



Thursday, May 26, 2022

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

Re: ALS Workorder: 2205284
Project Name: Kodak 34-44BH
Project Number:

Dear Mr. Trehus:

Two water samples were received from Great Western Operating Company, LLC, on 5/13/2022. 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,

For
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 |
| Arizona | AZ0828 |
| California (CA) | 2926 |
| Colorado (CO) | CO01099 |
| Florida (FL) | E87914 |
| Idaho (ID) | CO01099 |
| Kansas (KS) | E-10381 |
| Kentucky (KY) | 90137 |
| Oklahoma | 1301 |
| Maryland (MD) | 285 |
| Missouri (MO) | 175 |
| Nebraska(NE) | NE-OS-24-13 |
| Nevada (NV) | CO010992018-1 |
| New York (NY) | 12036 |
| North Dakota (ND) | R-057 |
| Oklahoma (OK) | 1301 |
| Pennsylvania (PA) | 68-03116 |
| Tennessee (TN) | TN02976 |
| Texas (TX) | T104704241 |
| Utah (UT) | CO01099 |
| Washington (WA) | C1280 |
| Virginia | 460305 |

40 CFR Part 136: All analyses for Clean Water Act samples are analyzed using the 40 CFR Part 136 specified method and include all the QC requirements.



2205284

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 samples were analyzed following Methods for the Determination of Metals in Environmental Samples – Supplement 1 procedures. Analysis by Trace ICP followed method 200.7 and the current revision of SOP 834.

Sample 2205284-2 was to be analyzed for dissolved metals. The sample 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.

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Sample Number(s) Cross-Reference Table

OrderNum: 2205284

Client Name: PDC Energy

Client Project Name: Kodak 34-44BH

Client Project Number:

Client PO Number:

| Client Sample Number | Lab Sample Number | COC Number | Matrix | Date Collected | Time Collected |
|----------------------|-------------------|------------|--------|----------------|----------------|
| 34-44A | 2205284-1 | | WATER | 12-May-22 | 12:21 |
| 34-44B | 2205284-2 | | WATER | 12-May-22 | 12:21 |



ALS Environmental

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

Chain-of-Custody

Form 202a6

| | | | | | | | | |
|--------------------|--------------------|--|--------------------|------------|--|-------------|----------------------------|--|
| PROJECT NAME | Kodak 3A-44-BH | | SAMPLER | Max Trehus | | WORKORDER # | 2205284 | |
| PROJECT No. | | | SITE ID | | | PAGE | of | |
| COMPANY NAME | PDC | | EDD FORMAT | | | DISPOSAL | By Lab or Return to Client | |
| SEND REPORT TO | Max Trehus | | PURCHASE ORDER | | | | | |
| ADDRESS | | | BILL TO COMPANY | | | | | |
| CITY / STATE / ZIP | | | INVOICE ATTN TO | | | | | |
| PHONE | | | ADDRESS | | | | | |
| FAX | | | CITY / STATE / ZIP | | | | | |
| E-MAIL | max.trehus@pdc.com | | PHONE | | | | | |
| | | | FAX | | | | | |
| | | | E-MAIL | | | | | |

| Lab ID | Field ID | Matrix | Sample Date | Sample Time | # Bottles | Pres. | QC | TURNAROUND DATE | SIGNATURE | PRINTED NAME | DATE | TIME |
|--------|----------|--------|-------------|-------------|-----------|-------|----|-----------------|-----------|--------------|------|------|
| | 3A-44A | W | 5/12/22 | 12:21 | 3 | - | | | | | | |
| | 3A-44A | | | | 3 | 1 | | | | | | |
| | 3A-44A | | | | 3 | 1 | | | | | | |
| | 3A-44A | | | | 3 | 1 | | | | | | |
| | 3A-44A | | | | 1 | - | | | | | | |
| | 3A-44D | | | | 1 | - | | | | | | |
| | 3A-44A | | | | 1 | 2 | | | | | | |

| | | | | |
|-----------------|--------------------|--------------|---------|-------|
| RELINQUISHED BY | SIGNATURE | PRINTED NAME | DATE | TIME |
| RECEIVED BY | <i>Max Trehus</i> | Max Trehus | 5/13/22 | 13:05 |
| RELINQUISHED BY | <i>Chia Tennes</i> | Chia Tennes | 5/13/22 | 13:05 |
| RECEIVED BY | | | | |
| RELINQUISHED BY | | | | |
| RECEIVED BY | | | | |

*Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter
 For metals or anions, please detail analytes below.

Comments:

Facility ID: 289735

S.3°

QC PACKAGE (check below)

LEVEL II (Standard QC)

LEVEL III (Std QC + forms)

LEVEL IV (Std QC + forms + raw data)

Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035



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CONDITION OF SAMPLE UPON RECEIPT FORM

Client: PDC

Workorder No: 2205284

Project Manager: _____

Initials: CXT

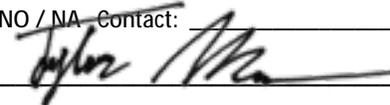
Date: 5/13/2022

| | | 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? | | | RAD ONLY |
| | IR gun used*: #5 | | | |
| | Cooler #: <u>1</u> | | | |
| | Temperature (°C): <u>5.3</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>NA</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 CT

If applicable, was the client contacted? YES / NO / NA Contact: _____ Date/Time: _____

Project Manager Signature / Date:  5/16/22

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SAMPLE SUMMARY REPORT

Client: PDC Energy
 Project: Kodak 34-44BH
 Sample ID: 34-44A
 Legal Location:
 Collection Date: 5/12/2022 12:21

Date: 26-May-22
 Work Order: 2205284
 Lab ID: 2205284-1
 Matrix: WATER
 Percent Moisture:

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|--|--------|------|------------------|-------|-----------------------------|--------------------|
| Alkalinity as Calcium Carbonate | | | SM2320B | | Prep Date: 5/18/2022 | PrepBy: KRL |
| BICARBONATE AS CaCO3 | 330 | | 20 | MG/L | 1 | 5/19/2022 |
| CARBONATE AS CaCO3 | 410 | | 20 | MG/L | 1 | 5/19/2022 |
| TOTAL ALKALINITY AS CaCO3 | 740 | | 20 | MG/L | 1 | 5/19/2022 |
| Diesel Range Organics | | | SW8015M | | Prep Date: 5/20/2022 | PrepBy: JRS |
| Diesel Range Organics | 10 | | 1 | MG/L | 1 | 5/23/2022 21:19 |
| Surr: O-TERPHENYL | 99 | | 69-120 | %REC | 1 | 5/23/2022 21:19 |
| Dissolved Gasses | | | RSK175 | | Prep Date: 5/20/2022 | PrepBy: JRS |
| METHANE | 15000 | | 1 | UG/L | 1 | 5/23/2022 14:14 |
| ETHANE | 1100 | | 2 | UG/L | 1 | 5/23/2022 14:14 |
| PROPANE | 1400 | | 1 | UG/L | 1 | 5/23/2022 14:14 |
| Gasoline Range Organics | | | SW8015 | | Prep Date: 5/20/2022 | PrepBy: JRS |
| GASOLINE RANGE ORGANICS | 1.4 | | 0.1 | MG/L | 1 | 5/25/2022 23:20 |
| Surr: 2,3,4-TRIFLUOROTOLUENE | 80 | | 80-120 | %REC | 1 | 5/25/2022 23:20 |
| GC/MS Volatiles | | | SW8260_25 | | Prep Date: 5/19/2022 | PrepBy: TWK |
| BENZENE | 370 | | 10 | UG/L | 10 | 5/19/2022 18:49 |
| TOLUENE | ND | | 10 | UG/L | 10 | 5/19/2022 18:49 |
| ETHYLBENZENE | 69 | | 10 | UG/L | 10 | 5/19/2022 18:49 |
| M+P-XYLENE | 210 | | 10 | UG/L | 10 | 5/19/2022 18:49 |
| O-XYLENE | ND | | 10 | UG/L | 10 | 5/19/2022 18:49 |
| TOTAL XYLENES | 210 | | 1 | UG/L | 1 | 5/19/2022 18:49 |
| Surr: 4-BROMOFLUOROBENZENE | 100 | | 80-120 | %REC | 10 | 5/19/2022 18:49 |
| Surr: DIBROMOFLUOROMETHANE | 102 | | 80-120 | %REC | 10 | 5/19/2022 18:49 |
| Surr: TOLUENE-D8 | 97 | | 80-120 | %REC | 10 | 5/19/2022 18:49 |
| Ion Chromatography | | | EPA300.0 | | Prep Date: 5/17/2022 | PrepBy: AOW |
| CHLORIDE | 160 | | 4 | MG/L | 20 | 5/17/2022 14:26 |
| SULFATE | ND | | 20 | MG/L | 20 | 5/17/2022 14:26 |
| Total Recoverable Metals by 200.7 | | | EPA200.7 | | Prep Date: 5/18/2022 | PrepBy: ETC |
| CALCIUM | ND | | 10 | MG/L | 10 | 5/23/2022 14:04 |
| POTASSIUM | ND | | 10 | MG/L | 10 | 5/23/2022 14:04 |
| MAGNESIUM | ND | | 10 | MG/L | 10 | 5/23/2022 14:04 |
| SODIUM | 460 | | 10 | MG/L | 10 | 5/23/2022 14:04 |
| Total Dissolved Solids | | | SM2540C | | Prep Date: 5/17/2022 | PrepBy: KRL |
| TOTAL DISSOLVED SOLIDS | 1600 | | 40 | MG/L | 1 | 5/19/2022 |

Client: PDC Energy
Project: Kodak 34-44BH
Sample ID: 34-44B
Legal Location:
Collection Date: 5/12/2022 12:21

Date: 26-May-22
Work Order: 2205284
Lab ID: 2205284-2
Matrix: WATER
Percent Moisture:

| Analyses | Result | Qual | Report Limit | Units | Dilution Factor | Date Analyzed |
|----------------------------------|------------|------|-----------------|----------------|-----------------------------|--------------------|
| Dissolved Metals by 200.7 | | | EPA200.7 | | Prep Date: 5/18/2022 | PrepBy: ETC |
| CALCIUM | ND | | | 10 MG/L | 10 | 5/23/2022 14:07 |
| POTASSIUM | ND | | | 10 MG/L | 10 | 5/23/2022 14:07 |
| MAGNESIUM | ND | | | 10 MG/L | 10 | 5/23/2022 14:07 |
| SODIUM | 480 | | | 10 MG/L | 10 | 5/23/2022 14:07 |

Client: PDC Energy
Project: Kodak 34-44BH
Sample ID: 34-44B
Legal Location:
Collection Date: 5/12/2022 12:21

Date: 26-May-22
Work Order: 2205284
Lab ID: 2205284-2
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: 5/26/2022 2:45:3

Client: PDC Energy
 Work Order: 2205284
 Project: Kodak 34-44BH

QC BATCH REPORT

Batch ID: **HC220520-61-1** Instrument ID: **FUELS-1** Method: **SW8015**

LCS Sample ID: **HC220520-61** Units: **MG/L** Analysis Date: **5/23/2022 14:38**

Client ID: Run ID: **HC220526-61A** Prep Date: **5/20/2022** 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 | 0.458 | 0.1 | 0.5 | | 92 | 80-120 | | | | 20 | |
| Surr: 2,3,4-TRIFLUOROTOLUENE | 0.0983 | | 0.1 | | 98 | 80-120 | | | | | |

LCSD Sample ID: **HC220520-61** Units: **MG/L** Analysis Date: **5/23/2022 17:47**

Client ID: Run ID: **HC220526-61A** Prep Date: **5/20/2022** 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 | 0.464 | 0.1 | 0.5 | | 93 | 80-120 | | 0.458 | 1 | 20 | |
| Surr: 2,3,4-TRIFLUOROTOLUENE | 0.107 | | 0.1 | | 107 | 80-120 | | | 8 | | |

MB Sample ID: **HC220520-61** Units: **MG/L** Analysis Date: **5/23/2022 14:54**

Client ID: Run ID: **HC220526-61A** Prep Date: **5/20/2022** 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 | 0.106 | | | | 106 | 80-120 | | | | | |

The following samples were analyzed in this batch:

Client: PDC Energy
 Work Order: 2205284
 Project: Kodak 34-44BH

QC BATCH REPORT

Batch ID: **HC220520-81-1** Instrument ID: **FUELS-1** Method: **SW8015M**

| LCS | | Sample ID: HC220520-81 | | | Units: MG/L | | Analysis Date: 5/23/2022 16:39 | | | | |
|-----------------------|--------|-------------------------------|---------|---------------|-----------------------------|---------------|---------------------------------------|---------------|-----|-----------|------|
| Client ID: | | Run ID: HC220523-81A | | | Prep Date: 5/20/2022 | | DF: 1 | | | | |
| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref Value | RPD | RPD Limit | Qual |
| Diesel Range Organics | 9.07 | 1.07 | 8.33 | | 109 | 53-120 | | | | 20 | |
| Surr: O-TERPHENYL | 1.65 | | 1.67 | | 99 | 69-120 | | | | | |

| LCSD | | Sample ID: HC220520-81 | | | Units: MG/L | | Analysis Date: 5/23/2022 17:01 | | | | |
|-----------------------|--------|-------------------------------|---------|---------------|-----------------------------|---------------|---------------------------------------|---------------|-----|-----------|------|
| Client ID: | | Run ID: HC220523-81A | | | Prep Date: 5/20/2022 | | DF: 1 | | | | |
| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref Value | RPD | RPD Limit | Qual |
| Diesel Range Organics | 9 | 1.07 | 8.33 | | 108 | 53-120 | | 9.07 | 1 | 20 | |
| Surr: O-TERPHENYL | 1.63 | | 1.67 | | 98 | 69-120 | | | 1 | | |

| MB | | Sample ID: HC220520-81 | | | Units: MG/L | | Analysis Date: 5/23/2022 15:57 | | | | | |
|-----------------------|--------|-------------------------------|--|--|-----------------------------|--------|---------------------------------------|--|--|--|--|------|
| Client ID: | | Run ID: HC220523-81A | | | Prep Date: 5/20/2022 | | DF: 1 | | | | | |
| Analyte | Result | ReportLimit | | | | | | | | | | Qual |
| Diesel Range Organics | ND | 1.1 | | | | | | | | | | |
| Surr: O-TERPHENYL | 1.63 | | | | 98 | 69-120 | | | | | | |

The following samples were analyzed in this batch:

Client: PDC Energy
 Work Order: 2205284
 Project: Kodak 34-44BH

QC BATCH REPORT

Batch ID: **HC220520-91-1** Instrument ID: **MEE-1** Method: **RSK175**

| LCS | | Sample ID: HC220520-91 | | | Units: UG/L | | Analysis Date: 5/23/2022 12:21 | | | | |
|------------|--------|-------------------------------|---------|---------------|-----------------------------|---------------|---------------------------------------|---------------|-----|-----------|------|
| Client ID: | | Run ID: HC220520-91A | | | Prep Date: 5/20/2022 | | DF: 1 | | | | |
| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref Value | RPD | RPD Limit | Qual |
| METHANE | 154 | 1 | 142 | | 108 | 76-125 | | | | 25 | |
| ETHANE | 296 | 2 | 267 | | 111 | 70-120 | | | | 25 | |
| PROPANE | 440 | 1 | 391 | | 112 | 72-120 | | | | 25 | |

| LCSD | | Sample ID: HC220520-91 | | | Units: UG/L | | Analysis Date: 5/23/2022 13:38 | | | | |
|------------|--------|-------------------------------|---------|---------------|-----------------------------|---------------|---------------------------------------|---------------|-----|-----------|------|
| Client ID: | | Run ID: HC220520-91A | | | Prep Date: 5/20/2022 | | DF: 1 | | | | |
| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref Value | RPD | RPD Limit | Qual |
| METHANE | 160 | 1 | 142 | | 112 | 76-125 | | 154 | 4 | 25 | |
| ETHANE | 303 | 2 | 267 | | 114 | 70-120 | | 296 | 2 | 25 | |
| PROPANE | 448 | 1 | 391 | | 114 | 72-120 | | 440 | 2 | 25 | |

| MB | | Sample ID: HC220520-91 | | | Units: UG/L | | Analysis Date: 5/23/2022 12:26 | | | | | |
|------------|--------|-------------------------------|--|--|-----------------------------|--|---------------------------------------|--|--|--|--|------|
| Client ID: | | Run ID: HC220520-91A | | | Prep Date: 5/20/2022 | | DF: 1 | | | | | |
| Analyte | Result | ReportLimit | | | | | | | | | | Qual |
| METHANE | ND | 1 | | | | | | | | | | |
| ETHANE | ND | 2 | | | | | | | | | | |
| PROPANE | ND | 1 | | | | | | | | | | |

The following samples were analyzed in this batch:

Client: PDC Energy
 Work Order: 2205284
 Project: Kodak 34-44BH

QC BATCH REPORT

Batch ID: IP220518-2-3 Instrument ID: ICP5900 Method: EPA200.7

| LCS | | Sample ID: IP220518-2 | | | Units: MG/L | | | Analysis Date: 5/23/2022 13:49 | | | |
|------------|--------|-----------------------|---------|---------------|----------------------|---------------|----------------|--------------------------------|-----|-----------|------|
| Client ID: | | Run ID: IT220523-1A3 | | | Prep Date: 5/18/2022 | | | DF: 1 | | | |
| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref Value | RPD | RPD Limit | Qual |
| CALCIUM | 39.2 | 1 | 40 | | 98 | 85-115 | | | | 20 | |
| MAGNESIUM | 38.2 | 1 | 40 | | 95 | 85-115 | | | | 20 | |
| POTASSIUM | 39.7 | 1 | 40 | | 99 | 85-115 | | | | 20 | |
| SODIUM | 40.3 | 1 | 40 | | 101 | 85-115 | | | | 20 | |

| LCSD | | Sample ID: IP220518-2 | | | Units: MG/L | | | Analysis Date: 5/23/2022 13:50 | | | |
|------------|--------|-----------------------|---------|---------------|----------------------|---------------|----------------|--------------------------------|-----|-----------|------|
| Client ID: | | Run ID: IT220523-1A3 | | | Prep Date: 5/18/2022 | | | DF: 1 | | | |
| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref Value | RPD | RPD Limit | Qual |
| CALCIUM | 39.1 | 1 | 40 | | 98 | 85-115 | | 39.2 | 0 | 20 | |
| MAGNESIUM | 38.2 | 1 | 40 | | 95 | 85-115 | | 38.2 | 0 | 20 | |
| POTASSIUM | 39.9 | 1 | 40 | | 100 | 85-115 | | 39.7 | 0 | 20 | |
| SODIUM | 40.6 | 1 | 40 | | 101 | 85-115 | | 40.3 | 1 | 20 | |

| MB | | Sample ID: IP220518-2 | | | Units: MG/L | | | Analysis Date: 5/23/2022 15:11 | | | | |
|------------|--------|-----------------------|--|--|----------------------|--|--|--------------------------------|--|--|--|------|
| Client ID: | | Run ID: IT220523-1A3 | | | Prep Date: 5/18/2022 | | | 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: PDC Energy
 Work Order: 2205284
 Project: Kodak 34-44BH

QC BATCH REPORT

Batch ID: **IP220518-2-4** Instrument ID: **ICP5900** Method: **EPA200.7**

| LCS | | Sample ID: IP220518-2 | | | Units: MG/L | | Analysis Date: 5/23/2022 13:49 | | | | |
|------------|--------|------------------------------|---------|---------------|-----------------------------|---------------|---------------------------------------|---------------|-----|-----------|------|
| Client ID: | | Run ID: IT220523-1A3 | | | Prep Date: 5/18/2022 | | DF: 1 | | | | |
| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref Value | RPD | RPD Limit | Qual |
| CALCIUM | 39.2 | 1 | 40 | | 98 | 85-115 | | | | 20 | |
| MAGNESIUM | 38.2 | 1 | 40 | | 95 | 85-115 | | | | 20 | |
| POTASSIUM | 39.7 | 1 | 40 | | 99 | 85-115 | | | | 20 | |
| SODIUM | 40.3 | 1 | 40 | | 101 | 85-115 | | | | 20 | |

| LCSD | | Sample ID: IP220518-2 | | | Units: MG/L | | Analysis Date: 5/23/2022 13:50 | | | | |
|------------|--------|------------------------------|---------|---------------|-----------------------------|---------------|---------------------------------------|---------------|-----|-----------|------|
| Client ID: | | Run ID: IT220523-1A3 | | | Prep Date: 5/18/2022 | | DF: 1 | | | | |
| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref Value | RPD | RPD Limit | Qual |
| CALCIUM | 39.1 | 1 | 40 | | 98 | 85-115 | | 39.2 | 0 | 20 | |
| MAGNESIUM | 38.2 | 1 | 40 | | 95 | 85-115 | | 38.2 | 0 | 20 | |
| POTASSIUM | 39.9 | 1 | 40 | | 100 | 85-115 | | 39.7 | 0 | 20 | |
| SODIUM | 40.6 | 1 | 40 | | 101 | 85-115 | | 40.3 | 1 | 20 | |

| MB | | Sample ID: FP220516-2 | | | Units: MG/L | | Analysis Date: 5/23/2022 15:12 | | | | | |
|------------|--------|------------------------------|--|--|-----------------------------|--|---------------------------------------|--|--|--|--|------|
| Client ID: | | Run ID: IT220523-1A3 | | | Prep Date: 5/18/2022 | | 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: PDC Energy
 Work Order: 2205284
 Project: Kodak 34-44BH

QC BATCH REPORT

Batch ID: VL220519-33-2 Instrument ID: HPV3 Method: SW8260_25

| LCS | | Sample ID: VL220519-3 | | | Units: %REC | | Analysis Date: 5/19/2022 10:55 | | | | |
|----------------------------|--------|-----------------------|---------|---------------|----------------------|---------------|--------------------------------|---------------|-----|-----------|------|
| Client ID: | | Run ID: VL220519-33A | | | Prep Date: 5/19/2022 | | 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 | 24.7 | | 25 | | 99 | 80-120 | | | | | |
| Surr: DIBROMOFLUOROMETHANE | 25.1 | | 25 | | 101 | 80-120 | | | | | |
| Surr: TOLUENE-D8 | 24.3 | | 25 | | 97 | 80-120 | | | | | |
| BENZENE | 10.2 | 1 | 10 | | 102 | 80-120 | | | | 20 | |
| TOLUENE | 10.1 | 1 | 10 | | 101 | 80-120 | | | | 20 | |
| ETHYLBENZENE | 9.91 | 1 | 10 | | 99 | 80-120 | | | | 20 | |
| M+P-XYLENE | 19 | 1 | 20 | | 95 | 80-120 | | | | 20 | |
| O-XYLENE | 10 | 1 | 10 | | 100 | 80-120 | | | | 20 | |

| LCSD | | Sample ID: VL220519-3 | | | Units: %REC | | Analysis Date: 5/19/2022 11:18 | | | | |
|----------------------------|--------|-----------------------|---------|---------------|----------------------|---------------|--------------------------------|---------------|-----|-----------|------|
| Client ID: | | Run ID: VL220519-33A | | | Prep Date: 5/19/2022 | | 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 | 24.7 | | 25 | | 99 | 80-120 | | | 0 | | |
| Surr: DIBROMOFLUOROMETHANE | 25.5 | | 25 | | 102 | 80-120 | | | 1 | | |
| Surr: TOLUENE-D8 | 24.9 | | 25 | | 100 | 80-120 | | | 2 | | |
| BENZENE | 10.5 | 1 | 10 | | 105 | 80-120 | | 10.2 | 3 | 20 | |
| TOLUENE | 10.7 | 1 | 10 | | 107 | 80-120 | | 10.1 | 6 | 20 | |
| ETHYLBENZENE | 10.5 | 1 | 10 | | 105 | 80-120 | | 9.91 | 6 | 20 | |
| M+P-XYLENE | 20.1 | 1 | 20 | | 100 | 80-120 | | 19 | 6 | 20 | |
| O-XYLENE | 10.4 | 1 | 10 | | 104 | 80-120 | | 10 | 4 | 20 | |

| MB | | Sample ID: VL220519-3 | | | Units: %REC | | Analysis Date: 5/19/2022 11:43 | | | | |
|----------------------------|--------|-----------------------|---------|---------------|----------------------|---------------|--------------------------------|---------------|-----|-----------|------|
| Client ID: | | Run ID: VL220519-33A | | | Prep Date: 5/19/2022 | | 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 | 25.1 | | 25 | | 100 | 80-120 | | | | | |
| Surr: DIBROMOFLUOROMETHANE | 25.3 | | 25 | | 101 | 80-120 | | | | | |
| Surr: TOLUENE-D8 | 24.4 | | 25 | | 98 | 80-120 | | | | | |
| BENZENE | ND | 1 | 10 | | | | | | | | |
| TOLUENE | ND | 1 | 10 | | | | | | | | |
| ETHYLBENZENE | ND | 1 | 10 | | | | | | | | |
| M+P-XYLENE | ND | 1 | 20 | | | | | | | | |
| O-XYLENE | ND | 1 | 10 | | | | | | | | |
| TOTAL XYLENES | ND | 1 | 10 | | | | | | | | |

The following samples were analyzed in this batch:

Client: PDC Energy
 Work Order: 2205284
 Project: Kodak 34-44BH

QC BATCH REPORT

Batch ID: **AK220519-1-2** Instrument ID: **NONE** Method: **SM2320B**

| LCS | | Sample ID: AK220519-1 | | | Units: MG/L | | Analysis Date: 5/19/2022 | | | | |
|---------------------------|--------|------------------------------|---------|---------------|-----------------------------|---------------|---------------------------------|---------------|-----|-----------|------|
| Client ID: | | Run ID: AK220519-1A1 | | | Prep Date: 5/18/2022 | | DF: 1 | | | | |
| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref Value | RPD | RPD Limit | Qual |
| TOTAL ALKALINITY AS CaCO3 | 99.1 | 5 | 100 | | 99 | 85-115 | | | | 15 | |

| MB | | Sample ID: AK220519-1 | | | Units: MG/L | | Analysis Date: 5/19/2022 | | | | |
|---------------------------|--------|------------------------------|--|--|-----------------------------|--|---------------------------------|--|--|--|--|
| Client ID: | | Run ID: AK220519-1A1 | | | Prep Date: 5/18/2022 | | DF: 1 | | | | |
| Analyte | Result | ReportLimit | | | | | | | | | |
| 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: PDC Energy
 Work Order: 2205284
 Project: Kodak 34-44BH

QC BATCH REPORT

Batch ID: IC220517-1-1 Instrument ID: IC3 Method: EPA300.0

| LCS | | Sample ID: IC220517-1 | | | Units: MG/L | | Analysis Date: 5/17/2022 12:41 | | | | |
|------------|--------|-----------------------|---------|---------------|----------------------|---------------|--------------------------------|---------------|-----|-----------|------|
| Client ID: | | Run ID: IC220517-1A1 | | | Prep Date: 5/17/2022 | | DF: 1 | | | | |
| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref Value | RPD | RPD Limit | Qual |
| CHLORIDE | 10.2 | 0.2 | 10 | | 102 | 90-110 | | | | 15 | |
| SULFATE | 51.6 | 1 | 50 | | 103 | 90-110 | | | | 15 | |

| LCSD | | Sample ID: IC220517-1 | | | Units: MG/L | | Analysis Date: 5/17/2022 13:55 | | | | |
|------------|--------|-----------------------|---------|---------------|----------------------|---------------|--------------------------------|---------------|-----|-----------|------|
| Client ID: | | Run ID: IC220517-1A1 | | | Prep Date: 5/17/2022 | | DF: 1 | | | | |
| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref Value | RPD | RPD Limit | Qual |
| CHLORIDE | 9.81 | 0.2 | 10 | | 98 | 90-110 | | 10.2 | 4 | 15 | |
| SULFATE | 48.9 | 1 | 50 | | 98 | 90-110 | | 51.6 | 5 | 15 | |

| MB | | Sample ID: IC220517-1 | | | Units: MG/L | | Analysis Date: 5/17/2022 12:49 | | | | | |
|------------|--------|-----------------------|--|--|----------------------|--|--------------------------------|--|--|--|--|------|
| Client ID: | | Run ID: IC220517-1A1 | | | Prep Date: 5/17/2022 | | DF: 1 | | | | | |
| Analyte | Result | ReportLimit | | | | | | | | | | Qual |
| CHLORIDE | ND | 0.2 | | | | | | | | | | |
| SULFATE | ND | 1 | | | | | | | | | | |

The following samples were analyzed in this batch:

Client: PDC Energy
 Work Order: 2205284
 Project: Kodak 34-44BH

QC BATCH REPORT

Batch ID: **TD220517-2-1** Instrument ID: **Balance** Method: **SM2540C**

| LCS | | Sample ID: TD220517-2 | | | Units: MG/L | | Analysis Date: 5/19/2022 | | | | |
|------------------------|--------|------------------------------|---------|---------------|-----------------------------|---------------|---------------------------------|---------------|-----|-----------|------|
| Client ID: | | Run ID: TD220519-1A1 | | | Prep Date: 5/17/2022 | | DF: 1 | | | | |
| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref Value | RPD | RPD Limit | Qual |
| TOTAL DISSOLVED SOLIDS | 402 | 20 | 400 | | 100 | 85-115 | | | | 14 | |

| LCSD | | Sample ID: TD220517-2 | | | Units: MG/L | | Analysis Date: 5/19/2022 | | | | |
|------------------------|--------|------------------------------|---------|---------------|-----------------------------|---------------|---------------------------------|---------------|-----|-----------|------|
| Client ID: | | Run ID: TD220519-1A1 | | | Prep Date: 5/17/2022 | | DF: 1 | | | | |
| Analyte | Result | ReportLimit | SPK Val | SPK Ref Value | %REC | Control Limit | Decision Level | RPD Ref Value | RPD | RPD Limit | Qual |
| TOTAL DISSOLVED SOLIDS | 390 | 20 | 400 | | 97 | 85-115 | | 402 | 3 | 14 | |

| MB | | Sample ID: TD220517-2 | | | Units: MG/L | | Analysis Date: 5/19/2022 | | | | | |
|------------------------|--------|------------------------------|--|--|-----------------------------|--|---------------------------------|--|--|--|--|------|
| Client ID: | | Run ID: TD220519-1A1 | | | Prep Date: 5/17/2022 | | DF: 1 | | | | | |
| Analyte | Result | ReportLimit | | | | | | | | | | Qual |
| TOTAL DISSOLVED SOLIDS | ND | 20 | | | | | | | | | | |

The following samples were analyzed in this batch: