



Thursday, November 11, 2021

Randy Evans
Randy Evans
328 South Overland Tr.
Fort Collins, CO 80521

Re: ALS Workorder: 2110525
Project Name: WPWT Facility
Project Number:

Dear Mr. Evans:

Two water samples were received from Randy Evans, on 10/22/2021. The samples were 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.



2110525

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.

Metals:

The sample was analyzed following SW-846, 3rd Edition procedures. Analysis by Trace ICP followed method 6010D and the current revision of SOP 834. Analysis by ICPMS followed method 6020B 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
Fluoride	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: 2110525

Client Name: Randy Evans

Client Project Name: WPWT Facility

Client Project Number:

Client PO Number: WO 014

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Outfall 001 A	2110525-1		WATER	22-Oct-21	13:15
Outfall 001 A	2110525-2		WATER	22-Oct-21	11:15



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: RANDY EVANS Workorder No: 2110525
 Project Manager: KMO Initials: AXK Date: 10/22/2021

		N/A	YES	NO
1.	Are airbills / shipping documents present and/or removable?	X		
	Tracking number:			
2.	Are custody seals on shipping containers intact?	X		
3.	Are custody seals on sample containers intact?	X		
4.	Is there a COC (chain-of-custody) present?		X	
5.	Is the COC in agreement with samples received? (IDs, dates, times, # of samples, # of containers, matrix, requested analyses, etc.)		X	
6.	Are short-hold samples present?			X
7.	Are all samples within holding times for the requested analyses?		X	
8.	Were all sample containers received intact? (not broken or leaking)		X	
9.	Is there sufficient sample for the requested analyses?		X	
10.	Are samples in proper containers for requested analyses? (form 250, <i>Sample Handling Guidelines</i>)		X	
11.	Are all aqueous samples preserved correctly, if required? (excluding volatiles)			X
12.	Are all samples requiring no headspace (VOC, GRO, RSK/MEE, radon) free of bubbles > 6 mm (1/4 inch) diameter? (i.e. size of green pea)	X		
13.	Were the samples shipped on ice?		X	
14.	Were cooler temperatures measured at 0.1-6.0°C?			
	IR gun used*:	#5		
			RAD ONLY	X
	Cooler #: <u>1</u>			
	Temperature (°C): <u>4.2</u>			
	# of custody seals on cooler: <u>0</u>			
	External µR/hr reading: <u>-</u>			
	Background µR/hr reading: <u>11</u>			
	Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? YES (If no, see Form 008.)			

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

Sample 1 bottle 1 had initial pH of 6 so added 1.0ml HNO3 lot 267725 to achieve pH <2.

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

If applicable, was the client contacted? YES / NO NA Contact: _____ Date/Time: 10/25/21
 Project Manager Signature / Date: [Signature]

Client: Randy Evans
Project: WPWT Facility
Sample ID: Outfall 001 A
Legal Location:
Collection Date: 10/22/2021 13:15

Date: 08-Nov-21
Work Order: 2110525
Lab ID: 2110525-1
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Total Recoverable ICP Metals			SW6010		Prep Date: 10/27/2021	PrepBy: WJS
BORON	2.3		0.1	MG/L	1	10/28/2021 12:51
BARIUM	6.3		0.1	MG/L	1	10/28/2021 12:51
SODIUM	760		10	MG/L	10	10/28/2021 12:56
Total Recoverable ICPMS Metals			SW6020		Prep Date: 10/27/2021	PrepBy: WJS
THALLIUM	ND		0.15	UG/L	10	11/2/2021 18:03
Ion Chromatography			EPA300.0		Prep Date: 11/3/2021	PrepBy: AOW
CHLORIDE	410		5	MG/L	25	11/3/2021 14:22
FLUORIDE	4.5		2.5	MG/L	25	11/3/2021 14:22
SULFATE	ND		25	MG/L	25	11/3/2021 14:22
Total Dissolved Solids			SM2540C		Prep Date: 10/26/2021	PrepBy: BMK
TOTAL DISSOLVED SOLIDS	2300		80	MG/L	1	11/3/2021

Client: Randy Evans
Project: WPWT Facility
Sample ID: Outfall 001 A
Legal Location:
Collection Date: 10/22/2021 11:15

Date: 08-Nov-21
Work Order: 2110525
Lab ID: 2110525-2
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
GC/MS Volatiles			SW8260_25		Prep Date: 10/25/2021	PrepBy: DJL
BENZENE	ND		1	UG/L	1	10/25/2021 15:24
TOLUENE	ND		1	UG/L	1	10/25/2021 15:24
ETHYLBENZENE	ND		1	UG/L	1	10/25/2021 15:24
M+P-XYLENE	ND		1	UG/L	1	10/25/2021 15:24
O-XYLENE	ND		1	UG/L	1	10/25/2021 15:24
NAPHTHALENE	ND		1	UG/L	1	10/25/2021 15:24
Surr: DIBROMOFLUOROMETHANE	101		80-120	%REC	1	10/25/2021 15:24
Surr: TOLUENE-D8	98		80-120	%REC	1	10/25/2021 15:24
Surr: 4-BROMOFLUOROBENZENE	99		80-120	%REC	1	10/25/2021 15:24

Client: Randy Evans
Project: WPWT Facility
Sample ID: Outfall 001 A
Legal Location:
Collection Date: 10/22/2021 11:15

Date: 08-Nov-21
Work Order: 2110525
Lab ID: 2110525-2
Matrix: WATER
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

ALS -- Fort Collins

Date: 11/8/2021 3:51:

Client: Randy Evans
 Work Order: 2110525
 Project: WPWT Facility

QC BATCH REPORT

Batch ID: **IP211027-4-4** Instrument ID **ICPTTrace2** Method: **SW6010**

LCS Sample ID: **IP211027-4** Units: **MG/L** Analysis Date: **10/28/2021 12:44**
 Client ID: Run ID: **IT211028-1A8** Prep Date: **10/27/2021** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BARIUM	0.991	0.1	1		99	80-120				20	
BORON	0.981	0.1	1		98	80-120				20	
SODIUM	40.9	1	40		102	80-120				20	

LCSD Sample ID: **IP211027-4** Units: **MG/L** Analysis Date: **10/28/2021 12:48**
 Client ID: Run ID: **IT211028-1A8** Prep Date: **10/27/2021** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BARIUM	0.984	0.1	1		98	80-120		0.991	1	20	
BORON	0.978	0.1	1		98	80-120		0.981	0	20	
SODIUM	40.7	1	40		102	80-120		40.9	0	20	

MB Sample ID: **IP211027-4** Units: **MG/L** Analysis Date: **10/28/2021 12:43**
 Client ID: Run ID: **IT211028-1A8** Prep Date: **10/27/2021** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BARIUM	ND	0.1									
BORON	ND	0.1									
SODIUM	ND	1									

The following samples were analyzed in this batch:

Client: Randy Evans
 Work Order: 2110525
 Project: WPWT Facility

QC BATCH REPORT

Batch ID: **IP211027-4-7** Instrument ID **ICPMS2** Method: **SW6020**

LCS		Sample ID: IM211027-4			Units: UG/L		Analysis Date: 11/2/2021 17:39				
Client ID:		Run ID: IM211102-10A7			Prep Date: 10/27/2021		DF: 10				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
THALLIUM	1.96	0.15	2		98	80-120				20	

LCSD		Sample ID: IM211027-4			Units: UG/L		Analysis Date: 11/2/2021 17:45				
Client ID:		Run ID: IM211102-10A7			Prep Date: 10/27/2021		DF: 10				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
THALLIUM	2	0.15	2		100	80-120		1.96	2	20	

MB		Sample ID: IP211027-4			Units: UG/L		Analysis Date: 11/2/2021 17:36					
Client ID:		Run ID: IM211102-10A7			Prep Date: 10/27/2021		DF: 10					
Analyte	Result	ReportLimit										Qual
THALLIUM	ND	0.15										

The following samples were analyzed in this batch:

Client: Randy Evans
 Work Order: 2110525
 Project: WPWT Facility

QC BATCH REPORT

Batch ID: VL211025-3-4 Instrument ID HPV1 Method: SW8260_25

LCS		Sample ID: VL211025-3			Units: UG/L		Analysis Date: 10/25/2021 11:43				
Client ID:		Run ID: VL211025-3a			Prep Date: 10/25/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	10.7	1	10		107	80-120				20	
TOLUENE	10.6	1	10		106	80-120				20	
ETHYLBENZENE	10.7	1	10		107	80-120				20	
M+P-XYLENE	21.7	1	20		108	80-120				20	
O-XYLENE	10.7	1	10		107	80-120				20	
NAPHTHALENE	10.7	1	10		107	62-136				20	
Surr: DIBROMOFLUOROMETHANE	25.2		25		101	80-120					
Surr: TOLUENE-D8	25		25		100	80-120					
Surr: 4-BROMOFLUOROBENZENE	24.8		25		99	80-120					

LCSD		Sample ID: VL211025-3			Units: UG/L		Analysis Date: 10/25/2021 12:05				
Client ID:		Run ID: VL211025-3a			Prep Date: 10/25/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BENZENE	11.2	1	10		112	80-120		10.7	4	20	
TOLUENE	11	1	10		110	80-120		10.6	4	20	
ETHYLBENZENE	11.1	1	10		111	80-120		10.7	3	20	
M+P-XYLENE	22.3	1	20		112	80-120		21.7	3	20	
O-XYLENE	11.3	1	10		113	80-120		10.7	5	20	
NAPHTHALENE	12.6	1	10		126	62-136		10.7	16	20	
Surr: DIBROMOFLUOROMETHANE	25.4		25		102	80-120			1		
Surr: TOLUENE-D8	24.4		25		98	80-120			2		
Surr: 4-BROMOFLUOROBENZENE	24.5		25		98	80-120			1		

Client: Randy Evans
Work Order: 2110525
Project: WPWT Facility

QC BATCH REPORT

Batch ID: **VL211025-3-4** Instrument ID **HPV1** Method: **SW8260_25**

MB Sample ID: **VL211025-3** Units: **UG/L** Analysis Date: **10/25/2021 12:49**
Client ID: Run ID: **VL211025-3a** Prep Date: **10/25/2021** DF: **1**

Analyte	Result	ReportLimit		Qual
BENZENE	ND	1		
TOLUENE	ND	1		
ETHYLBENZENE	ND	1		
M+P-XYLENE	ND	1		
O-XYLENE	ND	1		
NAPHTHALENE	ND	1		
Surr: DIBROMOFLUOROMETHANE	25.6		103	80-120
Surr: TOLUENE-D8	24.9		99	80-120
Surr: 4-BROMOFLUOROBENZENE	25		100	80-120

The following samples were analyzed in this batch:

2110525-2

Client: Randy Evans
 Work Order: 2110525
 Project: WPWT Facility

QC BATCH REPORT

Batch ID: **IC211103-2-1** Instrument ID **IC3** Method: **EPA300.0**

LCS		Sample ID: IC211103-2			Units: MG/L		Analysis Date: 11/3/2021 16:05				
Client ID:		Run ID: IC211103-1A1			Prep Date: 11/3/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
FLUORIDE	5.17	0.1	5		103	90-110				15	
CHLORIDE	10.5	0.2	10		105	90-110				15	
SULFATE	49.5	1	50		99	90-110				15	

LCSD		Sample ID: IC211103-2			Units: MG/L		Analysis Date: 11/3/2021 17:17				
Client ID:		Run ID: IC211103-1A1			Prep Date: 11/3/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
FLUORIDE	5.24	0.1	5		105	90-110		5.17	1	15	
CHLORIDE	10.7	0.2	10		107	90-110		10.5	2	15	
SULFATE	49.8	1	50		100	90-110		49.5	0	15	

MB		Sample ID: IC211103-2			Units: MG/L		Analysis Date: 11/3/2021 14:58					
Client ID:		Run ID: IC211103-1A1			Prep Date: 11/3/2021		DF: 1					
Analyte	Result	ReportLimit										Qual
FLUORIDE	ND	0.1										
CHLORIDE	ND	0.2										
SULFATE	ND	1										

The following samples were analyzed in this batch:

Client: Randy Evans
 Work Order: 2110525
 Project: WPWT Facility

QC BATCH REPORT

Batch ID: TD211026-1-1 Instrument ID Balance Method: SM2540C

LCS		Sample ID: TD211026-1			Units: MG/L		Analysis Date: 11/3/2021				
Client ID:		Run ID: TD211103-1A1			Prep Date: 10/26/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	382	20	400		95	85-115				14	

LCSD		Sample ID: TD211026-1			Units: MG/L		Analysis Date: 11/3/2021				
Client ID:		Run ID: TD211103-1A1			Prep Date: 10/26/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	393	20	400		98	85-115		382	3	14	

MB		Sample ID: TD211026-1			Units: MG/L		Analysis Date: 11/3/2021				
Client ID:		Run ID: TD211103-1A1			Prep Date: 10/26/2021		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	ND	20									

The following samples were analyzed in this batch: