



Thursday, August 27, 2020

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

Re: ALS Workorder: 2008053
Project Name: Talon View 21-9 BH
Project Number:

Dear Mr. Trehus:

Two water samples were received from Great Western Operating Company, LLC, on 8/4/2020. 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

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
AIHA	214884
Alaska (AK)	UST-086
Alaska (AK)	CO01099
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
PJ-LA (DoD ELAP/ISO 170250)	95377
Louisiana (LA)	05057
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280



2008053

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.

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.

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.

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.

Sample 2008053-2 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: 2008053

Client Name: Great Western Operating Company, LLC

Client Project Name: Talon View 21-9 BH

Client Project Number:

Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Talon View 21-9 A through E, G	2008053-1		WATER	03-Aug-20	16:30
Talon View 21-9 F	2008053-2		WATER	03-Aug-20	16:30

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SAMPLE SUMMARY REPORT

Client: Great Western Operating Company, LLC
 Project: Talon View 21-9 BH
 Sample ID: Talon View 21-9 A through E, G
 Legal Location:
 Collection Date: 8/3/2020 16:30

Date: 27-Aug-20
 Work Order: 2008053
 Lab ID: 2008053-1
 Matrix: WATER
 Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity as Calcium Carbonate			SM2320B		Prep Date: 8/10/2020	PrepBy: KJS
BICARBONATE AS CaCO3	610		20	MG/L	1	8/10/2020
CARBONATE AS CaCO3	1200		20	MG/L	1	8/10/2020
TOTAL ALKALINITY AS CaCO3	1800		20	MG/L	1	8/10/2020
Diesel Range Organics			SW8015M		Prep Date: 8/10/2020	PrepBy: JRS
Diesel Range Organics	35		1	MG/L	1	8/13/2020 08:45
Surr: O-TERPHENYL	89		69-120	%REC	1	8/13/2020 08:45
Dissolved Gasses			RSK175		Prep Date: 8/14/2020	PrepBy: ASZ
METHANE	13000		6	UG/L	6	8/14/2020 14:31
ETHANE	5500		12	UG/L	6	8/14/2020 14:31
PROPANE	1900		6	UG/L	6	8/14/2020 14:31
Gasoline Range Organics			SW8015		Prep Date: 8/9/2020	PrepBy: ASZ
GASOLINE RANGE ORGANICS	3.9		1	MG/L	10	8/9/2020 13:18
Surr: 2,3,4-TRIFLUOROTOLUENE	97		80-120	%REC	10	8/9/2020 13:18
GC/MS Volatiles			SW8260_25		Prep Date: 8/14/2020	PrepBy: C1A
BENZENE	290		20	UG/L	20	8/14/2020 18:42
TOLUENE	250		5	UG/L	5	8/12/2020 18:06
ETHYLBENZENE	140		5	UG/L	5	8/12/2020 18:06
M+P-XYLENE	510		5	UG/L	5	8/12/2020 18:06
O-XYLENE	250		20	UG/L	20	8/14/2020 18:42
TOTAL XYLENES	510		1	UG/L	1	8/12/2020 18:06
Surr: 4-BROMOFLUOROBENZENE	102		80-120	%REC	20	8/14/2020 18:42
Surr: 4-BROMOFLUOROBENZENE	96		80-120	%REC	5	8/12/2020 18:06
Surr: DIBROMOFLUOROMETHANE	103		80-120	%REC	5	8/12/2020 18:06
Surr: DIBROMOFLUOROMETHANE	117		80-120	%REC	20	8/14/2020 18:42
Surr: TOLUENE-D8	102		80-120	%REC	5	8/12/2020 18:06
Surr: TOLUENE-D8	94		80-120	%REC	20	8/14/2020 18:42
Ion Chromatography			EPA300.0		Prep Date: 8/6/2020	PrepBy: KJS
CHLORIDE	260		10	MG/L	50	8/6/2020 15:45
SULFATE	52		5	MG/L	5	8/6/2020 15:32
Total Recoverable Metals by 200.8			EPA200.8		Prep Date: 8/8/2020	PrepBy: JML
CALCIUM	2200		1000	UG/L	10	8/13/2020 14:25
POTASSIUM	13000		1000	UG/L	10	8/13/2020 14:25
MAGNESIUM	150		100	UG/L	10	8/13/2020 14:25
SODIUM	1100000		1000	UG/L	10	8/13/2020 14:25
Total Dissolved Solids			SM2540C		Prep Date: 8/6/2020	PrepBy: LMC
TOTAL DISSOLVED SOLIDS	2700		80	MG/L	1	8/11/2020

Client: Great Western Operating Company, LLC

Date: 27-Aug-20

Project: Talon View 21-9 BH

Work Order: 2008053

Sample ID: Talon View 21-9 F

Lab ID: 2008053-2

Legal Location:

Matrix: WATER

Collection Date: 8/3/2020 16:30

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Dissolved Metals by 200.8			EPA200.8		Prep Date: 8/8/2020	PrepBy: JML
CALCIUM	1800		1000	UG/L	10	8/13/2020 14:31
POTASSIUM	13000		1000	UG/L	10	8/13/2020 14:31
MAGNESIUM	ND		100	UG/L	10	8/13/2020 14:31
SODIUM	1100000		1000	UG/L	10	8/13/2020 14:31

Client: Great Western Operating Company, LLC
Project: Talon View 21-9 BH
Sample ID: Talon View 21-9 F
Legal Location:
Collection Date: 8/3/2020 16:30

Date: 27-Aug-20
Work Order: 2008053
Lab ID: 2008053-2
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: 8/27/2020 10:03

Client: Great Western Operating Company, LLC

QC BATCH REPORT

Work Order: 2008053

Project: Talon View 21-9 BH

Batch ID: HC200809-61-1

Instrument ID: FUELS-1

Method: SW8015

LCS Sample ID: HC200809-61 Units: **MG/L** Analysis Date: **8/9/2020 15:07**

Client ID: Run ID: HC200809-61A Prep Date: **8/9/2020** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	0.503	0.1	0.5		101	80-120				20	
Surr: 2,3,4-TRIFLUOROTOLUENE	0.106		0.1		106	80-120					

LCSD Sample ID: HC200809-61 Units: **MG/L** Analysis Date: **8/9/2020 18:04**

Client ID: Run ID: HC200809-61A Prep Date: **8/9/2020** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	0.503	0.1	0.5		101	80-120		0.503	0	20	
Surr: 2,3,4-TRIFLUOROTOLUENE	0.101		0.1		101	80-120			5		

MB Sample ID: HC200809-61 Units: **MG/L** Analysis Date: **8/9/2020 09:59**

Client ID: Run ID: HC200809-61A Prep Date: **8/9/2020** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	ND	0.1									
Surr: 2,3,4-TRIFLUOROTOLUENE	0.093				93	80-120					

The following samples were analyzed in this batch:

2008053-1

Client: Great Western Operating Company, LLC
 Work Order: 2008053
 Project: Talon View 21-9 BH

QC BATCH REPORT

Batch ID: **HC200810-83-1** Instrument ID **FUELS-1** Method: **SW8015M**

LCS		Sample ID: HC200810-83			Units: MG/L		Analysis Date: 8/12/2020 14:14				
Client ID:		Run ID: HC200810-83A			Prep Date: 8/10/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	8.23	1.07	8.33		99	53-120				20	
Surr: O-TERPHENYL	1.62		1.67		97	69-120					

LCSD		Sample ID: HC200810-83			Units: MG/L		Analysis Date: 8/12/2020 14:35				
Client ID:		Run ID: HC200810-83A			Prep Date: 8/10/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	8.45	1.07	8.33		101	53-120		8.23	3	20	
Surr: O-TERPHENYL	1.6		1.67		96	69-120			1		

MB		Sample ID: HC200810-83			Units: MG/L		Analysis Date: 8/12/2020 13:08					
Client ID:		Run ID: HC200810-83A			Prep Date: 8/10/2020		DF: 1					
Analyte	Result	ReportLimit										Qual
Diesel Range Organics	ND	1.1										
Surr: O-TERPHENYL	1.48		89	69-120								

The following samples were analyzed in this batch:

Client: Great Western Operating Company, LLC

QC BATCH REPORT

Work Order: 2008053

Project: Talon View 21-9 BH

Batch ID: **HC200814-91-1**

Instrument ID **MEE-1**

Method: **RSK175**

DUP Sample ID: **2008053-1** Units: **UG/L** Analysis Date: **8/14/2020 14:36**

Client ID: **Talon View 21-9 A through E, G** Run ID: **HC200814-91A** Prep Date: **8/14/2020** DF: **6**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	14800	6						13000	16	25	
ETHANE	6300	12						5500	13	25	
PROPANE	2650	6						1900	31	25	+

LCS Sample ID: **HC200814-91** Units: **UG/L** Analysis Date: **8/14/2020 14:03**

Client ID: Run ID: **HC200814-91A** Prep Date: **8/14/2020** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	132	1	142		93	76-125				25	
ETHANE	254	2	267		95	70-120				25	
PROPANE	373	1	391		95	72-120				25	

LCSD Sample ID: **HC200814-91** Units: **UG/L** Analysis Date: **8/14/2020 14:57**

Client ID: Run ID: **HC200814-91A** Prep Date: **8/14/2020** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	162	1	142		114	76-125		132	20	25	
ETHANE	305	2	267		114	70-120		254	18	25	
PROPANE	443	1	391		113	72-120		373	17	25	

MB Sample ID: **HC200814-91** Units: **UG/L** Analysis Date: **8/14/2020 14:06**

Client ID: Run ID: **HC200814-91A** Prep Date: **8/14/2020** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	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: 2008053
 Project: Talon View 21-9 BH

QC BATCH REPORT

Batch ID: **IP200808-3-1** Instrument ID **ICPMS2** Method: **EPA200.8**

LCS		Sample ID: IM200808-3			Units: UG/L		Analysis Date: 8/13/2020 13:26				
Client ID:		Run ID: IM200813-10A5			Prep Date: 8/8/2020		DF: 10				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CALCIUM	11100	1000	10000		111	85-115				20	
MAGNESIUM	10100	100	10000		101	85-115				20	
POTASSIUM	5020	1000	5000		100	85-115				20	
SODIUM	10300	1000	10000		103	85-115				20	

LCSD		Sample ID: IM200808-3			Units: UG/L		Analysis Date: 8/13/2020 13:32				
Client ID:		Run ID: IM200813-10A5			Prep Date: 8/8/2020		DF: 10				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CALCIUM	11000	1000	10000		110	85-115		11100	1	20	
MAGNESIUM	10200	100	10000		102	85-115		10100	1	20	
POTASSIUM	5030	1000	5000		101	85-115		5020	0	20	
SODIUM	10300	1000	10000		103	85-115		10300	0	20	

MB		Sample ID: FP200804-3			Units: UG/L		Analysis Date: 8/13/2020 13:14					
Client ID:		Run ID: IM200813-10A5			Prep Date: 8/8/2020		DF: 10					
Analyte	Result	ReportLimit										Qual
CALCIUM	ND	1000										
MAGNESIUM	ND	100										
POTASSIUM	ND	1000										
SODIUM	ND	1000										

MB		Sample ID: IP200808-3			Units: UG/L		Analysis Date: 8/13/2020 13:20					
Client ID:		Run ID: IM200813-10A5			Prep Date: 8/8/2020		DF: 10					
Analyte	Result	ReportLimit										Qual
CALCIUM	ND	1000										
MAGNESIUM	ND	100										
POTASSIUM	ND	1000										
SODIUM	ND	1000										

The following samples were analyzed in this batch:

2008053-1	2008053-2
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Client: Great Western Operating Company, LLC
 Work Order: 2008053
 Project: Talon View 21-9 BH

QC BATCH REPORT

Batch ID: VL200812-3-5 Instrument ID: HPV3 Method: SW8260_25

LCS		Sample ID: VL200812-3			Units: %REC		Analysis Date: 8/12/2020 14:41				
Client ID:		Run ID: VL200812-3A			Prep Date: 8/12/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	23.9		25		96	80-120					
Surr: DIBROMOFLUOROMETHANE	25.3		25		101	80-120					
Surr: TOLUENE-D8	25.8		25		103	80-120					
BENZENE	9.56	1	10		96	80-120				20	
TOLUENE	10.3	1	10		103	80-120				20	
ETHYLBENZENE	10.1	1	10		101	80-120				20	
M+P-XYLENE	21	1	20		105	80-120				20	
O-XYLENE	10.6	1	10		106	80-120				20	

LCSD		Sample ID: VL200812-3			Units: %REC		Analysis Date: 8/12/2020 15:01				
Client ID:		Run ID: VL200812-3A			Prep Date: 8/12/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	24.2		25		97	80-120			1		
Surr: DIBROMOFLUOROMETHANE	25.1		25		100	80-120			1		
Surr: TOLUENE-D8	25.3		25		101	80-120			2		
BENZENE	9.3	1	10		93	80-120		9.56	3	20	
TOLUENE	9.88	1	10		99	80-120		10.3	4	20	
ETHYLBENZENE	9.9	1	10		99	80-120		10.1	2	20	
M+P-XYLENE	21.1	1	20		105	80-120		21	1	20	
O-XYLENE	10.3	1	10		103	80-120		10.6	3	20	

MB		Sample ID: VL200812-3			Units: %REC		Analysis Date: 8/12/2020 16:24				
Client ID:		Run ID: VL200812-3A			Prep Date: 8/12/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	24.5		25		98	80-120					
Surr: DIBROMOFLUOROMETHANE	24.9		25		99	80-120					
Surr: TOLUENE-D8	25.2		25		101	80-120					
BENZENE	ND	1	10								
TOLUENE	ND	1	10								
ETHYLBENZENE	ND	1	10								
M+P-XYLENE	ND	1	20								
O-XYLENE	ND	1	10								
TOTAL XYLENES	ND	1	10								

The following samples were analyzed in this batch:

