

November 28, 2017

RYAN MUELLER

ARCADIS - MIDLAND

1004 N BIG SPRING ST., SUITE 300

MIDLAND, TX 79701

RE: APACHE

Enclosed are the results of analyses for samples received by the laboratory on 11/20/17 13:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-9. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

| | |
|------------------|--------------------------------|
| Method EPA 552.2 | Total Haloacetic Acids (HAA-5) |
| Method EPA 524.2 | Total Trihalomethanes (TTHM) |
| Method EPA 524.4 | Regulated VOCs (V1, V2, V3) |

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

| | |
|------------------|---|
| Method SM 9223-B | Total Coliform and E. coli (Colilert MMO-MUG) |
| Method EPA 524.2 | Regulated VOCs and Total Trihalomethanes (TTHM) |
| Method EPA 552.2 | Total Haloacetic Acids (HAA-5) |

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:ARCADIS - MIDLAND
1004 N BIG SPRING ST., SUITE 300
MIDLAND TX, 79701Project: APACHE
Project Number: BARNSDALE
Project Manager: RYAN MUELLER
Fax To: NAReported:
28-Nov-17 17:47

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|-------------|---------------|--------|-----------------|-----------------|
| EAST WALL 4 | H703233-01 | Soil | 20-Nov-17 10:30 | 20-Nov-17 13:50 |

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:ARCADIS - MIDLAND
1004 N BIG SPRING ST., SUITE 300
MIDLAND TX, 79701Project: APACHE
Project Number: BARNSDALE
Project Manager: RYAN MUELLER
Fax To: NAReported:
28-Nov-17 17:47**EAST WALL 4**
H703233-01 (Soil)

| Analyte | Result | MDL | Reporting Limit | Units | Dilution | Batch | Analyst | Analyzed | Method | Notes |
|---------|--------|-----|--------------------|-------|----------|-------|---------|----------|--------|-------|
|---------|--------|-----|--------------------|-------|----------|-------|---------|----------|--------|-------|

Green Analytical Laboratories**Soluble (DI Water Extraction)**

| | | | | | | | | | | |
|-----------------|------------|--|------|-----------|----|---------|-----|-----------|----------|--|
| Chloride | 131 | | 10.0 | mg/kg wet | 10 | B711202 | JDA | 27-Nov-17 | EPA300.0 | |
|-----------------|------------|--|------|-----------|----|---------|-----|-----------|----------|--|

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:ARCADIS - MIDLAND
1004 N BIG SPRING ST., SUITE 300
MIDLAND TX, 79701Project: APACHE
Project Number: BARNSDALE
Project Manager: RYAN MUELLER
Fax To: NAReported:
28-Nov-17 17:47**Soluble (DI Water Extraction) - Quality Control****Green Analytical Laboratories**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC Limits | RPD | RPD Limit | Notes |
|--|--------|--------------------|-----------|---|------------------|----------------|--------|--------------|-------|
| Batch B711202 - General Prep - Wet Chem | | | | | | | | | |
| Blank (B711202-BLK1) | | | | | | | | | |
| | | | | Prepared: 22-Nov-17 Analyzed: 27-Nov-17 | | | | | |
| Chloride | ND | 10.0 | mg/kg wet | | | | | | |
| LCS (B711202-BS1) | | | | | | | | | |
| | | | | Prepared: 22-Nov-17 Analyzed: 27-Nov-17 | | | | | |
| Chloride | 244 | 10.0 | mg/kg wet | 250 | | 97.5 | 85-115 | | |
| LCS Dup (B711202-BSD1) | | | | | | | | | |
| | | | | Prepared: 22-Nov-17 Analyzed: 27-Nov-17 | | | | | |
| Chloride | 245 | 10.0 | mg/kg wet | 250 | | 98.0 | 85-115 | 0.458 | 20 |

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

| | |
|-----|--|
| ND | Analyte NOT DETECTED at or above the reporting limit |
| RPD | Relative Percent Difference |
| ** | Samples not received at proper temperature of 6°C or below. |
| *** | Insufficient time to reach temperature. |
| - | Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report |

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Celey D. Keene, Lab Director/Quality Manager



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ANALYSIS REQUEST

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