



Friday, August 27, 2021

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

Re: ALS Workorder: 2107306
Project Name: Champlin 117 G5
Project Number:

Dear Mr. Trehus:

Two water samples were received from Great Western Operating Company, LLC, on 7/16/2021. 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. OBrien
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.



2107306

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.

The sample was re-analyzed outside the established holding time due to analyst oversight. See NCR #15323.

All remaining acceptance criteria were met.

GRO:

The samples were 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 sample was 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.

The dissolved metals sample submitted could not be filtered and therefore, could not be analyzed.

All acceptance criteria were met.



Inorganics:

The sample was analyzed following 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: 2107306

Client Name: Great Western Operating Company, LLC

Client Project Name: Champlin 117 G5

Client Project Number:

Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
G5 - A	2107306-1		WATER	15-Jul-21	15:20
G5 - B	2107306-2		WATER	15-Jul-21	15:20



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CONDITION OF SAMPLE UPON RECEIPT FORM

Client: GWOC Workorder No: 2107306
 Project Manager: KMO Initials: JPE Date: 07/16/2021

		N/A	YES	NO
1.	Are airbills / shipping documents present and/or removable?	X		
	Tracking number:			
2.	Are custody seals on shipping containers intact?	X		
3.	Are custody seals on sample containers intact?	X		
4.	Is there a COC (chain-of-custody) present?		X	
5.	Is the COC in agreement with samples received? (IDs, dates, times, # of samples, # of containers, matrix, requested analyses, etc.)		X	
6.	Are short-hold samples present?			X
7.	Are all samples within holding times for the requested analyses?		X	
8.	Were all sample containers received intact? (not broken or leaking)		X	
9.	Is there sufficient sample for the requested analyses?		X	
10.	Are samples in proper containers for requested analyses? (form 250, <i>Sample Handling Guidelines</i>)		X	
11.	Are all aqueous samples preserved correctly, if required? (excluding volatiles)		X	
12.	Are all samples requiring no headspace (VOC, GRO, RSK/MEE, radon) free of bubbles > 6 mm (1/4 inch) diameter? (i.e. size of green pea)		X	
13.	Were the samples shipped on ice?		X	
14.	Were cooler temperatures measured at 0.1-6.0°C?	IR gun used*:	#5	
		RAD ONLY	X	
Cooler #: <u>1</u> Temperature (°C): <u>3.3</u> # of custody seals on cooler: <u>0</u> External µR/hr reading: <u>NA</u> Background µR/hr reading: <u>11</u> Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? YES (If no, see Form 008.)				

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

Were unpreserved bottles pH checked? NA All client bottle ID's vs ALS lab ID's double-checked by: JE
 If applicable, was the client contacted? YES / NO NA Contact: [Signature] Date/Time: 7/20/21
 Project Manager Signature / Date: [Signature]

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SAMPLE SUMMARY REPORT

Client: Great Western Operating Company, LLC
Project: Champlin 117 G5
Sample ID: G5 - A
Legal Location:
Collection Date: 7/15/2021 15:20

Date: 20-Aug-21
Work Order: 2107306
Lab ID: 2107306-1
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity as Calcium Carbonate			SM2320B		Prep Date: 7/29/2021	PrepBy: LMC
BICARBONATE AS CaCO3	280		20	MG/L	1	7/29/2021
CARBONATE AS CaCO3	94		20	MG/L	1	7/29/2021
TOTAL ALKALINITY AS CaCO3	370		20	MG/L	1	7/29/2021
Diesel Range Organics			SW8015M		Prep Date: 7/26/2021	PrepBy: JRS
Diesel Range Organics	28		1.1	MG/L	1	8/2/2021 20:03
Surr: O-TERPHENYL	85		69-120	%REC	1	8/2/2021 20:03
Dissolved Gasses			RSK175		Prep Date: 7/23/2021	PrepBy: JRS
METHANE	14000		1	UG/L	1	7/23/2021 15:52
ETHANE	2500		4	UG/L	2	8/13/2021 16:20
PROPANE	1200		1	UG/L	1	7/23/2021 15:52
Gasoline Range Organics			SW8015		Prep Date: 7/27/2021	PrepBy: JRS
GASOLINE RANGE ORGANICS	16		2	MG/L	20	7/27/2021 18:03
Surr: 2,3,4-TRIFLUOROTOLUENE	96		80-120	%REC	20	7/27/2021 18:03
GC/MS Volatiles			SW8260_25		Prep Date: 7/28/2021	PrepBy: TWK
BENZENE	2100		100	UG/L	100	7/28/2021 22:00
TOLUENE	2800		100	UG/L	100	7/28/2021 22:00
ETHYLBENZENE	230		100	UG/L	100	7/28/2021 22:00
M+P-XYLENE	2100		100	UG/L	100	7/28/2021 22:00
O-XYLENE	730		100	UG/L	100	7/28/2021 22:00
TOTAL XYLENES	2800		1	UG/L	1	7/28/2021 22:00
Surr: 4-BROMOFLUOROBENZENE	101		80-120	%REC	100	7/28/2021 22:00
Surr: DIBROMOFLUOROMETHANE	98		80-120	%REC	100	7/28/2021 22:00
Surr: TOLUENE-D8	98		80-120	%REC	100	7/28/2021 22:00
Ion Chromatography			EPA300.0		Prep Date: 8/3/2021	PrepBy: AOW
CHLORIDE	1900		20	MG/L	100	8/4/2021 21:15
SULFATE	ND		50	MG/L	50	8/3/2021 21:41
Total Recoverable Metals by 200.7			EPA200.7		Prep Date: 8/2/2021	PrepBy: JML
CALCIUM	2.3		1	MG/L	1	8/3/2021 11:39
POTASSIUM	590		10	MG/L	10	8/3/2021 11:26
MAGNESIUM	ND		1	MG/L	1	8/3/2021 11:39
SODIUM	880		10	MG/L	10	8/3/2021 11:26
Total Dissolved Solids			SM2540C		Prep Date: 7/20/2021	PrepBy: BMK
TOTAL DISSOLVED SOLIDS	3600		80	MG/L	1	7/26/2021

Client: Great Western Operating Company, LLC
Project: Champlin 117 G5
Sample ID: G5 - B
Legal Location:
Collection Date: 7/15/2021 15:20

Date: 20-Aug-21
Work Order: 2107306
Lab ID: 2107306-2
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: 8/20/2021 9:16:4

Client: Great Western Operating Company, LLC

QC BATCH REPORT

Work Order: 2107306

Project: Champlin 117 G5

Batch ID: HC210723-91-1

Instrument ID: MEE-1

Method: RSK175

LCS		Sample ID: HC210723-91			Units: UG/L			Analysis Date: 7/23/2021 15:13				
Client ID:		Run ID: HC210723-91A			Prep Date: 7/23/2021			DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual	
METHANE	157	1	142		110	76-125				25		
PROPANE	435	1	391		111	72-120				25		

LCSD		Sample ID: HC210723-91			Units: UG/L			Analysis Date: 7/23/2021 16:11				
Client ID:		Run ID: HC210723-91A			Prep Date: 7/23/2021			DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual	
METHANE	157	1	142		110	76-125		157	0	25		
PROPANE	430	1	391		110	72-120		435	1	25		

MB		Sample ID: HC210723-91			Units: UG/L			Analysis Date: 7/23/2021 15:21				
Client ID:		Run ID: HC210723-91A			Prep Date: 7/23/2021			DF: 1				
Analyte	Result	ReportLimit										Qual
METHANE	ND	1										
PROPANE	ND	1										

MS		Sample ID: 2107306-1			Units: UG/L			Analysis Date: 7/23/2021 15:56				
Client ID: G5 - A		Run ID: HC210723-91A			Prep Date: 7/23/2021			DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual	
METHANE	16000	1	71.1	14000	2339	76-125				25	*	
PROPANE	1390	1	196	1200	82	72-120				25		

The following samples were analyzed in this batch:

Client: Great Western Operating Company, LLC
 Work Order: 2107306
 Project: Champlin 117 G5

QC BATCH REPORT

Batch ID: **HC210726-82-1** Instrument ID: **FUELS-1** Method: **SW8015M**

LCS		Sample ID: HC210726-82			Units: MG/L		Analysis Date: 8/2/2021 18:38				
Client ID:		Run ID: HC210802-81A			Prep Date: 7/26/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
Diesel Range Organics	5.94	1.07	8.33		71	53-120				20	
Surr: O-TERPHENYL	1.61		1.67		96	69-120					

LCSD		Sample ID: HC210726-82			Units: MG/L		Analysis Date: 8/2/2021 18:59				
Client ID:		Run ID: HC210802-81A			Prep Date: 7/26/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
Diesel Range Organics	6.16	1.07	8.33		74	53-120		5.94	4	20	
Surr: O-TERPHENYL	1.61		1.67		96	69-120			0		

MB		Sample ID: HC210726-82			Units: MG/L		Analysis Date: 8/2/2021 18:17					
Client ID:		Run ID: HC210802-81A			Prep Date: 7/26/2021		DF: 1					
Analyte	Result	ReportLimit										Qual
Diesel Range Organics	ND	1.1										
Surr: O-TERPHENYL	1.62		97	69-120								

The following samples were analyzed in this batch:

Client: Great Western Operating Company, LLC
 Work Order: 2107306
 Project: Champlin 117 G5

QC BATCH REPORT

Batch ID: **HC210727-61-1** Instrument ID: **FUELS-1** Method: **SW8015**

LCS		Sample ID: HC210727-61	Units: MG/L				Analysis Date: 7/27/2021 13:31				
Client ID:		Run ID: HC210727-61A			Prep Date: 7/27/2021			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	0.494	0.1	0.5		99	80-120				20	
Surr: 2,3,4-TRIFLUOROTOLUENE	0.0999		0.1		100	80-120					

LCSD		Sample ID: HC210727-61	Units: MG/L				Analysis Date: 7/27/2021 16:55				
Client ID:		Run ID: HC210727-61A			Prep Date: 7/27/2021			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	0.481	0.1	0.5		96	80-120		0.494	3	20	
Surr: 2,3,4-TRIFLUOROTOLUENE	0.1		0.1		100	80-120			1		

MB		Sample ID: HC210727-61	Units: MG/L				Analysis Date: 7/27/2021 13:54				
Client ID:		Run ID: HC210727-61A			Prep Date: 7/27/2021			DF: 1			
Analyte	Result	ReportLimit	Qual								
GASOLINE RANGE ORGANICS	ND	0.1									
Surr: 2,3,4-TRIFLUOROTOLUENE	0.0976		98	80-120							

The following samples were analyzed in this batch:

Client: Great Western Operating Company, LLC
 Work Order: 2107306
 Project: Champlin 117 G5

QC BATCH REPORT

Batch ID: **HC210813-91-1** Instrument ID: **MEE-1** Method: **RSK175**

LCS		Sample ID: HC210813-91			Units: UG/L		Analysis Date: 8/13/2021 16:06				
Client ID:		Run ID: HC210813-91A			Prep Date: 8/13/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
ETHANE	311	2	267		116	70-120				25	

LCSD		Sample ID: HC210813-91			Units: UG/L		Analysis Date: 8/13/2021 16:29				
Client ID:		Run ID: HC210813-91A			Prep Date: 8/13/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
ETHANE	259	2	267		97	70-120		311	18	25	

MB		Sample ID: HC210813-91			Units: UG/L		Analysis Date: 8/13/2021 16:13				
Client ID:		Run ID: HC210813-91A			Prep Date: 8/13/2021		DF: 1				
Analyte	Result	ReportLimit	Qual								
ETHANE	ND	2									

The following samples were analyzed in this batch:

Client: Great Western Operating Company, LLC
 Work Order: 2107306
 Project: Champlin 117 G5

QC BATCH REPORT

Batch ID: IP210802-1-1 Instrument ID: ICPTrace2 Method: EPA200.7

LCS		Sample ID: IP210802-1			Units: MG/L		Analysis Date: 8/3/2021 11:15				
Client ID:		Run ID: IT210803-1A5			Prep Date: 8/2/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
CALCIUM	40.1	1	40		100	85-115				20	
MAGNESIUM	40.4	1	40		101	85-115				20	
POTASSIUM	43.1	1	40		108	85-115				20	
SODIUM	41.4	1	40		103	85-115				20	

LCSD		Sample ID: IP210802-1			Units: MG/L		Analysis Date: 8/3/2021 11:16				
Client ID:		Run ID: IT210803-1A5			Prep Date: 8/2/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
CALCIUM	40.1	1	40		100	85-115		40.1	0	20	
MAGNESIUM	40.4	1	40		101	85-115		40.4	0	20	
POTASSIUM	43.1	1	40		108	85-115		43.1	0	20	
SODIUM	41.5	1	40		104	85-115		41.4	0	20	

MB		Sample ID: IP210802-1			Units: MG/L		Analysis Date: 8/3/2021 11:14					
Client ID:		Run ID: IT210803-1A5			Prep Date: 8/2/2021		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:

Client: Great Western Operating Company, LLC

Work Order: 2107306

Project: Champlin 117 G5

QC BATCH REPORT

Batch ID: VL210728-4-1

Instrument ID: HPV4

Method: SW8260_25

LCS		Sample ID: VL210728-4			Units: %REC		Analysis Date: 7/28/2021 16:00				
Client ID:		Run ID: VL210728-4A			Prep Date: 7/28/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	24.9		25		100	80-120					
Surr: DIBROMOFLUOROMETHANE	24.6		25		98	80-120					
Surr: TOLUENE-D8	24.7		25		99	80-120					
BENZENE	9.14	1	10		91	80-120				20	
TOLUENE	9.17	1	10		92	80-120				20	
ETHYLBENZENE	9.18	1	10		92	80-120				20	
M+P-XYLENE	18.1	1	20		90	80-120				20	
O-XYLENE	9.32	1	10		93	80-120				20	

LCSD		Sample ID: VL210728-4			Units: %REC		Analysis Date: 7/28/2021 16:20				
Client ID:		Run ID: VL210728-4A			Prep Date: 7/28/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	24.8		25		99	80-120			1		
Surr: DIBROMOFLUOROMETHANE	24.8		25		99	80-120			1		
Surr: TOLUENE-D8	24.2		25		97	80-120			2		
BENZENE	9.33	1	10		93	80-120		9.14	2	20	
TOLUENE	9.18	1	10		92	80-120		9.17	0	20	
ETHYLBENZENE	9.23	1	10		92	80-120		9.18	1	20	
M+P-XYLENE	17.9	1	20		90	80-120		18.1	1	20	
O-XYLENE	9.34	1	10		93	80-120		9.32	0	20	

MB		Sample ID: VL210728-4			Units: %REC		Analysis Date: 7/28/2021 17:24				
Client ID:		Run ID: VL210728-4A			Prep Date: 7/28/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	26.1				104	80-120					
Surr: DIBROMOFLUOROMETHANE	24.7				99	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:

2107306-1

Client: Great Western Operating Company, LLC
Work Order: 2107306
Project: Champlin 117 G5

QC BATCH REPORT

Batch ID: **AK210729-1-2** Instrument ID: **NONE** Method: **SM2320B**

LCS		Sample ID: AK210729-1			Units: MG/L		Analysis Date: 7/29/2021				
Client ID:		Run ID: AK210729-1A1			Prep Date: 7/29/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
TOTAL ALKALINITY AS CaCO3	98.1	5	100		98	85-115				15	

MB		Sample ID: AK210729-1			Units: MG/L		Analysis Date: 7/29/2021				
Client ID:		Run ID: AK210729-1A1			Prep Date: 7/29/2021		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: 2107306
 Project: Champlin 117 G5

QC BATCH REPORT

Batch ID: IC210803-1-1 Instrument ID: IC3 Method: EPA300.0

LCS		Sample ID: IC210803-1			Units: MG/L		Analysis Date: 8/3/2021 09:14				
Client ID:		Run ID: IC210803-1A1			Prep Date: 8/3/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
CHLORIDE	10.3	0.2	10		103	90-110				15	
SULFATE	51.2	1	50		102	90-110				15	

LCSD		Sample ID: IC210803-1			Units: MG/L		Analysis Date: 8/3/2021 11:53				
Client ID:		Run ID: IC210803-1A1			Prep Date: 8/3/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
CHLORIDE	10.2	0.2	10		102	90-110		10.3	1	15	
SULFATE	51.2	1	50		102	90-110		51.2	0	15	

MB		Sample ID: IC210803-1			Units: MG/L		Analysis Date: 8/3/2021 09:28					
Client ID:		Run ID: IC210803-1A1			Prep Date: 8/3/2021		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: 2107306
 Project: Champlin 117 G5

QC BATCH REPORT

Batch ID: **TD210720-1-2** Instrument ID: **Balance** Method: **SM2540C**

LCS		Sample ID: TD210720-1			Units: MG/L		Analysis Date: 7/26/2021				
Client ID:		Run ID: TD210726-1A1			Prep Date: 7/20/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	372	20	400		93	85-115				14	

LCSD		Sample ID: TD210720-1			Units: MG/L		Analysis Date: 7/26/2021				
Client ID:		Run ID: TD210726-1A1			Prep Date: 7/20/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	377	20	400		94	85-115		372	1	14	

MB		Sample ID: TD210720-1			Units: MG/L		Analysis Date: 7/26/2021				
Client ID:		Run ID: TD210726-1A1			Prep Date: 7/20/2021		DF: 1				
Analyte	Result	ReportLimit	Qual								
TOTAL DISSOLVED SOLIDS	ND	20									

The following samples were analyzed in this batch:

CONTROLLED NON-CONFORMANCE REPORT

Non-Conformance

Initiated By: Jessica R. Spiller on 8/12/2021

Event Type: Target analyte above curve

Event Explanation: Sample 2107306-1 was above the calibration curve for Ethane. Sample was not rerun within hold time due to analyst oversight. No further action was taken due to hold time requirements.

Action To

Prevent Recurrence: Analyst revisited control limits for this testcode.

Corrective Action

Corrective Action:

Department Manager Approval:

Approval Date:

Corrective Action Comments:

Workorders Affected

Workorder -- Procedure

2107306 -- RSK175

No client contact information.

Approved By

PENDING

Approval Date

There Are No Associated Batches

NCR Approval

Project Manager Approval:

Department Manager Approval:

QA Manager Approval: