



Friday, December 31, 2021

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

Re: ALS Workorder: 2111546  
Project Name: WPWT Facility  
Project Number:

Dear Mr. Evans:

Five water samples were received from Randy Evans, on 11/19/2021. The samples were scheduled for the following analyses:

GC/MS Volatiles

Inorganics

Metals

Radium-226

Radium-228

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.



## 2111546

### **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 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.

### **Radium-228:**

The samples were analyzed for the presence of <sup>228</sup>Ra by low background gas flow proportional counting of <sup>228</sup>Ac, which is the ingrown progeny of <sup>228</sup>Ra, according to the current revision of SOP 724.

All remaining acceptance criteria were met.

### **Radium-226:**

The samples were prepared and analyzed according to the current revision of SOP 783.

All remaining acceptance criteria were met.

# ALS -- Fort Collins

## Sample Number(s) Cross-Reference Table

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**OrderNum:** 2111546

**Client Name:** Randy Evans

**Client Project Name:** WPWT Facility

**Client Project Number:**

**Client PO Number:**

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| Client Sample Number | Lab Sample Number | COC Number | Matrix | Date Collected | Time Collected |
|----------------------|-------------------|------------|--------|----------------|----------------|
| Outfall 050A         | 2111546-1         |            | WATER  | 19-Nov-21      | 9:30           |
| Outfall 050B         | 2111546-2         |            | WATER  | 19-Nov-21      | 10:30          |
| Outfall 050C         | 2111546-3         |            | WATER  | 19-Nov-21      | 11:30          |
| Outfall 050D         | 2111546-4         |            | WATER  | 19-Nov-21      | 12:30          |
| Outfall 050E         | 2111546-5         |            | WATER  | 19-Nov-21      | 13:30          |



211546



## Chain-of-Custody

Form 202r8

\*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><br><br><b>EDD Facility ID Number is listed in Field ID for Reference</b><br><br><b>Do not use Facility Number as part of the Field ID</b><br><br>5 of 18 | <b>QC PACKAGE (check below)</b>      |  |
|   | LEVEL II (Standard QC)               |  |
|   | LEVEL III (Std QC + forms)           |  |
|   | LEVEL IV (Std QC + forms + raw data) |  |
|   |                                      |  |
| <b>Preservative Key:</b> 1-HCl   2-HNO3   3-H2SO4   4-NaOH   5-NaHSO4   7-Other   8-4 degrees C   9-5035  |                                      |  |

|                 | SIGNATURE   | PRINTED NAME | DATE     | TIME |
|-----------------|---|--------------|----------|------|
| RELINQUISHED BY |  | Randy Evans  | 11/19/21 | 1455 |
| RECEIVED BY     |  | Amy K. Davis | 11-19-21 | 1520 |
| RELINQUISHED BY |   |              |          |      |
| RECEIVED BY     |   |              |          |      |
| RELINQUISHED BY |   |              |          |      |
| RECEIVED BY     |   |              |          |      |



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

Client: RANDY EVANS Workorder No: 2111546  
 Project Manager: KMO Initials: AXK, Date: 11/19/2021

|   | 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 |     |    |
| Cooler #: <u>1</u><br>Temperature (°C): <u>1.8</u><br># of custody seals on cooler: <u>0</u><br>External µR/hr reading: <u>-</u><br>Background µR/hr reading: <u>11</u><br>Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? <u>NA</u> (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.

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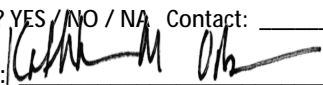
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Were unpreserved bottles pH checked? NA All client bottle ID's vs ALS lab ID's double-checked by: AK

If applicable, was the client contacted? YES / NO / NA Contact: \_\_\_\_\_ Date/Time: 11/23/21

Project Manager Signature / Date: 

**Client:** Randy Evans  
**Project:** WPWT Facility  
**Sample ID:** Outfall 050A  
**Legal Location:**  
**Collection Date:** 11/19/2021 09:30

**Date:** 31-Dec-21  
**Work Order:** 2111546  
**Lab ID:** 2111546-1  
**Matrix:** WATER  
**Percent Moisture:**

| Analyses                            | Result | Qual | Report<br>Limit | Units | Dilution<br>Factor    | Date Analyzed    |
|-------------------------------------|--------|------|-----------------|-------|-----------------------|------------------|
| <b>Total Recoverable ICP Metals</b> |        |      | <b>SW6010</b>   |       | Prep Date: 11/24/2021 | PrepBy: ETC      |
| <b>BORON</b>                        | 0.19   |      | 0.1             | MG/L  | 1                     | 11/24/2021 15:48 |
| <b>BARIUM</b>                       | ND     |      | 0.1             | MG/L  | 1                     | 11/24/2021 15:48 |
| <b>SODIUM</b>                       | 52     |      | 1               | MG/L  | 1                     | 11/24/2021 15:48 |
| <b>Ion Chromatography</b>           |        |      | <b>EPA300.0</b> |       | Prep Date: 12/1/2021  | PrepBy: AOW      |
| <b>CHLORIDE</b>                     | 17     |      | 1               | MG/L  | 5                     | 12/1/2021 11:22  |
| <b>FLUORIDE</b>                     | 0.77   |      | 0.5             | MG/L  | 5                     | 12/1/2021 11:22  |
| <b>SULFATE</b>                      | 800    |      | 20              | MG/L  | 20                    | 12/1/2021 12:47  |
| <b>Total Dissolved Solids</b>       |        |      | <b>SM2540C</b>  |       | Prep Date: 11/24/2021 | PrepBy: AOW      |
| <b>TOTAL DISSOLVED SOLIDS</b>       | 1400   |      | 40              | MG/L  | 1                     | 11/29/2021       |

## ALS -- Fort Collins

## SAMPLE SUMMARY REPORT

**Client:** Randy Evans  
**Project:** WPWT Facility  
**Sample ID:** Outfall 050B  
**Legal Location:**  
**Collection Date:** 11/19/2021 10:30

**Date:** 31-Dec-21  
**Work Order:** 2111546  
**Lab ID:** 2111546-2  
**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: 11/26/2021 | PrepBy: DJL      |
| BENZENE   | ND              |      | 1                | UG/L  | 1                     | 11/26/2021 16:19 |
| TOLUENE   | ND              |      | 1                | UG/L  | 1                     | 11/26/2021 16:19 |
| ETHYLBENZENE  | ND              |      | 1                | UG/L  | 1                     | 11/26/2021 16:19 |
| M+P-XYLENE  | ND              |      | 1                | UG/L  | 1                     | 11/26/2021 16:19 |
| O-XYLENE  | ND              |      | 1                | UG/L  | 1                     | 11/26/2021 16:19 |
| 1,3,5-TRIMETHYLBENZENE                              | ND              |      | 1                | UG/L  | 1                     | 11/26/2021 16:19 |
| 1,2,4-TRIMETHYLBENZENE                              | ND              |      | 1                | UG/L  | 1                     | 11/26/2021 16:19 |
| NAPHTHALENE   | ND              |      | 1                | UG/L  | 1                     | 11/26/2021 16:19 |
| Surr: DIBROMOFLUOROMETHANE                          | 100             |      | 80-120           | %REC  | 1                     | 11/26/2021 16:19 |
| Surr: TOLUENE-D8                                    | 101             |      | 80-120           | %REC  | 1                     | 11/26/2021 16:19 |
| Surr: 4-BROMOFLUOROBENZENE                          | 102             |      | 80-120           | %REC  | 1                     | 11/26/2021 16:19 |
| <b>Total Recoverable ICP Metals</b>                 |                 |      |                  |       |                       |                  |
|   |                 |      | <b>SW6010</b>    |       | Prep Date: 11/24/2021 | PrepBy: ETC      |
| BORON   | 0.67            |      | 0.1              | MG/L  | 1                     | 11/24/2021 15:49 |
| BARIUM  | ND              |      | 0.1              | MG/L  | 1                     | 11/24/2021 15:49 |
| SODIUM  | 150             |      | 10               | MG/L  | 10                    | 11/24/2021 16:08 |
| <b>Ion Chromatography</b>                           |                 |      |                  |       |                       |                  |
|   |                 |      | <b>EPA300.0</b>  |       | Prep Date: 12/1/2021  | PrepBy: AOW      |
| CHLORIDE  | 240             |      | 4                | MG/L  | 20                    | 12/1/2021 12:53  |
| FLUORIDE  | 0.85            |      | 0.5              | MG/L  | 5                     | 12/1/2021 11:28  |
| SULFATE   | 160             |      | 5                | MG/L  | 5                     | 12/1/2021 11:28  |
| <b>Radium-226 by Radon Emanation - Method 903.1</b> |                 |      |                  |       |                       |                  |
|   |                 |      | <b>SOP 783</b>   |       | Prep Date: 12/16/2021 | PrepBy: EJE      |
| Ra-226  | 0.47 (+/- 0.26) |      | 0.28             | pCi/l | NA                    | 12/28/2021 11:21 |
| Carr: BARIUM  | 94.1            |      | 40-110           | %REC  | DL = NA               | 12/28/2021 11:21 |
| <b>Radium-228 Analysis by GFPC</b>                  |                 |      |                  |       |                       |                  |
|   |                 |      | <b>SOP 724</b>   |       | Prep Date: 12/27/2021 | PrepBy: MMS      |
| Ra-228  | 1.71 (+/- 0.61) |      | 0.85             | pCi/l | NA                    | 12/30/2021 12:07 |
| Carr: BARIUM  | 91.7            |      | 40-110           | %REC  | DL = NA               | 12/30/2021 12:07 |
| <b>Total Dissolved Solids</b>                       |                 |      |                  |       |                       |                  |
|   |                 |      | <b>SM2540C</b>   |       | Prep Date: 11/24/2021 | PrepBy: AOW      |
| TOTAL DISSOLVED SOLIDS                              | 1200            |      | 40               | MG/L  | 1                     | 11/29/2021       |



**Client:** Randy Evans  
**Project:** WPWT Facility  
**Sample ID:** Outfall 050C  
**Legal Location:**  
**Collection Date:** 11/19/2021 11:30

**Date:** 31-Dec-21  
**Work Order:** 2111546  
**Lab ID:** 2111546-3  
**Matrix:** WATER  
**Percent Moisture:**

| Analyses                            | Result | Qual | Report<br>Limit | Units | Dilution<br>Factor    | Date Analyzed    |
|-------------------------------------|--------|------|-----------------|-------|-----------------------|------------------|
| <b>Total Recoverable ICP Metals</b> |        |      | <b>SW6010</b>   |       | Prep Date: 11/24/2021 | PrepBy: ETC      |
| BORON                               | 0.18   |      | 0.1             | MG/L  | 1                     | 11/24/2021 15:50 |
| BARIUM                              | ND     |      | 0.1             | MG/L  | 1                     | 11/24/2021 15:50 |
| SODIUM                              | 47     |      | 1               | MG/L  | 1                     | 11/24/2021 15:50 |
| <b>Ion Chromatography</b>           |        |      | <b>EPA300.0</b> |       | Prep Date: 12/1/2021  | PrepBy: AOW      |
| CHLORIDE                            | 32     |      | 1               | MG/L  | 5                     | 12/1/2021 11:40  |
| FLUORIDE                            | 0.98   |      | 0.5             | MG/L  | 5                     | 12/1/2021 11:40  |
| SULFATE                             | 330    |      | 5               | MG/L  | 5                     | 12/1/2021 11:40  |
| <b>Total Dissolved Solids</b>       |        |      | <b>SM2540C</b>  |       | Prep Date: 11/24/2021 | PrepBy: AOW      |
| TOTAL DISSOLVED SOLIDS              | 800    |      | 20              | MG/L  | 1                     | 11/29/2021       |

**Client:** Randy Evans  
**Project:** WPWT Facility  
**Sample ID:** Outfall 050D  
**Legal Location:**  
**Collection Date:** 11/19/2021 12:30

**Date:** 31-Dec-21  
**Work Order:** 2111546  
**Lab ID:** 2111546-4  
**Matrix:** WATER  
**Percent Moisture:**

| Analyses                            | Result | Qual | Report<br>Limit | Units | Dilution<br>Factor    | Date Analyzed    |
|-------------------------------------|--------|------|-----------------|-------|-----------------------|------------------|
| <b>Total Recoverable ICP Metals</b> |        |      | <b>SW6010</b>   |       | Prep Date: 11/24/2021 | PrepBy: ETC      |
| BORON                               | 0.16   |      | 0.1             | MG/L  | 1                     | 11/24/2021 15:51 |
| BARIUM                              | ND     |      | 0.1             | MG/L  | 1                     | 11/24/2021 15:51 |
| SODIUM                              | 38     |      | 1               | MG/L  | 1                     | 11/24/2021 15:51 |
| <b>Ion Chromatography</b>           |        |      | <b>EPA300.0</b> |       | Prep Date: 12/1/2021  | PrepBy: AOW      |
| CHLORIDE                            | 13     |      | 1               | MG/L  | 5                     | 12/1/2021 11:46  |
| FLUORIDE                            | 0.8    |      | 0.5             | MG/L  | 5                     | 12/1/2021 11:46  |
| SULFATE                             | 700    |      | 20              | MG/L  | 20                    | 12/1/2021 13:05  |
| <b>Total Dissolved Solids</b>       |        |      | <b>SM2540C</b>  |       | Prep Date: 11/24/2021 | PrepBy: AOW      |
| TOTAL DISSOLVED SOLIDS              | 1200   |      | 20              | MG/L  | 1                     | 11/29/2021       |

**Client:** Randy Evans  
**Project:** WPWT Facility  
**Sample ID:** Outfall 050E  
**Legal Location:**  
**Collection Date:** 11/19/2021 13:30

**Date:** 31-Dec-21  
**Work Order:** 2111546  
**Lab ID:** 2111546-5  
**Matrix:** WATER  
**Percent Moisture:**

| Analyses                            | Result | Qual | Report<br>Limit | Units | Dilution<br>Factor    | Date Analyzed    |
|-------------------------------------|--------|------|-----------------|-------|-----------------------|------------------|
| <b>Total Recoverable ICP Metals</b> |        |      | <b>SW6010</b>   |       | Prep Date: 11/24/2021 | PrepBy: ETC      |
| BORON                               | 0.15   |      | 0.1             | MG/L  | 1                     | 11/24/2021 15:59 |
| BARIUM                              | ND     |      | 0.1             | MG/L  | 1                     | 11/24/2021 15:59 |
| SODIUM                              | 35     |      | 1               | MG/L  | 1                     | 11/24/2021 15:59 |
| <b>Ion Chromatography</b>           |        |      | <b>EPA300.0</b> |       | Prep Date: 12/1/2021  | PrepBy: AOW      |
| CHLORIDE                            | 20     |      | 1               | MG/L  | 5                     | 12/1/2021 11:52  |
| FLUORIDE                            | 0.8    |      | 0.5             | MG/L  | 5                     | 12/1/2021 11:52  |
| SULFATE                             | 400    |      | 5               | MG/L  | 5                     | 12/1/2021 11:52  |
| <b>Total Dissolved Solids</b>       |        |      | <b>SM2540C</b>  |       | Prep Date: 11/24/2021 | PrepBy: AOW      |
| TOTAL DISSOLVED SOLIDS              | 760    |      | 20              | MG/L  | 1                     | 11/29/2021       |

**Client:** Randy Evans  
**Project:** WPWT Facility  
**Sample ID:** Outfall 050E  
**Legal Location:**  
**Collection Date:** 11/19/2021 13:30

**Date:** 31-Dec-21  
**Work Order:** 2111546  
**Lab ID:** 2111546-5  
**Matrix:** WATER  
**Percent Moisture:**

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|----------|--------|------|--------------|-------|-----------------|---------------|
|----------|--------|------|--------------|-------|-----------------|---------------|

### Explanation of Qualifiers

#### Radiochemistry:

|   |   |
|---|---|
| - "Report Limit" is the MDC   | M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC. |
| U or ND - Result is less than the sample specific MDC.                        | L - LCS Recovery below lower control limit.   |
| Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed. | H - LCS Recovery above upper control limit.   |
| Y2 - Chemical Yield outside default limits.                                   | P - LCS, Matrix Spike Recovery within control limits.   |
| W - DER is greater than Warning Limit of 1.42                                 | N - Matrix Spike Recovery outside control limits  |
| * - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.    | NC - Not Calculated for duplicate results less than 5 times MDC                                 |
| # - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.    | B - Analyte concentration greater than MDC.   |
| G - Sample density differs by more than 15% of LCS density.                   | B3 - Analyte concentration greater than MDC but less than Requested MDC.                        |
| D - DER is greater than Control Limit   |   |
| M - Requested MDC not met.  |   |

#### 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: 12/31/2021 1:37

Client: Randy Evans

## QC BATCH REPORT

Work Order: 2111546

Project: WPWT Facility

Batch ID: RE211216-1-3

Instrument ID Alpha Scin

Method: Radium-226 by Radon Emanation

| <b>LCS</b>   | Sample ID: RE211216-1 |             |         | Units: pCi/l  |                       |               | Analysis Date: 12/28/2021 12:42 |         |     |           |      |  |
|--------------|-----------------------|-------------|---------|---------------|-----------------------|---------------|---------------------------------|---------|-----|-----------|------|--|
| Client ID:   | Run ID: RE211216-1A   |             |         |               | Prep Date: 12/16/2021 |               | DF: NA                          |         |     |           |      |  |
| Analyte      | Result                | ReportLimit | SPK Val | SPK Ref Value | %REC                  | Control Limit | Decision Level                  | DER Ref | DER | DER Limit | Qual |  |
| Ra-226       | 45 (+/- 11)           | 0           | 46.42   |               | 96.2                  | 67-120        |                                 |         |     |           | P    |  |
| Carr: BARIUM | 14690                 |             | 15230   |               | 96.5                  | 40-110        |                                 |         |     |           |      |  |

| <b>LCSD</b>  | Sample ID: RE211216-1 |             |         | Units: pCi/l  |                       |               | Analysis Date: 12/28/2021 12:42 |         |      |           |      |  |
|--------------|-----------------------|-------------|---------|---------------|-----------------------|---------------|---------------------------------|---------|------|-----------|------|--|
| Client ID:   | Run ID: RE211216-1A   |             |         |               | Prep Date: 12/16/2021 |               | DF: NA                          |         |      |           |      |  |
| Analyte      | Result                | ReportLimit | SPK Val | SPK Ref Value | %REC                  | Control Limit | Decision Level                  | DER Ref | DER  | DER Limit | Qual |  |
| Ra-226       | 44 (+/- 11)           | 0           | 46.42   |               | 94.4                  | 67-120        |                                 | 45      | 0.05 | 2.1       | P    |  |
| Carr: BARIUM | 14620                 |             | 15230   |               | 96                    | 40-110        |                                 | 14690   |      |           |      |  |

| <b>MB</b>    | Sample ID: RE211216-1 |             |         | Units: pCi/l  |                       |               | Analysis Date: 12/28/2021 11:21 |         |     |           |      |  |
|--------------|-----------------------|-------------|---------|---------------|-----------------------|---------------|---------------------------------|---------|-----|-----------|------|--|
| Client ID:   | Run ID: RE211216-1A   |             |         |               | Prep Date: 12/16/2021 |               | DF: NA                          |         |     |           |      |  |
| Analyte      | Result                | ReportLimit | SPK Val | SPK Ref Value | %REC                  | Control Limit | Decision Level                  | DER Ref | DER | DER Limit | Qual |  |
| Ra-226       | ND                    | 0.2         |         |               |                       |               |                                 |         |     |           | U    |  |
| Carr: BARIUM | 14220                 |             | 15230   |               | 93.4                  | 40-110        |                                 |         |     |           |      |  |

The following samples were analyzed in this batch:

2111546-2

**Client:** Randy Evans  
**Work Order:** 2111546  
**Project:** WPWT Facility

## QC BATCH REPORT

Batch ID: **RA211227-1-2** Instrument ID **LB4100-C** Method: **Radium-228 Analysis by GFPC**

|              |                       |                     |         |               |              |                       |                                 |         |        |           |      |
|--------------|-----------------------|---------------------|---------|---------------|--------------|-----------------------|---------------------------------|---------|--------|-----------|------|
| LCS          | Sample ID: RA211227-1 |                     |         |               | Units: pCi/l |                       | Analysis Date: 12/30/2021 11:56 |         |        |           |      |
| Client ID:   |                       | Run ID: RA211227-1A |         |               |              | Prep Date: 12/27/2021 |                                 |         | DF: NA |           |      |
| Analyte      | Result                | ReportLimit         | SPK Val | SPK Ref Value | %REC         | Control Limit         | Decision Level                  | DER Ref | DER    | DER Limit | Qual |
| Ra-228       | 24.4 (+/- 5.7)        | 0.8                 | 22.67   |               | 108          | 70-130                |                                 |         |        |           | P    |
| Carr: BARIUM | 30680                 |                     | 32690   |               | 93.8         | 40-110                |                                 |         |        |           |      |

|              |                       |                     |         |               |              |                       |                                 |         |        |           |      |
|--------------|-----------------------|---------------------|---------|---------------|--------------|-----------------------|---------------------------------|---------|--------|-----------|------|
| LCSD         | Sample ID: RA211227-1 |                     |         |               | Units: pCi/l |                       | Analysis Date: 12/30/2021 11:56 |         |        |           |      |
| Client ID:   |                       | Run ID: RA211227-1A |         |               |              | Prep Date: 12/27/2021 |                                 |         | DF: NA |           |      |
| Analyte      | Result                | ReportLimit         | SPK Val | SPK Ref Value | %REC         | Control Limit         | Decision Level                  | DER Ref | DER    | DER Limit | Qual |
| Ra-228       | 23.8 (+/- 5.6)        | 0.8                 | 22.67   |               | 105          | 70-130                |                                 | 24.4    | 0.08   | 2.1       | P    |
| Carr: BARIUM | 30730                 |                     | 32750   |               | 93.8         | 40-110                |                                 | 30680   |        |           |      |

|              |        |                       |         |               |      |                       |                |                                 |     |           |      |
|--------------|--------|-----------------------|---------|---------------|------|-----------------------|----------------|---------------------------------|-----|-----------|------|
| MB           |        | Sample ID: RA211227-1 |         |               |      | Units: pCi/l          |                | Analysis Date: 12/30/2021 11:56 |     |           |      |
| Client ID:   |        | Run ID: RA211227-1A   |         |               |      | Prep Date: 12/27/2021 |                | DF: NA                          |     |           |      |
| Analyte      | Result | ReportLimit           | SPK Val | SPK Ref Value | %REC | Control Limit         | Decision Level | DER Ref                         | DER | DER Limit | Qual |
| Ra-228       | ND     | 0.73                  |         |               |      |                       |                |                                 |     |           | U    |
| Carr: BARIUM | 32100  |                       | 32690   |               | 98.2 | 40-110                |                |                                 |     |           |      |

The following samples were analyzed in this batch:

2111546-2

**Client:** Randy Evans  
**Work Order:** 2111546  
**Project:** WPWT Facility

## QC BATCH REPORT

Batch ID: **IP211124-3-3** Instrument ID **ICPTTrace2** Method: **SW6010**

**LCS** Sample ID: **IP211124-3** Units: **MG/L** Analysis Date: **11/24/2021 15:41**

Client ID: Run ID: **IT211124-1A8** Prep Date: **11/24/2021** DF: **1**

| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref | RPD | RPD Limit | Qual |
|---------|--------|-------------|---------|---------------|------|---------------|----------------|---------|-----|-----------|------|
| BARIUM  | 0.944  | 0.1         | 1       |               | 94   | 80-120        |                |         |     | 20        |      |
| BORON   | 0.93   | 0.1         | 1       |               | 93   | 80-120        |                |         |     | 20        |      |
| SODIUM  | 40.2   | 1           | 40      |               | 100  | 80-120        |                |         |     | 20        |      |

**LCSD** Sample ID: **IP211124-3** Units: **MG/L** Analysis Date: **11/24/2021 15:42**

Client ID: Run ID: **IT211124-1A8** Prep Date: **11/24/2021** DF: **1**

| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref | RPD | RPD Limit | Qual |
|---------|--------|-------------|---------|---------------|------|---------------|----------------|---------|-----|-----------|------|
| BARIUM  | 0.957  | 0.1         | 1       |               | 96   | 80-120        |                | 0.944   | 1   | 20        |      |
| BORON   | 0.945  | 0.1         | 1       |               | 94   | 80-120        |                | 0.93    | 2   | 20        |      |
| SODIUM  | 40.4   | 1           | 40      |               | 101  | 80-120        |                | 40.2    | 1   | 20        |      |

**MB** Sample ID: **IP211124-3** Units: **MG/L** Analysis Date: **11/24/2021 15:40**

Client ID: Run ID: **IT211124-1A8** Prep Date: **11/24/2021** 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:

|           |           |           |
|-----------|-----------|-----------|
| 2111546-1 | 2111546-2 | 2111546-3 |
| 2111546-4 | 2111546-5 |           |

Client: Randy Evans  
 Work Order: 2111546  
 Project: WPWT Facility

# QC BATCH REPORT

Batch ID: VL211126-33-5 Instrument ID HPV1 Method: SW8260\_25

|                            |                       |                      |         |               |                       |               |                                 |         |     |           |      |
|----------------------------|-----------------------|----------------------|---------|---------------|-----------------------|---------------|---------------------------------|---------|-----|-----------|------|
| LCS                        | Sample ID: VL211126-3 |                      |         | Units: UG/L   |                       |               | Analysis Date: 11/26/2021 14:51 |         |     |           |      |
| Client ID:                 |                       | Run ID: VL211126-33a |         |               | Prep Date: 11/26/2021 |               |                                 | DF: 1   |     |           |      |
| Analyte                    | Result                | ReportLimit          | SPK Val | SPK Ref Value | %REC                  | Control Limit | Decision Level                  | RPD Ref | RPD | RPD Limit | Qual |
| BENZENE                    | 9.74                  | 1                    | 10      |               | 97                    | 80-120        |                                 |         |     | 20        |      |
| TOLUENE                    | 9.52                  | 1                    | 10      |               | 95                    | 80-120        |                                 |         |     | 20        |      |
| Surr: DIBROMOFLUOROMETHANE | 25                    |                      | 25      |               | 100                   | 80-120        |                                 |         |     |           |      |
| Surr: TOLUENE-D8           | 24.8                  |                      | 25      |               | 99                    | 80-120        |                                 |         |     |           |      |
| Surr: 4-BROMOFLUOROBENZENE | 25.8                  |                      | 25      |               | 103                   | 80-120        |                                 |         |     |           |      |

|                            |                       |             |         |                       |      |               |                                 |         |     |           |      |
|----------------------------|-----------------------|-------------|---------|-----------------------|------|---------------|---------------------------------|---------|-----|-----------|------|
| LCSD                       | Sample ID: VL211126-3 |             |         | Units: UG/L           |      |               | Analysis Date: 11/26/2021 15:13 |         |     |           |      |
| Client ID:                 | Run ID: VL211126-33a  |             |         | Prep Date: 11/26/2021 |      |               | DF: 1                           |         |     |           |      |
| Analyte                    | Result                | ReportLimit | SPK Val | SPK Ref Value         | %REC | Control Limit | Decision Level                  | RPD Ref | RPD | RPD Limit | Qual |
| BENZENE                    | 9.78                  | 1           | 10      |                       | 98   | 80-120        |                                 | 9.74    | 0   | 20        |      |
| TOLUENE                    | 9.72                  | 1           | 10      |                       | 97   | 80-120        |                                 | 9.52    | 2   | 20        |      |
| Surr: DIBROMOFLUOROMETHANE | 24.9                  |             | 25      |                       | 100  | 80-120        |                                 |         | 0   |           |      |
| Surr: TOLUENE-D8           | 25                    |             | 25      |                       | 100  | 80-120        |                                 |         | 1   |           |      |
| Surr: 4-BROMOFLUOROBENZENE | 25.3                  |             | 25      |                       | 101  | 80-120        |                                 |         | 2   |           |      |

|                        |        |                       |     |                       |  |                                 |      |
|------------------------|--------|-----------------------|-----|-----------------------|--|---------------------------------|------|
| MB                     |        | Sample ID: VL211126-3 |     | Units: UG/L           |  | Analysis Date: 11/26/2021 15:57 |      |
| Client ID:             |        | Run ID: VL211126-33a  |     | Prep Date: 11/26/2021 |  | DF: 1                           |      |
| Analyte                | Result | ReportLimit           |     |                       |  |                                 | Qual |
| BENZENE                | ND     | 1                     |     |                       |  |                                 |      |
| TOLUENE                | ND     | 1                     |     |                       |  |                                 |      |
| ETHYLBENZENE           | ND     | 1                     |     |                       |  |                                 |      |
| M+P-XYLENE             | ND     | 1                     |     |                       |  |                                 |      |
| O-XYLENE               | ND     | 1                     |     |                       |  |                                 |      |
| 1,3,5-TRIMETHYLBENZENE | ND     | 1                     |     |                       |  |                                 |      |
| 1,2,4-TRIMETHYLBENZENE | ND     | 1                     |     |                       |  |                                 |      |
| NAPHTHALENE            | ND     | 1                     |     |                       |  |                                 |      |
| Surr:                  | 24.9   |                       | 100 | 80-120                |  |                                 |      |
| DIBROMOFLUOROMETHANE   |        |                       |     |                       |  |                                 |      |
| Surr: TOLUENE-D8       | 25.3   |                       | 101 | 80-120                |  |                                 |      |
| Surr: 4-               | 25.2   |                       | 101 | 80-120                |  |                                 |      |
| BROMOFLUOROBENZENE     |        |                       |     |                       |  |                                 |      |

The following samples were analyzed in this batch:

2111546-2



**Client:** Randy Evans  
**Work Order:** 2111546  
**Project:** WPWT Facility

## QC BATCH REPORT

Batch ID: **IC211201-2-1** Instrument ID **IC3** Method: **EPA300.0**

|            |                       |             |         |               |                      |               |                                |         |     |           |      |
|------------|-----------------------|-------------|---------|---------------|----------------------|---------------|--------------------------------|---------|-----|-----------|------|
| LCS        | Sample ID: IC211201-2 |             |         |               | Units: MG/L          |               | Analysis Date: 12/1/2021 12:22 |         |     |           |      |
| Client ID: | Run ID: IC211201-1A1  |             |         |               | Prep Date: 12/1/2021 |               |                                | DF: 1   |     |           |      |
| Analyte    | Result                | ReportLimit | SPK Val | SPK Ref Value | %REC                 | Control Limit | Decision Level                 | RPD Ref | RPD | RPD Limit | Qual |
| FLUORIDE   | 4.93                  | 0.1         | 5       |               | 99                   | 90-110        |                                |         |     | 15        |      |
| CHLORIDE   | 9.91                  | 0.2         | 10      |               | 99                   | 90-110        |                                |         |     | 15        |      |
| SULFATE    | 50.2                  | 1           | 50      |               | 100                  | 90-110        |                                |         |     | 15        |      |

|            |                       |             |         |               |                      |               |                                |         |     |           |      |
|------------|-----------------------|-------------|---------|---------------|----------------------|---------------|--------------------------------|---------|-----|-----------|------|
| LCSD       | Sample ID: IC211201-2 |             |         |               | Units: MG/L          |               | Analysis Date: 12/1/2021 13:35 |         |     |           |      |
| Client ID: | Run ID: IC211201-1A1  |             |         |               | Prep Date: 12/1/2021 |               |                                | DF: 1   |     |           |      |
| Analyte    | Result                | ReportLimit | SPK Val | SPK Ref Value | %REC                 | Control Limit | Decision Level                 | RPD Ref | RPD | RPD Limit | Qual |
| FLUORIDE   | 5.04                  | 0.1         | 5       |               | 101                  | 90-110        |                                | 4.93    | 2   | 15        |      |
| CHLORIDE   | 9.93                  | 0.2         | 10      |               | 99                   | 90-110        |                                | 9.91    | 0   | 15        |      |
| SULFATE    | 50.5                  | 1           | 50      |               | 101                  | 90-110        |                                | 50.2    | 1   | 15        |      |

