Friday, May 27, 2022

Jeff Braden
WSP USA, Inc.
4600 West 60th Avenue
Arvada, CO 80003

Re: ALS Workorder: 2205211
Project Name: LDS 1W-314
Project Number: 31403904.77

Dear Mr. Braden:

One water sample was received from WSP USA, Inc., on 5/11/2022. The sample was scheduled for the following analyses:

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

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,

for

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
Arizona	AZ0828
California (CA)	2926
Colorado (CO)	CO01099
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
Oklahoma	1301
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
Virginia	460305

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.

2205211

GC/MS Volatiles:
The sample was analyzed using GC/MS following the current revision of SOP 525 based on SW-846 Method 8260C. The sample was also analyzed for Gasoline Range Organics (GRO).

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 matrix spike and matrix spike duplicate recoveries and RPDs were within acceptance criteria with the following exceptions:

Spiked Compound	QC Sample	Direction
Methane	MS	High
Ethane	MS	Low
Propane	MS	Low

The recoveries of these compounds in the laboratory control sample and laboratory control sample duplicate were within control limits, which suggest the outliers in the matrix spikes may have been due to matrix effects. No further action was taken.

All remaining 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 surrogate recoveries were within acceptance criteria with the following exception:

Surrogate	Sample	Direction
O-terphenyl	-1	Low

All remaining acceptance criteria were met.

Metals:
The sample was 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.

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:

Analyte	Method	SOP #
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.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 2205211
Client Name: WSP USA, Inc.
Client Project Name: LDS 1W-314
Client Project Number: 31403904.77
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
LDS 1W-314	2205211-1		WATER	09-May-22	13:30

ALS Environmental

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

Chain-of-Custody

Form 202r8

WORKORDER # 2205211

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DISPOSAL By Lab or Return to Client

PROJECT NAME	LDS 1W-314	SAMPLER	Jeff Braden
PROJECT No.	31403904.77	FACILITY ID	123-41208
	PDC Bradenhead Sampling	EDD FORMAT	COGCC EDD, LTE
		PURCHASE ORDER	N/A
COMPANY NAME	WSP USA	BILL TO COMPANY	PDC Energy
SEND REPORT TO	Jenifer Hakkarinen, Jeff Braden	INVOICE ATTN TO	Jenifer Hakkarinen
ADDRESS	4600 W 60th Ave	ADDRESS	1775 Sherman Street, Suite 3000
CITY / STATE / ZIP	Arvada, CO 80003	CITY / STATE / ZIP	Denver, Colorado
PHONE	303-433-9788	PHONE	303.860.5815
FAX	303-433-1432	FAX	
E-MAIL	jenifer.hakkarinen@pdce.com jeff.braden@wsp.com drew.bullinger@wsp.com	E-MAIL	Jenifer.Hakkarinen@pdce.com

DATE 5/9/22

TURNAROUND Standard

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	Dissolved Methane, Ethane, Propane RSK 175	BTEX & TPH GRO SW8260_25	TPH DRO SW8015M	Alkalinity, Carbonate, Bicarbonate, Total SM2320B	Total Cations - see comments EPA200.7/200.8	Total Anions - see comments EPA 300.0	Total Dissolved Solids SM2540C
1	LDS 1W-314	W	5/9/22	1330	11	1,3	-	X	X	X	X	X	X	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

For metals or anions, please detail analytes below.

Comments: Cations/Anions:

Calcium, Chloride, Magnesium, Potassium, Sodium, Sulfate

Samples analyzed per COGCC Bradenhead Sampling Program 2-4°C

QC PACKAGE (check below)	
	LEVEL II (Standard QC)
	LEVEL III (Std QC + forms)
	LEVEL IV (Std QC + forms + raw data)

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Jeff Braden	5/11/22	1425
RECEIVED BY		Claire Thomas	5/11/22	1425
RELINQUISHED BY				CT 5/11/22
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

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ALS Environmental - Fort Colllins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: WSP Workorder No: 2205211

Project Manager: KMO Initials: CXT Date: 5/11/2022

		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):	2.4						
# of custody seals on cooler:	1						
External µR/hr reading:	NA						
Background µR/hr reading:	11						

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

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

Sample 1 bottles 1-9 received with headspace

Were unpreserved bottles pH checked? NA All client bottle ID's vs ALS lab ID's double-checked by: CT

If applicable, was the client contacted? YES / NO / NA Contact: _____ Date/Time: _____

Project Manager Signature / Date: _____ 5/13/22

Form 201r29.xls
(10/15/2019)

