

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?	_ 21 _ (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 not 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

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

- 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

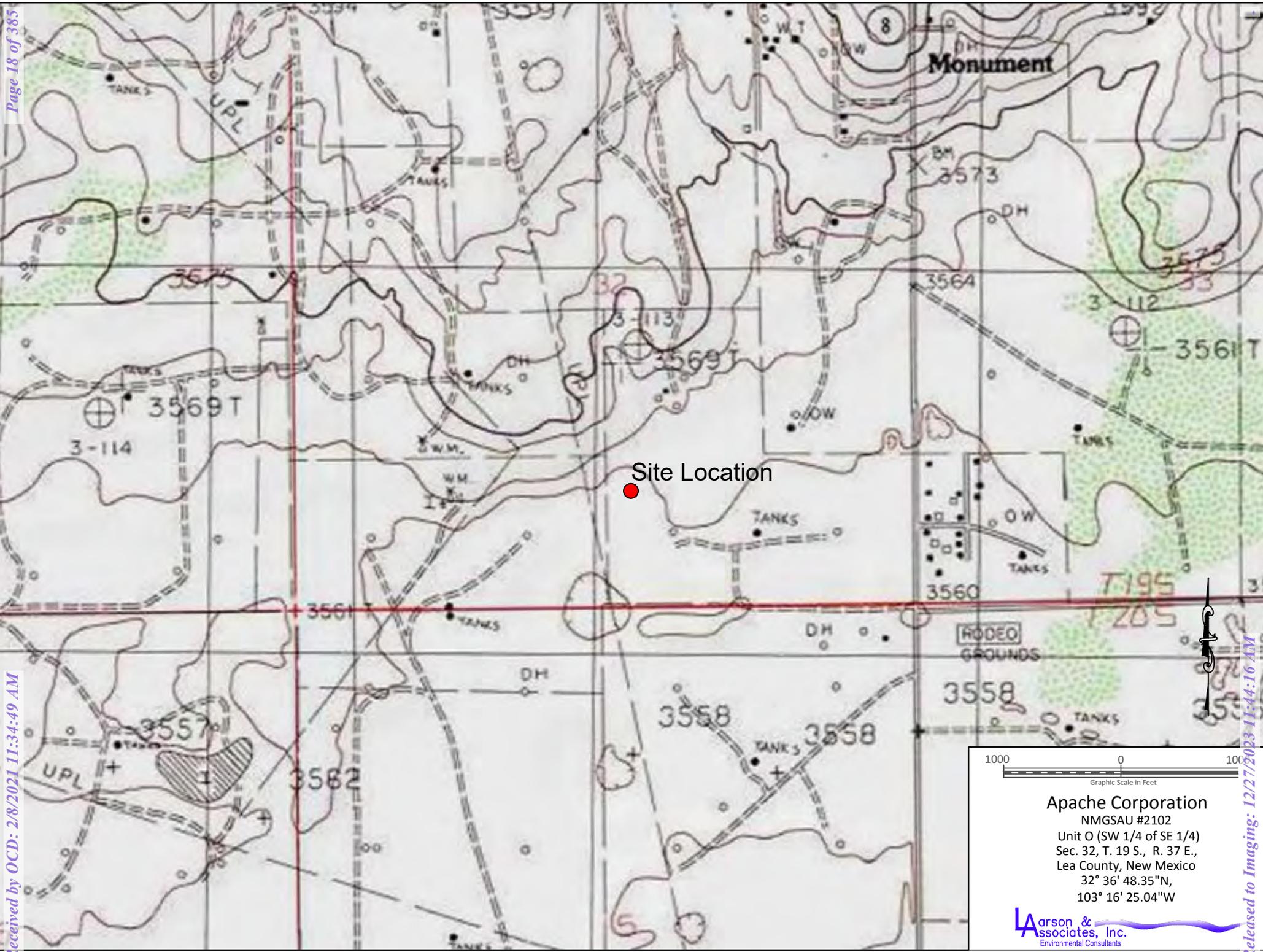
Map ID	Sample ID	Depth	Chloride	Benzene	Toulene	Ethybenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO	GPS Coordinates
B1	B1	12'	176	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B2	B2	12'	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	On Lab Results
B3	B3	12'	48	<0.050	<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

FIELD SAMPLING SHOWN IN RED WITH CHLORIDE FINDINGS ONLY

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

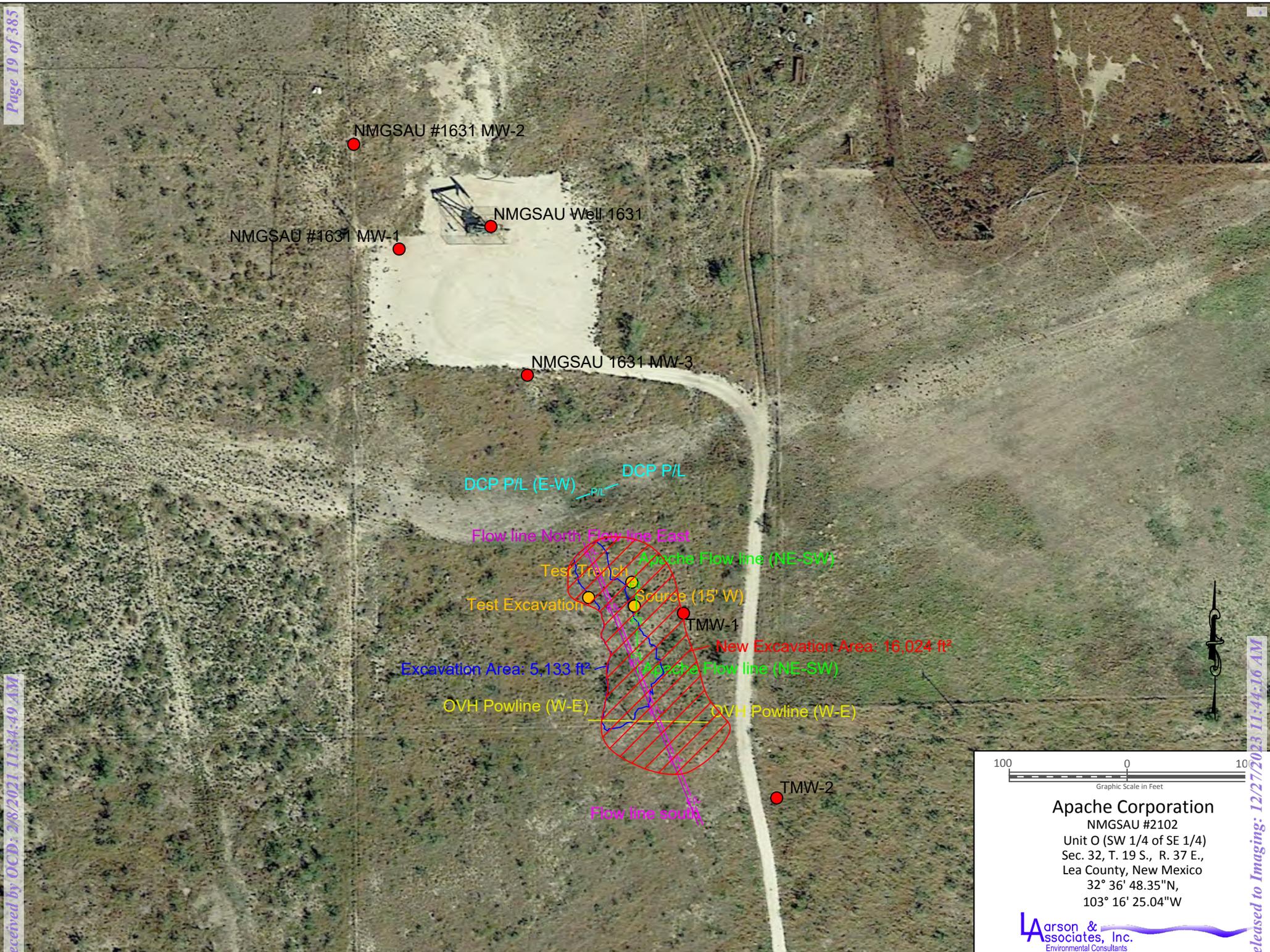


1000 0 1000
Graphic Scale in Feet

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

Larson & Associates, Inc.
 Environmental Consultants

Figure 1 - Topographic Map



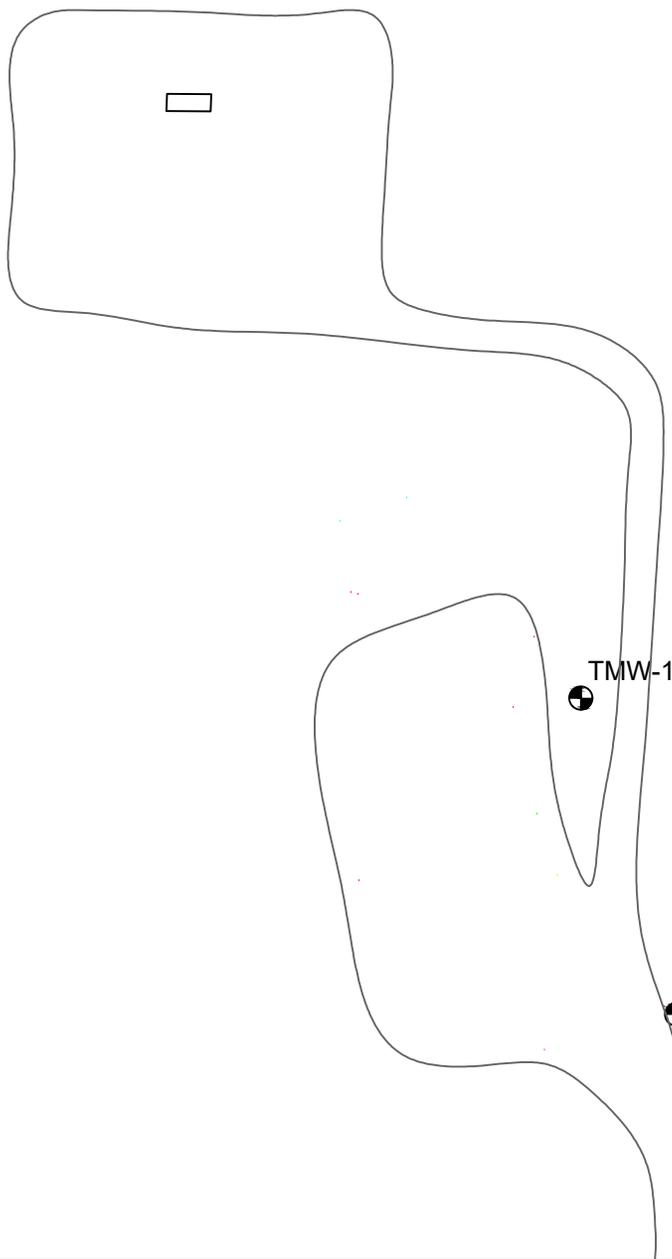
100 0 100
Graphic Scale in Feet

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

Larson &
 Associates, Inc.
 Environmental Consultants

Figure 2 - Aerial Map

NMGSAU #1631 MW-2



TMW-1



TMW-2



100 0 100
Graphic Scale in Feet

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

Larson &
Associates, Inc.
Environmental Consultants



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) Unknown	Volume Recovered (bbls) 2.5 barrels
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) Unknown	Volume Recovered (bbls) 2.5 barrels
	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.**

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? Release is greater than 25 barrels
---	---

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
 Via email on 8/16/2019 given to NMOCD Rep. Dylan Rose-Coss by Jeff Broom, Environmental Tech, Apache Corporation

Initial Response

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

- The source of the release has been stopped.
- The impacted area has been secured to protect human health and the environment.
- Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not 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: Bruce Baker Title: Environmental Tech. SR.
 Signature: *Bruce Baker* Date: 8/29/19
 email: larry.baker@apachecorp.com Telephone: 432-631-6982

OCD Only
 Received by: Ramona Marcus Date: 09/20/2019

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:			REMARKS
					NUMBER	RECOVERY	DEPTH	
	0	Sand, 7.5YR, 6/5 to 6/4, Well Sorted, Very Fine Grained Quartz Sand, Light Brown	ML					BACKGROUND PID READING 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			7.83			
	15	7.5YR, 8/6, Reddish Yellow, Moderately Sorted with Subangular 2-6mm Clast Inclusions	ML		9.83		Graded Silica Sand	
	20							
	25						2" Sch. 40 PVC Threaded 0.0.0" Slotted Screw	
	30	TD: 30'			29.49 29.82 30.00		Cap	

- 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

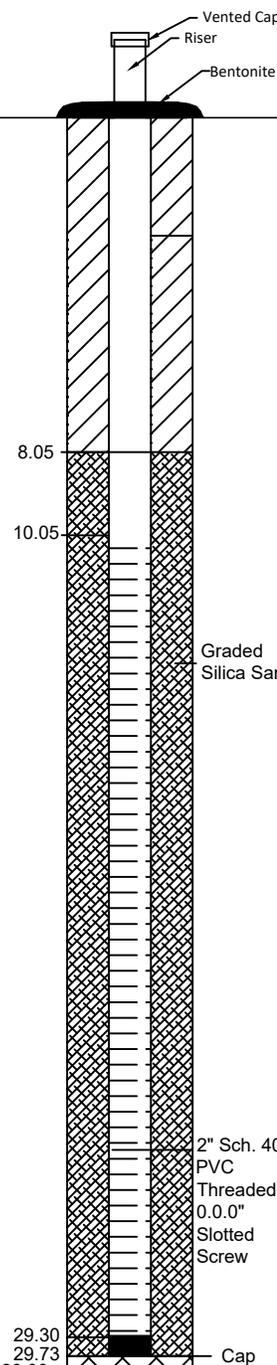


DRILL DATE : 03-11-2020

BORING NUMBER : TMW-1

BORING RECORD

GEOLOGIC UNIT	DEPTH	DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	Surface Elevation: TOC Elevation:			REMARKS
					NUMBER	RECOVERY	DEPTH	
	0	Sand, 7.5YR, 6/5 to 6/4, Well Sorted, Very Fine Quartz Grained Sand, Light Brown	ML					BACKGROUND PID READING 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			8.05			
	15	7.5YR, 8/6, Reddish Yellow, Moderately Sorted with Subangular 2-6mm Clast Inclusions	ML		10.05			
	20							
	25							
	30							
		TD: 30'			29.30			
					29.73			
					30.00			



- 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)
- NR NO RECOVERY

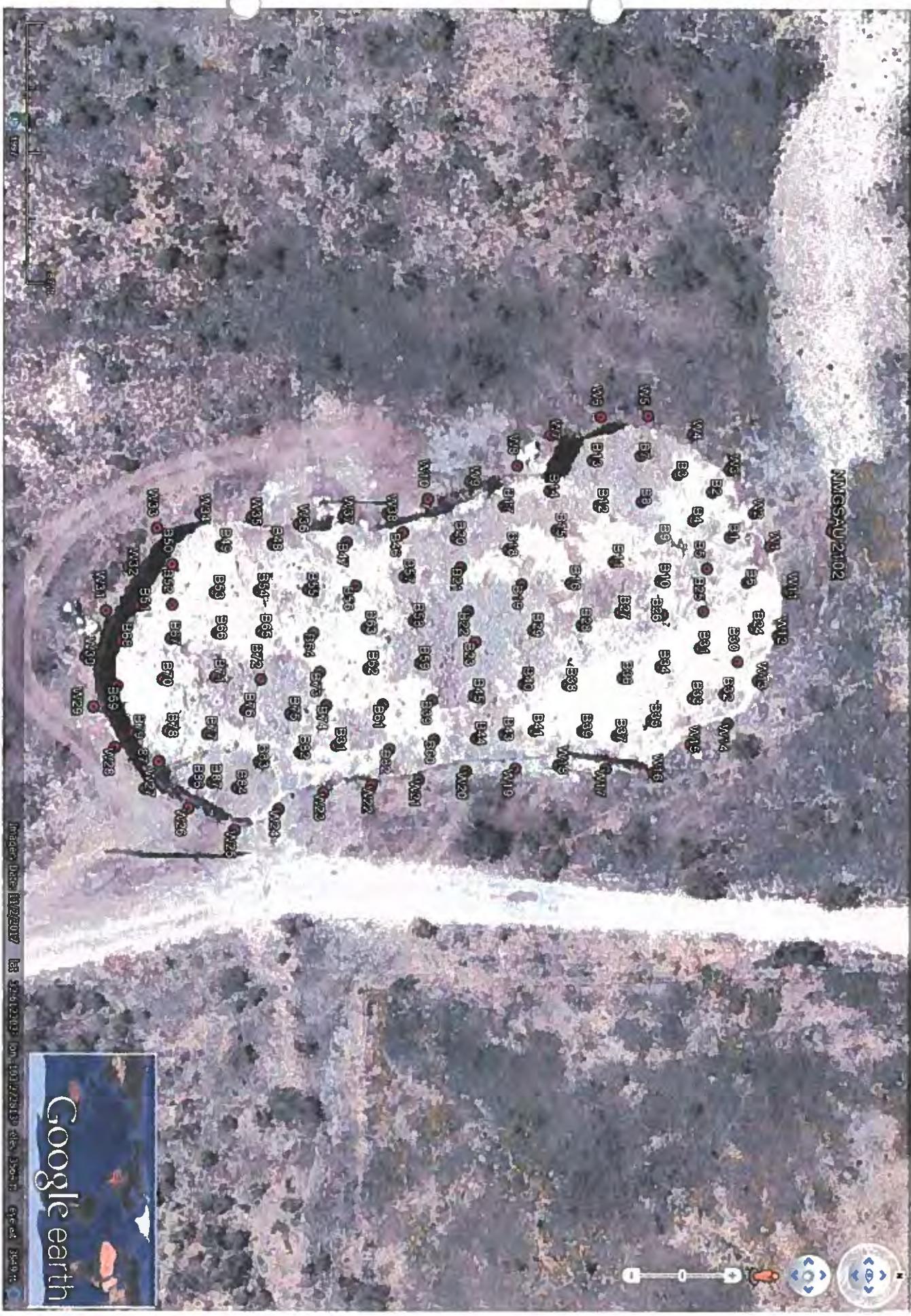
JOB NUMBER : 19-0112-51 / Apache Corp.
 HOLE DIAMETER : 2"
 LOCATION : NMGSAU 2102
 LAI GEOLOGIST : R. Nelson
 DRILLING CONTRACTOR : SDI
 DRILLING METHOD : Air Rotary



DRILL DATE : 03-11-2020

BORING NUMBER : TMW-2

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.

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 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 3 32.6124552-103.2730152 (H903141-01)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 87.8 % 41-142

Surrogate: 1-Chlorooctadecane 95.5 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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 client for analyses.

Handwritten signature of 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: 09/11/2019 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 4 32.6123818-103.27330568 (H903141-02)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 85.0 % 41-142

Surrogate: 1-Chlorooctadecane 95.6 % 37.6-147

Cardinal Laboratories

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Celestina

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	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 (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



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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: 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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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:	09/11/2019	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 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) 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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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)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 89.0 % 41-142

Surrogate: 1-Chlorooctadecane 95.4 % 37.6-147

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Handwritten signature of 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:	09/11/2019	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 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 SM4500C-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

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

BILL TO

ANALYSIS REQUEST

Company Name: Archie
Project Manager: Jeffrey Brown

Address: _____
City: Hobbs State: NM Zip: 88240

Phone #: _____ Fax #: _____
Project #: _____ Project Owner: _____

Project Name: _____
Project Location: WYB SAU PIR

Sample Name: See Quercus etc.

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX							DATE	TIME	EXT TPH	BTEX
				GROUNDWATER	WASTEWATER	SOIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL				
1	SA 612 055 2	C	1								9/11	12:09		
2	SA 612 055 2	C	1								9/11	12:11		
3	SA 612 055 2	C	1								9/11	12:13		
4	SA 612 055 2	C	1								9/11	12:15		
5	SA 612 055 2	C	1								9/11	12:17		
6	SA 612 055 2	C	1								9/11	13:15		
7	SA 612 055 2	C	1								9/11	2:33 PM		

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Relinquished By: [Signature] Date: 9-11-19 Time: 5:35
Received By: [Signature] Date: _____ Time: _____
Delivered By: (Circle One) 2.22 # 497 Sample Condition: COOL Intact: Yes
Sampler - UPS - Bus - Other: Corrected 2.6 No: Yes No: No CHECKED BY: [Signature] (Initials) TO



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

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.

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 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 17 @ 12' 32.6122239-103.2730310 (H903162-01)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 84.7% 41-142

Surrogate: 1-Chlorooctadecane 91.5% 37.6-147

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Celey D. Keene (Signature)

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	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 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



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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 15 @ 12' 32.6123148-103.2728449 (H903162-03)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 93.2 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

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Signature of 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: 09/13/2019 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 16 @ 12' 32.6123332-103.2728691 (H903162-04)

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

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

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, and EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 86.0 % 41-142

Surrogate: 1-Chlorooctadecane 92.6 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Handwritten signature of 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: 09/13/2019 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: W 9 32.6122163-103.2729334 (H903162-05)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 94.6 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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Celestine

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: W 8 32.6122163-103.2729334 (H903162-06)

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

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

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, and EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 83.8 % 41-142

Surrogate: 1-Chlorooctadecane 89.4 % 37.6-147

Cardinal Laboratories

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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:	09/13/2019	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 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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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 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 18 32.6122566-103.2728781 (H903162-08)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 87.1% 41-142

Surrogate: 1-Chlorooctadecane 93.4% 37.6-147

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Celestine

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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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

BILL TO

ANALYSIS REQUEST

Company Name: Hacker P.O. #:
 Project Manager: Anthony Brewer Company:
 Address: _____
 City: Hobbs State: NM Zip: 88240 Attn:
 Phone #: _____ Fax #: _____ Address:
 Project #: _____ Project Owner: _____ City: _____ State: _____ Zip: _____
 Project Name: _____
 Project Location: 426 S Alt #2119 Phone #: _____ Fax #:
 Sampler Name: See Comments

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX						DATE	TIME	REMARKS
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER			
1	B13 010' 32.1000239		1							9/12 8:08	01	
	-103.2730310		1							9/12 10:54	EXT. TPH	
2	B20 012' 30.6121942		1							9/12 10:54	BTEX	
	-103.2729113		1							9/12 12:10		
3	B15 012' 30.6123148		1							9/12 13:14		
	-103.2708449		1							9/12 1:50		
4	B16 012' 32.10183332		1									
	-103.2728191		1									
5	B19 32.6121163		1									
	-103.2729334		1									

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Relinquished By: [Signature] Date: 9/12/19
 Received By: [Signature] Date: 9/12/19
 Time: _____

Delivered By: (Circle One) UPS 4:02 #197 Sample Condition: Cool Intact CHECKED BY: _____
 Sampler - UPS - Bus - Other: Counted 50°C Yes No 4:02
 Phone Result: Yes No Add'l Phone #: _____
 Fax Result: Yes No Add'l Fax #: _____
 REMARKS: uic
Emm/Results



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: Parade P.O. #: _____
 Project Manager: Jeffrey Bacon Company: _____
 Address: _____ Attn: _____
 City: Hobbs State: NM Zip: 87240 Address: _____
 Phone #: _____ Fax #: _____ City: _____
 Project #: _____ Project Owner: _____ State: _____ Zip: _____
 Project Name: _____
 Project Location: BLG 200 2119 Phone #: _____
 Sampler Name: Joe Gussner Jr. Fax #: _____

Lab I.D.	Sample I.D.	(G)RAB OR (C)OM	# CONTAINERS	MATRIX						DATE	TIME	REMARKS	ANALYSIS REQUEST
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER				
<u>A903162</u>	<u>6108 32.6123163</u>	<u>C</u>	<u>1</u>			<u>1</u>				<u>9/12</u>	<u>1500</u>	<u>EXT TRH</u>	
	<u>-103.8729334</u>	<u>C</u>	<u>1</u>			<u>1</u>				<u>9/12</u>	<u>3:31pm</u>	<u>BTEX</u>	
	<u>7 319 32.6122829</u>	<u>C</u>	<u>1</u>			<u>1</u>							
	<u>-03 2728600</u>												
	<u>8 318 32.6123566</u>	<u>C</u>	<u>1</u>			<u>1</u>				<u>9/12</u>	<u>3:29</u>		
	<u>1 -103.222.8781</u>												

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Relinquished By: [Signature] Date: 9/13/19 Time: 05:30
 Received By: [Signature] Date: _____ Time: _____

Delivered By: (Circle One) 4.6C #97 Sample Condition: YD
 Cooler Intact: Yes Yes No No
 Sampler - UPS - Bus - Other: Controlled 5.00



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.

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 Sampling Date: 09/13/2019
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 24 @ 12' 32.6124803-103.2728909 (H903176-01)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 93.6% 41-142

Surrogate: 1-Chlorooctadecane 104% 37.6-147

Cardinal Laboratories

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Signature of 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 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 1 32.6124824-103.2729247 (H903176-02)

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

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

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, and EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 92.0 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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Celey D. Keene (Signature)

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

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 94.3 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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Celey D. Keene (signature)

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

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

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

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

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, and EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 81.3 % 41-142

Surrogate: 1-Chlorooctadecane 99.3 % 37.6-147

Cardinal Laboratories

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Celestine

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 25 @ 12' 32.6125097-103.2729076 (H903176-05)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 96.0 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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Celestine

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)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 83.8 % 41-142

Surrogate: 1-Chlorooctadecane 95.4 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Signature of 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 27 @ 12' 32.6124058-103.2728697 (H903176-07)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 88.9 % 41-142

Surrogate: 1-Chlorooctadecane 99.5 % 37.6-147

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Celestine

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

Sample ID: B 28 @ 12' 32.6123391-103.2728375 (H903176-09)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 84.8 % 41-142

Surrogate: 1-Chlorooctadecane 96.4 % 37.6-147

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Signature of 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 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)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, and EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 83.9 % 41-142

Surrogate: 1-Chlorooctadecane 93.3 % 37.6-147

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Celely D. Keene (signature)

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

Celey D. Keene, Lab Director/Quality Manager



CARDINAL LABORATORIES

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: <i>Agri 1st</i>		P.O. #:	
Project Manager: <i>Self Keon</i>		Company:	
Address:		Attn:	
City: <i>Hobbs</i> State: <i>NM</i> zip: <i>88240</i>		Address:	
Phone #:		City:	
Project #:		State:	
Project Name:		Phone #:	
Project Location: <i>NM4554N 4247</i>		Fax #:	
Sampler Name: <i>Sosa Rosell</i>		PRESERV	SAMPLING
FOR USE ONLY			

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	CI	BTEX	HPLC/PH
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE					
<i>H903176</i>	<i>B24612' 32.6124803</i>	<i>C</i>	<i>1</i>								<i>9/13</i>	<i>9:20</i>	<i>1</i>	<i>1</i>	<i>1</i>
	<i>-103.2728909</i>	<i>C</i>	<i>1</i>									<i>9:35</i>	<i>1</i>	<i>1</i>	<i>1</i>
	<i>-103.2729247</i>	<i>C</i>	<i>1</i>									<i>9:37</i>	<i>1</i>	<i>1</i>	<i>1</i>
	<i>602 32.6124668</i>	<i>C</i>	<i>1</i>									<i>10:15</i>	<i>1</i>	<i>1</i>	<i>1</i>
	<i>-103.2729945</i>	<i>C</i>	<i>1</i>									<i>10:15</i>	<i>1</i>	<i>1</i>	<i>1</i>
	<i>4 611 32.6125023</i>	<i>C</i>	<i>1</i>									<i>11:00</i>	<i>1</i>	<i>1</i>	<i>1</i>
	<i>-103.2728862</i>	<i>C</i>	<i>1</i>												
	<i>5 B25012' 32.6125097</i>	<i>C</i>	<i>1</i>												
	<i>-103.2728926</i>	<i>C</i>	<i>1</i>												

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Relinquished By: *[Signature]* Date: *9/13/10* Received By: *[Signature]* Date: *9/16/10*

Delivered By: (Circle One) *3.7c* *[Signature]* Sample Condition: Intact Broken

Sampler - UPS - Bus - Other: *[Signature]* No No

Checked By: *[Signature]* (Initials) *40*

Phone Result: Yes No Add'l Phone #: _____
 Fax Result: Yes No Add'l Fax #: _____

REMARKS:



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: Peche
 Project Manager: Jessie Brown
 Address: 48805
 City: Alamosa State: NM Zip: 88024
 Phone #: _____ Fax #: _____
 Project #: _____ Project Owner: _____

P.O. #: _____ Company: _____
 Attn: _____
 Address: _____ City: _____
 State: _____ Zip: _____
 Phone #: _____ Fax #: _____

Project Location: MESA 2114
 Sampler Name: see description

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX							DATE	TIME	REMARKS	ANALYSIS REQUEST	
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE					CE COOL
H903716	6 P&A 012 32.6023182	C 1	1								9/13 11:45	1	EXT TPH		
	-103. 2727583	C 1	1								9/13 13:00	1	BTEX		
	7 R27012 38.624058	C 1	1								9/13 15:45	1			
	-103. 2728167	C 1	1								9/13 16:13	1			
	8 W12 32.6125523	C 1	1								9/13 17:05	1			
	-103. 2728815	C 1	1												
	9 B&C 012 32.6123391	C 1	1												
	-103. 2728375	C 1	1												
	16 B&C 012 32.6123333	C 1	1												
	-103. 27271678	C 1	1												

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Relinquished By: [Signature] Date: 9/16 Time: 9:00 Received By: [Signature]
 Relinquished By: [Signature] Date: 9-16-19 Time: 11:40 Received By: [Signature]

Delivered By: (Circle One) 3.72 Sample Condition: Cool Intact
 Sampler - UPS - Bus - Other: Container 4.12 Yes No Yes No
 CHECKED BY: [Signature] (Initials) 70
 REMARKS: Email Results



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.

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 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 21 @ 12' 32.6121112-103.2729187 (H903177-01)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, and EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 85.1% 41-142

Surrogate: 1-Chlorooctadecane 97.6% 37.6-147

Cardinal Laboratories

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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: 09/14/2019
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 22 @ 12' 32.6121214-103.2728724 (H903177-02)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 86.9 % 41-142

Surrogate: 1-Chlorooctadecane 98.2 % 37.6-147

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Celestine 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: 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)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 87.8 % 41-142

Surrogate: 1-Chlorooctadecane 99.2 % 37.6-147

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Celestine Keene (Signature)

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)

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 (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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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: 09/14/2019
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 31 @ 12' 32.6124594-103.2727497 (H903177-05)

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

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

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, and EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 85.2 % 41-142

Surrogate: 1-Chlorooctadecane 90.8 % 37.6-147

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Handwritten signature of 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	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 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	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 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



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 34 @ 12' 32.6124354-103.2727041 (H903177-08)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

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

Table for Chloride, SM4500Cl-B. Columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row: Chloride 32.0, 16.0, 09/17/2019, ND, 432, 108, 400, 0.00.

Table for TPH 8015M. Columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows: GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 87.1 % 41-142

Surrogate: 1-Chlorooctadecane 92.0 % 37.6-147

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Signature of 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: 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 35 @ 12' 32.6124687-103.2727859 (H903177-09)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 85.4 % 41-142

Surrogate: 1-Chlorooctadecane 91.8 % 37.6-147

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Celestine

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: 09/14/2019
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 36 @ 12' 32.6123770-103.2727806 (H903177-10)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 88.8 % 41-142

Surrogate: 1-Chlorooctadecane 93.8 % 37.6-147

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Celestine

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: 09/14/2019
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 37 @ 12' 32.6124351-103.2727172 (H903177-11)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

TPH 8015M mg/kg Analyzed By: MS

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 86.2 % 41-142

Surrogate: 1-Chlorooctadecane 93.3 % 37.6-147

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Celestine Keene (Signature)

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

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: Apache Project Manager: Jeffrey Brown Address: City: Hobbs State: NM Zip: 88240 Phone #: Fax #: Project Owner: Project #: Project Name: Project Location: McGraw Hill #8114 Sampler Name: Dr. Quiscales Jr.		BILL TO P.O. #: Company: Attn: Address: City: State: Zip: Phone #: Fax #:	
FOR LAB USE ONLY Lab I.D. Sample I.D.		(G)RAB OR (C)OMP # CONTAINERS MATRIX GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: ACID/BASE: (C) COOL OTHER: PRESERV: SAMPLING	
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.		DATE TIME DATE TIME DATE TIME DATE TIME DATE TIME	
Relinquished By: Dr. Quiscales Jr. Date: 9/16 Time: 10:00A		Received By: Jeff Brown Date: 9-16-19 Time: 1:40	
Delivered By: (Circle One) 3.7c Sampler - UPS - Bus - Other: Printed 4.1c		Sample Condition Cool Intact Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> CHECKED BY: JE (Initials)	
Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #: Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Fax #:		REMARKS: Good Results.	



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>Debbie Brown</u>		Company:	
Address:		Attn:	
City: <u>Hobbs</u>		Address:	
Phone #:		City:	
Project #:		State:	Zip:
Project Name:		Phone #:	
Project Location: <u>WYO STATE #2119</u>		Fax #:	
Sampler Name: <u>Joe L. Wenzel</u>			
FOR LAB USE ONLY			

Lab I.D.	Sample I.D.	(G)RAB OR (C)OM		MATRIX						DATE	TIME	EXT	TRH	BTEX		
		#	CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:						ACID/BASE	CHEM COOL
<u>H903177</u>	<u>B33012' 32.612 4685</u>	<u>0</u>	<u>1</u>									<u>9/14</u>	<u>12:38</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>-103.2727853</u>															
	<u>7 B33012' 32.612 3673</u>		<u>1</u>									<u>9/14</u>	<u>4:77 pm</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>-103.2727364</u>															
	<u>8 B33012' 32.612 4354</u>		<u>1</u>									<u>9/14</u>	<u>4:24 pm</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>-103.2727041</u>															
	<u>9 B33012' 32.612 4685</u>		<u>1</u>									<u>9/14</u>	<u>7:38</u>	<u>1</u>	<u>1</u>	<u>1</u>
	<u>-103.2727859</u>															
	<u>10 B33012' 32.612 3770</u>		<u>1</u>									<u>9/14</u>	<u>7:36</u>			
	<u>-103.2727806</u>															

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Relinquished By: _____ Date: 9/16 Received By: _____ Date: 9/16

Relinquished By: _____ Date: 9/16/19 Received By: _____ Date: 9/16/19

Delivered By: (Circle One) 3.7% Sample Condition: 97 CHECKED BY: _____

Sampler - UPS - Bus - Other: Consolidated 4.12 Yes No Yes No

REMARKS:



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <u>Apex Brown</u> Project Manager: <u>Jeffrey Brown</u>		P.O. #: Company:					
Address: City: <u>Hobbs</u> State: <u>NM</u> zip: <u>88240</u>		Attn: Address:					
Phone #: Fax #:		City: State: zip:					
Project #: Project Owner:		Phone #:					
Project Name:		Fax #:					
Project Location: <u>WILSON 919</u> <u>300 Quinceberry</u>							
Sampler Name:							
<small>FOR LAB USE ONLY</small>							
Lab I.D.	Sample I.D.	MATRIX	PRESERV.	SAMPLING	DATE	TIME	REMARKS
<u>H983177</u>	<u>B37012 3a, 612 4351</u>	(G)RAB OR (C)OMP # CONTAINERS	GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER	ACID/BASE ICE / COOL OTHER	<u>9/14</u>	<u>7:38</u>	<u>CL</u> <u>BTEX</u> <u>EXT TPH</u>
	<u>-03 272 7172</u>						

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Relinquished By: Joe Quinceberry **Date:** 9/16 **Received By:** Jeff Brown
Relinquished By: Joe Quinceberry **Time:** 10:00 **Received By:** Jeff Brown
Relinquished By: Joe Quinceberry **Time:** 11:40 **Received By:** Janora Walker

Delivered By: (Circle One) 3.7c **Sample Condition:** Cool Intact
Sampler - UPS - Bus - Other: Sampled 4.1c **Yes** **No** **Yes** **No**
CHECKER BY: Janora Walker (Initials) JD



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

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.

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:	09/18/2019	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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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: NMGS AU #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)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table for Chloride, SM4500Cl-B. Columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row: Chloride 48.0, 16.0, 09/19/2019, ND, 432, 108, 400, 0.00.

Table for TPH 8015M. Columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows: GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 92.1 % 41-142

Surrogate: 1-Chlorooctadecane 96.0 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Signature of 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 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 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 41 @ 12' 32.6122730-103.2727326 (H903211-04)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

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

Table for Chloride, SM4500Cl-B. Columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row: Chloride 32.0, 16.0, 09/19/2019, ND, 432, 108, 400, 0.00.

Table for TPH 8015M. Columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows: GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 94.7 % 41-142

Surrogate: 1-Chlorooctadecane 96.1 % 37.6-147

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Signature of 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	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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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: NMGS AU #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)

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

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

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

TPH 8015M mg/kg Analyzed By: MS

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, and EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 93.6 % 41-142

Surrogate: 1-Chlorooctadecane 95.0 % 37.6-147

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Handwritten signature of 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 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)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 86.7 % 41-142

Surrogate: 1-Chlorooctadecane 88.7 % 37.6-147

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Celestine 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 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 45 @ 12' 32.6121858-103.2727806 (H903211-08)

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

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

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, and EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 93.5 % 41-142

Surrogate: 1-Chlorooctadecane 96.7 % 37.6-147

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Signature of 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

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

BILL TO

ANALYSIS REQUEST

Company Name: <i>Apog by</i>		P.O. #:																
Project Manager: <i>SRI Brown</i>		Company:																
Address:		Attn:																
City: <i>Hobbs</i> State: <i>NM</i> Zip: <i>88240</i>		Address:																
Phone #: _____ Fax #: _____		City:																
Project #: _____ Project Owner:		State:																
Project Name:		Zip:																
Project Location: <i>NW 5th #2115</i>		Phone #:																
Sampler Name: <i>Jose Roobla</i>		Fax #:																
FOR LAB USE ONLY																		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV.	SAMPLING	DATE	TIME										
<i>HD9211</i>	<i>6 B43012 33.612 7559</i>	<i>C</i>	<i>1</i>	GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER	ACID/BASE ICE / COOL OTHER	<i>1</i>	<i>9/16</i>	<i>3:03pm</i>	<i>1</i>									
	<i>7 B44012 32.612 7559</i>	<i>C</i>	<i>1</i>			<i>1</i>	<i>9/16</i>	<i>5:13pm</i>	<i>1</i>									
	<i>8 B45012 32.612 1858</i>	<i>C</i>	<i>1</i>			<i>1</i>	<i>9/16</i>	<i>5:15pm</i>	<i>1</i>									

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Relinquished By: *[Signature]* Received By: *[Signature]*

Delivered By: (Circle One) UPS Bus Other: *1:10*

Sample Condition: Cool Intact Yes No Yes No

Checked By: *[Signature]*

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

Fax Result: Yes No Add'l Fax #: _____

REMARKS: *9-Me. Res. 1/15*



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.

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: 09/18/2019
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 46 @ 12' 32.6120666-103.2729757 (H903212-01)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table for Chloride, SM4500Cl-B. Columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row: Chloride 144, 16.0, 09/19/2019, ND, 400, 100, 400, 0.00.

Table for TPH 8015M. Columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows: GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 95.3 % 41-142

Surrogate: 1-Chlorooctadecane 97.8 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celestine Keene (handwritten signature)

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: NMGS AU #2119 Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson
Project Location: NOT GIVEN

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

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

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

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, and EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 97.2 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

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Celestine 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 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 48 @ 12' 32.6129886-103.2729559 (H903212-03)

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

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

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, and EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 88.2 % 41-142

Surrogate: 1-Chlorooctadecane 94.5 % 37.6-147

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Celestine 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: 09/17/2019
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 49 32.6119759-103.2728892 (H903212-04)

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

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

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, and EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 91.1 % 41-142

Surrogate: 1-Chlorooctadecane 94.7 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Signature of 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: 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)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table for Chloride, SM4500Cl-B. Columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row: Chloride 32.0, 16.0, 09/19/2019, ND, 400, 100, 400, 0.00.

Table for TPH 8015M. Columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows: GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 93.4 % 41-142

Surrogate: 1-Chlorooctadecane 95.8 % 37.6-147

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Celey D. Keene (signature)

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: NMGS AU #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)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, and EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 95.5 % 41-142

Surrogate: 1-Chlorooctadecane 98.7 % 37.6-147

Cardinal Laboratories

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Signature of 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 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 52 @ 12' 32.6119550-103.2728067 (H903212-07)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 91.7 % 41-142

Surrogate: 1-Chlorooctadecane 91.8 % 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: 09/17/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 91.5 % 41-142

Surrogate: 1-Chlorooctadecane 95.3 % 37.6-147

Cardinal Laboratories *=Accredited Analyte

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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: 09/17/2019
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 54 @ 12' 32.6120753-103.2728127 (H903212-09)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 88.2 % 41-142

Surrogate: 1-Chlorooctadecane 94.7 % 37.6-147

Cardinal Laboratories

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Handwritten signature of 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 SM4500C-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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C. D. Keene

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

BILL TO

ANALYSIS REQUEST

Company Name: Pusher Brown P.O. #: _____
 Project Manager: Wendy Brown Company: _____
 Address: _____ Attn: _____
 City: Hobbs State: NM Zip: 88240 Address: _____
 Phone #: _____ Fax #: _____ City: _____
 Project #: _____ Project Owner: _____ State: _____ Zip: _____
 Project Name: _____
 Project Location: MUSGRAVE 219 Phone #: _____
 Sampler Name: Don Curren Fax #: _____

Lab I.D.	Sample I.D.	(G)RAB OR (C)OM	# CONTAINERS	MATRIX							DATE	TIME	REMARKS
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE:			
H903212	1 B46 010' 32.61200000	C	1								9/17	10:14	CL EXT TPH BTEX
	-103.8729757										9/17	10:16	
	2 B47 010' 32.61200000	C	1								9/17	11:18	
	-103.2729522										9/17	14:16	
	3 B48 010' 32.61200000	C	1								9/17	14:16	
	-103.2729559										9/17	14:16	
	4 B49 32.6119759	C	1								9/17	14:16	
	-103.2728882										9/17	14:16	
	5 B50 32.6119759	C	1								9/17	14:16	
	-103.8729409										9/17	14:16	

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Relinquished By: Don Curren Date: 9/18/19 Time: 9:15
 Received By: Don Curren Date: _____ Time: _____
 Relinquished By: _____ Date: _____ Time: _____
 Received By: _____ Date: _____ Time: _____

Delivered By: (Circle One) UPS 97 Sample Condition: Intact 97
 Cooler: Yes 97 CHEMISTRY: Analysis
 Sampler - UPS - Bus - Other: 170° Limited air No 97
 Phone Result: Yes No Add'l Phone #: _____
 Fax Result: Yes No Add'l Fax #: _____
 REMARKS: Encail Results.



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: _____ P.O. #: _____
 Project Manager: _____ Company: _____
 Address: _____ Attn: _____
 City: _____ State: _____ Zip: _____
 Phone #: _____ Fax #: _____
 Project #: _____ Project Owner: _____
 Project Name: _____ State: _____ Zip: _____
 Project Location: _____ Phone #: _____
 Sampler Name: _____ Fax #: _____
 FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OM	# CONTAINERS	MATRIX						DATE	TIME	C	EPI TPH	BTEX
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER					
H903212	6 RT 010' 32.6119770	(C)	1						9/17	5:17				
	-103.2729581								9/17	16:20				
	7 B52 012' 32.6119550	(C)	1						9/17	18:58				
	-03.2728067								9/17	17:18				
	8 B52 012' 32.6119524	(C)	1						9/17	18:58				
	-103.2728724													
	9 B54 012' 32.6119573	(C)	1						9/17	18:58				
	-103.2728187													

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Relinquished By: [Signature] Date: 9/19/15 Received By: [Signature] Date: 9/15
 Title: [Signature] Title: [Signature]
 Reinstated By: [Signature] Date: _____ Received By: [Signature] Date: _____
 Time: _____

Delivered By: (Circle One) UPS 1:19c [Signature] 497 Sample Condition: Good Intact Yes Yes CHECKED BY: [Signature]
 Sampler - UPS - Bus - Other: 1:19c [Signature] 497 Yes Yes NO NO

REMARKS: Email Results



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 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.

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: 09/18/2019
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, 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	09/20/2019	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

Cardinal Laboratories

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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: 09/18/2019
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 56 @ 12' 32.6120793-103.2728684 (H903232-02)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

TPH 8015M mg/kg Analyzed By: MS

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, and EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 87.6% 41-142

Surrogate: 1-Chlorooctadecane 92.4% 37.6-147

Cardinal Laboratories

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Celestine Keene (Signature)

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:	09/18/2019
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 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: 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 58 @ 12' 32.6121260-103.2727816 (H903232-04)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table for Chloride, SM4500Cl-B. Columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row: Chloride.

Table for TPH 8015M. Columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows: GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 93.1 % 41-142

Surrogate: 1-Chlorooctadecane 95.3 % 37.6-147

Cardinal Laboratories

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Signature of 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 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 59 @ 12' 32.6121327-103.2727604 (H903232-05)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row: Chloride, SM4500Cl-B

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 93.2 % 41-142

Surrogate: 1-Chlorooctadecane 93.7 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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 client for analyses.

Celestine Keene (Signature)

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 60 @ 12' 32.6121496-103.2727276 (H903232-06)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 88.0 % 41-142

Surrogate: 1-Chlorooctadecane 90.5 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celestine 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 61 @ 12' 32.6119948-103.2728627 (H903232-07)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table for Chloride, SM4500CI-B. Columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row: Chloride 144, 16.0, 09/20/2019, ND, 432, 108, 400, 3.64.

Table for TPH 8015M. Columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows: GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 91.6 % 41-142

Surrogate: 1-Chlorooctadecane 97.5 % 37.6-147

Cardinal Laboratories * = Accredited Analyte

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Celestine Keene (Signature)

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 62 @ 12' 32.6120276-103.2728493 (H903232-08)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 93.6% 41-142

Surrogate: 1-Chlorooctadecane 94.9% 37.6-147

Cardinal Laboratories

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Celestine Keene (Signature)

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 63 @ 12' 32.6119728-103.2729059 (H903232-09)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 89.6 % 41-142

Surrogate: 1-Chlorooctadecane 94.4 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene (Signature)

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

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 89.7 % 41-142

Surrogate: 1-Chlorooctadecane 94.1 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celestine Keene (signature)

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: 09/18/2019
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)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

TPH 8015M Analyzed By: MS

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 90.9 % 41-142

Surrogate: 1-Chlorooctadecane 95.5 % 37.6-147

Cardinal Laboratories

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Celestina

Celey D. Keene, Lab Director/Quality Manager



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

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

BILL TO

ANALYSIS REQUEST

Company Name: Archuleta P.O. #:
 Project Manager: Jeffrey Brown Company:
 Address: _____ Attn:
 City: Hobbs State: NM Zip: 88240 Address:
 Phone #: _____ Fax #: _____ City: _____
 Project #: _____ Project Owner: _____ State: _____ Zip: _____
 Project Name: _____
 Project Location: WHS SAN AIR Phone #: _____ Fax #: _____
 Sampler Name: Jos. Quinteros

Lab I.D.	Sample I.D.	(G)RAB OR (COMB)	# CONTAINERS	MATRIX						DATE	TIME	REMARKS
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER			
H903392	B55 012' 33.612.0731		1							9/18	7:38	EXT TRH
	-103. 2728734		1							9/18	8:43	BTEX
	2 B56 012' 32.422.0743		1							9/18	10:09	
	-103. 2728684		1							9/18	10:13	
	3 B57 012' 32.612.1933		1							9/18	13:05	
	-103. 2729716		1									
	4 B58 012' 32.612.1260		1									
	-103. 2727916		1									
	5 B59 012' 32.612.1327		1									
	-103. 2727604		1									

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Relinquished By: _____
 Date: _____
 Received By: _____
 Date: _____
 Time: 11:19
 Received By: Jos. Quinteros

Delivered By: (Circle One) 2.02
 Sample Condition: Cool Intact
 Sample UPS - Bus - Other: 2.40
 #97
 Checked By: _____



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2

Company Name: <u>Boehm</u> Project Manager: <u>Jill Brown</u>		P.O. #: _____ Company: _____ Attn: _____		
Address: _____ City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88240</u>		Address: _____ City: _____ State: _____ Zip: _____		
Phone #: _____ Fax #: _____ Project #: _____ Project Owner: _____		City: _____ State: _____ Zip: _____		
Project Name: _____ Project Location: <u>DUGSKA 8114</u>		Phone #: _____ Fax #: _____		
Sampler Name: <u>Joe Gundersen Jr.</u>		MATRIX: <input type="checkbox"/> (G)RAB OR (C)OMP <input type="checkbox"/> # CONTAINERS <input type="checkbox"/> GROUNDWATER <input type="checkbox"/> WASTEWATER <input type="checkbox"/> SOIL <input type="checkbox"/> OIL <input type="checkbox"/> SLUDGE <input type="checkbox"/> OTHER ACID/BASE: <input checked="" type="checkbox"/> COOL <input type="checkbox"/> OTHER		
FOR LAB USE ONLY		PRESERV: _____ SAMPLING: _____		
Lab I.D.	Sample I.D.	DATE	TIME	ANALYSIS REQUEST
<u>H903252</u>	<u>360 810' (012144)</u>	<u>9/18</u>	<u>13:10</u>	<u>EXT TPH</u> <u>BTEX</u>
	<u>-103. 8707276</u>			
	<u>BU 012 32. 611944E</u>	<u>9/18</u>	<u>13:31</u>	
	<u>-103. 8708627</u>			
	<u>BU 012 32. 61190976</u>	<u>9/18</u>	<u>14:06</u>	
	<u>-103. 8708493</u>			
	<u>BU 012 32. 61197283</u>	<u>9/18</u>	<u>14:57</u>	
	<u>-103. 8709059</u>			
	<u>BU 012 32. 6120652</u>	<u>9/18</u>	<u>16:00</u>	
	<u>-103. 8727886</u>			

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Relinquished By: [Signature] Date: 9/18/19 Received By: [Signature] Date: 9/18/19
 Title: Quality Control Received By: [Signature] Title: Quality Control

Vertical Result: Yes No Add'l Phone #: _____
 All Results are emailed. Please provide Email address: Case! Results

Delivered By: (Circle One) Observed Temp. °C: 22.0 Sample Condition: Intact Broken
 Corrected Temp. °C: 24 Cool Yes No No No
 Turnaround Time: _____ Standard Rush
 Bacteria (only) Sample Condition: Cool Intact Yes No No No
 Corrected Temp. °C: _____

† 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

3

Company Name:		P.O. #:		BILL TO		ANALYSIS REQUEST	
Project Manager:		Company:					
Address:		Attn:					
City:		Address:					
State:		City:					
Zip:		State:					
Phone #:		Project Owner:					
Project #:		City:					
Project Name:		State:					
Project Location: <u>WAGSFAU 2119</u>		Phone #:					
Sampler Name:		Fax #:					
FOR LAB USE ONLY		PRESERV		SAMPLING			
Lab I.D.		MATRIX					
Sample I.D.		GROUNDWATER					
H903232		WASTEWATER					
11 BUS 210' S2. W120756		SOIL					
-103. 0721755		OIL					
		SLUDGE					
		OTHER:					
		ACID/BASE:					
		ICE COOL					
		OTHER:					
		DATE					
		TIME					
		9/18					
		16:36					
		1					
		EXT TRM					
		BTEX					

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Reinquisitioned By: [Signature] Date: 9/18/19 Received By: [Signature] Time: 17:07

Delivered By: (Circle One) UPS - Bus - Other: FORM-006 R 3.0

Observed Temp. °C: 2.0 Sample Condition: Intact Cool Yes No

Corrected Temp. °C: 2.4 Checked By: [Signature]

Turnaround Time: Standard Rush

Bacteria (only) Sample Condition: Cool Intact Yes No

Thermometer ID #97 Correction Factor +0.4 °C

REMARKS: Verbal Result: Yes No Add'l Phone #: All Results are emailed. Please provide Email address:

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



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.

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: 09/19/2019 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 66 @ 12' 32.6120883-103.2727075 (H903252-01)

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

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

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, and EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 95.3% 41-142

Surrogate: 1-Chlorooctadecane 94.2% 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celestine Keene (signature)

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 67 @ 12' 32.6120324-103.2727400 (H903252-02)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, and EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 96.2% 41-142

Surrogate: 1-Chlorooctadecane 96.8% 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celestine

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:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

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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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: NMGSAU #2119 Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Tamara Oldaker
Project Location: NOT GIVEN

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

TPH 8015M mg/kg Analyzed By: MS

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, and EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 97.0 % 41-142

Surrogate: 1-Chlorooctadecane 96.4 % 37.6-147

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Signature of 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: 09/19/2019 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 70 32.6120217-103.2727578 (H903252-05)

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

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

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, and EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 94.1 % 41-142

Surrogate: 1-Chlorooctadecane 94.9 % 37.6-147

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Celestine 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: 09/19/2019 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 71 @ 12' 32.6120217-103.2727578 (H903252-06)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

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

Table for Chloride, SM4500Cl-B. Columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row: Chloride 464 16.0 09/23/2019 ND 432 108 400 0.00

Table for TPH 8015M. Columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows: GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 94.1 % 41-142

Surrogate: 1-Chlorooctadecane 94.2 % 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:	09/19/2019	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 72 @ 12' 32.6119186-103.2727507 (H903252-07)

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	09/23/2019	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 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	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 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 (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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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 74 @ 12' 32.6119056-103.2727762 (H903252-09)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, and EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 95.6 % 41-142

Surrogate: 1-Chlorooctadecane 95.8 % 37.6-147

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Celestine 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: 09/19/2019 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 75 @ 12' 32.6119189-103.2727712 (H903252-10)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table for Chloride, SM4500Cl-B. Columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row: Chloride 96.0 16.0 09/23/2019 ND 432 108 400 0.00

Table for TPH 8015M. Columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows: GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 91.4 % 41-142

Surrogate: 1-Chlorooctadecane 95.2 % 37.6-147

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Celestina

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 76 @ 12' 32.6119612-103.2727239 (H903252-11)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 88.0% 41-142

Surrogate: 1-Chlorooctadecane 89.1% 37.6-147

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Handwritten signature of 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: 09/19/2019
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 77 @ 12' 32.6119985-103.2727396 (H903252-12)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row: Chloride, SM4500Cl-B

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows: GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 90.2 % 41-142

Surrogate: 1-Chlorooctadecane 98.3 % 37.6-147

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Celestine Keene (Signature)

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 78 @ 12' 32.6120200-103.2727286 (H903252-13)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

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

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 91.3 % 41-142

Surrogate: 1-Chlorooctadecane 93.5 % 37.6-147

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Apache Corp
 Project Manager: Jeffrey Brown
 Address: _____
 City: Hobbs State: NM Zip: 88240
 Phone #: _____ Fax #: _____
 Project #: _____ Project Owner: _____
 Project Location: NECSTAN 2119
 Sampler Name: Dea Dunsdale Jr
 P.O. #: _____ Company: _____
 Attn: _____ Address: _____
 City: _____ State: _____ Zip: _____
 Phone #: _____ Fax #: _____

Lab I.D.	Sample I.D.	(G)RAB OR (COM)	# CONTAINERS	MATRIX							DATE	TIME	REMARKS
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE			
1	816 @ 12.32 (612085)3	C	1								9/19	8:13	EXT TPK BTEX
2	B67 FFA 32 (612032)4	C	1								9/19	11:30	
3	B68 @ 12.32 (612033)9	C	1								9/19	11:30	
4	B69 32.6120.88	C	1								9/19	11:42	
5	B70 @ 32.6120.27	C	1								9/19	11:57	

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Relinquished By: Dea Dunsdale Jr Date: 9/19/19 Received By: Jawara Okazaki
 Time: _____ Time: 17:05
 Requisitioned By: _____ Date: _____ Received By: _____
 Time: _____ Time: _____

Vertical Result: Yes No Add'l Phone #: _____
 All Results are emailed. Please provide Email address: _____
 REMARKS: Email! Results to Jeff Brown

Delivered By: (Circle One) UPS Observed Temp. °C 16 Sample Condition Intact CHECKED BY: _____ (Initials)
 Sampler - UPS - Bus - Other: _____ Corrected Temp. °C 1.0 Cool Intact Yes No
 Turaround Time: _____ Standard Add'l Phone #: _____
 Thermometer ID #97 Bacteria (only) Sample Condition Intact
 Correction Factor +0.4°C Cool Intact Yes No Observed Temp. °C _____
 Corrected Temp. °C _____



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <i>Hooper Corp</i> Project Manager: <i>Jeffrey Brown</i> Address: City: <i>Hobbs</i> State: <i>NM</i> Zip: <i>88240</i> Phone #: Fax #: Project #: Project Owner: Project Name: Project Location: <i>WILKIE 0119</i> Sampler Name: <i>Jeffrey Brown</i> <small>FOR LAB USE ONLY</small>		BILL TO P.O. #: Company: Attn: Address: City: State: Zip: Phone #: Fax #:		ANALYSIS REQUEST					
Lab I.D.	Sample I.D.	(G)GRAB OR (C)COMP	# CONTAINERS	MATRIX	PRESERV	SAMPLING	DATE	TIME	REMARKS
<i>HP03252</i>	<i>B71 @ 12.32.612.0217</i>	<input checked="" type="checkbox"/>	<i>1</i>	GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER	<input checked="" type="checkbox"/> COOL OTHER:		<i>9/9</i>	<i>12:03</i>	<i>EXT TPH</i> <i>BTEX</i>
	<i>-103.272.7578</i>	<input type="checkbox"/>	<i>1</i>				<i>9/19</i>	<i>13:30</i>	
	<i>B72 @ 12.32.619.816</i>	<input type="checkbox"/>	<i>1</i>				<i>9/19</i>	<i>13:30</i>	
	<i>-103.272.7507</i>	<input type="checkbox"/>	<i>1</i>				<i>9/19</i>	<i>14:51</i>	
	<i>B73 @ 12.32.619.110</i>	<input type="checkbox"/>	<i>1</i>				<i>9/19</i>	<i>14:57</i>	
	<i>-103.272.7548</i>	<input type="checkbox"/>	<i>1</i>						
	<i>B74 @ 12.32.619.056</i>	<input type="checkbox"/>	<i>1</i>						
	<i>-103.272.7768</i>	<input type="checkbox"/>	<i>1</i>						
	<i>B75 @ 12.32.619.189</i>	<input type="checkbox"/>	<i>1</i>						
	<i>-103.272.7512</i>	<input type="checkbox"/>	<i>1</i>						

PLEASE NOTE: Liability and Damages: 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 analysis. 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: *Jeffrey Brown* **Date:** *9/9-19* **Time:** *17:05*
Received By: *Jessica Alabaster*

Delivered By: (Circle One) **Observed Temp. °C:** *0.6*
Sampler - UPS - Bus - Other: **Corrected Temp. °C:** *1.0*
 FORM-006 R 3.0

Turnaround Time: Standard Rush
Thermometer ID #97 **Correction Factor + 0.4 °C**
Bacteria (only) Sample Condition: Cool Intact
Corrected Temp. °C:
Remarks: *Email Results to Jeffrey Brown*



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Heach Corp</u> Project Manager: <u>Judith Brown</u> Address: _____ City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88240</u> Phone #: _____ Fax #: _____ Project #: _____ Project Owner: _____ Project Name: _____ Project Location: <u>MUSAU AIG</u> Sampler Name: <u>Judy Quisenberry</u> FOR LAB USE ONLY		BILL TO P.O. #: _____ Company: _____ Attn: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone #: _____ Fax #: _____		
Lab I.D. <u>H903352</u> Sample I.D.	11 <u>B76 012 82.611912</u> -103. 2727239	(G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: _____ ACID/BASE: <u>CB / COOL</u> OTHER: _____	DATE TIME 9/19 15:28 EXT TPH BTEX	
	12 <u>B77 012 32.611985</u> -103. 2727236	C 1 1 1 1	DATE TIME 9/19 16:30	
	13 <u>B38 012 32.612020</u> -103. 2727236	C 1 1 1 1	DATE TIME 9/19 16:36	
	_____ _____	_____ _____	_____ _____	_____ _____

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Relinquished By: [Signature] Date: 9-19-19 Received By: [Signature] Date: 9-19-19
 Reimquished By: [Signature] Date: 9-19-19 Received By: [Signature] Date: 9-19-19

Delivered By: (Circle One) Observed Temp. °C 0.6 Sample Condition Cool Intact Yes No
 Sampler - UPS - Bus - Other: Corrected Temp. °C 1.0 Yes No

Turnaround Time: _____ Standard Rush
 Thermometer ID #97 _____ Bacteria (only) Sample Condition Cool Intact Yes No
 Correction Factor + 0.4 °C _____ Corrected Temp. °C _____

Vertical Result: Yes No Add'l Phone #: _____
 All Results are emailed. Please provide Email address: _____
 REMARKS: Email Result to Judy Brown

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



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/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,

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 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 (PIL Chloride, SM4500Cl-B)		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
	83.7 %	73.3-129							
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

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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 (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 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 81 32.6121375-103.2726961 (H903272-03)

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, and Total BTEX.

Surrogate: 4-Bromofluorobenzene (PID) 84.3 % 73.3-129

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

TPH 8015M mg/kg Analyzed By: MS

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, and EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 89.8 % 41-142

Surrogate: 1-Chlorooctadecane 94.3 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Handwritten signature of 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: 09/24/2019 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 82 @ 12' 32.6120784-103.2726877 (H903272-04)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

Surrogate: 4-Bromofluorobenzene (PID) 84.9 % 73.3-129

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

TPH 8015M mg/kg Analyzed By: MS

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 86.4 % 41-142

Surrogate: 1-Chlorooctadecane 89.2 % 37.6-147

Cardinal Laboratories

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Celey D. Keene

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.

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	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, 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		

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	

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

Cardinal Laboratories

*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



CARDINAL Laboratories

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>Apple Tree Bar</u>		P.O. #:	
Project Manager: <u>Jeff Brown</u>		Company:	
Address:		Attn:	
City: <u>Hobbs</u> State: <u>NM</u> ZIP: _____		Address:	
Phone #: _____ Fax #: _____		City: _____	
Project #: _____ Project Owner: _____		State: _____ Zip: _____	
Project Name: _____		Phone #: _____	
Project Location: <u>WINGSTAU 42119</u>		Fax #: _____	
Sampler Name: <u>Jose Alvarez</u>		PRESERV:	
FOR LAB USE ONLY		SAMPLING	

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME			
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER			ACID/BASE	ICE / COOL	OTHER
<u>HPD3065</u>														
	<u>1</u>	<u>Surf Area</u>	<u>5</u>								<u>7/4</u>	<u>4:58pm</u>		
	<u>2</u>	<u>Surf Area</u>	<u>6</u>									<u>4:58pm</u>		
	<u>3</u>	<u>Surf Area</u>	<u>6</u>									<u>5:00pm</u>		
	<u>4</u>	<u>Surf Area</u>	<u>6</u>									<u>5:02</u>		
	<u>5</u>	<u>Surf Area</u>	<u>6</u>									<u>5:04</u>		
	<u>6</u>	<u>Surf Area</u>	<u>6</u>									<u>5:06</u>		

PLEASE NOTE: Labdry and Damages. Cardenal'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 analysis. 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 or its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder. In Cardenal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: [Signature] Date: 08/19 Time: 07:40 Received By: [Signature]

Delivered By: (Circle One) C.S.E Sample Condition: Intact CHECKED BY: [Signature]
 Cooler: Yes Cooler: Yes
 Sampler - UPS - Bus - Other: Corrected 0.9% Yes No Yes No

REMARKS: Email Results



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.

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:	09/06/2019	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 1 @ 12' 32.6124168-103.2729871 (H903092-01)

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	09/10/2019	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 BTEX	<0.300	0.300	09/10/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIL) 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)

BTEX 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 BTEX	<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

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*=Accredited Analyte

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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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Celey D. Keene

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.

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)

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 (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

Cardinal Laboratories

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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 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

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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 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

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 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)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

Surrogate: 4-Bromofluorobenzene (PID) 87.7 % 73.3-129

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 81.6 % 41-142

Surrogate: 1-Chlorooctadecane 86.6 % 37.6-147

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*=Accredited Analyte

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Celestine Keene

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

Cardinal Laboratories

*=Accredited Analyte

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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: <u>Agache</u> Project Manager: <u>Jeffrey Bacon</u>		BILL TO		P.O. #: Company: Attn: Address: City: State: Zip:	
Address: City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88240</u>		Project #: Project Owner: Project Name: Project Location: <u>WUGSALL 2119</u>		City: State: Zip: Phone #: Fax #: Project #: Project Owner:	
Sample Name: <u>Joe Cassella</u>		Fax #:		Phone #:	
FOR LAB USE ONLY					
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER	ACID/BASE: (C)/ COOL OTHER
1903114	32 GIBS-45E 33 GIBS-45G 34 GIBS-45H 35 GIBS-45I 36 GIBS-45J 37 GIBS-45K 38 GIBS-45L 39 GIBS-45M 40 GIBS-45N	(C)	1 1 1 1 1 1 1 1 1	/ / / / / / / /	/ / / / / / / /
1 2 3 4	32 GIBS-45E 33 GIBS-45G 34 GIBS-45H 35 GIBS-45I 36 GIBS-45J 37 GIBS-45K 38 GIBS-45L 39 GIBS-45M 40 GIBS-45N	(C)	1 1 1 1	/ / / /	/ / / /
DATE	TIME	DATE	TIME	EXT. TPH	BTEX
9/10	7:57	9/10	7:59	/	/
9/10	8:01	9/10	11:47	/	/



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.

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: 09/09/2019
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: B3 @ 12' 32.6123770-103.2730927 (H903102-01)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene*, Toluene*, Ethylbenzene*, Total Xylenes*, Total BTEX.

Surrogate: 4-Bromofluorobenzene (PID) 91.3 % 73.3-129

Table for Chloride, SM4500Cl-B. Columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row: Chloride 48.0 16.0 09/10/2019 ND 416 104 400 3.92

Table for TPH 8015M. Columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows: GRO C6-C10*, DRO >C10-C28*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 74.9 % 41-142

Surrogate: 1-Chlorooctadecane 77.6 % 37.6-147

Cardinal Laboratories * = Accredited Analyte

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 client for analyses.

Signature of 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:	09/09/2019	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: 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, 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

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	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)

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, 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

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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:	NMGS AU #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 (PII) 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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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:	09/09/2019	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)

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) 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	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, 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: B2 @ 12' 32.6124219-103.2730907 (H903102-08)

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	09/10/2019	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) 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



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



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: Apex
 Project Manager: Bruce Baker / Jeffrey Brown
 Address: 1000 State: UT Zip: 88240
 City: Hobbs P.O. #: _____
 Phone #: _____ Fax #: _____ Attn: _____
 Project #: _____ Project Owner: _____ Address: _____
 Project Name: _____ City: _____ State: _____ Zip: _____
 Project Location: ALBESALE #819 Phone #: _____
 Sampler Name: Jim Quercoberry Fax #: _____
 FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX						PRESERV	SAMPLING	DATE	TIME	REMARKS	EXT	TPH	PTX
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER								
H903102																	
1	B5 @ 12' - 32.0225770		1									9/9	7:55				
2	35 @ 12' - 32.0490195		1									9/9	0:45				
3	81 @ 12' - 32.0610535		1									9/9	0:47				
4	01 @ 12' - 32.0625532		1									9/9	0:59				
5	88 @ 12' - 32.0630808		1									9/9	13:56				
6	89 @ 12' - 32.0632805		1									9/9	15:58				
7	81 @ 12' - 32.0637825		1									9/9	13:40				
8	02 @ 12' - 32.0642414		1									9/9	4:03				

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Relinquished By: _____ Date: 9/9 Received By: _____ Date: 10/5/1
 Time: _____ Time: _____
 Delivered By: (Circle One) 3:22 Sample Condition: 3:12
 Cooler Intact: YES Checked By: _____ (Initials)
 Sampler - UPS - Bus - Other: Printed 3:12 YES NO YES NO

REMARKS: _____
 Phone Result: Yes No Add'l Phone #: _____
 Fax Result: Yes No Add'l Fax #: _____

Emeril Results -



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.

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
 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, SM4500CI-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, 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	09/05/2019	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

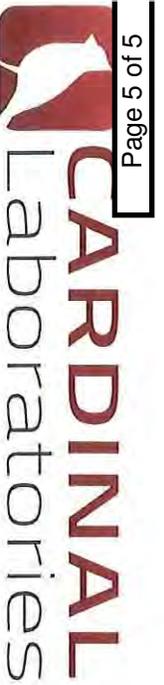
Cardinal Laboratories

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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: <i>Apple</i>		BILL TO		ANALYSIS REQUEST															
Project Manager: <i>Jeff Brown</i>		P.O. #:																	
Address:		Company:																	
City: <i>Hobbs</i> State: <i>NM</i> Zip:		Attn:																	
Phone #: Fax #:		Address:																	
Project #: Project Owner:		City:																	
Project Name:		State:																	
Project Location: <i>NMGS AU 42119</i>		Phone #:																	
Sampler Name: <i>Sosa Berwald</i>		Fax #:																	
FOR LAB USE ONLY		PRESERV		SAMPLING															
Lab I.D. Sample I.D.		MATRIX		DATE		TIME													
<i>HPD3065</i>		(G)RAB OR (C)OMP.		<i>9/4</i>		<i>4:54pm</i>													
<i>1</i>		# CONTAINERS		<i>4:58pm</i>		<i>5:00pm</i>													
<i>2</i>		GROUNDWATER		<i>5:02pm</i>		<i>5:04pm</i>													
<i>3</i>		WASTEWATER		<i>5:06pm</i>		<i>5:06pm</i>													
<i>4</i>		SOIL																	
<i>5</i>		OIL																	
<i>6</i>		SLUDGE																	
		OTHER:																	
		ACID/BASE:																	
		ICE / COOL																	
		OTHER:																	

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Relinquished By: <i>[Signature]</i>	Date: <i>9/5/19</i>	Received By: <i>[Signature]</i>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: <i>07:40</i>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Delivered By: (Circle One) <i>CS</i>	Sampler - UPS - Bus - Other: <i>Collected 0.9%</i>	Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	REMARKS: <i>Email Results</i>	
Checked By: <i>[Signature]</i>	Time: <i>7:00</i>	Checked By: (Initials) <i>FB</i>		



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.

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:	09/06/2019	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 1 @ 12' 32.6124168-103.2729871 (H903092-01)

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	09/10/2019	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 BTEX	<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)

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	2.10	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 BTEX	<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



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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



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.

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.

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:	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)

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	GC-NC	
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) 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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* = 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	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: 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, 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

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:	09/09/2019	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)

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, 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

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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	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)

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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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:	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 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, 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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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:	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)

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



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: 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, 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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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:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: B2 @ 12' 32.6124219-103.2730907 (H903102-08)

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	09/10/2019	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) 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

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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

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

Cardinal Laboratories

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Celey D. Keene

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

BILL TO

ANALYSIS REQUEST

Company Name: <u>Apex</u>		P.O. #:																
Project Manager: <u>Bruce Baker / Jeffrey Beem</u>		Company:																
Address:		Attn:																
City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88240</u>		Address:																
Phone #: _____ Fax #: _____		City:																
Project #: _____ Project Owner:		State:																
Project Name:		Zip:																
Project Location: <u>WASSACE #2119</u>		Phone #:																
Sampler Name: <u>Jim Quevedo</u>		Fax #:																
FOR LAB USE ONLY																		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV.	SAMPLING	DATE	TIME	REMARKS	EXT	TPH	BTEX						
<u>H903102</u>	<u>1</u>	<u>31.045370</u>	<u>1</u>	<u>SOIL</u>	<u>ICE/COOL</u>	<u>1</u>	<u>9/9</u>	<u>7:55</u>	<u>101</u>	<u>EXT</u>	<u>TPH</u>	<u>BTEX</u>						
	<u>2</u>	<u>32.818193</u>	<u>1</u>	<u>SOIL</u>	<u>ICE/COOL</u>	<u>1</u>	<u>9/9</u>	<u>9:45</u>	<u>101</u>	<u>EXT</u>	<u>TPH</u>	<u>BTEX</u>						
	<u>3</u>	<u>32.818193</u>	<u>1</u>	<u>SOIL</u>	<u>ICE/COOL</u>	<u>1</u>	<u>9/9</u>	<u>9:47</u>	<u>101</u>	<u>EXT</u>	<u>TPH</u>	<u>BTEX</u>						
	<u>4</u>	<u>32.818193</u>	<u>1</u>	<u>SOIL</u>	<u>ICE/COOL</u>	<u>1</u>	<u>9/9</u>	<u>10:59</u>	<u>101</u>	<u>EXT</u>	<u>TPH</u>	<u>BTEX</u>						
	<u>5</u>	<u>32.818193</u>	<u>1</u>	<u>SOIL</u>	<u>ICE/COOL</u>	<u>1</u>	<u>9/9</u>	<u>13:56</u>	<u>101</u>	<u>EXT</u>	<u>TPH</u>	<u>BTEX</u>						
	<u>6</u>	<u>32.818193</u>	<u>1</u>	<u>SOIL</u>	<u>ICE/COOL</u>	<u>1</u>	<u>9/9</u>	<u>13:58</u>	<u>101</u>	<u>EXT</u>	<u>TPH</u>	<u>BTEX</u>						
	<u>7</u>	<u>32.818193</u>	<u>1</u>	<u>SOIL</u>	<u>ICE/COOL</u>	<u>1</u>	<u>9/9</u>	<u>13:40</u>	<u>101</u>	<u>EXT</u>	<u>TPH</u>	<u>BTEX</u>						
	<u>8</u>	<u>32.818193</u>	<u>1</u>	<u>SOIL</u>	<u>ICE/COOL</u>	<u>1</u>	<u>9/9</u>	<u>4:03</u>	<u>101</u>	<u>EXT</u>	<u>TPH</u>	<u>BTEX</u>						

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Relinquished By: _____ Date: 9/9
 Received By: Jawara
 Relinquished By: _____ Date: 10/5/21
 Received By: _____

Delivered By: (Circle One) 2.72 497 Sample Condition: Cool Intact
 Sampler - UPS - Bus - Other: Collected 3.16 Yes No Yes No
 CHECKED BY: VB
 Phone Result: Yes No Add'l Phone #: _____
 Fax Result: Yes No Add'l Fax #: _____
 REMARKS: Emergi Results



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.

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.

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)

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	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 (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

*=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 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 (PID) 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

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	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 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) 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, Lab Director/Quality Manager



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

Notes and Definitions

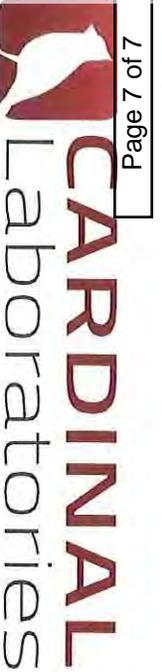
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on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

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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>Aguelva</u> Project Manager: <u>Jeffrey Brown</u> Address: _____ City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88240</u> Phone #: _____ Fax #: _____ Project #: _____ Project Owner: _____ Project Name: _____ Project Location: <u>MUSGRAVE 2119</u> Sampler Name: <u>one container</u>		P.O. #: _____ Company: _____ Attn: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone #: _____ Fax #: _____	
BILL TO			
ANALYSIS REQUEST			
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: <u>9/10</u> Time: <u>12:25</u>	Received By: _____ Date: _____ Time: _____	CHECKED BY: _____ (Initials) <u>yo</u>	
Delivered By: (Circle One) <u>5:62</u> Sampler - UPS - Bus - Other: <u>Commercial 605</u>	Sample Condition Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	REMARKS: <u>Envi! Results,</u> <u>(Regular)</u>	
Lab I.D. <u>H903114</u> Sample I.D. _____	(G)RAB OR (C)OMP _____ # CONTAINERS _____ MATRIX GROUNDWATER _____ WASTEWATER _____ SOIL _____ OIL _____ SLUDGE _____ OTHER: _____ ACID/BASE: _____ (C) COOL _____ OTHER: _____	DATE _____ TIME _____ EXT. TPH _____ BTEX _____	SAMPLING _____
1 B11 @ 12' 32.6123450 2 B12 @ 12' 32.6123450 3 B13 @ 12' 32.6123450 4 B14 @ 12' 32.6123450	1 1 1 1 1 1 1 1	9/10 7:57 9/10 7:59 9/10 8:01 9/10 11:47	_____ _____ _____ _____



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.

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:	09/11/2019	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 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	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 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	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 (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	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 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 (PID) 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

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:	09/11/2019	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 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, 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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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	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



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 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



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

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

Celey D. Keene, Lab Director/Quality Manager



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

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.

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:	09/13/2019	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 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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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:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Mike Snyder
Project Location:	NOT GIVEN		

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	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 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, 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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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:	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 (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	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: 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	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: 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, 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

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	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 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, 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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*=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	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 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

Cardinal Laboratories

*=Accredited Analyte

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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

BILL TO

ANALYSIS REQUEST

Company Name: Roche
 Project Manager: Anthony Brown
 Address: _____
 City: Hobbs State: NM Zip: 88240
 Phone #: _____ Fax #: _____
 Project #: _____ Project Owner: _____
 Project Name: _____
 Project Location: W & SALT #2119
 Sampler Name: Steve Duracela Jr.

P.O. #: _____ Company: _____
 Attn: _____ Address: _____
 City: _____ State: _____ Zip: _____
 Phone #: _____ Fax #: _____

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX						PRESERV.	SAMPLING	DATE	TIME	CI	EXT. TPH	BTEX
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :							
<u>H003162</u>	<u>B17 012' 32.612239</u>	<input type="checkbox"/>	<u>1</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>9/12</u>	<u>8:08</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>103.2730310</u>	<input type="checkbox"/>	<u>1</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>9/12</u>	<u>10:54</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>B20 012' 32.6121242</u>	<input type="checkbox"/>	<u>1</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>9/12</u>	<u>13:10</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>B15 012' 32.6123148</u>	<input type="checkbox"/>	<u>1</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>9/12</u>	<u>15:14</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>B16 012' 32.1023332</u>	<input type="checkbox"/>	<u>1</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>9/12</u>	<u>1:50</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>B09 32.6122163</u>	<input type="checkbox"/>	<u>1</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>9/12</u>	<u>1:50</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>-103.2729113</u>	<input type="checkbox"/>	<u>1</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>-103.2728448</u>	<input type="checkbox"/>	<u>1</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>-103.2728691</u>	<input type="checkbox"/>	<u>1</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>-103.2729334</u>	<input type="checkbox"/>	<u>1</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

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Relinquished By: [Signature] Date: 01/13/19
 Time: 5:13
 Received By: [Signature]
 Date: _____ Time: _____

Phone Result: Yes No Add'l Phone #:
 Fax Result: Yes No Add'l Fax #:
 REMARKS: u.c.c

Delivered By: (Circle One) 4.6c # 97 Sample Condition
 Cooler Intact
 Sampler - UPS - Bus - Other: Corrected 50c Yes No Yes No
 CHECKED BY: (Initials) TC

u.c.c
Enval/Resc/TS



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <u>ADP/SHR</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>		Address:																	
Phone #:		Fax #:		City:																	
Project #:		Project Owner:		State:																	
Project Name:		Phone #:		Zip:																	
Project Location: <u>WUGSTAR 2119</u>		Phone #:																			
Sampler Name: <u>Joe Quisenberry Jr.</u>		Fax #:																			
FOR LAB USE ONLY																					
Lab I.D. <u>A903162</u>		Sample I.D.																			
		(G)RAB OR (C)OMP.																			
		# CONTAINERS																			
		GROUNDWATER																			
		WASTEWATER																			
		SOIL																			
		OIL																			
		SLUDGE																			
		OTHER :																			
		ACID/BASE:																			
		(C)/ COOL																			
		OTHER :																			
		DATE		TIME																	
<u>6</u>		<u>WS</u>		<u>32.61228163</u>		<u>9/12</u>		<u>1500</u>		<u>1</u>		<u>EXT TPH</u>		<u>1</u>		<u>1</u>		<u>1</u>		<u>1</u>	
<u>7</u>		<u>319</u>		<u>32.6122829</u>		<u>9/12</u>		<u>3:31pm</u>		<u>1</u>		<u>1</u>		<u>1</u>		<u>1</u>		<u>1</u>		<u>1</u>	
<u>8</u>		<u>318</u>		<u>32.6122566</u>		<u>9/12</u>		<u>3:29</u>		<u>1</u>		<u>1</u>		<u>1</u>		<u>1</u>		<u>1</u>		<u>1</u>	
<u>1</u>		<u>-103.222.8781</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>	

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Relinquished By: [Signature] Date: 9/13/19 Time: 5:35

Received By: [Signature]

Delivered By: (Circle One) 4.6°C #197 Sample Condition Cool Intact Yes No

Sampler - UPS - Bus - Other: Consolidated 5.0°C Yes No

CHECKED BY: (Initials) YO

REMARKS: 4.6°C

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

Fax Result: Yes No Add'l Fax #: _____



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.

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.

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: 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	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 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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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 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	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, 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



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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 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, 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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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 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, 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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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 (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	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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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 (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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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 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, 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	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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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 (PID) 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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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 LCS/D 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

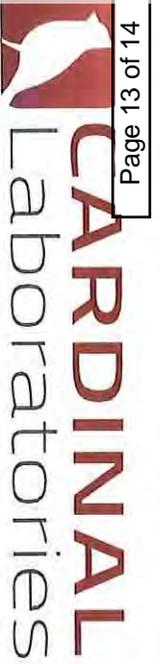
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Celey D. Keene

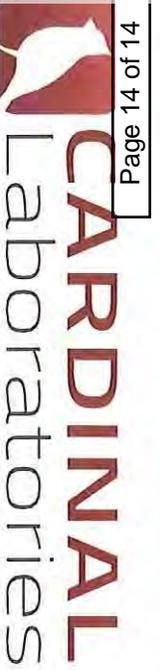
Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>ADP L1</u> Project Manager: <u>Sgt. Keon</u> Address: <u>Hobbs</u> State: <u>NM</u> zip: <u>88240</u> City: <u>Hobbs</u> State: <u>NM</u> zip: <u>88240</u> Phone #: _____ Fax #: _____ Project #: _____ Project Owner: _____ Project Name: _____ Project Location: <u>MMASAN 43117</u> Sampler Name: <u>Sosa Rios</u> FOR LAB USE ONLY		BILL TO P.O. #: _____ Company: _____ Attn: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone #: _____ Fax #: _____		
Lab I.D. <u>H903179</u> Sample I.D.	(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER :	MATRIX ACID/BASE: ICE / COOL OTHER :	PRESERV. SAMPLING DATE TIME	ANALYSIS REQUEST
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>[Signature]</u> Date: <u>2/11/20</u> Received By: <u>[Signature]</u> Date: <u>2/11/20</u> Relinquished By: <u>[Signature]</u> Date: <u>2/16/19</u> Received By: <u>[Signature]</u> Date: <u>2/16/19</u>		Delivered By: (Circle One) <u>3.7c</u> # <u>497</u> Sample Condition: <u>Intact</u> CHECKED BY: <u>[Signature]</u> Sampler - UPS - Bus - Other: <u>Preserved 4.1.12</u> Cool <input type="checkbox"/> Yes <input type="checkbox"/> No Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		
REMARKS: _____ 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 #: _____				



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>Pruchin Jeffrey Brown</u>		P.O. #:									
Project Manager: <u>Jeffrey Brown</u>		Company:									
Address:		Attn:									
City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88240</u>		Address:									
Phone #: _____ Fax #: _____		City:									
Project #: _____ Project Owner:		State:									
Project Name:		Zip:									
Project Location: <u>MUSTAU 2114</u>		Phone #:									
Sampler Name: <u>Chel Quastler Jr</u>		Fax #:									
FOR LAB USE ONLY											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV	SAMPLING	DATE	TIME	EXT	PHI	BTEX
<u>H903716</u>	<u>BAG 012 32.6123182</u>		1	SOIL			9/13	11:45	/	/	/
	<u>-103.2727883</u>			WASTEWATER					/	/	/
	<u>327012 32.6124058</u>		1	SOIL			9/13	13:00	/	/	/
	<u>-103.2728147</u>			WASTEWATER					/	/	/
	<u>8 W12 32.6125323</u>		1	SOIL			9/13	15:25	/	/	/
	<u>-103.2728815</u>			WASTEWATER					/	/	/
	<u>9 BAG 012 32.6123391</u>		1	SOIL			9/13	12:13	/	/	/
	<u>-103.2728375</u>			WASTEWATER					/	/	/
	<u>16 BAG 012 32.6122533</u>		1	SOIL			9/13	17:05	/	/	/
	<u>-103.27271678</u>			WASTEWATER					/	/	/

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Relinquished By: [Signature] Date: 9/10 Time: 9:00 Received By: [Signature]
 Relinquished By: [Signature] Date: 9-16-19 Time: 11:40 Received By: [Signature]

Delivered By: (Circle One) 3.72 Sample Condition: Intact CHECKED BY: [Signature]
 Sampler - UPS - Bus - Other: Assisted 4.12 Cool Yes No Intact Yes No
 Phone Result: Yes No Add'l Phone #: _____
 Fax Result: Yes No Add'l Fax #: _____
 REMARKS: Email Results



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.

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.

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:	NMGSAU #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



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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 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, 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



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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 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, 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	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 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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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:	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 (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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*=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:	09/14/2019
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 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, 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



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:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

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, 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



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:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

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, 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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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:	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 (PID) 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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* = 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:	09/14/2019
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 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, 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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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:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

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

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	09/19/2019	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 BTEX	<0.300	0.300	09/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 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

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

- 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

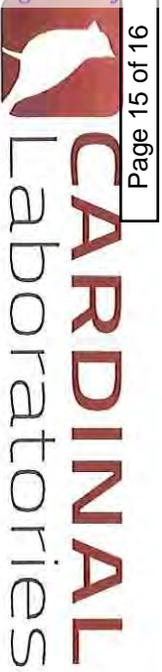
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Celey D. Keene

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: <u>Apex</u> Project Manager: <u>Jeffrey Brown</u> Address: _____ City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88240</u> Phone #: _____ Fax #: _____ Project #: _____ Project Owner: _____ Project Name: _____ Project Location: <u>WML GSHA #2119</u> Sampler Name: <u>Joe L. Pinescales, Jr.</u>		P.O. #: _____ Company: _____ Attn: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone #: _____ Fax #: _____							
BILL TO									
ANALYSIS REQUEST									
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX	PRESERV	SAMPLING	DATE	TIME	REMARKS
<u>AH03177</u>	<u>B30 012 32.612 46805</u>	<input checked="" type="checkbox"/>	1	SOIL	<input checked="" type="checkbox"/>	COOL	9/14	12:38	EXT TRH BTEX
	<u>-103.2727885</u>			GROUNDWATER					
	<u>B33 012 32.612 3673</u>	<input checked="" type="checkbox"/>	1	WASTEWATER			9/14	4:24 pm	
	<u>-103.2727364</u>			SOIL					
	<u>8 034 012 32.612 4354</u>	<input checked="" type="checkbox"/>	1	SLUDGE			9/14	7:34	
	<u>-103.2727041</u>			OTHER :					
	<u>9 335 012 32.612 4682</u>	<input checked="" type="checkbox"/>	1	OTHER :			9/14	7:36	
	<u>-103.2727859</u>			ACID/BASE:					
	<u>10 B36 012 32.612 3720</u>	<input checked="" type="checkbox"/>	1	CE/COOL			9/14	7:36	
	<u>-103.2727806</u>			OTHER :					

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Relinquished By: _____ Date: 9/16 Received By: Jeffrey Brown

Relinquished By: Joe L. Pinescales, Jr. Date: 9/16/19 Received By: Joe L. Pinescales, Jr.

Delivered By: (Circle One) 3:72 Sample Condition: Intact CHECKED BY: Joe L. Pinescales, Jr.

Sampler - UPS - Bus - Other: Counted 4.12 Cool Intact Yes No No No No

Phone Result: Yes No Add'l Phone #: _____
 Fax Result: Yes No Add'l Fax #: _____
 REMARKS: _____



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

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.

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.

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 (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

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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:	09/16/2019
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 (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	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	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 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	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 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, 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



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 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 (PID) 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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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 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, 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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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 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, 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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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 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 (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



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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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

BILL TO

ANALYSIS REQUEST

Company Name: <i>APD</i>		P.O. #:																		
Project Manager: <i>Self Brown</i>		Company:																		
Address:		Attn:																		
City: <i>Hobbs</i>		Address:																		
State: <i>NM</i> Zip: <i>88240</i>		City:																		
Phone #:		State:																		
Project #:		Zip:																		
Project Name:		Project Owner:																		
Project Location: <i>NM HSA 4215</i>		Phone #:																		
Sampler Name: <i>Soc Redoche</i>		Fax #:																		
FOR LAB USE ONLY		PRESERV		SAMPLING																
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	DATE	TIME														
<i>H903211</i>																				
<i>1</i>	<i>B38012' 32.612.3881</i>	<i>C</i>	<i>1</i>	GROUNDWATER	<i>9/16</i>	<i>9:30am</i>	<i>1</i>	<i>1</i>	<i>1</i>											
<i>2</i>	<i>-103.272.7551</i>	<i>C</i>	<i>1</i>	WASTEWATER	<i>9/16</i>	<i>5:30am</i>	<i>1</i>	<i>1</i>	<i>1</i>											
<i>3</i>	<i>B39012 32.612.2818</i>	<i>C</i>	<i>1</i>	SOIL	<i>9/16</i>	<i>12:45pm</i>	<i>1</i>	<i>1</i>	<i>1</i>											
<i>4</i>	<i>-103.272.7108</i>	<i>C</i>	<i>1</i>	OIL	<i>9/16</i>	<i>12:42</i>	<i>1</i>	<i>1</i>	<i>1</i>											
<i>5</i>	<i>B42012' 32.612.2833</i>	<i>C</i>	<i>1</i>	SLUDGE	<i>9/16</i>	<i>3:01pm</i>	<i>1</i>	<i>1</i>	<i>1</i>											
	<i>-103.272.7245</i>	<i>C</i>	<i>1</i>	OTHER:																
				ACID/BASE:																
				ICE / COOL																
				OTHER:																

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Relinquished By: *[Signature]* Date: *9/18/15* Time: *10:00am* Received By: *[Signature]* Date: *9/18/15* Time: *9:15*

Phone Result: Yes No Add'l Phone #: _____
 Fax Result: Yes No Add'l Fax #: _____

Delivered By: (Circle One) *UPS* *Bus* *Other* *1.75* *2.12* *3.12*

Sample Condition: Intact Cool Yes No Yes No

Checked By: *[Signature]* Initials: *[Signature]*

REMARKS: *S-mail Results*



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <u>Agilent</u>		P.O. #:		ANALYSIS REQUEST					
Project Manager: <u>Sally Brown</u>		Company:							
Address:		Attn:							
City: <u>Hobbs</u>		Address:							
State: <u>NM</u> Zip: <u>88240</u>		City:							
Phone #:		State:							
Fax #:		Zip:							
Project #:		Project Owner:							
Project Name:		Project Location: <u>NW 65th #2115</u>							
Sampler Name: <u>SSe Coates</u>		Phone #:							
FOR LAB USE ONLY		Fax #:							
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV	SAMPLING	DATE	TIME	REMARKS
<u>HPD5211</u>	<u>1343@12 32.612 2095</u>	<u>C</u>	<u>1</u>	GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER:	<u>1</u>	<u>9/16</u>	<u>3:03pm</u>	<u>1</u>	<u>BTEx</u> <u>EXT TPH</u>
	<u>7 1344@12 32.612 1575</u>	<u>C</u>	<u>1</u>		<u>1</u>	<u>9/16</u>	<u>5:13pm</u>	<u>1</u>	
	<u>8 B45@12 32.612 1858</u>	<u>C</u>	<u>1</u>		<u>1</u>	<u>9/16</u>	<u>5:15pm</u>	<u>1</u>	

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Relinquished By: [Signature] Date: 9/18/19 Received By: [Signature] Date: 9/18/19

Relinquished By: [Signature] Date: 9/18/19 Received By: [Signature] Date: 9/18/19

Delivered By: [Signature] Time: 4:15 Received By: [Signature] Time: 4:47

Sampler - UPS - Bus - Other: 1.70 Contained 2.12

Sample Condition: Intact Cool Yes No

CHECKED BY: [Signature]

REMARKS: 9-Mar Rest 1Hs



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.

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:	09/17/2019
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 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

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	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 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, 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

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	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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* = 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	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 (PID) 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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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:	09/17/2019
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 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, 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

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	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 (PID) 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

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	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 52 @ 12' 32.6119550-103.2728067 (H903212-07)

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	09/21/2019	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) 89.3 % 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

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	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)

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, 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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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:	09/17/2019
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

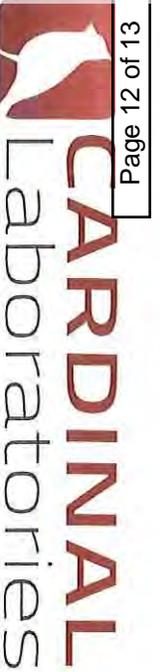
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on 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. #:		BILL TO		ANALYSIS REQUEST						
Project Manager: <u>Jill May Brown</u>		Company:										
Address:		Attn:										
City: <u>Hobbs</u>		State: <u>NM</u> Zip: <u>88240</u>		Address:								
Phone #:		Fax #:		City:								
Project #:		Project Owner:		State:		Zip:						
Project Name:		Project Location: <u>MUSGRAVE 219</u>		Phone #:								
Sampler Name: <u>Doc Cunniff</u>		Fax #:		Date:								
FOR LAB USE ONLY				SAMPLING								
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX	PRESERV	DATE	TIME	EXT TPH	BTEX			
<u>H903212</u>	<u>BY 010' 32.61201000</u>	<input checked="" type="checkbox"/>	<u>1</u>	GROUNDWATER		<u>9/17</u>	<u>10:14</u>	<u>✓</u>	<u>✓</u>			
	<u>-103.2729757</u>			WASTEWATER								
	<u>2 BY 17 010' 32.6120251</u>		<u>1</u>	SOIL		<u>9/17</u>	<u>10:16</u>	<u>✓</u>	<u>✓</u>			
	<u>-103.2729522</u>			OIL								
	<u>3 BY 8 010' 32.6120286</u>		<u>1</u>	SLUDGE		<u>9/17</u>	<u>11:18</u>	<u>✓</u>	<u>✓</u>			
	<u>-103.2729559</u>			OTHER :								
	<u>4 BY 9 32.6119759</u>		<u>1</u>	ACID/BASE:		<u>9/17</u>	<u>14:16</u>	<u>✓</u>	<u>✓</u>			
	<u>-103.2728892</u>			COOL								
	<u>5 BY 0 32.61191697</u>		<u>1</u>	OTHER :		<u>9/17</u>	<u>14:22</u>	<u>✓</u>	<u>✓</u>			
	<u>-103.2729909</u>											

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Relinquished By: Doc Cunniff Date: 9/18/19 Time: 9:15
 Received By: Joaki Henderson
 Delivered By: (Circle One) #97 Sample Condition: Intact Cool Yes No Intact Yes No

REMARKS: 1.9% Permitted site
Small Results.



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

31 of 13 page

BILL TO

ANALYSIS REQUEST

Company Name: _____ P.O. #: _____
 Project Manager: _____ Company: _____
 Address: _____ Attn: _____
 City: _____ State: _____ Zip: _____
 Phone #: _____ Fax #: _____
 Project #: _____ Project Owner: _____
 Project Name: _____ City: _____ State: _____ Zip: _____
 Project Location: _____ Phone #: _____
 Sampler Name: _____ Fax #: _____
 FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OM	# CONTAINERS	MATRIX							PRESERV.	SAMPLING	DATE	TIME	C1	EXT TPH	BTEX
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:							
H903212	6 R51 012' 32.6119770		1									9/17	15:17				
	-103. 2729581		1									9/17	16:20				
	7 R52 012' 32.6119550		1									9/17	17:18				
	-103. 2728067		1									9/17	18:58				
	8 R53 012' 32.6120324		1									9/17	18:58				
	-103. 2728724		1									9/17	18:58				
	9 R54 012' 32.6120673		1									9/17	18:58				
	-103. 2728127		1									9/17	18:58				

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Relinquished By: *Lee Dunsell* Date: *9/19/19* Received By: *Spacie Henderson*
 Time: _____ Date: _____

REMARKS: *Email Results*
 Phone Result: Yes No Add'l Phone #: _____
 Fax Result: Yes No Add'l Fax #: _____

Delivered By: (Circle One) *UPS* *1.95* *UPS* *497*
 Cooler Yes No Intact Yes No
 Sample Condition: *497*
 CHECKED BY: *[Signature]*



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 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.

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.

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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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 56 @ 12' 32.6120793-103.2728684 (H903232-02)

BTEX 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	
Total Xylenes*	0.221	0.150	09/23/2019	ND	5.36	89.4	6.00	1.02	
Total BTEX	0.221	0.100	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 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
Chloride	864	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*	21.5	10.0	09/20/2019	ND	190	95.0	200	0.113	
DRO >C10-C28*	395	10.0	09/20/2019	ND	197	98.4	200	3.16	
EXT DRO >C28-C36	45.3	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



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 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



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 58 @ 12' 32.6121260-103.2727816 (H903232-04)

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	09/23/2019	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) 98.5 % 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, 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 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, 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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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 60 @ 12' 32.6121496-103.2727276 (H903232-06)

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	09/23/2019	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) 96.5 % 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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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:	09/18/2019
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 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 (PID) 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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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 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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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 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, 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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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 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, 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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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 (PID) 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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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

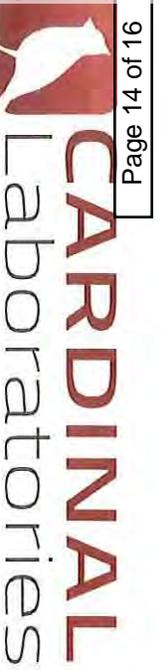
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Celey D. Keene

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:		Project Manager:		Address:		City:		State:		Zip:		P.O. #:		Company:		Attn:		Address:		City:		State:		Zip:			
Meyer		Jeffrey Brown		Hobbs		NM		88240		88240																	
Project Location:		Project Name:		Project #:		Project Owner:		Project #:		Project Owner:		Project #:		Project Owner:		Project #:		Project Owner:		Project #:		Project Owner:		Project #:		Project Owner:	
SUBSTAN AIR		JACQUETTE G																									
FOR LAB USE ONLY		Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX		PRESERV.		SAMPLING		DATE		TIME									
H903332		1		R55 @ 12' 32.6120731		C 1		1		GROUNDWATER		✓		9/18		7:38											
		2		R56 @ 12' 32.6228784		C 1		1		WASTEWATER		✓		9/18		8:43											
		3		R57 @ 12' 32.6121933		C 1		1		SOIL		✓		9/18		10:09											
		4		R58 @ 12' 32.6121260		C 1		1		OIL		✓		9/18		10:13											
		5		R59 @ 12' 32.6121327		C 1		1		SLUDGE		✓		9/18		13:05											
				-103.2727816						OTHER:		ACID/BASE:		DATE		TIME											
				-103.2727604						OTHER:		OTHER:															

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Relinquished By: *[Signature]* Date: 9/18/19 Received By: *[Signature]* Date: 9/18/19
 Reinstated By: *[Signature]* Date: 9/18/19 Received By: *[Signature]* Date: 9/18/19

Delivered By: (Circle One) 2.02 Sample Condition: Cool Intact Intact Yes No
 Sampler: UPS - Bus - Other: 2.44 #97



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: <i>Apex</i>		P.O. #:	
Project Manager: <i>Jeff Brown</i>		Company:	
Address:		Attn:	
City: <i>Hobbs</i>		Address:	
State: <i>NM</i> zip: <i>88240</i>		City:	
Phone #:		State:	
Project #:		Zip:	
Project Name:		Project Location: <i>DUGSSAN 8119</i>	
Sampler Name: <i>Joe Overcash Jr.</i>		Phone #:	
FOR LAB USE ONLY		Fax #:	

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.		DATE	TIME	ANALYSIS	REMARKS	
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	COOL					OTHER :
<i>H9903252</i>	<i>360 @12' (12)1446</i>	<i>C</i>	<i>1</i>	<input checked="" type="checkbox"/>								<i>9/18</i>	<i>13:10</i>	<i>C</i>	<i>EXT TPH</i>	<i>BTEX</i>
<i>7</i>	<i>B61 @12 32.6119448</i>	<i>C</i>	<i>1</i>									<i>9/18</i>	<i>13:31</i>	<i>-</i>	<i>-</i>	
<i>8</i>	<i>B62 @12 32.6119076</i>	<i>C</i>	<i>1</i>									<i>9/18</i>	<i>14:06</i>	<i>-</i>	<i>-</i>	
<i>9</i>	<i>B63 @12 32.6119728</i>	<i>C</i>	<i>1</i>									<i>9/18</i>	<i>14:57</i>	<i>-</i>	<i>-</i>	
<i>10</i>	<i>B64 @12 32.6120652</i>	<i>C</i>	<i>1</i>									<i>9/18</i>	<i>16:00</i>	<i>-</i>	<i>-</i>	

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 analysis. 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.

Reinquired By: *John Lunsford Jr.* Date: *9/18/19* Received By: *John Lunsford Jr.* Time: *17:07*

Delivered By: (Circle One) UPS - Bus - Other: Corrected Temp. °C *2.0* Sample Condition: Intact Cool Yes No No

Turnaround Time: *Standard* *Rush* Bacteria (only) Sample Condition: Cool Intact Yes No No No

Thermometer ID #97 Correction Factor + 0.4 °C

Verbal Results: Yes No Add'l Phone #: *817-211-1115*

REMARKS: *Email Results*

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



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: 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.

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	Sampling Date:	09/19/2019
Reported:	09/24/2019	Sampling Type:	Soil
Project Name:	NEDU #929	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 3 @ 5' (H903247-01)

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*	0.058	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 BTEX	<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

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	Sampling Date:	09/19/2019
Reported:	09/24/2019	Sampling Type:	Soil
Project Name:	NEDU #929	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

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

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	Sampling Date:	09/19/2019
Reported:	09/24/2019	Sampling Type:	Soil
Project Name:	NEDU #929	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 3 @ 15' (H903247-03)

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) 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

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	Sampling Date:	09/19/2019
Reported:	09/24/2019	Sampling Type:	Soil
Project Name:	NEDU #929	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

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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*=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

- 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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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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: 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.

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.

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

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 client for 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 thirty (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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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:	09/18/2019
Reported:	09/24/2019	Sampling Type:	Soil
Project Name:	NEDU #928	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 2 @ 10' (H903248-02)

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) 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

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	Sampling Date:	09/18/2019
Reported:	09/24/2019	Sampling Type:	Soil
Project Name:	NEDU #928	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

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, SM4500CI-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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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:	09/18/2019
Reported:	09/24/2019	Sampling Type:	Soil
Project Name:	NEDU #928	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

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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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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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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.

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.

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:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

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

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	09/23/2019	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) 88.2 % 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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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:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

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 (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	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



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:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

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



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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 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	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 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, 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



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:	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)

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) 90.1 % 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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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:	NMGSAU #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)

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) 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



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:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

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, 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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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:	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)

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, 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	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 75 @ 12' 32.6119189-103.2727712 (H903252-10)

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	1.81	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) 90.0 % 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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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:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

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

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	09/24/2019	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 BTEX	<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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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:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

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

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	09/24/2019	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 BTEX	<0.300	0.300	09/24/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 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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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 78 @ 12' 32.6120200-103.2727286 (H903252-13)

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	09/24/2019	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 BTEX	<0.300	0.300	09/24/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 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

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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

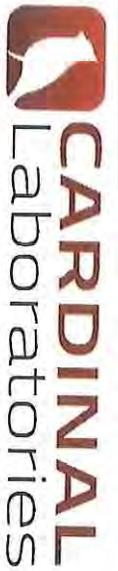
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*=Accredited Analyte

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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.
 Project Manager: Jeffery Brown
 Address:
 City: Hobbs State: NM Zip: 88240
 Phone #: Fax #:
 Project #: Project Owner:
 Project Name:
 Project Location: NECSAN 0119
 Sampler Name: Dee Dumbauld Jr

BILL TO
 P.O. #:
 Company:
 Attn:
 Address:
 City:
 State: Zip:
 Phone #: Fax #:

Lab I.D.	Sample I.D.	(G)RAB OR (DOM)	# CONTAINERS	MATRIX						DATE	TIME	REMARKS
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:			
H903252	B.00012.32.6120803	C	1							9/19	8:13	C1 EYT TPH BTEX
	-103.0727025											
	B607 01232.6120504	C	1							9/19	11:30	
	-103.0727400											
	B68 01232.6120239	C	1							9/19	11:36	
	-103.0727504											
	B69 32.6120198	C	1							9/19	11:42	
	-103.0727537											
	B70 01232.6120217	C	1							9/19	11:57	
	-103.0727572											

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Relinquished By: *Dee Dumbauld Jr* Date: 9/19/19
 Received By: *Jawara Dlatky* Date: 9/19/19
 Time: 11:05

Verbal Result: Yes No Add'l Phone #:
 All Results are emailed. Please provide Email address:
 REMARKS: *Email Results by Jeff Brown*

Delivered By: (Circle One) UPS - Bus - Other: Corrected Temp. °C: 0.6
 Sampler - UPS - Bus - Other: FORM-006 R.3.0 Corrected Temp. °C: 1.0
 Sample Condition: Cool Intact Yes No
 Checked By: (Initials) *TD*
 Turnaround Time: Standard Rush
 Bacteria (only) Sample Condition: Cool Intact Yes No
 Corrected Temp. °C: Yes No

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



101 East Marland, Hobbs, NM 88240
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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <i>Hoach Corp</i> Project Manager: <i>Jeffrey Brown</i>		P.O. #: Company:							
Address: City: <i>Hobbs</i> State: <i>NM</i> Zip: <i>88240</i>		Attn: Address:							
Phone #: Fax #: Project #: Project Owner:		City: State: Zip:							
Project Name: Project Location: <i>Wilb's Place 0119</i>		Phone #: Zip:							
Sampler Name: <i>for Quasimodo, Jr.</i>		Fax #:							
FOR LAB USE ONLY									
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX	PRESERV.	SAMPLING	DATE	TIME	REMARKS
<i>H903252</i>	<i>TS71 012 32.6120217</i>	<input checked="" type="checkbox"/>	1	SOIL	<input checked="" type="checkbox"/> COOL		9/19	12:03	<i>Ext TPH</i>
	<i>-103 2727578</i>	<input type="checkbox"/>		WASTEWATER			9/19	13:30	<i>BTEX</i>
	<i>872.012 32.619186</i>	<input type="checkbox"/>	1	SOIL			9/19	13:36	
	<i>-103 2727507</i>	<input type="checkbox"/>	1	SOIL			9/19	13:36	
	<i>873012 32.619110</i>	<input type="checkbox"/>	1	SOIL			9/19	14:51	
	<i>-103 2727592</i>	<input type="checkbox"/>	1	SOIL			9/19	14:57	
	<i>874012 32.619056</i>	<input type="checkbox"/>	1	SOIL			9/19	14:57	
	<i>-103 2727762</i>	<input type="checkbox"/>	1	SOIL			9/19	14:57	
	<i>875012 32.619189</i>	<input type="checkbox"/>	1	SOIL			9/19	14:57	
	<i>-103 2727712</i>	<input type="checkbox"/>	1	SOIL			9/19	14:57	

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Relinquished By: <i>[Signature]</i> Date: <i>9/19-19</i>	Received By: <i>[Signature]</i> Date: <i>9/19-19</i>
Turnaround Time: _____ Thermometer ID #97 _____ Correction Factor + 0.4 °C _____	Standard <input checked="" type="checkbox"/> RUSH Bacteria (only) Sample Condition Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No Observed Temp. °C _____ Corrected Temp. °C _____

REMARKS: *Email Results to Jeffrey Brown*

Verbal Result: Yes No **Add'l Phone #:** _____

All Results are emailed. Please provide Email address: _____

Delivered By: (Circle One) **Observed Temp. °C** *0.6* **Sample Condition** Intact Cool Yes No

Sampler - UPS - Bus - Other: **Corrected Temp. °C** *1.0* Yes No

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



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Frederick Corp.</u> Project Manager: <u>Jeffrey Brown</u>		P.O. #: _____ Company: _____	
Address: _____ City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88240</u>		Attn: _____ Address: _____	
Phone #: _____ Fax #: _____ Project #: _____ Project Owner: _____		City: _____ State: _____ Zip: _____	
Project Name: _____ Project Location: <u>MUSAU 019</u>		Phone #: _____ Fax #: _____	
Sampler Name: <u>J. Quisenberry</u>		Matrix: _____	
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:
11 <u>A903252</u>	B76 012 82.6119412 103.2727334	1	SOIL
12	B77 012 32.6119485 -103.2727334	1	SOIL
13	B28 012 32.6119485 -103.2727334	1	SOIL
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: <u>9-19-19</u> Time: <u>7:05</u>		Received By: _____ Date: _____ Time: _____	
Reminushed By: _____ Date: _____ Time: _____		Received By: _____ Date: _____ Time: _____	
Delivered By: (Circle One) Observed Temp. °C: <u>0.6</u>		Sample Condition: Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>	
Sampler - UPS - Bus - Other: FORM-006 R 3.0 Corrected Temp. °C: <u>1.0</u>		CHECKED BY: (Initials) <u>JA</u>	
Turnaround Time: _____ Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>		Bacteria (only) Sample Condition: Cool <input type="checkbox"/> Intact <input type="checkbox"/>	
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 Result to Jeffrey Brown</u>		Thermometer ID #97 Correction Factor + 0.4 °C	

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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.

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:	09/24/2019	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 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) 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

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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

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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 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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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 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

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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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*=Accredited Analyte

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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

BILL TO

ANALYSIS REQUEST

Company Name: <u>Apacure Corp</u>		P.O. #:
Project Manager: <u>Jeffrey Brown</u>		Company:
Address:		Attn:
City: <u>Kelbs</u>	State: <u>NM</u> Zip: <u>88406</u>	Address:
Phone #:	Fax #:	City:
Project #:	Project Owner:	State:
Project Name:		Zip:
Project Location: <u>MESQUITE</u>		Phone #:
Sampler Name: <u>Joe Overland</u>		Fax #:
FOR LAB USE ONLY		

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV		DATE	TIME	REMARKS	STANDARD	ADD'l PHONE #	Bacteria (only)	Sample Condition	Observed Temp. °C
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	(ICE)/COOL								
<u>H903212</u>	<u>BTE012 320119567</u>	<u>0</u>	<u>1</u>			<u>✓</u>					<u>9/20</u>	<u>2:36</u>	<u>Ext TPH</u>						
	<u>-103222-7105</u>	<u>0</u>	<u>1</u>			<u>✓</u>					<u>9/20</u>	<u>13:50</u>	<u>BTEY</u>						
	<u>B80 012 32.6120275</u>	<u>0</u>	<u>1</u>			<u>✓</u>					<u>9/20</u>	<u>13:54</u>							
	<u>-103.272.6743</u>	<u>0</u>	<u>1</u>			<u>✓</u>					<u>9/20</u>	<u>13:50</u>							
	<u>B51 32.612.1375</u>	<u>0</u>	<u>1</u>			<u>✓</u>					<u>9/20</u>	<u>13:54</u>							
	<u>-103.272.62161</u>	<u>0</u>	<u>1</u>			<u>✓</u>					<u>9/20</u>	<u>13:54</u>							
	<u>R82012 32.6120784</u>	<u>0</u>	<u>1</u>			<u>✓</u>					<u>9/20</u>	<u>13:54</u>							
	<u>-103.272.62161</u>	<u>0</u>	<u>1</u>			<u>✓</u>					<u>9/20</u>	<u>13:54</u>							
	<u>103.272.62161</u>	<u>0</u>	<u>1</u>			<u>✓</u>					<u>9/20</u>	<u>13:54</u>							

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Relinquished By: Jeffrey Brown Date: 9/20 Time: 7:30 Received By: Mike Buhl

Relinquished By: Jeffrey Brown Date: 9/20 Time: 7:30 Received By: Mike Buhl

Delivered By: (Circle One) Observed Temp. °C 5.3 Corrected Temp. °C 5.7 Sample Condition: Cool Yes No Intact Yes No

Turnaround Time: Standard Rush Add'l Phone #: _____

Thermometer ID #97 Correction Factor + 0.4 °C Bacteria (only) Sample Condition: Cool Yes No Intact Yes No Observed Temp. °C 5.8 Corrected Temp. °C 5.7

REMARKS: Email to Jeffrey Brown

Verbal Result: Yes No Add'l Phone #: _____

All Results are emailed. Please provide Email address: _____



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

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.

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.

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

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:	09/23/2019
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 14 32.6124795 - 103.2727571 (H903273-02)

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) 82.5 % 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	09/25/2019	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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*=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:	09/23/2019
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 15 32.6124631 - 103.2727360 (H903273-03)

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) 82.7 % 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	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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*=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:	09/23/2019
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 16 32.6124199 - 103.2727075 (H903273-04)

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) 81.4 % 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	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

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:	09/23/2019
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 17 32.6123939 - 103.2726937 (H903273-05)

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	09/25/2019	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) 81.9 % 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	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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*=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:	09/23/2019
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 18 32.6123357 - 103.2726951 (H903273-06)

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	09/25/2019	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) 80.2 % 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	09/25/2019	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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*=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:	09/23/2019
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 19 32.6123092 - 103.2726910 (H903273-07)

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	09/25/2019	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) 78.6 % 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	09/25/2019	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

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:	09/23/2019
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 20 32.6122682 - 103.2726873 (H903273-08)

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	09/25/2019	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) 78.4 % 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	09/25/2019	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



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 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, 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	09/25/2019	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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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)

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) 80.0 % 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	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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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 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, 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	09/25/2019	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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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)

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) 82.0 % 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	09/25/2019	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

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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 27 32.6119516 - 103.2726119 (H903273-15)

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) 79.4 % 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	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

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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 28 32.6119220 - 103.272662 (H903273-16)

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) 81.7 % 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	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

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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 29 32.6118895 - 103.2727079 (H903273-17)

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) 81.7 % 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	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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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 30 32.6118697 - 103.2727410 (H903273-18)

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	09/26/2019	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 BTEX	<0.300	0.300	09/26/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 80.9 % 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	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	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 31 32.6118570 - 103.2727785 (H903273-19)

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) 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	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	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 32 32.6118898 - 103.2728308 (H903273-20)

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	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	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 33 32.6118974 - 103.2728855 (H903273-21)

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) 97.1 % 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	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



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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 34 32.6119175 - 103.2729113 (H903273-22)

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) 98.8 % 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	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

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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 35 32.6119641 - 103.2729160 (H903273-23)

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) 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	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



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 36 32.6120036 - 103.2729210 (H903273-24)

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) 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	09/25/2019	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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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 37 32.6120561 - 103.2729204 (H903273-25)

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) 94.9 % 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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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 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, 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	09/25/2019	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	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 84 @ 12' 32.6120595-103.2726910 (H903273-28)

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) 96.5 % 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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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 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



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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: B 86 @ 12' 32.6119847 - 103.2726350 (H903273-30)

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) 94.4 % 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	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



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

①

Company Name: Apex Corp. Project Manager: Debra Brown		P.O. #: Company:	
Address: City: Hobbs State: NM Zip: 88240		Attn: Address:	
Phone #: Fax #: Project #: Project Owner:		City: State: Zip:	
Project Location: Wagon 2119		Phone #: Fax #:	
Sampler Name: Joe Quinsler Jr.		For Lab Use Only	

Lab I.D.	Sample I.D.	(G)RAB OR (C)IMP.	# CONTAINERS	MATRIX						DATE	TIME	REMARKS
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:			
1	W13 32.61248 -103.2121605	C	1						9/23	11:30	EXT TPH DTEX	
2	W14 32.6124795 -103.272571	C	1						9/23	13:38		
3	W15 32.6124631 -103.2727360	C	1						9/23	13:40		
4	W16 32.6124199 -103.2727075	C	1						9/23	11:42		
5	W17 32.6123939 -103.2726937	C	1						9/23	11:50		

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Requisitioned By: Joe Quinsler Date: 9/24 Time: 7:30	Received By: Mike Ford Date: _____ Time: _____
---	---

Relinquished By: _____ Received By: _____

Delivered By: (Circle One) Sampler - UPS - Bus - Other: FORM-006 R 3.0	Observed Temp. °C: 5.3 Corrected Temp. °C: 5.7	Sample Condition Cool Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Bacteria (only): <input type="checkbox"/> Yes <input type="checkbox"/> No	CHECKED BY: _____ (Initials)	Turnaround Time: Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/> Thermometer ID #97 Correction Factor + 0.4 °C	Bacteria (only) Sample Condition Cool Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Observed Temp. °C: 5.3 Corrected Temp. °C: 5.7
--	---	---	---------------------------------	---	--

REMARKS: **Emeri Results to Jeff Brown**

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



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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

26 of 32 page

Company Name: <i>Apache</i>		P.O. #:																	
Project Manager: <i>Jeleney Brown</i>		Company:																	
Address:		Attn:																	
City: <i>Lubbock</i> State: <i>NM</i> Zip: <i>88240</i>		Address:																	
Phone #: _____ Fax #: _____		City: _____																	
Project #: _____ Project Owner:		State: _____ Zip: _____																	
Project Name:		Phone #: _____																	
Project Location: <i>Nuesku 2119</i>		Fax #: _____																	
Sampler Name: <i>Joe Quisada Jr.</i>		PRESERV: _____																	
FOR LAB USE ONLY		SAMPLING																	
Lab I.D.	Sample I.D.	(G)RAB OR (C)OM?	# CONTAINERS	MATRIX	ACID/BASE:	DATE	TIME												
<i>A4903273</i>	<i>W18 32.619 3357</i>	<input checked="" type="checkbox"/>	<i>1</i>	<input checked="" type="checkbox"/>	<i>CEY COOL</i>	<i>9/23</i>	<i>11:44</i>	<i>1</i>											
	<i>-103. 272.6951</i>																		
	<i>W14 32.6123092</i>		<i>1</i>				<i>11:48</i>												
	<i>-103. 272.6910</i>																		
	<i>W20 32.61221682</i>		<i>1</i>				<i>11:50</i>												
	<i>-103. 272.6873</i>																		
	<i>W21 32.6122346</i>		<i>1</i>				<i>11:52</i>												
	<i>-103. 272.6980</i>																		
	<i>W22 32.6122019</i>		<i>1</i>				<i>11:54</i>												
	<i>-103. 272.6934</i>																		

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Relinquished By: *Joe Quisada* Date: *9/24* Received By: *Mike Smith* Date: *7:31*
 Relinquished By: _____ Date: _____ Received By: _____ Date: _____

Delivered By: (Circle One) Observed Temp. °C *5.3* Sample Condition: Cool Intact Yes No
 Corrected Temp. °C *5.7* CHECKED BY: _____ (Initials)
 Turmaround Time: _____ Standard Bacteria (only) Sample Condition: Cool Intact Yes No
 Thermometer ID #97 Correction Factor + 0.4 °C Observed Temp. °C *5.8* Corrected Temp. °C *5.7*

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

26 of 33 page

②

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>		Address:					
Phone #: _____ Fax #: _____		City:					
Project #: _____ Project Owner:		State:					
Project Name:		Zip:					
Project Location: <u>MUSGRAVE BLVD</u>		Phone #:					
Sampler Name: <u>Don Quasada Sr.</u>		Fax #:					
FOR LAB USE ONLY		PRESERV:		SAMPLING			
Lab I.D. Sample I.D.		ACID/BASE: <u>(C) / COOL</u>		DATE		TIME	
<u>H903273</u>		OTHER:		<u>9/23</u>		<u>11:56</u>	
11 <u>W23 32.61A0985</u>		GROUNDWATER					
12 <u>W24 32.61A0621</u>		WASTEWATER					
13 <u>W25 32.61A0522</u>		SOIL					
14 <u>W26 32.61B0011</u>		OIL					
15 <u>W27 32.61A0516</u>		SLUDGE					
		OTHER:					
		OTHER:					
		OTHER:					
		OTHER:					

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Relinquished By: Don Quasada Date: 9/24 Received By: Mark Smith
 Relinquished By: _____ Date: _____ Received By: _____

Delivered By: (Circle One) Observed Temp. °C 5.3 Sample Condition Cool Intact Checked BY: _____
 Sampler - UPS - Bus - Other: Corrected Temp. °C 5.7 Yes No No No No
 FORM-006 R 3.0

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

5

BILL TO

ANALYSIS REQUEST

Company Name: Apple		P.O. #:	
Project Manager: Jeffrey Brown		Company:	
Address:		Attn:	
City: Hobbs		Address:	
Phone #: 575-393-2326		City:	
Project #:		State:	
Project Name:		Zip:	
Project Location: Mesquite 211a		Phone #:	
Sampler Name: Joe Keene		Fax #:	
FOR LAB USE ONLY		DATE	
Lab I.D. Sample I.D.		TIME	
HP03273		9/23 15:20	
21 W33. 82. 411 8974		C 1	
-103. 82. 8855		C 1	
22 W34. 82. 1018175		C 1	
-103. 82. 0113		C 1	
23 W35. 82. 119111		C 1	
-103. 82. 2291100		C 1	
24 W30. 82. 1120034		C 1	
-103. 82. 2729210		C 1	
25 W37. 82. 1120561		C 1	
-103. 82. 2729204		C 1	

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Relinquished By: **Joe Keene** Date: **9/24** Received By: **Jeffrey Brown** Date: **9/23**

Delivered By: (Circle One) **UPS** Observed Temp. °C: **5.3** Corrected Temp. °C: **5.7**

Sample Condition: Cool Intact Yes No

Turnaround Time: **Standard** **Rush**

Bacteria (only) Sample Condition: Cool Intact Yes No

Thermometer ID #97 Correction Factor +0.4 °C

REMARKS: **EXT TPH BTEX**



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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

6

Company Name: <u>Dr. Keene</u>		P.O. #:							
Project Manager: <u>Jeffrey Brown</u>		Company:							
Address:		Attn:							
City: <u>Hobbs</u> State: <u>NM</u> zip: <u>88240</u>		Address:							
Phone #: _____ Fax #: _____		City: _____ State: _____ Zip: _____							
Project Name: _____		Project Location: <u>WASTON 5154</u>							
Project Location: _____		Sampler Name: <u>Dr. Keene</u>							
FOR LAB USE ONLY		Phone #: _____ Fax #: _____							
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX	PRESERV	SAMPLING	DATE	TIME	ANALYSIS REQUEST
<u>APP3373</u>	<u>W38 32.16.12.11</u>	<input checked="" type="checkbox"/>	1	GROUNDWATER			<u>9/23 15:50</u>	<u>15:50</u>	<u>DELETED PER CUSTOMER</u>
<u>26</u>	<u>W38 32.16.12.11</u>	<input checked="" type="checkbox"/>	1	WASTEWATER			<u>9/23 16:10</u>	<u>16:10</u>	
<u>27</u>	<u>B3309 32.16.12.11</u>	<input checked="" type="checkbox"/>	1	SOIL			<u>9/23 16:10</u>	<u>16:12</u>	
<u>28</u>	<u>B3401 32.16.12.11</u>	<input checked="" type="checkbox"/>	1	OIL			<u>9/23 16:10</u>	<u>16:14</u>	
<u>29</u>	<u>B3402 32.16.12.11</u>	<input checked="" type="checkbox"/>	1	SLUDGE			<u>9/23 16:10</u>	<u>16:14</u>	
<u>30</u>	<u>B3403 32.16.12.11</u>	<input checked="" type="checkbox"/>	1	OTHER :			<u>9/23 16:10</u>	<u>16:16</u>	

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Relinquished By: Joe Ruscsek Date: 9/24 Received By: Jeffrey Brown Date: 9/24
 Time: 7:30 Time: _____
 Relinquished By: _____ Received By: _____
 Date: _____ Date: _____
 Time: _____ Time: _____

Delivered By: (Circle One) Observed Temp. °C 5.3 Sample Condition: Cool Intact Yes No
 Corrected Temp. °C 5.7 Checked BY: _____
 Sampler - UPS - Bus - Other: FORM-006 R.3.0

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

REMARKS: Conc'l Results to Jeffrey Brown



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

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.

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:	09/24/2019	Sampling Date:	09/24/2019
Reported:	09/30/2019	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 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

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:	09/24/2019
Reported:	09/30/2019	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 38 32.6121266 - 103.2729116 (H903288-02)

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	09/26/2019	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) 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	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



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:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: W 25 32.6120527 - 103.2726072 (H903288-03)

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	09/26/2019	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) 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

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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

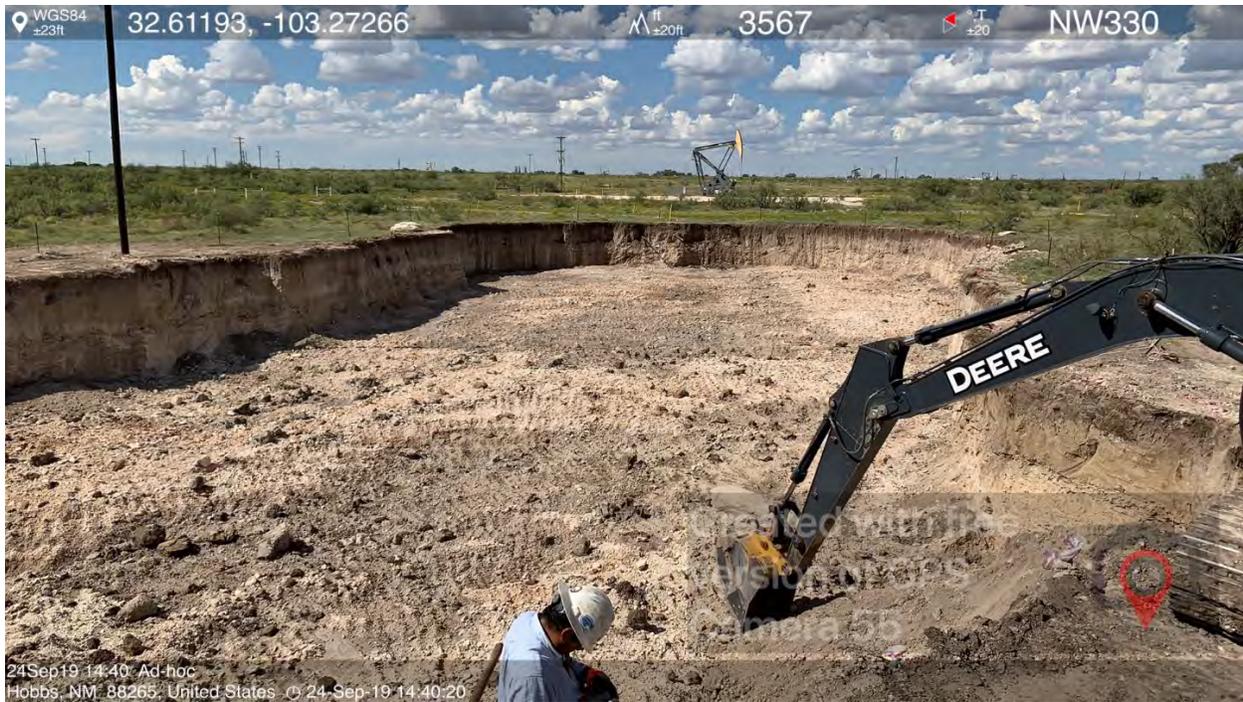


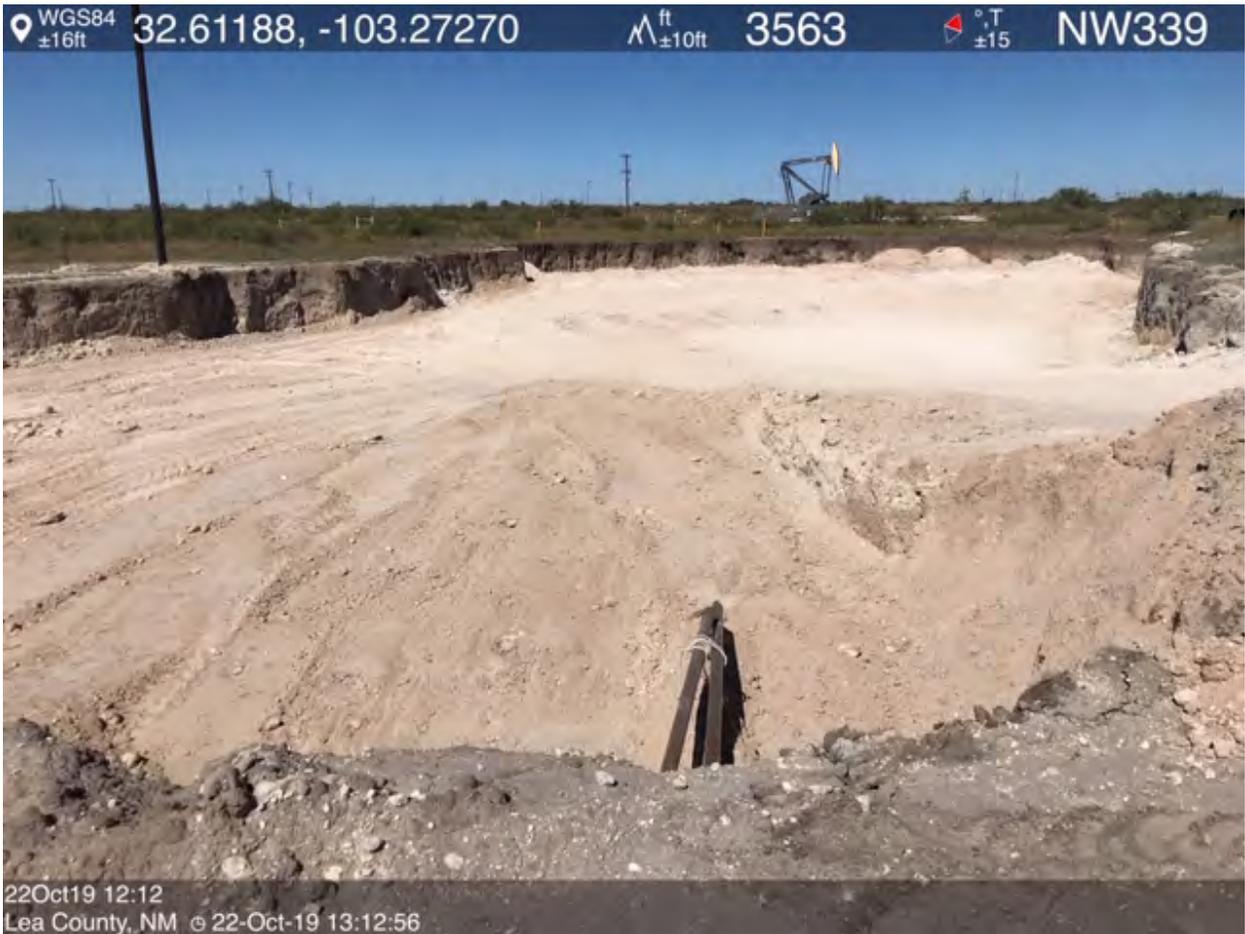
101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Agape Inc Corp. Project Manager: Jeffery Brown		P.O. #: _____ Company: _____	
Address: _____ City: Hobbs State: NM zip: 88240		Attn: _____ Address: _____	
Phone #: _____ Fax #: _____ Project #: _____ Project Owner: _____		City: _____ State: _____ Zip: _____	
Project Location: NM 6550a 2119 Sampler Name: Joe Gunderman		Phone #: _____ Fax #: _____	
FOR LAB USE ONLY			
Lab I.D. H903288 Sample I.D.	1 W 24 32. 612 0392 -103. 072 0578	(G)RAB OR (C)OMP. <input type="checkbox"/> # CONTAINERS 1	MATRIX GROUNDWATER <input type="checkbox"/> WASTEWATER <input type="checkbox"/> SOIL <input checked="" type="checkbox"/> OIL <input type="checkbox"/> SLUDGE <input type="checkbox"/> OTHER: _____ ACID/BASE: _____ ICE/COOL <input checked="" type="checkbox"/> OTHER: _____
	2 W 38 32. 612 0392 -103. 212 9114	# CONTAINERS 1	
	3 W 05 32. 612 0527 -103. 072 0072	# CONTAINERS 1	
	DATE TIME 9/24 10:30	DATE TIME 9/24 14:15	
RECEIVED BY: [Signature]		RECEIVED BY: [Signature]	
Date: 9/24/19		Date: 9/24/19	
Time: _____		Time: _____	
Delivered By: (Circle One) _____ Observed Temp. °C 4.0		Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Bacteria (only) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Sampler - UPS - Bus - Other: _____ Corrected Temp. °C 4.4		CHECKED BY: (Initials) TO Turnaround Time: Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/> Bacteria (only) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Sample Condition <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Observed Temp. °C _____ Corrected Temp. °C _____	
REMARKS: Email Jeffery Brown			

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