|            |  |                       |             |                      |  |                                |  |
|------------|--|-----------------------|-------------|----------------------|--|--------------------------------|--|
| MB         |  | Sample ID: IC211201-2 |             | Units: MG/L          |  | Analysis Date: 12/1/2021 13:41 |  |
| Client ID: |  | Run ID: IC211201-1A1  |             | Prep Date: 12/1/2021 |  | DF: 1                          |  |
| Analyte    |  | Result                | ReportLimit | Qual                 |  |                                |  |
| FLUORIDE   |  | ND                    | 0.1         |                      |  |                                |  |
| CHLORIDE   |  | ND                    | 0.2         |                      |  |                                |  |
| SULFATE    |  | ND                    | 1           |                      |  |                                |  |

|                         |        |                      |         |               |      |                      |                |                                |       |           |      |
|-------------------------|--------|----------------------|---------|---------------|------|----------------------|----------------|--------------------------------|-------|-----------|------|
| MS                      |        | Sample ID: 2111546-2 |         |               |      | Units: MG/L          |                | Analysis Date: 12/1/2021 11:34 |       |           |      |
| Client ID: Outfall 050B |        | Run ID: IC211201-1A1 |         |               |      | Prep Date: 12/1/2021 |                |                                | DF: 5 |           |      |
| Analyte                 | Result | ReportLimit          | SPK Val | SPK Ref Value | %REC | Control Limit        | Decision Level | RPD Ref                        | RPD   | RPD Limit | Qual |
| FLUORIDE                | 11     | 0.5                  | 10      | 0.85          | 101  | 85-115               |                |                                |       | 15        |      |
| CHLORIDE                | 336    | 4                    | 100     | 240           | 101  | 85-115               |                |                                |       | 15        |      |
| SULFATE                 | 257    | 5                    | 100     | 160           | 97   | 85-115               |                |                                |       | 15        |      |

The following samples were analyzed in this batch:

|           |           |           |
|-----------|-----------|-----------|
| 2111546-1 | 2111546-2 | 2111546-3 |
| 2111546-4 | 2111546-5 |           |

**Client:** Randy Evans  
**Work Order:** 2111546  
**Project:** WPWT Facility

## QC BATCH REPORT

Batch ID: **TD211124-1-1** Instrument ID **Balance** Method: **SM2540C**

|                        |                       |                      |         |               |                       |               |                           |         |     |           |      |
|------------------------|-----------------------|----------------------|---------|---------------|-----------------------|---------------|---------------------------|---------|-----|-----------|------|
| LCS                    | Sample ID: TD211124-1 |                      |         | Units: MG/L   |                       |               | Analysis Date: 11/29/2021 |         |     |           |      |
| Client ID:             |                       | Run ID: TD211129-1A1 |         |               | Prep Date: 11/24/2021 |               |                           | DF: 1   |     |           |      |
| Analyte                | Result                | ReportLimit          | SPK Val | SPK Ref Value | %REC                  | Control Limit | Decision Level            | RPD Ref | RPD | RPD Limit | Qual |
| TOTAL DISSOLVED SOLIDS | 360                   | 20                   | 400     |               | 90                    | 85-115        |                           |         |     | 14        |      |

|                        |        |                       |         |               |      |                       |                |                           |     |           |      |
|------------------------|--------|-----------------------|---------|---------------|------|-----------------------|----------------|---------------------------|-----|-----------|------|
| LCSD                   |        | Sample ID: TD211124-1 |         |               |      | Units: MG/L           |                | Analysis Date: 11/29/2021 |     |           |      |
| Client ID:             |        | Run ID: TD211129-1A1  |         |               |      | Prep Date: 11/24/2021 |                | DF: 1                     |     |           |      |
| Analyte                | Result | ReportLimit           | SPK Val | SPK Ref Value | %REC | Control Limit         | Decision Level | RPD Ref                   | RPD | RPD Limit | Qual |
| TOTAL DISSOLVED SOLIDS | 361    | 20                    | 400     |               | 90   | 85-115                |                | 360                       | 0   | 14        |      |

|                        |  |                       |             |                       |  |                           |  |
|------------------------|--|-----------------------|-------------|-----------------------|--|---------------------------|--|
| MB                     |  | Sample ID: TD211124-1 |             | Units: MG/L           |  | Analysis Date: 11/29/2021 |  |
| Client ID:             |  | Run ID: TD211129-1A1  |             | Prep Date: 11/24/2021 |  | DF: 1                     |  |
| Analyte                |  | Result                | ReportLimit |                       |  |                           |  |
| TOTAL DISSOLVED SOLIDS |  | ND                    | 20          |                       |  |                           |  |

The following samples were analyzed in this batch:

|           |           |           |
|-----------|-----------|-----------|
| 2111546-1 | 2111546-2 | 2111546-3 |
| 2111546-4 | 2111546-5 |           |