*IR Gun #3, VWR SN 170647571
*IR Gun #5, VWR SN 192272629

Client: WSP USA, Inc. **Date:** *27-May-22*
Project: 31403904.77 LDS 1W-314 **Work Order:** 2205211
Sample ID: LDS 1W-314 **Lab ID:** 2205211-1
Legal Location: **Matrix:** WATER
Collection Date: 5/9/2022 13:30 **Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity as Calcium Carbonate			**SM2320B**		Prep Date: **5/18/2022**	PrepBy:**KRL**
TOTAL ALKALINITY AS CaCO3	**2700**		**20**	**MG/L**	1	5/19/2022
BICARBONATE AS CaCO3	**2500**		**20**	**MG/L**	1	5/19/2022
CARBONATE AS CaCO3	**210**		**20**	**MG/L**	1	5/19/2022
Diesel Range Organics			**SW8015M**		Prep Date: **5/20/2022**	PrepBy:**JRS**
Diesel Range Organics	**480**		**51**	**MG/L**	50	5/23/2022 18:26
Surr: O-TERPHENYL	*57*	*	*69-120*	*%REC*	50	5/23/2022 18:26
Dissolved Gasses			**RSK175**		Prep Date: **5/20/2022**	PrepBy:**JRS**
METHANE	**14000**		**10**	**UG/L**	10	5/23/2022 13:13
ETHANE	**6900**		**20**	**UG/L**	10	5/23/2022 13:13
PROPANE	**5800**		**10**	**UG/L**	10	5/23/2022 13:13
GC/MS Volatiles			**SW8260_25**		Prep Date: **5/23/2022**	PrepBy:**TWK**
BENZENE	**200**		**25**	**UG/L**	25	5/23/2022 16:22
TOLUENE	**720**		**25**	**UG/L**	25	5/23/2022 16:22
ETHYLBENZENE	**85**		**25**	**UG/L**	25	5/23/2022 16:22
M+P-XYLENE	**710**		**25**	**UG/L**	25	5/23/2022 16:22
O-XYLENE	**210**		**25**	**UG/L**	25	5/23/2022 16:22
TOTAL XYLENES	**920**		**1**	**UG/L**	1	5/23/2022 16:22
Surr: 4-BROMOFLUOROBENZENE	*100*		*80-120*	*%REC*	25	5/23/2022 16:22
Surr: DIBROMOFLUOROMETHANE	*104*		*80-120*	*%REC*	25	5/23/2022 16:22
Surr: TOLUENE-D8	*98*		*80-120*	*%REC*	25	5/23/2022 16:22
GASOLINE RANGE ORGANICS	**7900**		**2500**	**UG/L**	25	5/23/2022 16:22
Ion Chromatography			**EPA300.0**		Prep Date: **5/17/2022**	PrepBy:**AOW**
CHLORIDE	**530**		**10**	**MG/L**	50	5/17/2022 13:19
SULFATE	ND		25	MG/L	25	5/17/2022 13:13
Total Recoverable Metals by 200.8			**EPA200.8**		Prep Date: **5/16/2022**	PrepBy:**ETC**
CALCIUM	**330**		**10**	**MG/L**	10	5/17/2022 13:07
MAGNESIUM	**5.9**		**1**	**MG/L**	10	5/17/2022 13:07
POTASSIUM	**17**		**10**	**MG/L**	10	5/17/2022 13:07
SODIUM	**1600**		**10**	**MG/L**	10	5/17/2022 13:07
Total Dissolved Solids			**SM2540C**		Prep Date: **5/16/2022**	PrepBy:**KRL**
TOTAL DISSOLVED SOLIDS	**4000**		**200**	**MG/L**	1	5/17/2022

Client:	WSP USA, Inc.	**Date:**	*27-May-22*
Project:	31403904.77 LDS 1W-314	**Work Order:**	2205211
Sample ID:	LDS 1W-314	**Lab ID:**	2205211-1
Legal Location:		**Matrix:**	WATER
Collection Date:	5/9/2022 13:30	**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: **HC220520-81-1** Instrument ID: **FUELS-1** Method: **SW8015M**

LCS Sample ID: **HC220520-81** Units: **MG/L** Analysis Date: **5/23/2022 16:39**
Client ID: Run ID: **HC220523-81A** Prep Date: **5/20/2022** 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	9.07	1.07	8.33		109	53-120				20	
Surr: O-TERPHENYL	1.65		1.67		99	69-120					

LCSD Sample ID: **HC220520-81** Units: **MG/L** Analysis Date: **5/23/2022 17:01**
Client ID: Run ID: **HC220523-81A** Prep Date: **5/20/2022** 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	9	1.07	8.33		108	53-120		9.07	1	20	
Surr: O-TERPHENYL	1.63		1.67		98	69-120			1		

MB Sample ID: **HC220520-81** Units: **MG/L** Analysis Date: **5/23/2022 15:57**
Client ID: Run ID: **HC220523-81A** Prep Date: **5/20/2022** DF: **1**

Analyte	Result	ReportLimit	Qual
Diesel Range Organics	ND	1.1	
Surr: O-TERPHENYL	1.63	98 69-120	

The following samples were analyzed in this batch: 2205211-1

QC BATCH REPORT

Batch ID: **HC220520-91-1** Instrument ID: **MEE-1** Method: **RSK175**

LCS Sample ID: **HC220520-91** Units: **UG/L** Analysis Date: **5/23/2022 12:21**
Client ID: Run ID: **HC220520-91A** Prep Date: **5/20/2022** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
METHANE	154	1	142		108	76-125				25	
ETHANE	296	2	267		111	70-120				25	
PROPANE	440	1	391		112	72-120				25	

LCSD Sample ID: **HC220520-91** Units: **UG/L** Analysis Date: **5/23/2022 13:38**
Client ID: Run ID: **HC220520-91A** Prep Date: **5/20/2022** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
METHANE	160	1	142		112	76-125		154	4	25	
ETHANE	303	2	267		114	70-120		296	2	25	
PROPANE	448	1	391		114	72-120		440	2	25	

MB Sample ID: **HC220520-91** Units: **UG/L** Analysis Date: **5/23/2022 12:26**
Client ID: Run ID: **HC220520-91A** Prep Date: **5/20/2022** DF: **1**

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

MS Sample ID: **2205211-1** Units: **UG/L** Analysis Date: **5/23/2022 13:23**
Client ID: **LDS 1W-314** Run ID: **HC220520-91A** Prep Date: **5/20/2022** DF: **10**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
METHANE	16400	10	711	14000	270	76-125				25	*
ETHANE	7600	20	1330	6900	50	70-120				25	*
PROPANE	6370	10	1960	5800	28	72-120				25	*

The following samples were analyzed in this batch: 2205211-1

QC BATCH REPORT

Batch ID: **IP220516-1-12** Instrument ID: **ICPMS2** Method: **EPA200.8**

LCS Sample ID: **IM220516-1** Units: **MG/L** Analysis Date: **5/17/2022 12:26**

Client ID: Run ID: **IM220517-10A15** Prep Date: **5/16/2022** DF: **10**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
CALCIUM	9.76	1	10		98	85-115				20	
MAGNESIUM	9.6	0.1	10		96	85-115				20	
POTASSIUM	4.65	1	5		93	85-115				20	
SODIUM	9.15	1	10		92	85-115				20	

LCSD Sample ID: **IM220516-1** Units: **MG/L** Analysis Date: **5/17/2022 12:32**

Client ID: Run ID: **IM220517-10A15** Prep Date: **5/16/2022** DF: **10**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
CALCIUM	9.84	1	10		98	85-115		9.76	1	20	
MAGNESIUM	9.66	0.1	10		97	85-115		9.6	1	20	
POTASSIUM	4.56	1	5		91	85-115		4.65	2	20	
SODIUM	9.12	1	10		91	85-115		9.15	0	20	

MB Sample ID: **IP220516-1** Units: **MG/L** Analysis Date: **5/17/2022 12:17**

Client ID: Run ID: **IM220517-10A15** Prep Date: **5/16/2022** DF: **10**

Analyte	Result	ReportLimit	Qual
CALCIUM	ND	1	
MAGNESIUM	ND	0.1	
POTASSIUM	ND	1	
SODIUM	ND	1	

The following samples were analyzed in this batch: 2205211-1

QC BATCH REPORT

Batch ID: **VL220523-3-2** Instrument ID: **HPV3** Method: **SW8260_25**

LCS Sample ID: **VL220523-33** Units: **UG/L** Analysis Date: **5/23/2022 11:07**
Client ID: Run ID: **VL220523-3A** Prep Date: **5/23/2022** 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	932	100	1000		93	75-121				20	

LCSD Sample ID: **VL220523-33** Units: **UG/L** Analysis Date: **5/23/2022 11:30**
Client ID: Run ID: **VL220523-3A** Prep Date: **5/23/2022** 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	945	100	1000		95	75-121		932	1	20	

MB Sample ID: **VL220523-3** Units: **UG/L** Analysis Date: **5/23/2022 12:15**
Client ID: Run ID: **VL220523-3A** Prep Date: **5/23/2022** DF: **1**

Analyte	Result	ReportLimit	Qual
GASOLINE RANGE ORGANICS	ND	100	

The following samples were analyzed in this batch: 2205211-1

QC BATCH REPORT

Batch ID: **VL220523-3-3** Instrument ID: **HPV3** Method: **SW8260_25**

LCS Sample ID: **VL220523-3** Units: **%REC** Analysis Date: **5/23/2022 09:59**

Client ID: Run ID: **VL220523-3A** Prep Date: **5/23/2022** 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	24.3		25		97	80-120					
Surr: DIBROMOFLUOROMETHANE	24.5		25		98	80-120					
Surr: TOLUENE-D8	24.5		25		98	80-120					
BENZENE	10.8	1	10		108	80-120				20	
TOLUENE	10.2	1	10		102	80-120				20	
ETHYLBENZENE	10.2	1	10		102	80-120				20	
M+P-XYLENE	19.9	1	20		100	80-120				20	
O-XYLENE	10.1	1	10		101	80-120				20	

LCSD Sample ID: **VL220523-3** Units: **%REC** Analysis Date: **5/23/2022 10:21**

Client ID: Run ID: **VL220523-3A** Prep Date: **5/23/2022** 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	24.4		25		98	80-120			1		
Surr: DIBROMOFLUOROMETHANE	25.4		25		101	80-120			3		
Surr: TOLUENE-D8	24.5		25		98	80-120			0		
BENZENE	10.9	1	10		109	80-120		10.8	1	20	
TOLUENE	10.3	1	10		103	80-120		10.2	0	20	
ETHYLBENZENE	10.2	1	10		102	80-120		10.2	0	20	
M+P-XYLENE	19.8	1	20		99	80-120		19.9	0	20	
O-XYLENE	10.2	1	10		102	80-120		10.1	1	20	

MB Sample ID: **VL220523-3** Units: **%REC** Analysis Date: **5/23/2022 12:15**

Client ID: Run ID: **VL220523-3A** Prep Date: **5/23/2022** DF: **1**

Analyte	Result	ReportLimit	%REC	Control Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	25		100	80-120	
Surr: DIBROMOFLUOROMETHANE	26.5		106	80-120	
Surr: TOLUENE-D8	24.2		97	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: 2205211-1

QC BATCH REPORT

Batch ID: **AK220519-1-3** Instrument ID: **NONE** Method: **SM2320B**

LCS Sample ID: **AK220519-1** Units: **MG/L** Analysis Date: **5/19/2022**

Client ID: Run ID: **AK220519-1A1** Prep Date: **5/18/2022** 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	99.1	5	100		99	85-115				15	

MB Sample ID: **AK220519-1** Units: **MG/L** Analysis Date: **5/19/2022**

Client ID: Run ID: **AK220519-1A1** Prep Date: **5/18/2022** DF: **1**

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

The following samples were analyzed in this batch: 2205211-1

QC BATCH REPORT

Batch ID: **IC220517-1-1** Instrument ID: **IC3** Method: **EPA300.0**

LCS Sample ID: **IC220517-1** Units: **MG/L** Analysis Date: **5/17/2022 12:41**

Client ID: Run ID: **IC220517-1A1** Prep Date: **5/17/2022** 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				15	
SULFATE	51.6	1	50		103	90-110				15	

LCSD Sample ID: **IC220517-1** Units: **MG/L** Analysis Date: **5/17/2022 13:55**

Client ID: Run ID: **IC220517-1A1** Prep Date: **5/17/2022** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
CHLORIDE	9.81	0.2	10		98	90-110		10.2	4	15	
SULFATE	48.9	1	50		98	90-110		51.6	5	15	

MB Sample ID: **IC220517-1** Units: **MG/L** Analysis Date: **5/17/2022 12:49**

Client ID: Run ID: **IC220517-1A1** Prep Date: **5/17/2022** DF: **1**

Analyte	Result	ReportLimit	Qual
CHLORIDE	ND	0.2	
SULFATE	ND	1	

The following samples were analyzed in this batch: 2205211-1

Client: WSP USA, Inc.
Work Order: 2205211
Project: 31403904.77 LDS 1W-314

QC BATCH REPORT

Batch ID: **TD220516-1-2** Instrument ID: **Balance** Method: **SM2540C**

DUP Sample ID: **2205211-1** Units: **MG/L** Analysis Date: **5/17/2022**
Client ID: **LDS 1W-314** Run ID: **TD220517-1A1** Prep Date: **5/16/2022** 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	4110	200						4000	3	14	

LCS Sample ID: **TD220516-1** Units: **MG/L** Analysis Date: **5/17/2022**
Client ID: Run ID: **TD220517-1A1** Prep Date: **5/16/2022** 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	387	20	400		97	85-115				14	

LCSD Sample ID: **TD220516-1** Units: **MG/L** Analysis Date: **5/17/2022**
Client ID: Run ID: **TD220517-1A1** Prep Date: **5/16/2022** 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	386	20	400		96	85-115		387	0	14	

MB Sample ID: **TD220516-1** Units: **MG/L** Analysis Date: **5/17/2022**
Client ID: Run ID: **TD220517-1A1** Prep Date: **5/16/2022** DF: **1**

Analyte	Result	ReportLimit	Qual
TOTAL DISSOLVED SOLIDS	ND	20	

The following samples were analyzed in this batch: 2205211-1