



Wednesday, December 23, 2020

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

Re: ALS Workorder: 2012012  
Project Name: B Farms LD 18-034 HC  
Project Number:

Dear Mr. Trehus:

Seven water samples were received from Great Western Operating Company, LLC, on 12/1/2020. 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. O'Brien  
Project Manager

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 |
| Alaska (AK)                      | 17-003                          |
| Arizona (AZ)                     | AZ0742                          |
| 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                           |



## 2012012

### GC/MS Volatiles:

The sample was analyzed using GC/MS following the current revision of SOP 525 based on SW-846 Method 8260C.

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

| Surrogate            | Sample | Direction |
|----------------------|--------|-----------|
| Dibromofluoromethane | -2     | Low       |

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

All remaining 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.

Sample -4 had a large peak outside of the GRO range, this caused a large interference to subsequent samples. See NCR# 15196.

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 samples were analyzed following Methods for the Determination of Metals in Environmental Samples – Supplement 1 procedures. Analysis by ICPMS followed method 200.8 and the current revision of SOP 827.

Sample 2012012-6 was filtered through a 0.45 micron filter and preserved with nitric acid to a pH less than two prior to analysis.

All acceptance criteria were met.

**Inorganics:**

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

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

All acceptance criteria were met.

# ALS -- Fort Collins

## Sample Number(s) Cross-Reference Table

---

**OrderNum:** 2012012

**Client Name:** Great Western Operating Company, LLC

**Client Project Name:** B Farms LD 18-034 HC

**Client Project Number:**

**Client PO Number:**

---

| Client Sample Number | Lab Sample Number | COC Number | Matrix | Date Collected | Time Collected |
|----------------------|-------------------|------------|--------|----------------|----------------|
| 18-034 HC A          | 2012012-1         |            | WATER  | 30-Nov-20      | 12:05          |
| 18-034 HC B          | 2012012-2         |            | WATER  | 30-Nov-20      | 12:05          |
| 18-034 HC C          | 2012012-3         |            | WATER  | 30-Nov-20      | 12:05          |
| 18-034 HC D          | 2012012-4         |            | WATER  | 30-Nov-20      | 12:05          |
| 18-034 HC E          | 2012012-5         |            | WATER  | 30-Nov-20      | 12:05          |
| 18-034 HC F          | 2012012-6         |            | WATER  | 30-Nov-20      | 12:05          |
| 18-034 HC G          | 2012012-7         |            | WATER  | 30-Nov-20      | 12:05          |



# 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 #                       |            | 2012012  |                  |
| TURNAROUND TIME                       | SAMPLER    | PAGE     | of               |
| SITE ID                               | EDD FORMAT | DISPOSAL | BY LAB or RETURN |
| PARAMETER/METHOD REQUEST FOR ANALYSIS |            |          |                  |

|                    |   |                  |
|--------------------|---|------------------|
| PURCHASE ORDER     | A | Disolved Gases   |
| BILL TO COMPANY    | B | BTEX             |
| INVOICE ATTN TO    | C | DRO              |
| ADDRESS            | D | GRO              |
| CITY / STATE / ZIP | E | Anions, Alk, VDS |
| PHONE              | F | PS Metals        |
| FAX                | G | TR Metals        |
| E-MAIL             | 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      | 18-034HC A | W      | 11/30/20    | 12:05       | 3            | -            |    | X |   |   |   |   |   |   |   |   |   |                   |
| 2      | 18-034HC B |        |             |             | 3            | HCL          |    | X |   |   |   |   |   |   |   |   |   |                   |
| 3      | 18-034HC C |        |             |             | 3            | HCL          |    |   | X |   |   |   |   |   |   |   |   |                   |
| 4      | 18-034HC D |        |             |             | 3            | HCL          |    |   |   | X |   |   |   |   |   |   |   |                   |
| 5      | 18-034HC E |        |             |             | 1            | -            |    |   |   |   |   | X |   |   |   |   |   |                   |
| 6      | 18-034HC F |        |             |             | 1            | -            |    |   |   |   |   |   | X |   |   |   |   |                   |
| 7      | 18-034HC G |        |             |             | 1            | HNO3         |    |   |   |   |   |   |   | X |   |   |   |                   |

|                                 |                     |        |         |         |                  |          |                     |           |            |             |            |
|---------------------------------|---------------------|--------|---------|---------|------------------|----------|---------------------|-----------|------------|-------------|------------|
| PROJECT NAME                    | B Farms LD 18-034HC |        |         |         |                  |          |                     |           |            |             |            |
| PROJECT No.                     |                     |        |         |         |                  |          |                     |           |            |             |            |
| COMPANY NAME                    | Great Western       |        |         |         |                  |          |                     |           |            |             |            |
| SEND REPORT TO                  | Max Trehus          |        |         |         |                  |          |                     |           |            |             |            |
| ADDRESS                         |                     |        |         |         |                  |          |                     |           |            |             |            |
| CITY / STATE / ZIP              |                     |        |         |         |                  |          |                     |           |            |             |            |
| PHONE                           |                     |        |         |         |                  |          |                     |           |            |             |            |
| FAX                             |                     |        |         |         |                  |          |                     |           |            |             |            |
| E-MAIL                          | MTrehus@GWP.com     |        |         |         |                  |          |                     |           |            |             |            |
| REPORT LEVEL / QC REQUIRED      | 3.8                 |        |         |         |                  |          |                     |           |            |             |            |
| Summary (Standard QC)           |                     |        |         |         |                  |          |                     |           |            |             |            |
| LEVEL II (Standard QC)          |                     |        |         |         |                  |          |                     |           |            |             |            |
| LEVEL III (Std QC + forms)      |                     |        |         |         |                  |          |                     |           |            |             |            |
| LEVEL IV (Std QC + forms + raw) |                     |        |         |         |                  |          |                     |           |            |             |            |
| RELINQUISHED BY                 | Kenny Pyatt         |        |         |         |                  |          |                     |           |            |             |            |
| RECEIVED BY                     | Rose Argente        |        |         |         |                  |          |                     |           |            |             |            |
| RELINQUISHED BY                 |                     |        |         |         |                  |          |                     |           |            |             |            |
| RECEIVED BY                     |                     |        |         |         |                  |          |                     |           |            |             |            |
| RELINQUISHED BY                 |                     |        |         |         |                  |          |                     |           |            |             |            |
| RECEIVED BY                     |                     |        |         |         |                  |          |                     |           |            |             |            |
| RELINQUISHED BY                 |                     |        |         |         |                  |          |                     |           |            |             |            |
| RECEIVED BY                     |                     |        |         |         |                  |          |                     |           |            |             |            |
| DATE                            | 12-01-20            |        |         |         |                  |          |                     |           |            |             |            |
| TIME                            | 10:25               |        |         |         |                  |          |                     |           |            |             |            |
| DATE                            | 12-01-20            |        |         |         |                  |          |                     |           |            |             |            |
| TIME                            | 10:25               |        |         |         |                  |          |                     |           |            |             |            |
| PRINTED NAME                    | Kenny Pyatt         |        |         |         |                  |          |                     |           |            |             |            |
| SIGNATURE                       | [Signature]         |        |         |         |                  |          |                     |           |            |             |            |
| RELINQUISHED BY                 | [Signature]         |        |         |         |                  |          |                     |           |            |             |            |
| RECEIVED BY                     | [Signature]         |        |         |         |                  |          |                     |           |            |             |            |
| RELINQUISHED BY                 |                     |        |         |         |                  |          |                     |           |            |             |            |
| RECEIVED BY                     |                     |        |         |         |                  |          |                     |           |            |             |            |
| RELINQUISHED BY                 |                     |        |         |         |                  |          |                     |           |            |             |            |
| RECEIVED BY                     |                     |        |         |         |                  |          |                     |           |            |             |            |
| RELINQUISHED BY                 |                     |        |         |         |                  |          |                     |           |            |             |            |
| RECEIVED BY                     |                     |        |         |         |                  |          |                     |           |            |             |            |
| FORM 2029                       |                     |        |         |         |                  |          |                     |           |            |             |            |
| NOTES                           | Facility ID: 452920 |        |         |         |                  |          |                     |           |            |             |            |
| EST                             | CST                 | MST    | PST     | Matrix: | O = oil          | S = soil | NS = non-soil solid | W = water | L = liquid | E = extract | F = filter |
| PRESERVATION KEY                | 1-HCl               | 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 Name/ID:

Great Western

Workorder No:

2012012

Project Manager:

KMO

Initials:

RGA

Date: 12/01/2020

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

Cooler #: 1  
 Temperature (°C): 3.8  
 # of custody seals on cooler: 0  
 External mR/hr reading: -  
 Background mR/hr reading: 9

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

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

11) Sample 2012012-7 had a pH of 14, 0.5 ml of HNO3 was added. The final pH was 13.

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

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

Project Manager Signature / Date: *KMO* 12/2/20

**Client:** Great Western Operating Company, LLC

**Date:** 23-Dec-20

**Project:** B Farms LD 18-034 HC

**Work Order:** 2012012

**Sample ID:** 18-034 HC A

**Lab ID:** 2012012-1

**Legal Location:**

**Matrix:** WATER

**Collection Date:** 11/30/2020 12:05

**Percent Moisture:**

| Analyses                | Result | Qual | Report Limit  | Units  | Dilution Factor             | Date Analyzed      |
|-------------------------|--------|------|---------------|--------|-----------------------------|--------------------|
| <b>Dissolved Gasses</b> |        |      | <b>RSK175</b> |        | Prep Date: <b>12/7/2020</b> | PrepBy: <b>ASZ</b> |
| METHANE                 | 2800   |      |               | 1 UG/L | 1                           | 12/7/2020 11:21    |
| ETHANE                  | 730    |      |               | 2 UG/L | 1                           | 12/7/2020 11:21    |
| PROPANE                 | 540    |      |               | 1 UG/L | 1                           | 12/7/2020 11:21    |

**Client:** Great Western Operating Company, LLC  
**Project:** B Farms LD 18-034 HC  
**Sample ID:** 18-034 HC B  
**Legal Location:**  
**Collection Date:** 11/30/2020 12:05

**Date:** 23-Dec-20  
**Work Order:** 2012012  
**Lab ID:** 2012012-2  
**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: <b>12/7/2020</b> | PrepBy: <b>AEW</b> |
| BENZENE                    | 130    |      | 10               | UG/L  | 10                          | 12/7/2020 20:07    |
| TOLUENE                    | 290    |      | 10               | UG/L  | 10                          | 12/7/2020 20:07    |
| ETHYLBENZENE               | 57     |      | 10               | UG/L  | 10                          | 12/7/2020 20:07    |
| M+P-XYLENE                 | 180    |      | 10               | UG/L  | 10                          | 12/7/2020 20:07    |
| O-XYLENE                   | 92     |      | 10               | UG/L  | 10                          | 12/7/2020 20:07    |
| TOTAL XYLENES              | 280    |      | 1                | UG/L  | 1                           | 12/7/2020 20:07    |
| Surr: 4-BROMOFLUOROBENZENE | 98     |      | 80-120           | %REC  | 10                          | 12/7/2020 20:07    |
| Surr: DIBROMOFLUOROMETHANE | 53     | *    | 80-120           | %REC  | 10                          | 12/7/2020 20:07    |
| Surr: TOLUENE-D8           | 100    |      | 80-120           | %REC  | 10                          | 12/7/2020 20:07    |

**Client:** Great Western Operating Company, LLC  
**Project:** B Farms LD 18-034 HC  
**Sample ID:** 18-034 HC C  
**Legal Location:**  
**Collection Date:** 11/30/2020 12:05

**Date:** 23-Dec-20  
**Work Order:** 2012012  
**Lab ID:** 2012012-3  
**Matrix:** WATER  
**Percent Moisture:**

| Analyses                     | Result | Qual | Report Limit   | Units | Dilution Factor             | Date Analyzed      |
|------------------------------|--------|------|----------------|-------|-----------------------------|--------------------|
| <b>Diesel Range Organics</b> |        |      | <b>SW8015M</b> |       | Prep Date: <b>12/9/2020</b> | PrepBy: <b>ASZ</b> |
| Diesel Range Organics        | 180    |      | 10             | MG/L  | 10                          | 12/13/2020 20:10   |
| Surr: O-TERPHENYL            | 83     |      | 69-120         | %REC  | 10                          | 12/13/2020 20:10   |

**Client:** Great Western Operating Company, LLC

**Date:** 23-Dec-20

**Project:** B Farms LD 18-034 HC

**Work Order:** 2012012

**Sample ID:** 18-034 HC D

**Lab ID:** 2012012-4

**Legal Location:**

**Matrix:** WATER

**Collection Date:** 11/30/2020 12:05

**Percent Moisture:**

| Analyses                            | Result | Qual | Report Limit  | Units | Dilution Factor              | Date Analyzed      |
|-------------------------------------|--------|------|---------------|-------|------------------------------|--------------------|
| <b>Gasoline Range Organics</b>      |        |      | <b>SW8015</b> |       | Prep Date: <b>12/14/2020</b> | PrepBy: <b>ASZ</b> |
| <b>GASOLINE RANGE ORGANICS</b>      | 2.9    |      | 0.1           | MG/L  | 1                            | 12/14/2020 17:49   |
| <i>Surr: 2,3,4-TRIFLUOROTOLUENE</i> | 100    |      | 80-120        | %REC  | 1                            | 12/14/2020 17:49   |

**Client:** Great Western Operating Company, LLC  
**Project:** B Farms LD 18-034 HC  
**Sample ID:** 18-034 HC E  
**Legal Location:**  
**Collection Date:** 11/30/2020 12:05

**Date:** 23-Dec-20  
**Work Order:** 2012012  
**Lab ID:** 2012012-5  
**Matrix:** WATER  
**Percent Moisture:**

| Analyses                               | Result       | Qual | Report Limit    | Units       | Dilution Factor              | Date Analyzed      |
|--|--------------|------|-----------------|-------------|------------------------------|--------------------|
| <b>Alkalinity as Calcium Carbonate</b> |              |      | <b>SM2320B</b>  |             | Prep Date: <b>12/11/2020</b> | PrepBy: <b>LMC</b> |
| BICARBONATE AS CaCO3                   | ND           |      | 500             | MG/L        | 1                            | 12/11/2020         |
| <b>CARBONATE AS CaCO3</b>              | <b>1100</b>  |      | <b>500</b>      | <b>MG/L</b> | 1                            | 12/11/2020         |
| <b>TOTAL ALKALINITY AS CaCO3</b>       | <b>11000</b> |      | <b>500</b>      | <b>MG/L</b> | 1                            | 12/11/2020         |
| <b>Ion Chromatography</b>              |              |      | <b>EPA300.0</b> |             | Prep Date: <b>12/4/2020</b>  | PrepBy: <b>KJS</b> |
| CHLORIDE                               | 730          |      | 10              | MG/L        | 50                           | 12/4/2020 14:39    |
| SULFATE                                | 350          |      | 5               | MG/L        | 5                            | 12/4/2020 15:05    |
| <b>Total Dissolved Solids</b>          |              |      | <b>SM2540C</b>  |             | Prep Date: <b>12/7/2020</b>  | PrepBy: <b>LMC</b> |
| <b>TOTAL DISSOLVED SOLIDS</b>          | <b>11000</b> |      | <b>1000</b>     | <b>MG/L</b> | 1                            | 12/10/2020         |

**Client:** Great Western Operating Company, LLC  
**Project:** B Farms LD 18-034 HC  
**Sample ID:** 18-034 HC F  
**Legal Location:**  
**Collection Date:** 11/30/2020 12:05

**Date:** 23-Dec-20  
**Work Order:** 2012012  
**Lab ID:** 2012012-6  
**Matrix:** WATER  
**Percent Moisture:**

| Analyses                         | Result  | Qual | Report Limit    | Units       | Dilution Factor             | Date Analyzed      |
|----------------------------------|---------|------|-----------------|-------------|-----------------------------|--------------------|
| <b>Dissolved Metals by 200.8</b> |         |      | <b>EPA200.8</b> |             | Prep Date: <b>12/7/2020</b> | PrepBy: <b>JML</b> |
| <b>CALCIUM</b>                   | 110000  |      | <b>1000</b>     | <b>UG/L</b> | 10                          | 12/8/2020 16:07    |
| <b>POTASSIUM</b>                 | 5400000 |      | <b>10000</b>    | <b>UG/L</b> | 100                         | 12/9/2020 12:50    |
| <b>MAGNESIUM</b>                 | ND      |      | <b>100</b>      | <b>UG/L</b> | 10                          | 12/8/2020 16:07    |
| <b>SODIUM</b>                    | 2000000 |      | <b>1000</b>     | <b>UG/L</b> | 10                          | 12/8/2020 16:07    |

**Client:** Great Western Operating Company, LLC  
**Project:** B Farms LD 18-034 HC  
**Sample ID:** 18-034 HC G  
**Legal Location:**  
**Collection Date:** 11/30/2020 12:05

**Date:** 23-Dec-20  
**Work Order:** 2012012  
**Lab ID:** 2012012-7  
**Matrix:** WATER  
**Percent Moisture:**

| Analyses                                 | Result  | Qual | Report Limit    | Units | Dilution Factor             | Date Analyzed      |
|--|---------|------|-----------------|-------|-----------------------------|--------------------|
| <b>Total Recoverable Metals by 200.8</b> |         |      | <b>EPA200.8</b> |       | Prep Date: <b>12/7/2020</b> | PrepBy: <b>JML</b> |
| <b>CALCIUM</b>                           | 150000  |      | 1000            | UG/L  | 10                          | 12/8/2020 16:10    |
| <b>POTASSIUM</b>                         | 5400000 |      | 10000           | UG/L  | 100                         | 12/9/2020 12:53    |
| <b>MAGNESIUM</b>                         | 110     |      | 100             | UG/L  | 10                          | 12/8/2020 16:10    |
| <b>SODIUM</b>                            | 2000000 |      | 1000            | UG/L  | 10                          | 12/8/2020 16:10    |

**Client:** Great Western Operating Company, LLC  
**Project:** B Farms LD 18-034 HC  
**Sample ID:** 18-034 HC G  
**Legal Location:**  
**Collection Date:** 11/30/2020 12:05

**Date:** 23-Dec-20  
**Work Order:** 2012012  
**Lab ID:** 2012012-7  
**Matrix:** WATER  
**Percent Moisture:**

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

**Explanation of Qualifiers**

**Radiochemistry:**

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

**Inorganics:**

- B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).
- U or ND - Indicates that the compound was analyzed for but not detected.
- E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.
- M - Duplicate injection precision was not met.
- N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.
- Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.
- \* - Duplicate analysis (relative percent difference) not within control limits.
- S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

**Organics:**

- U or ND - Indicates that the compound was analyzed for but not detected.
- B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.
- E - Analyte concentration exceeds the upper level of the calibration range.
- J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).
- A - A tentatively identified compound is a suspected aldol-condensation product.
- X - The analyte was diluted below an accurate quantitation level.
- \* - The spike recovery is equal to or outside the control criteria used.
- + - The relative percent difference (RPD) equals or exceeds the control criteria.
- G - A pattern resembling gasoline was detected in this sample.
- D - A pattern resembling diesel was detected in this sample.
- M - A pattern resembling motor oil was detected in this sample.
- C - A pattern resembling crude oil was detected in this sample.
- 4 - A pattern resembling JP-4 was detected in this sample.
- 5 - A pattern resembling JP-5 was detected in this sample.
- H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.
- L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.
- Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
  - gasoline
  - JP-8
  - diesel
  - mineral spirits
  - motor oil
  - Stoddard solvent
  - bunker C

ALS -- Fort Collins

Date: 12/23/2020 9:55:

Client: Great Western Operating Company, LLC  
 Work Order: 2012012  
 Project: B Farms LD 18-034 HC

QC BATCH REPORT

Batch ID: **HC201207-91-1** Instrument ID: **MEE-1** Method: **RSK175**

**LCS** Sample ID: **HC201207-91** Units: **UG/L** Analysis Date: **12/7/2020 10:14**

Client ID: Run ID: **HC201207-91A** Prep Date: **12/7/2020** DF: **1**

| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref Value | RPD | RPD Limit | Qual |
|---------|--------|-------------|---------|---------------|------|---------------|----------------|---------------|-----|-----------|------|
| METHANE | 166    | 1           | 142     |               | 117  | 76-125        |                |               |     | 25        |      |
| ETHANE  | 297    | 2           | 267     |               | 111  | 70-120        |                |               |     | 25        |      |
| PROPANE | 438    | 1           | 391     |               | 112  | 72-120        |                |               |     | 25        |      |

**LCSD** Sample ID: **HC201207-91** Units: **UG/L** Analysis Date: **12/7/2020 10:57**

Client ID: Run ID: **HC201207-91A** Prep Date: **12/7/2020** DF: **1**

| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref Value | RPD | RPD Limit | Qual |
|---------|--------|-------------|---------|---------------|------|---------------|----------------|---------------|-----|-----------|------|
| METHANE | 155    | 1           | 142     |               | 109  | 76-125        |                | 166           | 7   | 25        |      |
| ETHANE  | 271    | 2           | 267     |               | 102  | 70-120        |                | 297           | 9   | 25        |      |
| PROPANE | 393    | 1           | 391     |               | 100  | 72-120        |                | 438           | 11  | 25        |      |

**MB** Sample ID: **HC201207-91** Units: **UG/L** Analysis Date: **12/7/2020 10:18**

Client ID: Run ID: **HC201207-91A** Prep Date: **12/7/2020** DF: **1**

| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref Value | 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: 2012012  
 Project: B Farms LD 18-034 HC

# QC BATCH REPORT

Batch ID: **HC201209-81-1** Instrument ID: **FUELS-1** Method: **SW8015M**

| LCS                   |        | Sample ID: <b>HC201209-81</b> |         |               | Units: <b>MG/L</b>          |               | Analysis Date: <b>12/13/2020 19:07</b> |               |     |           |      |
|-----------------------|--------|-------------------------------|---------|---------------|-----------------------------|---------------|--|---------------|-----|-----------|------|
| Client ID:            |        | Run ID: <b>HC201213-81A</b>   |         |               | Prep Date: <b>12/9/2020</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 |
| Diesel Range Organics | 7.04   | 1.07                          | 8.33    |               | 85                          | 53-120        |  |               |     | 20        |      |
| Surr: O-TERPHENYL     | 1.58   |                               | 1.67    |               | 95                          | 69-120        |  |               |     |           |      |

| LCSD                  |        | Sample ID: <b>HC201209-81</b> |         |               | Units: <b>MG/L</b>          |               | Analysis Date: <b>12/13/2020 19:28</b> |               |     |           |      |
|-----------------------|--------|-------------------------------|---------|---------------|-----------------------------|---------------|--|---------------|-----|-----------|------|
| Client ID:            |        | Run ID: <b>HC201213-81A</b>   |         |               | Prep Date: <b>12/9/2020</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 |
| Diesel Range Organics | 6.88   | 1.07                          | 8.33    |               | 83                          | 53-120        |  | 7.04          | 2   | 20        |      |
| Surr: O-TERPHENYL     | 1.57   |                               | 1.67    |               | 94                          | 69-120        |  |               | 1   |           |      |

| MB                    |        | Sample ID: <b>HC201209-81</b> |     |  | Units: <b>MG/L</b>          |  | Analysis Date: <b>12/13/2020 14:14</b> |  |  |  |  |        |
|-----------------------|--------|-------------------------------|-----|--|-----------------------------|--|--|--|--|--|--|--------|
| Client ID:            |        | Run ID: <b>HC201213-81A</b>   |     |  | Prep Date: <b>12/9/2020</b> |  | DF: <b>1</b>                           |  |  |  |  |        |
| Analyte               | Result | ReportLimit                   |     |  |                             |  |  |  |  |  |  | Qual   |
| Diesel Range Organics | ND     | 1.1                           |     |  |                             |  |  |  |  |  |  |        |
| Surr: O-TERPHENYL     | 1.71   |                               | 102 |  |                             |  |  |  |  |  |  | 69-120 |

The following samples were analyzed in this batch:

Client: Great Western Operating Company, LLC  
 Work Order: 2012012  
 Project: B Farms LD 18-034 HC

# QC BATCH REPORT

Batch ID: **HC201214-61-1** Instrument ID: **FUELS-1** Method: **SW8015**

**LCS** Sample ID: **HC201214-61** Units: **MG/L** Analysis Date: **12/15/2020 01:45**  
 Client ID: Run ID: **HC201214-61A** Prep Date: **12/14/2020** DF: **1**

| Analyte                      | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref Value | RPD | RPD Limit | Qual |
|------------------------------|--------|-------------|---------|---------------|------|---------------|----------------|---------------|-----|-----------|------|
| GASOLINE RANGE ORGANICS      | 0.501  | 0.1         | 0.5     |               | 100  | 80-120        |                |               |     | 20        |      |
| Surr: 2,3,4-TRIFLUOROTOLUENE | 0.106  |             | 0.1     |               | 106  | 80-120        |                |               |     |           |      |

**MB** Sample ID: **HC201214-61** Units: **MG/L** Analysis Date: **12/14/2020 17:23**  
 Client ID: Run ID: **HC201214-61A** Prep Date: **12/14/2020** DF: **1**

| Analyte                      | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref Value | 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:

2012012-4

Client: Great Western Operating Company, LLC  
 Work Order: 2012012  
 Project: B Farms LD 18-034 HC

# QC BATCH REPORT

Batch ID: **IP201207-5-1** Instrument ID: **ICPMS2** Method: **EPA200.8**

| LCS        |        | Sample ID: <b>IM201207-5</b> |         |               | Units: <b>UG/L</b>          |               | Analysis Date: <b>12/8/2020 16:01</b> |               |     |           |      |
|------------|--------|------------------------------|---------|---------------|-----------------------------|---------------|---------------------------------------|---------------|-----|-----------|------|
| Client ID: |        | Run ID: <b>IM201208-10A7</b> |         |               | Prep Date: <b>12/7/2020</b> |               | DF: <b>10</b>                         |               |     |           |      |
| Analyte    | Result | ReportLimit                  | SPK Val | SPK Ref Value | %REC                        | Control Limit | Decision Level                        | RPD Ref Value | RPD | RPD Limit | Qual |
| CALCIUM    | 10800  | 1000                         | 10000   |               | 108                         | 85-115        |                                       |               |     | 20        |      |
| MAGNESIUM  | 10300  | 100                          | 10000   |               | 103                         | 85-115        |                                       |               |     | 20        |      |
| POTASSIUM  | 4990   | 1000                         | 5000    |               | 100                         | 85-115        |                                       |               |     | 20        |      |
| SODIUM     | 11200  | 1000                         | 10000   |               | 112                         | 85-115        |                                       |               |     | 20        |      |

| MB         |        | Sample ID: <b>FP201204-5</b> |      |  | Units: <b>UG/L</b>          |  | Analysis Date: <b>12/8/2020 15:55</b> |  |  |  |  |
|------------|--------|------------------------------|------|--|-----------------------------|--|---------------------------------------|--|--|--|--|
| Client ID: |        | Run ID: <b>IM201208-10A7</b> |      |  | Prep Date: <b>12/7/2020</b> |  | DF: <b>10</b>                         |  |  |  |  |
| Analyte    | Result | ReportLimit                  | Qual |  |                             |  |                                       |  |  |  |  |
| CALCIUM    | ND     | 1000                         |      |  |                             |  |                                       |  |  |  |  |
| MAGNESIUM  | ND     | 100                          |      |  |                             |  |                                       |  |  |  |  |
| POTASSIUM  | ND     | 1000                         |      |  |                             |  |                                       |  |  |  |  |
| SODIUM     | ND     | 1000                         |      |  |                             |  |                                       |  |  |  |  |

| MB         |        | Sample ID: <b>IP201207-5</b> |      |  | Units: <b>UG/L</b>          |  | Analysis Date: <b>12/8/2020 15:58</b> |  |  |  |  |
|------------|--------|------------------------------|------|--|-----------------------------|--|---------------------------------------|--|--|--|--|
| Client ID: |        | Run ID: <b>IM201208-10A7</b> |      |  | Prep Date: <b>12/7/2020</b> |  | DF: <b>10</b>                         |  |  |  |  |
| Analyte    | Result | ReportLimit                  | Qual |  |                             |  |                                       |  |  |  |  |
| CALCIUM    | ND     | 1000                         |      |  |                             |  |                                       |  |  |  |  |
| MAGNESIUM  | ND     | 100                          |      |  |                             |  |                                       |  |  |  |  |
| POTASSIUM  | ND     | 1000                         |      |  |                             |  |                                       |  |  |  |  |
| SODIUM     | ND     | 1000                         |      |  |                             |  |                                       |  |  |  |  |

The following samples were analyzed in this batch: 2012012-6      2012012-7

Client: Great Western Operating Company, LLC

Work Order: 2012012

Project: B Farms LD 18-034 HC

# QC BATCH REPORT

Batch ID: VL201207-3-4

Instrument ID: HPV3

Method: SW8260\_25

| LCS                        |        | Sample ID: VL201207-3 |         |               | Units: %REC          |               | Analysis Date: 12/7/2020 13:26 |               |     |           |      |
|----------------------------|--------|-----------------------|---------|---------------|----------------------|---------------|--------------------------------|---------------|-----|-----------|------|
| Client ID:                 |        | Run ID: VL201207-33A  |         |               | Prep Date: 12/7/2020 |               | DF: 1                          |               |     |           |      |
| Analyte                    | Result | ReportLimit           | SPK Val | SPK Ref Value | %REC                 | Control Limit | Decision Level                 | RPD Ref Value | RPD | RPD Limit | Qual |
| Surr: 4-BROMOFLUOROBENZENE | 24.9   |                       | 25      |               | 100                  | 80-120        |                                |               |     |           |      |
| Surr: DIBROMOFLUOROMETHANE | 25.3   |                       | 25      |               | 101                  | 80-120        |                                |               |     |           |      |
| Surr: TOLUENE-D8           | 24.7   |                       | 25      |               | 99                   | 80-120        |                                |               |     |           |      |
| BENZENE                    | 9.48   | 1                     | 10      |               | 95                   | 80-120        |                                |               |     | 20        |      |
| TOLUENE                    | 9.4    | 1                     | 10      |               | 94                   | 80-120        |                                |               |     | 20        |      |
| ETHYLBENZENE               | 9.76   | 1                     | 10      |               | 98                   | 80-120        |                                |               |     | 20        |      |
| M+P-XYLENE                 | 19.4   | 1                     | 20      |               | 97                   | 80-120        |                                |               |     | 20        |      |
| O-XYLENE                   | 9.38   | 1                     | 10      |               | 94                   | 80-120        |                                |               |     | 20        |      |

| LCSD                       |        | Sample ID: VL201207-3 |         |               | Units: %REC          |               | Analysis Date: 12/7/2020 15:48 |               |     |           |      |
|----------------------------|--------|-----------------------|---------|---------------|----------------------|---------------|--------------------------------|---------------|-----|-----------|------|
| Client ID:                 |        | Run ID: VL201207-33A  |         |               | Prep Date: 12/7/2020 |               | DF: 1                          |               |     |           |      |
| Analyte                    | Result | ReportLimit           | SPK Val | SPK Ref Value | %REC                 | Control Limit | Decision Level                 | RPD Ref Value | RPD | RPD Limit | Qual |
| Surr: 4-BROMOFLUOROBENZENE | 24.8   |                       | 25      |               | 99                   | 80-120        |                                |               | 0   |           |      |
| Surr: DIBROMOFLUOROMETHANE | 25.4   |                       | 25      |               | 102                  | 80-120        |                                |               | 1   |           |      |
| Surr: TOLUENE-D8           | 25     |                       | 25      |               | 100                  | 80-120        |                                |               | 1   |           |      |
| BENZENE                    | 11.1   | 1                     | 10      |               | 111                  | 80-120        |                                | 9.48          | 16  | 20        |      |
| TOLUENE                    | 10.7   | 1                     | 10      |               | 107                  | 80-120        |                                | 9.4           | 13  | 20        |      |
| ETHYLBENZENE               | 11     | 1                     | 10      |               | 110                  | 80-120        |                                | 9.76          | 12  | 20        |      |
| M+P-XYLENE                 | 21.8   | 1                     | 20      |               | 109                  | 80-120        |                                | 19.4          | 12  | 20        |      |
| O-XYLENE                   | 10.9   | 1                     | 10      |               | 109                  | 80-120        |                                | 9.38          | 15  | 20        |      |

| MB                         |        | Sample ID: VL201207-3 |         |               | Units: %REC          |               | Analysis Date: 12/7/2020 16:08 |               |     |           |      |
|----------------------------|--------|-----------------------|---------|---------------|----------------------|---------------|--------------------------------|---------------|-----|-----------|------|
| Client ID:                 |        | Run ID: VL201207-33A  |         |               | Prep Date: 12/7/2020 |               | DF: 1                          |               |     |           |      |
| Analyte                    | Result | ReportLimit           | SPK Val | SPK Ref Value | %REC                 | Control Limit | Decision Level                 | RPD Ref Value | RPD | RPD Limit | Qual |
| Surr: 4-BROMOFLUOROBENZENE | 24.8   |                       | 25      |               | 99                   | 80-120        |                                |               |     |           |      |
| Surr: DIBROMOFLUOROMETHANE | 25.4   |                       | 25      |               | 102                  | 80-120        |                                |               |     |           |      |
| Surr: TOLUENE-D8           | 25     |                       | 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:

2012012-2

Client: Great Western Operating Company, LLC  
 Work Order: 2012012  
 Project: B Farms LD 18-034 HC

# QC BATCH REPORT

Batch ID: **AK201211-1-1** Instrument ID: **NONE** Method: **SM2320B**

| LCS                       |        | Sample ID: <b>AK201211-1</b> |         |               | Units: <b>MG/L</b>           |               | Analysis Date: <b>12/11/2020</b> |               |     |           |      |
|---------------------------|--------|------------------------------|---------|---------------|------------------------------|---------------|----------------------------------|---------------|-----|-----------|------|
| Client ID:                |        | Run ID: <b>AK201211-1A1</b>  |         |               | Prep Date: <b>12/11/2020</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 ALKALINITY AS CaCO3 | 96     | 5                            | 100     |               | 96                           | 85-115        |                                  |               |     | 15        |      |

| LCSD                      |        | Sample ID: <b>AK201211-1</b> |         |               | Units: <b>MG/L</b>           |               | Analysis Date: <b>12/11/2020</b> |               |     |           |      |
|---------------------------|--------|------------------------------|---------|---------------|------------------------------|---------------|----------------------------------|---------------|-----|-----------|------|
| Client ID:                |        | Run ID: <b>AK201211-1A1</b>  |         |               | Prep Date: <b>12/11/2020</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 ALKALINITY AS CaCO3 | 95.8   | 5                            | 100     |               | 96                           | 85-115        |                                  | 96            | 0   | 15        |      |

| MB                        |        | Sample ID: <b>AK201211-1</b> |  |  | Units: <b>MG/L</b>           |  | Analysis Date: <b>12/11/2020</b> |  |  |  |  |      |
|---------------------------|--------|------------------------------|--|--|------------------------------|--|----------------------------------|--|--|--|--|------|
| Client ID:                |        | Run ID: <b>AK201211-1A1</b>  |  |  | Prep Date: <b>12/11/2020</b> |  | DF: <b>1</b>                     |  |  |  |  |      |
| Analyte                   | Result | ReportLimit                  |  |  |                              |  |                                  |  |  |  |  | Qual |
| BICARBONATE AS CaCO3      | ND     | 5                            |  |  |                              |  |                                  |  |  |  |  |      |
| CARBONATE AS CaCO3        | ND     | 5                            |  |  |                              |  |                                  |  |  |  |  |      |
| TOTAL ALKALINITY AS CaCO3 | ND     | 5                            |  |  |                              |  |                                  |  |  |  |  |      |

The following samples were analyzed in this batch:

Client: Great Western Operating Company, LLC  
 Work Order: 2012012  
 Project: B Farms LD 18-034 HC

# QC BATCH REPORT

Batch ID: **IC201204-1-1** Instrument ID: **IC3** Method: **EPA300.0**

| LCS        |        | Sample ID: <b>IC201204-1</b> |         |               | Units: <b>MG/L</b>          |               | Analysis Date: <b>12/4/2020 07:32</b> |               |     |           |      |
|------------|--------|------------------------------|---------|---------------|-----------------------------|---------------|---------------------------------------|---------------|-----|-----------|------|
| Client ID: |        | Run ID: <b>IC201204-1A1</b>  |         |               | Prep Date: <b>12/4/2020</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 |
| CHLORIDE   | 9.73   | 0.2                          | 10      |               | 97                          | 90-110        |                                       |               |     | 15        |      |
| SULFATE    | 48.1   | 1                            | 50      |               | 96                          | 90-110        |                                       |               |     | 15        |      |

| LCSD       |        | Sample ID: <b>IC201204-1</b> |         |               | Units: <b>MG/L</b>          |               | Analysis Date: <b>12/4/2020 10:10</b> |               |     |           |      |
|------------|--------|------------------------------|---------|---------------|-----------------------------|---------------|---------------------------------------|---------------|-----|-----------|------|
| Client ID: |        | Run ID: <b>IC201204-1A1</b>  |         |               | Prep Date: <b>12/4/2020</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 |
| CHLORIDE   | 9.76   | 0.2                          | 10      |               | 98                          | 90-110        |                                       | 9.73          | 0   | 15        |      |
| SULFATE    | 48.1   | 1                            | 50      |               | 96                          | 90-110        |                                       | 48.1          | 0   | 15        |      |

| MB         |        | Sample ID: <b>IC201204-1</b> |      |  | Units: <b>MG/L</b>          |  | Analysis Date: <b>12/4/2020 07:45</b> |  |  |  |  |
|------------|--------|------------------------------|------|--|-----------------------------|--|---------------------------------------|--|--|--|--|
| Client ID: |        | Run ID: <b>IC201204-1A1</b>  |      |  | Prep Date: <b>12/4/2020</b> |  | DF: <b>1</b>                          |  |  |  |  |
| Analyte    | Result | ReportLimit                  | Qual |  |                             |  |                                       |  |  |  |  |
| CHLORIDE   | ND     | 0.2                          |      |  |                             |  |                                       |  |  |  |  |
| SULFATE    | ND     | 1                            |      |  |                             |  |                                       |  |  |  |  |

| MS                            |        | Sample ID: <b>2012012-5</b> |         |               | Units: <b>MG/L</b>          |               | Analysis Date: <b>12/4/2020 14:52</b> |               |     |           |      |
|-------------------------------|--------|-----------------------------|---------|---------------|-----------------------------|---------------|---------------------------------------|---------------|-----|-----------|------|
| Client ID: <b>18-034 HC E</b> |        | Run ID: <b>IC201204-1A1</b> |         |               | Prep Date: <b>12/4/2020</b> |               | DF: <b>50</b>                         |               |     |           |      |
| Analyte                       | Result | ReportLimit                 | SPK Val | SPK Ref Value | %REC                        | Control Limit | Decision Level                        | RPD Ref Value | RPD | RPD Limit | Qual |
| CHLORIDE                      | 998    | 10                          | 250     | 730           | 107                         | 85-115        |                                       |               |     | 15        |      |
| SULFATE                       | 445    | 5                           | 100     | 350           | 98                          | 85-115        |                                       |               |     | 15        |      |

The following samples were analyzed in this batch:

Client: Great Western Operating Company, LLC  
 Work Order: 2012012  
 Project: B Farms LD 18-034 HC

# QC BATCH REPORT

Batch ID: **TD201207-1-1** Instrument ID: **Balance** Method: **SM2540C**

| LCS                    |        | Sample ID: TD201207-1 | Units: MG/L |               |                      |               | Analysis Date: 12/10/2020 |               |     |           |      |
|------------------------|--------|-----------------------|-------------|---------------|----------------------|---------------|---------------------------|---------------|-----|-----------|------|
| Client ID:             |        | Run ID: AK201210-1A1  |             |               | Prep Date: 12/7/2020 |               | 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 | 400    | 20                    | 400         |               | 100                  | 85-115        |                           |               |     | 14        |      |

| LCSD                   |        | Sample ID: TD201207-1 | Units: MG/L |               |                      |               | Analysis Date: 12/10/2020 |               |     |           |      |
|------------------------|--------|-----------------------|-------------|---------------|----------------------|---------------|---------------------------|---------------|-----|-----------|------|
| Client ID:             |        | Run ID: AK201210-1A1  |             |               | Prep Date: 12/7/2020 |               | 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 | 406    | 20                    | 400         |               | 101                  | 85-115        |                           | 400           | 1   | 14        |      |

| MB                     |        | Sample ID: TD201207-1 | Units: MG/L |  |                      |  | Analysis Date: 12/10/2020 |  |  |  |  |
|------------------------|--------|-----------------------|-------------|--|----------------------|--|---------------------------|--|--|--|--|
| Client ID:             |        | Run ID: AK201210-1A1  |             |  | Prep Date: 12/7/2020 |  | DF: 1                     |  |  |  |  |
| Analyte                | Result | ReportLimit           | Qual        |  |                      |  |                           |  |  |  |  |
| TOTAL DISSOLVED SOLIDS | ND     | 20                    |             |  |                      |  |                           |  |  |  |  |

The following samples were analyzed in this batch:

## CONTROLLED NON-CONFORMANCE REPORT

### Non-Conformance

**Initiated By:** Aaron S. Ziegler on 12/22/2020

**Event Type:** Lab Contamination

**Event Explanation:** Sample 2012012-4 had a large peak outside of the GRO range, this caused a large interference to subsequent samples. Carry over peaks may have contributed to an elevated concentration in other samples. The GRO concentrations were confirmed by the 8260 analysis. Two passing CCV's before and after sample analysis were reported and samples suspected of this large interference will be screened at a larger dilution going forward. Samples could not be rerun due to limited sample volume.

**Action To**

**Prevent Reccurence:** Not Applicable

### Corrective Action

**Corrective Action:** Document in Narrative

**Department Manager Approval:**

**Approval Date:**

**Corrective Action Comments:**

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

| Workorder -- Procedure | Approved By                    | Approval Date |
|------------------------|--------------------------------|---------------|
| 2012012 -- SW8015      | No client contact information. | PENDING       |
| 2012022 -- SW8015      |                                |               |
| 2012023 -- SW8015      |                                |               |
| 2012024 -- SW8015      |                                |               |
| 2012076 -- SW8015      |                                |               |

### Associated Batches

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

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

|                                    |
|------------------------------------|
| HC201214-61A created on 12/14/2020 |
|------------------------------------|

**Not Applicable**

### NCR Approval

**Project Manager Approval:**

**Department Manager Approval:**

**QA Manager Approval:**