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July 13, 2023

Jenifer Hakkarinen
PDC Energy
1775 Sherman Street
Suite 3000
Denver, CO 80203

Work Order: **HS23061730**

Laboratory Results for: **Raindance FC 26-112HNX**

Dear Jenifer Hakkarinen,

ALS Environmental received 1 sample(s) on Jun 24, 2023 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
Tyler Monroe

Client: PDC Energy
Project: Raindance FC 26-112HNX
Work Order: HS23061730

SAMPLE SUMMARY

| Lab Samp ID | Client Sample ID | Matrix | TagNo | Collection Date | Date Received | Hold |
|---------------|------------------------|--------|-------|-------------------|-------------------|--------------------------|
| HS23061730-01 | Raindance FC 26-112HNX | Water | | 23-Jun-2023 10:30 | 24-Jun-2023 09:05 | <input type="checkbox"/> |

Client: PDC Energy
Project: Raindance FC 26-112HNX
Work Order: HS23061730

CASE NARRATIVE

GC Semivolatiles by Method RSK-175**Batch ID: R439932**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GC Semivolatiles by Method SW8015M**Batch ID: 196878****Sample ID: Raindance FC 26-112HNX (HS23061730-01)**

- Surrogate recoveries were outside of the control limits due to matrix interference.

GC Volatiles by Method SW8015**Batch ID: R440336**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260**Batch ID: R440144****Sample ID: Raindance FC 26-112HNX (HS23061730-01)**

- Lowest possible dilution due to sample matrix.

Metals by Method E200.8**Batch ID: 197352****Sample ID: HS23061561-01MS**

- MS and MSD are for an unrelated sample

Sample ID: HS23061733-01MS

- MS and MSD are for an unrelated sample

WetChemistry by Method E300**Batch ID: R440960****Sample ID: HS23061706-02MS**

- MS and MSD are for an unrelated sample

WetChemistry by Method SM2320B**Batch ID: R440544**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method M2540C**Batch ID: R440321**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: PDC Energy
 Project: Raindance FC 26-112HNX
 Sample ID: Raindance FC 26-112HNX
 Collection Date: 23-Jun-2023 10:30

ANALYTICAL REPORT

WorkOrder:HS23061730
 Lab ID:HS23061730-01
 Matrix:Water

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|--|--------|------|-----------------------|-------|---------------------------|-------------------|
| LOW LEVEL VOLATILES BY SW8260C | | | Method:SW8260 | | Analyst: FT | |
| Benzene | ND | | 500 | ug/L | 500 | 29-Jun-2023 04:27 |
| Ethylbenzene | ND | | 500 | ug/L | 500 | 29-Jun-2023 04:27 |
| m,p-Xylene | ND | | 1000 | ug/L | 500 | 29-Jun-2023 04:27 |
| o-Xylene | ND | | 500 | ug/L | 500 | 29-Jun-2023 04:27 |
| Toluene | ND | | 500 | ug/L | 500 | 29-Jun-2023 04:27 |
| Xylenes, Total | ND | | 500 | ug/L | 500 | 29-Jun-2023 04:27 |
| Surr: 1,2-Dichloroethane-d4 | 98.3 | | 70-126 | %REC | 500 | 29-Jun-2023 04:27 |
| Surr: 4-Bromofluorobenzene | 93.2 | | 77-113 | %REC | 500 | 29-Jun-2023 04:27 |
| Surr: Dibromofluoromethane | 98.2 | | 77-123 | %REC | 500 | 29-Jun-2023 04:27 |
| Surr: Toluene-d8 | 98.5 | | 82-127 | %REC | 500 | 29-Jun-2023 04:27 |
| GASOLINE RANGE ORGANICS BY SW8015C | | | Method:SW8015 | | Analyst: PJM | |
| Gasoline Range Organics | 113 | | 25.0 | mg/L | 500 | 30-Jun-2023 13:47 |
| Surr: 4-Bromofluorobenzene | 92.5 | | 70-123 | %REC | 500 | 30-Jun-2023 13:47 |
| DISSOLVED GASES BY RSK-175 | | | Method:RSK-175 | | Analyst: SAM | |
| Ethane | 39.1 | | 1.00 | ug/L | 1 | 26-Jun-2023 14:01 |
| Methane | 1,670 | | 25.0 | ug/L | 50 | 26-Jun-2023 14:41 |
| Propane | 20.1 | | 1.00 | ug/L | 1 | 26-Jun-2023 14:01 |
| TPH DRO/ORO BY SW8015C | | | Method:SW8015M | | Prep:SW3511 / 26-Jun-2023 | Analyst: SAM |
| TPH (Diesel Range) | 3.6 | | 0.050 | mg/L | 1 | 28-Jun-2023 14:19 |
| Surr: 2-Fluorobiphenyl | 170 | S | 60-135 | %REC | 1 | 28-Jun-2023 14:19 |
| TOTAL METALS BY E200.8, REV 5.4, 1994 | | | Method:E200.8 | | Prep:E200.8 / 10-Jul-2023 | Analyst: JHD |
| Calcium | 798 | | 2.50 | mg/L | 5 | 11-Jul-2023 21:31 |
| Magnesium | ND | | 0.500 | mg/L | 1 | 12-Jul-2023 15:43 |
| Potassium | 277 | | 2.50 | mg/L | 5 | 11-Jul-2023 21:31 |
| Sodium | 729 | | 1.00 | mg/L | 5 | 11-Jul-2023 21:31 |
| ANIONS BY E300.0, REV 2.1, 1993 | | | Method:E300 | | Analyst: TH | |
| Chloride | 3,350 | | 50.0 | mg/L | 100 | 10-Jul-2023 15:48 |
| Sulfate | 28.2 | | 2.50 | mg/L | 5 | 10-Jul-2023 15:43 |
| TOTAL DISSOLVED SOLIDS BY SM2540C -2011 | | | Method:M2540C | | Analyst: DC | |
| Total Dissolved Solids (Residue, Filterable) | 13,700 | | 10.0 | mg/L | 1 | 29-Jun-2023 14:40 |
| ALKALINITY BY SM 2320B-2011 | | | Method:SM2320B | | Analyst: DW | |
| Alkalinity, Bicarbonate (As CaCO3) | 49.2 | | 5.00 | mg/L | 1 | 05-Jul-2023 14:32 |
| Alkalinity, Carbonate (As CaCO3) | 24.2 | | 5.00 | mg/L | 1 | 05-Jul-2023 14:32 |
| Alkalinity, Total (As CaCO3) | 73.4 | | 5.00 | mg/L | 1 | 05-Jul-2023 14:32 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Weight / Prep Log

