



Wednesday, March 30, 2022

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

Re: ALS Workorder: 2203217  
Project Name: WPWT Facility  
Project Number:

Dear Mr. Evans:

Five water samples were received from Randy Evans, on 3/11/2022. The samples were scheduled for the following analyses:

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
Arizona	AZ0828
California (CA)	2926
Colorado (CO)	CO01099
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
Oklahoma	1301
PJLA (DoD ELAP/ISO 170250)	95377
PJLA (DOE-AP/ISO 17025)	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
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.



## 2203217

### **Metals:**

The samples were analyzed following SW-846, 3<sup>rd</sup> Edition procedures. Analysis by Trace ICP followed method 6010D and the current revision of SOP 834.

All acceptance criteria were met.

### **Inorganics:**

The samples were 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

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**OrderNum:** 2203217

**Client Name:** Randy Evans

**Client Project Name:** WPWT Facility

**Client Project Number:**

**Client PO Number:** WO 032

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Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Outfall 050A	2203217-1		WATER	11-Mar-22	8:00
Outfall 050B	2203217-2		WATER	11-Mar-22	9:00
Outfall 050C	2203217-3		WATER	11-Mar-22	10:00
Outfall 050D	2203217-4		WATER	11-Mar-22	11:00
Outfall 050E	2203217-5		WATER	11-Mar-22	12:00



## Chain-of-Custody



Form 202r8

2203217

\*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.**

<b>Comments:</b> <b>2DD Facility ID Number is listed in Field ID for Reference</b> <b>Do not use Facility Number as part of the Field ID</b> <b>0115</b>	<b>QC PACKAGE (check below)</b>	
	<b>LEVEL II (Standard QC)</b>	
	<b>LEVEL III (Std QC + forms)</b>	
	<b>LEVEL IV (Std QC + forms + raw data)</b>	
<b>Desiccantization Key:</b> 1-HCl 2-HNO <sub>3</sub> 3-PDSO <sub>4</sub> 4-NaOH 5-NaHSO <sub>4</sub> 7-Other 8.1 decreases C 9-5N35		

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Randy Evans	3/11/22	1545
RECEIVED BY		Karen Craven	3-11-22	1545
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				



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

Client: RANDY EVANS Workorder No: 2203217  
 Project Manager: KMO Initials: KC Date: 3/11/22

	N/A	YES	NO
1. Are airbills / shipping documents present and/or removable?	X		
Tracking number:			
2. Are custody seals on <b>shipping</b> containers intact?	X		
3. Are custody seals on <b>sample</b> 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?	RAD ONLY	X	
IR gun used*: <u>#5</u> Cooler #: <u>1</u> Temperature (°C): <u>3.8</u> # of custody seals on cooler: <u>0</u> External µR/hr reading: <u>NA</u> Background µR/hr reading: <u>12</u> Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? <b>YES</b>			

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

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

If applicable, was the client contacted? NA Contact: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager Signature / Date:  3/14/22

**Client:** Randy Evans  
**Project:** WPWT Facility  
**Sample ID:** Outfall 050A  
**Legal Location:**  
**Collection Date:** 3/11/2022 08:00

**Date:** 30-Mar-22  
**Work Order:** 2203217  
**Lab ID:** 2203217-1  
**Matrix:** WATER  
**Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>Total Recoverable ICP Metals</b>			<b>SW6010</b>		Prep Date: <b>3/16/2022</b>	PrepBy: <b>WJS</b>
<b>BORON</b>	<b>0.19</b>		<b>0.1</b>	<b>MG/L</b>	<b>1</b>	3/21/2022 13:06
<b>BARIUM</b>	<b>ND</b>		<b>0.1</b>	<b>MG/L</b>	<b>1</b>	3/21/2022 13:06
<b>SODIUM</b>	<b>47</b>		<b>1</b>	<b>MG/L</b>	<b>1</b>	3/21/2022 13:06
<b>Ion Chromatography</b>			<b>EPA300.0</b>		Prep Date: <b>3/28/2022</b>	PrepBy: <b>AOW</b>
<b>CHLORIDE</b>	<b>18</b>		<b>1</b>	<b>MG/L</b>	<b>5</b>	3/28/2022 15:51
<b>SULFATE</b>	<b>880</b>		<b>25</b>	<b>MG/L</b>	<b>25</b>	3/28/2022 19:35
<b>Total Dissolved Solids</b>			<b>SM2540C</b>		Prep Date: <b>3/16/2022</b>	PrepBy: <b>KRL</b>
<b>TOTAL DISSOLVED SOLIDS</b>	<b>1400</b>		<b>40</b>	<b>MG/L</b>	<b>1</b>	3/17/2022

**Client:** Randy Evans  
**Project:** WPWT Facility  
**Sample ID:** Outfall 050B  
**Legal Location:**  
**Collection Date:** 3/11/2022 09:00

**Date:** 30-Mar-22  
**Work Order:** 2203217  
**Lab ID:** 2203217-2  
**Matrix:** WATER  
**Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>Total Recoverable ICP Metals</b>			<b>SW6010</b>		Prep Date: <b>3/16/2022</b>	PrepBy: <b>WJS</b>
<b>BORON</b>	<b>0.91</b>		<b>0.1</b>	<b>MG/L</b>	1	3/21/2022 13:07
<b>BARIUM</b>	<b>ND</b>		<b>0.1</b>	<b>MG/L</b>	1	3/21/2022 13:07
<b>SODIUM</b>	<b>180</b>		<b>10</b>	<b>MG/L</b>	10	3/21/2022 13:17
<b>Ion Chromatography</b>			<b>EPA300.0</b>		Prep Date: <b>3/28/2022</b>	PrepBy: <b>AOW</b>
<b>CHLORIDE</b>	<b>310</b>		<b>5</b>	<b>MG/L</b>	25	3/28/2022 19:45
<b>FLUORIDE</b>	<b>ND</b>		<b>1</b>	<b>MG/L</b>	10	3/28/2022 15:58
<b>SULFATE</b>	<b>270</b>		<b>10</b>	<b>MG/L</b>	10	3/28/2022 15:58
<b>Total Dissolved Solids</b>			<b>SM2540C</b>		Prep Date: <b>3/16/2022</b>	PrepBy: <b>KRL</b>
<b>TOTAL DISSOLVED SOLIDS</b>	<b>1500</b>		<b>40</b>	<b>MG/L</b>	1	3/17/2022



**Client:** Randy Evans  
**Project:** WPWT Facility  
**Sample ID:** Outfall 050C  
**Legal Location:**  
**Collection Date:** 3/11/2022 10:00

**Date:** 30-Mar-22  
**Work Order:** 2203217  
**Lab ID:** 2203217-3  
**Matrix:** WATER  
**Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>Total Recoverable ICP Metals</b>			<b>SW6010</b>		Prep Date: <b>3/16/2022</b>	PrepBy: <b>WJS</b>
<b>BORON</b>	<b>0.18</b>		<b>0.1</b>	<b>MG/L</b>	1	3/21/2022 13:08
<b>BARIUM</b>	<b>ND</b>		<b>0.1</b>	<b>MG/L</b>	1	3/21/2022 13:08
<b>SODIUM</b>	<b>49</b>		<b>1</b>	<b>MG/L</b>	1	3/21/2022 13:08
<b>Ion Chromatography</b>			<b>EPA300.0</b>		Prep Date: <b>3/28/2022</b>	PrepBy: <b>AOW</b>
<b>CHLORIDE</b>	<b>23</b>		<b>1</b>	<b>MG/L</b>	5	3/28/2022 16:04
<b>SULFATE</b>	<b>840</b>		<b>25</b>	<b>MG/L</b>	25	3/28/2022 19:51
<b>Total Dissolved Solids</b>			<b>SM2540C</b>		Prep Date: <b>3/16/2022</b>	PrepBy: <b>KRL</b>
<b>TOTAL DISSOLVED SOLIDS</b>	<b>1400</b>		<b>40</b>	<b>MG/L</b>	1	3/17/2022

**Client:** Randy Evans  
**Project:** WPWT Facility  
**Sample ID:** Outfall 050D  
**Legal Location:**  
**Collection Date:** 3/11/2022 11:00

**Date:** 30-Mar-22  
**Work Order:** 2203217  
**Lab ID:** 2203217-4  
**Matrix:** WATER  
**Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>Total Recoverable ICP Metals</b>			<b>SW6010</b>		Prep Date: <b>3/16/2022</b>	PrepBy: <b>WJS</b>
<b>BORON</b>	<b>0.16</b>		<b>0.1</b>	<b>MG/L</b>	1	3/21/2022 13:09
<b>BARIUM</b>	<b>ND</b>		<b>0.1</b>	<b>MG/L</b>	1	3/21/2022 13:09
<b>SODIUM</b>	<b>36</b>		<b>1</b>	<b>MG/L</b>	1	3/21/2022 13:09
<b>Ion Chromatography</b>			<b>EPA300.0</b>		Prep Date: <b>3/28/2022</b>	PrepBy: <b>AOW</b>
<b>CHLORIDE</b>	<b>14</b>		<b>1</b>	<b>MG/L</b>	5	3/28/2022 16:22
<b>SULFATE</b>	<b>770</b>		<b>25</b>	<b>MG/L</b>	25	3/28/2022 20:01
<b>Total Dissolved Solids</b>			<b>SM2540C</b>		Prep Date: <b>3/16/2022</b>	PrepBy: <b>KRL</b>
<b>TOTAL DISSOLVED SOLIDS</b>	<b>1300</b>		<b>40</b>	<b>MG/L</b>	1	3/17/2022

**Client:** Randy Evans  
**Project:** WPWT Facility  
**Sample ID:** Outfall 050E  
**Legal Location:**  
**Collection Date:** 3/11/2022 12:00

**Date:** 30-Mar-22  
**Work Order:** 2203217  
**Lab ID:** 2203217-5  
**Matrix:** WATER  
**Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>Total Recoverable ICP Metals</b>		<b>SW6010</b>			Prep Date: <b>3/16/2022</b>	PrepBy: <b>WJS</b>
BORON	0.12		0.1	MG/L	1	3/21/2022 13:10
BARIUM	0.12		0.1	MG/L	1	3/21/2022 13:10
SODIUM	33		1	MG/L	1	3/21/2022 13:10
<b>Ion Chromatography</b>		<b>EPA300.0</b>			Prep Date: <b>3/28/2022</b>	PrepBy: <b>AOW</b>
CHLORIDE	24		1	MG/L	5	3/28/2022 16:28
SULFATE	480		5	MG/L	5	3/28/2022 16:28
<b>Total Dissolved Solids</b>		<b>SM2540C</b>			Prep Date: <b>3/16/2022</b>	PrepBy: <b>KRL</b>
TOTAL DISSOLVED SOLIDS	900		20	MG/L	1	3/17/2022

**Client:** Randy Evans  
**Project:** WPWT Facility  
**Sample ID:** Outfall 050E  
**Legal Location:**  
**Collection Date:** 3/11/2022 12:00

**Date:** 30-Mar-22  
**Work Order:** 2203217  
**Lab ID:** 2203217-5  
**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: 3/30/2022 1:35:4

Client: Randy Evans

## QC BATCH REPORT

Work Order: 2203217

Project: WPWT Facility

Batch ID: IP220316-2-3

Instrument ID: ICPTTrace2

Method: SW6010

LCS Sample ID: IP220316-2

Units: MG/L

Analysis Date: 3/21/2022 12:55

Client ID:

Run ID: IT220321-1A9

Prep Date: 3/16/2022

DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
BARIUM	0.95	0.1	1		95	80-120				20	
BORON	0.948	0.1	1		95	80-120				20	
SODIUM	37.2	1	40		93	80-120				20	

LCSD Sample ID: IP220316-2

Units: MG/L

Analysis Date: 3/21/2022 12:57

Client ID:

Run ID: IT220321-1A9

Prep Date: 3/16/2022

DF: 1

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
BARIUM	0.964	0.1	1		96	80-120		0.95	1	20	
BORON	0.954	0.1	1		95	80-120		0.948	1	20	
SODIUM	37.4	1	40		93	80-120		37.2	1	20	

MB Sample ID: IP220316-2

Units: MG/L

Analysis Date: 3/21/2022 12:39

Client ID:

Run ID: IT220321-1A9

Prep Date: 3/16/2022

DF: 1

Analyte	Result	ReportLimit									Qual
BARIUM	ND	0.1									
BORON	ND	0.1									
SODIUM	ND	1									

The following samples were analyzed in this batch:

2203217-1	2203217-2	2203217-3
2203217-4	2203217-5	

**Client:** Randy Evans  
**Work Order:** 2203217  
**Project:** WPWT Facility

## QC BATCH REPORT

Batch ID: **IC220328-1-1** Instrument ID: **IC3** Method: **EPA300.0**

LCS	Sample ID: IC220328-1				Units: MG/L		Analysis Date: 3/28/2022 13:44				
Client ID:		Run ID: IC220328-1A1				Prep Date: 3/28/2022			DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
FLUORIDE	5.41	0.1	5		108	90-110				15	
CHLORIDE	10.9	0.2	10		109	90-110				15	
SULFATE	53.2	1	50		106	90-110				15	

LCSD	Sample ID: IC220328-1				Units: MG/L		Analysis Date: 3/28/2022 14:57				
Client ID:	Run ID: IC220328-1A1				Prep Date: 3/28/2022			DF: 1			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
FLUORIDE	5.35	0.1	5		107	90-110		5.41	1	15	
CHLORIDE	10.6	0.2	10		106	90-110		10.9	2	15	
SULFATE	52.9	1	50		106	90-110		53.2	0	15	

<b>MB</b>		Sample ID: <b>IC220328-1</b>		Units: <b>MG/L</b>		Analysis Date: <b>3/28/2022 13:50</b>	
Client ID:		Run ID: <b>IC220328-1A1</b>		Prep Date: <b>3/28/2022</b>		DF: <b>1</b>	
Analyte	Result	ReportLimit					Qual
FLUORIDE	ND	0.1					
CHLORIDE	ND	0.2					
SULFATE	ND	1					

The following samples were analyzed in this batch:

2203217-1	2203217-2	2203217-3
2203217-4	2203217-5	

**Client:** Randy Evans  
**Work Order:** 2203217  
**Project:** WPWT Facility

## QC BATCH REPORT

Batch ID: **TD220316-1-1** Instrument ID: **Balance** Method: **SM2540C**

LCS	Sample ID: <b>TD220316-1</b>			Units: <b>MG/L</b>			Analysis Date: <b>3/17/2022</b>				
Client ID:		Run ID: <b>TD220317-1A1</b>			Prep Date: <b>3/16/2022</b>			DF: <b>1</b>			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref Value	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	436	20	400		109	85-115				14	

LCSD		Sample ID: TD220316-1			Units: MG/L		Analysis Date: 3/17/2022				
Client ID:		Run ID: TD220317-1A1			Prep Date: 3/16/2022			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	412	20	400		103	85-115		436	6	14	

MB		Sample ID: TD220316-1			Units: MG/L		Analysis Date: 3/17/2022			
Client ID:		Run ID: TD220317-1A1			Prep Date: 3/16/2022			DF: 1		
Analyte		Result	ReportLimit							Qual
TOTAL DISSOLVED SOLIDS		ND	20							

The following samples were analyzed in this batch:

2203217-1	2203217-2	2203217-3
2203217-4	2203217-5	