Client: Great Western Operating Company, LLC

QC BATCH REPORT

Work Order: 2008053

Project: Talon View 21-9 BH

Batch ID: VL200814-4-6

Instrument ID: HPV4

Method: SW8260_25

LCS		Sample ID: VL200814-4			Units: %REC		Analysis Date: 8/14/2020 13:18				
Client ID:		Run ID: VL200814-4A			Prep Date: 8/14/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	25.2		25		101	80-120					
Surr: DIBROMOFLUOROMETHANE	23.6		25		95	80-120					
Surr: TOLUENE-D8	24		25		96	80-120					
BENZENE	9.75	1	10		97	80-120				20	
TOLUENE	9.53	1	10		95	80-120				20	
ETHYLBENZENE	10.1	1	10		101	80-120				20	
M+P-XYLENE	19.6	1	20		98	80-120				20	
O-XYLENE	9.83	1	10		98	80-120				20	

LCSD		Sample ID: VL200814-4			Units: %REC		Analysis Date: 8/14/2020 13:39				
Client ID:		Run ID: VL200814-4A			Prep Date: 8/14/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	24.9		25		100	80-120			1		
Surr: DIBROMOFLUOROMETHANE	23.6		25		94	80-120			0		
Surr: TOLUENE-D8	23.4		25		94	80-120			2		
BENZENE	9.53	1	10		95	80-120		9.75	2	20	
TOLUENE	9.46	1	10		95	80-120		9.53	1	20	
ETHYLBENZENE	10.3	1	10		103	80-120		10.1	2	20	
M+P-XYLENE	19.2	1	20		96	80-120		19.6	2	20	
O-XYLENE	9.5	1	10		95	80-120		9.83	3	20	

MB		Sample ID: VL200814-4			Units: %REC		Analysis Date: 8/14/2020 14:25				
Client ID:		Run ID: VL200814-4A			Prep Date: 8/14/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	26.2				105	80-120					
Surr: DIBROMOFLUOROMETHANE	24.1				97	80-120					
Surr: TOLUENE-D8	23.7				95	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:

2008053-1

Client: Great Western Operating Company, LLC
 Work Order: 2008053
 Project: Talon View 21-9 BH

QC BATCH REPORT

Batch ID: **AK200810-1-1** Instrument ID **NONE** Method: **SM2320B**

LCS		Sample ID: AK200810-1			Units: MG/L		Analysis Date: 8/10/2020				
Client ID:		Run ID: AK200810-1a1			Prep Date: 8/10/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL ALKALINITY AS CaCO3	404	20	400		101	85-115				15	

LCSD		Sample ID: AK200810-1			Units: MG/L		Analysis Date: 8/10/2020				
Client ID:		Run ID: AK200810-1a1			Prep Date: 8/10/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL ALKALINITY AS CaCO3	102	5	100		102	85-115		404	1	15	

MB		Sample ID: AK200810-1			Units: MG/L		Analysis Date: 8/10/2020				
Client ID:		Run ID: AK200810-1a1			Prep Date: 8/10/2020		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: 2008053
 Project: Talon View 21-9 BH

QC BATCH REPORT

Batch ID: **IC200806-1-1** Instrument ID **IC3** Method: **EPA300.0**

LCS		Sample ID: IC200806-1			Units: MG/L		Analysis Date: 8/6/2020 06:53				
Client ID:		Run ID: IC200806-1a1			Prep Date: 8/6/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CHLORIDE	10.2	0.2	10		102	90-110				15	
SULFATE	49.6	1	50		99	90-110				15	

LCSD		Sample ID: IC200806-1			Units: MG/L		Analysis Date: 8/6/2020 09:31				
Client ID:		Run ID: IC200806-1a1			Prep Date: 8/6/2020		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CHLORIDE	10.1	0.2	10		101	90-110		10.2	0	15	
SULFATE	49.1	1	50		98	90-110		49.6	1	15	

MB		Sample ID: IC200806-1			Units: MG/L		Analysis Date: 8/6/2020 07:06					
Client ID:		Run ID: IC200806-1a1			Prep Date: 8/6/2020		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: 2008053
Project: Talon View 21-9 BH

QC BATCH REPORT

Batch ID: **TD200806-1-1** Instrument ID **Balance** Method: **SM2540C**

LCS Sample ID: **TD200806-1** Units: **MG/L** Analysis Date: **8/11/2020**
 Client ID: Run ID: **TD200811-1A1** Prep Date: **8/6/2020** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	424	20	400		106	85-115				14	

MB Sample ID: **TD200806-1** Units: **MG/L** Analysis Date: **8/11/2020**
 Client ID: Run ID: **TD200811-1A1** Prep Date: **8/6/2020** DF: **1**

Analyte	Result	ReportLimit										Qual
TOTAL DISSOLVED SOLIDS	ND	20										

The following samples were analyzed in this batch: