



Monday, January 25, 2021

Jeremy Pike  
WSP USA, Inc.  
4600 West 60th Avenue  
Arvada, CO 80003

Re: ALS Workorder: 2101231  
Project Name:  
Project Number: TE034520047, Task 1.00

Dear Mr. Pike:

One water sample was received from WSP USA, Inc., on 1/14/2021. The sample was scheduled for the following analyses:

GC/MS Volatiles

Inorganics

Metals

The results for these analyses are contained in the enclosed reports.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental.

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

Sincerely,

ALS Environmental  
Katie M. O'Brien  
Project Manager

Accreditations: ALS Environmental – Fort Collins is accredited by the following accreditation bodies for various testing scopes in accordance with requirements of each accreditation body. All testing is performed under the laboratory management system, which is maintained to meet these requirement and regulations. Please contact the laboratory or accreditation body for the current scope testing parameters.

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

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



## 2101231

### 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 surrogate recoveries were within acceptance criteria with the following exception:

Surrogate	Sample	Direction
Dibromofluoromethane	-1	Low

The low surrogate recovery is likely due to the pH of the sample. No further action was taken.

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:

<u>Analyte</u>	<u>Method</u>	<u>SOP #</u>
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

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**OrderNum:** 2101231

**Client Name:** WSP USA, Inc.

**Client Project Name:**

**Client Project Number:** TE034520047, Task 1.00

**Client PO Number:**

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Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Antelope Federal T34-20-13 XRL	2101231-1		WATER	13-Jan-21	12:20





**ALS Environmental - Fort Collins**  
**CONDITION OF SAMPLE UPON RECEIPT FORM**

Client Name/ID:

LTE

Workorder No:

2101231

Project Manager:

KMO

Initials:

TM

Date:

1/14/21

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

Cooler #: 1

Temperature (°C): 7.9

# of custody seals on cooler: 0

External mR/hr reading: -

Background mR/hr reading: 9

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

N/A  YES  NO

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

*per Jeremy, analyze catrins if there is sufficient sample*

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

If applicable, was the client contacted?  YES  N/A Contact Name

Date:

Project Manager Signature / Date:

*[Signature]* 1/15/21

**Client:** WSP USA, Inc.  
**Project:** TE034520047, Task 1.00  
**Sample ID:** Antelope Federal T34-20-13 XRLNB (459888)  
**Legal Location:**  
**Collection Date:** 1/13/2021 12:20

**Date:** 25-Jan-21  
**Work Order:** 2101231  
**Lab ID:** 2101231-1  
**Matrix:** WATER  
**Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>GC/MS Volatiles</b>			<b>SW8260_25</b>		Prep Date: <b>1/15/2021</b>	PrepBy: <b>AEW</b>
BENZENE	27		1	UG/L	1	1/15/2021 19:13
TOLUENE	48		1	UG/L	1	1/15/2021 19:13
ETHYLBENZENE	20		1	UG/L	1	1/15/2021 19:13
M+P-XYLENE	58		1	UG/L	1	1/15/2021 19:13
O-XYLENE	40		1	UG/L	1	1/15/2021 19:13
TOTAL XYLENES	99		1	UG/L	1	1/15/2021 19:13
Surr: 4-BROMOFLUOROBENZENE	97		80-120	%REC	1	1/15/2021 19:13
Surr: DIBROMOFLUOROMETHANE	25	*	80-120	%REC	1	1/15/2021 19:13
Surr: TOLUENE-D8	99		80-120	%REC	1	1/15/2021 19:13
<b>GASOLINE RANGE ORGANICS</b>	<b>3000</b>		<b>100</b>	<b>UG/L</b>	1	1/15/2021 19:13
<b>Ion Chromatography</b>			<b>EPA300.0</b>		Prep Date: <b>1/19/2021</b>	PrepBy: <b>KJS</b>
CHLORIDE	1400		20	MG/L	100	1/19/2021 09:43
SULFATE	300		5	MG/L	5	1/19/2021 14:50
<b>Total Recoverable Metals by 200.8</b>			<b>EPA200.8</b>		Prep Date: <b>1/22/2021</b>	PrepBy: <b>TXS</b>
CALCIUM	130		1	MG/L	10	1/23/2021 15:45
MAGNESIUM	ND		0.1	MG/L	10	1/23/2021 15:45
POTASSIUM	3000		1	MG/L	10	1/23/2021 15:45
SODIUM	1900		1	MG/L	10	1/23/2021 15:45
<b>Total Dissolved Solids</b>			<b>SM2540C</b>		Prep Date: <b>1/18/2021</b>	PrepBy: <b>LMC</b>
TOTAL DISSOLVED SOLIDS	8800		400	MG/L	1	1/20/2021

**Client:** WSP USA, Inc.  
**Project:** TE034520047, Task 1.00  
**Sample ID:** Antelope Federal T34-20-13 XRLNB (459888)  
**Legal Location:**  
**Collection Date:** 1/13/2021 12:20

**Date:** 25-Jan-21  
**Work Order:** 2101231  
**Lab ID:** 2101231-1  
**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

ALS -- Fort Collins

Date: 1/25/2021 3:27:

Client: WSP USA, Inc.

QC BATCH REPORT

Work Order: 2101231

Project: TE034520047, Task 1.00

Batch ID: IP210122-1-5

Instrument ID ICPMS2

Method: EPA200.8

**LCS** Sample ID: IM210122-1 Units: **MG/L** Analysis Date: 1/23/2021 15:21

Client ID: Run ID: IM210123-11A15 Prep Date: 1/22/2021 DF: 10

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CALCIUM	8.61	1	10		86	85-115				20	
MAGNESIUM	9.01	0.1	10		90	85-115				20	
POTASSIUM	4.43	1	5		89	85-115				20	
SODIUM	10.2	1	10		102	85-115				20	

**LCSD** Sample ID: IM210122-1 Units: **MG/L** Analysis Date: 1/23/2021 15:26

Client ID: Run ID: IM210123-11A15 Prep Date: 1/22/2021 DF: 10

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
CALCIUM	9.35	1	10		93	85-115		8.61	8	20	
MAGNESIUM	8.95	0.1	10		90	85-115		9.01	1	20	
POTASSIUM	4.47	1	5		89	85-115		4.43	1	20	
SODIUM	10.1	1	10		101	85-115		10.2	1	20	

**MB** Sample ID: IP210122-1 Units: **MG/L** Analysis Date: 1/23/2021 15:18

Client ID: Run ID: IM210123-11A15 Prep Date: 1/22/2021 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:

2101231-1

**Client:** WSP USA, Inc.  
**Work Order:** 2101231  
**Project:** TE034520047, Task 1.00

# QC BATCH REPORT

Batch ID: **VL210115-3-3**      Instrument ID **HPV3**      Method: **SW8260\_25**

LCS		Sample ID: <b>VL210115-33</b>			Units: <b>UG/L</b>		Analysis Date: <b>1/15/2021 15:25</b>				
Client ID:		Run ID: <b>VL210115-3A</b>			Prep Date: <b>1/15/2021</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	810	100	1000		81	75-121				20	

LCSD		Sample ID: <b>VL210115-33</b>			Units: <b>UG/L</b>		Analysis Date: <b>1/15/2021 15:45</b>				
Client ID:		Run ID: <b>VL210115-3A</b>			Prep Date: <b>1/15/2021</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	842	100	1000		84	75-121		810	4	20	

MB		Sample ID: <b>VL210115-3</b>			Units: <b>UG/L</b>		Analysis Date: <b>1/15/2021 15:04</b>					
Client ID:		Run ID: <b>VL210115-3A</b>			Prep Date: <b>1/15/2021</b>		DF: <b>1</b>					
Analyte	Result	ReportLimit										Qual
GASOLINE RANGE ORGANICS	ND	100										

**The following samples were analyzed in this batch:**

Client: WSP USA, Inc.  
 Work Order: 2101231  
 Project: TE034520047, Task 1.00

# QC BATCH REPORT

Batch ID: VL210115-3-4 Instrument ID: HPV3 Method: SW8260\_25

LCS		Sample ID: VL210115-3			Units: %REC		Analysis Date: 1/15/2021 13:41				
Client ID:		Run ID: VL210115-3A			Prep Date: 1/15/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	24.8		25		99	80-120					
Surr: DIBROMOFLUOROMETHANE	24.1		25		96	80-120					
Surr: TOLUENE-D8	25.2		25		101	80-120					
BENZENE	8.95	1	10		89	80-120				20	
TOLUENE	8.8	1	10		88	80-120				20	
ETHYLBENZENE	9.14	1	10		91	80-120				20	
M+P-XYLENE	18.3	1	20		92	80-120				20	
O-XYLENE	8.97	1	10		90	80-120				20	

LCSD		Sample ID: VL210115-3			Units: %REC		Analysis Date: 1/15/2021 14:01				
Client ID:		Run ID: VL210115-3A			Prep Date: 1/15/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	24.9		25		100	80-120			0		
Surr: DIBROMOFLUOROMETHANE	24.6		25		98	80-120			2		
Surr: TOLUENE-D8	25		25		100	80-120			1		
BENZENE	9.47	1	10		95	80-120		8.95	6	20	
TOLUENE	9.14	1	10		91	80-120		8.8	4	20	
ETHYLBENZENE	9.54	1	10		95	80-120		9.14	4	20	
M+P-XYLENE	18.9	1	20		95	80-120		18.3	3	20	
O-XYLENE	9.34	1	10		93	80-120		8.97	4	20	

MB		Sample ID: VL210115-3			Units: %REC		Analysis Date: 1/15/2021 15:04				
Client ID:		Run ID: VL210115-3A			Prep Date: 1/15/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	24.2				97	80-120					
Surr: DIBROMOFLUOROMETHANE	24.3				97	80-120					
Surr: TOLUENE-D8	25.2				101	80-120					
BENZENE	ND	1									
TOLUENE	ND	1									
ETHYLBENZENE	ND	1									
M+P-XYLENE	ND	1									
O-XYLENE	ND	1									
TOTAL XYLENES	ND	1									

The following samples were analyzed in this batch:

Client: WSP USA, Inc.  
 Work Order: 2101231  
 Project: TE034520047, Task 1.00

# QC BATCH REPORT

Batch ID: **IC210119-1-1** Instrument ID **IC3** Method: **EPA300.0**

LCS		Sample ID: <b>IC210119-1</b>			Units: <b>MG/L</b>		Analysis Date: <b>1/19/2021 08:10</b>				
Client ID:		Run ID: <b>IC210119-1a1</b>			Prep Date: <b>1/19/2021</b>		DF: <b>1</b>				
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	50.8	1	50		102	90-110				15	

LCSD		Sample ID: <b>IC210119-1</b>			Units: <b>MG/L</b>		Analysis Date: <b>1/19/2021 10:49</b>				
Client ID:		Run ID: <b>IC210119-1a1</b>			Prep Date: <b>1/19/2021</b>		DF: <b>1</b>				
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		10.2	0	15	
SULFATE	50.7	1	50		101	90-110		50.8	0	15	

MB		Sample ID: <b>IC210119-1</b>			Units: <b>MG/L</b>		Analysis Date: <b>1/19/2021 08:23</b>					
Client ID:		Run ID: <b>IC210119-1a1</b>			Prep Date: <b>1/19/2021</b>		DF: <b>1</b>					
Analyte	Result	ReportLimit										Qual
CHLORIDE	ND	0.2										
SULFATE	ND	1										

The following samples were analyzed in this batch:

Client: WSP USA, Inc.  
 Work Order: 2101231  
 Project: TE034520047, Task 1.00

# QC BATCH REPORT

Batch ID: **TD210118-1-2** Instrument ID **Balance** Method: **SM2540C**

LCS		Sample ID: <b>TD210118-1</b>			Units: <b>MG/L</b>		Analysis Date: <b>1/20/2021</b>				
Client ID:		Run ID: <b>TD210120-1A1</b>			Prep Date: <b>1/18/2021</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	414	20	400		103	85-115				14	

LCSD		Sample ID: <b>TD210118-1</b>			Units: <b>MG/L</b>		Analysis Date: <b>1/20/2021</b>				
Client ID:		Run ID: <b>TD210120-1A1</b>			Prep Date: <b>1/18/2021</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	415	20	400		104	85-115		414	0	14	

MB		Sample ID: <b>TD210118-1</b>			Units: <b>MG/L</b>		Analysis Date: <b>1/20/2021</b>				
Client ID:		Run ID: <b>TD210120-1A1</b>			Prep Date: <b>1/18/2021</b>		DF: <b>1</b>				
Analyte	Result	ReportLimit	Qual								
TOTAL DISSOLVED SOLIDS	ND	20									

The following samples were analyzed in this batch: