

Analytical Results
Former Duke J 4-33 Tank Battery

TABLE 1
FORMER DUKE J 4-33 TANK BATTERY
SOIL ANALYTICAL RESULTS SUMMARY TABLE
ORGANIC COMPOUNDS

| Sample ID | Date Sampled | Depth | Benzene (mg/kg) | Toluene (mg/kg) | Ethylbenzene (mg/kg) | Total Xylenes (mg/kg) | 1, 2, 4-TMB (mg/kg) | 1, 3, 5-TMB (mg/kg) | Naphthalene (mg/kg) | TPH ⁽⁴⁾ (mg/kg) |
|---------------------------------------------------------|--------------|-------------|--------------------|--------------------|-------------------------|-----------------------------|------------------------|------------------------|------------------------|-------------------------------|
| Residential SSL ^(1,2) | | | 1.2 | 490 | 5.8 | 58 | 30 | 27 | 2 | 500 |
| Protection of Groundwater SSL ^(1,2,3) | | | 0.0026 | 0.69 | 0.78 | 9.9 | 0.0081 | 0.0087 | 0.0038 | 500 |
| SEP01-DL-B @ 4' | 12/3/2021 | 4 ft. bgs | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0038 | <50 |
| SEP01-DL-N @ 2.5' | 12/3/2021 | 2.5 ft. bgs | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0038 | <50 |
| SEP01-FL @ 4' | 12/3/2021 | 4 ft. bgs | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0038 | <50 |
| AST01 @ 4' | 12/3/2021 | 4 ft. bgs | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0038 | <50 |
| AST02 @ 4' | 12/3/2021 | 4 ft. bgs | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0038 | <50 |
| AST03 @ 4' | 12/3/2021 | 4 ft. bgs | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0038 | <50 |
| AST04 @ 4' | 12/3/2021 | 4 ft. bgs | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0038 | <50 |
| AST05 @ 4' | 12/3/2021 | 4 ft. bgs | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0038 | <50 |
| AST06 @ 4' | 12/3/2021 | 4 ft. bgs | <0.0020 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0038 | <50 |

Notes:

- Compounds referenced from the COGCC 2 CCR 404-1, Table 915-1, effective January 15, 2021.
 - Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
 - SSLs are applicable if a pathway for communication with groundwater is present.
 - Value calculated by adding TVPH-GRO, TEPH-DRO, and TEPH-ORO concentrations.
- COGCC = Colorado Oil and Gas Conservation Commission
 (<) = Analytical result is less than the indicated laboratory reporting limit.
 TVPH-GRO = Total volatile petroleum hydrocarbons - gasoline range organics
 TEPH-DRO = Total extractable petroleum hydrocarbons - diesel range organics
 TEPH-ORO = Total extractable petroleum hydrocarbons - oil range organics
 mg/kg = Milligrams per kilogram
 TMB = Trimethylbenzene
 ft. = Feet
 bgs = Below ground surface

TABLE 2
FORMER DUKE J 4-33 TANK BATTERY
SOIL ANALYTICAL RESULTS SUMMARY TABLE
INORGANIC COMPOUNDS

| Sample ID | Date Sampled | Depth | pH (units) | EC (mmhos/cm) | SAR (units) | Boron (mg/L) |
|-----------------------------------------------------------------|--------------|-------------|---------------|------------------|----------------|-----------------|
| Soil Suitability for Reclamation Standard ⁽¹⁾ | | | 6-8.3 | <4 | <6 | 2 |
| SEP01-DL-B @ 4' | 12/3/2021 | 4 ft. bgs | 7.89 | 0.623 | 0.777 | 0.0632 |
| SEP01-DL-N @ 2.5' | 12/3/2021 | 2.5 ft. bgs | 7.96 | 0.467 | 0.314 | <0.0100 |

Notes:

1. Compounds referenced from the COGCC 2 CCR 404-1, Table 915-1, effective January 15, 2021.

COGCC = Colorado Oil and Gas Conservation Commission

(<) = Analytical result is less than the indicated laboratory reporting limit.

EC = Electrical conductivity

SAR = Sodium adsorption ratio

mmhos/cm = Millimhos per centimeter

mg/L = Milligrams per liter

ft. = Feet

bgs = Below ground surface

TABLE 3
FORMER DUKE J 4-33 TANK BATTERY
FIELD DATA SUMMARY TABLE

| Sample ID | Date Sampled | Depth | GPS Data ⁽¹⁾ Latitude / Longitude | | PDOP Value | VOC Concentration ⁽²⁾ (ppm) |
|-------------------|--------------|-------------|-------------------------------------------------|-------------|------------|----------------------------------------------|
| SEP-01-DL-B @ 4' | 12/3/2021 | 4 ft. bgs | 40.425686 | -104.792249 | 1.1 | 1.5 |
| SEP01-DL-N @ 2.5' | 12/3/2021 | 2.5 ft. bgs | 40.425707 | -104.792245 | 1.2 | 0.0 |
| SEP01-DL-W @ 2.5' | 12/3/2021 | 2.5 ft. bgs | 40.425710 | -104.792281 | 1.2 | 0.0 |
| SEP01-DL-S @ 2.5' | 12/3/2021 | 2.5 ft. bgs | 40.425693 | -104.792266 | 1.2 | 0.0 |
| SEP01-DL-E @ 2.5' | 12/3/2021 | 2.5 ft. bgs | 40.425679 | -104.792242 | 1.2 | 0.0 |
| SEP01-FL @ 4' | 12/3/2021 | 4 ft. bgs | 40.425679 | -104.792192 | 1.1 | 0.0 |
| AST01 @ 4' | 12/3/2021 | 4 ft. bgs | 40.425982 | -104.791963 | 1.1 | 8.8 |
| AST02 @ 4' | 12/3/2021 | 4 ft. bgs | 40.426033 | -104.791949 | 1.2 | 0.7 |
| AST03 @ 4' | 12/3/2021 | 4 ft. bgs | 40.426026 | -104.791895 | 1.2 | 0.1 |
| AST04 @ 4' | 12/3/2021 | 4 ft. bgs | 40.425957 | -104.791895 | 1.2 | 0.1 |
| AST05 @ 4' | 12/3/2021 | 4 ft. bgs | 40.425915 | -104.791901 | 1.2 | 0.0 |
| AST06 @ 4' | 12/3/2021 | 4 ft. bgs | 40.425925 | -104.791947 | 1.2 | 0.0 |
| BKG01 @ 2.5' | 12/3/2021 | 2.5 ft. bgs | 40.425798 | -104.791970 | 1.0 | 1.1 |
| BKG01 @ 4' | 12/3/2021 | 4 ft. bgs | 40.425798 | -104.791970 | 1.0 | 1.3 |
| MH01 @ 0-6" | 12/3/2021 | 0-6 in. bgs | 40.425753 | -104.792115 | 1.1 | 0.0 |

Notes:

1. Global Positioning System (GPS) data is provided in decimal degrees using World Geodetic System (WGS) 84 UTM Zone 13 North.
2. Volatile organic compound (VOC) concentrations are measured in the field using a photoionization detector (PID).
3. Sample included for reference only, sample collected during associated tank battery decommissioning.

PDOP = Position Dilution of Precision

ppm = Parts per million

ft. = Feet

in. = Inches

bgs = Below ground surface

ATTACHMENT A

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

December 27, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

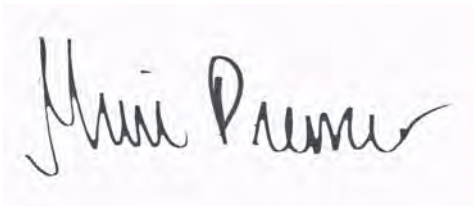
Denver, CO 80203

RE: Duke J 4-33 Tank Battery

Work Order #2112066

Enclosed are the results of analyses for samples received by Summit Scientific on 12/03/21 15:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Muri Premer", is shown on a light-colored background.

Muri Premer For Paul Shrewsbury
President



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|-----------------|---------------|--------|----------------|----------------|
| SEP01-DL-B@4' | 2112066-01 | Soil | 12/03/21 11:00 | 12/03/21 15:30 |
| SEP01-DL-N@2.5' | 2112066-02 | Soil | 12/03/21 11:02 | 12/03/21 15:30 |
| SEP01-FL@4' | 2112066-06 | Soil | 12/03/21 11:10 | 12/03/21 15:30 |
| AST01@4' | 2112066-09 | Soil | 12/03/21 13:30 | 12/03/21 15:30 |
| AST02@4' | 2112066-10 | Soil | 12/03/21 13:32 | 12/03/21 15:30 |
| AST03@4' | 2112066-11 | Soil | 12/03/21 13:34 | 12/03/21 15:30 |
| AST04@4' | 2112066-12 | Soil | 12/03/21 13:36 | 12/03/21 15:30 |
| AST05@4' | 2112066-13 | Soil | 12/03/21 13:38 | 12/03/21 15:30 |
| AST06@4' | 2112066-14 | Soil | 12/03/21 13:40 | 12/03/21 15:30 |

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

2112066.1

Page 1 of 2

Project Number:

| | | | | | Preservative | | | | Matrix | | | | Analysis Requested | | | | | | | Special Instructions | | |
|-------------------|--------------------|--------------|--------------|-------------------|--------------|------------|------|------------------|--------|---------------------------|----------------|----------|--------------------|------------------|-------------------|-------------|-------------|----------|---|----------------------|--|--------------------------------|
| ID | Sample Description | Date Sampled | Time Sampled | # of containers | HCl | HNO3 | None | Other | Water | Soil | Air-Canister # | Other | BTEXN - 8260B | TPH - (C6 - C36) | 1,2,4 & 1,3,5-TMB | Boron - HWS | pH, EC, SAR | PAHS-915 | | | | pH, EC, SAR by saturated paste |
| 1 | SEPO1-DL-B @ 4' | 12/3/21 | 1100 | 3 | | | X | | | X | | | X | X | X | X | X | X | X | mm | | |
| 2 | SEPO1-DL-N @ 2.5' | | 1102 | 3 | | | X | | | X | | | X | X | X | X | X | X | X | mm | | |
| 3 | SEPO1-DL-W @ 2.5' | | 1104 | 3 | | | X | | | X | | | | | | | | | | | | X |
| 4 | SEPO1-DL-S @ 2.5' | | 1106 | 3 | | | X | | | X | | | | | | | | | | | | X |
| 5 | SEPO1-DL-E @ 2.5' | | 1108 | 3 | | | X | | | X | | | | | | | | | | | | X |
| 6 | SEPO1-FL @ 4' | | 1110 | 3 | | | X | | | X | | | X | X | X | | | | | | | X |
| 7 | BLG01 @ 4' | | 1235 | 1 | | | X | | | X | | | | | | | | | | | | X |
| 8 | BLG01 @ 2.5' | | 1230 | 1 | | | X | | | X | | | | | | | | | | | | X |
| 9 | AST01 @ 4' | | 1330 | 3 | | | X | | | X | | | X | X | X | | | | | | | |
| 10 | AST02 @ 4' | | 1332 | 3 | | | X | | | X | | | X | X | X | | | | | | | |
| Relinquished by: | | Date/Time: | | Received by: | | Date/Time: | | Turn Around Time | | (Check) | | Notes: | | | | | | | | | | |
| Matt W. | | 12-3-21 | | Tasman's Lock Box | | | | Same Day | | 72 hours | | | | | | | | | | | | |
| | | 12:30 PM | | | | | | 24 hours | | Standard | | | | | | | | | | | | |
| Relinquished by: | | Date/Time: | | Received by: | | Date/Time: | | 48 hours | | Sample Integrity: | | | | | | | | | | | | |
| Tasman's Lock Box | | 12-3-21 | | [Signature] | | 12-3-21 | | | | Temperature Upon Receipt: | | 11.1 | | | | | | | | | | |
| | | 3:30 PM | | | | 1530 | | | | Samples Intact: | | (Yes) No | | | | | | | | | | |
| Relinquished by: | | Date/Time: | | Received by: | | Date/Time: | | | | | | | | | | | | | | | | |

2112066.2

Page 2 of 2

Project Number:

| | | | | | Preservative | | | | Matrix | | | | Analysis Requested | | | | | | | Special Instructions | | | |
|----|--------------------|--------------|--------------|-----------------|--------------|------|------|-------------|--------|------|----------------|-------------|--------------------|------------------|-------------------|-------------|-------------|------------|--|----------------------|--|--------------------------------|--|
| ID | Sample Description | Date Sampled | Time Sampled | # of containers | HCl | HNO3 | None | Other _____ | Water | Soil | Air-Canister # | Other _____ | BTEXN - 8260B | TPH - (C6 - C36) | 1,2,4 & 1,3,5-TMB | Boron - HWS | pH, EC, SAR | PAHs - 915 | | | | pH, EC, SAR by saturated paste | |
| 1 | AST03 @ 4' | 12-3-21 | 1334 | 3 | | | X | | | X | | | X | X | X | | | | | | | | |
| 2 | AST04 @ 4' | ↓ | 1336 | 3 | | | X | | | X | | | X | X | X | | | | | | | | |
| 3 | AST05 @ 4' | ↓ | 1338 | 3 | | | X | | | X | | | X | X | X | | | | | | | | |
| 4 | AST012 @ 4' | ↓ | 1340 | 3 | | | X | | | X | | | X | X | X | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | |
|-------------------|-------------------|-------------------|-----------------|---------------------------|----------|--------|
| Relinquished by: | Date/Time: | Received by: | Date/Time: | Turn Around Time | (Check) | Notes: |
| Matayau W. | 12-3-21 3:30pm | Tasman's Lock Box | | Same Day | 72 hours | |
| Relinquished by: | Date/Time: | Received by: | Date/Time: | 24 hours | Standard | |
| Tasman's Lock Box | | | 12 3 21 1530 | 48 hours | | |
| Relinquished by: | Date/Time: | Received by: | Date/Time: | Sample Integrity: | | |
| | | | | Temperature Upon Receipt: | 11.1 | |
| | | | | Samples Intact: | Yes No | |

S₂

2/2

2112066

Sample Receipt Checklist

S2 Work Order#

Client: Poc/Tasman

Client Project ID:

Duke J4-33 Tank BatteryShipped Via: H.D./P.U./FedEx/UPS/USPS/Other

Airbill #:

Matrix (check all that apply):

☐ Air☒ Soil/Solid☐ Water☐ Other:

(Describe)

Temp (°C)

11.1

Thermometer ID: G86A9201901378

| | Yes | No | N/A | Comments (if any) |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------|
| If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | on ICE |
| Were all samples received intact ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Was adequate sample volume provided ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| If custody seals are present, are they intact ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Are samples with holding times due within 48 hours sample due within 48 hours present? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| For volatiles in water – is there headspace present? If yes, contact client and note in narrative. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| If dissolved metals are requested, were samples field filtered? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

Additional Comments (if any):

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Custodian Printed Name or Initials

12-3-21
Date/Time



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

SEP01-DL-B@4'
2112066-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/03/21 11:00**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | |
| Benzene | ND | 0.0020 | mg/kg | 1 | BEL0172 | 12/08/21 | 12/09/21 | EPA 8260B | |
| Toluene | ND | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.010 | " | " | " | " | " | " | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Naphthalene | ND | 0.0038 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 0.50 | " | " | " | " | " | " | |

Date Sampled: **12/03/21 11:00**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 113 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 108 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 114 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/03/21 11:00**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | |
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | BEL0171 | 12/08/21 | 12/09/21 | EPA 8015M | |
| C28-C36 (ORO) | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **12/03/21 11:00**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | |
| Surrogate: o-Terphenyl | | 83.0 % | 30-150 | | " | " | " | " | |

Total Metals by EPA 6020B Hot Water Soluble Extraction

Summit Scientific

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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

SEP01-DL-B@4'
2112066-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/03/21 11:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|-----------------|-------|----------|---------|----------|----------|-----------|-------|
| Boron | 0.0632 | 0.0100 | mg/L | 1 | BEL0168 | 12/08/21 | 12/14/21 | EPA 6020B | |

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **12/03/21 11:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|--------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Calcium | 57.2 | 0.0566 | mg/L dry | 1 | BEL0191 | 12/09/21 | 12/15/21 | EPA 6020B | |
| Magnesium | 20.9 | 0.0566 | " | " | " | " | " | " | |
| Sodium | 27.0 | 0.0566 | " | " | " | " | " | " | |

Calculated Analysis

Date Sampled: **12/03/21 11:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-------------------------|--------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| Sodium Adsorption Ratio | 0.777 | 0.00100 | units | 1 | BEL0354 | 12/15/21 | 12/15/21 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/03/21 11:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------|--------|-----------------|-------|----------|---------|----------|----------|-------------|-------|
| % Solids | 88.3 | | % | 1 | BEL0328 | 12/15/21 | 12/15/21 | Calculation | |

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/03/21 11:00**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------------------|--------|-----------------|----------|----------|---------|----------|----------|-----------|-------|
| Specific Conductance (EC) | 0.623 | 0.0100 | mmhos/cm | 1 | BEL0238 | 12/10/21 | 12/10/21 | EPA 120.1 | |

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

SEP01-DL-B@4'
2112066-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **12/03/21 11:00**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|-------------|-----------|--|----------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| pH | 7.89 | | | pH Units | 1 | BEL0239 | 12/10/21 | 12/10/21 | EPA 9045D | |

Summit Scientific

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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

SEP01-DL-N@2.5'
2112066-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/03/21 11:02**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | |
| Benzene | ND | 0.0020 | mg/kg | 1 | BEL0172 | 12/08/21 | 12/09/21 | EPA 8260B | |
| Toluene | ND | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.010 | " | " | " | " | " | " | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Naphthalene | ND | 0.0038 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 0.50 | " | " | " | " | " | " | |

Date Sampled: **12/03/21 11:02**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 113 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 111 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 112 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/03/21 11:02**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | |
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | BEL0171 | 12/08/21 | 12/09/21 | EPA 8015M | |
| C28-C36 (ORO) | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **12/03/21 11:02**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | |
| Surrogate: o-Terphenyl | | 68.0 % | 30-150 | | " | " | " | " | |

Total Metals by EPA 6020B Hot Water Soluble Extraction

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

SEP01-DL-N@2.5'
2112066-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/03/21 11:02**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | |
| Boron | ND | 0.0100 | mg/L | 1 | BEL0168 | 12/08/21 | 12/14/21 | EPA 6020B | |

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **12/03/21 11:02**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|--------|-----------|----------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | |
| Calcium | 43.6 | 0.0537 | mg/L dry | 1 | BEL0191 | 12/09/21 | 12/15/21 | EPA 6020B | |
| Magnesium | 12.9 | 0.0537 | " | " | " | " | " | " | |
| Sodium | 9.19 | 0.0537 | " | " | " | " | " | " | |

Calculated Analysis

Date Sampled: **12/03/21 11:02**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-------------------------|--------|-----------|-------|----------|---------|----------|----------|-------------|-------|
| | | Limit | | | | | | | |
| Sodium Adsorption Ratio | 0.314 | 0.00100 | units | 1 | BEL0354 | 12/15/21 | 12/15/21 | Calculation | |

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/03/21 11:02**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------|--------|-----------|-------|----------|---------|----------|----------|-------------|-------|
| | | Limit | | | | | | | |
| % Solids | 93.0 | | % | 1 | BEL0328 | 12/15/21 | 12/15/21 | Calculation | |

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/03/21 11:02**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------------------|--------|-----------|----------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | |
| Specific Conductance (EC) | 0.467 | 0.0100 | mmhos/cm | 1 | BEL0238 | 12/10/21 | 12/10/21 | EPA 120.1 | |

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Summit Scientific

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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

SEP01-DL-N@2.5'
2112066-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **12/03/21 11:02**

| Analyte | Result | Reporting | | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------|-------------|-----------|--|----------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | | |
| pH | 7.96 | | | pH Units | 1 | BEL0239 | 12/10/21 | 12/10/21 | EPA 9045D | |

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

SEP01-FL@4'
2112066-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/03/21 11:10**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | |
| Benzene | ND | 0.0020 | mg/kg | 1 | BEL0172 | 12/08/21 | 12/23/21 | EPA 8260B | |
| Toluene | ND | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.010 | " | " | " | " | " | " | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Naphthalene | ND | 0.0038 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 0.50 | " | " | " | " | " | " | |

Date Sampled: **12/03/21 11:10**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 110 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 94.2 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 91.1 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/03/21 11:10**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | |
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | BEL0171 | 12/08/21 | 12/09/21 | EPA 8015M | |
| C28-C36 (ORO) | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **12/03/21 11:10**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | |
| Surrogate: o-Terphenyl | | 61.2 % | 30-150 | | " | " | " | " | |

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

AST01@4'
2112066-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/03/21 13:30**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | |
| Benzene | ND | 0.0020 | mg/kg | 1 | BEL0172 | 12/08/21 | 12/09/21 | EPA 8260B | |
| Toluene | ND | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.010 | " | " | " | " | " | " | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Naphthalene | ND | 0.0038 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 0.50 | " | " | " | " | " | " | |

Date Sampled: **12/03/21 13:30**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 116 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 111 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 115 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/03/21 13:30**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | |
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | BEL0171 | 12/08/21 | 12/09/21 | EPA 8015M | |
| C28-C36 (ORO) | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **12/03/21 13:30**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | |
| Surrogate: o-Terphenyl | | 57.2 % | 30-150 | | " | " | " | " | |

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

AST02@4'
2112066-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/03/21 13:32**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | |
| Benzene | ND | 0.0020 | mg/kg | 1 | BEL0172 | 12/08/21 | 12/09/21 | EPA 8260B | |
| Toluene | ND | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.010 | " | " | " | " | " | " | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Naphthalene | ND | 0.0038 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 0.50 | " | " | " | " | " | " | |

Date Sampled: **12/03/21 13:32**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 114 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 107 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 112 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/03/21 13:32**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | |
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | BEL0171 | 12/08/21 | 12/09/21 | EPA 8015M | |
| C28-C36 (ORO) | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **12/03/21 13:32**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | |
| Surrogate: o-Terphenyl | | 83.4 % | 30-150 | | " | " | " | " | |

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

AST03@4'
2112066-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/03/21 13:34**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | |
| Benzene | ND | 0.0020 | mg/kg | 1 | BEL0172 | 12/08/21 | 12/09/21 | EPA 8260B | |
| Toluene | ND | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.010 | " | " | " | " | " | " | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Naphthalene | ND | 0.0038 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 0.50 | " | " | " | " | " | " | |

Date Sampled: **12/03/21 13:34**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 117 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 108 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 112 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/03/21 13:34**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | |
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | BEL0171 | 12/08/21 | 12/09/21 | EPA 8015M | |
| C28-C36 (ORO) | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **12/03/21 13:34**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | |
| Surrogate: o-Terphenyl | | 98.4 % | 30-150 | | " | " | " | " | |

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

AST04@4'
2112066-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/03/21 13:36**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | |
| Benzene | ND | 0.0020 | mg/kg | 1 | BEL0172 | 12/08/21 | 12/09/21 | EPA 8260B | |
| Toluene | ND | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.010 | " | " | " | " | " | " | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Naphthalene | ND | 0.0038 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 0.50 | " | " | " | " | " | " | |

Date Sampled: **12/03/21 13:36**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 111 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 107 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 115 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/03/21 13:36**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | |
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | BEL0171 | 12/08/21 | 12/09/21 | EPA 8015M | |
| C28-C36 (ORO) | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **12/03/21 13:36**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | |
| Surrogate: o-Terphenyl | | 64.2 % | 30-150 | | " | " | " | " | |

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

AST05@4'
2112066-13 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/03/21 13:38**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | |
| Benzene | ND | 0.0020 | mg/kg | 1 | BEL0172 | 12/08/21 | 12/09/21 | EPA 8260B | |
| Toluene | ND | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.010 | " | " | " | " | " | " | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Naphthalene | ND | 0.0038 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 0.50 | " | " | " | " | " | " | |

Date Sampled: **12/03/21 13:38**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 112 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 107 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 112 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/03/21 13:38**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | |
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | BEL0171 | 12/08/21 | 12/09/21 | EPA 8015M | |
| C28-C36 (ORO) | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **12/03/21 13:38**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | |
| Surrogate: o-Terphenyl | | 90.2 % | 30-150 | | " | " | " | " | |

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

AST06@4'
2112066-14 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/03/21 13:40**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|-----------------------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | |
| Benzene | ND | 0.0020 | mg/kg | 1 | BEL0172 | 12/08/21 | 12/09/21 | EPA 8260B | |
| Toluene | ND | 0.0050 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Xylenes (total) | ND | 0.010 | " | " | " | " | " | " | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | " | " | " | " | " | " | |
| Naphthalene | ND | 0.0038 | " | " | " | " | " | " | |
| Gasoline Range Hydrocarbons | ND | 0.50 | " | " | " | " | " | " | |

Date Sampled: **12/03/21 13:40**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|----------------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | | 113 % | 23-173 | | " | " | " | " | |
| Surrogate: Toluene-d8 | | 110 % | 20-170 | | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | 115 % | 21-167 | | " | " | " | " | |

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/03/21 13:40**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---------------|--------|-----------|-------|----------|---------|----------|----------|-----------|-------|
| | | Limit | | | | | | | |
| C10-C28 (DRO) | ND | 50 | mg/kg | 1 | BEL0171 | 12/08/21 | 12/09/21 | EPA 8015M | |
| C28-C36 (ORO) | ND | 50 | " | " | " | " | " | " | |

Date Sampled: **12/03/21 13:40**

| Analyte | Result | Reporting | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|------------------------|--------|-----------|--------|----------|-------|----------|----------|--------|-------|
| | | Limit | | | | | | | |
| Surrogate: o-Terphenyl | | 69.7 % | 30-150 | | " | " | " | " | |

Summit Scientific

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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

| Analyte | Reporting | | | Spike | Source | | %REC | | RPD | |
|---------|-----------|-------|-------|-------|--------|------|--------|-----|-------|-------|
| | Result | Limit | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

Batch BEL0172 - EPA 5030 Soil MS

Blank (BEL0172-BLK1)

Prepared: 12/08/21 Analyzed: 12/09/21

| | | | | | | | | | | |
|----------------------------------|--------|--------|-------|--------|--|-----|--------|--|--|--|
| Benzene | ND | 0.0020 | mg/kg | | | | | | | |
| Toluene | ND | 0.0050 | " | | | | | | | |
| Ethylbenzene | ND | 0.0050 | " | | | | | | | |
| Xylenes (total) | ND | 0.010 | " | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.0050 | " | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.0050 | " | | | | | | | |
| Naphthalene | ND | 0.0038 | " | | | | | | | |
| Gasoline Range Hydrocarbons | ND | 0.50 | " | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0459 | | " | 0.0400 | | 115 | 23-173 | | | |
| Surrogate: Toluene-d8 | 0.0434 | | " | 0.0400 | | 108 | 20-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0446 | | " | 0.0400 | | 111 | 21-167 | | | |

LCS (BEL0172-BS1)

Prepared: 12/08/21 Analyzed: 12/09/21

| | | | | | | | | | | |
|----------------------------------|--------|--------|-------|--------|--|------|--------|--|--|--|
| Benzene | 0.0744 | 0.0020 | mg/kg | 0.100 | | 74.4 | 70-130 | | | |
| Toluene | 0.0743 | 0.0050 | " | 0.100 | | 74.3 | 70-130 | | | |
| Ethylbenzene | 0.0956 | 0.0050 | " | 0.100 | | 95.6 | 70-130 | | | |
| m,p-Xylene | 0.190 | 0.010 | " | 0.200 | | 95.1 | 70-130 | | | |
| o-Xylene | 0.0985 | 0.0050 | " | 0.100 | | 98.5 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 0.0727 | 0.0050 | " | 0.100 | | 72.7 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 0.0717 | 0.0050 | " | 0.100 | | 71.7 | 70-130 | | | |
| Naphthalene | 0.0978 | 0.0038 | " | 0.100 | | 97.8 | 70-130 | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0457 | | " | 0.0400 | | 114 | 23-173 | | | |
| Surrogate: Toluene-d8 | 0.0447 | | " | 0.0400 | | 112 | 20-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0430 | | " | 0.0400 | | 108 | 21-167 | | | |

Matrix Spike (BEL0172-MS1)

Source: 2112066-01

Prepared: 12/08/21 Analyzed: 12/09/21

| | | | | | | | | | | |
|----------------------------------|--------|--------|-------|--------|----|------|--------|--|--|--|
| Benzene | 0.112 | 0.0020 | mg/kg | 0.100 | ND | 112 | 70-130 | | | |
| Toluene | 0.105 | 0.0050 | " | 0.100 | ND | 105 | 70-130 | | | |
| Ethylbenzene | 0.0939 | 0.0050 | " | 0.100 | ND | 93.9 | 70-130 | | | |
| m,p-Xylene | 0.183 | 0.010 | " | 0.200 | ND | 91.5 | 70-130 | | | |
| o-Xylene | 0.0972 | 0.0050 | " | 0.100 | ND | 97.2 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 0.103 | 0.0050 | " | 0.100 | ND | 103 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 0.0998 | 0.0050 | " | 0.100 | ND | 99.8 | 70-130 | | | |
| Naphthalene | 0.105 | 0.0038 | " | 0.100 | ND | 105 | 70-130 | | | |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0434 | | " | 0.0400 | | 109 | 23-173 | | | |
| Surrogate: Toluene-d8 | 0.0435 | | " | 0.0400 | | 109 | 20-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0416 | | " | 0.0400 | | 104 | 21-167 | | | |

Summit Scientific

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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

| Analyte | Reporting | | | Spike | Source | | %REC | | RPD | |
|---------|-----------|-------|-------|-------|--------|------|--------|-----|-------|-------|
| | Result | Limit | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

Batch BEL0172 - EPA 5030 Soil MS

| Matrix Spike Dup (BEL0172-MSD1) | Source: 2112066-01 | | | Prepared: 12/08/21 Analyzed: 12/09/21 | | | | | | |
|----------------------------------|--------------------|--------|-------|---------------------------------------|----|-----|--------|------|----|--|
| Benzene | 0.128 | 0.0020 | mg/kg | 0.100 | ND | 128 | 70-130 | 14.0 | 30 | |
| Toluene | 0.121 | 0.0050 | " | 0.100 | ND | 121 | 70-130 | 13.7 | 30 | |
| Ethylbenzene | 0.108 | 0.0050 | " | 0.100 | ND | 108 | 70-130 | 13.5 | 30 | |
| m,p-Xylene | 0.212 | 0.010 | " | 0.200 | ND | 106 | 70-130 | 14.8 | 30 | |
| o-Xylene | 0.113 | 0.0050 | " | 0.100 | ND | 113 | 70-130 | 15.0 | 30 | |
| 1,2,4-Trimethylbenzene | 0.122 | 0.0050 | " | 0.100 | ND | 122 | 70-130 | 16.3 | 30 | |
| 1,3,5-Trimethylbenzene | 0.116 | 0.0050 | " | 0.100 | ND | 116 | 70-130 | 15.4 | 30 | |
| Naphthalene | 0.121 | 0.0038 | " | 0.100 | ND | 121 | 70-130 | 14.7 | 30 | |
| Surrogate: 1,2-Dichloroethane-d4 | 0.0446 | | " | 0.0400 | | 111 | 23-173 | | | |
| Surrogate: Toluene-d8 | 0.0442 | | " | 0.0400 | | 111 | 20-170 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0432 | | " | 0.0400 | | 108 | 21-167 | | | |

Summit Scientific

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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

| Analyte | Result | Reporting | | Spike Level | Source | | %REC | | RPD | |
|---------|--------|-----------|-------|----------------|--------|------|--------|-----|-------|-------|
| | | Limit | Units | | Result | %REC | Limits | RPD | Limit | Notes |

Batch BEL0171 - EPA 3550A

Blank (BEL0171-BLK1)

Prepared: 12/08/21 Analyzed: 12/09/21

| | | | |
|---------------|----|----|-------|
| C10-C28 (DRO) | ND | 50 | mg/kg |
| C28-C36 (ORO) | ND | 50 | " |

LCS (BEL0171-BS1)

Prepared: 12/08/21 Analyzed: 12/09/21

| | | | | | | |
|---------------|-----|----|-------|-----|------|--------|
| C10-C28 (DRO) | 440 | 50 | mg/kg | 500 | 88.0 | 70-130 |
|---------------|-----|----|-------|-----|------|--------|

Matrix Spike (BEL0171-MS1)

Source: 2112066-01

Prepared: 12/08/21 Analyzed: 12/09/21

| | | | | | | | |
|---------------|-----|----|-------|-----|------|------|--------|
| C10-C28 (DRO) | 436 | 50 | mg/kg | 500 | 42.4 | 78.6 | 70-130 |
|---------------|-----|----|-------|-----|------|------|--------|

Matrix Spike Dup (BEL0171-MSD1)

Source: 2112066-01

Prepared: 12/08/21 Analyzed: 12/09/21

| | | | | | | | | | |
|---------------|-----|----|-------|-----|------|------|--------|------|----|
| C10-C28 (DRO) | 411 | 50 | mg/kg | 500 | 42.4 | 73.8 | 70-130 | 5.77 | 20 |
|---------------|-----|----|-------|-----|------|------|--------|------|----|

Summit Scientific

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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

| Analyte | Reporting | | | Spike | Source | | %REC | | RPD | |
|---------|-----------|-------|-------|-------|--------|------|--------|-----|-------|-------|
| | Result | Limit | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

Batch BEL0168 - EPA 3050B

Blank (BEL0168-BLK1)

Prepared: 12/08/21 Analyzed: 12/14/21

Boron ND 0.0100 mg/L

LCS (BEL0168-BS1)

Prepared: 12/08/21 Analyzed: 12/14/21

Boron 5.10 0.0100 mg/L 5.00 102 80-120

Duplicate (BEL0168-DUP1)

Source: 2112027-01

Prepared: 12/08/21 Analyzed: 12/14/21

Boron ND 0.0100 mg/L ND 20

Matrix Spike (BEL0168-MS1)

Source: 2112027-01

Prepared: 12/08/21 Analyzed: 12/14/21

Boron 5.40 0.0100 mg/L 5.00 ND 108 75-125

Matrix Spike Dup (BEL0168-MSD1)

Source: 2112027-01

Prepared: 12/08/21 Analyzed: 12/14/21

Boron 5.39 0.0100 mg/L 5.00 ND 108 75-125 0.156 25

Summit Scientific

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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control
Summit Scientific

| Analyte | Reporting | | | Spike | Source | | %REC | | RPD | |
|---------|-----------|-------|-------|-------|--------|------|--------|-----|-------|-------|
| | Result | Limit | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

Batch BEL0191 - General Preparation

Blank (BEL0191-BLK1)

Prepared: 12/09/21 Analyzed: 12/15/21

| | | | |
|-----------|----|--------|----------|
| Calcium | ND | 0.0500 | mg/L wet |
| Magnesium | ND | 0.0500 | " |
| Sodium | ND | 0.0500 | " |

LCS (BEL0191-BS1)

Prepared: 12/09/21 Analyzed: 12/15/21

| | | | | | | |
|-----------|------|--------|----------|------|------|--------|
| Calcium | 5.26 | 0.0500 | mg/L wet | 5.00 | 105 | 70-130 |
| Magnesium | 5.19 | 0.0500 | " | 5.00 | 104 | 70-130 |
| Sodium | 4.74 | 0.0500 | " | 5.00 | 94.9 | 70-130 |

Summit Scientific

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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

| Analyte | Result | Reporting | | Spike Level | Source | | %REC | | RPD | |
|---------|--------|-----------|-------|----------------|--------|------|--------|-----|-------|-------|
| | | Limit | Units | | Result | %REC | Limits | RPD | Limit | Notes |

Batch BEL0328 - General Preparation

| Duplicate (BEL0328-DUP1) | | Source: 2112061-01 | | Prepared & Analyzed: 12/15/21 | | | | | | |
|--------------------------|------|--------------------|---|-------------------------------|------|--|--|-------|----|--|
| % Solids | 90.1 | | % | | 90.5 | | | 0.401 | 20 | |

Summit Scientific

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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control

Summit Scientific

| Analyte | Result | Reporting | | Spike Level | Source | | %REC | | RPD | |
|---------|--------|-----------|-------|----------------|--------|------|--------|-----|-------|-------|
| | | Limit | Units | | Result | %REC | Limits | RPD | Limit | Notes |

Batch BEL0238 - General Preparation

Blank (BEL0238-BLK1)

Prepared & Analyzed: 12/10/21

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BEL0238-BS1)

Prepared & Analyzed: 12/10/21

Specific Conductance (EC) 0.147 0.0100 mmhos/cm 0.150 97.9 95-105

Duplicate (BEL0238-DUP1)

Source: 2112066-01

Prepared & Analyzed: 12/10/21

Specific Conductance (EC) 0.624 0.0100 mmhos/cm 0.623 0.176 20

Summit Scientific

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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control

Summit Scientific

| Analyte | Result | Reporting | | Spike Level | Source Result | %REC | | RPD | | Notes |
|---------|--------|-----------|-------|----------------|------------------|------|--------|-----|-------|-------|
| | | Limit | Units | | | %REC | Limits | RPD | Limit | |

Batch BEL0239 - General Preparation

LCS (BEL0239-BS1)

Prepared & Analyzed: 12/10/21

| | | | | | |
|----|------|----------|------|------|--------|
| pH | 9.06 | pH Units | 9.18 | 98.7 | 95-105 |
|----|------|----------|------|------|--------|

Duplicate (BEL0239-DUP1)

Source: 2112066-01

Prepared & Analyzed: 12/10/21

| | | | | | |
|----|------|----------|------|-------|----|
| pH | 7.93 | pH Units | 7.89 | 0.506 | 20 |
|----|------|----------|------|-------|----|

Summit Scientific

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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Duke J 4-33 Tank Battery
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/27/21 18:12

Notes and Definitions

| | |
|-----|------------------------------------------------------|
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |