

Incident ID	nRM1926352539
District RP	1RP-5677
Facility ID	
Application ID	pRM1926352024

## Site Assessment/Characterization

*This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>21</u> (ft bgs)
Did this release impact groundwater or surface water?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

### **Characterization Report Checklist:** *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico  
Oil Conservation Division

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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Larry Baker Title: Environmental Tech Sr.

Signature: Larry Baker Date: 2/2/2021

email: larry.baker@apachecorp.com Telephone: 432-631-6982

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

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## Remediation Plan

**Remediation Plan Checklist:** *Each of the following items must be included in the plan.*

- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☒ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

**Deferral Requests Only:** *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Larry Baker Title: Environmental Tech Sr.

Signature: Larry Baker Date: 2/2/2021

email: larry.baker@apachecorp.com Telephone: 432-631-6982

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

☒ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: Michael Buchanan Date: 12/27/2023

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## Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

**Closure Report Attachment Checklist:** *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Larry Baker Title: Environmental Tech Sr.

Signature: Larry Baker Date: 2/2/2021

email: larry.baker@apachecorp.com Telephone: 432-631-6982

### OCD Only

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Michael Buchanan Date: 12/27/2023

Printed Name: Mike Buchanan Title: Environmental Specialist



**1RP-5677**  
**CLOSURE REPORT**  
**North Monument G/SA Unit #002**  
**Produced Water and Crude Oil Release**

Lea County, New Mexico

Latitude: 32.61233°

Longitude: -103.27262°

LAI Project No. 19-0112-51

December 21, 2020

Prepared for:  
Apache Corporation  
2350 W. Marland Blvd  
Hobbs, New Mexico 88240

Prepared by:  
Larson & Associates, Inc.  
507 North Marienfeld, Suite 202  
Midland, Texas 79701



Mark J. Larson, P.G.  
Certified Professional Geologist #10490



Robert Nelson  
Sr. Geoscientist

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Closure Report  
North Monument G/SA Unit #002  
Lea County, New Mexico  
December 21, 2020

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Closure Report and Annual Groundwater Monitoring Report  
North Monument G/SA Unit #002  
Lea County, New Mexico  
December 21, 2020

## 1.0 INTRODUCTION

Larson & Associates, Inc. (LAI) has prepared this closure report for submittal to the New Mexico Oil Conservation Division (OCD) in Santa Fe and Hobbs, New Mexico, on behalf of Apache Corporation (Apache). This report presents remediation activities at the NMGSAU 2102(Site) located in Unit O (SW/4, SE/4), Section 32, Township 19 South, Range 37 East, in Lea County, New Mexico. The geodetic position is North 32.61233 and West -103.27262. Figure 1 presents a topographic map.

### 1.1 Background

The crude oil and produced water release occurred on August 16, 2019, due to corrosion and failure of a buried 3-inch steel flowline. The failure allowed for an unknown volume of crude oil and produced water to be released. Approximately 2.5 barrels (bbls) of crude oil and produced water were recovered. The fluid pooled in the pasture south of the well pad and west of the lease road. Immediate notice was given to Mr. Dylan Rose-Cross (NMOCD) by Mr. Jeffery Broom (Apache Environmental Tech) via email on August 16, 2019. The surface ownership is private. The initial C-141 was submitted on August 29, 2019 and assigned remediation permit number of 1RP-5677. Appendix A presents the initial C-141.

### 1.2 Physical Setting

The physical setting is as follows:

- The surface elevation is approximately 3,564 feet above mean sea level (msl).
- The topography slopes gently towards the southeast.
- There are no surface water features within 1,000 feet of the Site.
- Karst data provided by the USGS describes this site as "Low Risk Potential".
- The soils are designated Berino-Cacique fine sandy loams association, 0 to 3 percent slopes, consisting of 8 inches of fine sandy loam and 52 inches of sandy clay loam in descending order.
- The surface geology consists of Eolian and piedmont deposits (Holocene to middle Pleistocene) interlayered eolian sands and piedmont-slop deposits.
- Groundwater occurs in the Ogallala Formation from about 21 to 23 feet below ground surface (bgs) based on depth to groundwater from two (2) monitoring wells installed near the excavation.

Appendix B presents the Karst Potential Map.

### 1.3 Remediation Levels

The following remediation standards are based on closure criteria for soil impacted by a release as presented in Table 1 of 19.15.29 NMAC:

- Benzene 10 mg/Kg
- BTEX 50 mg/Kg

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- TPH 100 mg/Kg
- Chloride 600 mg/Kg

Further, 19.15.29.13 NAMC (Restoration, Reclamation, and Re-Vegetation) requires the operator to restore the impacted surface area that existed prior to the release or their final land use.

## 2.0 REMEDIATION

Between September 4 and 23, 2019, an Apache contractor excavated contaminated soil to approximately twelve (12) feet bgs or about 10 feet above groundwater over an area measuring approximate 16,024 square feet or about 0.37 acre. Personnel from Apache collected confirmation soil samples from the excavation floor (bottom) and sidewalls. The samples were delivered under chain of custody to Cardinal Laboratories in Hobbs, New Mexico, which analyzed the samples for benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA SW-846 Method 8021B, total petroleum hydrocarbons (TPH), including gasoline range organics (C6-C12), diesel range organics (>C12-C28), and oil range organics (<C28-C35) by EPA SW-846 Method 8015M and chloride by titration method SM4500 CL-B. The samples were five-point composites collected no more than every 200 square feet of the excavation sidewalls (W1 through W36) and floor (B1 through B87).

All sidewall samples reported benzene, BTEX, TPH, and chloride less than the OCD remediation limits of 10 milligrams per kilogram (mg/Kg), 50 mg/Kg, 100 mg/Kg, and 600 mg/Kg, respectively. All floor (bottom) samples reported benzene and BTEX below the OCD remediation levels. TPH was reported above the remediation level of 100 mg/Kg in the following floor samples:

Sample ID	TPH (mg/Kg)
B48	256.5
B55	119
B56	461.8
B63	136
B77	277.3

Chloride was reported above the OCD remediation level (600 mg/Kg) in the following floor samples:

Sample ID	Chloride (mg/Kg)
B5	608
B10	688
B11	976
B19	923

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B22	816
B23	720
B45	1,170
B55	720
B56	864
B57	1,120
B58	832
B59	1,120
B62	928
B63	816
B64	1,060
B65	976
B66	1,300
B67	640
B76	784
B77	1,140
B78	1,090
B79	688

Table 1 presents the Apache laboratory analytical data summary. Appendix C presents a drawing showing the soil sample locations. Appendix D presents the Apache soil laboratory reports.

### 3.0 VARIANCE REQUEST AND WELL INSTALATION

On October 10, 2019, Apache applied for a variance to backfill the excavation due to the presence of groundwater between approximately 21 and 23 feet bgs for the remaining TPH and chloride contamination below approximately 12 feet bgs. The request denoted that Apache would backfill the excavation with clean caliche to about 6 feet bgs, install a 20-mil polyethylene synthetic liner, and complete backfilling with clean topsoil containing chloride less than 600 mg/Kg. No response was received from OCD. On November 14, 2019, Apache installed a 20-mil polyethylene synthetic liner in the bottom of the excavation at approximately 6 feet bgs and backfilled the excavation with caliche to two (2) feet bgs and to the surface with topsoil. The backfilled area measures approximately 16,024 square feet and was seeded with BLM Mix #2. Appendix E presents the variance request.

On March 11, 2020, Scarborough Drilling, Inc. (SDI) under LAI supervision installed two (2) monitor wells (TMW-1 and TMW-2) utilizing an air rotary rig. The wells were drilled to depths of approximately 30 feet bgs. TMW-1 installed near the east side of the excavation and TMW-2 installed southeast of the excavation, as close as possible to the source of the release. TMW-2 is positioned hydraulically down gradient and approximately 150 feet southeast of the excavation. The wells were completed with 2-inch schedule 40 threaded casing. About 20 feet of 0.010-inch factory slotted screen was positioned above and below the groundwater gauged at the time of drilling. The annular space above the sand was filled with bentonite chips to about 1-foot bgs. The wells were secured with locking steel protectors anchored in concrete. West Company, a State of New Mexico licensed professional land surveyor (License Number

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23263) surveyed the monitoring wells for position and elevation including top of casing and natural ground surface. Appendix F presents the boring logs. Appendix G presents photographic documentation.

## **4.0 CLOSURE REQUEST**

Apache requests approval for the variance request submitted on October 10, 2019 and no further action for the excavation.

**Tables**



## Floor Samples

Map ID	Sample ID	Depth	Chloride	Benzene	Toulene	Ethybenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO	GPS Coordinates
W1	W1	12'	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W2	W2	12'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W3	W3	12'	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W4	W4	12'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W5	W5	12'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W6	W6	12'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W7	W7	12'	128	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W8	W8	12'	160	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W9	W9	12'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W10	W10	12'	128	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W11	W11	12'	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W12	W12	12'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W13	W13	12'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W14	W14	12'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W15	W15	12'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W16	W16	12'	96	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W17	W17	12'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W18	W18	12'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W19	W19	12'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W20	W20	12'	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W21	W21	12'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W22	W22	12'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W23	W23	12'	112	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W24	W24	12'	352	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W25	W25	12'	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W26	W26	12'	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W27	W27	12'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W28	W28	12'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W29	W29	12'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W30	W30	12'	30	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W31	W31	12'	96	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W32	W32	12'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W33	W33	12'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W34	W34	12'	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W35	W35	12'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W36	W36	12'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results

W37	W37	12'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
W38	W38	12'	160	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	10.1	On Lab Results

## Wall Samples

Map ID	Sample ID	Depth	Chloride	Benzene	Toulene	Ethybenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO	GPS Coordinates
B1	B1	12'	176	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B2	B2	12'	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B3	B3	12'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B4	B4	12'	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B5	B5	12'	608	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B6	B6	12'	288	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B7	B7	12'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B8	B8	12'	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B9	B9	12'	112	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B10	B10	12'	688	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B11	B11	12'	976	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B12	B12	12'	96	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B13	B13	12'	128	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B14	B14	12'	160	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B15	B15	12'	160	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B16	B16	12'	112	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B17	B17	12'	160	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B18	B18	12'	272	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B19	B19	12'	928	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B20	B20	12'	112	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B21	B21	12'	528	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B22	B22	12'	816	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B23	B23	12'	720	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B24	B24	12'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B25	B25	12'	96	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B26	B26	12'	160	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B27	B27	12'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B28	B28	12'	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B29	B29	12'	240	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	12	<10.0	On Lab Results
B30	B30	12'	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B31	B31	12'	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B32	B32	12'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B33	B33	12'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B34	B34	12'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B35	B35	12'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B36	B36	12'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results

B37	B37	12'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B38	B38	12'	144	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B39	B39	12'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B40	B40	12'	96	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B41	B41	12'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B42	B42	12'	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B43	B43	12'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B44	B44	12'	128	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B45	B45	12'	1170	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B46	B46	12'	144	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B47	B47	12'	336	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B48	B48	12'	128	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	222	34.5	On Lab Results
B49	B49	12'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B50	B50	12'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B51	B51	12'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	92.4	<10.0	On Lab Results
B52	B52	12'	128	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B53	B53	12'	256	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	19.7	<10.0	On Lab Results
B54	B54	12'	416	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B55	B55	12'	720	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	119	<10.0	On Lab Results
B56	B56	12'	864	<0.050	<0.050	<0.050	0.221	0.221	21.5	395	45.3	On Lab Results
B57	B57	12'	1120	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B58	B58	12'	832	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	11.9	<10.0	On Lab Results
B59	B59	12'	1120	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	37.8	<10.0	On Lab Results
B60	B60	12'	240	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B61	B61	12'	144	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	74.9	<10.0	On Lab Results
B62	B62	12'	928	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	29.9	<10.0	On Lab Results
B63	B63	12'	816	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	136	16.6	On Lab Results
B64	B64	12'	1060	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	85.5	12	On Lab Results
B65	B65	12'	976	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	13.6	<10.0	On Lab Results
B66	B66	12'	1300	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B67	B67	12'	640	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B68	B68	12'	496	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B69	B69	12'	192	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B70	B70	12'	112	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B71	B71	12'	464	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B72	B72	12'	496	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B73	B73	12'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B74	B74	12'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	14.1	<10.0	On Lab Results
B75	B75	12'	96	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B76	B76	12'	784	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	74.9	<10.0	On Lab Results
B77	B77	12'	1140	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	190	87.3	On Lab Results
B78	B78	12'	1090	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results

B79	B79	12'	688	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	12	<10.0	On Lab Results
B80	B80	12'	384	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B81	B81	12'	224	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B82	B82	12'	416	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B83	B83	12'	112	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B84	B84	12'	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B85	B85	12'	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B86	B86	12'	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B87	B87	12'	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	41.5	<10.0	On Lab Results

## **Figures**



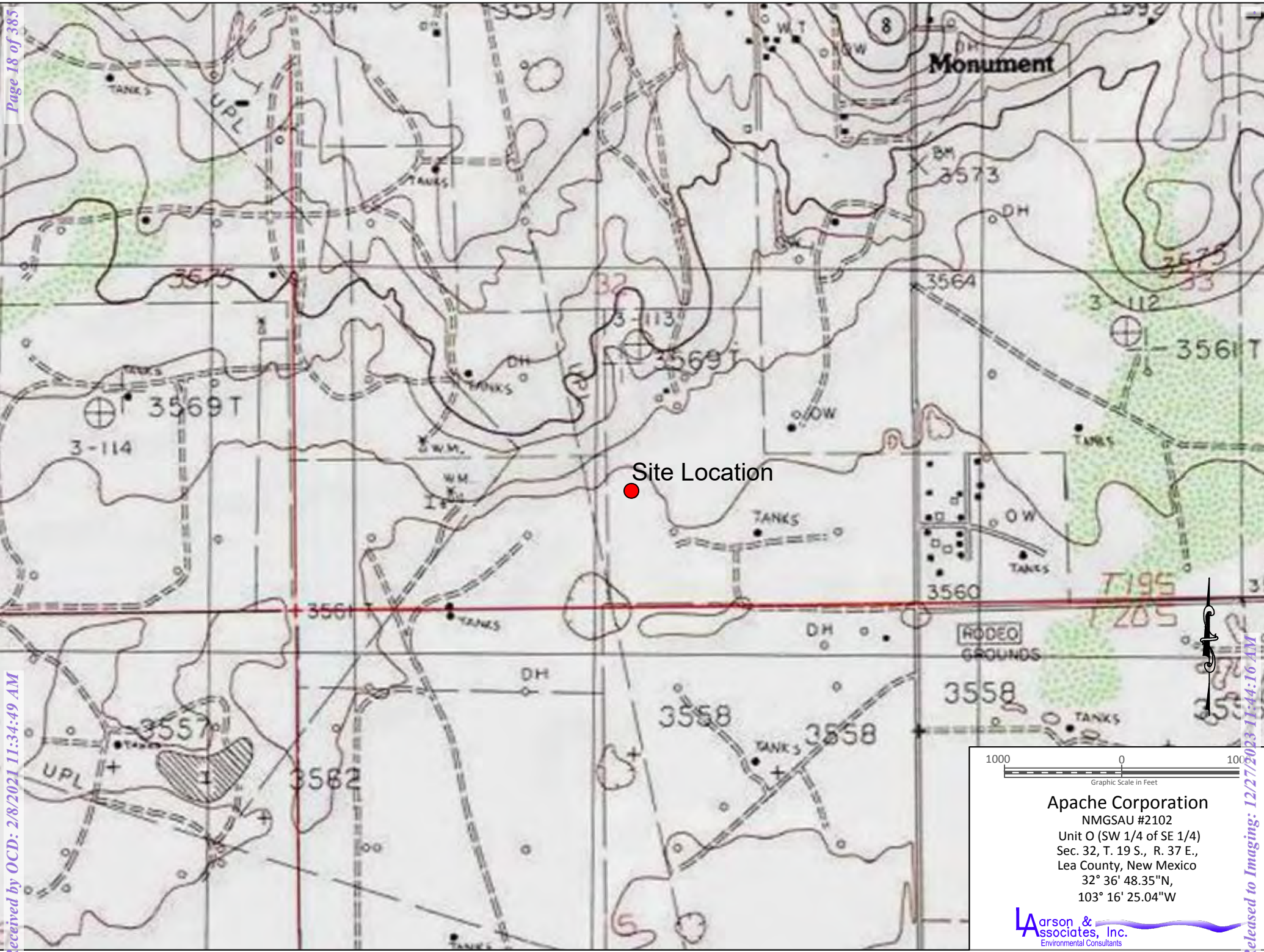


Figure 1 - Topographic Map



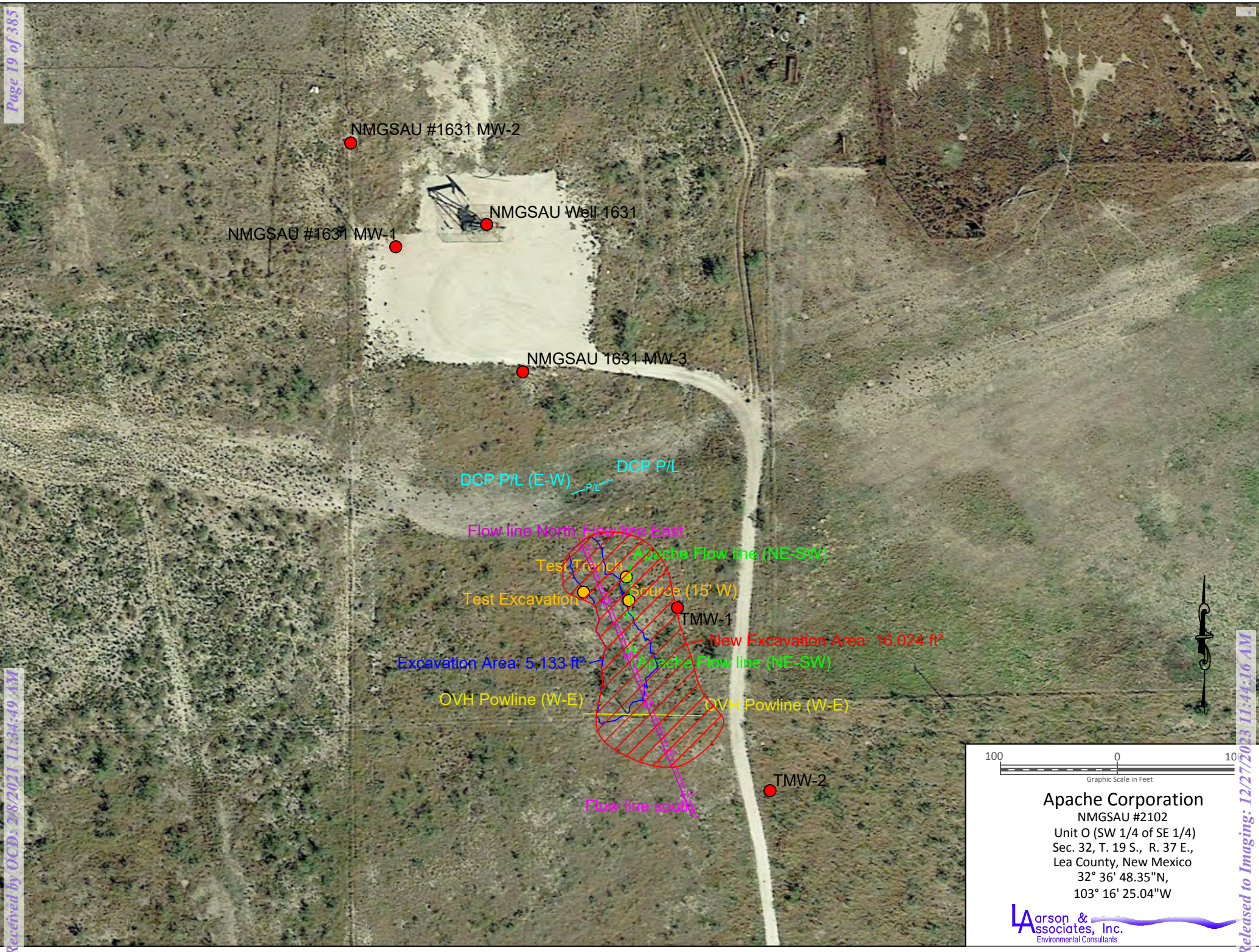
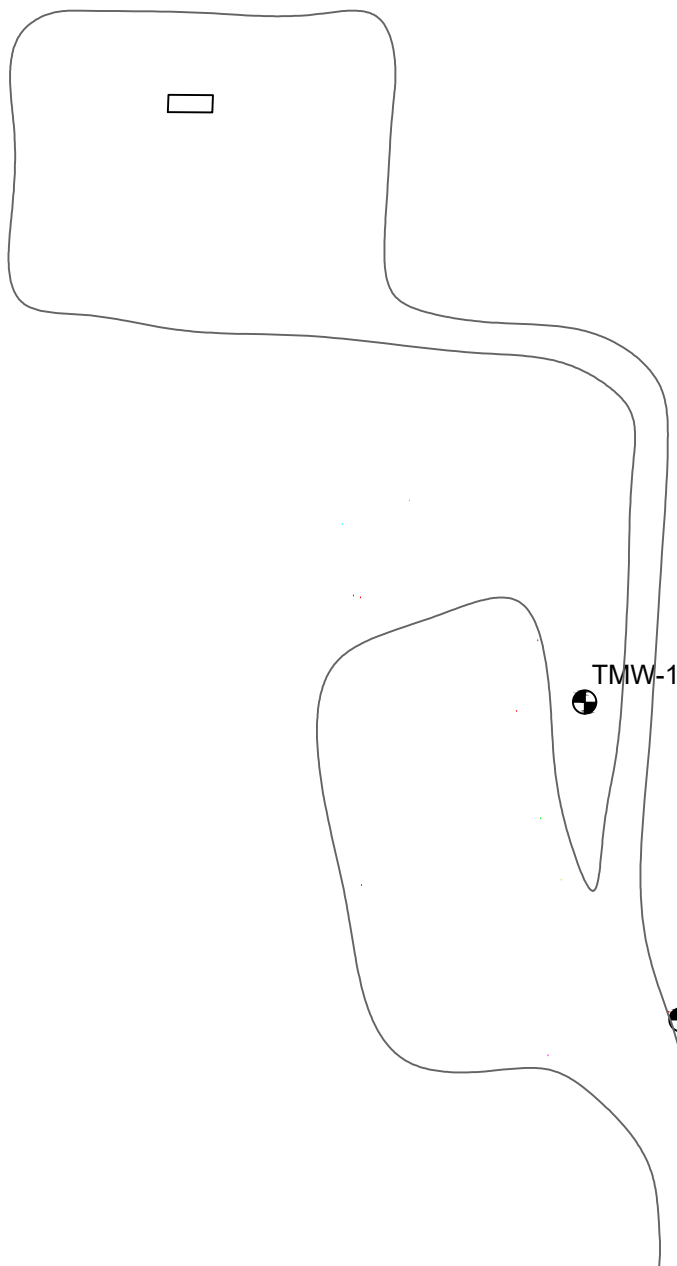


Figure 2 - Aerial Map



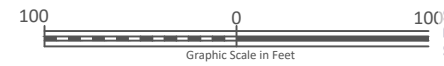
NMGSAU #1631 MW-2



TMW-1



TMW-2



Apache Corporation  
NMGSAU #2102  
Unit O (SW 1/4 of SE 1/4)  
Sec. 32, T. 19 S., R. 37 E.,  
Lea County, New Mexico  
32° 36' 48.35"N,  
103° 16' 25.04"W



Figure 3 - Base Map



**Appendix A**  
**Laboratory Reports**

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural  
Resources Department

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 24, 2018  
Submit to appropriate OCD District office

Incident ID	NRM1926352539
District RP	1RP-5677
Facility ID	
Application ID	pRM1926352024

## Release Notification

### Responsible Party

Responsible Party	Apache Corporation	OGRID	873
Contact Name	Bruce Baker	Contact Telephone	432-631-6982
Contact email	larry.baker@apachecorp.com	Incident # (assigned by OCD)	
Contact mailing address	2350 W. Marland BLVD Hobbs, NM 88240		

### Location of Release Source

Latitude 32.61233 Longitude -103.27262  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	North Monument G/SA Unit # 002	Site Type	Oil Well
Date Release Discovered	8/16/19	API# (if applicable)	30-025-05919

Unit Letter	Section	Township	Range	County
O	32	19S	37E	Lea

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name: Johnston)

### Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) <b>Unknown</b>	Volume Recovered (bbls) <b>2.5 barrels</b>
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) <b>Unknown</b>	Volume Recovered (bbls) <b>2.5 barrels</b>
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release **Buried flanged 3 inch steel pipe failed due to internal corrosion. The release occurred on the flowline in the pasture so the GPS coordinates for the actual release will not match the actual well location.**

State of New Mexico  
Oil Conservation Division

Incident ID	NRM1926352539
District RP	1RP-5677
Facility ID	
Application ID	pRM1926352024

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?  <b>Release is greater than 25 barrels</b>
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? <b>Via email on 8/16/2019 given to NMOCD Rep. Dylan Rose-Coss by Jeff Broom, Environmental Tech, Apache Corporation</b>	

### Initial Response

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:  	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Bruce Baker</u>	Title: <u>Environmental Tech. SR.</u>
Signature: <u>Bruce Baker</u>	Date: <u>8/29/19</u>
email: <u>larry.baker@apachecorp.com</u>	Telephone: <u>432-631-6982</u>
<b>OCD Only</b> Received by: <u>Ramona Marcus</u> Date: <u>09/20/2019</u>	

## **Appendix C**

### **Photographs**





Browser

★ Favorites

▶ Spatial Bookmarks

▶ Project Home

▶ Home

▶ C:\

▶ D:\

▶ L:\

▶ Z:\

▶ GeoPackage

▶ SpatiaLite

▶ PostgreSQL

▶ MSSQL

▶ Oracle

▶ DB2

▶ WMS/WMTS

▶ XYZ Tiles

▶ WCS

▶ WFS / OGC API - Features

▶ OWS

▶ ArcGisMapServer

▶ ArcGisFeatureServer

▶ GeoNode

Layers

☒ Added geom info

☒ carlsbad\_west

☒ Karst\_or\_No\_Karst

☒ High

☒ Low

☒ Medium

☒

☒ Bing Satellite



**Appendix A**  
**Laboratory Reports**



## BORING RECORD

GEOLOGIC UNIT	DEPTH	Start: 10:29 Finish: 11:45 DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	Surface Elevation: TOC Elevation:		NUMBER	RECOVERY	DEPTH	REMARKS
										BACKGROUND PID READING
	0	Sand, 7.5YR, 6/5 to 6/4, Well Sorted, Very Fine Grained Quartz Sand, Light Brown	ML							SOIL : _____ PPM SOIL : _____ PPM
	5	Caliche, 7.5YR, 8/3, Pink, 2-10mm Subangular Clast Inclusions, Fine Grained	Caliche							
	10	Silty Sand, 7.5YR, 8/4, Pink, Moderately Sorted with Subangular 1-6mm Clast Inclusions								
	15	7.5YR, 8/6, Reddish Yellow, Moderately Sorted with Subangular 2-6mm Clast Inclusions	ML							
	20									
	25									
	30	TD: 30'								

☐ ONE CONTINUOUS AUGER SAMPLER

☐ STANDARD PENETRATION TEST

☐ UNDISTURBED SAMPLE

☐ WATER TABLE ( 24 HRS )

☐ WATER TABLE ( TIME OF BORING )

☐ LABORATORY TEST LOCATION

☐ PENETROMETER ( TONS/ SQ. FT )

☐ NO RECOVERY

JOB NUMBER : 19-0112-51 / Apache Corp.

HOLE DIAMETER : 2"

LOCATION : NMGSAU 2102

LAI GEOLOGIST : R. Nelson

DRILLING CONTRACTOR : SDI

DRILLING METHOD : Air Rotary

## BORING RECORD

GEOLOGIC UNIT	DEPTH	Start: 12:36 Finish: 1:09 DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	Surface Elevation: TOC Elevation:		NUMBER	RECOVERY	DEPTH	REMARKS
										BACKGROUND PID READING
	0	Sand, 7.5YR, 6/5 to 6/4, Well Sorted, Very Fine Quartz Grained Sand, Light Brown	ML							SOIL : _____ PPM SOIL : _____ PPM
	5	Caliche, 7.5YR, 8/3, Pink, 2-10mm Subangular Clast Inclusions, Fine Grained	Caliche							
	10	Silty Sand, 7.5YR, 8/4, Pink, Moderately Sorted with Subangular 1-6mm Clast Inclusions								
	15	7.5YR, 8/6, Reddish Yellow, Moderately Sorted with Subangular 2-6mm Clast Inclusions	ML							
	20									
	25									
	30	TD: 30'								

☐ ONE CONTINUOUS AUGER SAMPLER

☐ STANDARD PENETRATION TEST

☐ UNDISTURBED SAMPLE

☐ WATER TABLE ( 24 HRS )

☐ WATER TABLE ( TIME OF BORING )

☐ LABORATORY TEST LOCATION

☐ PENETROMETER ( TONS/ SQ. FT )

☐ NO RECOVERY

JOB NUMBER : 19-0112-51 / Apache Corp.

HOLE DIAMETER : 2"

LOCATION : NMGSAU 2102

LAI GEOLOGIST : R. Nelson

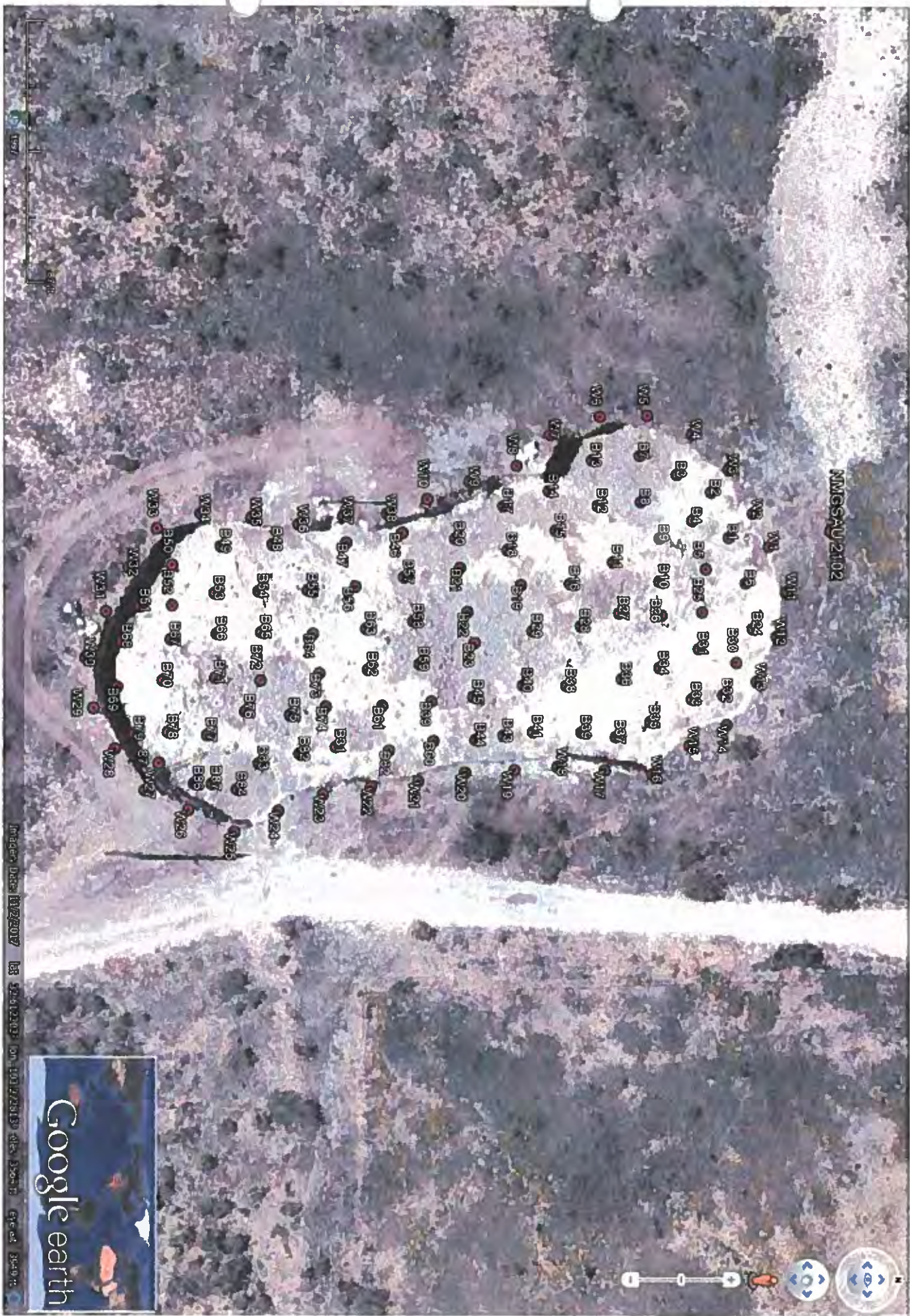
DRILLING CONTRACTOR : SDI

DRILLING METHOD : Air Rotary



## **Appendix B**

### **Photographs**



## **Appendix C**

### **Photographs**





PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

September 17, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/11/19 15:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/11/2019  
Reported: 09/17/2019  
Project Name: NMGSAU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/11/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: W 3 32.6124552-103.2730152 (H903141-01)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	1.84	92.0	2.00	6.79	
Toluene*	<0.050	0.050	09/16/2019	ND	1.89	94.4	2.00	4.62	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	1.94	96.9	2.00	4.64	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	5.87	97.9	6.00	5.18	
Total BTEX	<0.300	0.300	09/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 79.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	09/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2019	ND	190	95.0	200	7.57	
DRO >C10-C28*	<10.0	10.0	09/12/2019	ND	185	92.5	200	11.7	
EXT DRO >C28-C36	<10.0	10.0	09/12/2019	ND					

Surrogate: 1-Chlorooctane 87.8 % 41-142

Surrogate: 1-Chlorooctadecane 95.5 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/11/2019  
Reported: 09/17/2019  
Project Name: NMGSAU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/11/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: W 4 32.6123818-103.27330568 (H903141-02)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	1.84	92.0	2.00	6.79	
Toluene*	<0.050	0.050	09/16/2019	ND	1.89	94.4	2.00	4.62	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	1.94	96.9	2.00	4.64	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	5.87	97.9	6.00	5.18	
Total BTEX	<0.300	0.300	09/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 79.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2019	ND	190	95.0	200	7.57	
DRO >C10-C28*	<10.0	10.0	09/12/2019	ND	185	92.5	200	11.7	
EXT DRO >C28-C36	<10.0	10.0	09/12/2019	ND					

Surrogate: 1-Chlorooctane 85.0 % 41-142

Surrogate: 1-Chlorooctadecane 95.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Page 35 of 385  
Received by OCD: 2/8/2021 11:34:49 AM  
Released to Imaging: 12/27/2023 11:44:16 AM



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/11/2019	Sampling Date:	09/11/2019
Reported:	09/17/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: W 5 32.6123114-103.2730431 (H903141-03)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	1.84	92.0	2.00	6.79	
Toluene*	<0.050	0.050	09/16/2019	ND	1.89	94.4	2.00	4.62	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	1.94	96.9	2.00	4.64	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	5.87	97.9	6.00	5.18	
Total BTEX	<0.300	0.300	09/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 77.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2019	ND	190	95.0	200	7.57	
DRO >C10-C28*	<10.0	10.0	09/12/2019	ND	185	92.5	200	11.7	
EXT DRO >C28-C36	<10.0	10.0	09/12/2019	ND					

Surrogate: 1-Chlorooctane 84.1 % 41-142

Surrogate: 1-Chlorooctadecane 93.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/11/2019  
Reported: 09/17/2019  
Project Name: NMGSAU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/11/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: W 6 32.6123253-103.2730421 (H903141-04)**

BTEX 8021B		mg/kg		Analyzed By: BF				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	1.84	92.0	2.00	6.79	
Toluene*	<0.050	0.050	09/16/2019	ND	1.89	94.4	2.00	4.62	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	1.94	96.9	2.00	4.64	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	5.87	97.9	6.00	5.18	
Total BTEX	<0.300	0.300	09/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 151 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2019	ND	190	95.0	200	7.57	
DRO >C10-C28*	<10.0	10.0	09/12/2019	ND	185	92.5	200	11.7	
EXT DRO >C28-C36	<10.0	10.0	09/12/2019	ND					

Surrogate: 1-Chlorooctane 80.9 % 41-142

Surrogate: 1-Chlorooctadecane 90.5 % 37.6-147

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*Coley D. Keene*

Coley D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/11/2019	Sampling Date:	09/11/2019
Reported:	09/17/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: W 7 32.6122662-103.2729995 (H903141-05)**

BTEX 80218		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	1.84	92.0	2.00	6.79	
Toluene*	<0.050	0.050	09/16/2019	ND	1.89	94.4	2.00	4.62	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	1.94	96.9	2.00	4.64	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	5.87	97.9	6.00	5.18	
Total BTEX	<0.300	0.300	09/16/2019	ND					

*Surrogate: 4-Bromofluorobenzene (PIE)* 75.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	09/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2019	ND	190	95.0	200	7.57	
DRO >C10-C28*	<10.0	10.0	09/12/2019	ND	185	92.5	200	11.7	
EXT DRO >C28-C36	<10.0	10.0	09/12/2019	ND					

*Surrogate: 1-Chlorooctane* 83.4 % 41-142

*Surrogate: 1-Chlorooctadecane* 92.4 % 37.6-147

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*C. D. Keene*

Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/11/2019	Sampling Date:	09/11/2019
Reported:	09/17/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B 15 32.6122705-103.2728741 (H903141-06)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	1.84	92.0	2.00	6.79	
Toluene*	<0.050	0.050	09/16/2019	ND	1.89	94.4	2.00	4.62	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	1.94	96.9	2.00	4.64	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	5.87	97.9	6.00	5.18	
Total BTEX	<0.300	0.300	09/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 78.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	09/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2019	ND	195	97.7	200	6.40	
DRO >C10-C28*	<10.0	10.0	09/12/2019	ND	198	99.0	200	7.79	
EXT DRO >C28-C36	<10.0	10.0	09/12/2019	ND					

Surrogate: 1-Chlorooctane 89.0 % 41-142

Surrogate: 1-Chlorooctadecane 95.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/11/2019	Sampling Date:	09/11/2019
Reported:	09/17/2019	Sampling Type:	Soil
Project Name:	NMGS AU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: W 10 32.6121547-103.2729090 (H903141-07)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	1.84	92.0	2.00	6.79	
Toluene*	<0.050	0.050	09/16/2019	ND	1.89	94.4	2.00	4.62	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	1.94	96.9	2.00	4.64	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	5.87	97.9	6.00	5.18	
Total BTX	<0.300	0.300	09/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 78.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	09/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2019	ND	195	97.7	200	6.40	
DRO >C10-C28*	<10.0	10.0	09/12/2019	ND	198	99.0	200	7.79	
EXT DRO >C28-C36	<10.0	10.0	09/12/2019	ND					

Surrogate: 1-Chlorooctane 93.3 % 41-142

Surrogate: 1-Chlorooctadecane 100 % 37.6-147

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*Coley D. Keene*

Coley D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

- S-04            The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- 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

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

<b>Company Name:</b> <u>Apple</u>		<b>P.O. #:</b>	
<b>Project Manager:</b> <u>Jeffrey Brown</u>		<b>Company:</b>	
<b>Address:</b>		<b>Attn:</b>	
<b>City:</b> <u>Holmes</u>		<b>State:</b> <u>WV</u>	
<b>Phone #:</b>		<b>Zip:</b> <u>26040</u>	
<b>Project #:</b>		<b>City:</b>	
<b>Project Name:</b>		<b>State:</b>	
<b>Project Location:</b> <u>WV 6540 219</u>		<b>Zip:</b>	
<b>Sample Name:</b> <u>See Quota 21</u>		<b>Phone #:</b>	
<b>FOR LAB USE ONLY</b>		<b>Fax #:</b>	

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX						DATE	TIME	EXT	TPH	BTEX
				GROUNDWATER	WASTEWATER	SOIL	SOIL	SLUDGE	OTHER					
H903141	1	32 G12 055-2	1							9/11	12:09			
	2	32 G12 055-2	1							9/11	12:11			
	3	32 G12 055-2	1							9/11	12:13			
	4	32 G12 055-2	1							9/11	12:15			
	5	32 G12 055-2	1							9/11	12:17			
	6	32 G12 055-2	1							9/11	12:18			
	7	32 G12 055-2	1							9/11	12:19			
	8	32 G12 055-2	1							9/11	12:20			
	9	32 G12 055-2	1							9/11	12:21			
	10	32 G12 055-2	1							9/11	12:22			

<b>Reinquinished By:</b> <u>[Signature]</u>	<b>Date:</b> <u>9/11/19</u>	<b>Received By:</b> <u>[Signature]</u>	<b>Date:</b> <u>9/11/19</u>
<b>Reinquinished By:</b> <u>[Signature]</u>	<b>Date:</b> <u>9/11/19</u>	<b>Received By:</b> <u>[Signature]</u>	<b>Date:</b> <u>9/11/19</u>

<b>Delivered By:</b> (Circle One) <u>2.22</u> <u>#47</u>	<b>Sample Condition:</b> <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Cool <input type="checkbox"/> No	<b>CHECKED BY:</b> (Initials) <u>TS</u>
<b>Sampler - UPS - Bus - Other:</b>	<b>REMARKS:</b>	<b>Phone Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Phone #:</b>
<b>REMARKS:</b>	<b>Fax Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Fax #:</b>	<b>REMARKS:</b>



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September 18, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/13/19 7:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/13/2019  
Reported: 09/18/2019  
Project Name: NMGSAU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/12/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Mike Snyder

**Sample ID: B 17 @ 12' 32.6122239-103.2730310 (H903162-01)**

BTX 80218		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	2.14	107	2.00	2.36	
Toluene*	<0.050	0.050	09/16/2019	ND	1.96	98.0	2.00	4.79	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	2.42	121	2.00	17.2	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	6.01	100	6.00	1.48	
Total BTX	<0.300	0.300	09/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 95.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	09/16/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2019	ND	198	98.8	200	5.98	
DRO >C10-C28*	<10.0	10.0	09/14/2019	ND	201	100	200	7.76	
EXT DRO >C28-C36	<10.0	10.0	09/14/2019	ND					

Surrogate: 1-Chlorooctane 84.7 % 41-142

Surrogate: 1-Chlorooctadecane 91.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/13/2019  
Reported: 09/18/2019  
Project Name: NMGSAU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/12/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Mike Snyder

**Sample ID: B 20 @ 12' 32.6121242-103.2729113 (H903162-02)**

BTEX 80218		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	2.14	107	2.00	2.36	
Toluene*	<0.050	0.050	09/16/2019	ND	1.96	98.0	2.00	4.79	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	2.42	121	2.00	17.2	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	6.01	100	6.00	1.48	
Total BTEX	<0.300	0.300	09/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	09/16/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2019	ND	198	98.8	200	5.98	
DRO >C10-C28*	<10.0	10.0	09/14/2019	ND	201	100	200	7.76	
EXT DRO >C28-C36	<10.0	10.0	09/14/2019	ND					

Surrogate: 1-Chlorooctane 88.1 % 41-142

Surrogate: 1-Chlorooctadecane 95.9 % 37.6-147

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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/13/2019  
Reported: 09/18/2019  
Project Name: NMGSAU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/12/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Mike Snyder

**Sample ID: B 15 @ 12' 32.6123148-103.2728449 (H903162-03)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	2.14	107	2.00	2.36	
Toluene*	<0.050	0.050	09/16/2019	ND	1.96	98.0	2.00	4.79	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	2.42	121	2.00	17.2	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	6.01	100	6.00	1.48	
Total BTX	<0.300	0.300	09/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 96.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	09/16/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2019	ND	198	98.8	200	5.98	
DRO >C10-C28*	<10.0	10.0	09/14/2019	ND	201	100	200	7.76	
EXT DRO >C28-C36	<10.0	10.0	09/14/2019	ND					

Surrogate: 1-Chlorooctane 93.2 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/13/2019	Sampling Date:	09/12/2019
Reported:	09/18/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Mike Snyder
Project Location:	NOT GIVEN		

**Sample ID: B 16 @ 12' 32.6123332-103.2728691 (H903162-04)**

BTEX 8021B		mg/kg	Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	2.14	107	2.00	2.36	
Toluene*	<0.050	0.050	09/16/2019	ND	1.96	98.0	2.00	4.79	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	2.42	121	2.00	17.2	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	6.01	100	6.00	1.48	
Total BTEX	<0.300	0.300	09/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 95.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	09/16/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2019	ND	198	98.8	200	5.98	
DRO >C10-C28*	<10.0	10.0	09/14/2019	ND	201	100	200	7.76	
EXT DRO >C28-C36	<10.0	10.0	09/14/2019	ND					

Surrogate: 1-Chlorooctane 86.0 % 41-142

Surrogate: 1-Chlorooctadecane 92.6 % 37.6-147

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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/13/2019  
Reported: 09/18/2019  
Project Name: NMGS AU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/12/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Mike Snyder

**Sample ID: W 9 32.6122163-103.2729334 (H903162-05)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	2.14	107	2.00	2.36	
Toluene*	<0.050	0.050	09/16/2019	ND	1.96	98.0	2.00	4.79	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	2.42	121	2.00	17.2	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	6.01	100	6.00	1.48	
Total BTEX	<0.300	0.300	09/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/16/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2019	ND	198	98.8	200	5.98	
DRO >C10-C28*	<10.0	10.0	09/14/2019	ND	201	100	200	7.76	
EXT DRO >C28-C36	<10.0	10.0	09/14/2019	ND					

Surrogate: 1-Chlorooctane 94.6 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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Celestine D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/13/2019  
Reported: 09/18/2019  
Project Name: NMGS AU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/12/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Mike Snyder

**Sample ID: W 8 32.6122163-103.2729334 (H903162-06)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	1.84	92.0	2.00	6.79	
Toluene*	<0.050	0.050	09/16/2019	ND	1.89	94.4	2.00	4.62	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	1.94	96.9	2.00	4.64	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	5.87	97.9	6.00	5.18	
Total BTX	<0.300	0.300	09/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 76.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	09/16/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/16/2019	ND	202	101	200	3.54	
DRO >C10-C28*	<10.0	10.0	09/16/2019	ND	193	96.6	200	4.33	
EXT DRO >C28-C36	<10.0	10.0	09/16/2019	ND					

Surrogate: 1-Chlorooctane 83.8 % 41-142

Surrogate: 1-Chlorooctadecane 89.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/13/2019  
Reported: 09/18/2019  
Project Name: NMGS AU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/12/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Mike Snyder

**Sample ID: B 19 32.6122829-103.2728600 (H903162-07)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	1.84	92.0	2.00	6.79	
Toluene*	<0.050	0.050	09/16/2019	ND	1.89	94.4	2.00	4.62	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	1.94	96.9	2.00	4.64	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	5.87	97.9	6.00	5.18	
Total BTEX	<0.300	0.300	09/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 78.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	928	16.0	09/16/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/16/2019	ND	202	101	200	3.54	
DRO >C10-C28*	<10.0	10.0	09/16/2019	ND	193	96.6	200	4.33	
EXT DRO >C28-C36	<10.0	10.0	09/16/2019	ND					

Surrogate: 1-Chlorooctane 78.2 % 41-142

Surrogate: 1-Chlorooctadecane 83.9 % 37.6-147

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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/13/2019  
Reported: 09/18/2019  
Project Name: NMGSAU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/12/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Mike Snyder

**Sample ID: B 18 32.6122566-103.2728781 (H903162-08)**

BTEX 80218		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	1.84	92.0	2.00	6.79	
Toluene*	<0.050	0.050	09/16/2019	ND	1.89	94.4	2.00	4.62	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	1.94	96.9	2.00	4.64	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	5.87	97.9	6.00	5.18	
Total BTEX	<0.300	0.300	09/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 76.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	09/16/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/16/2019	ND	202	101	200	3.54	
DRO >C10-C28*	<10.0	10.0	09/16/2019	ND	193	96.6	200	4.33	
EXT DRO >C28-C36	<10.0	10.0	09/16/2019	ND					

Surrogate: 1-Chlorooctane 87.1 % 41-142

Surrogate: 1-Chlorooctadecane 93.4 % 37.6-147

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Notes and Definitions

- QR-02            The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- QM-07            The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- 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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# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: <u>Harsh</u>		P.O. #:		BILL TO		ANALYSIS REQUEST	
Project Manager: <u>William Brewer</u>		Company:					
Address:		Attn:					
City: <u>Hobbs</u>		Address:					
State: <u>NM</u> Zip: <u>88240</u>		City:					
Phone #:		Address:					
Project #:		City:					
Project Name:		State:		Zip:			
Project Location: <u>426 S Alt #2119</u>		Phone #:					
Sampler Name: <u>Joe Curracla</u>		Fax #:					

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX						DATE	TIME	EXT. TPH	BTEX	
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER					ACID/BASE
14003162	B13 0.10' 32.602339		1								9/12/08	8:08		
	-103.2730310		1								9/12/08	10:54		
3	B20 0.12' 32.6021042		1								9/12/08	12:10		
	-103.2729113		1								9/12/08	13:14		
3	B15 0.12' 32.6023148		1								9/12/08	1:50		
	-103.2728449		1											
4	B16 0.12' 32.6023332		1											
	-103.2728441		1											
5	B19 32.6123163		1											
	-103.2729334		1											

Relinquished By: <u>Joe Curracla</u>	Date: <u>9/12/08</u>	Time: <u>5:30</u>	Received By: <u>Mike Smith</u>	Date: <u>9/12/08</u>	Time: <u>4:00</u>
Delivered By: (Circle One) <u>4.6°C</u>	Sample Condition	Cool	Intact	Checked By: (Initials) <u>4.6°C</u>	
Sampler - UPS - Bus - Other: <u>Counted 50°C</u>	Yes	No	Yes	No	

REMARKS: 4.6°C

Curracla/Results





**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

<b>Company Name:</b> <u>Cardinal</u>		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>	
<b>Project Manager:</b> <u>Jeffrey Bacon</u>		<b>P.O. #:</b>			
<b>Address:</b>		<b>Company:</b>			
<b>City:</b> <u>Hobbs</u>		<b>Attn:</b>			
<b>State:</b> <u>NM</u> <b>Zip:</b> <u>88240</u>		<b>Address:</b>			
<b>Phone #:</b>		<b>City:</b>			
<b>Fax #:</b>		<b>State:</b>			
<b>Project Owner:</b>		<b>Zip:</b>			
<b>Project Name:</b>		<b>Phone #:</b>			
<b>Project Location:</b> <u>BLG-200 2119</u>		<b>Fax #:</b>			
<b>Sampler Name:</b> <u>Joe Curcio</u>					

Lab I.D.	Sample I.D.	(G)RAB OR (C)OM	# CONTAINERS	MATRIX						DATE	TIME	EXT	TPI	BTEX	
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER						ACID/BASE
H903162															
6148	32.6123163	C 1	1							9/12	1500				
	-103.8729334	C 1	1							9/12	3:31pm				
7	32.6122824	C 1	1												
	-103.2728600	C 1	1												
8	32.6123566	C 1	1							9/12	3:29				
	-103.2228781	C 1	1												

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<b>Relinquished By:</b> <u>[Signature]</u>	<b>Date:</b> <u>9/13/19</u>	<b>Received By:</b> <u>[Signature]</u>	<b>Date:</b> <u>9/13/19</u>
<b>Relinquished By:</b> <u>[Signature]</u>	<b>Date:</b> <u>9/13/19</u>	<b>Received By:</b> <u>[Signature]</u>	<b>Date:</b> <u>9/13/19</u>

<b>Delivered By: (Circle One)</b> <u>4.6c</u>	<b>Sample Condition</b>	<b>CHECKED BY:</b>
<b>Sampler - UPS - Bus - Other:</b> <u>Consolidated 5:00</u>	<input checked="" type="checkbox"/> Cool <input type="checkbox"/> Intact	<u>4.6c</u>
	<input type="checkbox"/> Yes <input type="checkbox"/> No	

**REMARKS:** 4.6c



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

September 20, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/16/19 11:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/16/2019  
Reported: 09/20/2019  
Project Name: NMGS AU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/13/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: B 24 @ 12' 32.6124803-103.2728909 (H903176-01)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/19/2019	ND	2.08	104	2.00	2.41	QR-03
Toluene*	<0.050	0.050	09/19/2019	ND	1.84	91.9	2.00	1.76	
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.86	93.1	2.00	2.77	
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.70	95.1	6.00	2.71	
Total BTX	<0.300	0.300	09/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 96.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	217	108	200	3.39	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	218	109	200	0.650	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 93.6 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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\*=Accredited Analyte

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*Celestine*

Celestine D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/16/2019  
Reported: 09/20/2019  
Project Name: NMGSAU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/13/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: W 1 32.6124824-103.2729247 (H903176-02)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/19/2019	ND	2.08	104	2.00	2.41	
Toluene*	<0.050	0.050	09/19/2019	ND	1.84	91.9	2.00	1.76	
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.86	93.1	2.00	2.77	
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.70	95.1	6.00	2.71	
Total BTEX	<0.300	0.300	09/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	217	108	200	3.39	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	218	109	200	0.650	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 92.0 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Page 57 of 385  
Received by OCD: 2/8/2021 11:34:49 AM  
Released to Imaging: 12/27/2023 11:44:16 AM



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/16/2019  
Reported: 09/20/2019  
Project Name: NMGS AU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/13/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: W 2 32.6124668-103.2729945 (H903176-03)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/19/2019	ND	2.08	104	2.00	2.41	
Toluene*	<0.050	0.050	09/19/2019	ND	1.84	91.9	2.00	1.76	
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.86	93.1	2.00	2.77	
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.70	95.1	6.00	2.71	
Total BTX	<0.300	0.300	09/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 94.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	217	108	200	3.39	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	218	109	200	0.650	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 94.3 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/16/2019	Sampling Date:	09/13/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: W 11 32.6125023-103.2728862 (H903176-04)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/19/2019	ND	2.08	104	2.00	2.41	
Toluene*	<0.050	0.050	09/19/2019	ND	1.84	91.9	2.00	1.76	
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.86	93.1	2.00	2.77	
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.70	95.1	6.00	2.71	
Total BTEX	<0.300	0.300	09/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	217	108	200	3.39	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	218	109	200	0.650	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 81.3 % 41-142

Surrogate: 1-Chlorooctadecane 99.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/16/2019  
Reported: 09/20/2019  
Project Name: NMGS AU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/13/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: B 25 @ 12' 32.6125097-103.2729076 (H903176-05)**

BTX 8021B		mg/kg	Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/19/2019	ND	2.08	104	2.00	2.41	
Toluene*	<0.050	0.050	09/19/2019	ND	1.84	91.9	2.00	1.76	
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.86	93.1	2.00	2.77	
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.70	95.1	6.00	2.71	
Total BTX	<0.300	0.300	09/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 94.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	217	108	200	3.39	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	218	109	200	0.650	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 96.0 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/16/2019	Sampling Date:	09/13/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B 26 @ 12' 32.6123182-103.2727883 (H903176-06)**

BTEX 80218		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/19/2019	ND	2.08	104	2.00	2.41	
Toluene*	<0.050	0.050	09/19/2019	ND	1.84	91.9	2.00	1.76	
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.86	93.1	2.00	2.77	
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.70	95.1	6.00	2.71	
Total BTEX	<0.300	0.300	09/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 95.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	09/17/2019	ND	432	108	400	0.00	QR-03

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	195	97.7	200	0.849	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	189	94.3	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 83.8 % 41-142

Surrogate: 1-Chlorooctadecane 95.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/16/2019	Sampling Date:	09/13/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B 27 @ 12' 32.6124058-103.2728697 (H903176-07)**

BTEX 8021B		mg/kg	Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/19/2019	ND	2.08	104	2.00	2.41	
Toluene*	<0.050	0.050	09/19/2019	ND	1.84	91.9	2.00	1.76	
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.86	93.1	2.00	2.77	
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.70	95.1	6.00	2.71	
Total BTEX	<0.300	0.300	09/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 96.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	195	97.7	200	0.849	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	189	94.3	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 88.9 % 41-142

Surrogate: 1-Chlorooctadecane 99.5 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/16/2019	Sampling Date:	09/13/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: W 12 32.6125323-103.2728815 (H903176-08)**

BTEX 8021B		mg/kg	Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/19/2019	ND	2.08	104	2.00	2.41	
Toluene*	<0.050	0.050	09/19/2019	ND	1.84	91.9	2.00	1.76	
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.86	93.1	2.00	2.77	
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.70	95.1	6.00	2.71	
Total BTEX	<0.300	0.300	09/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 95.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	195	97.7	200	0.849	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	189	94.3	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 87.2 % 41-142

Surrogate: 1-Chlorooctadecane 96.4 % 37.6-147

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*Celely D. Keene*

Celely D. Keene, Lab Director/Quality Manager





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Received by OCD: 2/8/2021 11:34:49 AM  
Released to Imaging: 12/27/2023 11:44:16 AM



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/16/2019	Sampling Date:	09/13/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B 29 @ 12' 32.6122533-103.2727678 (H903176-10)**

BTEX 8021B		mg/kg	Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/19/2019	ND	2.08	104	2.00	2.41	
Toluene*	<0.050	0.050	09/19/2019	ND	1.84	91.9	2.00	1.76	
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.86	93.1	2.00	2.77	
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.70	95.1	6.00	2.71	
Total BTEX	<0.300	0.300	09/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 95.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	195	97.7	200	0.849	
DRO >C10-C28*	12.0	10.0	09/17/2019	ND	189	94.3	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 83.9 % 41-142

Surrogate: 1-Chlorooctadecane 93.3 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- QR-03      The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- 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



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: <u>Adair's</u>		P.O. #:		BILL TO												ANALYSIS REQUEST												
Project Manager: <u>Bill Keon</u>		Company:																										
Address:		City:																										
City: <u>Hobbs</u>		State: <u>NM</u>		Zip: <u>88240</u>																								
Phone #:		Fax #:		Address:																								
Project #:		Project Owner:		City:																								
Project Name:		State:		Zip:																								
Project Location: <u>NMAHSAW #247</u>		Phone #:																										
Sample Name: <u>Sosa Quach</u>		Fax #:																										
FOR LAB USE ONLY																												
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV	SAMPLING	DATE	TIME															
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER					ACID/BASE	ICE / COOL	OTHER												
<u>H903126</u>	<u>B24612' 32.6124803</u>	<u>C 1</u>	<u>1</u>									<u>9/13</u>	<u>9:20</u>	<u>1</u>	<u>1</u>	<u>1</u>												
	<u>-103.2723909</u>	<u>C 1</u>	<u>1</u>										<u>9:35</u>	<u>1</u>	<u>1</u>	<u>1</u>												
	<u>-103.2729247</u>	<u>C 1</u>	<u>1</u>										<u>9:37</u>	<u>1</u>	<u>1</u>	<u>1</u>												
	<u>3 42 32.6124668</u>	<u>C 1</u>	<u>1</u>																									
	<u>-103.2729945</u>	<u>C 1</u>	<u>1</u>																									
	<u>4 411 32.6125023</u>	<u>C 1</u>	<u>1</u>										<u>10:15</u>	<u>1</u>	<u>1</u>	<u>1</u>												
	<u>-103.2728862</u>	<u>C 1</u>	<u>1</u>																									
	<u>5 B25012' 32.6125097</u>	<u>C 1</u>	<u>1</u>										<u>11:00</u>	<u>1</u>	<u>1</u>	<u>1</u>												
	<u>-103.2723026</u>	<u>C 1</u>	<u>1</u>																									

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Relinquished By: [Signature] Date: 9/14 Received By: [Signature] Date: 9/16

Time: 10:00 Time: 1:00

Delivered By: (Circle One) 3.76 4.11 4.12

Sampler - UPS - Bus - Other: UPS

Sample Condition: Intact YES NO

CHECKED BY: [Signature] (Initials)

REMARKS:



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

<b>Company Name:</b> Pacific		<b>P.O. #:</b>	<b>BILL TO</b>	<b>ANALYSIS REQUEST</b>				
<b>Project Manager:</b> Jeffery Bauman		<b>Company:</b>						
<b>Address:</b>		<b>Attn:</b>						
<b>City:</b> Hesperus		<b>State:</b> NM	<b>Zip:</b> 87240					
<b>Phone #:</b>		<b>Address:</b>						
<b>Project #:</b>		<b>City:</b>						
<b>Project Owner:</b>		<b>State:</b>						
<b>Project Name:</b>		<b>Zip:</b>						
<b>Project Location:</b> MUSSAU 8119		<b>Phone #:</b>						
<b>Sample Name:</b> CMA Quezada Jr.		<b>Fax #:</b>						
<b>FOR LAB USE ONLY</b>		<b>MATRIX</b>	<b>PRESERV</b>	<b>SAMPLING</b>				
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP # CONTAINERS	GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER :	ACID/BASE (CE) COOL OTHER :	DATE	TIME	CHECKED BY: (Initials)	REMARKS:
H903716	Ba10 Q1B 3A G23182 -103.2727883	C 1			9/13	11:45	/	EXT TPTI
	Q27 Q1B 3A G24058 -103.2728067	C 1			9/13	13:00	/	BTEX
	Q12 3A G125523 -103.2728815	C 1			9/13	15:45	/	
	Ba8 Q1B 3A G123391 -103.2728375	C 1			9/13	16:13	/	
	Ba9 Q1B 3A G120533 -103.27271678	C 1			9/13	17:05	-	

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**Relinquished By:** \_\_\_\_\_  
**Date:** 9/11/03  
**Time:** 9:11 AM  
**Received By:** \_\_\_\_\_

**Reinquired By:** \_\_\_\_\_  
**Date:** 9-16-19  
**Time:** 11:40  
**Received By:** \_\_\_\_\_

**Delivered By:** (Circle One) 3.72  
**Sampler - UPS - Bus - Other:** Estimated 4.1c  
**Sample Condition:** Cool Intact  
☒ Yes ☐ No  
☒ Yes ☐ No  
**CHECKED BY:** \_\_\_\_\_  
**REMARKS:** Email Results



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Received by OCD: 2/8/2021 11:34:49 AM

Released to Imaging: 12/27/2023 11:44:16 AM



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September 20, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/16/19 11:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/16/2019  
Reported: 09/20/2019  
Project Name: NMGSAU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/14/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: B 21 @ 12' 32.6121112-103.2729187 (H903177-01)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/19/2019	ND	2.08	104	2.00	2.41	
Toluene*	<0.050	0.050	09/19/2019	ND	1.84	91.9	2.00	1.76	
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.86	93.1	2.00	2.77	
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.70	95.1	6.00	2.71	
Total BTEX	<0.300	0.300	09/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	528	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	195	97.7	200	0.849	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	189	94.3	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 85.1 % 41-142

Surrogate: 1-Chlorooctadecane 97.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/14/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 22 @ 12' 32.6121214-103.2728724 (H903177-02)**

BTEX 8021B		mg/kg	Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2019	ND	2.08	104	2.00	2.41	
Toluene*	<0.050	0.050	09/20/2019	ND	1.84	91.9	2.00	1.76	
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.86	93.1	2.00	2.77	
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.70	95.1	6.00	2.71	
Total BTEX	<0.300	0.300	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 96.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	816	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	195	97.7	200	0.849	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	189	94.3	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 86.9 % 41-142

Surrogate: 1-Chlorooctadecane 98.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/16/2019  
Reported: 09/20/2019  
Project Name: NMGSAU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/14/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: B 23 @ 12' 32.6121264-103.2728416 (H903177-03)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2019	ND	2.08	104	2.00	2.41	
Toluene*	<0.050	0.050	09/20/2019	ND	1.84	91.9	2.00	1.76	
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.86	93.1	2.00	2.77	
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.70	95.1	6.00	2.71	
Total BTX	<0.300	0.300	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	195	97.7	200	0.849	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	189	94.3	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 87.8 % 41-142

Surrogate: 1-Chlorooctadecane 99.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/16/2019  
Reported: 09/20/2019  
Project Name: NMGSAU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/14/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: B 30 @ 12' 32.6124509-103.2727966 (H903177-04)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2019	ND	2.08	104	2.00	2.41	
Toluene*	<0.050	0.050	09/20/2019	ND	1.84	91.9	2.00	1.76	
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.86	93.1	2.00	2.77	
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.70	95.1	6.00	2.71	
Total BTX	<0.300	0.300	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 96.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	220	110	200	4.74	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	226	113	200	3.61	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 83.7 % 41-142

Surrogate: 1-Chlorooctadecane 88.9 % 37.6-147

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*Celestine D. Keene*

Celestine D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/16/2019	Sampling Date:	09/14/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B 31 @ 12' 32.6124594-103.2727497 (H903177-05)**

BTEX 8021B		mg/kg	Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2019	ND	2.08	104	2.00	2.41	
Toluene*	<0.050	0.050	09/20/2019	ND	1.84	91.9	2.00	1.76	
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.86	93.1	2.00	2.77	
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.70	95.1	6.00	2.71	
Total BTEX	<0.300	0.300	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 96.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	220	110	200	4.74	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	226	113	200	3.61	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 85.2 % 41-142

Surrogate: 1-Chlorooctadecane 90.8 % 37.6-147

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*Celey D. Keene*

Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/14/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 32 @ 12' 32.6124605-103.2727383 (H903177-06)**

BTEX 80218		mg/kg	Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2019	ND	2.08	104	2.00	2.41	
Toluene*	<0.050	0.050	09/20/2019	ND	1.84	91.9	2.00	1.76	
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.86	93.1	2.00	2.77	
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.70	95.1	6.00	2.71	
Total BTEX	<0.300	0.300	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 94.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	220	110	200	4.74	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	226	113	200	3.61	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 86.0 % 41-142

Surrogate: 1-Chlorooctadecane 91.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/16/2019  
Reported: 09/20/2019  
Project Name: NMGS AU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/14/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: B 33 @ 12' 32.6123673-103.2727364 (H903177-07)**

BTEX 8021B		mg/kg	Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2019	ND	2.08	104	2.00	2.41	
Toluene*	<0.050	0.050	09/20/2019	ND	1.84	91.9	2.00	1.76	
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.86	93.1	2.00	2.77	
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.70	95.1	6.00	2.71	
Total BTEX	<0.300	0.300	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 95.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	220	110	200	4.74	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	226	113	200	3.61	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 87.5 % 41-142

Surrogate: 1-Chlorooctadecane 91.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/16/2019  
Reported: 09/20/2019  
Project Name: NMGSAU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/14/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: B 34 @ 12' 32.6124354-103.2727041 (H903177-08)**

BTEX 8021B		mg/kg	Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2019	ND	2.08	104	2.00	2.41	
Toluene*	<0.050	0.050	09/20/2019	ND	1.84	91.9	2.00	1.76	
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.86	93.1	2.00	2.77	
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.70	95.1	6.00	2.71	
Total BTEX	<0.300	0.300	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 95.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	220	110	200	4.74	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	226	113	200	3.61	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 87.1 % 41-142

Surrogate: 1-Chlorooctadecane 92.0 % 37.6-147

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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/16/2019	Sampling Date:	09/14/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B 35 @ 12' 32.6124687-103.2727859 (H903177-09)**

BTEx 8021B		mg/kg	Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2019	ND	2.08	104	2.00	2.41	
Toluene*	<0.050	0.050	09/20/2019	ND	1.84	91.9	2.00	1.76	
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.86	93.1	2.00	2.77	
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.70	95.1	6.00	2.71	
Total BTEx	<0.300	0.300	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 97.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	220	110	200	4.74	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	226	113	200	3.61	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 85.4 % 41-142

Surrogate: 1-Chlorooctadecane 91.8 % 37.6-147

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*Coley D. Keene*

Coley D. Keene, Lab Director/Quality Manager



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Received by OCD: 2/8/2021 11:34:49 AM  
Released to Imaging: 12/27/2023 11:44:16 AM



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/16/2019  
Reported: 09/20/2019  
Project Name: NMGSAU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/14/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: B 36 @ 12' 32.6123770-103.2727806 (H903177-10)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2019	ND	2.08	104	2.00	2.41	
Toluene*	<0.050	0.050	09/20/2019	ND	1.84	91.9	2.00	1.76	
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.86	93.1	2.00	2.77	
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.70	95.1	6.00	2.71	
Total BTX	<0.300	0.300	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 95.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	220	110	200	4.74	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	226	113	200	3.61	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 88.8 % 41-142

Surrogate: 1-Chlorooctadecane 93.8 % 37.6-147

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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/14/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 37 @ 12' 32.6124351-103.2727172 (H903177-11)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/19/2019	ND	2.05	103	2.00	4.77	
Toluene*	<0.050	0.050	09/19/2019	ND	1.97	98.3	2.00	0.984	
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.88	94.2	2.00	8.89	QR-03
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.71	95.1	6.00	7.38	QR-03
Total BTX	<0.300	0.300	09/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 104 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	220	110	200	4.74	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	226	113	200	3.61	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 86.2 % 41-142

Surrogate: 1-Chlorooctadecane 93.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

- QR-03      The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QR-02      The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- 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



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: <b>Apache</b>		P.O. #:		BILL TO				ANALYSIS REQUEST			
Project Manager: <b>Jeffrey Brown</b>		Company:									
Address:		Attn:									
City: <b>Hobbs</b>		State: <b>NM</b> Zip: <b>88240</b>		Address:							
Phone #:		Fax #:		City:		State:		Zip:			
Project #:		Project Owner:		Phone #:		Fax #:					
Project Name:		Project Location: <b>McGraw Hill #8114</b>		Phone #:		Fax #:					
Sample Name: <b>de. Curucke Dr.</b>		FOR LAB USE ONLY		DATE		TIME					
Lab I.D.		Sample I.D.		DATE		TIME					
H903177		B31012' 50.6121112		9/14		8:16					
		-103.2729187									
		2 B22012' 50.6121814		9/14		8:12					
		-103.2728724									
		3 B23012' 39.6121814		9/14		8:20					
		-103.2728416									
		4 B30012' 50.6121509		9/14		10:44					
		-103.2728796									
		5 B31012' 32.6121594		9/14		12:30					
		-103.2727049									

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Relinquished By: <b>Jeff Curucke</b>	Date: <b>9/16</b>	Received By: <b>Jeff Brown</b>	Date: <b>9/16/19</b>
Time: <b>10:00</b>	Time: <b>11:40</b>	Time: <b>11:40</b>	Time: <b>11:40</b>
Delivered By: (Circle One) <b>3.72</b>	Sample Condition	CHECKED BY: <b>Jeffrey Brown</b>	REMARKS: <b>Good Results</b>
Sampler - UPS - Bus - Other: <b>Ported 4.12</b>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: <u>Apex</u>		P.O. #:	
Project Manager: <u>Debbie Brown</u>		Company:	
Address:		Attn:	
City: <u>Hobbs</u>		Address:	
Phone #:		City:	
Project #:		State:	
Project Name:		Zip:	
Project Location: <u>WAGS #2119</u>		Phone #:	
Sample Name: <u>See Enclosures</u>		Fax #:	

Lab I.D.	Sample I.D.	MATRIX					PRESERV.	SAMPLING	DATE	TIME	REMARKS
		(G)RAB OR (C)OM	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL					
H903177	B32012 32.412 4605	C	1						9/14	12:38	Ext TRH BTEX
	-103.2727853										
	7 B33012 32.612 3673	C	1						9/14	4:77pm	
	-103.2727364										
	8 B34002 32.612 4354	C	1						9/14	4:24pm	
	-103.2727041										
	9 B35012 32.612 4652	C	1						9/14	7:34	
	-103.2727859										
	10 B36012 32.612 3720	C	1						9/14	7:36	
	-103.2727806										

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Relinquished By: <u>Donna Brown</u>	Date: <u>9/16</u>	Received By: <u>Donna Brown</u>	Date: <u>9/16</u>
Relinquished By: <u>Donna Brown</u>	Date: <u>9/16/19</u>	Received By: <u>Donna Brown</u>	Date: <u>9/16/19</u>

Delivered By: (Circle One) 3.72 497 50

Sampler - UPS - Bus - Other: Consolidated 4.12

Sample Condition: ☒ Cool ☐ Intact ☐ Yes ☐ No

CHECKED BY: Donna Brown

REMARKS:





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September 23, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/18/19 9:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/18/2019	Sampling Date:	09/16/2019
Reported:	09/23/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: B 38 @ 12' 32.6123281-103.2727551 (H903211-01)**

BTEX 8021B		mg/kg	Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2019	ND	1.82	91.1	2.00	0.321	
Toluene*	<0.050	0.050	09/20/2019	ND	1.81	90.4	2.00	0.798	
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.76	88.0	2.00	1.50	
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.40	89.9	6.00	0.509	
Total BTEX	<0.300	0.300	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 86.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	09/19/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 93.8 % 41-142

Surrogate: 1-Chlorooctadecane 95.5 % 37.6-147

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Coley D. Keene, Lab Director/Quality Manager

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Received by OCD: 2/8/2021 11:34:49 AM  
Released to Imaging: 12/27/2023 11:44:16 AM



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/18/2019	Sampling Date:	09/16/2019
Reported:	09/23/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: B 39 @ 12' 32.6122818-103.2727108 (H903211-02)**

BTEX 8021B		mg/kg	Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2019	ND	1.82	91.1	2.00	0.321	
Toluene*	<0.050	0.050	09/20/2019	ND	1.81	90.4	2.00	0.798	
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.76	88.0	2.00	1.50	
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.40	89.9	6.00	0.509	
Total BTEX	<0.300	0.300	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 88.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/19/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 92.1 % 41-142

Surrogate: 1-Chlorooctadecane 96.0 % 37.6-147

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Celely D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/23/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/16/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 40 @ 12' 32.6122623-103.2727718 (H903211-03)**

BTEX 8021B		mg/kg	Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2019	ND	1.82	91.1	2.00	0.321	
Toluene*	<0.050	0.050	09/20/2019	ND	1.81	90.4	2.00	0.798	
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.76	88.0	2.00	1.50	
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.40	89.9	6.00	0.509	
Total BTEX	<0.300	0.300	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 88.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	09/19/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 93.9 % 41-142

Surrogate: 1-Chlorooctadecane 95.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/23/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/16/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 41 @ 12' 32.6122730-103.2727326 (H903211-04)**

BTEX 8021B		mg/kg	Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2019	ND	1.82	91.1	2.00	0.321	
Toluene*	<0.050	0.050	09/20/2019	ND	1.81	90.4	2.00	0.798	
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.76	88.0	2.00	1.50	
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.40	89.9	6.00	0.509	
Total BTEX	<0.300	0.300	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 86.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/19/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 94.7 % 41-142

Surrogate: 1-Chlorooctadecane 96.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/18/2019	Sampling Date:	09/16/2019
Reported:	09/23/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: B 42 @ 12' 32.6122386-103.2727745 (H903211-05)**

BTEX 8021B		mg/kg	Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2019	ND	1.82	91.1	2.00	0.321	
Toluene*	<0.050	0.050	09/20/2019	ND	1.81	90.4	2.00	0.798	
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.76	88.0	2.00	1.50	
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.40	89.9	6.00	0.509	
Total BTEX	<0.300	0.300	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 87.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/19/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 94.5 % 41-142

Surrogate: 1-Chlorooctadecane 96.7 % 37.6-147

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Celestine Keene  
Celestine Keene, Lab Director/Quality Manager





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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/18/2019	Sampling Date:	09/16/2019
Reported:	09/23/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: B 43 @ 12' 32.6122086-103.2727759 (H903211-06)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2019	ND	1.82	91.1	2.00	0.321	
Toluene*	<0.050	0.050	09/20/2019	ND	1.81	90.4	2.00	0.798	
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.76	88.0	2.00	1.50	
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.40	89.9	6.00	0.509	
Total BTEX	<0.300	0.300	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 88.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/19/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 93.6 % 41-142

Surrogate: 1-Chlorooctadecane 95.0 % 37.6-147

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\*=Accredited Analyte

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*Coley D. Keene*

Coley D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/18/2019	Sampling Date:	09/16/2019
Reported:	09/23/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: B 44 @ 12' 32.6121575-103.2727095 (H903211-07)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2019	ND	1.82	91.1	2.00	0.321	
Toluene*	<0.050	0.050	09/20/2019	ND	1.81	90.4	2.00	0.798	
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.76	88.0	2.00	1.50	
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.40	89.9	6.00	0.509	
Total BTEX	<0.300	0.300	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 88.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	09/19/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 86.7 % 41-142

Surrogate: 1-Chlorooctadecane 88.7 % 37.6-147

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*Coley D. Keene*

Coley D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/18/2019	Sampling Date:	09/16/2019
Reported:	09/23/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: B 45 @ 12' 32.6121858-103.2727806 (H903211-08)**

BTEX 8021B		mg/kg	Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/21/2019	ND	1.82	91.1	2.00	0.321	
Toluene*	<0.050	0.050	09/21/2019	ND	1.81	90.4	2.00	0.798	
Ethylbenzene*	<0.050	0.050	09/21/2019	ND	1.76	88.0	2.00	1.50	
Total Xylenes*	<0.150	0.150	09/21/2019	ND	5.40	89.9	6.00	0.509	
Total BTEX	<0.300	0.300	09/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 88.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1170	16.0	09/19/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 93.5 % 41-142

Surrogate: 1-Chlorooctadecane 96.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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### 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



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: <b>ALCOA</b>		P.O. #:								
Project Manager: <b>Self Bree</b>		Company:								
Address:		Attn:								
City: <b>Hobbs</b>		Address:								
State: <b>NM</b> Zip: <b>88240</b>		City:								
Phone #:		State:								
Project #:		Zip:								
Project Name:		Phone #:								
Project Location: <b>NM 65444215</b>		Fax #:								
Sampler Name: <b>Jose Rodriguez</b>										
FOR LAB USE ONLY										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP		DATE	TIME	C1	BTEX	EXT TPH		
		# CONTAINERS	MATRIX							
		GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER
<b>H903211</b>										
1	83 8/22/12 32.612.3881									
2	-103.272.7551									
3	839 8/12 32.612.2818									
4	-103.272.7108									
5	840 8/12 32.612.2633									
6	-103.272.7715									
7	841 8/12 32.612.2736									
8	-103.272.7326									
9	842 8/12 32.612.2384									
10	-103.272.7245									

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Relinquished By: <b>[Signature]</b>	Date: <b>8/15/12</b>	Received By: <b>[Signature]</b>	Date: <b>8/15/12</b>
Relinquished By: <b>[Signature]</b>	Date: <b>8/15/12</b>	Received By: <b>[Signature]</b>	Date: <b>8/15/12</b>

Releashed By: **[Signature]** Time: **9:15** Received By: **[Signature]**

Delivered By: (Circle One) **17c** Sample Condition: **Cool** ☒ Intact ☐ Yes ☐ No

Sampler - UPS - Bus - Other: **17c** Checked By: **[Signature]**

Phone Result: ☐ Yes ☐ No Add'l Phone #:

Fax Result: ☐ Yes ☐ No Add'l Fax #:

REMARKS: **E-mail Results**





# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

[illegible]





PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

September 24, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/18/19 9:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

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Received by OCD: 2/8/2021 11:34:49 AM  
Released to Imaging: 12/27/2023 11:44:16 AM



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/18/2019	Sampling Date:	09/17/2019
Reported:	09/24/2019	Sampling Type:	Soil
Project Name:	NMGS AU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: B 46 @ 12' 32.6120666-103.2729757 (H903212-01)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/21/2019	ND	1.82	91.1	2.00	0.321	
Toluene*	<0.050	0.050	09/21/2019	ND	1.81	90.4	2.00	0.798	
Ethylbenzene*	<0.050	0.050	09/21/2019	ND	1.76	88.0	2.00	1.50	
Total Xylenes*	<0.150	0.150	09/21/2019	ND	5.40	89.9	6.00	0.509	
Total BTX	<0.300	0.300	09/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 89.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	09/19/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 95.3 % 41-142

Surrogate: 1-Chlorooctadecane 97.8 % 37.6-147

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\*=Accredited Analyte

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*Coley D. Keene*

Coley D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/18/2019  
Reported: 09/24/2019  
Project Name: NMGS AU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/17/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: B 47 @ 12' 32.6120251-103.2729522 (H903212-02)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/21/2019	ND	1.82	91.1	2.00	0.321	
Toluene*	<0.050	0.050	09/21/2019	ND	1.81	90.4	2.00	0.798	
Ethylbenzene*	<0.050	0.050	09/21/2019	ND	1.76	88.0	2.00	1.50	
Total Xylenes*	<0.150	0.150	09/21/2019	ND	5.40	89.9	6.00	0.509	
Total BTX	<0.300	0.300	09/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 87.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	09/19/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 97.2 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

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Celestine D. Keene, Lab Director/Quality Manager

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Received by OCD: 2/8/2021 11:34:49 AM  
Released to Imaging: 12/27/2023 11:44:16 AM



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/18/2019	Sampling Date:	09/17/2019
Reported:	09/24/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: B 48 @ 12' 32.6129886-103.2729559 (H903212-03)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/21/2019	ND	1.82	91.1	2.00	0.321	
Toluene*	<0.050	0.050	09/21/2019	ND	1.81	90.4	2.00	0.798	
Ethylbenzene*	<0.050	0.050	09/21/2019	ND	1.76	88.0	2.00	1.50	
Total Xylenes*	<0.150	0.150	09/21/2019	ND	5.40	89.9	6.00	0.509	
Total BTEX	<0.300	0.300	09/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 88.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	09/19/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	222	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	34.5	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 88.2 % 41-142

Surrogate: 1-Chlorooctadecane 94.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/18/2019	Sampling Date:	09/17/2019
Reported:	09/24/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: B 49 32.6119759-103.2728892 (H903212-04)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/21/2019	ND	1.86	93.1	2.00	3.03	
Toluene*	<0.050	0.050	09/21/2019	ND	1.81	90.6	2.00	2.04	
Ethylbenzene*	<0.050	0.050	09/21/2019	ND	1.82	91.2	2.00	1.63	
Total Xylenes*	<0.150	0.150	09/21/2019	ND	5.42	90.3	6.00	0.00690	
Total BTEX	<0.300	0.300	09/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 87.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/19/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 91.1 % 41-142

Surrogate: 1-Chlorooctadecane 94.7 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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*Coley D. Keene*

Coley D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/18/2019  
Reported: 09/24/2019  
Project Name: NMGSAU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/17/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: B 50 32.6119697-103.2728909 (H903212-05)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/21/2019	ND	1.86	93.1	2.00	3.03	
Toluene*	<0.050	0.050	09/21/2019	ND	1.81	90.6	2.00	2.04	
Ethylbenzene*	<0.050	0.050	09/21/2019	ND	1.82	91.2	2.00	1.63	
Total Xylenes*	<0.150	0.150	09/21/2019	ND	5.42	90.3	6.00	0.00690	
Total BTX	<0.300	0.300	09/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 89.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/19/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 93.4 % 41-142

Surrogate: 1-Chlorooctadecane 95.8 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/18/2019	Sampling Date:	09/17/2019
Reported:	09/24/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: B 51 @ 12' 32.6119770-103.2729381 (H903212-06)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/21/2019	ND	1.86	93.1	2.00	3.03	
Toluene*	<0.050	0.050	09/21/2019	ND	1.81	90.6	2.00	2.04	
Ethylbenzene*	<0.050	0.050	09/21/2019	ND	1.82	91.2	2.00	1.63	
Total Xylenes*	<0.150	0.150	09/21/2019	ND	5.42	90.3	6.00	0.00690	
Total BTEX	<0.300	0.300	09/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 91.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/19/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	92.4	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 95.5 % 41-142

Surrogate: 1-Chlorooctadecane 98.7 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/17/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 52 @ 12' 32.6119550-103.2728067 (H903212-07)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/21/2019	ND	1.86	93.1	2.00	3.03	
Toluene*	<0.050	0.050	09/21/2019	ND	1.81	90.6	2.00	2.04	
Ethylbenzene*	<0.050	0.050	09/21/2019	ND	1.82	91.2	2.00	1.63	
Total Xylenes*	<0.150	0.150	09/21/2019	ND	5.42	90.3	6.00	0.00690	
Total BTX	<0.300	0.300	09/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 89.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	09/19/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 91.7 % 41-142

Surrogate: 1-Chlorooctadecane 91.8 % 37.6-147

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\*=Accredited Analyte

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*Coley D. Keene*

Coley D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/18/2019	Sampling Date:	09/17/2019
Reported:	09/24/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: B 53 @ 12' 32.6120324-103.2728724 (H903212-08)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/21/2019	ND	1.86	93.1	2.00	3.03	
Toluene*	<0.050	0.050	09/21/2019	ND	1.81	90.6	2.00	2.04	
Ethylbenzene*	<0.050	0.050	09/21/2019	ND	1.82	91.2	2.00	1.63	
Total Xylenes*	<0.150	0.150	09/21/2019	ND	5.42	90.3	6.00	0.00690	
Total BTX	<0.300	0.300	09/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 87.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	09/19/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	19.7	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 91.5 % 41-142

Surrogate: 1-Chlorooctadecane 95.3 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/18/2019	Sampling Date:	09/17/2019
Reported:	09/24/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: B 54 @ 12' 32.6120753-103.2728127 (H903212-09)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/21/2019	ND	1.86	93.1	2.00	3.03	
Toluene*	<0.050	0.050	09/21/2019	ND	1.81	90.6	2.00	2.04	
Ethylbenzene*	<0.050	0.050	09/21/2019	ND	1.82	91.2	2.00	1.63	
Total Xylenes*	<0.150	0.150	09/21/2019	ND	5.42	90.3	6.00	0.00690	
Total BTEX	<0.300	0.300	09/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 88.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	09/19/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 88.2 % 41-142

Surrogate: 1-Chlorooctadecane 94.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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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



**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: <u>Apex</u>		P.O. #:		<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>			
Project Manager: <u>Jeffrey Brown</u>		Company:									
Address:		Attn:									
City: <u>Hobbs</u>		State: <u>NM</u>		Zip: <u>88240</u>							
Phone #:		Fax #:		Address:							
Project #:		Project Owner:		City:							
Project Name:		State:		Zip:							
Project Location: <u>Alcoba 219</u>		Phone #:									
Sampler Name: <u>Joe Cusack</u>		Fax #:									

Lab I.D.	Sample I.D.	(G)RAB OR (C)OM	# CONTAINERS	MATRIX							DATE	TIME	EXT	TPI	BTEX	
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE:						COOL
<u>H903212</u>	<u>B46 010 32.6120000</u>	<u>C</u>	<u>1</u>	<input checked="" type="checkbox"/>								<u>9/17</u>	<u>10:14</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>-103.2729757</u>	<u>C</u>	<u>1</u>			<input checked="" type="checkbox"/>						<u>9/17</u>	<u>10:16</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>2847 010 32.6120000</u>	<u>C</u>	<u>1</u>			<input checked="" type="checkbox"/>						<u>9/17</u>	<u>11:18</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>-103.2729522</u>	<u>C</u>	<u>1</u>			<input checked="" type="checkbox"/>						<u>9/17</u>	<u>11:18</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>3848 010 32.6120000</u>	<u>C</u>	<u>1</u>			<input checked="" type="checkbox"/>						<u>9/17</u>	<u>11:18</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>-103.2729556</u>	<u>C</u>	<u>1</u>			<input checked="" type="checkbox"/>						<u>9/17</u>	<u>11:18</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>4849 32.6119759</u>	<u>C</u>	<u>1</u>			<input checked="" type="checkbox"/>						<u>9/17</u>	<u>14:16</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>-103.2728862</u>	<u>C</u>	<u>1</u>			<input checked="" type="checkbox"/>						<u>9/17</u>	<u>14:16</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>5850 32.6119759</u>	<u>C</u>	<u>1</u>			<input checked="" type="checkbox"/>						<u>9/17</u>	<u>14:16</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>-103.2728909</u>	<u>C</u>	<u>1</u>			<input checked="" type="checkbox"/>						<u>9/17</u>	<u>14:16</u>	<u>1</u>	<u>1</u>	<u>1</u>

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Relinquished By: <u>Joe Cusack</u>	Received By: <u>Joe Cusack</u>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #: _____
Date: <u>9/18/17</u>	Time: <u>9:15</u>	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #: _____
REMARKS: <u>Email Results.</u>			







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September 24, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/18/19 17:07.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/18/2019  
Reported: 09/24/2019  
Project Name: NMGS AU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/18/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: B 55 @ 12' 32.6120731-103.2728734 (H903232-01)**

BTEX 8021B		mg/kg	Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.97	98.4	2.00	0.109	
Toluene*	<0.050	0.050	09/23/2019	ND	1.74	87.2	2.00	1.71	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.75	87.5	2.00	1.09	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.36	89.4	6.00	1.02	
Total BTEX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 96.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	09/20/2019	ND	416	104	400	3.92	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	190	95.0	200	0.113	
DRO >C10-C28*	119	10.0	09/19/2019	ND	197	98.4	200	3.16	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 81.0 % 41-142

Surrogate: 1-Chlorooctadecane 86.1 % 37.6-147

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*Coley D. Keene*

Coley D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/18/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 56 @ 12' 32.6120793-103.2728684 (H903232-02)**

BTX 8021B		mg/kg	Analyzed By: CK				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.97	98.4	2.00	0.109	
Toluene*	<0.050	0.050	09/23/2019	ND	1.74	87.2	2.00	1.71	GC-NC
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.75	87.5	2.00	1.09	
<b>Total Xylenes*</b>	<b>0.221</b>	0.150	09/23/2019	ND	5.36	89.4	6.00	1.02	
<b>Total BTX</b>	<b>0.221</b>	0.100	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 137 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>864</b>	16.0	09/20/2019	ND	416	104	400	3.92	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>21.5</b>	10.0	09/20/2019	ND	190	95.0	200	0.113	
<b>DRO &gt;C10-C28*</b>	<b>395</b>	10.0	09/20/2019	ND	197	98.4	200	3.16	
<b>EXT DRO &gt;C28-C36</b>	<b>45.3</b>	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 87.6 % 41-142

Surrogate: 1-Chlorooctadecane 92.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGSAU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/18/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 57 @ 12' 32.6121233-103.2729716 (H903232-03)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.97	98.4	2.00	0.109	
Toluene*	<0.050	0.050	09/23/2019	ND	1.74	87.2	2.00	1.71	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.75	87.5	2.00	1.09	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.36	89.4	6.00	1.02	
Total BTEX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1120	16.0	09/20/2019	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	190	95.0	200	0.113	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	197	98.4	200	3.16	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 83.3 % 41-142

Surrogate: 1-Chlorooctadecane 88.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/18/2019  
Reported: 09/24/2019  
Project Name: NMGS AU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/18/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: B 58 @ 12' 32.6121260-103.2727816 (H903232-04)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.97	98.4	2.00	0.109	
Toluene*	<0.050	0.050	09/23/2019	ND	1.74	87.2	2.00	1.71	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.75	87.5	2.00	1.09	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.36	89.4	6.00	1.02	
Total BTX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 98.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	832	16.0	09/20/2019	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	207	104	200	2.29	
DRO >C10-C28*	11.9	10.0	09/19/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 93.1 % 41-142

Surrogate: 1-Chlorooctadecane 95.3 % 37.6-147

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*Celey D. Keene*

Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/18/2019  
Reported: 09/24/2019  
Project Name: NMGSAU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/18/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: B 59 @ 12' 32.6121327-103.2727604 (H903232-05)**

BTX 80218		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.97	98.4	2.00	0.109	
Toluene*	<0.050	0.050	09/23/2019	ND	1.74	87.2	2.00	1.71	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.75	87.5	2.00	1.09	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.36	89.4	6.00	1.02	
Total BTX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1120	16.0	09/20/2019	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	207	104	200	2.29	
DRO >C10-C28*	37.8	10.0	09/19/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 93.2 % 41-142

Surrogate: 1-Chlorooctadecane 93.7 % 37.6-147

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*Celestine Keene*

Celestine D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGSAU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/18/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 60 @ 12' 32.6121496-103.2727276 (H903232-06)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.97	98.4	2.00	0.109	
Toluene*	<0.050	0.050	09/23/2019	ND	1.74	87.2	2.00	1.71	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.75	87.5	2.00	1.09	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.36	89.4	6.00	1.02	
Total BTX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	09/20/2019	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	207	104	200	2.29	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 88.0 % 41-142

Surrogate: 1-Chlorooctadecane 90.5 % 37.6-147

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*Celestine D. Keene*

Celestine D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/18/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 61 @ 12' 32.6119948-103.2728627 (H903232-07)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.97	98.4	2.00	0.109	
Toluene*	<0.050	0.050	09/23/2019	ND	1.74	87.2	2.00	1.71	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.75	87.5	2.00	1.09	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.36	89.4	6.00	1.02	
Total BTEX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 97.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	09/20/2019	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	207	104	200	2.29	
DRO >C10-C28*	74.9	10.0	09/19/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 91.6 % 41-142

Surrogate: 1-Chlorooctadecane 97.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGSAU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/18/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 62 @ 12' 32.6120276-103.2728493 (H903232-08)**

BTX 6021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.97	98.4	2.00	0.109	
Toluene*	<0.050	0.050	09/23/2019	ND	1.74	87.2	2.00	1.71	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.75	87.5	2.00	1.09	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.36	89.4	6.00	1.02	
Total BTX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 96.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	928	16.0	09/20/2019	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	207	104	200	2.29	
DRO >C10-C28*	29.9	10.0	09/20/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 93.6 % 41-142

Surrogate: 1-Chlorooctadecane 94.9 % 37.6-147

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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/18/2019	Sampling Date:	09/18/2019
Reported:	09/24/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: B 63 @ 12' 32.6119728-103.2729059 (H903232-09)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.97	98.4	2.00	0.109	
Toluene*	<0.050	0.050	09/23/2019	ND	1.74	87.2	2.00	1.71	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.75	87.5	2.00	1.09	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.36	89.4	6.00	1.02	
Total BTEX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 97.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	816	16.0	09/20/2019	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	207	104	200	2.29	
DRO >C10-C28*	136	10.0	09/20/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	16.6	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 89.6 % 41-142

Surrogate: 1-Chlorooctadecane 94.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/18/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 64 @ 12' 32.6120652-103.2727886 (H903232-10)**

BTEX 8021B		mg/kg	Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.58	79.1	2.00	7.18	
Toluene*	<0.050	0.050	09/23/2019	ND	1.55	77.6	2.00	7.16	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.56	77.9	2.00	6.01	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	4.66	77.7	6.00	5.89	
Total BTEX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 91.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1060	16.0	09/20/2019	ND	432	108	400	3.64	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	207	104	200	2.29	
DRO >C10-C28*	85.5	10.0	09/20/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	12.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 89.7 % 41-142

Surrogate: 1-Chlorooctadecane 94.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/18/2019	Sampling Date:	09/18/2019
Reported:	09/24/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: B 65 @ 12' 32.6120756-103.2727755 (H903232-11)**

BTEX 8021B		mg/kg	Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.58	79.1	2.00	7.18	
Toluene*	<0.050	0.050	09/23/2019	ND	1.55	77.6	2.00	7.16	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.56	77.9	2.00	6.01	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	4.66	77.7	6.00	5.89	
Total BTEX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 89.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	976	16.0	09/20/2019	ND	432	108	400	3.64	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	207	104	200	2.29	
DRO >C10-C28*	13.6	10.0	09/20/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 90.9 % 41-142

Surrogate: 1-Chlorooctadecane 95.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- GC-NC 8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
- 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



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: <b>Acme Brown</b>		P.O. #:	
Project Manager: <b>Jeffrey Brown</b>		Company:	
Address:		Attn:	
City: <b>Wobos</b>		Address:	
Phone #:		City:	
Project #:		State:	
Project Name:		Zip:	
Project Location: <b>WHSAN 219</b>		Phone #:	
Sample Name: <b>See Remarks</b>		Fax #:	
FOR LAB USE ONLY			

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX						DATE	TIME	EXT TRAIL	BTEX	
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER					ACID/BASE
1	B55 012' 32.612.0731	C 1	1								9/10	7:38	1	
	-103.2728734													
2	B56 012' 32.612.0743	C 1	1								9/18	8:43	1	
	-103.2728684													
3	B57 012' 32.612.1233	C 1	1								9/18	10:04	1	
	-103.2729716													
4	B58 012' 32.612.1340	C 1	1								9/18	10:13	1	
	-103.2727816													
5	B59 012' 32.612.1347	C 1	1								9/18	13:08		
	-103.2727604													

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Relinquished By: **See Remarks**      Received By: **See Remarks**      Date: **9/18/19**      Time: **17:17**

Reinquired By: **See Remarks**      Received By: **See Remarks**      Date: **9/18/19**      Time: **17:17**

Delivered By: (Circle One) **2.02**      Sample Condition: **Intact**      Checked By: **See Remarks**

Sampler: **UPS**      Bus: **2.40**      Other: **See Remarks**      Cool: **Yes**      Intact: **Yes**      NO: **See Remarks**

REMARKS: **Time correction**



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

## **CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

<b>Company Name:</b> <u>Acqu</u> <b>Project Manager:</b> <u>Jeff Beeson</u> <b>Address:</b> <b>City:</b> <u>Hobbs</u> <b>State:</b> <u>NM</u> <b>Zip:</b> <u>88000</u> <b>Phone #:</b> <b>Fax #:</b> <b>Project #:</b> <b>Project Owner:</b> <b>Project Name:</b> <b>Project Location:</b> <u>NM55AA 8119</u> <b>Sample Name:</b> <u>NM55AA 8119</u> <b>FOR LAB USE ONLY</b>		<b>P.O. #:</b> <b>Company:</b> <b>Attn:</b> <b>Address:</b> <b>City:</b> <b>State:</b> <b>Zip:</b> <b>Phone #:</b> <b>Fax #:</b>	
<b>Lab I.D.</b> <u>H903252</u> <b>Sample I.D.</b>		<b>MATRIX</b> <input checked="" type="checkbox"/> GROUNDWATER <input type="checkbox"/> WASTEWATER <input type="checkbox"/> SOIL <input type="checkbox"/> OIL <input type="checkbox"/> SLUDGE <input type="checkbox"/> OTHER <b>PRESERV</b> <input checked="" type="checkbox"/> ACID/BASE <input checked="" type="checkbox"/> COOL <input type="checkbox"/> OTHER	
<b>DATE</b> <b>TIME</b> <b>DATE</b> <b>TIME</b>		<b>SAMPLING</b> <b>EXT TPT</b> <b>BTEX</b>	
<b>DELIVERED BY:</b> (Circle One) Sample - UPS - Bus - Other:		<b>OBSERVED TEMP. °C</b> <u>2.0</u> <b>CORRECTED TEMP. °C</b> <u>2.4</u> <b>SAMPLE CONDITION</b> Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>DELIVERED BY:</b> <u>Jeff Beeson</u> <b>DATE:</b> <u>9/18/13</u> <b>RECEIVED BY:</b> <u>Emily Hudson</u> <b>DATE:</b> <u>9/18/13</u> <b>RECEIVED BY:</b> <u>Emily Hudson</u>		<b>TURNAROUND TIME:</b> <b>STANDARD</b> <input checked="" type="checkbox"/> <b>EXPRESS</b> <input type="checkbox"/> <b>VERBAL RESULT:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>ADD'l PHONE #:</b> <b>REMARKS:</b> <u>Emil Hudson</u> <b>ALL RESULTS ARE EMAILED. PLEASE PROVIDE EMAIL ADDRESS:</b>	

+ Cardinal cannot accept verbal changes. Please email changes to [celey.keene@cardinallabsnm.com](mailto:celey.keene@cardinallabsnm.com)





# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

September 25, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/19/19 17:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is fluid and cursive, with the first name "Celey" and last name "Keene" clearly distinguishable.

Celey D. Keene

Lab Director/Quality Manager





PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/19/2019  
Reported: 09/25/2019  
Project Name: NMGS AU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: B 66 @ 12' 32.6120883-103.2727075 (H903252-01)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.81	90.7	2.00	3.84	
Toluene*	<0.050	0.050	09/23/2019	ND	1.77	88.4	2.00	3.35	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.76	88.2	2.00	4.48	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.25	87.5	6.00	2.74	
Total BTX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 88.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1300	16.0	09/23/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	199	99.7	200	0.456	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	177	88.5	200	0.973	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 95.3 % 41-142

Surrogate: 1-Chlorooctadecane 94.2 % 37.6-147

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\*=Accredited Analyte

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*Celestine Keene*

Celestine D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/25/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 67 @ 12' 32.6120324-103.2727400 (H903252-02)**

BTEX 8021B		mg/kg	Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.81	90.7	2.00	3.84	
Toluene*	<0.050	0.050	09/23/2019	ND	1.77	88.4	2.00	3.35	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.76	88.2	2.00	4.48	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.25	87.5	6.00	2.74	
Total BTEX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 88.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	640	16.0	09/23/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	199	99.7	200	0.456	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	177	88.5	200	0.973	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 96.2 % 41-142

Surrogate: 1-Chlorooctadecane 96.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/25/2019  
 Project Name: NMGSAU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 68 @ 12' 32.6120239-103.2727504 (H903252-03)**

BTEX 8021B		mg/kg	Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.81	90.7	2.00	3.84	
Toluene*	<0.050	0.050	09/23/2019	ND	1.77	88.4	2.00	3.35	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.76	88.2	2.00	4.48	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.25	87.5	6.00	2.74	
Total BTEX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 88.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	496	16.0	09/23/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	199	99.7	200	0.456	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	177	88.5	200	0.973	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 90.7 % 41-142

Surrogate: 1-Chlorooctadecane 92.7 % 37.6-147

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Celestine D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/19/2019  
Reported: 09/25/2019  
Project Name: NMGS AU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: B 69 32.6120188-103.2727537 (H903252-04)**

BTEX 8021B		mg/kg	Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.81	90.7	2.00	3.84	
Toluene*	<0.050	0.050	09/23/2019	ND	1.77	88.4	2.00	3.35	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.76	88.2	2.00	4.48	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.25	87.5	6.00	2.74	
Total BTEX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 89.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	09/23/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	199	99.7	200	0.456	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	177	88.5	200	0.973	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 97.0 % 41-142

Surrogate: 1-Chlorooctadecane 96.4 % 37.6-147

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*Celestine Keene*

Celestine D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/25/2019  
 Project Name: NMGSAU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 70 32.6120217-103.2727578 (H903252-05)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.81	90.7	2.00	3.84	
Toluene*	<0.050	0.050	09/23/2019	ND	1.77	88.4	2.00	3.35	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.76	88.2	2.00	4.48	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.25	87.5	6.00	2.74	
Total BTEX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 86.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	09/23/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	199	99.7	200	0.456	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	177	88.5	200	0.973	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 94.1 % 41-142

Surrogate: 1-Chlorooctadecane 94.9 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/19/2019	Sampling Date:	09/19/2019
Reported:	09/25/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B 71 @ 12' 32.6120217-103.2727578 (H903252-06)**

BTX 8021B		mg/kg	Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.81	90.7	2.00	3.84	
Toluene*	<0.050	0.050	09/23/2019	ND	1.77	88.4	2.00	3.35	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.76	88.2	2.00	4.48	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.25	87.5	6.00	2.74	
Total BTX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 90.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	464	16.0	09/23/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	199	99.7	200	0.456	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	177	88.5	200	0.973	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 94.1 % 41-142

Surrogate: 1-Chlorooctadecane 94.2 % 37.6-147

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*Colley D. Keene*

Colley D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/19/2019  
Reported: 09/25/2019  
Project Name: NMGSAU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: B 72 @ 12' 32.6119186-103.2727507 (H903252-07)**

BTX 80218		mg/kg	Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.81	90.7	2.00	3.84	
Toluene*	<0.050	0.050	09/23/2019	ND	1.77	88.4	2.00	3.35	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.76	88.2	2.00	4.48	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.25	87.5	6.00	2.74	
Total BTX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 87.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	496	16.0	09/23/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	199	99.7	200	0.456	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	177	88.5	200	0.973	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 93.6 % 41-142

Surrogate: 1-Chlorooctadecane 93.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/19/2019  
Reported: 09/25/2019  
Project Name: NMGSAU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: B 73 @ 12' 32.6119110-103.2727598 (H903252-08)**

BTX 80218		mg/kg	Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.81	90.7	2.00	3.84	
Toluene*	<0.050	0.050	09/23/2019	ND	1.77	88.4	2.00	3.35	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.76	88.2	2.00	4.48	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.25	87.5	6.00	2.74	
Total BTX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 90.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/23/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	199	99.7	200	0.456	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	177	88.5	200	0.973	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 96.2 % 41-142

Surrogate: 1-Chlorooctadecane 98.4 % 37.6-147

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*Celestine Keene*

Celestine D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/19/2019	Sampling Date:	09/19/2019
Reported:	09/25/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B 74 @ 12' 32.6119056-103.2727762 (H903252-09)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.81	90.7	2.00	3.84	
Toluene*	<0.050	0.050	09/23/2019	ND	1.77	88.4	2.00	3.35	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.76	88.2	2.00	4.48	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.25	87.5	6.00	2.74	
Total BTX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 88.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/23/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	199	99.7	200	0.456	
DRO >C10-C28*	14.1	10.0	09/20/2019	ND	177	88.5	200	0.973	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 95.6 % 41-142

Surrogate: 1-Chlorooctadecane 95.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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### Analytical Results For:

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/19/2019  
Reported: 09/25/2019  
Project Name: NMGS AU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: B 75 @ 12' 32.6119189-103.2727712 (H903252-10)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.81	90.7	2.00	3.84	
Toluene*	<0.050	0.050	09/23/2019	ND	1.77	88.4	2.00	3.35	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.76	88.2	2.00	4.48	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.25	87.5	6.00	2.74	
Total BTX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 90.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	09/23/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/23/2019	ND	201	100	200	7.30	
DRO >C10-C28*	<10.0	10.0	09/23/2019	ND	191	95.7	200	17.4	
EXT DRO >C28-C36	<10.0	10.0	09/23/2019	ND					

Surrogate: 1-Chlorooctane 91.4 % 41-142

Surrogate: 1-Chlorooctadecane 95.2 % 37.6-147

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*Celestine Keene*

Celestine D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/25/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 76 @ 12' 32.6119612-103.2727239 (H903252-11)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/24/2019	ND	1.78	88.8	2.00	0.673	
Toluene*	<0.050	0.050	09/24/2019	ND	1.54	77.1	2.00	0.403	
Ethylbenzene*	<0.050	0.050	09/24/2019	ND	1.54	77.1	2.00	0.245	
Total Xylenes*	<0.150	0.150	09/24/2019	ND	4.77	79.5	6.00	0.227	
Total BTX	<0.300	0.300	09/24/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	784	16.0	09/23/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/23/2019	ND	201	100	200	7.30	
DRO >C10-C28*	74.9	10.0	09/23/2019	ND	191	95.7	200	17.4	
EXT DRO >C28-C36	<10.0	10.0	09/23/2019	ND					

Surrogate: 1-Chlorooctane 88.0 % 41-142

Surrogate: 1-Chlorooctadecane 89.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/25/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 77 @ 12' 32.6119985-103.2727396 (H903252-12)**

BTX 8021B		mg/kg	Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/24/2019	ND	1.78	88.8	2.00	0.673	
Toluene*	<0.050	0.050	09/24/2019	ND	1.54	77.1	2.00	0.403	
Ethylbenzene*	<0.050	0.050	09/24/2019	ND	1.54	77.1	2.00	0.245	
Total Xylenes*	<0.150	0.150	09/24/2019	ND	4.77	79.5	6.00	0.227	
Total BTX	<0.300	0.300	09/24/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 95.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1140	16.0	09/23/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/23/2019	ND	201	100	200	7.30	
DRO >C10-C28*	190	10.0	09/23/2019	ND	191	95.7	200	17.4	
EXT DRO >C28-C36	87.3	10.0	09/23/2019	ND					

Surrogate: 1-Chlorooctane 90.2 % 41-142

Surrogate: 1-Chlorooctadecane 98.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/19/2019  
Reported: 09/25/2019  
Project Name: NMGS AU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: B 78 @ 12' 32.6120200-103.2727286 (H903252-13)**

BTX 8021B		mg/kg	Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/24/2019	ND	1.78	88.8	2.00	0.673	
Toluene*	<0.050	0.050	09/24/2019	ND	1.54	77.1	2.00	0.403	
Ethylbenzene*	<0.050	0.050	09/24/2019	ND	1.54	77.1	2.00	0.245	
Total Xylenes*	<0.150	0.150	09/24/2019	ND	4.77	79.5	6.00	0.227	
Total BTX	<0.300	0.300	09/24/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 96.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1090	16.0	09/23/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/23/2019	ND	201	100	200	7.30	
DRO >C10-C28*	<10.0	10.0	09/23/2019	ND	191	95.7	200	17.4	
EXT DRO >C28-C36	<10.0	10.0	09/23/2019	ND					

Surrogate: 1-Chlorooctane 91.3 % 41-142

Surrogate: 1-Chlorooctadecane 93.5 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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### 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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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

<b>Company Name:</b> <u>Apache Corp.</u> <b>Project Manager:</b> <u>Jeffrey Brown</u> <b>Address:</b> <b>City:</b> <u>Hobbs</u> <b>State:</b> <u>NM</u> <b>Zip:</b> <u>88240</u> <b>Phone #:</b> <b>Fax #:</b> <b>Project #:</b> <b>Project Owner:</b> <b>Project Name:</b> <b>Project Location:</b> <u>NECSTA 219</u> <b>Sampler Name:</b> <u>Dea Cunsado Jr</u> <small>FOR LAB USE ONLY</small>		<b>P.O. #:</b> <b>Company:</b> <b>Attn:</b> <b>Address:</b> <b>City:</b> <b>State:</b> <b>Zip:</b> <b>Phone #:</b> <b>Fax #:</b>																																																																																																																																																					
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<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th rowspan="2">(G)RAB OR (C)OMP</th> <th rowspan="2"># CONTAINERS</th> <th colspan="6">MATRIX</th> <th rowspan="2">PRESERV</th> <th rowspan="2">SAMPLING</th> <th rowspan="2">DATE</th> <th rowspan="2">TIME</th> <th rowspan="2"></th> <th rowspan="2"></th> <th rowspan="2"></th> <th rowspan="2"></th> <th rowspan="2"></th> <th rowspan="2"></th> </tr> <tr> <th>GROUNDWATER</th> <th>WASTEWATER</th> <th>SOIL</th> <th>OIL</th> <th>SLUDGE</th> <th>OTHER</th> <th>ACID/BASE</th> <th>CE COOL</th> <th>OTHER</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>8.16 @ 12.32 (612085)3</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>9/19</td> <td>8:13</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>103.072.7025</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>9/19</td> <td>11:30</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>103.072.7400</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>9/19</td> <td>11:36</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>103.072.7504</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>9/19</td> <td>11:42</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td>103.072.7537</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>9/19</td> <td>11:57</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>103.072.7572</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			(G)RAB OR (C)OMP	# CONTAINERS	MATRIX						PRESERV	SAMPLING	DATE	TIME							GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	CE COOL	OTHER	1	8.16 @ 12.32 (612085)3	1									9/19	8:13								2	103.072.7025	1									9/19	11:30								3	103.072.7400	1									9/19	11:36								4	103.072.7504	1									9/19	11:42								5	103.072.7537	1									9/19	11:57									103.072.7572	1																		<b>ANALYSIS REQUEST</b>	
	(G)RAB OR (C)OMP				# CONTAINERS	MATRIX															PRESERV	SAMPLING	DATE	TIME																																																																																																																															
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2	103.072.7025	1									9/19	11:30																																																																																																																																											
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	103.072.7572	1																																																																																																																																																					
<b>Delivered By:</b> (Circle One) <u>UPS</u> <b>Observed Temp. °C</b> <u>16</u> <b>Sample Condition</b> <b>Sampler - UPS - Bus - Other:</b> <b>Corrected Temp. °C</b> <u>1.0</u> <input type="checkbox"/> Cool <input checked="" type="checkbox"/> Intact <small>FORM-006 R 3.0</small>		<b>Turnaround Time:</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush <b>Bacteria (only) Sample Condition</b> <input type="checkbox"/> Cool <input checked="" type="checkbox"/> Intact <b>Observed Temp. °C</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Corrected Temp. °C</b>																																																																																																																																																					
<b>Relinquished By:</b> <u>Dea Cunsado Jr</u> <b>Date:</b> <u>9/19/19</u> <b>Received By:</b> <u>Juanara Sclafky</u> <b>Time:</b> <u>17:05</u> <b>Received By:</b> <u>Juanara Sclafky</u> <b>Time:</b> <u>17:05</u>		<b>REMARKS:</b> <u>Email Results to Jeff Brown</u>																																																																																																																																																					

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



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(575) 393-2326 FAX (575) 393-2476**

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

<b>Company Name:</b> <u>Proactive Corp</u> <b>Project Manager:</b> <u>Jeffrey Brown</u> <b>Address:</b> <b>City:</b> <u>Healds</u> <b>State:</b> <u>WA</u> <b>Zip:</b> <u>98220</u> <b>Phone #:</b> <b>Fax #:</b> <b>Project #:</b> <b>Project Owner:</b> <b>Project Name:</b> <b>Project Location:</b> <u>WLB546 0119</u> <b>Sample Name:</b> <u>See Attached</u> <b>For Use Only</b>				<b>BILL TO</b> <b>P.O. #:</b> <b>Company:</b> <b>Attn:</b> <b>Address:</b> <b>City:</b> <b>State:</b> <b>Zip:</b> <b>Phone #:</b> <b>Fax #:</b>				<b>ANALYSIS REQUEST</b>					
<b>Lab I.D.</b> <b>Sample I.D.</b>		<b>(G)RAB OR (C)OMP</b> <b># CONTAINERS</b> <b>GROUNDWATER</b> <b>WASTEWATER</b> <b>SOIL</b> <b>OIL</b> <b>SLUDGE</b> <b>OTHER</b> <b>ACID/BASE:</b> <b>(CE) COOL</b> <b>OTHER:</b>		<b>MATRIX</b> <b>PRESERV</b> <b>SAMPLING</b>		<b>DATE</b> <b>TIME</b> <b>EXT TPH</b> <b>BTEX</b>							
<u>H03252</u> <u>6</u> <u>571 @ 2.32.612.0217</u> <u>7</u> <u>-103.272.75.78</u> <u>8</u> <u>872.002.32.6119.816</u> <u>9</u> <u>-103.272.75.07</u> <u>10</u> <u>873.021.32.6119.110</u> <u>11</u> <u>-103.272.75.92</u> <u>12</u> <u>874.021.32.6119.056</u> <u>13</u> <u>-103.272.77.60</u> <u>14</u> <u>875.010.32.6119.189</u> <u>15</u> <u>-103.272.77.10</u>		<u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u>		<u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u>		<u>9/19 12:03</u> <u>9/19 13:30</u> <u>9/19 13:36</u> <u>9/19 14:51</u> <u>9/19 14:57</u>		<u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u>					
<b>PLEASE NOTE: Liability and Damages.</b> Cardinal's liability and claims exclusion remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the service. In no event shall Cardinal be liable for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruption, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.													
<b>Reinquisitioned By:</b> <u>See Attached</u> <b>Date:</b> <u>9/19-19</u> <b>Time:</b> <u>17:05</u> <b>Received By:</b> <u>Janina Alldridge</u> <b>Date:</b> <u>9/19</u> <b>Time:</b> <u>17:05</u> <b>Received By:</b> <u>Janina Alldridge</u>				<b>Verbal Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Addt Phone #: <b>All Results are emailed. Please provide Email address:</b> <b>REMARKS:</b> <u>Excel Results to Jeffrey Brown</u>									
<b>Delivered By:</b> (Circle One) <u>Observed Temp. °C</u> <u>0.6</u> <b>Sampler - UPS - Bus - Other:</b> <u>Corrected Temp. °C</u> <u>1.0</u> <b>FORM-006 R 3.0</b>				<b>Sample Condition</b> <b>Cool Intact</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No				<b>CHECKED BY:</b> (Initials) <u>YB.</u> <b>Turnaround Time:</b> <u>Standard</u> <input checked="" type="checkbox"/> <u>Rush</u> <b>Bacteria (only) Sample Condition</b> <b>Cool Intact</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No					





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# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Heechu Corp</u>		BILL TO		ANALYSIS REQUEST																							
Project Manager: <u>Jeffrey Brown</u>		P.O. #:																									
Address:		Company:																									
City: <u>Hobbs</u>		Attn:																									
State: <u>NM</u> Zip: <u>88240</u>		Address:																									
Phone #: _____		City:																									
Project #: _____		State:																									
Project Name: _____		Zip:																									
Project Location: <u>MUSAU A19</u>		Phone #:																									
Sampler Name: <u>Jeffrey Brown</u>		Fax #:																									
FOR LAB USE ONLY		PRESERV.		SAMPLING																							
Lab I.D.	Sample I.D.	(G)RAB OR (C)OM	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	CB / COOL	OTHER	DATE	TIME													
<u>H903352</u>	<u>B76 012 32.614912</u>	<u>C</u>	<u>1</u>										<u>9/19</u>	<u>15:28</u>	<u>EXT TPI</u>	<u>BTEX</u>											
	<u>-103 2727234</u>																										
	<u>12 B77 012 32.6114985</u>		<u>1</u>										<u>9/19</u>	<u>16:30</u>													
	<u>-103 2727234</u>																										
	<u>13 B78 012 32.6120200</u>		<u>1</u>										<u>9/19</u>	<u>16:36</u>													
	<u>-103 2727234</u>																										

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Relinquished By: Jeffrey Brown Date: 9-19-19 Received By: Jeffrey Brown

Time: \_\_\_\_\_

Delivered By: (Circle One) Observed Temp. °C 0.6 Sample Condition Cool Intact ☒ Yes ☐ No CHECKED BY: (Initials) JB

Sampler - UPS - Bus - Other: Corrected Temp. °C 1.0 ☐ Yes ☒ No THERMOMETER ID #97 Standard ☒ Bacteria (only) Sample Condition Cool Intact ☐ Yes ☐ No Observed Temp. °C \_\_\_\_\_

FORM-008 R 3.0

REMARKS: Email Result to Jeffrey Brown

Verbal Result: ☐ Yes ☐ No Add'l Phone #: \_\_\_\_\_

All Results are emailed. Please provide Email address: \_\_\_\_\_



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September 27, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/24/19 7:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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](http://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	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Coley D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager





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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/24/2019	Sampling Date:	09/20/2019
Reported:	09/27/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Mike Snyder
Project Location:	NOT GIVEN		

**Sample ID: B 79 @ 12' 32.6119567-103.2727105 (H903272-01)**

BTEX 80218		mg/kg	Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83	
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39	
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18	
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956	
Total BTEX	<0.300	0.300	09/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 83.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	688	16.0	09/25/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/24/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	12.0	10.0	09/24/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/24/2019	ND					

Surrogate: 1-Chlorooctane 82.9 % 41-142

Surrogate: 1-Chlorooctadecane 87.4 % 37.6-147

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\*=Accredited Analyte

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*Celestine Keene*

Celestine D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/24/2019	Sampling Date:	09/20/2019
Reported:	09/27/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Mike Snyder
Project Location:	NOT GIVEN		

**Sample ID: B 80 @ 12' 32.6120273-103.2726743 (H903272-02)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83	
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39	
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18	
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956	
Total BTEX	<0.300	0.300	09/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 85.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	09/25/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/24/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/24/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/24/2019	ND					

Surrogate: 1-Chlorooctane 88.2 % 41-142

Surrogate: 1-Chlorooctadecane 90.8 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/27/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/20/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: B 81 32.6121375-103.2726961 (H903272-03)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83	
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39	
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18	
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956	
Total BTEX	<0.300	0.300	09/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 84.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	09/25/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/24/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/24/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/24/2019	ND					

Surrogate: 1-Chlorooctane 89.8 % 41-142

Surrogate: 1-Chlorooctadecane 94.3 % 37.6-147

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*Celestine*

Celestine D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/24/2019  
Reported: 09/27/2019  
Project Name: NMGSAU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/20/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Mike Snyder

**Sample ID: B 82 @ 12' 32.6120784-103.2726877 (H903272-04)**

BTEX 8021B		mg/kg	Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83	
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39	
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18	
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956	
Total BTEX	<0.300	0.300	09/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 84.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	09/25/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/24/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/24/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/24/2019	ND					

Surrogate: 1-Chlorooctane 86.4 % 41-142

Surrogate: 1-Chlorooctadecane 89.2 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

September 05, 2019

JEFFREY BROOM

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/05/19 7:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
JEFFREY BROOM  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received: 09/05/2019  
Reported: 09/05/2019  
Project Name: NMGS AU #2119  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 09/04/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Mike Snyder

**Sample ID: V 2 SURFACE (H903065-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/05/2019	ND	416	104	400	0.00	

**Sample ID: V 2 @ 4' (H903065-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	608	16.0	09/05/2019	ND	416	104	400	0.00	

**Sample ID: V 2 @ 8' (H903065-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	09/05/2019	ND	416	104	400	0.00	

**Sample ID: V 1 @ SURFACE (H903065-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	09/05/2019	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
JEFFREY BROOM  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/05/2019	Sampling Date:	09/04/2019
Reported:	09/05/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Mike Snyder
Project Location:	NOT GIVEN		

**Sample ID: V 1 @ 2' (H903065-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1650	16.0	09/05/2019	ND	416	104	400	0.00		

**Sample ID: V 1 @ 4' (H903065-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	416	16.0	09/05/2019	ND	416	104	400	0.00		

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Celey D. Keene, Lab Director/Quality Manager



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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

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: <u>Test Bureau</u>		P.O. #:		BILL TO												ANALYSIS REQUEST																									
Project Manager: <u>Test Bureau</u>		Company:																																							
Address:		Attn:																																							
City: <u>Hobbs</u>		Address:																																							
State: <u>NM</u>		City:																																							
Zip:		State:																																							
Phone #:		Fax #:																																							
Project #:		Project Owner:																																							
Project Name:		Phone #:																																							
Project Location: <u>NM 6544 4115</u>		Zip:																																							
Sampler Name: <u>Jose Alvarez</u>		Fax #:																																							
FOR LAB USE ONLY																																									
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER		ACID/BASE		ICE / COOL		OTHER		DATE		TIME													
<u>H903065</u>		<u>28 Sur Area</u>				<u>5</u>																				<u>7/4</u>		<u>4:56am</u>													
<u>20204</u>		<u>30208</u>				<u>6</u>																				<u>4:58pm</u>															
<u>40108</u>		<u>40108</u>				<u>6</u>																				<u>5:00pm</u>															
<u>50108</u>		<u>50108</u>				<u>6</u>																				<u>5:02</u>															
<u>60104</u>		<u>60104</u>				<u>6</u>																				<u>5:04</u>															
																										<u>5:06</u>															



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

September 11, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/06/19 17:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is fluid and cursive, with the first name "Celey" being more prominent.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/06/2019  
 Reported: 09/11/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/06/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 1 @ 12' 32.6124168-103.2729871 (H903092-01)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2019	ND	2.10	105	2.00	1.07	
Toluene*	<0.050	0.050	09/10/2019	ND	2.10	105	2.00	1.29	
Ethylbenzene*	<0.050	0.050	09/10/2019	ND	2.15	108	2.00	1.28	
Total Xylenes*	<0.150	0.150	09/10/2019	ND	6.52	109	6.00	1.83	
Total BTX	<0.300	0.300	09/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 89.0 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	09/09/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2019	ND	207	103	200	2.73	
DRO >C10-C28*	<10.0	10.0	09/10/2019	ND	215	107	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	09/10/2019	ND					

Surrogate: 1-Chlorooctane 76.2 % 41-142

Surrogate: 1-Chlorooctadecane 79.2 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/06/2019  
 Reported: 09/11/2019  
 Project Name: NMGSAU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/06/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 4 @ 12' 32.6122356-103.2729844 (H903092-02)**

BTX 8021B		mg/kg		Analyzed By: 8F					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2019	ND	2.10	105	2.00	1.07	
Toluene*	<0.050	0.050	09/10/2019	ND	2.10	105	2.00	1.29	
Ethylbenzene*	<0.050	0.050	09/10/2019	ND	2.15	108	2.00	1.28	
Total Xylenes*	<0.150	0.150	09/10/2019	ND	6.52	109	6.00	1.83	
Total BTX	<0.300	0.300	09/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/09/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2019	ND	207	103	200	2.73	
DRO >C10-C28*	<10.0	10.0	09/10/2019	ND	215	107	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	09/10/2019	ND					

Surrogate: 1-Chlorooctane 75.0 % 41-142

Surrogate: 1-Chlorooctadecane 78.7 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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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

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

September 12, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/10/19 12:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/10/2019	Sampling Date:	09/10/2019
Reported:	09/12/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B 11 @ 12' 32.6123450-103.2729049 (H903114-01)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/11/2019	ND	1.98	98.9	2.00	0.722	
Toluene*	<0.050	0.050	09/11/2019	ND	1.96	97.9	2.00	2.85	
Ethylbenzene*	<0.050	0.050	09/11/2019	ND	2.02	101	2.00	0.247	
Total Xylenes*	<0.150	0.150	09/11/2019	ND	6.09	102	6.00	0.208	
Total BTX	<0.300	0.300	09/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 90.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	976	16.0	09/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/11/2019	ND	214	107	200	1.48	
DRO >C10-C28*	<10.0	10.0	09/11/2019	ND	215	108	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	09/11/2019	ND					

Surrogate: 1-Chlorooctane 80.9 % 41-142

Surrogate: 1-Chlorooctadecane 83.4 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/10/2019	Sampling Date:	09/10/2019
Reported:	09/12/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B 12 @ 12' 32.6123964-103.2729328 (H903114-02)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/11/2019	ND	1.98	98.9	2.00	0.722	
Toluene*	<0.050	0.050	09/11/2019	ND	1.96	97.9	2.00	2.85	
Ethylbenzene*	<0.050	0.050	09/11/2019	ND	2.02	101	2.00	0.247	
Total Xylenes*	<0.150	0.150	09/11/2019	ND	6.09	102	6.00	0.208	
Total BTEX	<0.300	0.300	09/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 90.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	09/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/11/2019	ND	214	107	200	1.48	
DRO >C10-C28*	<10.0	10.0	09/11/2019	ND	215	108	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	09/11/2019	ND					

Surrogate: 1-Chlorooctane 80.9 % 41-142

Surrogate: 1-Chlorooctadecane 86.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/10/2019	Sampling Date:	09/10/2019
Reported:	09/12/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B 13 @ 12' 32.6123561-103.2729757 (H903114-03)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/11/2019	ND	1.98	98.9	2.00	0.722	
Toluene*	<0.050	0.050	09/11/2019	ND	1.96	97.9	2.00	2.85	
Ethylbenzene*	<0.050	0.050	09/11/2019	ND	2.02	101	2.00	0.247	
Total Xylenes*	<0.150	0.150	09/11/2019	ND	6.09	102	6.00	0.208	
Total BTEX	<0.300	0.300	09/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 90.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	09/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/11/2019	ND	214	107	200	1.48	
DRO >C10-C28*	<10.0	10.0	09/11/2019	ND	215	108	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	09/11/2019	ND					

Surrogate: 1-Chlorooctane 80.7 % 41-142

Surrogate: 1-Chlorooctadecane 86.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/10/2019	Sampling Date:	09/10/2019
Reported:	09/12/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B 14 @ 12' 32.6122143-103.2729556 (H903114-04)**

BTEX 80218		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/11/2019	ND	1.98	98.9	2.00	0.722	
Toluene*	<0.050	0.050	09/11/2019	ND	1.96	97.9	2.00	2.85	
Ethylbenzene*	<0.050	0.050	09/11/2019	ND	2.02	101	2.00	0.247	
Total Xylenes*	<0.150	0.150	09/11/2019	ND	6.09	102	6.00	0.208	
Total BTEX	<0.300	0.300	09/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 87.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	09/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/11/2019	ND	214	107	200	1.48	
DRO >C10-C28*	<10.0	10.0	09/11/2019	ND	215	108	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	09/11/2019	ND					

Surrogate: 1-Chlorooctane 81.6 % 41-142

Surrogate: 1-Chlorooctadecane 86.6 % 37.6-147

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*Celey D. Keene*

Celey D. Keene, Lab Director/Quality Manager



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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



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

<b>Company Name:</b> <u>Agache</u>		<b>P.O. #:</b>		<b>BILL TO</b>											
<b>Project Manager:</b> <u>Jeffrey Bacon</u>		<b>Company:</b>													
<b>Address:</b>		<b>Attn:</b>		<b>ANALYSIS REQUEST</b>											
<b>City:</b> <u>Hobbs</u>		<b>Address:</b>													
<b>State:</b> <u>NM</u>		<b>Zip:</b> <u>88240</u>													
<b>Phone #:</b>		<b>Fax #:</b>													
<b>Project #:</b>		<b>Project Owner:</b>													
<b>Project Name:</b>		<b>City:</b>													
<b>Project Location:</b> <u>MUSALL 2119</u>		<b>State:</b>													
<b>Sample Name:</b> <u>Joe Musalla</u>		<b>Phone #:</b>													
<b>FOR LAB USE ONLY</b>		<b>Fax #:</b>													

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX							DATE	TIME	EXT. TPH	BTEX
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE: (C)/ COOL OTHER				
11903114	32 GIBS+SC		1							9/10	7:57	/	/	
2	32 GIBS+SC		1							9/10	7:59	/	/	
3	32 GIBS+SC		1							9/10	8:01	/	/	
4	32 GIBS+SC		1							9/10	11:47	/	/	

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<b>Relinquished By:</b> <u>Joe Musalla</u>	<b>Date:</b> <u>9/10</u>	<b>Received By:</b> <u>Joe Musalla</u>	<b>Date:</b> <u>9/10</u>
<b>Relinquished By:</b> <u>Joe Musalla</u>	<b>Date:</b> <u>9/10</u>	<b>Received By:</b> <u>Joe Musalla</u>	<b>Date:</b> <u>9/10</u>

<b>Delivered By: (Circle One)</b> <u>5.6°C</u>	<b>Sample Condition</b>	<b>CHECKED BY:</b> <u>Joe</u>
<b>Sampler - UPS - Bus - Other:</b> <u>Consistent 6.0°C</u>	<b>Cool</b> <input checked="" type="checkbox"/> <b>Intact</b> <input checked="" type="checkbox"/>	<b>(Initials)</b>

**REMARKS:** Final Results.



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September 13, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/09/19 16:54.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/09/2019	Sampling Date:	09/09/2019
Reported:	09/13/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B3 @ 12' 32.6123770-103.2730927 (H903102-01)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2019	ND	2.06	103	2.00	3.82	
Toluene*	<0.050	0.050	09/10/2019	ND	2.07	103	2.00	4.16	
Ethylbenzene*	<0.050	0.050	09/10/2019	ND	2.08	104	2.00	3.74	GC-NC
Total Xylenes*	<0.150	0.150	09/10/2019	ND	6.21	103	6.00	3.49	
Total BTX	<0.300	0.300	09/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/10/2019	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2019	ND	191	95.3	200	1.54	
DRO >C10-C28*	<10.0	10.0	09/10/2019	ND	200	100	200	2.91	
EXT DRO >C28-C36	<10.0	10.0	09/10/2019	ND					

Surrogate: 1-Chlorooctane 74.9 % 41-142

Surrogate: 1-Chlorooctadecane 77.6 % 37.6-147

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*Coley D. Keene*

Coley D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/09/2019  
 Reported: 09/13/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/09/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B5 @ 12' 32.612403-103.2728533 (H903102-02)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2019	ND	2.06	103	2.00	3.82	
Toluene*	<0.050	0.050	09/10/2019	ND	2.07	103	2.00	4.16	
Ethylbenzene*	<0.050	0.050	09/10/2019	ND	2.08	104	2.00	3.74	
Total Xylenes*	<0.150	0.150	09/10/2019	ND	6.21	103	6.00	3.49	
Total BTX	<0.300	0.300	09/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 90.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	608	16.0	09/10/2019	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2019	ND	191	95.3	200	1.54	
DRO >C10-C28*	<10.0	10.0	09/10/2019	ND	200	100	200	2.91	
EXT DRO >C28-C36	<10.0	10.0	09/10/2019	ND					

Surrogate: 1-Chlorooctane 75.4 % 41-142

Surrogate: 1-Chlorooctadecane 78.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

APACHE CORP - HOBBS  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	09/09/2019	Sampling Date:	09/09/2019
Reported:	09/13/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B6 @ 12' 32.6124535-103.2729123 (H903102-03)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2019	ND	2.06	103	2.00	3.82	
Toluene*	<0.050	0.050	09/10/2019	ND	2.07	103	2.00	4.16	
Ethylbenzene*	<0.050	0.050	09/10/2019	ND	2.08	104	2.00	3.74	
Total Xylenes*	<0.150	0.150	09/10/2019	ND	6.21	103	6.00	3.49	
Total BTX	<0.300	0.300	09/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 90.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	09/10/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2019	ND	191	95.3	200	1.54	
DRO >C10-C28*	<10.0	10.0	09/10/2019	ND	200	100	200	2.91	
EXT DRO >C28-C36	<10.0	10.0	09/10/2019	ND					

Surrogate: 1-Chlorooctane 79.3 % 41-142

Surrogate: 1-Chlorooctadecane 83.3 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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*Coley D. Keene*

Coley D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/09/2019	Sampling Date:	09/09/2019
Reported:	09/13/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B7 @ 12' 32.6123532-103.27230508 (H903102-04)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2019	ND	2.06	103	2.00	3.82	
Toluene*	<0.050	0.050	09/10/2019	ND	2.07	103	2.00	4.16	
Ethylbenzene*	<0.050	0.050	09/10/2019	ND	2.08	104	2.00	3.74	
Total Xylenes*	<0.150	0.150	09/10/2019	ND	6.21	103	6.00	3.49	
Total BTX	<0.300	0.300	09/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 88.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/10/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2019	ND	191	95.3	200	1.54	
DRO >C10-C28*	<10.0	10.0	09/10/2019	ND	200	100	200	2.91	
EXT DRO >C28-C36	<10.0	10.0	09/10/2019	ND					

Surrogate: 1-Chlorooctane 80.2 % 41-142

Surrogate: 1-Chlorooctadecane 84.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/09/2019	Sampling Date:	09/09/2019
Reported:	09/13/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B8 @ 12' 32.6123688-103.2730307 (H903102-05)**

BTEX 80218		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2019	ND	2.06	103	2.00	3.82	
Toluene*	<0.050	0.050	09/10/2019	ND	2.07	103	2.00	4.16	
Ethylbenzene*	<0.050	0.050	09/10/2019	ND	2.08	104	2.00	3.74	
Total Xylenes*	<0.150	0.150	09/10/2019	ND	6.21	103	6.00	3.49	
Total BTEX	<0.300	0.300	09/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 90.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	09/10/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2019	ND	191	95.3	200	1.54	
DRO >C10-C28*	<10.0	10.0	09/10/2019	ND	200	100	200	2.91	
EXT DRO >C28-C36	<10.0	10.0	09/10/2019	ND					

Surrogate: 1-Chlorooctane 80.5 % 41-142

Surrogate: 1-Chlorooctadecane 85.0 % 37.6-147

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*Coley D. Keene*

Coley D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/09/2019	Sampling Date:	09/09/2019
Reported:	09/13/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B9 @ 12' 32.612363-103.2728852 (H903102-06)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2019	ND	2.06	103	2.00	3.82	
Toluene*	<0.050	0.050	09/10/2019	ND	2.07	103	2.00	4.16	
Ethylbenzene*	<0.050	0.050	09/10/2019	ND	2.08	104	2.00	3.74	
Total Xylenes*	<0.150	0.150	09/10/2019	ND	6.21	103	6.00	3.49	
Total BTX	<0.300	0.300	09/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 90.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	09/10/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2019	ND	191	95.3	200	1.54	
DRO >C10-C28*	<10.0	10.0	09/10/2019	ND	200	100	200	2.91	
EXT DRO >C28-C36	<10.0	10.0	09/10/2019	ND					

Surrogate: 1-Chlorooctane 78.8 % 41-142

Surrogate: 1-Chlorooctadecane 83.4 % 37.6-147

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*Coley D. Keene*

Coley D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/09/2019	Sampling Date:	09/09/2019
Reported:	09/13/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B10 @ 12' 32.6123023-103.2728238 (H903102-07)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2019	ND	2.06	103	2.00	3.82	
Toluene*	<0.050	0.050	09/10/2019	ND	2.07	103	2.00	4.16	
Ethylbenzene*	<0.050	0.050	09/10/2019	ND	2.08	104	2.00	3.74	
Total Xylenes*	<0.150	0.150	09/10/2019	ND	6.21	103	6.00	3.49	
Total BTEX	<0.300	0.300	09/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 92.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	688	16.0	09/10/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2019	ND	191	95.3	200	1.54	
DRO >C10-C28*	<10.0	10.0	09/10/2019	ND	200	100	200	2.91	
EXT DRO >C28-C36	<10.0	10.0	09/10/2019	ND					

Surrogate: 1-Chlorooctane 79.3 % 41-142

Surrogate: 1-Chlorooctadecane 83.3 % 37.6-147

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*Coley D. Keene*

Coley D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/09/2019  
 Reported: 09/13/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/09/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B2 @ 12' 32.6124219-103.2730907 (H903102-08)**

BTX 80218		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2019	ND	2.06	103	2.00	3.82	
Toluene*	<0.050	0.050	09/10/2019	ND	2.07	103	2.00	4.16	
Ethylbenzene*	<0.050	0.050	09/10/2019	ND	2.08	104	2.00	3.74	
Total Xylenes*	<0.150	0.150	09/10/2019	ND	6.21	103	6.00	3.49	
Total BTX	<0.300	0.300	09/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/10/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2019	ND	191	95.3	200	1.54	
DRO >C10-C28*	<10.0	10.0	09/10/2019	ND	200	100	200	2.91	
EXT DRO >C28-C36	<10.0	10.0	09/10/2019	ND					

Surrogate: 1-Chlorooctane 79.1 % 41-142

Surrogate: 1-Chlorooctadecane 82.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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### Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

GC-NC 8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.

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-8 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

11 jo 11 e6ag



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

BILL TO

ANALYSIS REQUEST

Company Name: <u>Apex</u>		P.O. #:																									
Project Manager: <u>Bruce Baker / Jeffery Brown</u>		Company:																									
Address:		Attn:																									
City: <u>Hobbs</u>		State: <u>NM</u> Zip: <u>88240</u>																									
Phone #:		Fax #:																									
Project #:		Project Owner:	City:	State:	Zip:																						
Project Name:		Phone #:																									
Project Location: <u>ALC 35A11 #219</u>		Fax #:																									
Sampler Name: <u>Jim Quevedo</u>		PRESERV	SAMPLING																								
FOR LAB USE ONLY																											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX					ACID/BASE	(C) COOL	OTHER	DATE	TIME	EXT	TPH	OTEX											
		GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER																				
<u>H903102</u>	<u>31.0-23.740</u>	<u>C</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>9/9</u>	<u>7:55</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>										
<u>1</u>	<u>35.0-12' 32.0-20.013</u>	<u>C</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>9/9</u>	<u>0:45</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>										
<u>2</u>	<u>35.0-12' 32.0-20.013</u>	<u>C</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>9/9</u>	<u>0:47</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>										
<u>3</u>	<u>35.0-12' 32.0-20.013</u>	<u>C</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>9/9</u>	<u>0:59</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>										
<u>4</u>	<u>35.0-12' 32.0-20.013</u>	<u>C</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>9/9</u>	<u>13:56</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>										
<u>5</u>	<u>35.0-12' 32.0-20.013</u>	<u>C</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>9/9</u>	<u>15:58</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>										
<u>6</u>	<u>35.0-12' 32.0-20.013</u>	<u>C</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>9/9</u>	<u>13:40</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>										
<u>7</u>	<u>35.0-12' 32.0-20.013</u>	<u>C</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>9/9</u>	<u>4:03</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>										
<u>8</u>	<u>35.0-12' 32.0-20.013</u>	<u>C</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>9/9</u>	<u>4:03</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>										

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Relinquished By: [Signature] Date: 9/9 Received By: [Signature] Date: 9/9

Relinquished By: [Signature] Date: 10/5/1 Received By: [Signature] Date: 10/5/1

Delivered By: (Circle One) 2.72 3.97 Sample Condition ☒ Cool ☐ Intact ☐ Yes ☐ No

Sampler - UPS - Bus - Other: 3.10 3.10 ☐ Yes ☐ No

CHECKED BY: (Initials) 70

REMARKS: Envirol Results -



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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September 05, 2019

JEFFREY BROOM

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/05/19 7:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 JEFFREY BROOM  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/05/2019	Sampling Date:	09/04/2019
Reported:	09/05/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Mike Snyder
Project Location:	NOT GIVEN		

**Sample ID: V 2 SURFACE (H903065-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/05/2019	ND	416	104	400	0.00	

**Sample ID: V 2 @ 4' (H903065-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	608	16.0	09/05/2019	ND	416	104	400	0.00	

**Sample ID: V 2 @ 8' (H903065-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	09/05/2019	ND	416	104	400	0.00	

**Sample ID: V 1 @ SURFACE (H903065-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	09/05/2019	ND	416	104	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 JEFFREY BROOM  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/05/2019	Sampling Date:	09/04/2019
Reported:	09/05/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Mike Snyder
Project Location:	NOT GIVEN		

**Sample ID: V 1 @ 2' (H903065-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1650	16.0	09/05/2019	ND	416	104	400	0.00		

**Sample ID: V 1 @ 4' (H903065-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	09/05/2019	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

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---

### 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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

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Celey D. Keene, Lab Director/Quality Manager



5 of 5 pages



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: <u>Aspire</u>		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>																					
Project Manager: <u>Jeff Brown</u>		P.O. #:																							
Address:		Company:																							
City: <u>Hobbs</u> State: <u>NM</u> Zip:		Attn:																							
Phone #: Fax #:		Address:																							
Project #: Project Owner:		City:																							
Project Name:		State:																							
Project Location: <u>NMGS44 42119</u>		Phone #:																							
Sampler Name: <u>Sose Brown</u>		Fax #:																							
FOR LAB USE ONLY																									
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.	SAMPLING														
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :			ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME									
<u>HP03065</u>	<u>102 Surface</u>	<u>G</u>	<u>1</u>									<u>9/4</u>	<u>4:54pm</u>												
	<u>202041</u>	<u>G</u>	<u>1</u>										<u>4:58pm</u>												
	<u>302081</u>	<u>G</u>	<u>1</u>										<u>5:00pm</u>												
	<u>4010 Surface</u>	<u>G</u>	<u>1</u>										<u>5:02</u>												
	<u>50102</u>	<u>G</u>	<u>1</u>										<u>5:04</u>												
	<u>601041</u>	<u>G</u>	<u>1</u>										<u>5:06</u>												
PLEASE NOTE: Liability and Damages, Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.																									
Relinquished By: <u>Jeff Brown</u>		Date: <u>9/5/19</u>		Received By: <u>Mike Funk</u>		Date: <u>9/10</u>		Time: <u>07:40</u>																	
Relinquished By:		Date:		Received By:		Date:		Time:																	
Delivered By: (Circle One) <u>CSE</u>		# <u>497</u>		Sample Condition		CHECKED BY: (Initials)																			
Sampler - UPS - Bus - Other: <u>Collected 0.9%</u>				Cool <input type="checkbox"/> Intact <input type="checkbox"/>																					
				Yes <input type="checkbox"/> No <input type="checkbox"/>																					
				Yes <input type="checkbox"/> No <input type="checkbox"/>																					
				Yes <input type="checkbox"/> No <input type="checkbox"/>																					
REMARKS: <u>Email Results</u>																									
Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>																									
Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>																									
Add'l Phone #:																									
Add'l Fax #:																									



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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September 11, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/06/19 17:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/06/2019	Sampling Date:	09/06/2019
Reported:	09/11/2019	Sampling Type:	Soil
Project Name:	NMGS AU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B 1 @ 12' 32.6124168-103.2729871 (H903092-01)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2019	ND	2.10	105	2.00	1.07	
Toluene*	<0.050	0.050	09/10/2019	ND	2.10	105	2.00	1.29	
Ethylbenzene*	<0.050	0.050	09/10/2019	ND	2.15	108	2.00	1.28	
Total Xylenes*	<0.150	0.150	09/10/2019	ND	6.52	109	6.00	1.83	
Total BTX	<0.300	0.300	09/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 89.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	09/09/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2019	ND	207	103	200	2.73	
DRO >C10-C28*	<10.0	10.0	09/10/2019	ND	215	107	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	09/10/2019	ND					

Surrogate: 1-Chlorooctane 76.2 % 41-142

Surrogate: 1-Chlorooctadecane 79.2 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/06/2019	Sampling Date:	09/06/2019
Reported:	09/11/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B 4 @ 12' 32.6122356-103.2729844 (H903092-02)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/10/2019	ND	2.10	105	2.00	1.07		
Toluene*	<0.050	0.050	09/10/2019	ND	2.10	105	2.00	1.29		
Ethylbenzene*	<0.050	0.050	09/10/2019	ND	2.15	108	2.00	1.28		
Total Xylenes*	<0.150	0.150	09/10/2019	ND	6.52	109	6.00	1.83		
Total BTX	<0.300	0.300	09/10/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 91.5 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/09/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2019	ND	207	103	200	2.73	
DRO >C10-C28*	<10.0	10.0	09/10/2019	ND	215	107	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	09/10/2019	ND					

Surrogate: 1-Chlorooctane 75.0 % 41-142

Surrogate: 1-Chlorooctadecane 78.7 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

**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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\*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



Page 5 of 5



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

[illegible]

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Relinquished By:	<i>David L. Drake</i>	Date:	8-6-19	Received By:	<i>James L. Drake</i>
		Time:	17:00		
		Date:			

Phone Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Phone #:
Fax Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Fax #:
REMARKS:			

Time:			
Delivered By: (Circle One)	3.92	#497	
Sampler - UPS - Bus - Other:	Collected	3.32	
Sample Condition		CHECKED BY:	
Cool	Impact	(Initials)	
<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Tg	

# Final Results





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

September 13, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/09/19 16:54.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/09/2019	Sampling Date:	09/09/2019
Reported:	09/13/2019	Sampling Type:	Soil
Project Name:	NMGS AU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B3 @ 12' 32.6123770-103.2730927 (H903102-01)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2019	ND	2.06	103	2.00	3.82	
Toluene*	<0.050	0.050	09/10/2019	ND	2.07	103	2.00	4.16	
Ethylbenzene*	<0.050	0.050	09/10/2019	ND	2.08	104	2.00	3.74	GC-NC
Total Xylenes*	<0.150	0.150	09/10/2019	ND	6.21	103	6.00	3.49	
Total BTX	<0.300	0.300	09/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/10/2019	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2019	ND	191	95.3	200	1.54	
DRO >C10-C28*	<10.0	10.0	09/10/2019	ND	200	100	200	2.91	
EXT DRO >C28-C36	<10.0	10.0	09/10/2019	ND					

Surrogate: 1-Chlorooctane 74.9 % 41-142

Surrogate: 1-Chlorooctadecane 77.6 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/09/2019  
 Reported: 09/13/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/09/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B5 @ 12' 32.612403-103.2728533 (H903102-02)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/10/2019	ND	2.06	103	2.00	3.82		
Toluene*	<0.050	0.050	09/10/2019	ND	2.07	103	2.00	4.16		
Ethylbenzene*	<0.050	0.050	09/10/2019	ND	2.08	104	2.00	3.74		
Total Xylenes*	<0.150	0.150	09/10/2019	ND	6.21	103	6.00	3.49		
Total BTEx	<0.300	0.300	09/10/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 90.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	608	16.0	09/10/2019	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2019	ND	191	95.3	200	1.54	
DRO >C10-C28*	<10.0	10.0	09/10/2019	ND	200	100	200	2.91	
EXT DRO >C28-C36	<10.0	10.0	09/10/2019	ND					

Surrogate: 1-Chlorooctane 75.4 % 41-142

Surrogate: 1-Chlorooctadecane 78.7 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/09/2019  
 Reported: 09/13/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/09/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B6 @ 12' 32.6124535-103.2729123 (H903102-03)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/10/2019	ND	2.06	103	2.00	3.82		
Toluene*	<0.050	0.050	09/10/2019	ND	2.07	103	2.00	4.16		
Ethylbenzene*	<0.050	0.050	09/10/2019	ND	2.08	104	2.00	3.74		
Total Xylenes*	<0.150	0.150	09/10/2019	ND	6.21	103	6.00	3.49		
Total BTX	<0.300	0.300	09/10/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 90.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	09/10/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2019	ND	191	95.3	200	1.54	
DRO >C10-C28*	<10.0	10.0	09/10/2019	ND	200	100	200	2.91	
EXT DRO >C28-C36	<10.0	10.0	09/10/2019	ND					

Surrogate: 1-Chlorooctane 79.3 % 41-142

Surrogate: 1-Chlorooctadecane 83.3 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/09/2019  
 Reported: 09/13/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/09/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B7 @ 12' 32.6123532-103.27230508 (H903102-04)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/10/2019	ND	2.06	103	2.00	3.82		
Toluene*	<0.050	0.050	09/10/2019	ND	2.07	103	2.00	4.16		
Ethylbenzene*	<0.050	0.050	09/10/2019	ND	2.08	104	2.00	3.74		
Total Xylenes*	<0.150	0.150	09/10/2019	ND	6.21	103	6.00	3.49		
Total BTEx	<0.300	0.300	09/10/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 88.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/10/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2019	ND	191	95.3	200	1.54	
DRO >C10-C28*	<10.0	10.0	09/10/2019	ND	200	100	200	2.91	
EXT DRO >C28-C36	<10.0	10.0	09/10/2019	ND					

Surrogate: 1-Chlorooctane 80.2 % 41-142

Surrogate: 1-Chlorooctadecane 84.7 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/09/2019  
 Reported: 09/13/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/09/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B8 @ 12' 32.6123688-103.2730307 (H903102-05)**

BTEx 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2019	ND	2.06	103	2.00	3.82	
Toluene*	<0.050	0.050	09/10/2019	ND	2.07	103	2.00	4.16	
Ethylbenzene*	<0.050	0.050	09/10/2019	ND	2.08	104	2.00	3.74	
Total Xylenes*	<0.150	0.150	09/10/2019	ND	6.21	103	6.00	3.49	
Total BTEx	<0.300	0.300	09/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 90.0 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	09/10/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2019	ND	191	95.3	200	1.54	
DRO >C10-C28*	<10.0	10.0	09/10/2019	ND	200	100	200	2.91	
EXT DRO >C28-C36	<10.0	10.0	09/10/2019	ND					

Surrogate: 1-Chlorooctane 80.5 % 41-142

Surrogate: 1-Chlorooctadecane 85.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/09/2019  
 Reported: 09/13/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/09/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B9 @ 12' 32.612363-103.2728852 (H903102-06)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/10/2019	ND	2.06	103	2.00	3.82		
Toluene*	<0.050	0.050	09/10/2019	ND	2.07	103	2.00	4.16		
Ethylbenzene*	<0.050	0.050	09/10/2019	ND	2.08	104	2.00	3.74		
Total Xylenes*	<0.150	0.150	09/10/2019	ND	6.21	103	6.00	3.49		
Total BTEx	<0.300	0.300	09/10/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 90.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	09/10/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2019	ND	191	95.3	200	1.54	
DRO >C10-C28*	<10.0	10.0	09/10/2019	ND	200	100	200	2.91	
EXT DRO >C28-C36	<10.0	10.0	09/10/2019	ND					

Surrogate: 1-Chlorooctane 78.8 % 41-142

Surrogate: 1-Chlorooctadecane 83.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/09/2019  
 Reported: 09/13/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/09/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B10 @ 12' 32.6123023-103.2728238 (H903102-07)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/10/2019	ND	2.06	103	2.00	3.82		
Toluene*	<0.050	0.050	09/10/2019	ND	2.07	103	2.00	4.16		
Ethylbenzene*	<0.050	0.050	09/10/2019	ND	2.08	104	2.00	3.74		
Total Xylenes*	<0.150	0.150	09/10/2019	ND	6.21	103	6.00	3.49		
Total BTEx	<0.300	0.300	09/10/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 92.3 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	688	16.0	09/10/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2019	ND	191	95.3	200	1.54	
DRO >C10-C28*	<10.0	10.0	09/10/2019	ND	200	100	200	2.91	
EXT DRO >C28-C36	<10.0	10.0	09/10/2019	ND					

Surrogate: 1-Chlorooctane 79.3 % 41-142

Surrogate: 1-Chlorooctadecane 83.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/09/2019  
 Reported: 09/13/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/09/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B2 @ 12' 32.6124219-103.2730907 (H903102-08)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2019	ND	2.06	103	2.00	3.82	
Toluene*	<0.050	0.050	09/10/2019	ND	2.07	103	2.00	4.16	
Ethylbenzene*	<0.050	0.050	09/10/2019	ND	2.08	104	2.00	3.74	
Total Xylenes*	<0.150	0.150	09/10/2019	ND	6.21	103	6.00	3.49	
Total BTX	<0.300	0.300	09/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.6 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	09/10/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2019	ND	191	95.3	200	1.54	
DRO >C10-C28*	<10.0	10.0	09/10/2019	ND	200	100	200	2.91	
EXT DRO >C28-C36	<10.0	10.0	09/10/2019	ND					

Surrogate: 1-Chlorooctane 79.1 % 41-142

Surrogate: 1-Chlorooctadecane 82.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
GC-NC	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

11

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Phone Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Phone #:
---------------	------------------------------	-----------------------------	----------------

REMARKS:

1

En

1001



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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September 12, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/10/19 12:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager





PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/10/2019	Sampling Date:	09/10/2019
Reported:	09/12/2019	Sampling Type:	Soil
Project Name:	NMGS AU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B 11 @ 12' 32.6123450-103.2729049 (H903114-01)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/11/2019	ND	1.98	98.9	2.00	0.722	
Toluene*	<0.050	0.050	09/11/2019	ND	1.96	97.9	2.00	2.85	
Ethylbenzene*	<0.050	0.050	09/11/2019	ND	2.02	101	2.00	0.247	
Total Xylenes*	<0.150	0.150	09/11/2019	ND	6.09	102	6.00	0.208	
Total BTEX	<0.300	0.300	09/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 90.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	976	16.0	09/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/11/2019	ND	214	107	200	1.48	
DRO >C10-C28*	<10.0	10.0	09/11/2019	ND	215	108	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	09/11/2019	ND					

Surrogate: 1-Chlorooctane 80.9 % 41-142

Surrogate: 1-Chlorooctadecane 83.4 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/10/2019  
 Reported: 09/12/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/10/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 12 @ 12' 32.6123964-103.2729328 (H903114-02)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/11/2019	ND	1.98	98.9	2.00	0.722		
Toluene*	<0.050	0.050	09/11/2019	ND	1.96	97.9	2.00	2.85		
Ethylbenzene*	<0.050	0.050	09/11/2019	ND	2.02	101	2.00	0.247		
Total Xylenes*	<0.150	0.150	09/11/2019	ND	6.09	102	6.00	0.208		
Total BTEx	<0.300	0.300	09/11/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 90.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	09/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/11/2019	ND	214	107	200	1.48	
DRO >C10-C28*	<10.0	10.0	09/11/2019	ND	215	108	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	09/11/2019	ND					

Surrogate: 1-Chlorooctane 80.9 % 41-142

Surrogate: 1-Chlorooctadecane 86.8 % 37.6-147

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/10/2019  
 Reported: 09/12/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/10/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 13 @ 12' 32.6123561-103.2729757 (H903114-03)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/11/2019	ND	1.98	98.9	2.00	0.722		
Toluene*	<0.050	0.050	09/11/2019	ND	1.96	97.9	2.00	2.85		
Ethylbenzene*	<0.050	0.050	09/11/2019	ND	2.02	101	2.00	0.247		
Total Xylenes*	<0.150	0.150	09/11/2019	ND	6.09	102	6.00	0.208		
Total BTX	<0.300	0.300	09/11/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 90.3 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	09/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/11/2019	ND	214	107	200	1.48	
DRO >C10-C28*	<10.0	10.0	09/11/2019	ND	215	108	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	09/11/2019	ND					

Surrogate: 1-Chlorooctane 80.7 % 41-142

Surrogate: 1-Chlorooctadecane 86.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/10/2019  
 Reported: 09/12/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/10/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 14 @ 12' 32.6122143-103.2729556 (H903114-04)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/11/2019	ND	1.98	98.9	2.00	0.722		
Toluene*	<0.050	0.050	09/11/2019	ND	1.96	97.9	2.00	2.85		
Ethylbenzene*	<0.050	0.050	09/11/2019	ND	2.02	101	2.00	0.247		
Total Xylenes*	<0.150	0.150	09/11/2019	ND	6.09	102	6.00	0.208		
Total BTX	<0.300	0.300	09/11/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 87.7 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	09/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/11/2019	ND	214	107	200	1.48	
DRO >C10-C28*	<10.0	10.0	09/11/2019	ND	215	108	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	09/11/2019	ND					

Surrogate: 1-Chlorooctane 81.6 % 41-142

Surrogate: 1-Chlorooctadecane 86.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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### 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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ANALYSIS REQUEST

(Regular)





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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September 17, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/11/19 15:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/11/2019  
 Reported: 09/17/2019  
 Project Name: NMGSAU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/11/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: W 3 32.6124552-103.2730152 (H903141-01)**

BTEx 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	1.84	92.0	2.00	6.79	
Toluene*	<0.050	0.050	09/16/2019	ND	1.89	94.4	2.00	4.62	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	1.94	96.9	2.00	4.64	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	5.87	97.9	6.00	5.18	
Total BTEx	<0.300	0.300	09/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 79.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	09/16/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2019	ND	190	95.0	200	7.57	
DRO >C10-C28*	<10.0	10.0	09/12/2019	ND	185	92.5	200	11.7	
EXT DRO >C28-C36	<10.0	10.0	09/12/2019	ND					

Surrogate: 1-Chlorooctane 87.8 % 41-142

Surrogate: 1-Chlorooctadecane 95.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/11/2019  
 Reported: 09/17/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/11/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: W 4 32.6123818-103.27330568 (H903141-02)**

BTEX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/16/2019	ND	1.84	92.0	2.00	6.79		
Toluene*	<0.050	0.050	09/16/2019	ND	1.89	94.4	2.00	4.62		
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	1.94	96.9	2.00	4.64		
Total Xylenes*	<0.150	0.150	09/16/2019	ND	5.87	97.9	6.00	5.18		
Total BTEX	<0.300	0.300	09/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 79.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/16/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2019	ND	190	95.0	200	7.57	
DRO >C10-C28*	<10.0	10.0	09/12/2019	ND	185	92.5	200	11.7	
EXT DRO >C28-C36	<10.0	10.0	09/12/2019	ND					

Surrogate: 1-Chlorooctane 85.0 % 41-142

Surrogate: 1-Chlorooctadecane 95.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/11/2019  
 Reported: 09/17/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/11/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: W 5 32.6123114-103.2730431 (H903141-03)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	1.84	92.0	2.00	6.79	
Toluene*	<0.050	0.050	09/16/2019	ND	1.89	94.4	2.00	4.62	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	1.94	96.9	2.00	4.64	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	5.87	97.9	6.00	5.18	
Total BTEX	<0.300	0.300	09/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 77.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2019	ND	190	95.0	200	7.57	
DRO >C10-C28*	<10.0	10.0	09/12/2019	ND	185	92.5	200	11.7	
EXT DRO >C28-C36	<10.0	10.0	09/12/2019	ND					

Surrogate: 1-Chlorooctane 84.1 % 41-142

Surrogate: 1-Chlorooctadecane 93.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/11/2019  
 Reported: 09/17/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/11/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: W 6 32.6123253-103.2730421 (H903141-04)**

BTX 8021B		mg/kg	Analyzed By: BF					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	1.84	92.0	2.00	6.79	
Toluene*	<0.050	0.050	09/16/2019	ND	1.89	94.4	2.00	4.62	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	1.94	96.9	2.00	4.64	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	5.87	97.9	6.00	5.18	
Total BTX	<0.300	0.300	09/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 151 % 73.3-129

Chloride, SM4500CI-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2019	ND	190	95.0	200	7.57	
DRO >C10-C28*	<10.0	10.0	09/12/2019	ND	185	92.5	200	11.7	
EXT DRO >C28-C36	<10.0	10.0	09/12/2019	ND					

Surrogate: 1-Chlorooctane 80.9 % 41-142

Surrogate: 1-Chlorooctadecane 90.5 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/11/2019  
 Reported: 09/17/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/11/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: W 7 32.6122662-103.2729995 (H903141-05)**

BTEX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/16/2019	ND	1.84	92.0	2.00	6.79		
Toluene*	<0.050	0.050	09/16/2019	ND	1.89	94.4	2.00	4.62		
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	1.94	96.9	2.00	4.64		
Total Xylenes*	<0.150	0.150	09/16/2019	ND	5.87	97.9	6.00	5.18		
Total BTEX	<0.300	0.300	09/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 75.4 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	09/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2019	ND	190	95.0	200	7.57	
DRO >C10-C28*	<10.0	10.0	09/12/2019	ND	185	92.5	200	11.7	
EXT DRO >C28-C36	<10.0	10.0	09/12/2019	ND					

Surrogate: 1-Chlorooctane 83.4 % 41-142

Surrogate: 1-Chlorooctadecane 92.4 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/11/2019  
 Reported: 09/17/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/11/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 15 32.6122705-103.2728741 (H903141-06)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/16/2019	ND	1.84	92.0	2.00	6.79		
Toluene*	<0.050	0.050	09/16/2019	ND	1.89	94.4	2.00	4.62		
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	1.94	96.9	2.00	4.64		
Total Xylenes*	<0.150	0.150	09/16/2019	ND	5.87	97.9	6.00	5.18		
Total BTX	<0.300	0.300	09/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 78.5 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	09/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2019	ND	195	97.7	200	6.40	
DRO >C10-C28*	<10.0	10.0	09/12/2019	ND	198	99.0	200	7.79	
EXT DRO >C28-C36	<10.0	10.0	09/12/2019	ND					

Surrogate: 1-Chlorooctane 89.0 % 41-142

Surrogate: 1-Chlorooctadecane 95.4 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/11/2019  
 Reported: 09/17/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/11/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: W 10 32.6121547-103.2729090 (H903141-07)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/16/2019	ND	1.84	92.0	2.00	6.79		
Toluene*	<0.050	0.050	09/16/2019	ND	1.89	94.4	2.00	4.62		
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	1.94	96.9	2.00	4.64		
Total Xylenes*	<0.150	0.150	09/16/2019	ND	5.87	97.9	6.00	5.18		
Total BTEx	<0.300	0.300	09/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 78.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	09/16/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2019	ND	195	97.7	200	6.40	
DRO >C10-C28*	<10.0	10.0	09/12/2019	ND	198	99.0	200	7.79	
EXT DRO >C28-C36	<10.0	10.0	09/12/2019	ND					

Surrogate: 1-Chlorooctane 93.3 % 41-142

Surrogate: 1-Chlorooctadecane 100 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

*Released to Imaging: 12/27/2023 11:44:16 AM*



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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September 18, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/13/19 7:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/13/2019	Sampling Date:	09/12/2019
Reported:	09/18/2019	Sampling Type:	Soil
Project Name:	NMGS AU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Mike Snyder
Project Location:	NOT GIVEN		

**Sample ID: B 17 @ 12' 32.6122239-103.2730310 (H903162-01)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	2.14	107	2.00	2.36	
Toluene*	<0.050	0.050	09/16/2019	ND	1.96	98.0	2.00	4.79	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	2.42	121	2.00	17.2	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	6.01	100	6.00	1.48	
Total BTEX	<0.300	0.300	09/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	09/16/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2019	ND	198	98.8	200	5.98	
DRO >C10-C28*	<10.0	10.0	09/14/2019	ND	201	100	200	7.76	
EXT DRO >C28-C36	<10.0	10.0	09/14/2019	ND					

Surrogate: 1-Chlorooctane 84.7 % 41-142

Surrogate: 1-Chlorooctadecane 91.5 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/13/2019  
 Reported: 09/18/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/12/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: B 20 @ 12' 32.6121242-103.2729113 (H903162-02)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/16/2019	ND	2.14	107	2.00	2.36		
Toluene*	<0.050	0.050	09/16/2019	ND	1.96	98.0	2.00	4.79		
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	2.42	121	2.00	17.2		
Total Xylenes*	<0.150	0.150	09/16/2019	ND	6.01	100	6.00	1.48		
Total BTEx	<0.300	0.300	09/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	09/16/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2019	ND	198	98.8	200	5.98	
DRO >C10-C28*	<10.0	10.0	09/14/2019	ND	201	100	200	7.76	
EXT DRO >C28-C36	<10.0	10.0	09/14/2019	ND					

Surrogate: 1-Chlorooctane 88.1 % 41-142

Surrogate: 1-Chlorooctadecane 95.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/13/2019  
 Reported: 09/18/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/12/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: B 15 @ 12' 32.6123148-103.2728449 (H903162-03)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/16/2019	ND	2.14	107	2.00	2.36		
Toluene*	<0.050	0.050	09/16/2019	ND	1.96	98.0	2.00	4.79		
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	2.42	121	2.00	17.2		
Total Xylenes*	<0.150	0.150	09/16/2019	ND	6.01	100	6.00	1.48		
Total BTEx	<0.300	0.300	09/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.3 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	09/16/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2019	ND	198	98.8	200	5.98	
DRO >C10-C28*	<10.0	10.0	09/14/2019	ND	201	100	200	7.76	
EXT DRO >C28-C36	<10.0	10.0	09/14/2019	ND					

Surrogate: 1-Chlorooctane 93.2 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/13/2019  
 Reported: 09/18/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/12/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: B 16 @ 12' 32.6123332-103.2728691 (H903162-04)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/16/2019	ND	2.14	107	2.00	2.36		
Toluene*	<0.050	0.050	09/16/2019	ND	1.96	98.0	2.00	4.79		
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	2.42	121	2.00	17.2		
Total Xylenes*	<0.150	0.150	09/16/2019	ND	6.01	100	6.00	1.48		
Total BTEx	<0.300	0.300	09/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	09/16/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2019	ND	198	98.8	200	5.98	
DRO >C10-C28*	<10.0	10.0	09/14/2019	ND	201	100	200	7.76	
EXT DRO >C28-C36	<10.0	10.0	09/14/2019	ND					

Surrogate: 1-Chlorooctane 86.0 % 41-142

Surrogate: 1-Chlorooctadecane 92.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/13/2019  
 Reported: 09/18/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/12/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: W 9 32.6122163-103.2729334 (H903162-05)**

BTEX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/16/2019	ND	2.14	107	2.00	2.36		
Toluene*	<0.050	0.050	09/16/2019	ND	1.96	98.0	2.00	4.79		
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	2.42	121	2.00	17.2		
Total Xylenes*	<0.150	0.150	09/16/2019	ND	6.01	100	6.00	1.48		
Total BTEX	<0.300	0.300	09/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/16/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2019	ND	198	98.8	200	5.98	
DRO >C10-C28*	<10.0	10.0	09/14/2019	ND	201	100	200	7.76	
EXT DRO >C28-C36	<10.0	10.0	09/14/2019	ND					

Surrogate: 1-Chlorooctane 94.6 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/13/2019  
 Reported: 09/18/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/12/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: W 8 32.6122163-103.2729334 (H903162-06)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/16/2019	ND	1.84	92.0	2.00	6.79		
Toluene*	<0.050	0.050	09/16/2019	ND	1.89	94.4	2.00	4.62		
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	1.94	96.9	2.00	4.64		
Total Xylenes*	<0.150	0.150	09/16/2019	ND	5.87	97.9	6.00	5.18		
Total BTEx	<0.300	0.300	09/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 76.3 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	09/16/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/16/2019	ND	202	101	200	3.54	
DRO >C10-C28*	<10.0	10.0	09/16/2019	ND	193	96.6	200	4.33	
EXT DRO >C28-C36	<10.0	10.0	09/16/2019	ND					

Surrogate: 1-Chlorooctane 83.8 % 41-142

Surrogate: 1-Chlorooctadecane 89.4 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/13/2019  
 Reported: 09/18/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/12/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: B 19 32.6122829-103.2728600 (H903162-07)**

BTEX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/16/2019	ND	1.84	92.0	2.00	6.79		
Toluene*	<0.050	0.050	09/16/2019	ND	1.89	94.4	2.00	4.62		
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	1.94	96.9	2.00	4.64		
Total Xylenes*	<0.150	0.150	09/16/2019	ND	5.87	97.9	6.00	5.18		
Total BTEX	<0.300	0.300	09/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 78.8 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	928	16.0	09/16/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/16/2019	ND	202	101	200	3.54	
DRO >C10-C28*	<10.0	10.0	09/16/2019	ND	193	96.6	200	4.33	
EXT DRO >C28-C36	<10.0	10.0	09/16/2019	ND					

Surrogate: 1-Chlorooctane 78.2 % 41-142

Surrogate: 1-Chlorooctadecane 83.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/13/2019  
 Reported: 09/18/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/12/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: B 18 32.6122566-103.2728781 (H903162-08)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	1.84	92.0	2.00	6.79	
Toluene*	<0.050	0.050	09/16/2019	ND	1.89	94.4	2.00	4.62	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	1.94	96.9	2.00	4.64	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	5.87	97.9	6.00	5.18	
Total BTEX	<0.300	0.300	09/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 76.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	09/16/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/16/2019	ND	202	101	200	3.54	
DRO >C10-C28*	<10.0	10.0	09/16/2019	ND	193	96.6	200	4.33	
EXT DRO >C28-C36	<10.0	10.0	09/16/2019	ND					

Surrogate: 1-Chlorooctane 87.1 % 41-142

Surrogate: 1-Chlorooctadecane 93.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Released to Imaging: 12/27/2023 11:44:16 AM



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Released to Imaging: 12/27/2023 11:44:16 AM



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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September 20, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/16/19 11:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGSAU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/13/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 24 @ 12' 32.6124803-103.2728909 (H903176-01)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/19/2019	ND	2.08	104	2.00	2.41	QR-03
Toluene*	<0.050	0.050	09/19/2019	ND	1.84	91.9	2.00	1.76	
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.86	93.1	2.00	2.77	
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.70	95.1	6.00	2.71	
Total BTEX	<0.300	0.300	09/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	09/17/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	217	108	200	3.39	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	218	109	200	0.650	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 93.6 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/13/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: W 1 32.6124824-103.2729247 (H903176-02)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/19/2019	ND	2.08	104	2.00	2.41		
Toluene*	<0.050	0.050	09/19/2019	ND	1.84	91.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.86	93.1	2.00	2.77		
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.70	95.1	6.00	2.71		
Total BTEx	<0.300	0.300	09/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	09/17/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	217	108	200	3.39	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	218	109	200	0.650	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 92.0 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/13/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: W 2 32.6124668-103.2729945 (H903176-03)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/19/2019	ND	2.08	104	2.00	2.41		
Toluene*	<0.050	0.050	09/19/2019	ND	1.84	91.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.86	93.1	2.00	2.77		
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.70	95.1	6.00	2.71		
Total BTEx	<0.300	0.300	09/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.6 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/17/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	217	108	200	3.39	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	218	109	200	0.650	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 94.3 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/13/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: W 11 32.6125023-103.2728862 (H903176-04)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/19/2019	ND	2.08	104	2.00	2.41		
Toluene*	<0.050	0.050	09/19/2019	ND	1.84	91.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.86	93.1	2.00	2.77		
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.70	95.1	6.00	2.71		
Total BTEx	<0.300	0.300	09/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.6 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	09/17/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	217	108	200	3.39	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	218	109	200	0.650	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 81.3 % 41-142

Surrogate: 1-Chlorooctadecane 99.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/13/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 25 @ 12' 32.6125097-103.2729076 (H903176-05)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/19/2019	ND	2.08	104	2.00	2.41		
Toluene*	<0.050	0.050	09/19/2019	ND	1.84	91.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.86	93.1	2.00	2.77		
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.70	95.1	6.00	2.71		
Total BTEx	<0.300	0.300	09/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.8 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	09/17/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	217	108	200	3.39	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	218	109	200	0.650	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 96.0 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/13/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 26 @ 12' 32.6123182-103.2727883 (H903176-06)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/19/2019	ND	2.08	104	2.00	2.41		
Toluene*	<0.050	0.050	09/19/2019	ND	1.84	91.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.86	93.1	2.00	2.77		
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.70	95.1	6.00	2.71		
Total BTEx	<0.300	0.300	09/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.8 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	09/17/2019	ND	432	108	400	0.00	QR-03	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	195	97.7	200	0.849	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	189	94.3	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 83.8 % 41-142

Surrogate: 1-Chlorooctadecane 95.4 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/13/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 27 @ 12' 32.6124058-103.2728697 (H903176-07)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/19/2019	ND	2.08	104	2.00	2.41		
Toluene*	<0.050	0.050	09/19/2019	ND	1.84	91.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.86	93.1	2.00	2.77		
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.70	95.1	6.00	2.71		
Total BTEx	<0.300	0.300	09/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/17/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	195	97.7	200	0.849	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	189	94.3	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 88.9 % 41-142

Surrogate: 1-Chlorooctadecane 99.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/13/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: W 12 32.6125323-103.2728815 (H903176-08)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/19/2019	ND	2.08	104	2.00	2.41		
Toluene*	<0.050	0.050	09/19/2019	ND	1.84	91.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.86	93.1	2.00	2.77		
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.70	95.1	6.00	2.71		
Total BTEx	<0.300	0.300	09/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/17/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	195	97.7	200	0.849	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	189	94.3	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 87.2 % 41-142

Surrogate: 1-Chlorooctadecane 96.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/13/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 28 @ 12' 32.6123391-103.2728375 (H903176-09)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/19/2019	ND	2.08	104	2.00	2.41		
Toluene*	<0.050	0.050	09/19/2019	ND	1.84	91.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.86	93.1	2.00	2.77		
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.70	95.1	6.00	2.71		
Total BTEx	<0.300	0.300	09/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.6 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	09/17/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	195	97.7	200	0.849	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	189	94.3	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 84.8 % 41-142

Surrogate: 1-Chlorooctadecane 96.4 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/13/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 29 @ 12' 32.6122533-103.2727678 (H903176-10)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/19/2019	ND	2.08	104	2.00	2.41		
Toluene*	<0.050	0.050	09/19/2019	ND	1.84	91.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.86	93.1	2.00	2.77		
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.70	95.1	6.00	2.71		
Total BTEx	<0.300	0.300	09/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.0 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	09/17/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	195	97.7	200	0.849	
DRO >C10-C28*	12.0	10.0	09/17/2019	ND	189	94.3	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 83.9 % 41-142

Surrogate: 1-Chlorooctadecane 93.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

# BILL TO

ANALYSIS REQUEST

*Released to Imaging: 12/27/2023 11:44:16 AM*





## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

[illegible]

**PLEASE NOTE:** Liability and damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 9/10	Received By:		Phone Result:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:	
Relinquished By:	Time: 0800	JST Brown		Fax Result:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:	
Relinquished By:	Date: 9-16-19	Received By:		REMARKS:			
Relinquished By:	Time: 11:40	Jamara Stender					
Delivered By: (Circle One)	3.7c	#47	SAMPLE CONDITION	CHECKED BY:			
Sampler - UPS - Bus - Other:	Corrected 4.1c		Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	(Initials) TS.			
Email Results							





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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September 20, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/16/19 11:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/16/2019	Sampling Date:	09/14/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	NMGS AU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B 21 @ 12' 32.6121112-103.2729187 (H903177-01)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/19/2019	ND	2.08	104	2.00	2.41	
Toluene*	<0.050	0.050	09/19/2019	ND	1.84	91.9	2.00	1.76	
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.86	93.1	2.00	2.77	
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.70	95.1	6.00	2.71	
Total BTEX	<0.300	0.300	09/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	528	16.0	09/17/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	195	97.7	200	0.849	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	189	94.3	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 85.1 % 41-142

Surrogate: 1-Chlorooctadecane 97.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/14/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 22 @ 12' 32.6121214-103.2728724 (H903177-02)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/20/2019	ND	2.08	104	2.00	2.41		
Toluene*	<0.050	0.050	09/20/2019	ND	1.84	91.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.86	93.1	2.00	2.77		
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.70	95.1	6.00	2.71		
Total BTEx	<0.300	0.300	09/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.1 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	816	16.0	09/17/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	195	97.7	200	0.849	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	189	94.3	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 86.9 % 41-142

Surrogate: 1-Chlorooctadecane 98.2 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/14/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 23 @ 12' 32.6121264-103.2728416 (H903177-03)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/20/2019	ND	2.08	104	2.00	2.41		
Toluene*	<0.050	0.050	09/20/2019	ND	1.84	91.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.86	93.1	2.00	2.77		
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.70	95.1	6.00	2.71		
Total BTEx	<0.300	0.300	09/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.1 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	720	16.0	09/17/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2019	ND	195	97.7	200	0.849	
DRO >C10-C28*	<10.0	10.0	09/17/2019	ND	189	94.3	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	09/17/2019	ND					

Surrogate: 1-Chlorooctane 87.8 % 41-142

Surrogate: 1-Chlorooctadecane 99.2 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/14/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 30 @ 12' 32.6124509-103.2727966 (H903177-04)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/20/2019	ND	2.08	104	2.00	2.41		
Toluene*	<0.050	0.050	09/20/2019	ND	1.84	91.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.86	93.1	2.00	2.77		
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.70	95.1	6.00	2.71		
Total BTEx	<0.300	0.300	09/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	09/17/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	220	110	200	4.74	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	226	113	200	3.61	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 83.7 % 41-142

Surrogate: 1-Chlorooctadecane 88.9 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/14/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 31 @ 12' 32.6124594-103.2727497 (H903177-05)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/20/2019	ND	2.08	104	2.00	2.41		
Toluene*	<0.050	0.050	09/20/2019	ND	1.84	91.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.86	93.1	2.00	2.77		
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.70	95.1	6.00	2.71		
Total BTEx	<0.300	0.300	09/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	09/17/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	220	110	200	4.74	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	226	113	200	3.61	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 85.2 % 41-142

Surrogate: 1-Chlorooctadecane 90.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/14/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 32 @ 12' 32.6124605-103.2727383 (H903177-06)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/20/2019	ND	2.08	104	2.00	2.41		
Toluene*	<0.050	0.050	09/20/2019	ND	1.84	91.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.86	93.1	2.00	2.77		
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.70	95.1	6.00	2.71		
Total BTEx	<0.300	0.300	09/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.6 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	09/17/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	220	110	200	4.74	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	226	113	200	3.61	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 86.0 % 41-142

Surrogate: 1-Chlorooctadecane 91.4 % 37.6-147

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/14/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 33 @ 12' 32.6123673-103.2727364 (H903177-07)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/20/2019	ND	2.08	104	2.00	2.41		
Toluene*	<0.050	0.050	09/20/2019	ND	1.84	91.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.86	93.1	2.00	2.77		
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.70	95.1	6.00	2.71		
Total BTEx	<0.300	0.300	09/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	220	110	200	4.74	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	226	113	200	3.61	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 87.5 % 41-142

Surrogate: 1-Chlorooctadecane 91.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/14/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 34 @ 12' 32.6124354-103.2727041 (H903177-08)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/20/2019	ND	2.08	104	2.00	2.41		
Toluene*	<0.050	0.050	09/20/2019	ND	1.84	91.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.86	93.1	2.00	2.77		
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.70	95.1	6.00	2.71		
Total BTEx	<0.300	0.300	09/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.7 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	09/17/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	220	110	200	4.74	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	226	113	200	3.61	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 87.1 % 41-142

Surrogate: 1-Chlorooctadecane 92.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/14/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 35 @ 12' 32.6124687-103.2727859 (H903177-09)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/20/2019	ND	2.08	104	2.00	2.41		
Toluene*	<0.050	0.050	09/20/2019	ND	1.84	91.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.86	93.1	2.00	2.77		
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.70	95.1	6.00	2.71		
Total BTEx	<0.300	0.300	09/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.0 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	09/17/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	220	110	200	4.74	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	226	113	200	3.61	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 85.4 % 41-142

Surrogate: 1-Chlorooctadecane 91.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/14/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 36 @ 12' 32.6123770-103.2727806 (H903177-10)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/20/2019	ND	2.08	104	2.00	2.41		
Toluene*	<0.050	0.050	09/20/2019	ND	1.84	91.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.86	93.1	2.00	2.77		
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.70	95.1	6.00	2.71		
Total BTEx	<0.300	0.300	09/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.0 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	220	110	200	4.74	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	226	113	200	3.61	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 88.8 % 41-142

Surrogate: 1-Chlorooctadecane 93.8 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/16/2019  
 Reported: 09/20/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/14/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 37 @ 12' 32.6124351-103.2727172 (H903177-11)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/19/2019	ND	2.05	103	2.00	4.77		
Toluene*	<0.050	0.050	09/19/2019	ND	1.97	98.3	2.00	0.984		
Ethylbenzene*	<0.050	0.050	09/19/2019	ND	1.88	94.2	2.00	8.89	QR-03	
Total Xylenes*	<0.150	0.150	09/19/2019	ND	5.71	95.1	6.00	7.38	QR-03	
Total BTX	<0.300	0.300	09/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	09/17/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	220	110	200	4.74	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	226	113	200	3.61	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 86.2 % 41-142

Surrogate: 1-Chlorooctadecane 93.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

[illegible]



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

*Released to Imaging: 12/27/2023 11:44:16 AM*



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Released to Imaging: 12/27/2023 11:44:16 AM



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---

September 23, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/18/19 9:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is fluid and cursive, with the first name "Celey" being more prominent.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/18/2019	Sampling Date:	09/16/2019
Reported:	09/23/2019	Sampling Type:	Soil
Project Name:	NMGS AU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: B 38 @ 12' 32.6123281-103.2727551 (H903211-01)**

BTEX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/20/2019	ND	1.82	91.1	2.00	0.321		
Toluene*	<0.050	0.050	09/20/2019	ND	1.81	90.4	2.00	0.798		
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.76	88.0	2.00	1.50		
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.40	89.9	6.00	0.509		
Total BTEX	<0.300	0.300	09/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 86.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	09/19/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 93.8 % 41-142

Surrogate: 1-Chlorooctadecane 95.5 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/23/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/16/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 39 @ 12' 32.6122818-103.2727108 (H903211-02)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2019	ND	1.82	91.1	2.00	0.321	
Toluene*	<0.050	0.050	09/20/2019	ND	1.81	90.4	2.00	0.798	
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.76	88.0	2.00	1.50	
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.40	89.9	6.00	0.509	
Total BTX	<0.300	0.300	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 88.3 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/19/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 92.1 % 41-142

Surrogate: 1-Chlorooctadecane 96.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/23/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/16/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 40 @ 12' 32.6122623-103.2727718 (H903211-03)**

BTEX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/20/2019	ND	1.82	91.1	2.00	0.321		
Toluene*	<0.050	0.050	09/20/2019	ND	1.81	90.4	2.00	0.798		
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.76	88.0	2.00	1.50		
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.40	89.9	6.00	0.509		
Total BTEX	<0.300	0.300	09/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 88.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	09/19/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 93.9 % 41-142

Surrogate: 1-Chlorooctadecane 95.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/23/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/16/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 41 @ 12' 32.6122730-103.2727326 (H903211-04)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/20/2019	ND	1.82	91.1	2.00	0.321		
Toluene*	<0.050	0.050	09/20/2019	ND	1.81	90.4	2.00	0.798		
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.76	88.0	2.00	1.50		
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.40	89.9	6.00	0.509		
Total BTEx	<0.300	0.300	09/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 86.8 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	09/19/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 94.7 % 41-142

Surrogate: 1-Chlorooctadecane 96.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/23/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/16/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 42 @ 12' 32.6122386-103.2727745 (H903211-05)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2019	ND	1.82	91.1	2.00	0.321	
Toluene*	<0.050	0.050	09/20/2019	ND	1.81	90.4	2.00	0.798	
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.76	88.0	2.00	1.50	
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.40	89.9	6.00	0.509	
Total BTX	<0.300	0.300	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 87.4 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	09/19/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 94.5 % 41-142

Surrogate: 1-Chlorooctadecane 96.7 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/23/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/16/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 43 @ 12' 32.6122086-103.2727759 (H903211-06)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/20/2019	ND	1.82	91.1	2.00	0.321		
Toluene*	<0.050	0.050	09/20/2019	ND	1.81	90.4	2.00	0.798		
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.76	88.0	2.00	1.50		
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.40	89.9	6.00	0.509		
Total BTEx	<0.300	0.300	09/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 88.0 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/19/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 93.6 % 41-142

Surrogate: 1-Chlorooctadecane 95.0 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/23/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/16/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 44 @ 12' 32.6121575-103.2727095 (H903211-07)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/20/2019	ND	1.82	91.1	2.00	0.321		
Toluene*	<0.050	0.050	09/20/2019	ND	1.81	90.4	2.00	0.798		
Ethylbenzene*	<0.050	0.050	09/20/2019	ND	1.76	88.0	2.00	1.50		
Total Xylenes*	<0.150	0.150	09/20/2019	ND	5.40	89.9	6.00	0.509		
Total BTEx	<0.300	0.300	09/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 88.8 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	09/19/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 86.7 % 41-142

Surrogate: 1-Chlorooctadecane 88.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/23/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/16/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 45 @ 12' 32.6121858-103.2727806 (H903211-08)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/21/2019	ND	1.82	91.1	2.00	0.321		
Toluene*	<0.050	0.050	09/21/2019	ND	1.81	90.4	2.00	0.798		
Ethylbenzene*	<0.050	0.050	09/21/2019	ND	1.76	88.0	2.00	1.50		
Total Xylenes*	<0.150	0.150	09/21/2019	ND	5.40	89.9	6.00	0.509		
Total BTX	<0.300	0.300	09/21/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 88.6 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1170	16.0	09/19/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 93.5 % 41-142

Surrogate: 1-Chlorooctadecane 96.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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### 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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

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Celey D. Keene, Lab Director/Quality Manager

21 of 11 page



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Company Name: <i>HPG</i>		P.O. #:		BILL TO		ANALYSIS REQUEST																													
Project Manager: <i>Self Brown</i>		Company:																																	
Address:		Attn:																																	
City: <i>Hobbs</i>		Address:																																	
Phone #: <i>State NM</i>		City:																																	
Project #: <i>Zip: 88240</i>		State:																																	
Project Name:		Zip:																																	
Project Location: <i>NM 65444215</i>		Phone #:																																	
Sampler Name: <i>Soc Research</i>		Fax #:																																	
FOR LAB USE ONLY		PRESERV		SAMPLING																															
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME		C1		BTEX		EXT TPH	
<i>H903211</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>			
<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>			
<i>2</i>		<i>2</i>		<i>2</i>		<i>2</i>		<i>2</i>		<i>2</i>		<i>2</i>		<i>2</i>		<i>2</i>		<i>2</i>		<i>2</i>		<i>2</i>		<i>2</i>		<i>2</i>		<i>2</i>		<i>2</i>		<i>2</i>			
<i>3</i>		<i>3</i>		<i>3</i>		<i>3</i>		<i>3</i>		<i>3</i>		<i>3</i>		<i>3</i>		<i>3</i>		<i>3</i>		<i>3</i>		<i>3</i>		<i>3</i>		<i>3</i>		<i>3</i>		<i>3</i>		<i>3</i>			
<i>4</i>		<i>4</i>		<i>4</i>		<i>4</i>		<i>4</i>		<i>4</i>		<i>4</i>		<i>4</i>		<i>4</i>		<i>4</i>		<i>4</i>		<i>4</i>		<i>4</i>		<i>4</i>		<i>4</i>		<i>4</i>		<i>4</i>			
<i>5</i>		<i>5</i>		<i>5</i>		<i>5</i>		<i>5</i>		<i>5</i>		<i>5</i>		<i>5</i>		<i>5</i>		<i>5</i>		<i>5</i>		<i>5</i>		<i>5</i>		<i>5</i>		<i>5</i>		<i>5</i>		<i>5</i>			

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Relinquished By: <i>[Signature]</i>		Date: <i>2/18/15</i>		Received By: <i>[Signature]</i>		Date: <i>2/18/15</i>		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #:	
Delivered By: (Circle One) <i>UPS</i>		Time: <i>9:15</i>		Sample Condition: <input checked="" type="checkbox"/> Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		CHECKED BY: <i>[Signature]</i>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Fax #:	
Sampler - UPS - Bus - Other: <i>1.75 container 3.12</i>								REMARKS: <i>E-mail results 2/23/15</i>	



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

Released to Imaging: 12/27/2023 11:44:16 AM



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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September 24, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/18/19 9:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGSAU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/17/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 46 @ 12' 32.6120666-103.2729757 (H903212-01)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/21/2019	ND	1.82	91.1	2.00	0.321	
Toluene*	<0.050	0.050	09/21/2019	ND	1.81	90.4	2.00	0.798	
Ethylbenzene*	<0.050	0.050	09/21/2019	ND	1.76	88.0	2.00	1.50	
Total Xylenes*	<0.150	0.150	09/21/2019	ND	5.40	89.9	6.00	0.509	
Total BTEX	<0.300	0.300	09/21/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 89.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	09/19/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 95.3 % 41-142

Surrogate: 1-Chlorooctadecane 97.8 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/17/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 47 @ 12' 32.6120251-103.2729522 (H903212-02)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/21/2019	ND	1.82	91.1	2.00	0.321		
Toluene*	<0.050	0.050	09/21/2019	ND	1.81	90.4	2.00	0.798		
Ethylbenzene*	<0.050	0.050	09/21/2019	ND	1.76	88.0	2.00	1.50		
Total Xylenes*	<0.150	0.150	09/21/2019	ND	5.40	89.9	6.00	0.509		
Total BTEx	<0.300	0.300	09/21/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 87.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	336	16.0	09/19/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 97.2 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/17/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 48 @ 12' 32.6129886-103.2729559 (H903212-03)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/21/2019	ND	1.82	91.1	2.00	0.321		
Toluene*	<0.050	0.050	09/21/2019	ND	1.81	90.4	2.00	0.798		
Ethylbenzene*	<0.050	0.050	09/21/2019	ND	1.76	88.0	2.00	1.50		
Total Xylenes*	<0.150	0.150	09/21/2019	ND	5.40	89.9	6.00	0.509		
Total BTEx	<0.300	0.300	09/21/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 88.1 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	09/19/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	222	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	34.5	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 88.2 % 41-142

Surrogate: 1-Chlorooctadecane 94.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/17/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 49 32.6119759-103.2728892 (H903212-04)**

BTEX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/21/2019	ND	1.86	93.1	2.00	3.03		
Toluene*	<0.050	0.050	09/21/2019	ND	1.81	90.6	2.00	2.04		
Ethylbenzene*	<0.050	0.050	09/21/2019	ND	1.82	91.2	2.00	1.63		
Total Xylenes*	<0.150	0.150	09/21/2019	ND	5.42	90.3	6.00	0.00690		
Total BTEX	<0.300	0.300	09/21/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 87.1 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	09/19/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 91.1 % 41-142

Surrogate: 1-Chlorooctadecane 94.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/17/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 50 32.6119697-103.2728909 (H903212-05)**

BTEX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/21/2019	ND	1.86	93.1	2.00	3.03		
Toluene*	<0.050	0.050	09/21/2019	ND	1.81	90.6	2.00	2.04		
Ethylbenzene*	<0.050	0.050	09/21/2019	ND	1.82	91.2	2.00	1.63		
Total Xylenes*	<0.150	0.150	09/21/2019	ND	5.42	90.3	6.00	0.00690		
Total BTEX	<0.300	0.300	09/21/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 89.0 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	09/19/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 93.4 % 41-142

Surrogate: 1-Chlorooctadecane 95.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/17/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 51 @ 12' 32.6119770-103.2729381 (H903212-06)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/21/2019	ND	1.86	93.1	2.00	3.03		
Toluene*	<0.050	0.050	09/21/2019	ND	1.81	90.6	2.00	2.04		
Ethylbenzene*	<0.050	0.050	09/21/2019	ND	1.82	91.2	2.00	1.63		
Total Xylenes*	<0.150	0.150	09/21/2019	ND	5.42	90.3	6.00	0.00690		
Total BTX	<0.300	0.300	09/21/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 91.8 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/19/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	92.4	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 95.5 % 41-142

Surrogate: 1-Chlorooctadecane 98.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/17/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 52 @ 12' 32.6119550-103.2728067 (H903212-07)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/21/2019	ND	1.86	93.1	2.00	3.03		
Toluene*	<0.050	0.050	09/21/2019	ND	1.81	90.6	2.00	2.04		
Ethylbenzene*	<0.050	0.050	09/21/2019	ND	1.82	91.2	2.00	1.63		
Total Xylenes*	<0.150	0.150	09/21/2019	ND	5.42	90.3	6.00	0.00690		
Total BTX	<0.300	0.300	09/21/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 89.3 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	09/19/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 91.7 % 41-142

Surrogate: 1-Chlorooctadecane 91.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/17/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 53 @ 12' 32.6120324-103.2728724 (H903212-08)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/21/2019	ND	1.86	93.1	2.00	3.03		
Toluene*	<0.050	0.050	09/21/2019	ND	1.81	90.6	2.00	2.04		
Ethylbenzene*	<0.050	0.050	09/21/2019	ND	1.82	91.2	2.00	1.63		
Total Xylenes*	<0.150	0.150	09/21/2019	ND	5.42	90.3	6.00	0.00690		
Total BTEx	<0.300	0.300	09/21/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 87.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	09/19/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	19.7	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 91.5 % 41-142

Surrogate: 1-Chlorooctadecane 95.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/17/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 54 @ 12' 32.6120753-103.2728127 (H903212-09)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/21/2019	ND	1.86	93.1	2.00	3.03		
Toluene*	<0.050	0.050	09/21/2019	ND	1.81	90.6	2.00	2.04		
Ethylbenzene*	<0.050	0.050	09/21/2019	ND	1.82	91.2	2.00	1.63		
Total Xylenes*	<0.150	0.150	09/21/2019	ND	5.42	90.3	6.00	0.00690		
Total BTEx	<0.300	0.300	09/21/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 88.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	09/19/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	202	101	200	2.43	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	194	96.8	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 88.2 % 41-142

Surrogate: 1-Chlorooctadecane 94.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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### 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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A handwritten signature in black ink, appearing to read "C. D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager

**CARDINAL**  
Laboratories

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

*Released to Imaging: 12/27/2023 11:44:16 AM*





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(575) 393-2326 FAX (575) 393-2476

*Released to Imaging: 12/27/2023 11:44:16 AM*



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September 24, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/18/19 17:07.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager





PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/18/2019	Sampling Date:	09/18/2019
Reported:	09/24/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: B 55 @ 12' 32.6120731-103.2728734 (H903232-01)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.97	98.4	2.00	0.109	
Toluene*	<0.050	0.050	09/23/2019	ND	1.74	87.2	2.00	1.71	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.75	87.5	2.00	1.09	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.36	89.4	6.00	1.02	
Total BTEX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	09/20/2019	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	190	95.0	200	0.113	
DRO >C10-C28*	119	10.0	09/19/2019	ND	197	98.4	200	3.16	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 81.0 % 41-142

Surrogate: 1-Chlorooctadecane 86.1 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/18/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 56 @ 12' 32.6120793-103.2728684 (H903232-02)**

BTX 8021B		mg/kg	Analyzed By: CK					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.97	98.4	2.00	0.109	
Toluene*	<0.050	0.050	09/23/2019	ND	1.74	87.2	2.00	1.71	GC-NC
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.75	87.5	2.00	1.09	
<b>Total Xylenes*</b>	<b>0.221</b>	0.150	09/23/2019	ND	5.36	89.4	6.00	1.02	
<b>Total BTX</b>	<b>0.221</b>	0.100	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 137 % 73.3-129

Chloride, SM4500CI-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>864</b>	16.0	09/20/2019	ND	416	104	400	3.92	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>21.5</b>	10.0	09/20/2019	ND	190	95.0	200	0.113	
<b>DRO &gt;C10-C28*</b>	<b>395</b>	10.0	09/20/2019	ND	197	98.4	200	3.16	
<b>EXT DRO &gt;C28-C36</b>	<b>45.3</b>	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 87.6 % 41-142

Surrogate: 1-Chlorooctadecane 92.4 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/18/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 57 @ 12' 32.6121233-103.2729716 (H903232-03)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.97	98.4	2.00	0.109	
Toluene*	<0.050	0.050	09/23/2019	ND	1.74	87.2	2.00	1.71	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.75	87.5	2.00	1.09	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.36	89.4	6.00	1.02	
Total BTX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.4 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1120	16.0	09/20/2019	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	190	95.0	200	0.113	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	197	98.4	200	3.16	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 83.3 % 41-142

Surrogate: 1-Chlorooctadecane 88.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/18/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 58 @ 12' 32.6121260-103.2727816 (H903232-04)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.97	98.4	2.00	0.109	
Toluene*	<0.050	0.050	09/23/2019	ND	1.74	87.2	2.00	1.71	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.75	87.5	2.00	1.09	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.36	89.4	6.00	1.02	
Total BTX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	832	16.0	09/20/2019	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	207	104	200	2.29	
DRO >C10-C28*	11.9	10.0	09/19/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 93.1 % 41-142

Surrogate: 1-Chlorooctadecane 95.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/18/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 59 @ 12' 32.6121327-103.2727604 (H903232-05)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/23/2019	ND	1.97	98.4	2.00	0.109		
Toluene*	<0.050	0.050	09/23/2019	ND	1.74	87.2	2.00	1.71		
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.75	87.5	2.00	1.09		
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.36	89.4	6.00	1.02		
Total BTEx	<0.300	0.300	09/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1120	16.0	09/20/2019	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	207	104	200	2.29	
DRO >C10-C28*	37.8	10.0	09/19/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 93.2 % 41-142

Surrogate: 1-Chlorooctadecane 93.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/18/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 60 @ 12' 32.6121496-103.2727276 (H903232-06)**

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/23/2019	ND	1.97	98.4	2.00	0.109		
Toluene*	<0.050	0.050	09/23/2019	ND	1.74	87.2	2.00	1.71		
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.75	87.5	2.00	1.09		
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.36	89.4	6.00	1.02		
Total BTX	<0.300	0.300	09/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.5 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	09/20/2019	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	207	104	200	2.29	
DRO >C10-C28*	<10.0	10.0	09/19/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 88.0 % 41-142

Surrogate: 1-Chlorooctadecane 90.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/18/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 61 @ 12' 32.6119948-103.2728627 (H903232-07)**

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/23/2019	ND	1.97	98.4	2.00	0.109		
Toluene*	<0.050	0.050	09/23/2019	ND	1.74	87.2	2.00	1.71		
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.75	87.5	2.00	1.09		
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.36	89.4	6.00	1.02		
Total BTX	<0.300	0.300	09/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.0 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	09/20/2019	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/19/2019	ND	207	104	200	2.29	
DRO >C10-C28*	74.9	10.0	09/19/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	<10.0	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane 91.6 % 41-142

Surrogate: 1-Chlorooctadecane 97.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/18/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 62 @ 12' 32.6120276-103.2728493 (H903232-08)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/23/2019	ND	1.97	98.4	2.00	0.109		
Toluene*	<0.050	0.050	09/23/2019	ND	1.74	87.2	2.00	1.71		
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.75	87.5	2.00	1.09		
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.36	89.4	6.00	1.02		
Total BTEX	<0.300	0.300	09/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	928	16.0	09/20/2019	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	207	104	200	2.29	
DRO >C10-C28*	29.9	10.0	09/20/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 93.6 % 41-142

Surrogate: 1-Chlorooctadecane 94.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/18/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 63 @ 12' 32.6119728-103.2729059 (H903232-09)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/23/2019	ND	1.97	98.4	2.00	0.109		
Toluene*	<0.050	0.050	09/23/2019	ND	1.74	87.2	2.00	1.71		
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.75	87.5	2.00	1.09		
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.36	89.4	6.00	1.02		
Total BTEx	<0.300	0.300	09/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	816	16.0	09/20/2019	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	207	104	200	2.29	
DRO >C10-C28*	136	10.0	09/20/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	16.6	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 89.6 % 41-142

Surrogate: 1-Chlorooctadecane 94.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/18/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 64 @ 12' 32.6120652-103.2727886 (H903232-10)**

BTEX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/23/2019	ND	1.58	79.1	2.00	7.18		
Toluene*	<0.050	0.050	09/23/2019	ND	1.55	77.6	2.00	7.16		
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.56	77.9	2.00	6.01		
Total Xylenes*	<0.150	0.150	09/23/2019	ND	4.66	77.7	6.00	5.89		
Total BTEX	<0.300	0.300	09/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 91.8 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1060	16.0	09/20/2019	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	207	104	200	2.29	
DRO >C10-C28*	85.5	10.0	09/20/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	12.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 89.7 % 41-142

Surrogate: 1-Chlorooctadecane 94.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/18/2019  
 Reported: 09/24/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/18/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 65 @ 12' 32.6120756-103.2727755 (H903232-11)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/23/2019	ND	1.58	79.1	2.00	7.18		
Toluene*	<0.050	0.050	09/23/2019	ND	1.55	77.6	2.00	7.16		
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.56	77.9	2.00	6.01		
Total Xylenes*	<0.150	0.150	09/23/2019	ND	4.66	77.7	6.00	5.89		
Total BTEx	<0.300	0.300	09/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 89.6 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	976	16.0	09/20/2019	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	207	104	200	2.29	
DRO >C10-C28*	13.6	10.0	09/20/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 90.9 % 41-142

Surrogate: 1-Chlorooctadecane 95.5 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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---

### Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
GC-NC	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



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*Released to Imaging: 12/27/2023 11:44:16 AM*



91 jo 151 page



101 East Marland, Hobbs, NM 88240  
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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Apache</u>		P.O. #:		BILL TO				ANALYSIS REQUEST			
Project Manager: <u>Jeff Brown</u>		Company:									
Address:		Attn:									
City: <u>Hobbs</u>		Address:									
Phone #:		City:									
Project #:		State:									
Project Name:		Zip:									
Project Location: <u>DUGSSAN 8119</u>		Phone #:									
Sampler Name: <u>Joe Quasada Jr.</u>		Fax #:									
FOR LAB USE ONLY				PRESERV		SAMPLING					
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX			
								GROUNDWATER			
								WASTEWATER			
								SOIL			
								OIL			
								SLUDGE			
								OTHER:			
								ACID/BASE:			
								CE COOL			
								OTHER:			
								DATE		TIME	
<u>H903232</u>		<u>360 010' (012146)</u>		<u>C 1</u>		<u>1</u>		<u>9/18</u>		<u>13:10</u>	
<u>6</u>		<u>-103. 2727276</u>		<u>C 1</u>		<u>1</u>		<u>9/18</u>		<u>13:31</u>	
<u>7</u>		<u>B61 012 32. 6119948</u>		<u>C 1</u>		<u>1</u>		<u>9/18</u>		<u>14:26</u>	
<u>8</u>		<u>-103. 2728627</u>		<u>C 1</u>		<u>1</u>		<u>9/18</u>		<u>14:57</u>	
<u>9</u>		<u>B63 012 32. 6119728</u>		<u>C 1</u>		<u>1</u>		<u>9/18</u>		<u>16:00</u>	
<u>10</u>		<u>-103. 2729059</u>		<u>C 1</u>		<u>1</u>		<u>9/18</u>		<u>16:00</u>	
		<u>B64 012 32. 6120652</u>		<u>C 1</u>		<u>1</u>		<u>9/18</u>		<u>16:00</u>	
		<u>-103. 2727886</u>		<u>C 1</u>		<u>1</u>		<u>9/18</u>		<u>16:00</u>	

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Reinquisitioned By:	Date: <u>9/18/19</u>	Received By:	Verbal Results: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #:
Requisitioned By: <u>Jeff Brown</u>	Date: <u>9/18/19</u>	Received By: <u>Joe Quasada Jr.</u>	All Results are emailed. Please provide Email address: <u>Joe Quasada Jr.</u>
Delivered By: (Circle One)	Observed Temp. °C: <u>22.0</u>	Sample Condition	Turnaround Time:
<input checked="" type="radio"/> UPS - Bus - Other:	Corrected Temp. °C: <u>2.4</u>	<input checked="" type="checkbox"/> Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	Standard <input checked="" type="checkbox"/> <u>Rush</u>
FORM-006 R.3.0		<input type="checkbox"/> Bacteria (only) <input type="checkbox"/> Sample Condition	Thermometer ID #97
		<input type="checkbox"/> Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	Correction Factor + 0.4 °C
		<input type="checkbox"/> Observed Temp. °C	Corrected Temp. °C

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com





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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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September 24, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU #929

Enclosed are the results of analyses for samples received by the laboratory on 09/19/19 15:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is fluid and cursive, with the first name "Celey" and last name "Keene" clearly distinguishable.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/24/2019  
 Project Name: NEDU #929  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 09/19/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 3 @ 5' (H903247-01)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/24/2019	ND	1.58	79.1	2.00	7.18	
Toluene*	0.058	0.050	09/24/2019	ND	1.55	77.6	2.00	7.16	
Ethylbenzene*	<0.050	0.050	09/24/2019	ND	1.56	77.9	2.00	6.01	
Total Xylenes*	<0.150	0.150	09/24/2019	ND	4.66	77.7	6.00	5.89	
Total BTX	<0.300	0.300	09/24/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 90.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	30400	16.0	09/20/2019	ND	432	108	400	3.77	QM-07	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	12.3	10.0	09/20/2019	ND	205	103	200	0.584	
DRO >C10-C28*	515	10.0	09/20/2019	ND	205	103	200	2.08	
EXT DRO >C28-C36	88.8	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 121 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/24/2019  
 Project Name: NEDU #929  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 09/19/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 3 @ 10' (H903247-02)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/24/2019	ND	1.58	79.1	2.00	7.18		
Toluene*	<0.050	0.050	09/24/2019	ND	1.55	77.6	2.00	7.16		
Ethylbenzene*	<0.050	0.050	09/24/2019	ND	1.56	77.9	2.00	6.01		
Total Xylenes*	<0.150	0.150	09/24/2019	ND	4.66	77.7	6.00	5.89		
Total BTEX	<0.300	0.300	09/24/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 89.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	24800	16.0	09/20/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	205	103	200	0.584	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	205	103	200	2.08	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 93.9 % 41-142

Surrogate: 1-Chlorooctadecane 96.7 % 37.6-147

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\*=Accredited Analyte

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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/24/2019  
 Project Name: NEDU #929  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 09/19/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 3 @ 15' (H903247-03)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/24/2019	ND	1.58	79.1	2.00	7.18	
Toluene*	<0.050	0.050	09/24/2019	ND	1.55	77.6	2.00	7.16	
Ethylbenzene*	<0.050	0.050	09/24/2019	ND	1.56	77.9	2.00	6.01	
Total Xylenes*	<0.150	0.150	09/24/2019	ND	4.66	77.7	6.00	5.89	
Total BTX	<0.300	0.300	09/24/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 89.1 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	17200	16.0	09/20/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	205	103	200	0.584	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	205	103	200	2.08	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 94.8 % 41-142

Surrogate: 1-Chlorooctadecane 96.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/24/2019  
 Project Name: NEDU #929  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 09/19/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 3 @ 19' (H903247-04)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/24/2019	ND	1.58	79.1	2.00	7.18		
Toluene*	<0.050	0.050	09/24/2019	ND	1.55	77.6	2.00	7.16		
Ethylbenzene*	<0.050	0.050	09/24/2019	ND	1.56	77.9	2.00	6.01		
Total Xylenes*	<0.150	0.150	09/24/2019	ND	4.66	77.7	6.00	5.89		
Total BTEx	<0.300	0.300	09/24/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 87.6 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	24400	16.0	09/20/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	205	103	200	0.584	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	205	103	200	2.08	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 94.1 % 41-142

Surrogate: 1-Chlorooctadecane 97.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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---

### Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



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(575) 393-2326 FAX (575) 393-2476

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <b>Apac Corporation</b>				P.O. #:		<b>BILL TO</b> ANALYSIS REQUEST																																																																							
Project Manager: <b>Grace Baker</b>				Company:																																																																									
Address:				Attn:																																																																									
City:				State:		Zip:																																																																							
Phone #:				Fax #:		Address:																																																																							
Project #:				City:		State:		Zip:																																																																					
Project Name:				Phone #:																																																																									
Project Location: <b>Medu 989</b>				Fax #:																																																																									
Sampler Name: <b>Jeff Gruen</b>				PRESERV.		SAMPLING																																																																							
FOR LAB USE ONLY																																																																													
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PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.												Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No    Add'l Phone #:																																																																	
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Relinquished By: <b>Jeff Gruen</b> Date: <b>9/14/14</b> Time: <b>3:50</b>				Received By: <b>Samanta Chakraborty</b> Date: <b>9/14/14</b> Time: <b>3:50</b>		REMARKS:																																																																							
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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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September 24, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU #928

Enclosed are the results of analyses for samples received by the laboratory on 09/19/19 15:44.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/24/2019  
 Project Name: NEDU #928  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 09/18/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 2 @ 5' (H903248-01)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/24/2019	ND	1.58	79.1	2.00	7.18		
Toluene*	<0.050	0.050	09/24/2019	ND	1.55	77.6	2.00	7.16		
Ethylbenzene*	<0.050	0.050	09/24/2019	ND	1.56	77.9	2.00	6.01		
Total Xylenes*	<0.150	0.150	09/24/2019	ND	4.66	77.7	6.00	5.89		
Total BTEx	<0.300	0.300	09/24/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 88.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/20/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	205	103	200	0.584	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	205	103	200	2.08	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 95.6 % 41-142

Surrogate: 1-Chlorooctadecane 98.7 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/24/2019  
 Project Name: NEDU #928  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 09/18/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 2 @ 10' (H903248-02)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/24/2019	ND	1.58	79.1	2.00	7.18	
Toluene*	<0.050	0.050	09/24/2019	ND	1.55	77.6	2.00	7.16	
Ethylbenzene*	<0.050	0.050	09/24/2019	ND	1.56	77.9	2.00	6.01	
Total Xylenes*	<0.150	0.150	09/24/2019	ND	4.66	77.7	6.00	5.89	
Total BTX	<0.300	0.300	09/24/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 88.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4560	16.0	09/20/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	205	103	200	0.584	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	205	103	200	2.08	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 96.0 % 41-142

Surrogate: 1-Chlorooctadecane 100 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/24/2019  
 Project Name: NEDU #928  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 09/18/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 2 @ 15' (H903248-03)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/24/2019	ND	1.58	79.1	2.00	7.18		
Toluene*	<0.050	0.050	09/24/2019	ND	1.55	77.6	2.00	7.16		
Ethylbenzene*	<0.050	0.050	09/24/2019	ND	1.56	77.9	2.00	6.01		
Total Xylenes*	<0.150	0.150	09/24/2019	ND	4.66	77.7	6.00	5.89		
Total BTEx	<0.300	0.300	09/24/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 87.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	9330	16.0	09/20/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	205	103	200	0.584	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	205	103	200	2.08	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 98.6 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/24/2019  
 Project Name: NEDU #928  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 09/18/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP 2 @ 20' (H903248-04)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/24/2019	ND	1.58	79.1	2.00	7.18		
Toluene*	<0.050	0.050	09/24/2019	ND	1.55	77.6	2.00	7.16		
Ethylbenzene*	<0.050	0.050	09/24/2019	ND	1.56	77.9	2.00	6.01		
Total Xylenes*	<0.150	0.150	09/24/2019	ND	4.66	77.7	6.00	5.89		
Total BTEx	<0.300	0.300	09/24/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 87.5 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	8800	16.0	09/20/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	205	103	200	0.584	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	205	103	200	2.08	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 93.4 % 41-142

Surrogate: 1-Chlorooctadecane 97.1 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



---

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### Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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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\*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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September 25, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/19/19 17:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager





PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/25/2019  
 Project Name: NMGSAU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 66 @ 12' 32.6120883-103.2727075 (H903252-01)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.81	90.7	2.00	3.84	
Toluene*	<0.050	0.050	09/23/2019	ND	1.77	88.4	2.00	3.35	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.76	88.2	2.00	4.48	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.25	87.5	6.00	2.74	
Total BTX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 88.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1300	16.0	09/23/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	199	99.7	200	0.456	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	177	88.5	200	0.973	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 95.3 % 41-142

Surrogate: 1-Chlorooctadecane 94.2 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/25/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 67 @ 12' 32.6120324-103.2727400 (H903252-02)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/23/2019	ND	1.81	90.7	2.00	3.84		
Toluene*	<0.050	0.050	09/23/2019	ND	1.77	88.4	2.00	3.35		
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.76	88.2	2.00	4.48		
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.25	87.5	6.00	2.74		
Total BTX	<0.300	0.300	09/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 88.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	640	16.0	09/23/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	199	99.7	200	0.456	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	177	88.5	200	0.973	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 96.2 % 41-142

Surrogate: 1-Chlorooctadecane 96.8 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/25/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 68 @ 12' 32.6120239-103.2727504 (H903252-03)**

BTEX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/23/2019	ND	1.81	90.7	2.00	3.84		
Toluene*	<0.050	0.050	09/23/2019	ND	1.77	88.4	2.00	3.35		
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.76	88.2	2.00	4.48		
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.25	87.5	6.00	2.74		
Total BTEX	<0.300	0.300	09/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 88.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	496	16.0	09/23/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	199	99.7	200	0.456	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	177	88.5	200	0.973	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 90.7 % 41-142

Surrogate: 1-Chlorooctadecane 92.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/25/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 69 32.6120188-103.2727537 (H903252-04)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.81	90.7	2.00	3.84	
Toluene*	<0.050	0.050	09/23/2019	ND	1.77	88.4	2.00	3.35	
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.76	88.2	2.00	4.48	
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.25	87.5	6.00	2.74	
Total BTEX	<0.300	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 89.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	09/23/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	199	99.7	200	0.456	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	177	88.5	200	0.973	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 97.0 % 41-142

Surrogate: 1-Chlorooctadecane 96.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/25/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 70 32.6120217-103.2727578 (H903252-05)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/23/2019	ND	1.81	90.7	2.00	3.84		
Toluene*	<0.050	0.050	09/23/2019	ND	1.77	88.4	2.00	3.35		
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.76	88.2	2.00	4.48		
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.25	87.5	6.00	2.74		
Total BTEx	<0.300	0.300	09/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 86.8 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	09/23/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	199	99.7	200	0.456	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	177	88.5	200	0.973	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 94.1 % 41-142

Surrogate: 1-Chlorooctadecane 94.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/25/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 71 @ 12' 32.6120217-103.2727578 (H903252-06)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/23/2019	ND	1.81	90.7	2.00	3.84		
Toluene*	<0.050	0.050	09/23/2019	ND	1.77	88.4	2.00	3.35		
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.76	88.2	2.00	4.48		
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.25	87.5	6.00	2.74		
Total BTX	<0.300	0.300	09/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 90.1 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	464	16.0	09/23/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	199	99.7	200	0.456	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	177	88.5	200	0.973	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 94.1 % 41-142

Surrogate: 1-Chlorooctadecane 94.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/19/2019	Sampling Date:	09/19/2019
Reported:	09/25/2019	Sampling Type:	Soil
Project Name:	NMGS AU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: B 72 @ 12' 32.6119186-103.2727507 (H903252-07)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/23/2019	ND	1.81	90.7	2.00	3.84		
Toluene*	<0.050	0.050	09/23/2019	ND	1.77	88.4	2.00	3.35		
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.76	88.2	2.00	4.48		
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.25	87.5	6.00	2.74		
Total BTX	<0.300	0.300	09/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 87.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	496	16.0	09/23/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	199	99.7	200	0.456	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	177	88.5	200	0.973	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 93.6 % 41-142

Surrogate: 1-Chlorooctadecane 93.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/25/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 73 @ 12' 32.6119110-103.2727598 (H903252-08)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/23/2019	ND	1.81	90.7	2.00	3.84		
Toluene*	<0.050	0.050	09/23/2019	ND	1.77	88.4	2.00	3.35		
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.76	88.2	2.00	4.48		
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.25	87.5	6.00	2.74		
Total BTEx	<0.300	0.300	09/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 90.4 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/23/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	199	99.7	200	0.456	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	177	88.5	200	0.973	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 96.2 % 41-142

Surrogate: 1-Chlorooctadecane 98.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/25/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 74 @ 12' 32.6119056-103.2727762 (H903252-09)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/23/2019	ND	1.81	90.7	2.00	3.84		
Toluene*	<0.050	0.050	09/23/2019	ND	1.77	88.4	2.00	3.35		
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.76	88.2	2.00	4.48		
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.25	87.5	6.00	2.74		
Total BTEx	<0.300	0.300	09/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 88.1 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/23/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	199	99.7	200	0.456	
DRO >C10-C28*	14.1	10.0	09/20/2019	ND	177	88.5	200	0.973	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane 95.6 % 41-142

Surrogate: 1-Chlorooctadecane 95.8 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/25/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 75 @ 12' 32.6119189-103.2727712 (H903252-10)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/23/2019	ND	1.81	90.7	2.00	3.84		
Toluene*	<0.050	0.050	09/23/2019	ND	1.77	88.4	2.00	3.35		
Ethylbenzene*	<0.050	0.050	09/23/2019	ND	1.76	88.2	2.00	4.48		
Total Xylenes*	<0.150	0.150	09/23/2019	ND	5.25	87.5	6.00	2.74		
Total BTX	<0.300	0.300	09/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 90.0 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	09/23/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/23/2019	ND	201	100	200	7.30	
DRO >C10-C28*	<10.0	10.0	09/23/2019	ND	191	95.7	200	17.4	
EXT DRO >C28-C36	<10.0	10.0	09/23/2019	ND					

Surrogate: 1-Chlorooctane 91.4 % 41-142

Surrogate: 1-Chlorooctadecane 95.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/25/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 76 @ 12' 32.6119612-103.2727239 (H903252-11)**

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/24/2019	ND	1.78	88.8	2.00	0.673		
Toluene*	<0.050	0.050	09/24/2019	ND	1.54	77.1	2.00	0.403		
Ethylbenzene*	<0.050	0.050	09/24/2019	ND	1.54	77.1	2.00	0.245		
Total Xylenes*	<0.150	0.150	09/24/2019	ND	4.77	79.5	6.00	0.227		
Total BTX	<0.300	0.300	09/24/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	784	16.0	09/23/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/23/2019	ND	201	100	200	7.30	
DRO >C10-C28*	74.9	10.0	09/23/2019	ND	191	95.7	200	17.4	
EXT DRO >C28-C36	<10.0	10.0	09/23/2019	ND					

Surrogate: 1-Chlorooctane 88.0 % 41-142

Surrogate: 1-Chlorooctadecane 89.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/25/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 77 @ 12' 32.6119985-103.2727396 (H903252-12)**

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/24/2019	ND	1.78	88.8	2.00	0.673		
Toluene*	<0.050	0.050	09/24/2019	ND	1.54	77.1	2.00	0.403		
Ethylbenzene*	<0.050	0.050	09/24/2019	ND	1.54	77.1	2.00	0.245		
Total Xylenes*	<0.150	0.150	09/24/2019	ND	4.77	79.5	6.00	0.227		
Total BTX	<0.300	0.300	09/24/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.1 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1140	16.0	09/23/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/23/2019	ND	201	100	200	7.30	
DRO >C10-C28*	190	10.0	09/23/2019	ND	191	95.7	200	17.4	
EXT DRO >C28-C36	87.3	10.0	09/23/2019	ND					

Surrogate: 1-Chlorooctane 90.2 % 41-142

Surrogate: 1-Chlorooctadecane 98.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/19/2019  
 Reported: 09/25/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/19/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 78 @ 12' 32.6120200-103.2727286 (H903252-13)**

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/24/2019	ND	1.78	88.8	2.00	0.673		
Toluene*	<0.050	0.050	09/24/2019	ND	1.54	77.1	2.00	0.403		
Ethylbenzene*	<0.050	0.050	09/24/2019	ND	1.54	77.1	2.00	0.245		
Total Xylenes*	<0.150	0.150	09/24/2019	ND	4.77	79.5	6.00	0.227		
Total BTX	<0.300	0.300	09/24/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.0 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1090	16.0	09/23/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/23/2019	ND	201	100	200	7.30	
DRO >C10-C28*	<10.0	10.0	09/23/2019	ND	191	95.7	200	17.4	
EXT DRO >C28-C36	<10.0	10.0	09/23/2019	ND					

Surrogate: 1-Chlorooctane 91.3 % 41-142

Surrogate: 1-Chlorooctadecane 93.5 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



---

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### 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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Apache Corp.		P.O. #:		BILL TO		ANALYSIS REQUEST	
Project Manager: Jeffery Brown		Company:					
Address:		City:					
City: Hobbs		State: NM		Zip: 88240			
Phone #:		Fax #:		Address:			
Project #:		Project Owner:		City:			
Project Name:		State:		Zip:			
Project Location: NEUSTAN 2119		Phone #:					
Sampler Name: Jeff Brown		Fax #:					
FOR LAB USE ONLY							
Lab I.D.	Sample I.D.	(G)RAB OR (Q)OMP	# CONTAINERS	MATRIX	PRESERV.	SAMPLING	
				GROUNDWATER			
				WASTEWATER			
				SOIL			
				OIL			
				SLUDGE			
				OTHER:			
				ACID/BASE:			
				(C) COOL			
				OTHER:			
				DATE	TIME		
1	B. 10012. 32. 6120803			9/19	8:13		
	-103. 2727075						
2	B. 607 01232 6120524			9/19	11:30		
	-103. 2727400						
3	B. 608 012 32. 6120239			9/19	11:36		
	-103. 2727504						
4	B. 609 32. 6120188			9/19	11:42		
	-103. 2727537						
5	B. 700 32. 6120217			9/19	11:57		
	-103. 2727578						

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Relinquished By: Jeff Brown	Date: 9/19/19	Received By: Jeff Brown	Date: 9/19/19
Time: 11:05	Time: 11:05	Time: 11:05	Time: 11:05

Delivered By: (Circle One) ☒ Observed Temp. °C 0.6 ☐ Corrected Temp. °C 1.0

Sampler - UPS - Bus - Other: FORM-006 R.3.0

Sample Condition: ☒ Cool ☐ Intact ☐ Yes ☐ No

CHECKED BY: (Initials) T.E.

Turnaround Time: ☒ Standard ☐ Rush

Thermometer ID #97 Correction Factor +0.4 °C

Bacteria (only) Sample Condition: ☐ Cool ☐ Intact ☐ Yes ☐ No

Corrected Temp. °C

REMARKS: Email Results to Jeff Brown

Verbal Result: ☐ Yes ☐ No Add'l Phone #:

All Results are emailed. Please provide Email address:





101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Acme Corp</u>		P.O. #:		BILL TO				ANALYSIS REQUEST					
Project Manager: <u>Jeffrey Brown</u>		Company:											
Address:		Attn:											
City: <u>Hobbs</u>		State: <u>NM</u> Zip: <u>88240</u>											
Phone #: _____		Fax #: _____											
Project #:		City:											
Project Name:		State:											
Project Location: <u>Blk 5416 0119</u>		Phone #:											
Sample Name: <u>for Quasda, Jr.</u>		Fax #:											
FOR LAB USE ONLY													
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP		# CONTAINERS		MATRIX		PRESERV.		SAMPLING	
								GROUNDWATER					
								WASTEWATER					
								SOIL					
								OIL					
								SLUDGE					
								OTHER :					
								ACID/BASE:					
								ICE/ COOL					
								OTHER :					
								DATE		TIME			
<u>H03252</u>		<u>1571 012 32.6120217</u>		<u>1</u>		<u>1</u>		<u>9/19</u>		<u>12:03</u>		<u>1</u>	
		<u>-103.2727578</u>		<u>1</u>		<u>1</u>		<u>9/19</u>		<u>13:30</u>		<u>1</u>	
		<u>872.012' 32.6119186</u>		<u>1</u>		<u>1</u>		<u>9/19</u>		<u>13:36</u>		<u>1</u>	
		<u>-103.2727507</u>		<u>1</u>		<u>1</u>		<u>9/19</u>		<u>14:51</u>		<u>1</u>	
		<u>873.012' 32.6119110</u>		<u>1</u>		<u>1</u>		<u>9/19</u>		<u>14:57</u>		<u>1</u>	
		<u>-103.2727598</u>		<u>1</u>		<u>1</u>		<u>9/19</u>		<u>14:57</u>		<u>1</u>	
		<u>874.012' 32.6119056</u>		<u>1</u>		<u>1</u>		<u>9/19</u>		<u>14:57</u>		<u>1</u>	
		<u>-103.2727762</u>		<u>1</u>		<u>1</u>		<u>9/19</u>		<u>14:57</u>		<u>1</u>	
		<u>875.012' 32.6119189</u>		<u>1</u>		<u>1</u>		<u>9/19</u>		<u>14:57</u>		<u>1</u>	
		<u>-103.2727712</u>		<u>1</u>		<u>1</u>		<u>9/19</u>		<u>14:57</u>		<u>1</u>	

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Relinquished By: <u>Jeffrey Brown</u>	Date: <u>9/19/19</u>	Time: <u>17:05</u>	Received By: <u>Jamara Stalder</u>	Date: <u>9/19/19</u>	Time: <u>17:05</u>
Delivered By: (Circle One) Sampler - UPS - Bus - Other: <u>FORM-006 R 3.0</u>	Observed Temp. °C: <u>0.6</u>	Corrected Temp. °C: <u>1.0</u>	Sample Condition Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	CHECKED BY: (Initials) <u>JS</u>	Turnaround Time: _____
Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #:			All Results are emailed. Please provide Email address:		
REMARKS: <u>Email Results to Jeffrey Brown</u>			Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>		
			Bacteria (only) Sample Condition Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>		
			Corrected Temp. °C: _____		

† Cardinal cannot accept verbal changes. Please email changes to [celey.keene@cardinallabsnm.com](mailto:celey.keene@cardinallabsnm.com)





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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

September 27, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/24/19 7:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is fluid and cursive, with the first and last names being more prominent.

Celey D. Keene

Lab Director/Quality Manager





PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/24/2019	Sampling Date:	09/20/2019
Reported:	09/27/2019	Sampling Type:	Soil
Project Name:	NMGS AU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Mike Snyder
Project Location:	NOT GIVEN		

**Sample ID: B 79 @ 12' 32.6119567-103.2727105 (H903272-01)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83		
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956		
Total BTX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 83.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	688	16.0	09/25/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/24/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	12.0	10.0	09/24/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/24/2019	ND					

Surrogate: 1-Chlorooctane 82.9 % 41-142

Surrogate: 1-Chlorooctadecane 87.4 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/24/2019	Sampling Date:	09/20/2019
Reported:	09/27/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Mike Snyder
Project Location:	NOT GIVEN		

**Sample ID: B 80 @ 12' 32.6120273-103.2726743 (H903272-02)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83		
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956		
Total BTEX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 85.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	384	16.0	09/25/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/24/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/24/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/24/2019	ND					

Surrogate: 1-Chlorooctane 88.2 % 41-142

Surrogate: 1-Chlorooctadecane 90.8 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/27/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/20/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: B 81 32.6121375-103.2726961 (H903272-03)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83		
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956		
Total BTX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 84.3 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	09/25/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/24/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/24/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/24/2019	ND					

Surrogate: 1-Chlorooctane 89.8 % 41-142

Surrogate: 1-Chlorooctadecane 94.3 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/27/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/20/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: B 82 @ 12' 32.6120784-103.2726877 (H903272-04)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83		
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956		
Total BTX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 84.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	416	16.0	09/25/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/24/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/24/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/24/2019	ND					

Surrogate: 1-Chlorooctane 86.4 % 41-142

Surrogate: 1-Chlorooctadecane 89.2 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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### 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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

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Celey D. Keene, Lab Director/Quality Manager

7 of 2 page



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Apacive Corp</u>		P.O. #:		BILL TO																			
Project Manager: <u>Jeffrey Broom</u>		Company:		ANALYSIS REQUEST																			
Address:		Attn:																					
City: <u>Albuquerque</u>		Address:																					
Phone #:		City:																					
Project #:		State:																					
Project Name:		Zip:																					
Project Location: <u>Albuquerque 2114</u>		Phone #:																					
Sampler Name: <u>Joe Quindley</u>		Fax #:																					
FOR LAB USE ONLY																							
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX				PRESERV		SAMPLING													
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	(ICE)/COOL	OTHER:	DATE	TIME									
<u>H903210</u>	<u>BTH 012 32 011 95 107</u>	<u>0</u>	<u>1</u>										<u>9/20</u>	<u>2:30</u>	<u>1</u>	<u>Ext TPH</u>	<u>BTEY</u>						
<u>2</u>	<u>B80 012 32 012 02 75</u>	<u>0</u>	<u>1</u>										<u>9/20</u>	<u>13:50</u>	<u>1</u>								
<u>3</u>	<u>B51 32 012 13 75</u>	<u>0</u>	<u>1</u>										<u>9/20</u>	<u>13:50</u>	<u>1</u>								
<u>4</u>	<u>B82 012 32 012 07 84</u>	<u>0</u>	<u>1</u>										<u>9/20</u>	<u>13:54</u>	<u>1</u>								

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Relinquished By: <u>Joe Quindley</u>	Date: <u>9/24</u>	Received By: <u>Mike Broom</u>	Time: <u>7:30</u>
Relinquished By:	Date:	Received By:	Time:

Delivered By: (Circle One)	Observed Temp. °C	Corrected Temp. °C	Sample Condition	CHECKED BY: (Initials)	Turnaround Time:	Standard	Bacteria (only)	Sample Condition
Sampler - UPS - Bus - Other:								
FORM-006 R 3.0	<u>5.3</u>	<u>5.7</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush	<input type="checkbox"/> Yes <input type="checkbox"/> No	<u>5.3</u>
								<u>5.7</u>

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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September 30, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/24/19 7:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is fluid and cursive, with the first name "Celey" and last name "Keene" clearly distinguishable.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/24/2019	Sampling Date:	09/23/2019
Reported:	09/30/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Mike Snyder
Project Location:	NOT GIVEN		

**Sample ID: W 13 32.61248 - 103.2727665 (H903273-01)**

BTEX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83		
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956		
Total BTEX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 82.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/25/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/30/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/30/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/30/2019	ND					

Surrogate: 1-Chlorooctane 85.7 % 41-142

Surrogate: 1-Chlorooctadecane 93.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/23/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: W 14 32.6124795 - 103.2727571 (H903273-02)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83		
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956		
Total BTX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 82.5 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/25/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/30/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/30/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/30/2019	ND					

Surrogate: 1-Chlorooctane 86.9 % 41-142

Surrogate: 1-Chlorooctadecane 91.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/23/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: W 15 32.6124631 - 103.2727360 (H903273-03)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83		
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956		
Total BTX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 82.7 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	09/25/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/24/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/24/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/24/2019	ND					

Surrogate: 1-Chlorooctane 87.2 % 41-142

Surrogate: 1-Chlorooctadecane 91.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/23/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: W 16 32.6124199 - 103.2727075 (H903273-04)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83		
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956		
Total BTX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 81.4 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	09/25/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/24/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/24/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/24/2019	ND					

Surrogate: 1-Chlorooctane 84.6 % 41-142

Surrogate: 1-Chlorooctadecane 87.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/23/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: W 17 32.6123939 - 103.2726937 (H903273-05)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83		
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956		
Total BTX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 81.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	09/25/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/30/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/30/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/30/2019	ND					

Surrogate: 1-Chlorooctane 86.8 % 41-142

Surrogate: 1-Chlorooctadecane 90.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/23/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: W 18 32.6123357 - 103.2726951 (H903273-06)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83		
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956		
Total BTX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 80.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/25/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/24/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/24/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/24/2019	ND					

Surrogate: 1-Chlorooctane 84.6 % 41-142

Surrogate: 1-Chlorooctadecane 89.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/23/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: W 19 32.6123092 - 103.2726910 (H903273-07)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83		
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956		
Total BTX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 78.6 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/25/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/24/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/24/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/24/2019	ND					

Surrogate: 1-Chlorooctane 81.8 % 41-142

Surrogate: 1-Chlorooctadecane 85.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/23/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: W 20 32.6122682 - 103.2726873 (H903273-08)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83		
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956		
Total BTX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 78.4 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	09/25/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/24/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/24/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/24/2019	ND					

Surrogate: 1-Chlorooctane 83.6 % 41-142

Surrogate: 1-Chlorooctadecane 90.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/24/2019	Sampling Date:	09/23/2019
Reported:	09/30/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Mike Snyder
Project Location:	NOT GIVEN		

**Sample ID: W 21 32.6122346 - 103.2726930 (H903273-09)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83		
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956		
Total BTEx	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 81.8 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	09/25/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/24/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/24/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/24/2019	ND					

Surrogate: 1-Chlorooctane 84.5 % 41-142

Surrogate: 1-Chlorooctadecane 89.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/24/2019	Sampling Date:	09/23/2019
Reported:	09/30/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Mike Snyder
Project Location:	NOT GIVEN		

**Sample ID: W 22 32.6122019 - 103.2726934 (H903273-10)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83		
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956		
Total BTX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 80.0 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	09/25/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/24/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/24/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/24/2019	ND					

Surrogate: 1-Chlorooctane 85.9 % 41-142

Surrogate: 1-Chlorooctadecane 90.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/24/2019	Sampling Date:	09/23/2019
Reported:	09/30/2019	Sampling Type:	Soil
Project Name:	NMGS AU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Mike Snyder
Project Location:	NOT GIVEN		

**Sample ID: W 23 32.6120985 - 103.2726837 (H903273-11)**

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83		
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956		
Total BTEx	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 82.8 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	09/25/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/24/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/24/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/24/2019	ND					

Surrogate: 1-Chlorooctane 87.9 % 41-142

Surrogate: 1-Chlorooctadecane 91.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/24/2019	Sampling Date:	09/23/2019
Reported:	09/30/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Mike Snyder
Project Location:	NOT GIVEN		

**Sample ID: W 26 32.6120011 - 103.2726267 (H903273-14)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83		
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956		
Total BTX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 82.0 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	09/25/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/24/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/24/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/24/2019	ND					

Surrogate: 1-Chlorooctane 83.2 % 41-142

Surrogate: 1-Chlorooctadecane 85.2 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/23/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: W 27 32.6119516 - 103.2726119 (H903273-15)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83		
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956		
Total BTX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 79.4 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	09/25/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/25/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/25/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/25/2019	ND					

Surrogate: 1-Chlorooctane 83.7 % 41-142

Surrogate: 1-Chlorooctadecane 88.1 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGSAU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/23/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: W 28 32.6119220 - 103.272662 (H903273-16)**

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83	
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39	
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18	
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956	
Total BTX	<0.300	0.300	09/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 81.7 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	09/25/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/25/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/25/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/25/2019	ND					

Surrogate: 1-Chlorooctane 81.0 % 41-142

Surrogate: 1-Chlorooctadecane 85.3 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/23/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: W 29 32.6118895 - 103.2727079 (H903273-17)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83		
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956		
Total BTX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 81.7 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	09/25/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/25/2019	ND	204	102	200	1.35	
DRO >C10-C28*	<10.0	10.0	09/25/2019	ND	192	96.2	200	1.88	
EXT DRO >C28-C36	<10.0	10.0	09/25/2019	ND					

Surrogate: 1-Chlorooctane 87.9 % 41-142

Surrogate: 1-Chlorooctadecane 99.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/23/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: W 30 32.6118697 - 103.2727410 (H903273-18)**

BTX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/26/2019	ND	1.89	94.7	2.00	1.83		
Toluene*	<0.050	0.050	09/26/2019	ND	1.88	94.2	2.00	1.39		
Ethylbenzene*	<0.050	0.050	09/26/2019	ND	1.86	93.0	2.00	1.18		
Total Xylenes*	<0.150	0.150	09/26/2019	ND	5.52	92.1	6.00	0.956		
Total BTX	<0.300	0.300	09/26/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 80.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	09/25/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/25/2019	ND	204	102	200	1.35	
DRO >C10-C28*	<10.0	10.0	09/25/2019	ND	192	96.2	200	1.88	
EXT DRO >C28-C36	<10.0	10.0	09/25/2019	ND					

Surrogate: 1-Chlorooctane 81.6 % 41-142

Surrogate: 1-Chlorooctadecane 91.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/23/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: W 31 32.6118570 - 103.2727785 (H903273-19)**

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	2.14	107	2.00	0.302		
Toluene*	<0.050	0.050	09/25/2019	ND	1.90	94.9	2.00	1.27		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.91	95.6	2.00	0.902		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.80	96.7	6.00	0.683		
Total BTX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	09/25/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/25/2019	ND	204	102	200	1.35	
DRO >C10-C28*	<10.0	10.0	09/25/2019	ND	192	96.2	200	1.88	
EXT DRO >C28-C36	<10.0	10.0	09/25/2019	ND					

Surrogate: 1-Chlorooctane 80.1 % 41-142

Surrogate: 1-Chlorooctadecane 86.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/23/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: W 32 32.6118898 - 103.2728308 (H903273-20)**

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	2.14	107	2.00	0.302		
Toluene*	<0.050	0.050	09/25/2019	ND	1.90	94.9	2.00	1.27		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.91	95.6	2.00	0.902		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.80	96.7	6.00	0.683		
Total BTX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.5 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	09/25/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/25/2019	ND	204	102	200	1.35	
DRO >C10-C28*	<10.0	10.0	09/25/2019	ND	192	96.2	200	1.88	
EXT DRO >C28-C36	<10.0	10.0	09/25/2019	ND					

Surrogate: 1-Chlorooctane 89.1 % 41-142

Surrogate: 1-Chlorooctadecane 96.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/23/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: W 33 32.6118974 - 103.2728855 (H903273-21)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/25/2019	ND	2.14	107	2.00	0.302	
Toluene*	<0.050	0.050	09/25/2019	ND	1.90	94.9	2.00	1.27	
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.91	95.6	2.00	0.902	
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.80	96.7	6.00	0.683	
Total BTX	<0.300	0.300	09/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.1 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	09/25/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/25/2019	ND	204	102	200	1.35	
DRO >C10-C28*	<10.0	10.0	09/25/2019	ND	192	96.2	200	1.88	
EXT DRO >C28-C36	<10.0	10.0	09/25/2019	ND					

Surrogate: 1-Chlorooctane 85.4 % 41-142

Surrogate: 1-Chlorooctadecane 91.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/23/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: W 34 32.6119175 - 103.2729113 (H903273-22)**

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	2.14	107	2.00	0.302		
Toluene*	<0.050	0.050	09/25/2019	ND	1.90	94.9	2.00	1.27		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.91	95.6	2.00	0.902		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.80	96.7	6.00	0.683		
Total BTX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	09/25/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/25/2019	ND	204	102	200	1.35	
DRO >C10-C28*	<10.0	10.0	09/25/2019	ND	192	96.2	200	1.88	
EXT DRO >C28-C36	<10.0	10.0	09/25/2019	ND					

Surrogate: 1-Chlorooctane 92.1 % 41-142

Surrogate: 1-Chlorooctadecane 95.4 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/23/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: W 35 32.6119641 - 103.2729160 (H903273-23)**

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	2.14	107	2.00	0.302		
Toluene*	<0.050	0.050	09/25/2019	ND	1.90	94.9	2.00	1.27		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.91	95.6	2.00	0.902		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.80	96.7	6.00	0.683		
Total BTX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	09/25/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/25/2019	ND	204	102	200	1.35	
DRO >C10-C28*	<10.0	10.0	09/25/2019	ND	192	96.2	200	1.88	
EXT DRO >C28-C36	<10.0	10.0	09/25/2019	ND					

Surrogate: 1-Chlorooctane 91.1 % 41-142

Surrogate: 1-Chlorooctadecane 94.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/23/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: W 36 32.6120036 - 103.2729210 (H903273-24)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/25/2019	ND	2.14	107	2.00	0.302	
Toluene*	<0.050	0.050	09/25/2019	ND	1.90	94.9	2.00	1.27	
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.91	95.6	2.00	0.902	
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.80	96.7	6.00	0.683	
Total BTX	<0.300	0.300	09/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.5 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/25/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/25/2019	ND	204	102	200	1.35	
DRO >C10-C28*	<10.0	10.0	09/25/2019	ND	192	96.2	200	1.88	
EXT DRO >C28-C36	<10.0	10.0	09/25/2019	ND					

Surrogate: 1-Chlorooctane 88.2 % 41-142

Surrogate: 1-Chlorooctadecane 92.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/23/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: W 37 32.6120561 - 103.2729204 (H903273-25)**

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	2.14	107	2.00	0.302		
Toluene*	<0.050	0.050	09/25/2019	ND	1.90	94.9	2.00	1.27		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.91	95.6	2.00	0.902		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.80	96.7	6.00	0.683		
Total BTX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/25/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/25/2019	ND	204	102	200	1.35	
DRO >C10-C28*	<10.0	10.0	09/25/2019	ND	192	96.2	200	1.88	
EXT DRO >C28-C36	<10.0	10.0	09/25/2019	ND					

Surrogate: 1-Chlorooctane 94.5 % 41-142

Surrogate: 1-Chlorooctadecane 96.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/23/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: B 83 @ 12' 32.6120968-103.2726927 (H903273-27)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	2.14	107	2.00	0.302		
Toluene*	<0.050	0.050	09/25/2019	ND	1.90	94.9	2.00	1.27		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.91	95.6	2.00	0.902		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.80	96.7	6.00	0.683		
Total BTEx	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.3 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	09/25/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/25/2019	ND	204	102	200	1.35	
DRO >C10-C28*	<10.0	10.0	09/25/2019	ND	192	96.2	200	1.88	
EXT DRO >C28-C36	<10.0	10.0	09/25/2019	ND					

Surrogate: 1-Chlorooctane 94.2 % 41-142

Surrogate: 1-Chlorooctadecane 97.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/23/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: B 84 @ 12' 32.6120595-103.2726910 (H903273-28)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/25/2019	ND	2.14	107	2.00	0.302	
Toluene*	<0.050	0.050	09/25/2019	ND	1.90	94.9	2.00	1.27	
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.91	95.6	2.00	0.902	
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.80	96.7	6.00	0.683	
Total BTX	<0.300	0.300	09/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	09/25/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/25/2019	ND	204	102	200	1.35	
DRO >C10-C28*	<10.0	10.0	09/25/2019	ND	192	96.2	200	1.88	
EXT DRO >C28-C36	<10.0	10.0	09/25/2019	ND					

Surrogate: 1-Chlorooctane 96.1 % 41-142

Surrogate: 1-Chlorooctadecane 97.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/23/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Mike Snyder

**Sample ID: B 85 @ 12' 32.6120426-103.2726833 (H903273-29)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	2.14	107	2.00	0.302		
Toluene*	<0.050	0.050	09/25/2019	ND	1.90	94.9	2.00	1.27		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.91	95.6	2.00	0.902		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.80	96.7	6.00	0.683		
Total BTEX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	09/25/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/25/2019	ND	204	102	200	1.35	
DRO >C10-C28*	<10.0	10.0	09/25/2019	ND	192	96.2	200	1.88	
EXT DRO >C28-C36	<10.0	10.0	09/25/2019	ND					

Surrogate: 1-Chlorooctane 89.7 % 41-142

Surrogate: 1-Chlorooctadecane 91.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/24/2019	Sampling Date:	09/23/2019
Reported:	09/30/2019	Sampling Type:	Soil
Project Name:	NMGS AU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Mike Snyder
Project Location:	NOT GIVEN		

**Sample ID: B 86 @ 12' 32.6119847 - 103.2726350 (H903273-30)**

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/25/2019	ND	2.14	107	2.00	0.302		
Toluene*	<0.050	0.050	09/25/2019	ND	1.90	94.9	2.00	1.27		
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.91	95.6	2.00	0.902		
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.80	96.7	6.00	0.683		
Total BTX	<0.300	0.300	09/25/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.4 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	09/25/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/25/2019	ND	204	102	200	1.35	
DRO >C10-C28*	<10.0	10.0	09/25/2019	ND	192	96.2	200	1.88	
EXT DRO >C28-C36	<10.0	10.0	09/25/2019	ND					

Surrogate: 1-Chlorooctane 94.9 % 41-142

Surrogate: 1-Chlorooctadecane 96.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/24/2019	Sampling Date:	09/23/2019
Reported:	09/30/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Mike Snyder
Project Location:	NOT GIVEN		

**Sample ID: B 87 @ 12' 32.6119386 - 103.2726686 (H903273-31)**

BTEx 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/25/2019	ND	2.14	107	2.00	0.302	
Toluene*	<0.050	0.050	09/25/2019	ND	1.90	94.9	2.00	1.27	
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.91	95.6	2.00	0.902	
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.80	96.7	6.00	0.683	
Total BTEX	<0.300	0.300	09/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/25/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/25/2019	ND	204	102	200	1.35	
DRO >C10-C28*	41.5	10.0	09/25/2019	ND	192	96.2	200	1.88	
EXT DRO >C28-C36	<10.0	10.0	09/25/2019	ND					

Surrogate: 1-Chlorooctane 98.1 % 41-142

Surrogate: 1-Chlorooctadecane 98.1 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

### 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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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

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Celey D. Keene, Lab Director/Quality Manager



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101 East Marland, Hobbs, NM 88240  
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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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**101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476**

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

<b>Company Name:</b> Apache		<b>P.O. #:</b>	<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>	
<b>Project Manager:</b> Jeffery Brown		<b>Company:</b>				
<b>Address:</b>		<b>Attn:</b>				
<b>City:</b> Hobbs	<b>State:</b> NM	<b>Zip:</b> 88240				
<b>Phone #:</b>	<b>Fax #:</b>	<b>Address:</b>				
<b>Project #:</b>	<b>Project Owner:</b>	<b>City:</b>				
<b>Project Name:</b>	<b>State:</b>	<b>Zip:</b>				
<b>Project Location:</b> Mustang 2119		<b>Phone #:</b>				
<b>Sampler Name:</b> Joe Cusack Jr.		<b>Fax #:</b>				
FOR LAB USE ONLY						
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV.	SAMPLING
				GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER :	ACID/BASE: <input checked="" type="checkbox"/> COOL OTHER :	DATE      TIME
H903273	W18 32.619 3357 -103.8724951	C /	/	-		11:43 11:44
	W19 32.6123092 -103.8724910	C /	/	-		11:48
	W20 32.6122682 -103.8724973	C /	/	-		11:50
	W21 32.6122346 -103.8724930	C /	/	-		11:52
	W22 32.6122019 -103.8724934	C /	/	-		11:54
<p>PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the service. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.</p>						
<b>Relinquished By:</b> [Signature]		<b>Date:</b> 9/24	<b>Received By:</b> Mike Smith			
<b>Time:</b> 7:31		<b>Date:</b>	<b>Received By:</b>			
<b>Delivered By:</b> (Circle One)		<b>Observed Temp. °C</b> 5.3	<b>Corrected Temp. °C</b> 5.7	<b>Sample Condition</b> <input checked="" type="checkbox"/> Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>CHECKED BY:</b> (Initials)	<b>Turnaround Time:</b> Standard Rush
<b>Sampler - UPS - Bus - Other:</b> FORM-006 R 3.0				<b>Bacteria (only)</b> <input type="checkbox"/> Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>Sample Condition</b> <input checked="" type="checkbox"/> Observed Temp. °C 5.8 <input type="checkbox"/> Corrected Temp. °C 6.2	
<b>REMARKS:</b>						
<b>Verbal Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Phone #:</b>						
<b>All Results are emailed. Please provide Email address:</b>						



26 JO 33 ead



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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

③

Company Name: <u>Apache</u>		P.O. #:		BILL TO		ANALYSIS REQUEST					
Project Manager: <u>Jeffrey Brown</u>		Company:									
Address:		Attn:									
City: <u>Hobbs</u>		State: <u>NM</u>		Zip: <u>88240</u>							
Phone #:		Address:									
Project #:		City:		State:		Zip:					
Project Name:		Phone #:									
Project Location: <u>Wichita Blg</u>		Fax #:									
Sampler Name: <u>Don Quisenberry Jr.</u>											
FOR LAB USE ONLY											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP		# CONTAINERS		MATRIX		PRESERV		SAMPLING	
						GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER :		ACID/BASE: ICE / COOL OTHER :		DATE	
<u>H903273</u>	<u>W23 32.61A0985</u>	<u>C1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>-103.2726837</u>	<u>C1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>12 W24 32.61A0421</u>	<u>C1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>-103.2726445</u>	<u>C1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>13 W25 32.61A0522</u>	<u>C1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>-103.2726072</u>	<u>C1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>14 W26 32.61A0011</u>	<u>C1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>-103.2726267</u>	<u>C1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>15 W27 32.61A0516</u>	<u>C1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>-103.2726119</u>	<u>C1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>

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Requisitioned By: <u>Don Quisenberry Jr.</u>	Date: <u>9/24</u>	Received By: <u>MLH</u>	Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #:
Relinquished By: <u>Don Quisenberry Jr.</u>	Date: <u>7:31</u>	Received By: <u>MLH</u>	All Results are emailed. Please provide Email address:
Delivered By: (Circle One) Sampler - UPS - Bus - Other: <u>FORM-006 R 3.0</u>	Observed Temp. °C: <u>5.3</u> Corrected Temp. °C: <u>5.7</u>	Sample Condition Cool <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	CHECKED BY: (Initials) Turnaround Time: <u>15:28</u> Thermometer ID #97 Correction Factor +0.4 °C
REMARKS:		Standard <input checked="" type="checkbox"/> Bacteria (only) <input type="checkbox"/> Cool <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
		Sample Condition Observed Temp. °C: <u>5.8</u> Corrected Temp. °C: <u>5.7</u>	

† Cardinal cannot accept verbal changes. Please email changes to caley.keene@cardinallabsnm.com



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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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101 East Marland, Hobbs, NM 88240  
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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

<b>Company Name:</b> Aquatic				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>														
<b>Project Manager:</b> Jeffery Brown				<b>P.O. #:</b>																		
<b>Address:</b>				<b>Company:</b>																		
<b>City:</b> Hobbs				<b>Attn:</b>																		
<b>State:</b> NM				<b>Address:</b>																		
<b>Phone #:</b>				<b>City:</b>																		
<b>Project #:</b>				<b>State:</b>																		
<b>Project Owner:</b>				<b>Zip:</b>																		
<b>Project Location:</b> Westview 211A				<b>Phone #:</b>																		
<b>Sample Name:</b> Joe Cline's hole				<b>Fax #:</b>																		
<b>FOR LAB USE ONLY</b>																						
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX					PRESERV	SAMPLING												
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE: ICE / COOL	OTHER :	DATE	TIME									
H903273	W33. 82.6118474 -103. -82.8855	C	1	/						1		9/23	15:40	C	EXT TPH	BTEX						
21	W34. 82.6119175 -103. -82.8855	C	1	/						1		9/23	15:42	-	-	-						
23	W35. 82.6119175 -103. -82.8855	C	1	/						1		9/23	15:44	-	-	-						
24	W36. 82.6119175 -103. -82.8855	C	1	/						1		9/23	15:46	-	-	-						
25	W37. 82.6119175 -103. -82.8855	C	1	/						1		9/23	15:48	-	-	-						

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<b>Relinquished By:</b> [Signature]		<b>Date:</b> 9/24	<b>Received By:</b> [Signature]
<b>Reinforced By:</b> [Signature]		<b>Date:</b> 7/13	<b>Received By:</b> [Signature]
<b>Time:</b>		<b>Time:</b>	
<b>Remarks:</b>		<b>Remarks:</b>	

<b>Delivered By:</b> (Circle One)	<b>Observed Temp. °C</b>	<b>Corrected Temp. °C</b>	<b>Sample Condition</b>	<b>CHECKED BY:</b> (Initials)	<b>Turnaround Time:</b>	<b>Standard</b>	<b>Add'l Phone #:</b>
Sampler - UPS - Bus - Other:	5.3	5.7	Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	[Signature]	Thermometer ID #97	Rush	
FORM-006 R 3.0					Correction Factor + 0.4 °C		



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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <b>Apex</b>		<b>BILL TO</b>		ANALYSIS REQUEST	
Project Manager: <b>Jeffrey Brown</b>		P.O. #:			
Address:		Company:			
City: <b>10000</b>		Attn:			
State: <b>VA</b>		Address:			
Zip: <b>20040</b>		City:			
Phone #:		State:			
Fax #:		Zip:			
Project #:		Phone #:			
Project Owner:		Fax #:			
Project Location: <b>Wesley Allen</b>		PRESERV.		SAMPLING	
Sampler Name: <b>Joe Russell Jr.</b>		DATE		TIME	
FOR LAB USE ONLY		C/EXT/TRY		BTEX	
Lab I.D.		Sample I.D.			
H903273		103.2721041		9/23/15 50	
26		103.2721041		9/23/16 10	
27		103.2721041		9/23/16 10	
28		103.2721041		9/23/16 10	
29		103.2721041		9/23/16 10	
30		103.2721041		9/23/16 10	
31		103.2721041		9/23/16 10	
32		103.2721041		9/23/16 10	
33		103.2721041		9/23/16 10	
34		103.2721041		9/23/16 10	
35		103.2721041		9/23/16 10	
36		103.2721041		9/23/16 10	
37		103.2721041		9/23/16 10	
38		103.2721041		9/23/16 10	
39		103.2721041		9/23/16 10	
40		103.2721041		9/23/16 10	
41		103.2721041		9/23/16 10	
42		103.2721041		9/23/16 10	
43		103.2721041		9/23/16 10	
44		103.2721041		9/23/16 10	
45		103.2721041		9/23/16 10	
46		103.2721041		9/23/16 10	
47		103.2721041		9/23/16 10	
48		103.2721041		9/23/16 10	
49		103.2721041		9/23/16 10	
50		103.2721041		9/23/16 10	
51		103.2721041		9/23/16 10	
52		103.2721041		9/23/16 10	
53		103.2721041		9/23/16 10	
54		103.2721041		9/23/16 10	
55		103.2721041		9/23/16 10	
56		103.2721041		9/23/16 10	
57		103.2721041		9/23/16 10	
58		103.2721041		9/23/16 10	
59		103.2721041		9/23/16 10	
60		103.2721041		9/23/16 10	
61		103.2721041		9/23/16 10	
62		103.2721041		9/23/16 10	
63		103.2721041		9/23/16 10	
64		103.2721041		9/23/16 10	
65		103.2721041		9/23/16 10	
66		103.2721041		9/23/16 10	
67		103.2721041		9/23/16 10	
68		103.2721041		9/23/16 10	
69		103.2721041		9/23/16 10	
70		103.2721041		9/23/16 10	
71		103.2721041		9/23/16 10	
72		103.2721041		9/23/16 10	
73		103.2721041		9/23/16 10	
74		103.2721041		9/23/16 10	
75		103.2721041		9/23/16 10	
76		103.2721041		9/23/16 10	
77		103.2721041		9/23/16 10	
78		103.2721041		9/23/16 10	
79		103.2721041		9/23/16 10	
80		103.2721041		9/23/16 10	
81		103.2721041		9/23/16 10	
82		103.2721041		9/23/16 10	
83		103.2721041		9/23/16 10	
84		103.2721041		9/23/16 10	
85		103.2721041		9/23/16 10	
86		103.2721041		9/23/16 10	
87		103.2721041		9/23/16 10	
88		103.2721041		9/23/16 10	
89		103.2721041		9/23/16 10	
90		103.2721041		9/23/16 10	
91		103.2721041		9/23/16 10	
92		103.2721041		9/23/16 10	
93		103.2721041		9/23/16 10	
94		103.2721041</			





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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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September 30, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NMGSAU #2119

Enclosed are the results of analyses for samples received by the laboratory on 09/24/19 16:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	09/24/2019	Sampling Date:	09/24/2019
Reported:	09/30/2019	Sampling Type:	Soil
Project Name:	NMGS AU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: W 24 32.6120392 - 103.2726575 (H903288-01)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/26/2019	ND	1.96	98.0	2.00	4.45	
Toluene*	<0.050	0.050	09/26/2019	ND	1.73	86.7	2.00	3.99	
Ethylbenzene*	<0.050	0.050	09/26/2019	ND	1.73	86.5	2.00	3.91	
Total Xylenes*	<0.150	0.150	09/26/2019	ND	5.31	88.4	6.00	3.67	
Total BTEX	<0.300	0.300	09/26/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	352	16.0	09/26/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/25/2019	ND	192	95.8	200	1.40	
DRO >C10-C28*	<10.0	10.0	09/25/2019	ND	188	94.0	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	09/25/2019	ND					

Surrogate: 1-Chlorooctane 91.7 % 41-142

Surrogate: 1-Chlorooctadecane 99.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGSAU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/24/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: W 38 32.6121266 - 103.2729116 (H903288-02)**

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/26/2019	ND	1.96	98.0	2.00	4.45		
Toluene*	<0.050	0.050	09/26/2019	ND	1.73	86.7	2.00	3.99		
Ethylbenzene*	<0.050	0.050	09/26/2019	ND	1.73	86.5	2.00	3.91		
Total Xylenes*	<0.150	0.150	09/26/2019	ND	5.31	88.4	6.00	3.67		
Total BTX	<0.300	0.300	09/26/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.6 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	09/26/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/25/2019	ND	192	95.8	200	1.40	
DRO >C10-C28*	<10.0	10.0	09/25/2019	ND	188	94.0	200	2.83	
EXT DRO >C28-C36	10.1	10.0	09/25/2019	ND					

Surrogate: 1-Chlorooctane 96.3 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

APACHE CORP - HOBBS  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received: 09/24/2019  
 Reported: 09/30/2019  
 Project Name: NMGS AU #2119  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 09/24/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: W 25 32.6120527 - 103.2726072 (H903288-03)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/26/2019	ND	1.96	98.0	2.00	4.45	
Toluene*	<0.050	0.050	09/26/2019	ND	1.73	86.7	2.00	3.99	
Ethylbenzene*	<0.050	0.050	09/26/2019	ND	1.73	86.5	2.00	3.91	
Total Xylenes*	<0.150	0.150	09/26/2019	ND	5.31	88.4	6.00	3.67	
Total BTX	<0.300	0.300	09/26/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.3 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	09/26/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/25/2019	ND	192	95.8	200	1.40	
DRO >C10-C28*	<10.0	10.0	09/25/2019	ND	188	94.0	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	09/25/2019	ND					

Surrogate: 1-Chlorooctane 90.7 % 41-142

Surrogate: 1-Chlorooctadecane 98.0 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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### 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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

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Celey D. Keene, Lab Director/Quality Manager





**Appendix A**  
**Laboratory Reports**



















**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico  
Energy, Minerals and Natural Resources  
Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505

CONDITIONS  
  
Action 17339

CONDITIONS

Operator: APACHE CORPORATION 303 Veterans Airpark Ln Midland, TX 79705	OGRID: 873
	Action Number: 17339
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	None	12/27/2023