Monday, June 28, 2021

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

Re: ALS Workorder: 2105612
Project Name: Wilson IC 03-019HNX
Project Number:

Dear Mr. Trehus:

Two water samples were received from Great Western Operating Company, LLC, on 5/27/2021. 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

Monday, June 28, 2021

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

Re: ALS Workorder: 2105612
Project Name: Wilson IC 03-019HNX
Project Number:

Dear Mr. Trehus:

Two water samples were received from Great Western Operating Company, LLC, on 5/27/2021. 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)
Chloride and Sulfate - Subcontracted to ALS MI

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.

2105612

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 laboratory control sample and laboratory control sample duplicate recoveries and RPDs were within the acceptance criteria with the following exception:

Spiked Compound	QC Sample	Direction
Propane	LCSD	High

Since the recoveries for propane in the laboratory control sample and laboratory control sample duplicate were within control limits, with only the RPD exceeding acceptance criteria, quantitations of target compounds were not compromised. No further action was taken.

All remaining 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 sample was analyzed following SW-846, 3rd Edition procedures. Analysis by Trace ICP followed method 200.7 and the current revision of SOP 834.

Due to the matrix of the sample, the dissolved metals analysis could not be performed.

All acceptance criteria were met.

Inorganics:

The sample was analyzed following Standard Method procedures for the current revisions of the following SOPs and methods:

Analyte	Method	SOP #
Alkalinity	SM2320B	1106
Bicarbonate	SM2320B	1106
Carbonate	SM2320B	1106
TDS	SM2540C	1101

Due to the matrix of the sample, the Chloride and Sulfate analysis could not be performed.

All acceptance criteria were met.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 2105612
Client Name: Great Western Operating Company, LLC
Client Project Name: Wilson IC 03-019HNX
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
03-019HNX A	2105612-1		WATER	25-May-21	13:10
03-019HNX B	2105612-2		WATER	25-May-21	13:10

ALS Environmental

225 Commerce Drive, Fort Collins, Colorado 80524
TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

Chain-of-Custody

Turnaround time for samples received after 2 p.m. will be calculated beginning from the next business day.

Turnaround time for samples received Saturday will be calculated beginning from the next business day.

ALS WORKORDER #
2105612

TURNAROUND TIME		SAMPLER		PAGE	of
SITE ID				DISPOSAL	BY LAB or RETURN

				PARAMETER/METHOD REQUEST FOR ANALYSIS	
PROJECT NAME	Wilson IC 03-019HNX	EDD FORMAT			
PROJECT No.		PURCHASE ORDER		A	Dissolved Gasses
COMPANY NAME	Great Western	BILL TO COMPANY		B	BTEX
SEND REPORT TO	Max Trehus	INVOICE ATTN TO		C	DRO
ADDRESS		ADDRESS		D	GRO
CITY / STATE / ZIP		CITY / STATE / ZIP		E	Anions, Alk, TDS
PHONE		PHONE		F	DS Metals
FAX		FAX		G	TR Metals
E-MAIL	MTrehus@GWP.com	E-MAIL		H	
				I	
				J	

LAB ID	FIELD ID	MATRIX	SAMPLE DATE	SAMPLE TIME	# OF BOTTLES	PRESERVATIVE	QC	A	B	C	D	E	F	G	H	I	J	SEE NOTES SECTION
	03-019HNX A	W	5/25/21	13:10	3	-		X										
	03-019HNX A	↓	↓	↓	3	HCL			X									
	03-019HNX A				3	HCL				X								
	03-019HNX A				3	HCL					X							
	03-019HNX A				1	-						X						
	03-019HNX B				1	-							X					
	03-019HNX A	↓	↓	↓	1	HNO3								X				

*Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

NOTES	REPORT LEVEL / QC REQUIRED
Facility ID 452169	Summary (Standard QC)
4.1	LEVEL II (Standard QC)
	LEVEL III (Std QC + forms)
	LEVEL IV (Std QC + forms + raw

PRESERVATION KEY: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaOH/ZnAcetate 6-NaHSO4 7-4°C 8-Other

Form 202r9

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Kenny Pyatt	5/27/21	1405
RECEIVED BY	Joshua Echoy	JE	5/27/21	1405
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: GWOC Workorder No: 2105612

Project Manager: KMO Initials: JPE Date: 05/28/2021

		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, *Sample Handling Guidelines*)		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 #:	1						
Temperature (°C):	4.1						
# of custody seals on cooler:	0						
External µR/hr reading:	11						
Background µR/hr reading:	11						

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? **YES**

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

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: _____ Date/Time: _____

Project Manager Signature / Date: Shilah Dunn 5/31/21

Form 201r30.xls
03/18/2021

*IR Gun #5, VWR SN 192272629

Client: Great Western Operating Company, LLC **Date:** *15-Jun-21*
Project: Wilson IC 03-019HNX **Work Order:** 2105612
Sample ID: 03-019HNX A **Lab ID:** 2105612-1
Legal Location: **Matrix:** WATER
Collection Date: 5/25/2021 13:10 **Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity as Calcium Carbonate		**SM2320B**			Prep Date: **6/7/2021**	PrepBy: **BMK**
BICARBONATE AS CaCO3	**150**		**20**	**MG/L**	1	6/7/2021
CARBONATE AS CaCO3	**180**		**20**	**MG/L**	1	6/7/2021
TOTAL ALKALINITY AS CaCO3	**330**		**20**	**MG/L**	1	6/7/2021
Diesel Range Organics		**SW8015M**			Prep Date: **6/4/2021**	PrepBy: **JRS**
Diesel Range Organics	**36**		**1.1**	**MG/L**	1	6/9/2021 10:15
Surr: O-TERPHENYL	*105*		*69-120*	*%REC*	1	6/9/2021 10:15
Dissolved Gasses		**RSK175**			Prep Date: **6/1/2021**	PrepBy: **DMS**
METHANE	**840**		**1**	**UG/L**	1	6/1/2021 14:14
ETHANE	**150**		**2**	**UG/L**	1	6/1/2021 14:14
PROPANE	**47**		**1**	**UG/L**	1	6/1/2021 14:14
Gasoline Range Organics		**SW8015**			Prep Date: **6/7/2021**	PrepBy: **JRS**
GASOLINE RANGE ORGANICS	**1.7**		**0.1**	**MG/L**	1	6/7/2021 19:17
Surr: 2,3,4-TRIFLUOROTOLUENE	*105*		*80-120*	*%REC*	1	6/7/2021 19:17
GC/MS Volatiles		**SW8260_25**			Prep Date: **6/7/2021**	PrepBy: **TWK**
BENZENE	**30**		**25**	**UG/L**	25	6/7/2021 14:45
TOLUENE	**56**		**25**	**UG/L**	25	6/7/2021 14:45
ETHYLBENZENE	ND		25	UG/L	25	6/7/2021 14:45
M+P-XYLENE	**53**		**25**	**UG/L**	25	6/7/2021 14:45
O-XYLENE	**34**		**25**	**UG/L**	25	6/7/2021 14:45
TOTAL XYLENES	**87**		**1**	**UG/L**	1	6/7/2021 14:45
Surr: 4-BROMOFLUOROBENZENE	*100*		*80-120*	*%REC*	25	6/7/2021 14:45
Surr: DIBROMOFLUOROMETHANE	*102*		*80-120*	*%REC*	25	6/7/2021 14:45
Surr: TOLUENE-D8	*100*		*80-120*	*%REC*	25	6/7/2021 14:45
Total Recoverable Metals by 200.7		**EPA200.7**			Prep Date: **6/7/2021**	PrepBy: **ZRH**
CALCIUM	**2900**		**10**	**MG/L**	10	6/10/2021 11:53
POTASSIUM	**370**		**10**	**MG/L**	10	6/10/2021 11:53
MAGNESIUM	ND		10	MG/L	10	6/10/2021 11:53
SODIUM	**550**		**10**	**MG/L**	10	6/10/2021 11:53
Total Dissolved Solids		**SM2540C**			Prep Date: **6/1/2021**	PrepBy: **BMK**
TOTAL DISSOLVED SOLIDS	**17000**		**400**	**MG/L**	1	6/1/2021

Client:	Great Western Operating Company, LLC	**Date:**	*15-Jun-21*
Project:	Wilson IC 03-019HNX	**Work Order:**	2105612
Sample ID:	03-019HNX B	**Lab ID:**	2105612-2
Legal Location:		**Matrix:**	WATER
Collection Date:	5/25/2021 13:10	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed

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

Batch ID: **HC210601-91-1** Instrument ID: **MEE-1** Method: **RSK175**

LCS Sample ID: **HC210601-91** Units: **UG/L** Analysis Date: **6/1/2021 13:36**

Client ID: Run ID: **HC210601-91A** Prep Date: **6/1/2021** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
METHANE	164	1	142		115	76-125				25	
ETHANE	312	2	267		117	70-120				25	
PROPANE	457	1	391		117	72-120				25	

LCSD Sample ID: **HC210601-91** Units: **UG/L** Analysis Date: **6/1/2021 14:23**

Client ID: Run ID: **HC210601-91A** Prep Date: **6/1/2021** 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		164	4	25	
ETHANE	297	2	267		111	70-120		312	5	25	
PROPANE	353	1	391		90	72-120		457	26	25	+

MB Sample ID: **HC210601-91** Units: **UG/L** Analysis Date: **6/1/2021 13:52**

Client ID: Run ID: **HC210601-91A** Prep Date: **6/1/2021** DF: **1**

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

The following samples were analyzed in this batch: 2105612-1

Batch ID: **HC210604-81-1** Instrument ID: **FUELS-1** Method: **SW8015M**

LCS Sample ID: **HC210604-81** Units: **MG/L** Analysis Date: **6/9/2021 06:43**

Client ID: Run ID: **HC210608-81** Prep Date: **6/4/2021** 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	6.87	1.07	8.33		82	53-120				20	
Surr: O-TERPHENYL	1.77		1.67		106	69-120					

LCSD Sample ID: **HC210604-81** Units: **MG/L** Analysis Date: **6/9/2021 07:05**

Client ID: Run ID: **HC210608-81** Prep Date: **6/4/2021** 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	6.6	1.07	8.33		79	53-120		6.87	4	20	
Surr: O-TERPHENYL	1.68		1.67		101	69-120			5		

MB Sample ID: **HC210604-81** Units: **MG/L** Analysis Date: **6/9/2021 06:22**

Client ID: Run ID: **HC210608-81** Prep Date: **6/4/2021** DF: **1**

Analyte	Result	ReportLimit	%REC	Control Limit	Qual
Diesel Range Organics	ND	1.1			
Surr: O-TERPHENYL	1.7		102	69-120	

The following samples were analyzed in this batch: 2105612-1

Batch ID: **HC210607-62-1** Instrument ID: **FUELS-1** Method: **SW8015**

LCS Sample ID: **HC210607-62** Units: **MG/L** Analysis Date: **6/7/2021 20:01**

Client ID: Run ID: **HC210607-61A** Prep Date: **6/7/2021** 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	0.438	0.1	0.5		88	80-120				20	
Surr: 2,3,4-TRIFLUOROTOLUENE	0.111		0.1		111	80-120					

LCSD Sample ID: **HC210607-62** Units: **MG/L** Analysis Date: **6/8/2021 03:15**

Client ID: Run ID: **HC210607-61A** Prep Date: **6/7/2021** 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	0.45	0.1	0.5		90	80-120		0.438	3	20	
Surr: 2,3,4-TRIFLUOROTOLUENE	0.11		0.1		110	80-120			1		

MB Sample ID: **HC210607-62** Units: **MG/L** Analysis Date: **6/7/2021 11:54**

Client ID: Run ID: **HC210607-61A** Prep Date: **6/7/2021** DF: **1**

Analyte	Result	ReportLimit	%REC	Control Limit	Qual
GASOLINE RANGE ORGANICS	ND	0.1			
Surr: 2,3,4-TRIFLUOROTOLUENE	0.105		105	80-120	

The following samples were analyzed in this batch: 2105612-1

QC BATCH REPORT

Batch ID: **IP210607-2-2** Instrument ID: **ICPTrace2** Method: **EPA200.7**

LCS Sample ID: **IP210607-2** Units: **MG/L** Analysis Date: **6/10/2021 11:47**
Client ID: Run ID: **IT210610-1A5** Prep Date: **6/7/2021** 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	40		100	85-115				20	
MAGNESIUM	40.2	1	40		101	85-115				20	
POTASSIUM	41.7	1	40		104	85-115				20	
SODIUM	40.4	1	40		101	85-115				20	

LCSD Sample ID: **IP210607-2** Units: **MG/L** Analysis Date: **6/10/2021 18:04**
Client ID: Run ID: **IT210610-1A5** Prep Date: **6/7/2021** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
CALCIUM	39	1	40		98	85-115		40	3	20	
MAGNESIUM	40.7	1	40		102	85-115		40.2	1	20	
POTASSIUM	40.6	1	40		101	85-115		41.7	3	20	
SODIUM	40.7	1	40		102	85-115		40.4	1	20	

MB Sample ID: **IP210607-2** Units: **MG/L** Analysis Date: **6/10/2021 11:46**
Client ID: Run ID: **IT210610-1A5** Prep Date: **6/7/2021** 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: 2105612-1

Batch ID: **VL210607-3-3** Instrument ID: **HPV1** Method: **SW8260_25**

LCS Sample ID: **VL210607-3** Units: **%REC** Analysis Date: **6/7/2021 07:48**

Client ID: Run ID: **VL210607-3A** Prep Date: **6/7/2021** 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	25		25		100	80-120					
Surr: TOLUENE-D8	24.9		25		99	80-120					
BENZENE	9.92	1	10		99	80-120				20	
TOLUENE	10.1	1	10		101	80-120				20	
ETHYLBENZENE	10	1	10		100	80-120				20	
M+P-XYLENE	20.1	1	20		100	80-120				20	
O-XYLENE	9.86	1	10		99	80-120				20	

LCSD Sample ID: **VL210607-3** Units: **%REC** Analysis Date: **6/7/2021**

Client ID: Run ID: **VL210607-3A** Prep Date: **6/7/2021** 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	25.3		25		101	80-120			1		
Surr: DIBROMOFLUOROMETHANE	25.5		25		102	80-120			2		
Surr: TOLUENE-D8	24.7		25		99	80-120			1		
BENZENE	9.94	1	10		99	80-120		9.92	0	20	
TOLUENE	10.1	1	10		101	80-120		10.1	0	20	
ETHYLBENZENE	9.95	1	10		100	80-120		10	1	20	
M+P-XYLENE	19.8	1	20		99	80-120		20.1	1	20	
O-XYLENE	9.85	1	10		98	80-120		9.86	0	20	

MB Sample ID: **VL210607-3** Units: **%REC** Analysis Date: **6/7/2021 08:59**

Client ID: Run ID: **VL210607-3A** Prep Date: **6/7/2021** DF: **1**

Analyte	Result	ReportLimit	%REC	Control Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	25.7		103	80-120	
Surr: DIBROMOFLUOROMETHANE	25.2		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: 2105612-1

Batch ID: **AK210607-1-1** Instrument ID: **NONE** Method: **SM2320B**

DUP Sample ID: **2105612-1** Units: **MG/L** Analysis Date: **6/7/2021**

Client ID: **03-019HNX A** Run ID: **AK210607-1A1** Prep Date: **6/7/2021** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
BICARBONATE AS CaCO3	153	20						150	5	15	
CARBONATE AS CaCO3	170	20						180	6	15	
TOTAL ALKALINITY AS CaCO3	323	20						330	1	15	

LCS Sample ID: **AK210607-1** Units: **MG/L** Analysis Date: **6/7/2021**

Client ID: Run ID: **AK210607-1A1** Prep Date: **6/7/2021** 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	96.6	5	100		96	85-115				15	

MB Sample ID: **AK210607-1** Units: **MG/L** Analysis Date: **6/7/2021**

Client ID: Run ID: **AK210607-1A1** Prep Date: **6/7/2021** DF: **1**

Analyte	Result	ReportLimit	Qual
BICARBONATE AS CaCO3	6.5	5	
CARBONATE AS CaCO3	ND	5	
TOTAL ALKALINITY AS CaCO3	6.5	5	

The following samples were analyzed in this batch: 2105612-1

Client: Great Western Operating Company, LLC
Work Order: 2105612
Project: Wilson IC 03-019HNX

QC BATCH REPORT

Batch ID: **TD210601-1-1** Instrument ID: **Balance** Method: **SM2540C**

LCS Sample ID: **TD210601-1** Units: **MG/L** Analysis Date: **6/1/2021**
Client ID: Run ID: **TD210601-1A1** Prep Date: **6/1/2021** 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	419	20	400		105	85-115				14	

LCSD Sample ID: **TD210601-1** Units: **MG/L** Analysis Date: **6/1/2021**
Client ID: Run ID: **TD210601-1A1** Prep Date: **6/1/2021** 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	399	20	400		100	85-115		419	5	14	

MB Sample ID: **TD210601-1** Units: **MG/L** Analysis Date: **6/1/2021**
Client ID: Run ID: **TD210601-1A1** Prep Date: **6/1/2021** DF: **1**

Analyte	Result	ReportLimit	Qual
TOTAL DISSOLVED SOLIDS	ND	20	

The following samples were analyzed in this batch: 2105612-1