Client: PDC Energy
Project: Raindance FC 26-112HNX
WorkOrder: HS23061730

| | | |
|-------------------------|--------------------------------------|------------------------------------|
| Batch ID: 196878 | Start Date: 26 Jun 2023 14:23 | End Date: 26 Jun 2023 14:23 |
| Method: SW3511 | Prep Code: 3511_DRO | |

| Sample ID | Container | Sample Wt/Vol | Final Volume | Prep Factor | |
|---------------|-----------|---------------|--------------|-------------|-------------|
| HS23061730-01 | | 32.79 (mL) | 2 (mL) | 0.06099 | 40 mL Amber |

| | | |
|---|--------------------------------------|------------------------------------|
| Batch ID: 197352 | Start Date: 10 Jul 2023 16:30 | End Date: 10 Jul 2023 16:30 |
| Method: TOTAL METALS PREP BY E200.8, REV 5.4, 1994 | Prep Code: 200.8PR | |

| Sample ID | Container | Sample Wt/Vol | Final Volume | Prep Factor | |
|---------------|-----------|---------------|--------------|-------------|-------------------------------|
| HS23061730-01 | | 10 (mL) | 10 (mL) | 1 | 250 mL plastic, HNO3 to pH <2 |

Client: PDC Energy
Project: Raindance FC 26-112HNX
WorkOrder: HS23061730

DATES REPORT

| Sample ID | Client Samp ID | Collection Date | Leachate Date | Prep Date | Analysis Date | DF |
|--------------------------------|------------------------|---|---------------|-------------------|----------------------|-----|
| Batch ID: 196878 (0) | | Test Name : TPH DRO/ORO BY SW8015C | | | Matrix: Water | |
| HS23061730-01 | Raindance FC 26-112HNX | 23 Jun 2023 10:30 | | 26 Jun 2023 14:23 | 28 Jun 2023 14:19 | 1 |
| Batch ID: 197352 (0) | | Test Name : TOTAL METALS BY E200.8, REV 5.4, 1994 | | | Matrix: Water | |
| HS23061730-01 | Raindance FC 26-112HNX | 23 Jun 2023 10:30 | | 10 Jul 2023 16:30 | 12 Jul 2023 15:43 | 1 |
| HS23061730-01 | Raindance FC 26-112HNX | 23 Jun 2023 10:30 | | 10 Jul 2023 16:30 | 11 Jul 2023 21:31 | 5 |
| Batch ID: R439932 (0) | | Test Name : DISSOLVED GASES BY RSK-175 | | | Matrix: Water | |
| HS23061730-01 | Raindance FC 26-112HNX | 23 Jun 2023 10:30 | | | 26 Jun 2023 14:41 | 50 |
| HS23061730-01 | Raindance FC 26-112HNX | 23 Jun 2023 10:30 | | | 26 Jun 2023 14:01 | 1 |
| Batch ID: R440144 (0) | | Test Name : LOW LEVEL VOLATILES BY SW8260C | | | Matrix: Water | |
| HS23061730-01 | Raindance FC 26-112HNX | 23 Jun 2023 10:30 | | | 29 Jun 2023 04:27 | 500 |
| Batch ID: R440321 (0) | | Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C-2011 | | | Matrix: Water | |
| HS23061730-01 | Raindance FC 26-112HNX | 23 Jun 2023 10:30 | | | 29 Jun 2023 14:40 | 1 |
| Batch ID: R440336 (0) | | Test Name : GASOLINE RANGE ORGANICS BY SW8015C | | | Matrix: Water | |
| HS23061730-01 | Raindance FC 26-112HNX | 23 Jun 2023 10:30 | | | 30 Jun 2023 13:47 | 500 |
| Batch ID: R440544 (0) | | Test Name : ALKALINITY BY SM 2320B-2011 | | | Matrix: Water | |
| HS23061730-01 | Raindance FC 26-112HNX | 23 Jun 2023 10:30 | | | 05 Jul 2023 14:32 | 1 |
| Batch ID: R440960 (0) | | Test Name : ANIONS BY E300.0, REV 2.1, 1993 | | | Matrix: Water | |
| HS23061730-01 | Raindance FC 26-112HNX | 23 Jun 2023 10:30 | | | 10 Jul 2023 15:48 | 100 |
| HS23061730-01 | Raindance FC 26-112HNX | 23 Jun 2023 10:30 | | | 10 Jul 2023 15:43 | 5 |

Client: PDC Energy
Project: Raindance FC 26-112HNX
WorkOrder: HS23061730

QC BATCH REPORT

| Batch ID: 196878 (0) | | Instrument: FID-16 | | Method: TPH DRO/ORO BY SW8015C | | | | | | |
|--|-------------------------------|--------------------|-----------------------|---|------------------------------|---------------|---------------|------|-----------|------|
| MBLK | Sample ID: MBLK-196878 | Units: mg/L | | Analysis Date: 30-Jun-2023 15:42 | | | | | | |
| Client ID: | Run ID: FID-16_440417 | | SeqNo: 7398371 | | PrepDate: 26-Jun-2023 | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| TPH (Diesel Range) | ND | 0.050 | | | | | | | | |
| Surr: 2-Fluorobiphenyl | 0.04142 | 0.0050 | 0.06 | 0 | 69.0 | 60 - 135 | | | | |
| LCS | Sample ID: LCS-196878 | Units: mg/L | | Analysis Date: 28-Jun-2023 06:55 | | | | | | |
| Client ID: | Run ID: FID-16_440417 | | SeqNo: 7398378 | | PrepDate: 26-Jun-2023 | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| TPH (Diesel Range) | 0.6017 | 0.050 | 0.6 | 0 | 100 | 70 - 130 | | | | |
| Surr: 2-Fluorobiphenyl | 0.05153 | 0.0050 | 0.06 | 0 | 85.9 | 60 - 135 | | | | |
| LCSD | Sample ID: LCSD-196878 | Units: mg/L | | Analysis Date: 28-Jun-2023 07:24 | | | | | | |
| Client ID: | Run ID: FID-16_440417 | | SeqNo: 7398379 | | PrepDate: 26-Jun-2023 | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| TPH (Diesel Range) | 0.6166 | 0.050 | 0.6 | 0 | 103 | 70 - 130 | 0.6017 | 2.44 | 20 | |
| Surr: 2-Fluorobiphenyl | 0.05579 | 0.0050 | 0.06 | 0 | 93.0 | 60 - 135 | 0.05153 | 7.94 | 20 | |
| The following samples were analyzed in this batch: HS23061730-01 | | | | | | | | | | |

Client: PDC Energy
 Project: Raindance FC 26-112HNX
 WorkOrder: HS23061730

QC BATCH REPORT

| Batch ID: R439932 (0) | | Instrument: FID-4 | | Method: DISSOLVED GASES BY RSK-175 | | | | | |
|-------------------------|-------------------------------|-----------------------|---------|---|------|---------------|---------------|------|----------------|
| MBLK | Sample ID: MBLK-230626 | Units: ug/L | | Analysis Date: 26-Jun-2023 09:17 | | | | | |
| Client ID: | Run ID: FID-4_439932 | SeqNo: 7386386 | | PrepDate: | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Ethane | ND | 1.00 | | | | | | | |
| Methane | ND | 0.500 | | | | | | | |
| Propane | ND | 1.00 | | | | | | | |

| LCS | Sample ID: LCS-230626 | Units: ug/L | | Analysis Date: 26-Jun-2023 09:44 | | | | | |
|------------|------------------------------|-----------------------|---------|---|------|---------------|---------------|------|----------------|
| Client ID: | Run ID: FID-4_439932 | SeqNo: 7386387 | | PrepDate: | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Ethane | 18.17 | 1.00 | 18.04 | 0 | 101 | 75 - 125 | | | |
| Methane | 8.664 | 0.500 | 9.647 | 0 | 89.8 | 75 - 125 | | | |
| Propane | 30.66 | 1.00 | 26.46 | 0 | 116 | 75 - 125 | | | |

| LCSD | Sample ID: LCSD-230626 | Units: ug/L | | Analysis Date: 26-Jun-2023 10:02 | | | | | |
|-------------|-------------------------------|-----------------------|---------|---|------|---------------|---------------|-------|----------------|
| Client ID: | Run ID: FID-4_439932 | SeqNo: 7386388 | | PrepDate: | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Ethane | 19 | 1.00 | 18.04 | 0 | 105 | 75 - 125 | 18.17 | 4.45 | 30 |
| Methane | 8.322 | 0.500 | 9.647 | 0 | 86.3 | 75 - 125 | 8.664 | 4.02 | 30 |
| Propane | 30.41 | 1.00 | 26.46 | 0 | 115 | 75 - 125 | 30.66 | 0.841 | 30 |

The following samples were analyzed in this batch: HS23061730-01

Client: PDC Energy
Project: Raindance FC 26-112HNX
WorkOrder: HS23061730

QC BATCH REPORT

| Batch ID: R440336 (0) | | Instrument: FID-20 | | Method: GASOLINE RANGE ORGANICS BY SW8015C | | | | | | |
|--|-------------------------------|--------------------|-----------------------|--|-----------|---------------|---------------|-------|-----------|------|
| MBLK | Sample ID: MBLK-230630 | Units: mg/L | | Analysis Date: 30-Jun-2023 10:23 | | | | | | |
| Client ID: | Run ID: FID-20_440336 | | SeqNo: 7396035 | | PrepDate: | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Gasoline Range Organics | ND | 0.0500 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 0.08358 | 0.00500 | 0.1 | 0 | 83.6 | 70 - 121 | | | | |
| LCS | Sample ID: LCS-230630 | Units: mg/L | | Analysis Date: 30-Jun-2023 09:56 | | | | | | |
| Client ID: | Run ID: FID-20_440336 | | SeqNo: 7396033 | | PrepDate: | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Gasoline Range Organics | 0.8944 | 0.0500 | 1 | 0 | 89.4 | 76 - 124 | | | | |
| Surr: 4-Bromofluorobenzene | 0.08201 | 0.00500 | 0.1 | 0 | 82.0 | 52 - 138 | | | | |
| LCSD | Sample ID: LCSD-230630 | Units: mg/L | | Analysis Date: 30-Jun-2023 10:09 | | | | | | |
| Client ID: | Run ID: FID-20_440336 | | SeqNo: 7396034 | | PrepDate: | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Gasoline Range Organics | 0.9149 | 0.0500 | 1 | 0 | 91.5 | 76 - 124 | 0.8944 | 2.26 | 20 | |
| Surr: 4-Bromofluorobenzene | 0.08186 | 0.00500 | 0.1 | 0 | 81.9 | 52 - 138 | 0.08201 | 0.179 | 20 | |
| The following samples were analyzed in this batch: HS23061730-01 | | | | | | | | | | |

Client: PDC Energy
Project: Raindance FC 26-112HNX
WorkOrder: HS23061730

QC BATCH REPORT

| Batch ID: 197352 (0) | | Instrument: ICPMS06 | | Method: TOTAL METALS BY E200.8, REV 5.4, 1994 | | | | | |
|------------------------|-------------------------------|---------------------|-----------------------|---|------------------------------|---------------|---------------|------|----------------|
| MBLK | Sample ID: MBLK-197352 | Units: ug/L | | Analysis Date: 11-Jul-2023 20:27 | | | | | |
| Client ID: | Run ID: ICPMS06_441004 | | SeqNo: 7420192 | | PrepDate: 10-Jul-2023 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |

| | | | | | | | | | |
|-----------|----|-----|--|--|--|--|--|--|--|
| Calcium | ND | 500 | | | | | | | |
| Magnesium | ND | 500 | | | | | | | |
| Potassium | ND | 500 | | | | | | | |
| Sodium | ND | 200 | | | | | | | |

| | | | | | | | | | |
|------------|-------------------------------|--------------------|-----------------------|---|------------------------------|---------------|---------------|------|----------------|
| LCS | Sample ID: LCS-197352 | Units: ug/L | | Analysis Date: 11-Jul-2023 20:29 | | | | | |
| Client ID: | Run ID: ICPMS06_441004 | | SeqNo: 7420193 | | PrepDate: 10-Jul-2023 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |

| | | | | | | | | | |
|-----------|------|-----|------|---|------|----------|--|--|--|
| Calcium | 4445 | 500 | 5000 | 0 | 88.9 | 85 - 115 | | | |
| Magnesium | 4757 | 500 | 5000 | 0 | 95.1 | 85 - 115 | | | |
| Potassium | 4612 | 500 | 5000 | 0 | 92.2 | 85 - 115 | | | |
| Sodium | 4825 | 200 | 5000 | 0 | 96.5 | 85 - 115 | | | |

| | | | | | | | | | |
|------------|-----------------------------------|--------------------|-----------------------|---|------------------------------|---------------|---------------|------|----------------|
| MS | Sample ID: HS23061733-01MS | Units: ug/L | | Analysis Date: 11-Jul-2023 21:01 | | | | | |
| Client ID: | Run ID: ICPMS06_441004 | | SeqNo: 7420266 | | PrepDate: 10-Jul-2023 | | DF: 5 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Calcium | 73100 | 2500 | 5000 | 70110 | 59.9 | 70 - 130 | | | SO |
| Magnesium | 15410 | 2500 | 5000 | 10960 | 89.0 | 70 - 130 | | | |
| Potassium | 12570 | 2500 | 5000 | 8111 | 89.2 | 70 - 130 | | | |
| Sodium | 2145000 | 1000 | 5000 | 2152000 | -140 | 70 - 130 | | | SEO |

| | | | | | | | | | |
|------------|-----------------------------------|--------------------|-----------------------|---|------------------------------|---------------|---------------|------|----------------|
| MS | Sample ID: HS23061561-01MS | Units: ug/L | | Analysis Date: 11-Jul-2023 20:33 | | | | | |
| Client ID: | Run ID: ICPMS06_441004 | | SeqNo: 7420195 | | PrepDate: 10-Jul-2023 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Calcium | 133700 | 500 | 5000 | 138500 | -95.1 | 70 - 130 | | | SO |
| Magnesium | 52290 | 500 | 5000 | 49920 | 47.2 | 70 - 130 | | | SO |
| Potassium | 16790 | 500 | 5000 | 12870 | 78.3 | 70 - 130 | | | |
| Sodium | 1591000 | 200 | 5000 | 1694000 | -2070 | 70 - 130 | | | SEO |

Client: PDC Energy
Project: Raindance FC 26-112HNX
WorkOrder: HS23061730

QC BATCH REPORT

| Batch ID: 197352 (0) | | Instrument: ICPMS06 | | Method: TOTAL METALS BY E200.8, REV 5.4, 1994 | | | | | | |
|--|---------|------------------------------------|---------|---|-------|---|---------------|--------------|-----------|------|
| MSD | | Sample ID: HS23061733-01MSD | | Units: ug/L | | Analysis Date: 11-Jul-2023 21:03 | | | | |
| Client ID: | | Run ID: ICPMS06_441004 | | SeqNo: 7420267 | | PrepDate: 10-Jul-2023 | | DF: 5 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Calcium | 70650 | 2500 | 5000 | 70110 | 10.9 | 70 - 130 | 73100 | 3.41 | 20 | SO |
| Magnesium | 14700 | 2500 | 5000 | 10960 | 74.9 | 70 - 130 | 15410 | 4.71 | 20 | |
| Potassium | 11930 | 2500 | 5000 | 8111 | 76.4 | 70 - 130 | 12570 | 5.25 | 20 | |
| Sodium | 1997000 | 1000 | 5000 | 2152000 | -3080 | 70 - 130 | 2145000 | 7.11 | 20 | SEO |
| MSD | | Sample ID: HS23061561-01MSD | | Units: ug/L | | Analysis Date: 11-Jul-2023 20:37 | | | | |
| Client ID: | | Run ID: ICPMS06_441004 | | SeqNo: 7420197 | | PrepDate: 10-Jul-2023 | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Calcium | 135200 | 500 | 5000 | 138500 | -66.7 | 70 - 130 | 133700 | 1.06 | 20 | SO |
| Magnesium | 52860 | 500 | 5000 | 49920 | 58.7 | 70 - 130 | 52290 | 1.09 | 20 | SO |
| Potassium | 17230 | 500 | 5000 | 12870 | 87.1 | 70 - 130 | 16790 | 2.58 | 20 | |
| Sodium | 1621000 | 200 | 5000 | 1694000 | -1480 | 70 - 130 | 1591000 | 1.85 | 20 | SEO |
| The following samples were analyzed in this batch: HS23061730-01 | | | | | | | | | | |

Client: PDC Energy
Project: Raindance FC 26-112HNX
WorkOrder: HS23061730

QC BATCH REPORT

| Batch ID: R440144 (0) | | Instrument: VOA7 | | Method: LOW LEVEL VOLATILES BY SW8260C | | | | | |
|-----------------------------|-------------------------|------------------|---------|--|------|---------------|---------------|------|----------------|
| MBLK | Sample ID: VBLKW-230628 | Units: ug/L | | Analysis Date: 28-Jun-2023 21:39 | | | | | |
| Client ID: | Run ID: VOA7_440144 | SeqNo: 7391696 | | PrepDate: | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Benzene | ND | 1.0 | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | |
| m,p-Xylene | ND | 2.0 | | | | | | | |
| o-Xylene | ND | 1.0 | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | |
| Xylenes, Total | ND | 1.0 | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 48.6 | 1.0 | 50 | 0 | 97.2 | 70 - 123 | | | |
| Surr: 4-Bromofluorobenzene | 45.87 | 1.0 | 50 | 0 | 91.7 | 77 - 113 | | | |
| Surr: Dibromofluoromethane | 48.65 | 1.0 | 50 | 0 | 97.3 | 73 - 126 | | | |
| Surr: Toluene-d8 | 49.45 | 1.0 | 50 | 0 | 98.9 | 81 - 120 | | | |

| LCS | Sample ID: VLCSW-230628 | Units: ug/L | | Analysis Date: 28-Jun-2023 20:56 | | | | | |
|-----------------------------|-------------------------|----------------|---------|----------------------------------|------|---------------|---------------|------|----------------|
| Client ID: | Run ID: VOA7_440144 | SeqNo: 7391695 | | PrepDate: | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Benzene | 18.08 | 1.0 | 20 | 0 | 90.4 | 74 - 120 | | | |
| Ethylbenzene | 18.38 | 1.0 | 20 | 0 | 91.9 | 77 - 117 | | | |
| m,p-Xylene | 36.17 | 2.0 | 40 | 0 | 90.4 | 77 - 122 | | | |
| o-Xylene | 18.23 | 1.0 | 20 | 0 | 91.2 | 75 - 119 | | | |
| Toluene | 18.23 | 1.0 | 20 | 0 | 91.2 | 77 - 118 | | | |
| Xylenes, Total | 54.4 | 1.0 | 60 | 0 | 90.7 | 75 - 122 | | | |
| Surr: 1,2-Dichloroethane-d4 | 49.31 | 1.0 | 50 | 0 | 98.6 | 70 - 123 | | | |
| Surr: 4-Bromofluorobenzene | 47.58 | 1.0 | 50 | 0 | 95.2 | 77 - 113 | | | |
| Surr: Dibromofluoromethane | 48.68 | 1.0 | 50 | 0 | 97.4 | 73 - 126 | | | |
| Surr: Toluene-d8 | 49.3 | 1.0 | 50 | 0 | 98.6 | 81 - 120 | | | |

Client: PDC Energy
Project: Raindance FC 26-112HNX
WorkOrder: HS23061730

QC BATCH REPORT

| Batch ID: R440144 (0) | | Instrument: VOA7 | | Method: LOW LEVEL VOLATILES BY SW8260C | | | | | |
|-----------------------------|--------|----------------------------|---------|--|------|----------------------------------|---------------|-------|----------------|
| MS | | Sample ID: HS23061923-06MS | | Units: ug/L | | Analysis Date: 28-Jun-2023 23:48 | | | |
| Client ID: | | Run ID: VOA7_440144 | | SeqNo: 7391702 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Benzene | 16.9 | 1.0 | 20 | 0 | 84.5 | 70 - 127 | | | |
| Ethylbenzene | 16.74 | 1.0 | 20 | 0 | 83.7 | 70 - 124 | | | |
| m,p-Xylene | 33.1 | 2.0 | 40 | 0 | 82.7 | 70 - 130 | | | |
| o-Xylene | 16.22 | 1.0 | 20 | 0 | 81.1 | 70 - 124 | | | |
| Toluene | 16.73 | 1.0 | 20 | 0 | 83.7 | 70 - 123 | | | |
| Xylenes, Total | 49.32 | 1.0 | 60 | 0 | 82.2 | 70 - 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 49.93 | 1.0 | 50 | 0 | 99.9 | 70 - 126 | | | |
| Surr: 4-Bromofluorobenzene | 47.31 | 1.0 | 50 | 0 | 94.6 | 77 - 113 | | | |
| Surr: Dibromofluoromethane | 49.49 | 1.0 | 50 | 0 | 99.0 | 77 - 123 | | | |
| Surr: Toluene-d8 | 49.8 | 1.0 | 50 | 0 | 99.6 | 82 - 127 | | | |

| MSD | | Sample ID: HS23061923-06MSD | | Units: ug/L | | Analysis Date: 29-Jun-2023 00:09 | | | |
|-----------------------------|--------|-----------------------------|---------|----------------|------|----------------------------------|---------------|-------|----------------|
| Client ID: | | Run ID: VOA7_440144 | | SeqNo: 7391703 | | PrepDate: | | DF: 1 | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Benzene | 17.24 | 1.0 | 20 | 0 | 86.2 | 70 - 127 | 16.9 | 1.99 | 20 |
| Ethylbenzene | 17.12 | 1.0 | 20 | 0 | 85.6 | 70 - 124 | 16.74 | 2.26 | 20 |
| m,p-Xylene | 33.84 | 2.0 | 40 | 0 | 84.6 | 70 - 130 | 33.1 | 2.23 | 20 |
| o-Xylene | 16.62 | 1.0 | 20 | 0 | 83.1 | 70 - 124 | 16.22 | 2.43 | 20 |
| Toluene | 17.13 | 1.0 | 20 | 0 | 85.7 | 70 - 123 | 16.73 | 2.37 | 20 |
| Xylenes, Total | 50.47 | 1.0 | 60 | 0 | 84.1 | 70 - 130 | 49.32 | 2.3 | 20 |
| Surr: 1,2-Dichloroethane-d4 | 49.54 | 1.0 | 50 | 0 | 99.1 | 70 - 126 | 49.93 | 0.79 | 20 |
| Surr: 4-Bromofluorobenzene | 47.1 | 1.0 | 50 | 0 | 94.2 | 77 - 113 | 47.31 | 0.444 | 20 |
| Surr: Dibromofluoromethane | 50.21 | 1.0 | 50 | 0 | 100 | 77 - 123 | 49.49 | 1.44 | 20 |
| Surr: Toluene-d8 | 49.47 | 1.0 | 50 | 0 | 98.9 | 82 - 127 | 49.8 | 0.651 | 20 |

The following samples were analyzed in this batch: HS23061730-01

Client: PDC Energy
Project: Raindance FC 26-112HNX
WorkOrder: HS23061730

QC BATCH REPORT

| Batch ID: R440321 (0) | | Instrument: Balance1 | | Method: TOTAL DISSOLVED SOLIDS BY SM2540C-2011 | | | | | | |
|--|-----------------------------|----------------------|---------|--|------|---------------|---------------|-------|-----------|------|
| MBLK | Sample ID: WBLK-06292023 | Units: mg/L | | Analysis Date: 29-Jun-2023 14:40 | | | | | | |
| Client ID: | Run ID: Balance1_440321 | SeqNo: 7395843 | | PrepDate: | | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Total Dissolved Solids (Residue, Filterable) | | ND | 10.0 | | | | | | | |
| LCS | Sample ID: WLCS-06292023 | Units: mg/L | | Analysis Date: 29-Jun-2023 14:40 | | | | | | |
| Client ID: | Run ID: Balance1_440321 | SeqNo: 7395844 | | PrepDate: | | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Total Dissolved Solids (Residue, Filterable) | | 1092 | 10.0 | 1000 | 0 | 109 | 85 - 115 | | | |
| DUP | Sample ID: HS23061706-05DUP | Units: mg/L | | Analysis Date: 29-Jun-2023 14:40 | | | | | | |
| Client ID: | Run ID: Balance1_440321 | SeqNo: 7395826 | | PrepDate: | | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Total Dissolved Solids (Residue, Filterable) | | 1360 | 10.0 | | | | 1364 | 0.294 | 20 | |
| DUP | Sample ID: HS23061706-02DUP | Units: mg/L | | Analysis Date: 29-Jun-2023 14:40 | | | | | | |
| Client ID: | Run ID: Balance1_440321 | SeqNo: 7395822 | | PrepDate: | | DF: 1 | | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
| Total Dissolved Solids (Residue, Filterable) | | 1332 | 10.0 | | | | 1336 | 0.3 | 20 | |
| The following samples were analyzed in this batch: HS23061730-01 | | | | | | | | | | |

Client: PDC Energy
Project: Raindance FC 26-112HNX
WorkOrder: HS23061730

QC BATCH REPORT

| Batch ID: R440544 (0) | | Instrument: Skalar 03 | | Method: ALKALINITY BY SM 2320B-2011 | | | | | |
|------------------------------------|--------------------------|-----------------------|---------|-------------------------------------|------|---------------|---------------|------|----------------|
| MBLK | Sample ID: MBLK-07052023 | Units: mg/L | | Analysis Date: 05-Jul-2023 11:42 | | | | | |
| Client ID: | Run ID: Skalar 03_440544 | SeqNo: 7401629 | | PrepDate: | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Alkalinity, Bicarbonate (As CaCO3) | ND | 5.00 | | | | | | | |
| Alkalinity, Carbonate (As CaCO3) | ND | 5.00 | | | | | | | |
| Alkalinity, Total (As CaCO3) | ND | 5.00 | | | | | | | |

| LCS | Sample ID: LCS-07052023 | Units: mg/L | | Analysis Date: 05-Jul-2023 11:48 | | | | | |
|----------------------------------|--------------------------|----------------|---------|----------------------------------|------|---------------|---------------|------|----------------|
| Client ID: | Run ID: Skalar 03_440544 | SeqNo: 7401630 | | PrepDate: | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Alkalinity, Carbonate (As CaCO3) | 918.4 | 5.00 | 1000 | 0 | 91.8 | 85 - 115 | | | |
| Alkalinity, Total (As CaCO3) | 925.6 | 5.00 | 1000 | 0 | 92.6 | 85 - 115 | | | |

| LCSD | Sample ID: LCSD-07052023 | Units: mg/L | | Analysis Date: 05-Jul-2023 11:55 | | | | | |
|----------------------------------|--------------------------|----------------|---------|----------------------------------|------|---------------|---------------|--------|----------------|
| Client ID: | Run ID: Skalar 03_440544 | SeqNo: 7401631 | | PrepDate: | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Alkalinity, Carbonate (As CaCO3) | 916.8 | 5.00 | 1000 | 0 | 91.7 | 85 - 115 | 918.4 | 0.174 | 20 |
| Alkalinity, Total (As CaCO3) | 925.3 | 5.00 | 1000 | 0 | 92.5 | 85 - 115 | 925.6 | 0.0324 | 20 |

| DUP | Sample ID: HS23061591-02DUP | Units: mg/L | | Analysis Date: 05-Jul-2023 12:14 | | | | | |
|------------------------------------|-----------------------------|----------------|---------|----------------------------------|------|---------------|---------------|------|----------------|
| Client ID: | Run ID: Skalar 03_440544 | SeqNo: 7401634 | | PrepDate: | | DF: 1 | | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Alkalinity, Bicarbonate (As CaCO3) | 996.7 | 5.00 | | | | | 984.2 | 1.26 | 20 |
| Alkalinity, Carbonate (As CaCO3) | ND | 5.00 | | | | | 0 | 0 | 20 |
| Alkalinity, Total (As CaCO3) | 996.7 | 5.00 | | | | | 984.2 | 1.26 | 20 |

The following samples were analyzed in this batch: HS23061730-01

Client: PDC Energy
Project: Raindance FC 26-112HNX
WorkOrder: HS23061730

QC BATCH REPORT

| Batch ID: R440960 (0) | | Instrument: ICS-Integrion | | Method: ANIONS BY E300.0, REV 2.1, 1993 | | | | | |
|-------------------------|-------------------------------------|---------------------------|-----------------------|---|-----------|---------------|---------------|------|----------------|
| MBLK | Sample ID: MBLK | Units: mg/L | | Analysis Date: 10-Jul-2023 14:16 | | | | | |
| Client ID: | Run ID: ICS-Integrion_440960 | | SeqNo: 7418018 | | PrepDate: | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |

| | | | | | | | | | |
|----------|----|-------|--|--|--|--|--|--|--|
| Chloride | ND | 0.500 | | | | | | | |
|----------|----|-------|--|--|--|--|--|--|--|

| | | | | | | | | | |
|---------|----|-------|--|--|--|--|--|--|--|
| Sulfate | ND | 0.500 | | | | | | | |
|---------|----|-------|--|--|--|--|--|--|--|

| LCS | Sample ID: LCS | Units: mg/L | | Analysis Date: 10-Jul-2023 14:27 | | | | | |
|------------|-------------------------------------|--------------------|-----------------------|---|-----------|---------------|---------------|------|----------------|
| Client ID: | Run ID: ICS-Integrion_440960 | | SeqNo: 7418019 | | PrepDate: | | DF: 1 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Chloride | 20.35 | 0.500 | 20 | 0 | 102 | 90 - 110 | | | |
| Sulfate | 19.89 | 0.500 | 20 | 0 | 99.5 | 90 - 110 | | | |

| MS | Sample ID: HS23061706-02MS | Units: mg/L | | Analysis Date: 10-Jul-2023 14:39 | | | | | |
|------------|-------------------------------------|--------------------|-----------------------|---|-----------|---------------|---------------|------|----------------|
| Client ID: | Run ID: ICS-Integrion_440960 | | SeqNo: 7418021 | | PrepDate: | | DF: 10 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Chloride | 426.5 | 5.00 | 100 | 358.9 | 67.7 | 80 - 120 | | | S |
| Sulfate | 187.9 | 5.00 | 100 | 107.4 | 80.4 | 80 - 120 | | | |

| MSD | Sample ID: HS23061706-02MSD | Units: mg/L | | Analysis Date: 10-Jul-2023 14:45 | | | | | |
|------------|-------------------------------------|--------------------|-----------------------|---|-----------|---------------|---------------|------|----------------|
| Client ID: | Run ID: ICS-Integrion_440960 | | SeqNo: 7418022 | | PrepDate: | | DF: 10 | | |
| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit Qual |
| Chloride | 409.7 | 5.00 | 100 | 358.9 | 50.8 | 80 - 120 | 426.5 | 4.02 | 20 S |
| Sulfate | 179.7 | 5.00 | 100 | 107.4 | 72.3 | 80 - 120 | 187.9 | 4.42 | 20 S |

The following samples were analyzed in this batch: HS23061730-01

Client: PDC Energy
Project: Raindance FC 26-112HNX
WorkOrder: HS23061730

**QUALIFIERS,
ACRONYMS, UNITS**

| Qualifier | Description |
|------------------|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| M | Manually integrated, see raw data for justification |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL/SDL |

| Acronym | Description |
|----------------|-------------------------------------|
| DCS | Detectability Check Study |
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitation Limit |
| SD | Serial Dilution |
| SDL | Sample Detection Limit |
| TRRP | Texas Risk Reduction Program |

| Unit Reported | Description |
|----------------------|----------------------|
| mg/L | Milligrams per Liter |

CERTIFICATIONS,ACCREDITATIONS & LICENSES

| Agency | Number | Expire Date |
|-----------------|--------------------|-------------|
| Arkansas | 88-00356 | 27-Mar-2024 |
| California | 2919; 2024 | 30-Apr-2024 |
| Dept of Defense | L23-358 | 31-May-2025 |
| Florida | E87611-38 | 30-Jun-2024 |
| Illinois | 2000322023-11 | 30-Jun-2024 |
| Kansas | E-10352; 2022-2023 | 31-Jul-2023 |
| Louisiana | 03087-2023 | 30-Jun-2024 |
| North Carolina | 624-2023 | 31-Dec-2023 |
| North Dakota | R-193 2023-2024 | 30-Apr-2024 |
| Oklahoma | 2022-141 | 31-Aug-2023 |
| Texas | T104704231-23-31 | 30-Apr-2024 |
| Utah | TX026932022-13 | 31-Jul-2023 |

Sample Receipt Checklist

Work Order ID: HS23061730

Date/Time Received: **24-Jun-2023 09:05**

Client Name: PDC Energy 80203

Received by: **Corey Grandits**Completed By: /S/ Paresh M. Giga

26-Jun-2023 13:10

eSignature

Date/Time

Reviewed by: /S/ Tyler Monroe

27-Jun-2023 10:42

eSignature

Date/Time

Matrices: **Water**Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?

Yes ☒No ☐Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐No ☐Not Present ☒

Custody seals intact on sample bottles?

Yes ☐No ☐Not Present ☒

VOA/TX1005/TX1006 Solids in hermetically sealed vials?

Yes ☐No ☐Not Present ☒

Chain of custody present?

Yes ☒No ☐

1 Page(s)

Chain of custody signed when relinquished and received?

Yes ☒No ☐

COC IDs:none

Samplers name present on COC?

Yes ☒No ☐

Chain of custody agrees with sample labels?

Yes ☒No ☐

Samples in proper container/bottle?

Yes ☒No ☐

Sample containers intact?

Yes ☒No ☐

Sufficient sample volume for indicated test?

Yes ☒No ☐

All samples received within holding time?

Yes ☒No ☐

Container/Temp Blank temperature in compliance?

Yes ☒No ☐

Temperature(s)/Thermometer(s):

2.9C/2.8C U/C

IR31

Cooler(s)/Kit(s):

48223

Date/Time sample(s) sent to storage:

6/24/23 12:00

Water - VOA vials have zero headspace?

Yes ☒No ☐No VOA vials submitted ☐

Water - pH acceptable upon receipt?

Yes ☒No ☐N/A ☐

pH adjusted?

Yes ☐No ☒N/A ☐

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:

