



Friday, July 23, 2021

Max Trehus
Great Western Operating Company, LLC
4093 Specialty Place, Unit B
Longmont, CO 80504

Re: ALS Workorder: 2105587
Project Name: Wilson IC 03-302 HC
Project Number:

Dear Mr. Trehus:

Two water samples were received from Great Western Operating Company, LLC, on 5/27/2021. The samples were scheduled for the following analyses:

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

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. OBrien
Project Manager

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

| ALS Environmental – Fort Collins | |
|----------------------------------|---------------------------------|
| Accreditation Body | License or Certification Number |
| 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.



2105587

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.

Dissolved Gasses:

The sample was prepared and analyzed according to method RSK-175 procedures and the current revision of SOP 449.

All acceptance criteria were met.

GRO:

The sample was analyzed following the current revision of SOP 425 generally based on SW-846 Methods 8000C and 8015D. TVPH is a multicomponent mixture and is quantitated by summing the entire carbon range, rather than individual peaks. The carbon range integrated in this test extends from C6 to C10.

All acceptance criteria were met.

DRO:

The sample was analyzed following the current revision of SOP 406 generally based on SW-846 Methods 8000C and 8015D. TEPH is a multicomponent mixture and is quantitated by summing the entire carbon range, rather than individual peaks. The carbon range integrated in this test extends from C10 to C28.

All acceptance criteria were met.

Metals:

The sample was analyzed following SW-846, 3rd Edition procedures. Analysis by Trace ICP followed method 200.7 and the current revision of SOP 834.

The dissolved metals sample could not be filtered and therefore, was not performed.

All acceptance criteria were met.



Inorganics:

The sample was analyzed following Standard Method procedures for the current revisions of the following SOPs and methods:

| <u>Analyte</u> | <u>Method</u> | <u>SOP #</u> |
|----------------|--------------------|--------------|
| Alkalinity | SM2320B | 1106 |
| Bicarbonate | SM2320B | 1106 |
| Carbonate | SM2320B | 1106 |
| TDS | SM2540C | 1101 |
| Chloride | 300.0 Revision 2.1 | 1113 |
| Sulfate | 300.0 Revision 2.1 | 1113 |

The sample was analyzed outside of hold time for TDS, chloride and sulfate. (See NCR #15287 and #15301)

The method blank associated with each batch was below the reporting limit for the requested analytes with the exception of alkalinity and bicarbonate. The associated sample contained more than ten times the concentration of alkalinity detected in the method blank, so no further action was taken.

All remaining acceptance criteria were met.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 2105587

Client Name: Great Western Operating Company, LLC

Client Project Name: Wilson IC 03-302 HC

Client Project Number:

Client PO Number:

| Client Sample Number | Lab Sample Number | COC Number | Matrix | Date Collected | Time Collected |
|----------------------|-------------------|------------|--------|----------------|----------------|
| 03-302 HC A | 2105587-1 | | WATER | 26-May-21 | 15:35 |
| 03-302 HC B | 2105587-2 | | WATER | 26-May-21 | 15:35 |



ALS Environmental

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

Chain-of-Custody

Turnaround time for samples received after 2 p.m. will be calculated beginning from the next business day.
 Turnaround time for samples received Saturday will be calculated beginning from the next business day.

ALS WORKORDER #

2105587

| TURNAROUND TIME | SAMPLER | PAGE | of |
|--------------------|-----------------|---------------------------------------|----------------------|
| SITE ID | EDD FORMAT | DISPOSAL | BY LAB or RETURN |
| PURCHASE ORDER | BILL TO COMPANY | PARAMETER/METHOD REQUEST FOR ANALYSIS | |
| INVOICE ATTN TO | ADDRESS | A | Disassembled Grasses |
| CITY / STATE / ZIP | PHONE | B | BTEX |
| FAX | E-MAIL | C | DRD |
| | | D | GRO |
| | | E | Anions Alk TDS |
| | | F | PS Metals |
| | | G | TR Metals |
| | | H | |
| | | I | |
| | | J | |

| LAB ID | FIELD ID | MATRIX | SAMPLE DATE | SAMPLE TIME | # OF BOTTLES | PRESERVATIVE | QC | A | B | C | D | E | F | G | H | I | J | SEE NOTES SECTION |
|--------|-------------|--------|-------------|-------------|--------------|--------------|----|---|---|---|---|---|---|---|---|---|---|-------------------|
| 1 | 03-302-HC A | W | 5/25/21 | 15:35 | 3 | - | | X | | | | | | | | | | |
| 1 | 03-302-HC A | ↓ | ↓ | ↓ | 3 | HCL | | | X | | | | | | | | | |
| 1 | 03-302-HC A | ↓ | ↓ | ↓ | 3 | HCL | | | | X | | | | | | | | |
| 1 | 03-302-HC A | ↓ | ↓ | ↓ | 3 | HCL | | | | | X | | | | | | | |
| 1 | 03-302-HC A | ↓ | ↓ | ↓ | 1 | - | | | | | | X | | | | | | |
| 2 | 03-302-HC B | ↓ | ↓ | ↓ | 1 | - | | | | | | | X | | | | | |
| 1 | 03-302-HC A | ↓ | ↓ | ↓ | 1 | HND3 | | | | | | | | X | | | | |

| RELINQUISHED BY | SIGNATURE | PRINTED NAME | DATE | TIME |
|-----------------|--------------------|--------------|---------|-------|
| RECEIVED BY | <i>[Signature]</i> | Kenny Pycott | 5/27/21 | 14:05 |
| RELINQUISHED BY | <i>[Signature]</i> | Joshua Eckey | 5/27/21 | 14:05 |
| RECEIVED BY | | | | |
| RELINQUISHED BY | | | | |
| RECEIVED BY | | | | |

Form 2028

*Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

| REPORT LEVEL / QC REQUIRED |
|---------------------------------|
| Summary (Standard QC) |
| LEVEL II (Standard QC) |
| LEVEL III (Std QC + forms) |
| LEVEL IV (Std QC + forms + raw) |

Facility ID 452194

of 20 5.2

PRESERVATION KEY 1-HCI 2-HNO3 3-H2SO4 4-NaOH 5-NaOH/ZnAcetate 6-NaHSO4 7-4°C 8-Other



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: GWOC Workorder No: 2105587
 Project Manager: KMO Initials: JPE Date: 05/27/2021

| | | 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>5.2</u> | | | | |
| # of custody seals on cooler: <u>0</u> | | | | |
| External µR/hr reading: <u>NA</u> | | | | |
| Background µR/hr reading: <u>11</u> | | | | |
| Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? <u>N/A</u> | | | | |

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

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

If applicable, was the client contacted? YES/NO/NA Contact: [Signature] Date/Time: 6/01/21
 Project Manager Signature / Date: [Signature]

Client: Great Western Operating Company, LLC
 Project: Wilson IC 03-302 HC
 Sample ID: 03-302 HC A
 Legal Location:
 Collection Date: 5/26/2021 15:35

Date: 23-Jul-21
 Work Order: 2105587
 Lab ID: 2105587-1
 Matrix: WATER
 Percent Moisture:

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|--|--------|------|------------------|-------|-----------------------------|--------------------|
| Alkalinity as Calcium Carbonate | | | SM2320B | | Prep Date: 6/7/2021 | PrepBy: BMK |
| BICARBONATE AS CaCO3 | 49 | | 20 | MG/L | 1 | 6/7/2021 |
| CARBONATE AS CaCO3 | 210 | | 20 | MG/L | 1 | 6/7/2021 |
| TOTAL ALKALINITY AS CaCO3 | 260 | | 20 | MG/L | 1 | 6/7/2021 |
| Diesel Range Organics | | | SW8015M | | Prep Date: 6/4/2021 | PrepBy: JRS |
| Diesel Range Organics | 36 | | 1.2 | MG/L | 1 | 6/9/2021 08:50 |
| Surr: O-TERPHENYL | 114 | | 69-120 | %REC | 1 | 6/9/2021 08:50 |
| Dissolved Gasses | | | RSK175 | | Prep Date: 6/8/2021 | PrepBy: JRS |
| METHANE | 4800 | | 1 | UG/L | 1 | 6/8/2021 16:46 |
| ETHANE | 930 | | 2 | UG/L | 1 | 6/8/2021 16:46 |
| PROPANE | 310 | | 1 | UG/L | 1 | 6/8/2021 16:46 |
| Gasoline Range Organics | | | SW8015 | | Prep Date: 6/7/2021 | PrepBy: JRS |
| GASOLINE RANGE ORGANICS | 19 | | 5 | MG/L | 50 | 6/7/2021 13:45 |
| Surr: 2,3,4-TRIFLUOROTOLUENE | 116 | | 80-120 | %REC | 50 | 6/7/2021 13:45 |
| GC/MS Volatiles | | | SW8260_25 | | Prep Date: 6/9/2021 | PrepBy: AEW |
| BENZENE | 200 | | 10 | UG/L | 10 | 6/9/2021 17:15 |
| TOLUENE | 350 | | 10 | UG/L | 10 | 6/9/2021 17:15 |
| ETHYLBENZENE | 79 | | 10 | UG/L | 10 | 6/9/2021 17:15 |
| M+P-XYLENE | 370 | | 10 | UG/L | 10 | 6/9/2021 17:15 |
| O-XYLENE | 200 | | 10 | UG/L | 10 | 6/9/2021 17:15 |
| TOTAL XYLENES | 570 | | 1 | UG/L | 1 | 6/9/2021 17:15 |
| Surr: 4-BROMOFLUOROBENZENE | 101 | | 80-120 | %REC | 10 | 6/9/2021 17:15 |
| Surr: DIBROMOFLUOROMETHANE | 99 | | 80-120 | %REC | 10 | 6/9/2021 17:15 |
| Surr: TOLUENE-D8 | 98 | | 80-120 | %REC | 10 | 6/9/2021 17:15 |
| Ion Chromatography | | | EPA300.0 | | Prep Date: 7/1/2021 | PrepBy: LMC |
| CHLORIDE | 2300 | | 40 | MG/L | 200 | 7/3/2021 04:56 |
| SULFATE | 860 | | 50 | MG/L | 50 | 7/1/2021 21:43 |
| Total Recoverable Metals by 200.7 | | | EPA200.7 | | Prep Date: 6/7/2021 | PrepBy: ZRH |
| CALCIUM | 1300 | | 10 | MG/L | 10 | 6/10/2021 11:50 |
| POTASSIUM | 280 | | 10 | MG/L | 10 | 6/10/2021 11:50 |
| MAGNESIUM | ND | | 10 | MG/L | 10 | 6/10/2021 11:50 |
| SODIUM | 410 | | 10 | MG/L | 10 | 6/10/2021 11:50 |
| Total Dissolved Solids | | | SM2540C | | Prep Date: 6/25/2021 | PrepBy: BMK |
| TOTAL DISSOLVED SOLIDS | 8400 | | 400 | MG/L | 1 | 6/30/2021 |

Client: Great Western Operating Company, LLC
Project: Wilson IC 03-302 HC
Sample ID: 03-302 HC B
Legal Location:
Collection Date: 5/26/2021 15:35

Date: 23-Jul-21
Work Order: 2105587
Lab ID: 2105587-2
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

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Date: 7/23/2021 11:49

Client: Great Western Operating Company, LLC

QC BATCH REPORT

Work Order: 2105587

Project: Wilson IC 03-302 HC

Batch ID: **HC210604-81-1** Instrument ID **FUELS-1** Method: **SW8015M**

LCS Sample ID: **HC210604-81** Units: **MG/L** Analysis Date: **6/9/2021 06:43**

Client ID: Run ID: **HC210608-81** Prep Date: **6/4/2021** DF: **1**

| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref | RPD | RPD Limit | Qual |
|-----------------------|--------|-------------|---------|---------------|------|---------------|----------------|---------|-----|-----------|------|
| Diesel Range Organics | 6.87 | 1.07 | 8.33 | | 82 | 53-120 | | | | 20 | |
| Surr: O-TERPHENYL | 1.77 | | 1.67 | | 106 | 69-120 | | | | | |

LCSD Sample ID: **HC210604-81** Units: **MG/L** Analysis Date: **6/9/2021 07:05**

Client ID: Run ID: **HC210608-81** Prep Date: **6/4/2021** DF: **1**

| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref | RPD | RPD Limit | Qual |
|-----------------------|--------|-------------|---------|---------------|------|---------------|----------------|---------|-----|-----------|------|
| Diesel Range Organics | 6.6 | 1.07 | 8.33 | | 79 | 53-120 | | 6.87 | 4 | 20 | |
| Surr: O-TERPHENYL | 1.68 | | 1.67 | | 101 | 69-120 | | | 5 | | |

MB Sample ID: **HC210604-81** Units: **MG/L** Analysis Date: **6/9/2021 06:22**

Client ID: Run ID: **HC210608-81** Prep Date: **6/4/2021** DF: **1**

| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref | RPD | RPD Limit | Qual |
|-----------------------|--------|-------------|---------|---------------|------|---------------|----------------|---------|-----|-----------|------|
| Diesel Range Organics | ND | 1.1 | | | | | | | | | |
| Surr: O-TERPHENYL | 1.7 | | | | 102 | 69-120 | | | | | |

The following samples were analyzed in this batch:

Client: Great Western Operating Company, LLC
 Work Order: 2105587
 Project: Wilson IC 03-302 HC

QC BATCH REPORT

Batch ID: **HC210607-62-1** Instrument ID **FUELS-1** Method: **SW8015**

LCS Sample ID: **HC210607-62** Units: **MG/L** Analysis Date: **6/7/2021 20:01**
 Client ID: Run ID: **HC210607-61A** Prep Date: **6/7/2021** DF: **1**

| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref | RPD | RPD Limit | Qual |
|------------------------------|--------|-------------|---------|---------------|------|---------------|----------------|---------|-----|-----------|------|
| GASOLINE RANGE ORGANICS | 0.438 | 0.1 | 0.5 | | 88 | 80-120 | | | | 20 | |
| Surr: 2,3,4-TRIFLUOROTOLUENE | 0.111 | | 0.1 | | 111 | 80-120 | | | | | |

LCSD Sample ID: **HC210607-62** Units: **MG/L** Analysis Date: **6/8/2021 03:15**
 Client ID: Run ID: **HC210607-61A** Prep Date: **6/7/2021** DF: **1**

| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref | RPD | RPD Limit | Qual |
|------------------------------|--------|-------------|---------|---------------|------|---------------|----------------|---------|-----|-----------|------|
| GASOLINE RANGE ORGANICS | 0.45 | 0.1 | 0.5 | | 90 | 80-120 | | 0.438 | 3 | 20 | |
| Surr: 2,3,4-TRIFLUOROTOLUENE | 0.11 | | 0.1 | | 110 | 80-120 | | | 1 | | |

MB Sample ID: **HC210607-62** Units: **MG/L** Analysis Date: **6/7/2021 11:54**
 Client ID: Run ID: **HC210607-61A** Prep Date: **6/7/2021** DF: **1**

| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref | RPD | RPD Limit | Qual |
|------------------------------|--------|-------------|---------|---------------|------|---------------|----------------|---------|-----|-----------|------|
| GASOLINE RANGE ORGANICS | ND | 0.1 | | | | | | | | | |
| Surr: 2,3,4-TRIFLUOROTOLUENE | 0.105 | | | | 105 | 80-120 | | | | | |

The following samples were analyzed in this batch:

Client: Great Western Operating Company, LLC
 Work Order: 2105587
 Project: Wilson IC 03-302 HC

QC BATCH REPORT

Batch ID: **HC210608-91-1** Instrument ID **MEE-1** Method: **RSK175**

LCS Sample ID: **HC210608-91** Units: **UG/L** Analysis Date: **6/8/2021 15:59**
 Client ID: Run ID: **HC210608-91A** Prep Date: **6/8/2021** DF: **1**

| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref | RPD | RPD Limit | Qual |
|---------|--------|-------------|---------|---------------|------|---------------|----------------|---------|-----|-----------|------|
| METHANE | 151 | 1 | 142 | | 106 | 76-125 | | | | 25 | |
| ETHANE | 288 | 2 | 267 | | 108 | 70-120 | | | | 25 | |
| PROPANE | 426 | 1 | 391 | | 109 | 72-120 | | | | 25 | |

LCSD Sample ID: **HC210608-91** Units: **UG/L** Analysis Date: **6/8/2021 16:54**
 Client ID: Run ID: **HC210608-91A** Prep Date: **6/8/2021** DF: **1**

| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref | RPD | RPD Limit | Qual |
|---------|--------|-------------|---------|---------------|------|---------------|----------------|---------|-----|-----------|------|
| METHANE | 140 | 1 | 142 | | 99 | 76-125 | | 151 | 7 | 25 | |
| ETHANE | 270 | 2 | 267 | | 101 | 70-120 | | 288 | 6 | 25 | |
| PROPANE | 399 | 1 | 391 | | 102 | 72-120 | | 426 | 6 | 25 | |

MB Sample ID: **HC210608-91** Units: **UG/L** Analysis Date: **6/8/2021 16:12**
 Client ID: Run ID: **HC210608-91A** Prep Date: **6/8/2021** DF: **1**

| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref | RPD | RPD Limit | Qual |
|---------|--------|-------------|---------|---------------|------|---------------|----------------|---------|-----|-----------|------|
| METHANE | ND | 1 | | | | | | | | | |
| ETHANE | ND | 2 | | | | | | | | | |
| PROPANE | ND | 1 | | | | | | | | | |

The following samples were analyzed in this batch:

Client: Great Western Operating Company, LLC
 Work Order: 2105587
 Project: Wilson IC 03-302 HC

QC BATCH REPORT

Batch ID: **IP210607-2-2** Instrument ID **ICPTrace2** Method: **EPA200.7**

| LCS | | Sample ID: IP210607-2 | | | Units: MG/L | | Analysis Date: 6/10/2021 11:47 | | | | |
|------------|--------|------------------------------|---------|---------------|----------------------------|---------------|---------------------------------------|---------|-----|-----------|------|
| Client ID: | | Run ID: IT210610-1A5 | | | Prep Date: 6/7/2021 | | DF: 1 | | | | |
| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref | RPD | RPD Limit | Qual |
| CALCIUM | 40 | 1 | 40 | | 100 | 85-115 | | | | 20 | |
| MAGNESIUM | 40.2 | 1 | 40 | | 101 | 85-115 | | | | 20 | |
| POTASSIUM | 41.7 | 1 | 40 | | 104 | 85-115 | | | | 20 | |
| SODIUM | 40.4 | 1 | 40 | | 101 | 85-115 | | | | 20 | |

| LCSD | | Sample ID: IP210607-2 | | | Units: MG/L | | Analysis Date: 6/10/2021 18:04 | | | | |
|------------|--------|------------------------------|---------|---------------|----------------------------|---------------|---------------------------------------|---------|-----|-----------|------|
| Client ID: | | Run ID: IT210610-1A5 | | | Prep Date: 6/7/2021 | | DF: 1 | | | | |
| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref | RPD | RPD Limit | Qual |
| CALCIUM | 39 | 1 | 40 | | 98 | 85-115 | | 40 | 3 | 20 | |
| MAGNESIUM | 40.7 | 1 | 40 | | 102 | 85-115 | | 40.2 | 1 | 20 | |
| POTASSIUM | 40.6 | 1 | 40 | | 101 | 85-115 | | 41.7 | 3 | 20 | |
| SODIUM | 40.7 | 1 | 40 | | 102 | 85-115 | | 40.4 | 1 | 20 | |

| MB | | Sample ID: IP210607-2 | | | Units: MG/L | | Analysis Date: 6/10/2021 11:46 | | | | | |
|------------|--------|------------------------------|--|--|----------------------------|--|---------------------------------------|--|--|--|--|------|
| Client ID: | | Run ID: IT210610-1A5 | | | Prep Date: 6/7/2021 | | DF: 1 | | | | | |
| Analyte | Result | ReportLimit | | | | | | | | | | Qual |
| CALCIUM | ND | 1 | | | | | | | | | | |
| MAGNESIUM | ND | 1 | | | | | | | | | | |
| POTASSIUM | ND | 1 | | | | | | | | | | |
| SODIUM | ND | 1 | | | | | | | | | | |

The following samples were analyzed in this batch:

Client: Great Western Operating Company, LLC
 Work Order: 2105587
 Project: Wilson IC 03-302 HC

QC BATCH REPORT

Batch ID: VL210609-3-2 Instrument ID: HPV1 Method: SW8260_25

| LCS | | Sample ID: VL210609-3 | | | Units: %REC | | Analysis Date: 6/9/2021 10:27 | | | | |
|----------------------------|--------|-----------------------|---------|---------------|---------------------|---------------|-------------------------------|---------|-----|-----------|------|
| Client ID: | | Run ID: VL210609-3A | | | Prep Date: 6/9/2021 | | DF: 1 | | | | |
| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref | RPD | RPD Limit | Qual |
| Surr: 4-BROMOFLUOROBENZENE | 24.6 | | 25 | | 98 | 80-120 | | | | | |
| Surr: DIBROMOFLUOROMETHANE | 25.5 | | 25 | | 102 | 80-120 | | | | | |
| Surr: TOLUENE-D8 | 25.1 | | 25 | | 100 | 80-120 | | | | | |
| BENZENE | 9.69 | 1 | 10 | | 97 | 80-120 | | | | 20 | |
| TOLUENE | 9.42 | 1 | 10 | | 94 | 80-120 | | | | 20 | |
| ETHYLBENZENE | 9.49 | 1 | 10 | | 95 | 80-120 | | | | 20 | |
| M+P-XYLENE | 18.5 | 1 | 20 | | 92 | 80-120 | | | | 20 | |
| O-XYLENE | 9.17 | 1 | 10 | | 92 | 80-120 | | | | 20 | |

| LCSD | | Sample ID: VL210609-3 | | | Units: %REC | | Analysis Date: 6/9/2021 10:51 | | | | |
|----------------------------|--------|-----------------------|---------|---------------|---------------------|---------------|-------------------------------|---------|-----|-----------|------|
| Client ID: | | Run ID: VL210609-3A | | | Prep Date: 6/9/2021 | | DF: 1 | | | | |
| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref | RPD | RPD Limit | Qual |
| Surr: 4-BROMOFLUOROBENZENE | 25.5 | | 25 | | 102 | 80-120 | | | 4 | | |
| Surr: DIBROMOFLUOROMETHANE | 25.8 | | 25 | | 103 | 80-120 | | | 1 | | |
| Surr: TOLUENE-D8 | 24.7 | | 25 | | 99 | 80-120 | | | 1 | | |
| BENZENE | 9.77 | 1 | 10 | | 98 | 80-120 | | 9.69 | 1 | 20 | |
| TOLUENE | 9.57 | 1 | 10 | | 96 | 80-120 | | 9.42 | 2 | 20 | |
| ETHYLBENZENE | 9.52 | 1 | 10 | | 95 | 80-120 | | 9.49 | 0 | 20 | |
| M+P-XYLENE | 18.9 | 1 | 20 | | 95 | 80-120 | | 18.5 | 3 | 20 | |
| O-XYLENE | 9.37 | 1 | 10 | | 94 | 80-120 | | 9.17 | 2 | 20 | |

| MB | | Sample ID: VL210609-3 | | | Units: %REC | | Analysis Date: 6/9/2021 12:51 | | | | |
|----------------------------|--------|-----------------------|---------|---------------|---------------------|---------------|-------------------------------|---------|-----|-----------|------|
| Client ID: | | Run ID: VL210609-3A | | | Prep Date: 6/9/2021 | | 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 | | | | 100 | 80-120 | | | | | |
| Surr: DIBROMOFLUOROMETHANE | 24.9 | | | | 100 | 80-120 | | | | | |
| Surr: TOLUENE-D8 | 25 | | | | 100 | 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: Great Western Operating Company, LLC
 Work Order: 2105587
 Project: Wilson IC 03-302 HC

QC BATCH REPORT

Batch ID: **AK210607-1-1** Instrument ID **NONE** Method: **SM2320B**

| LCS | | Sample ID: AK210607-1 | | | Units: MG/L | | Analysis Date: 6/7/2021 | | | | |
|---------------------------|--------|------------------------------|---------|---------------|----------------------------|---------------|--------------------------------|---------|-----|-----------|------|
| Client ID: | | Run ID: AK210607-1A1 | | | Prep Date: 6/7/2021 | | DF: 1 | | | | |
| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref | RPD | RPD Limit | Qual |
| TOTAL ALKALINITY AS CaCO3 | 96.6 | 5 | 100 | | 96 | 85-115 | | | | 15 | |

| MB | | Sample ID: AK210607-1 | | | Units: MG/L | | Analysis Date: 6/7/2021 | | | | |
|---------------------------|--------|------------------------------|--|--|----------------------------|--|--------------------------------|--|--|--|--|
| Client ID: | | Run ID: AK210607-1A1 | | | Prep Date: 6/7/2021 | | DF: 1 | | | | |
| Analyte | Result | ReportLimit | | | | | | | | | |
| BICARBONATE AS CaCO3 | 6.5 | 5 | | | | | | | | | |
| CARBONATE AS CaCO3 | ND | 5 | | | | | | | | | |
| TOTAL ALKALINITY AS CaCO3 | 6.5 | 5 | | | | | | | | | |

The following samples were analyzed in this batch:

2105587-1

Client: Great Western Operating Company, LLC
 Work Order: 2105587
 Project: Wilson IC 03-302 HC

QC BATCH REPORT

Batch ID: **IC210701-1-1** Instrument ID **IC3** Method: **EPA300.0**

| LCS | | Sample ID: IC210701-1 | | | Units: MG/L | | Analysis Date: 7/1/2021 13:17 | | | | |
|------------|--------|------------------------------|---------|---------------|----------------------------|---------------|--------------------------------------|---------|-----|-----------|------|
| Client ID: | | Run ID: IC210701-1A1 | | | Prep Date: 7/1/2021 | | DF: 1 | | | | |
| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref | RPD | RPD Limit | Qual |
| CHLORIDE | 9.8 | 0.2 | 10 | | 98 | 90-110 | | | | 15 | |
| SULFATE | 48.2 | 1 | 50 | | 96 | 90-110 | | | | 15 | |

| LCSD | | Sample ID: IC210701-1 | | | Units: MG/L | | Analysis Date: 7/1/2021 15:55 | | | | |
|------------|--------|------------------------------|---------|---------------|----------------------------|---------------|--------------------------------------|---------|-----|-----------|------|
| Client ID: | | Run ID: IC210701-1A1 | | | Prep Date: 7/1/2021 | | DF: 1 | | | | |
| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref | RPD | RPD Limit | Qual |
| CHLORIDE | 9.71 | 0.2 | 10 | | 97 | 90-110 | | 9.8 | 1 | 15 | |
| SULFATE | 48.1 | 1 | 50 | | 96 | 90-110 | | 48.2 | 0 | 15 | |

| MB | | Sample ID: IC210701-1 | | | Units: MG/L | | Analysis Date: 7/1/2021 13:30 | | | | | |
|------------|--------|------------------------------|--|--|----------------------------|--|--------------------------------------|--|--|--|--|------|
| Client ID: | | Run ID: IC210701-1A1 | | | Prep Date: 7/1/2021 | | DF: 1 | | | | | |
| Analyte | Result | ReportLimit | | | | | | | | | | Qual |
| CHLORIDE | ND | 0.2 | | | | | | | | | | |
| SULFATE | ND | 1 | | | | | | | | | | |

The following samples were analyzed in this batch:

Client: Great Western Operating Company, LLC
 Work Order: 2105587
 Project: Wilson IC 03-302 HC

QC BATCH REPORT

Batch ID: TD210625-1-1 Instrument ID Balance Method: SM2540C

DUP Sample ID: 2105587-1 Units: MG/L Analysis Date: 6/30/2021
 Client ID: 03-302 HC A Run ID: TD210630-2A1 Prep Date: 6/25/2021 DF: 1

| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref | RPD | RPD Limit | Qual |
|------------------------|--------|-------------|---------|---------------|------|---------------|----------------|---------|-----|-----------|------|
| TOTAL DISSOLVED SOLIDS | 9260 | 400 | | | | | | 8400 | 10 | 14 | |

LCS Sample ID: TD210625-1 Units: MG/L Analysis Date: 6/30/2021
 Client ID: Run ID: TD210630-2A1 Prep Date: 6/25/2021 DF: 1

| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref | RPD | RPD Limit | Qual |
|------------------------|--------|-------------|---------|---------------|------|---------------|----------------|---------|-----|-----------|------|
| TOTAL DISSOLVED SOLIDS | 426 | 20 | 400 | | 106 | 85-115 | | | | 14 | |

LCSD Sample ID: TD210625-1 Units: MG/L Analysis Date: 6/30/2021
 Client ID: Run ID: TD210630-2A1 Prep Date: 6/25/2021 DF: 1

| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref | RPD | RPD Limit | Qual |
|------------------------|--------|-------------|---------|---------------|------|---------------|----------------|---------|-----|-----------|------|
| TOTAL DISSOLVED SOLIDS | 420 | 20 | 400 | | 105 | 85-115 | | 426 | 1 | 14 | |

MB Sample ID: TD210625-1 Units: MG/L Analysis Date: 6/30/2021
 Client ID: Run ID: TD210630-2A1 Prep Date: 6/25/2021 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:

CONTROLLED NON-CONFORMANCE REPORT

Non-Conformance

Initiated By: Lisa M. Champagne on 7/8/2021

Event Type: Hold Time Exceeded

Event Explanation: Due to prolonged instrument malfunction these samples were analyzed out of holding time.

Action To

Prevent Recurrence: Not Applicable

Corrective Action

Corrective Action: Document in Narrative

Department Manager Approval:

Approval Date:

Corrective Action Comments:

Workorders Affected

| Workorder -- Procedure | No client contact information. | Approved By | Approval Date |
|---|--------------------------------|-----------------|---------------|
| 2106011 -- EPA300.0 | No client contact information. | PENDING | |
| 2104630 -- EPA300.0 2105587 -- EPA300.0 2105588 -- EPA300.0 2106125 -- EPA300.0 2106609 -- EPA300.0 2106643 -- EPA300.0 2106666 -- EPA300.0 | No client contact information. | Katie M. OBrien | 7/14/2021 |

Associated Batches

The samples were originally associated with the following Batch(es):

- IC210527-1A2 created on 5/27/2021
- IC210702-1A3 created on 7/2/2021
- IC210527-1A1 created on 5/27/2021
- IC210702-1A1 created on 7/2/2021
- IC210702-1A4 created on 7/2/2021
- IC210702-1A2 created on 7/2/2021

All rework was completed in the following Batch(es):

Not Applicable

NCR Approval



Ft. Collins, Colorado

NCR #: 15287

CONTROLLED NON-CONFORMANCE REPORT

Project Manager Approval:

KMO on 7/14/2021

Department Manager Approval:

QA Manager Approval:

CONTROLLED NON-CONFORMANCE REPORT

Non-Conformance

Initiated By: Breyer M. Kinzer on 7/22/2021

Event Type: Hold Time Exceeded

Event Explanation: Due to laboratory oversight samples were analyzed out of hold.

Action To

Prevent Recurrence: Not Applicable

Corrective Action

Corrective Action:

Department Manager Approval:

Approval Date:

Corrective Action Comments:

| |
|----------------------------|
| Workorders Affected |
|----------------------------|

Workorder -- Procedure

Approved By

Approval Date

2105587 -- SM2540C

No client contact information.

PENDING

2105588 -- SM2540C

Associated Batches

The samples were originally associated with the following Batch(es):

All rework was completed in the following Batch(es):

| |
|-----------------------------------|
| TD210630-2A1 created on 6/30/2021 |
|-----------------------------------|

Not Applicable

NCR Approval

Project Manager Approval:

Department Manager Approval:

QA Manager Approval: