain-of-custody) present?		<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO*
5. Is the COC in agreement with samples received? (IDs, dates, times, # of samples, # of containers, matrix, requested analyses, etc.)		<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO*
6. Are short-hold samples present?		<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
7. Are all samples within holding times for the requested analyses?		<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO*
8. Were all sample containers received intact? (not broken or leaking)		<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO*
9. Is there sufficient sample for the requested analyses?		<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO*
10. Are samples in proper containers for requested analyses? (form 250, Sample Handling Guidelines)		<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO*
11. Are all aqueous samples preserved correctly, if required?	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO*
12. Were unpreserved samples pH checked, if required?	<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO
13. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, radon) free of bubbles > 6 mm in diameter?	<input type="checkbox"/> N/A	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
14. Were the samples shipped on ice?		<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
15. Were cooler temperatures measured at 0.1 - 6.0°C?	IR gun used: <input type="checkbox"/> #3 <input checked="" type="checkbox"/> #5	<input type="checkbox"/> Rad Only	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

Cooler #: **1**
 Temperature (°C): **5.4**
 # of custody seals on cooler: **0**
 External mR/hr reading: **-**
 Background mR/hr reading: **10**

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

* Please provide details below for 'NO' responses in gray boxes above - for 2 thru 5 & 7 thru 12, notify PM & continue w/ login.

All client bottle ID's vs ALS lab ID's double-checked by: **TEM**

If applicable, was the client contacted? YES N/A Contact Name _____ Date: _____
 Project Manager Signature / Date:  **2/4/21**

Client: Great Western Operating Company, LLC
Project: Wilson IC 03-339HN
Sample ID: 03-339HN A through E, G
Legal Location:
Collection Date: 2/3/2021 11:28

Date: 19-Feb-21
Work Order: 2102084
Lab ID: 2102084-1
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity as Calcium Carbonate			SM2320B		Prep Date: 2/9/2021	PrepBy: KJS
BICARBONATE AS CaCO3	920		20	MG/L	1	2/9/2021
CARBONATE AS CaCO3	36		20	MG/L	1	2/9/2021
TOTAL ALKALINITY AS CaCO3	950		20	MG/L	1	2/9/2021
Diesel Range Organics			SW8015M		Prep Date: 2/9/2021	PrepBy: ASZ
Diesel Range Organics	22		1	MG/L	1	2/11/2021 10:18
Surr: O-TERPHENYL	98		69-120	%REC	1	2/11/2021 10:18
Dissolved Gasses			RSK175		Prep Date: 2/8/2021	PrepBy: ASZ
METHANE	650		1	UG/L	1	2/8/2021 10:55
ETHANE	120		2	UG/L	1	2/8/2021 10:55
PROPANE	85		1	UG/L	1	2/8/2021 10:55
Gasoline Range Organics			SW8015		Prep Date: 2/15/2021	PrepBy: ASZ
GASOLINE RANGE ORGANICS	10		1	MG/L	10	2/15/2021 20:18
Surr: 2,3,4-TRIFLUOROTOLUENE	102		80-120	%REC	10	2/15/2021 20:18
GC/MS Volatiles			SW8260_25		Prep Date: 2/5/2021	PrepBy: AEW
BENZENE	55		5	UG/L	5	2/5/2021 18:30
TOLUENE	170		5	UG/L	5	2/5/2021 18:30
ETHYLBENZENE	65		5	UG/L	5	2/5/2021 18:30
M+P-XYLENE	270		5	UG/L	5	2/5/2021 18:30
O-XYLENE	140		5	UG/L	5	2/5/2021 18:30
TOTAL XYLENES	410		1	UG/L	1	2/5/2021 18:30
Surr: 4-BROMOFLUOROBENZENE	98		80-120	%REC	5	2/5/2021 18:30
Surr: DIBROMOFLUOROMETHANE	100		80-120	%REC	5	2/5/2021 18:30
Surr: TOLUENE-D8	99		80-120	%REC	5	2/5/2021 18:30
Ion Chromatography			EPA300.0		Prep Date: 2/9/2021	PrepBy: KJS
CHLORIDE	2800		40	MG/L	200	2/10/2021 08:52
SULFATE	ND		5	MG/L	5	2/9/2021 09:43
Total Recoverable Metals by 200.7			EPA200.7		Prep Date: 2/10/2021	PrepBy: TXS
CALCIUM	1700		10	MG/L	10	2/11/2021 12:00
POTASSIUM	240		10	MG/L	10	2/11/2021 12:00
MAGNESIUM	ND		10	MG/L	10	2/11/2021 12:00
SODIUM	470		10	MG/L	10	2/11/2021 12:00
Total Dissolved Solids			SM2540C		Prep Date: 2/10/2021	PrepBy: LMC
TOTAL DISSOLVED SOLIDS	6800		200	MG/L	1	2/15/2021

Client: Great Western Operating Company, LLC

Date: 19-Feb-21

Project: Wilson IC 03-339HN

Work Order: 2102084

Sample ID: 03-339HN F

Lab ID: 2102084-2

Legal Location:

Matrix: WATER

Collection Date: 2/3/2021 11:28

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dissolved Metals by 200.7			EPA200.7		Prep Date: 2/10/2021	PrepBy: TXS
CALCIUM	1800		10	MG/L	10	2/11/2021 12:04
POTASSIUM	240		10	MG/L	10	2/11/2021 12:04
MAGNESIUM	ND		10	MG/L	10	2/11/2021 12:04
SODIUM	470		10	MG/L	10	2/11/2021 12:04

Client: Great Western Operating Company, LLC
Project: Wilson IC 03-339HN
Sample ID: 03-339HN F
Legal Location:
Collection Date: 2/3/2021 11:28

Date: 19-Feb-21
Work Order: 2102084
Lab ID: 2102084-2
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	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: 2/19/2021 9:20:

Client: Great Western Operating Company, LLC

QC BATCH REPORT

Work Order: 2102084

Project: Wilson IC 03-339HN

Batch ID: HC210208-91-1

Instrument ID MEE-1

Method: RSK175

LCS Sample ID: HC210208-91 Units: UG/L Analysis Date: 2/8/2021 09:11

Client ID: Run ID: HC210208-91A Prep Date: 2/8/2021 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	154	1	142		108	76-125				25	
ETHANE	282	2	267		106	70-120				25	
PROPANE	415	1	391		106	72-120				25	

LCSD Sample ID: HC210208-91 Units: UG/L Analysis Date: 2/8/2021 09:52

Client ID: Run ID: HC210208-91A Prep Date: 2/8/2021 DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	147	1	142		104	76-125		154	5	25	
ETHANE	270	2	267		101	70-120		282	4	25	
PROPANE	398	1	391		102	72-120		415	4	25	

MB Sample ID: HC210208-91 Units: UG/L Analysis Date: 2/8/2021 09:14

Client ID: Run ID: HC210208-91A Prep Date: 2/8/2021 DF: 1

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

The following samples were analyzed in this batch:

Client: Great Western Operating Company, LLC
 Work Order: 2102084
 Project: Wilson IC 03-339HN

QC BATCH REPORT

Batch ID: **HC210209-81-1** Instrument ID **FUELS-1** Method: **SW8015M**

LCS		Sample ID: HC210209-81			Units: MG/L		Analysis Date: 2/11/2021 15:25				
Client ID:		Run ID: HC210209-81B			Prep Date: 2/9/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	6.84	1.07	8.33		82	53-120				20	
Surr: O-TERPHENYL	1.59		1.67		96	69-120					

LCSD		Sample ID: HC210209-81			Units: MG/L		Analysis Date: 2/11/2021 15:46				
Client ID:		Run ID: HC210209-81B			Prep Date: 2/9/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	7.45	1.07	8.33		89	53-120		6.84	9	20	
Surr: O-TERPHENYL	1.7		1.67		102	69-120			6		

MB		Sample ID: HC210209-81			Units: MG/L		Analysis Date: 2/11/2021 08:06					
Client ID:		Run ID: HC210209-81B			Prep Date: 2/9/2021		DF: 1					
Analyte	Result	ReportLimit										Qual
Diesel Range Organics	ND	1.1										
Surr: O-TERPHENYL	1.5		90	69-120								

The following samples were analyzed in this batch:

Client: Great Western Operating Company, LLC
 Work Order: 2102084
 Project: Wilson IC 03-339HN

QC BATCH REPORT

Batch ID: **HC210215-61-1** Instrument ID **FUELS-1** Method: **SW8015**

LCS		Sample ID: HC210215-61			Units: MG/L		Analysis Date: 2/15/2021 22:39				
Client ID:		Run ID: HC210215-61A			Prep Date: 2/15/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	0.476	0.1	0.5		95	80-120				20	
Surr: 2,3,4-TRIFLUOROTOLUENE	0.0989		0.1		99	80-120					

LCSD		Sample ID: HC210215-61			Units: MG/L		Analysis Date: 2/15/2021 23:03				
Client ID:		Run ID: HC210215-61A			Prep Date: 2/15/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	0.487	0.1	0.5		97	80-120		0.476	2	20	
Surr: 2,3,4-TRIFLUOROTOLUENE	0.101		0.1		101	80-120			2		

MB		Sample ID: HC210215-61			Units: MG/L		Analysis Date: 2/15/2021 19:31					
Client ID:		Run ID: HC210215-61A			Prep Date: 2/15/2021		DF: 1					
Analyte	Result	ReportLimit										Qual
GASOLINE RANGE ORGANICS	ND	0.1										
Surr: 2,3,4-TRIFLUOROTOLUENE	0.0916		92	80-120								

The following samples were analyzed in this batch:

Client: Great Western Operating Company, LLC
 Work Order: 2102084
 Project: Wilson IC 03-339HN

QC BATCH REPORT

Batch ID: **IP210210-3-2** Instrument ID **ICPTrace2** Method: **EPA200.7**

LCS		Sample ID: IP210210-3			Units: MG/L		Analysis Date: 2/11/2021 11:56				
Client ID:		Run ID: IT210211-1A3			Prep Date: 2/10/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CALCIUM	39	1	40		98	85-115				20	
MAGNESIUM	39.5	1	40		99	85-115				20	
POTASSIUM	40.9	1	40		102	85-115				20	
SODIUM	39.7	1	40		99	85-115				20	

LCSD		Sample ID: IP210210-3			Units: MG/L		Analysis Date: 2/11/2021 11:57				
Client ID:		Run ID: IT210211-1A3			Prep Date: 2/10/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CALCIUM	39.1	1	40		98	85-115		39	0	20	
MAGNESIUM	39.5	1	40		99	85-115		39.5	0	20	
POTASSIUM	40.7	1	40		102	85-115		40.9	0	20	
SODIUM	39.5	1	40		99	85-115		39.7	0	20	

MB		Sample ID: FP210209-1			Units: MG/L		Analysis Date: 2/11/2021 11:54					
Client ID:		Run ID: IT210211-1A3			Prep Date: 2/10/2021		DF: 1					
Analyte	Result	ReportLimit										Qual
CALCIUM	ND	1										
MAGNESIUM	ND	1										
POTASSIUM	ND	1										
SODIUM	ND	1										

MB		Sample ID: IP210210-3			Units: MG/L		Analysis Date: 2/11/2021 11:55					
Client ID:		Run ID: IT210211-1A3			Prep Date: 2/10/2021		DF: 1					
Analyte	Result	ReportLimit										Qual
CALCIUM	ND	1										
MAGNESIUM	ND	1										
POTASSIUM	ND	1										
SODIUM	ND	1										

The following samples were analyzed in this batch:

2102084-1	2102084-2
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Client: Great Western Operating Company, LLC
 Work Order: 2102084
 Project: Wilson IC 03-339HN

QC BATCH REPORT

Batch ID: VL210205-3-2 Instrument ID: HPV3 Method: SW8260_25

LCS		Sample ID: VL210205-3			Units: %REC		Analysis Date: 2/5/2021 12:33				
Client ID:		Run ID: VL210205-3A			Prep Date: 2/5/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	25.1		25		100	80-120					
Surr: DIBROMOFLUOROMETHANE	25.5		25		102	80-120					
Surr: TOLUENE-D8	24.6		25		98	80-120					
BENZENE	9.09	1	10		91	80-120				20	
TOLUENE	8.63	1	10		86	80-120				20	
ETHYLBENZENE	8.73	1	10		87	80-120				20	
M+P-XYLENE	17.4	1	20		87	80-120				20	
O-XYLENE	8.91	1	10		89	80-120				20	

LCSD		Sample ID: VL210205-3			Units: %REC		Analysis Date: 2/5/2021 12:57				
Client ID:		Run ID: VL210205-3A			Prep Date: 2/5/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	24.8		25		99	80-120			1		
Surr: DIBROMOFLUOROMETHANE	25.5		25		102	80-120			0		
Surr: TOLUENE-D8	24.7		25		99	80-120			0		
BENZENE	9.52	1	10		95	80-120		9.09	5	20	
TOLUENE	9.32	1	10		93	80-120		8.63	8	20	
ETHYLBENZENE	9.31	1	10		93	80-120		8.73	6	20	
M+P-XYLENE	18.8	1	20		94	80-120		17.4	7	20	
O-XYLENE	9.29	1	10		93	80-120		8.91	4	20	

MB		Sample ID: VL210205-3			Units: %REC		Analysis Date: 2/5/2021 13:46				
Client ID:		Run ID: VL210205-3A			Prep Date: 2/5/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	25.2				101	80-120					
Surr: DIBROMOFLUOROMETHANE	25.4				101	80-120					
Surr: TOLUENE-D8	24.8				99	80-120					
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:

Client: Great Western Operating Company, LLC
 Work Order: 2102084
 Project: Wilson IC 03-339HN

QC BATCH REPORT

Batch ID: **AK210209-1-2** Instrument ID **NONE** Method: **SM2320B**

LCS		Sample ID: AK210209-1			Units: MG/L		Analysis Date: 2/9/2021				
Client ID:		Run ID: AK210209-1a1			Prep Date: 2/9/2021		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	98.9	5	100		99	85-115				15	

LCSD		Sample ID: AK210209-1			Units: MG/L		Analysis Date: 2/9/2021				
Client ID:		Run ID: AK210209-1a1			Prep Date: 2/9/2021		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	99.4	5	100		99	85-115		98.9	1	15	

MB		Sample ID: AK210209-1			Units: MG/L		Analysis Date: 2/9/2021				
Client ID:		Run ID: AK210209-1a1			Prep Date: 2/9/2021		DF: 1				
Analyte	Result	ReportLimit	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: Great Western Operating Company, LLC
 Work Order: 2102084
 Project: Wilson IC 03-339HN

QC BATCH REPORT

Batch ID: **IC210209-1-1** Instrument ID **IC3** Method: **EPA300.0**

LCS		Sample ID: IC210209-1			Units: MG/L		Analysis Date: 2/9/2021 07:44				
Client ID:		Run ID: IC210209-1a1					Prep Date: 2/9/2021		DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CHLORIDE	9.81	0.2	10		98	90-110				15	
SULFATE	49.8	1	50		100	90-110				15	

LCSD		Sample ID: IC210209-1			Units: MG/L		Analysis Date: 2/9/2021 10:23				
Client ID:		Run ID: IC210209-1a1					Prep Date: 2/9/2021		DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CHLORIDE	9.85	0.2	10		99	90-110		9.81	0	15	
SULFATE	49.9	1	50		100	90-110		49.8	0	15	

MB		Sample ID: IC210209-1			Units: MG/L		Analysis Date: 2/9/2021 07:57					
Client ID:		Run ID: IC210209-1a1					Prep Date: 2/9/2021		DF: 1			
Analyte	Result	ReportLimit										Qual
CHLORIDE	ND	0.2										
SULFATE	ND	1										

The following samples were analyzed in this batch:

Client: Great Western Operating Company, LLC
 Work Order: 2102084
 Project: Wilson IC 03-339HN

QC BATCH REPORT

Batch ID: TD210210-2-1 Instrument ID Balance Method: SM2540C

DUP		Sample ID: 2102084-1		Units: MG/L		Analysis Date: 2/15/2021					
Client ID: 03-339HN A through E, G		Run ID: TD210215-1A1		Prep Date: 2/10/2021			DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	6770	200						6800	1	14	

LCS		Sample ID: TD210210-2		Units: MG/L		Analysis Date: 2/15/2021					
Client ID:		Run ID: TD210215-1A1		Prep Date: 2/10/2021			DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	387	20	400		97	85-115				14	

MB		Sample ID: TD210210-2		Units: MG/L		Analysis Date: 2/15/2021					
Client ID:		Run ID: TD210215-1A1		Prep Date: 2/10/2021			DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	ND	20									

The following samples were analyzed in this batch: