State of New Mexico
Oil Conservation Division

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?	☒ Yes ☐ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ 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)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ 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?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☐ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ 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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nRM1926352539
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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: Bruce Baker Title: Environmental Tech Sr.

Signature:_____ Date: _____

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

OCD Only

Received by: _____ Date: _____

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

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: Bruce Baker Title: Environmental Tech Sr.

Signature: _____ Date: _____

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: _____ Date: _____

Incident ID	nRM1926352539
District RP	1RP-5677
Facility ID	
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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: ____Bruce Baker_____ Title: _Environmental Tech Sr._____

Signature: _____ Date: _____

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: _____ Date**:** _____

Printed Name: _____ Title: _____

1RP-5677
EXCAVATION CLOSURE AND GROUNDWATER 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

June 3, 2022

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

Prepared by:
Larson & Associates, Inc.
507 North Marienfeld, Suite 202
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Mark J. Larson, P.G.
Certified Professional Geologist #10490

Robert Nelson
Sr. Geoscientist

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1.0 INTRODUCTION

Larson & Associates, Inc. (LAI) has prepared this excavation closure and groundwater 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. Figure 2 presents an aerial drawing.

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.

On October 10, 2019, Apache applied for a variance to backfill the excavation due to the presence of groundwater between approximately 21 to 23 feet below ground surface (bgs), and total petroleum hydrocarbon (TPH) and chloride contamination in soil beneath the excavation at approximately 12 feet bgs. The request stated that Apache would backfill the excavation with clean caliche to about 6 feet bgs, install a 20-mil polyethylene synthetic liner, and complete backfilling to surface with clean topsoil containing chloride less than 600 mg/Kg. NMOCD approved the variance request on October 16, 2019, under the condition that Apache will install two (2) monitor wells, with TMW-1 installed as close as possible to the source of the release and TMW-2 installed hydraulically down gradient approximately 150 feet southeast of the excavation. Additional, NMOCD requested one (1) monitor well be installed hydraulically upgradient to monitor background groundwater. Appendix B presents the variance request and NMOCD communications.

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 C 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
- 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 SOIL 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
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

On October 19, 2020, per the NMOCD approved variance, the excavation was backfilled to approximately 6 feet bgs with non-contaminated caliche containing chloride less than 600 mg/Kg. The 20-mil polyethylene synthetic liner was installed above the caliche at approximately 6 feet bgs, and excavation backfilling was completed to surface with clean topsoil containing chloride less than 600 mg/Kg. Table 1 presents the Apache laboratory analytical data summary. Appendix D presents a drawing showing the Apache soil sample locations. Appendix E presents the Apache soil sample laboratory reports.

3.0 GROUNDWATER INVESTIGATION AND MONITORING

3.1 Groundwater Investigation

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. Monitoring well TMW-1 was installed near the east side of the excavation. Monitoring well TMW-2 was installed southeast (down gradient) approximately 150 feet from the excavation. The monitoring wells were completed with 2-inch schedule 40 threaded casing and 20 feet of 0.010-inch factory slotted screen that was positioned above and below the groundwater level gauged at the time of drilling. Graded silica sand was placed around the screen to about 2 feet above the screen. The annular space above the

sand was filled with bentonite chips to about 1-foot bgs. The wells were logged according to the Unified Soil Classification System (ASTM D 2487 – 06) and are secured with locking steel protectors anchored in concrete. West Company, a State of New Mexico licensed professional land surveyor (License Number 23263) surveyed the monitoring wells for position and elevation including top of casing and natural ground surface. Figure 2 presents the monitoring well locations. Appendix F presents the boring logs.

3.2 Groundwater Monitoring

3.2.1 Depth to Groundwater and Groundwater Flow

During eight (8) consecutive quarters between March 1, 2020, and December 21, 2021, LAI personnel gauged depth to groundwater in monitoring wells TMW-1, TMW-2, and the background well (MW-2) located about 300 feet northwest and hydraulically up gradient from the release. Monitoring well MW-2 is located northwest of NMGSAU #1631.

On December 21, 2021, depth to groundwater ranged from 10.88 feet bgs at monitoring well MW-2 (up gradient) to 23.54 feet bgs at TMW-2 (down gradient). The groundwater elevation ranged from 3,555.76 feet above mean sea level (AMSL) at MW-2 (up gradient) to 3,537.98 feet AMSL at TMW-2 (down gradient). The groundwater flow direction was from northwest to southeast at a gradient of approximately 0.26 feet per foot. The groundwater elevation and flow direction remained consistent through eight (8) consecutive quarters. Table 2 presents the monitoring well completion details and depth to groundwater readings. Figure 3 presents the groundwater potentiometric surface map for December 21, 2021.

3.2.2 Groundwater Samples

Groundwater samples were collected using the low stress or low flow method according to EPA protocol (EQASOP-GW4, Revision 4, September 19, 2017) where an environmental pump is submerged near the middle of the water column and the well is pumped at a low rate until environmental parameters stabilize. Groundwater samples were collected from the discharge of the dedicated disposable Tygon® tubing. The tubing was discarded after each use and the pump was thoroughly cleaned with a solution of potable water and laboratory grade detergent (Alconox®) and rinsed with distilled water. Quality assurance and quality control (duplicate) samples were collected from monitoring wells MW-2 and TMW-2. The samples were carefully transferred to laboratory containers that were labeled, packed in an ice filled chest and delivered under chain of custody control to Xenco-Eurofins Laboratories (Eurofins), a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory, located in Midland, Texas. Xenco analyzed the samples for benzene, toluene, ethylbenzene, xylene (BTEX) according to EPA SW-846 Method SW-8021B and chloride by EPA Method 300, respectively. Table 3 presents the laboratory analytical data summary. Appendix G presents the groundwater sample laboratory reports.

3.2.2.1 Organic Analysis

All BTEX values were below the SW-846 – 8021B analytical method reporting limits (RL) and New Mexico Water Quality Control Commission (WQCC) human health standards during the eight (8) consecutive quarters. No data quality exceptions were noted in the Xenco case narratives.

3.2.2.2 Inorganic Analysis

Chloride was reported above the WQCC domestic water quality standard of 250 milligrams per liter (mg/L) in the following samples during 2020:

Sample ID	March 12, 2020 (mg/L)	July 20, 2020 (mg/L)	October 1, 2020 (mg/L)	December 8, 2020 (mg/L)
TMW-1	360	432	452	449
TMW-2	423	664	591	473

Figure 4a through 4d present isopleth drawings for chloride concentrations in groundwater samples on March 12, 2020, July 20, 2020, October 1, 2020, and December 8, 2020, respectively.

Chloride was reported above the WQCC domestic water quality standard of 250 milligrams per liter (mg/L) in the following samples during 2021:

Sample ID	March 10, 2021 (mg/L)	June 11, 2021 (mg/L)	October 12, 2021 (mg/L)	December 21, 2021 (mg/L)
TMW-1	418	361	291	406
TMW-2	428	402	325	388

Figure 5a through 5d present isopleth drawings for chloride concentrations in groundwater samples on March 10, 2021, June 11, 2021, October 12, 2021, and December 21, 2020, respectively. Figure 6 presents a control chart for chloride concentrations in groundwater. Appendix H presents photographic documentation.

4.0 CONCLUSIONS

- Soil was excavated to approximately 12 feet bgs and disposed at Sundance Disposal, a NMOCD approved landfill located east of Eunice, New Mexico.
- Per the NMOCD approved variance the excavation was backfilled caliche to approximately 6 feet bgs where a 20-mil thickness polyethylene synthetic liner was placed in the bottom of the

excavation with the remainder of the excavation above the liner backfilled with non-contaminated soil containing less than 600 mg/Kg chloride.

- Two (2) monitor wells (TMW-1 and TMW-2) were installed in air rotary drilled borings at approximately 30 feet bgs. Monitoring well TMW-1 was installed near the east side of the excavation. Monitoring well TMW-2 was installed southeast (down gradient) approximately 150 feet from the excavation.
- Groundwater samples were collected from an upgradient monitoring well (MW-2) and the down gradient wells (TMW-1 and TMW-2) during eight consecutive quarters between March 12, 2020, and December 21, 2021, and were analyzed for BTEX and chloride.
- BTEX values were below the RL and WQCC human heath standard (0.01 mg/L) in all samples during the eight (8) consecutive quarters.
- Chloride concentrations from the down gradient wells (TMW-1 and TMW-2) exceeded the WQCC domestic water quality standard (250 mg/L) during the eight (8) consecutive quarters and ranged from 290 mg/L in TMW-1 on October 12, 2021, and 664 mg/L in TMW-2 on July 20, 2020.

5.0 CLOSURE REQUEST

Apache requests closure approval for the excavation and no further action for groundwater or groundwater monitoring. The monitoring wells will be plugged according to State of New Mexico Office of the State Engineer requirements.

Tables

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LAB RESULTS IN RED

FIELD SAMPLING SHOWN IN RED WITH CHLORIDE FINDINGS ONLY

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

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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

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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

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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

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Table 2
Monitor Well Completion and Gauging Summary
Apache Corporation, NMGSAU 2102
Lea County, New Mexico

Well Information									Groundwater Data				
Well No.	Date Drilled	Well Depth (Feet TOC)	Drilled Depth (Feet BGS)	Well Diameter (inches)	Surface Elevation (Feet AMSL)	Screen Interval (Feet BGS)	Casing Stickup (Feet)	TOC Elevation (Feet AMSL)	Date Gauged	Depth to Water (feet TOC)	Depth to Water (feet BGS)	Water Column Height (feet)	Groundwater Elevation (feet AMSL)
MW-2	Unknown	62.91	60.03	2	3566.64	Unknown	2.88	3,569.52	03/12/2020	13.59	10.71	49.32	3,555.93
									07/20/2020	13.75	10.87	49.16	3,555.77
									10/01/2020	13.90	11.02	49.01	3,555.62
									12/08/2020	13.81	10.93	49.10	3,555.71
									03/10/2021	13.80	10.92	49.11	3,555.72
									06/11/2021	13.80	10.92	49.11	3,555.72
									10/12/2021	13.81	10.93	49.10	3,555.71
									12/21/2021	13.76	10.88	49.15	3,555.76
TMW-1	3/11/2020	36.23	33.33	2	3561.92	9.83 - 29.49	2.90	3,564.82	03/12/2020	24.37	21.47	11.86	3,540.45
									07/20/2020	24.95	22.05	11.28	3,539.87
									10/01/2020	24.90	22.00	11.33	3,539.92
									12/08/2020	24.65	21.75	11.58	3,540.17
									03/10/2021	24.60	21.70	11.63	3,540.22
									06/11/2021	24.80	21.9	11.43	3540.02
									10/12/2021	24.96	22.06	11.27	3539.86
									12/21/2021	24.64	21.74	11.59	3540.18
TWM-2	3/11/2020	37.07	34.03	2	3561.43	10.05 - 29.30	3.04	3,564.47	03/12/2020	26.38	23.34	10.69	3,538.09
									07/20/2020	26.70	23.66	10.37	3,537.77
									10/01/2020	26.70	23.66	10.37	3,537.77
									12/08/2020	26.51	23.47	10.56	3,537.96
									03/10/2021	26.40	23.36	10.67	3,538.07
									06/11/2021	26.57	23.53	10.50	3537.9
									10/12/2021	26.72	23.68	10.35	3537.75
									12/21/2021	26.49	23.45	10.58	3537.98

Notes: MW-2 is hydraulically upgradient. TMW-1 is near release source. TMW-2 is hydraulically down gradient.
bgs: below ground surface
TOC: top of casing
AMSL: elevation above mean sea level

Table 3

Groundwater Sample Analytical Data Summary

Apache Corporation, NMGSAU 2102

Lea County, New Mexico

Sample	Collection Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	Chloride (mg/L)
WQCC Standard:		*0.005	* 1	*0.7	*0.62	**250
MW-2	3/12/2020	<0.00100	<0.00100	<0.00100	<0.00300	230
	7/20/2020	<0.00200	<0.00200	<0.00200	<0.00600	231
	10/1/2020	<0.00200	<0.00200	<0.00200	<0.00200	241
	12/8/2020	<0.00200	<0.00200	<0.00200	<0.00200	227
	3/10/2021	<0.00200	<0.00200	<0.00200	<0.00200	235
	6/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	212
	10/12/2021	<0.00200	<0.00200	<0.00200	<0.00400	207
	12/21/2021	<0.00200	<0.00200	<0.00200	<0.00400	222
TMW-1	3/12/2020	<0.00100	<0.00100	<0.00100	<0.00300	360
	7/20/2020	<0.00200	<0.00200	<0.00200	<0.00600	432
	10/1/2020	<0.00200	<0.00200	<0.00200	<0.00200	452
	12/8/2020	<0.00200	<0.00200	<0.00200	<0.00200	449
	3/10/2021	<0.00200	<0.00200	<0.00200	<0.00200	418
	6/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	361
	10/12/2021	<0.00200	<0.00200	<0.00200	<0.00400	291
	12/21/2021	<0.00200	<0.00200	<0.00200	<0.00400	406
TMW-2	3/12/2020	<0.00100	<0.00100	<0.00100	<0.00300	423
	7/20/2020	<0.00200	<0.00200	<0.00200	<0.00600	664
	10/1/2020	<0.00200	<0.00200	<0.00200	<0.00200	591
	12/8/2020	<0.00200	<0.00200	<0.00200	<0.00200	473
	3/10/2021	<0.00200	<0.00200	<0.00200	<0.00200	428
	6/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	402
	10/12/2021	<0.00200	<0.00200	<0.00200	<0.00400	325
	12/21/2021	<0.00200	<0.00200	<0.00200	<0.00400	388
(QA/QC (Duplicate) Samples						
MW-2	3/12/2020	<0.00100	<0.00100	<0.00100	<0.00300	223
	7/20/2020	<0.00200	<0.00200	<0.00200	<0.00600	242
	10/1/2020	<0.00200	<0.00200	<0.00200	<0.00200	245
	12/8/2020	<0.00200	<0.00200	<0.00200	<0.00200	226
	3/10/2021	<0.00200	<0.00200	<0.00200	<0.00200	237
	6/11/2021	<0.00200	<0.00200	<0.00200	<0.00400	213
TMW-2	10/12/2021	<0.00200	<0.00200	<0.00200	<0.00400	305
MW-2	12/21/2021	<0.00200	<0.00200	<0.00200	<0.00400	226

Notes:
analysis performed by Xenco Laboratories, Midland, Texas by EPA SW-846 Method 8021B (BTEX) and Method 300 (chloride)
All values reported in milligrams per liter (mg/L) equivalent to parts per million (ppm)
< values - denotes concentration is less than method reporting limit (RL).
* - NMWQCC human health standard
** - NMWQCC domestic water quality standard

BGS - below ground surface

Figures

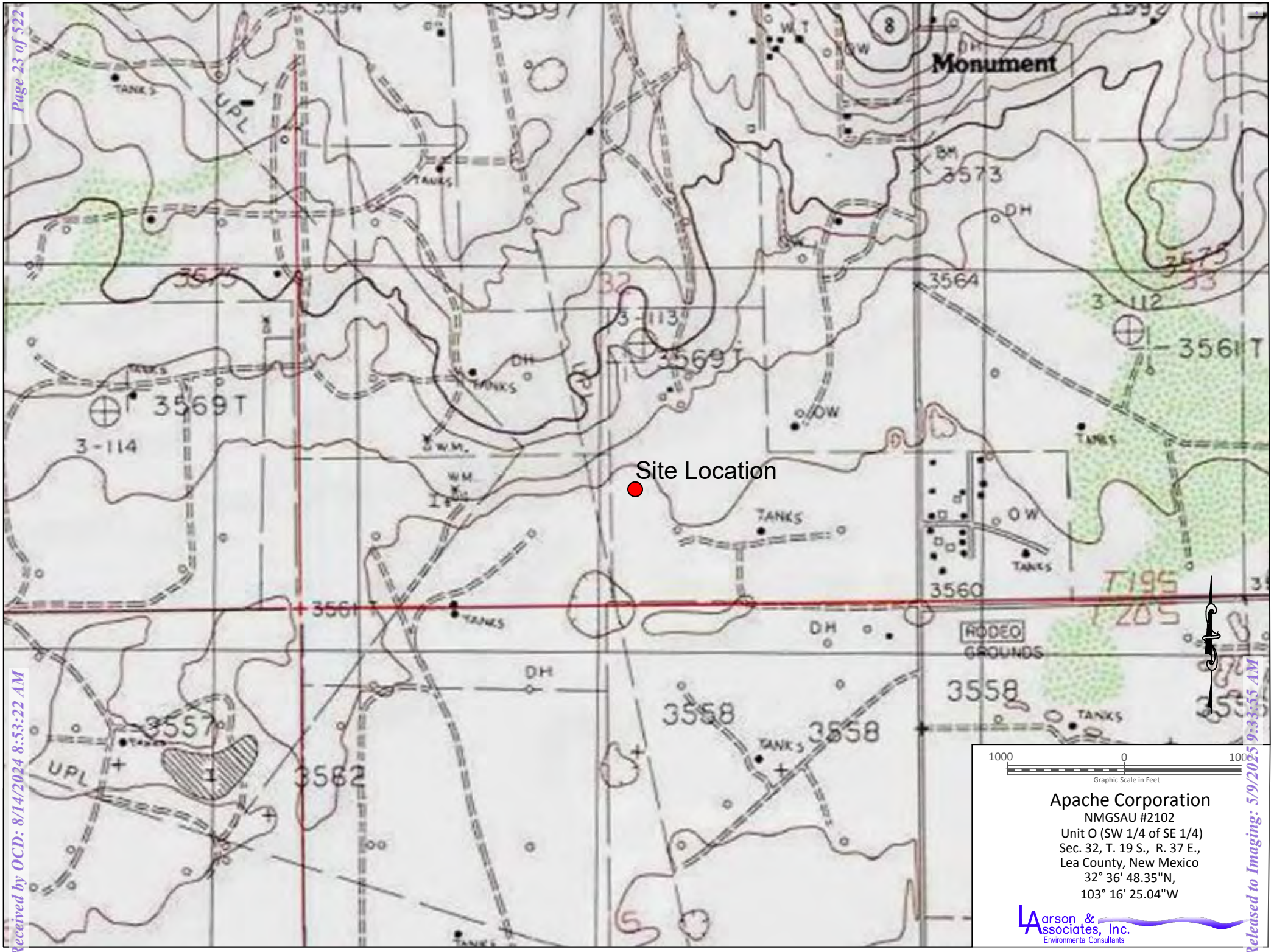

Figure 1 - Topographic Map

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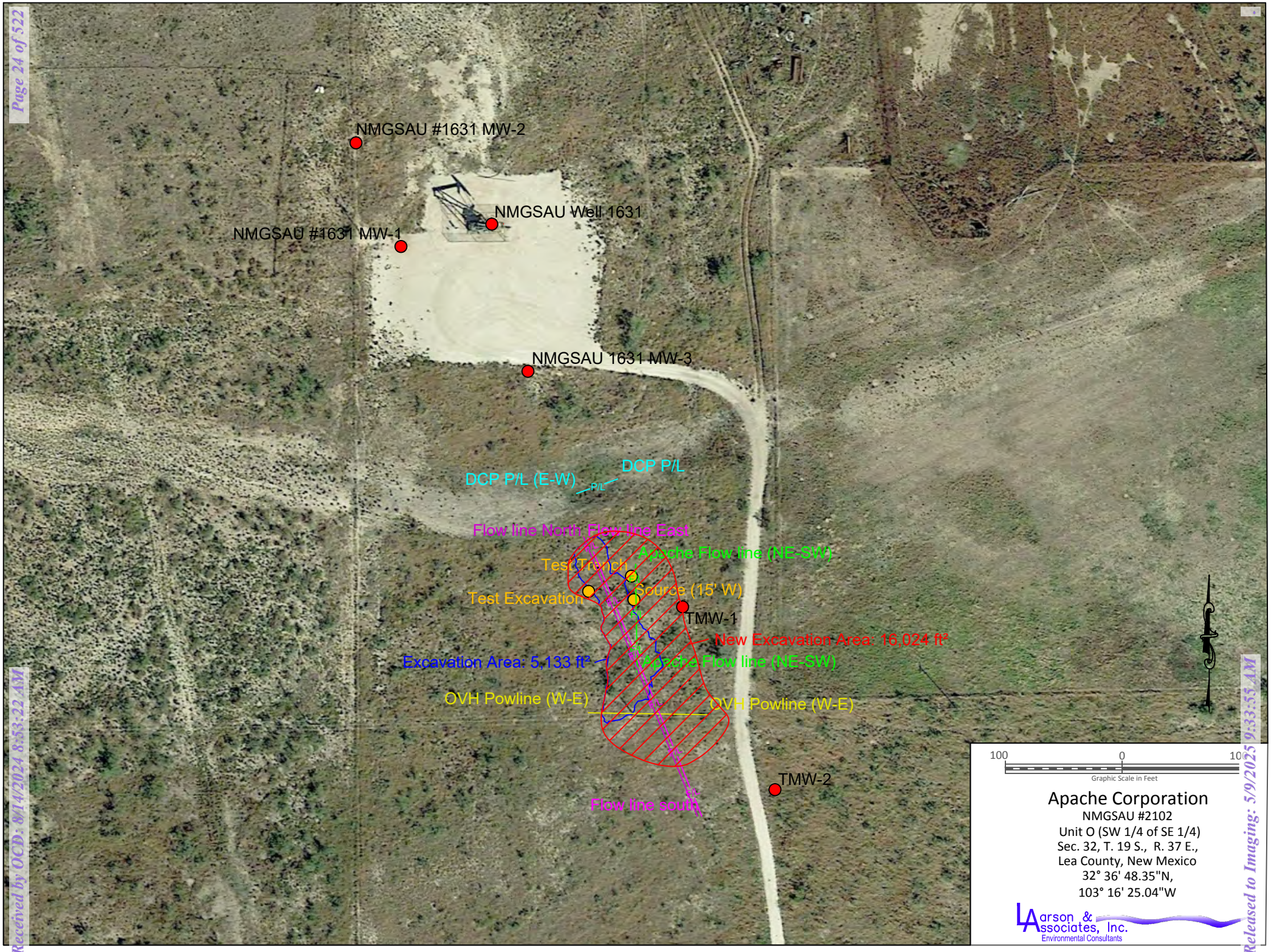

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Figure 2 - Aerial Map

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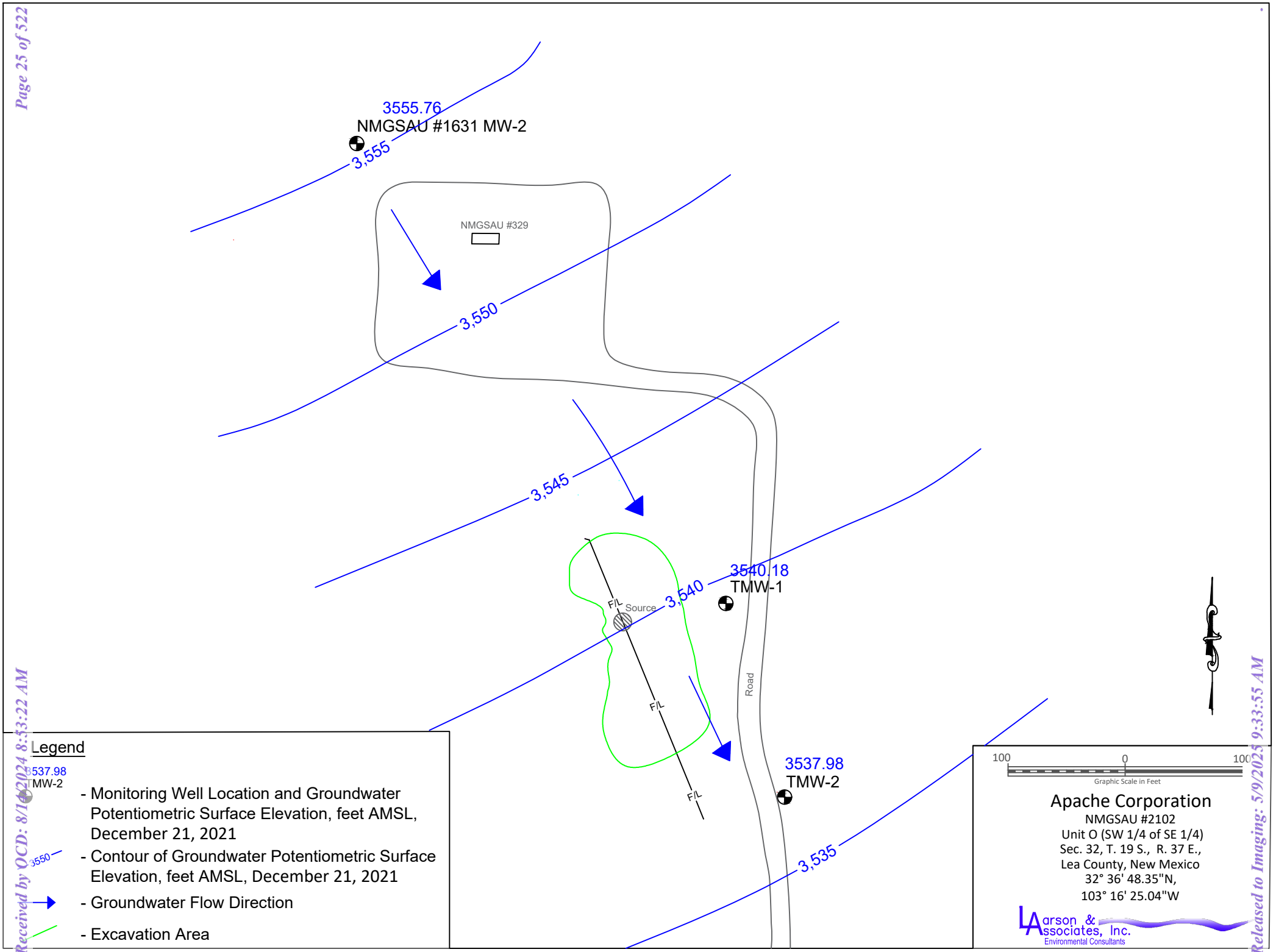

Figure 3 - Groundwater Potentiometric Surface Map, December 21, 2021

Received by OCD: 8/16/2024 8:53:22 AM
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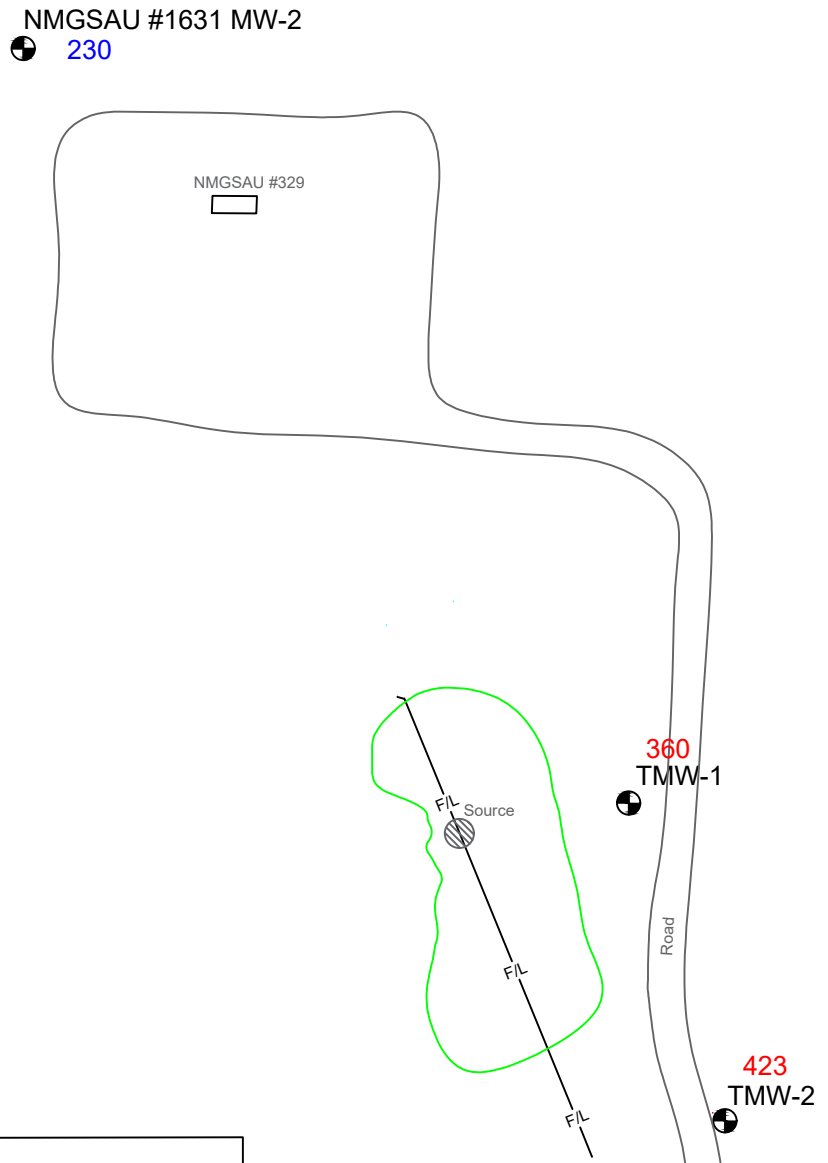

Legend

TMW-2 - Monitoring Well Location and Chloride Concentration in Groundwater, mg/L, March 12, 2020

Red - Exceeds NMWQCC Domestic Water Ruality Standard: 250 mg/L

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 4a - Chloride Concentration in Groundwater Map, March 12, 2020

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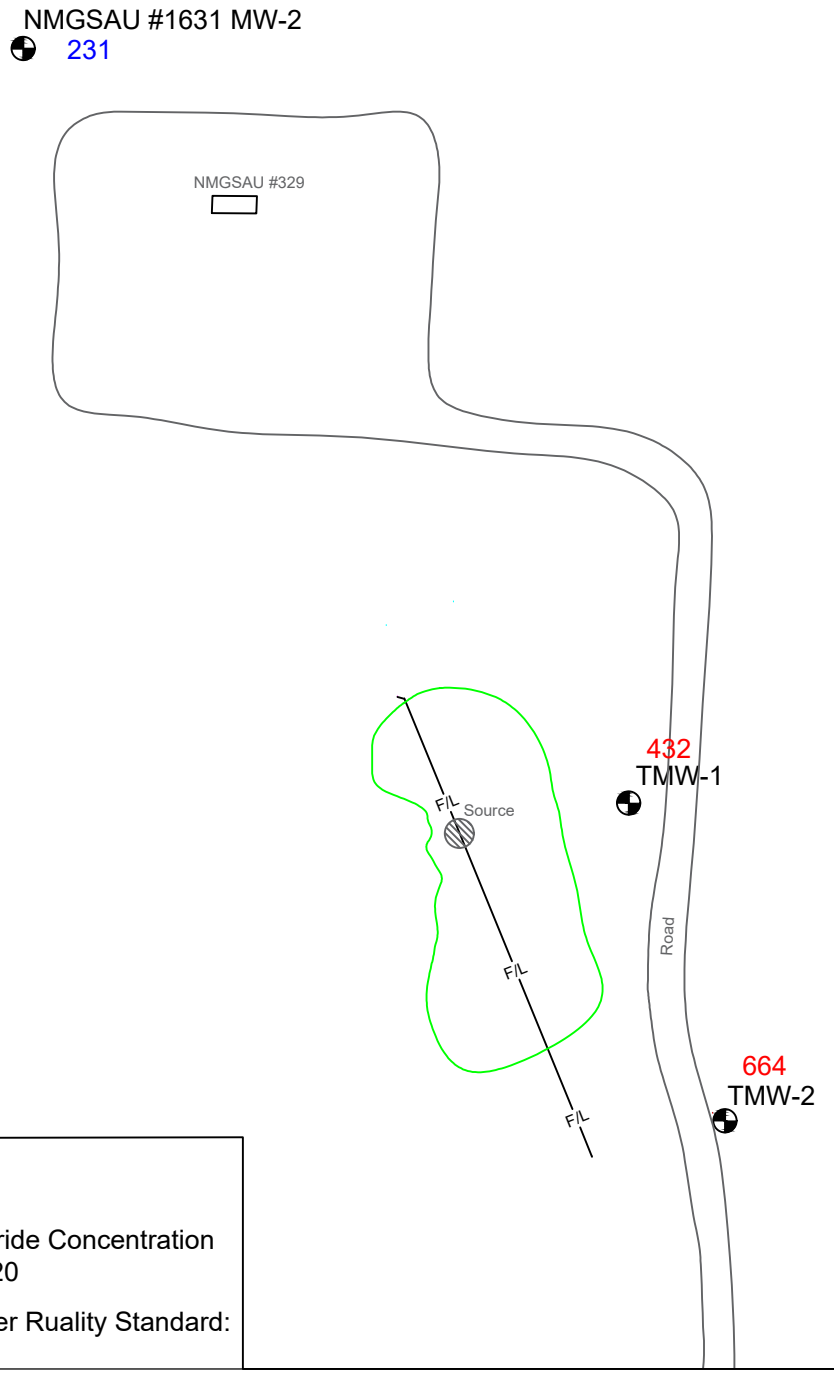

Legend

TMW-2 - Monitoring Well Location and Chloride Concentration in Groundwater, mg/L, July 20, 2020

Red - Exceeds NMWQCC Domestic Water Ruality Standard: 250 mg/L

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 4b - Chloride Concentration in Groundwater Map, July 20, 2020

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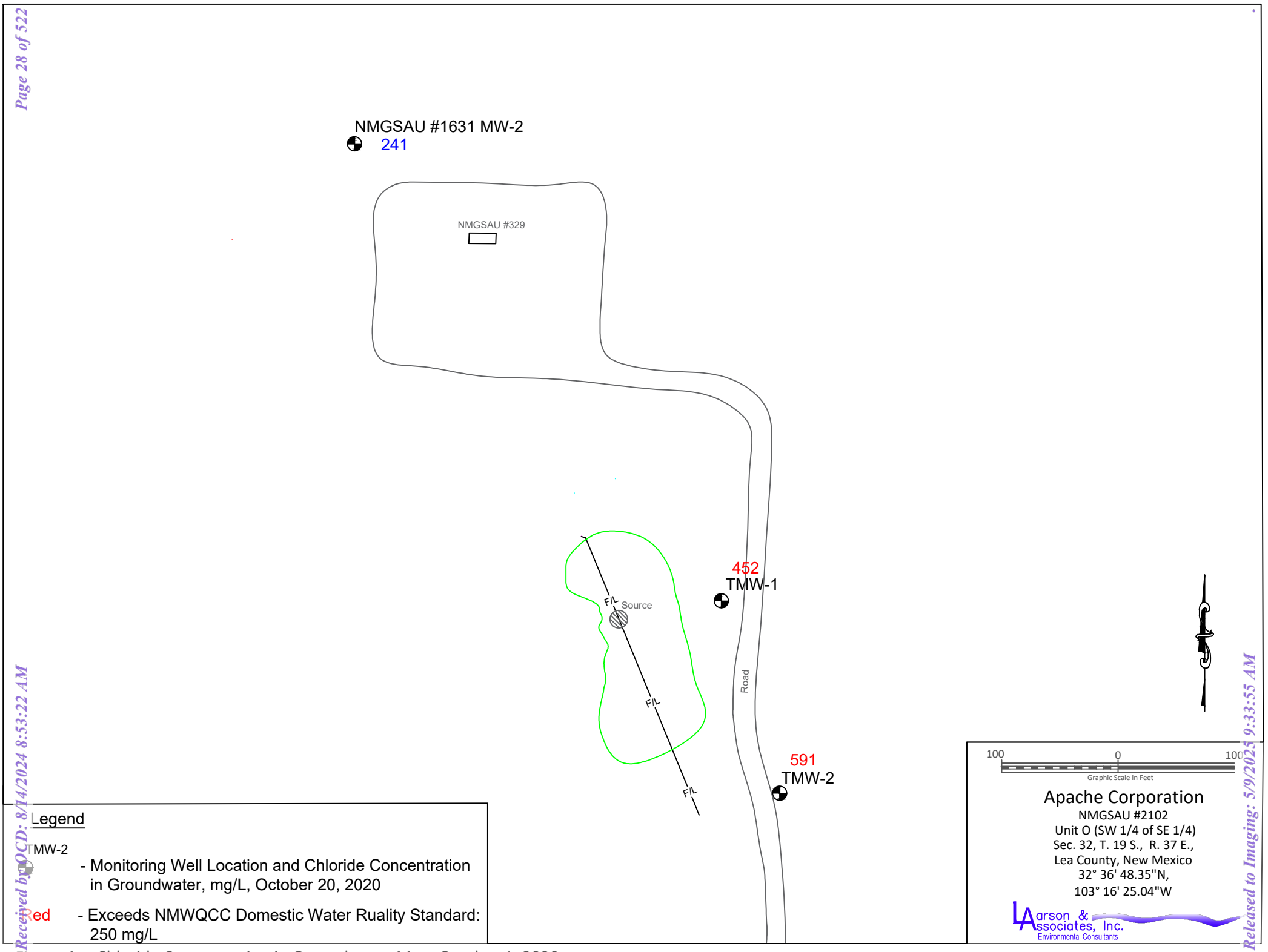

Figure 4c - Chloride Concentration in Groundwater Map, October 1, 2020

Received by OCD: 8/14/2024 8:53:22 AM

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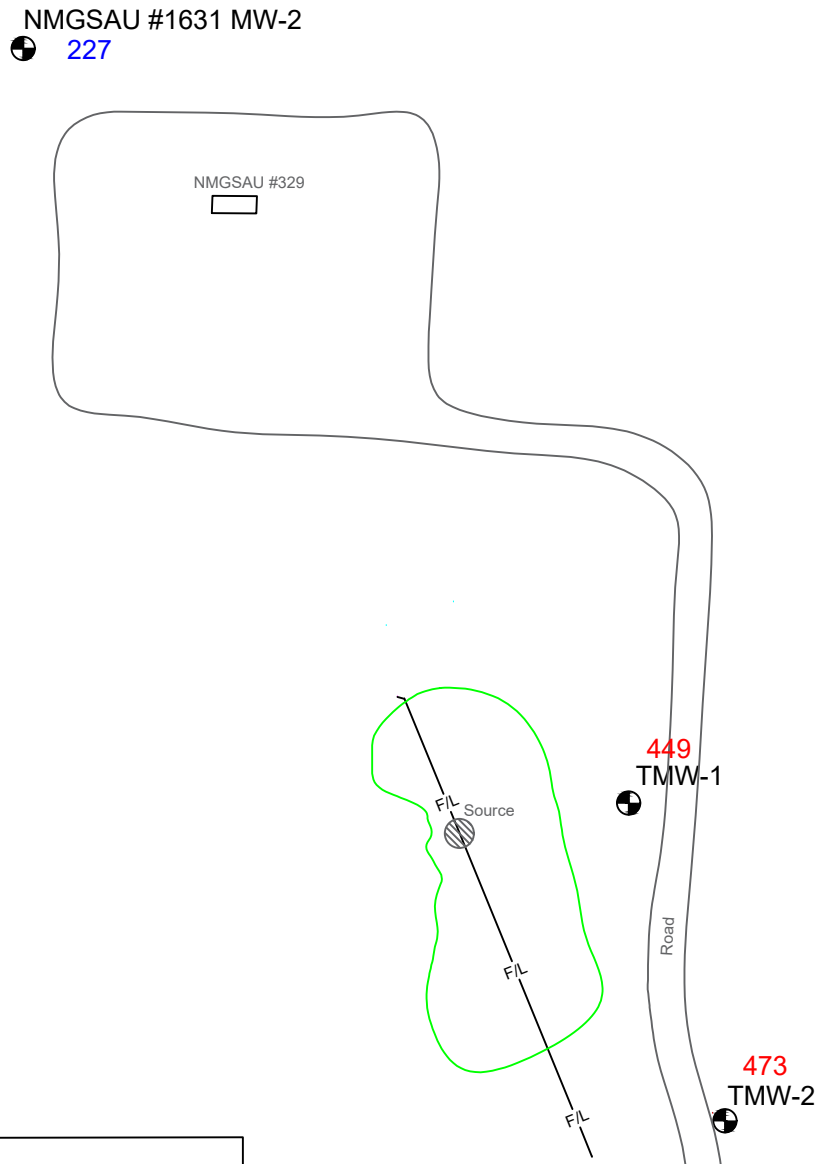

Legend

TMW-2 - Monitoring Well Location and Chloride Concentration in Groundwater, mg/L, December 5, 2020

Red - Exceeds NMWQCC Domestic Water Ruality Standard: 250 mg/L

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 4d - Chloride Concentration in Groundwater Map, December 8, 2020

Received by OCD: 8/14/2024 8:53:22 AM
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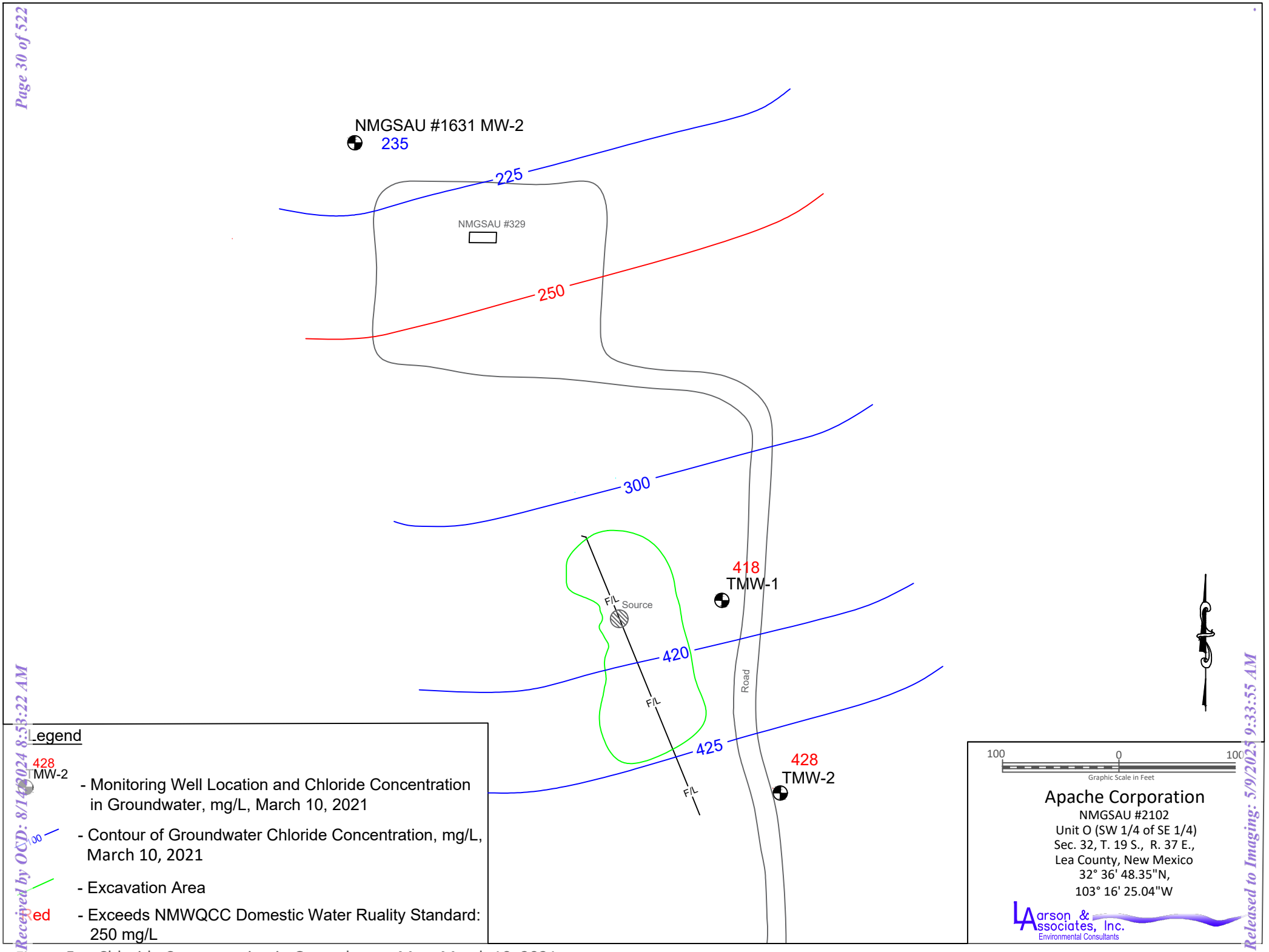

Figure 5a - Chloride Concentration in Groundwater Map, March 10, 2021

Received by OCD: 8/14/2024 8:53:22 AM
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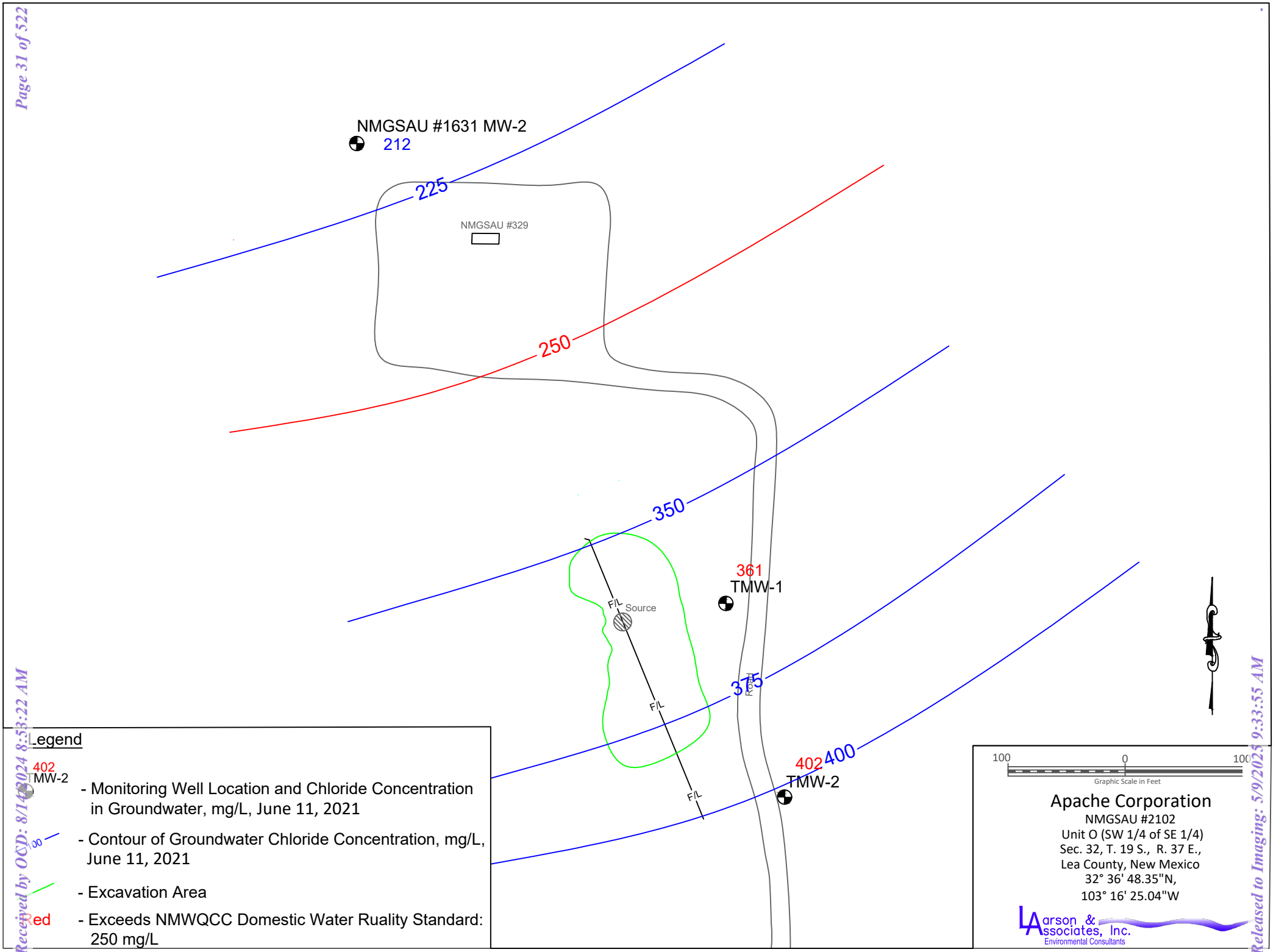

Figure 5b - Chloride Concentration in Groundwater Map, June 11, 2021

Received by OCD: 8/14/2024 8:53:22 AM
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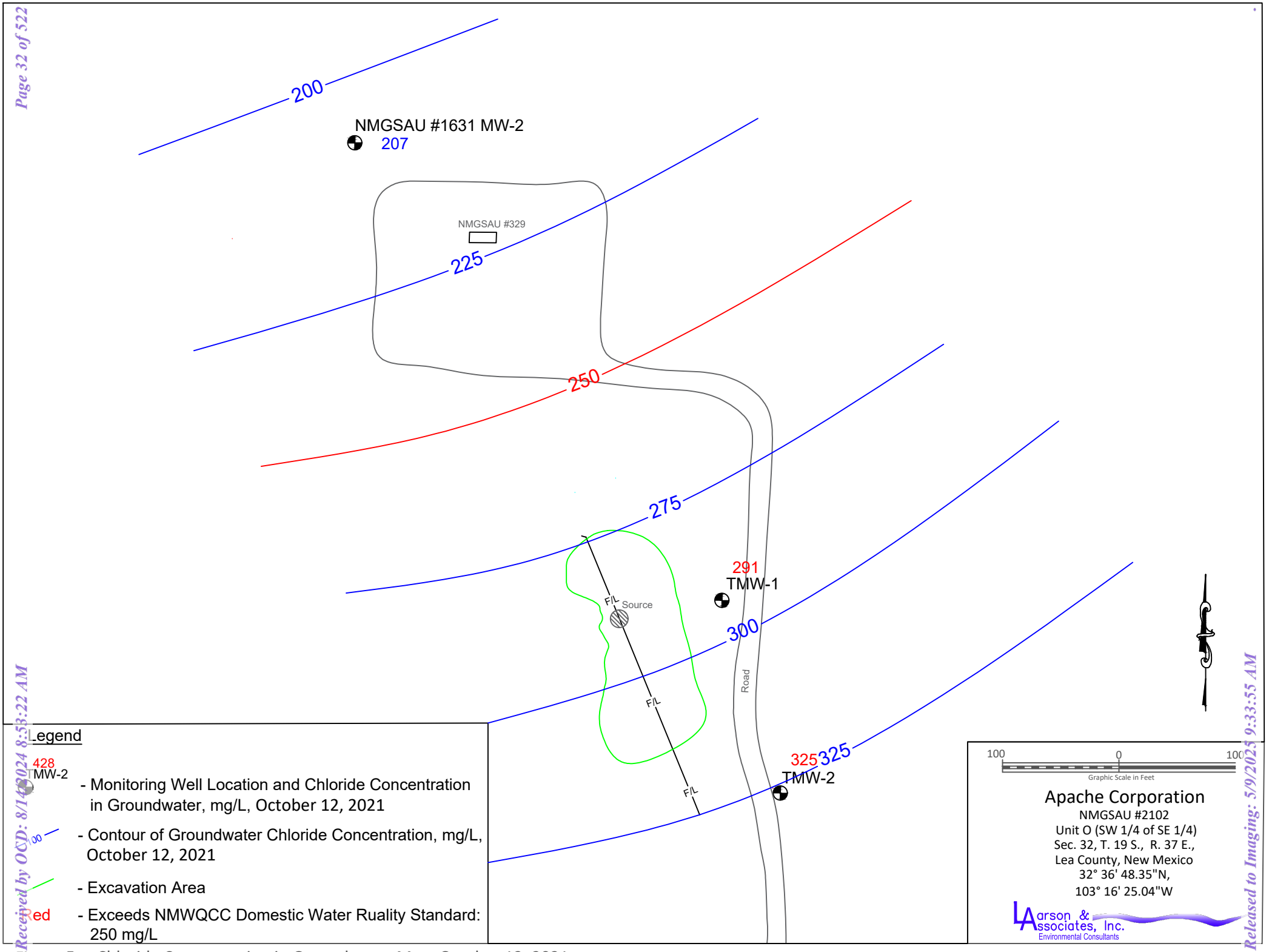

Figure 5c - Chloride Concentration in Groundwater Map, October 12, 2021

Received by OCD: 8/14/2024 8:53:22 AM
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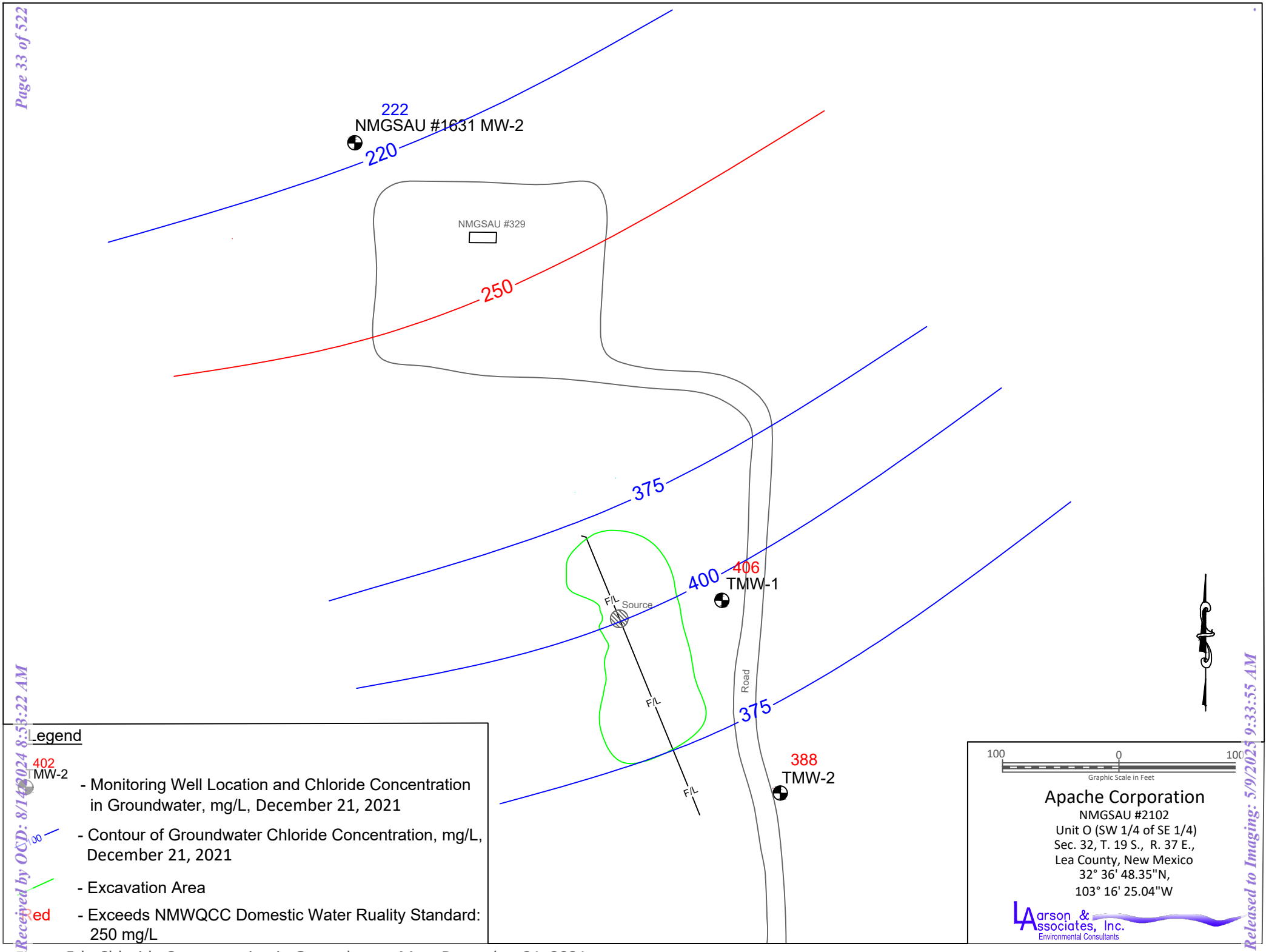

Figure 5d - Chloride Concentration in Groundwater Map, December 21, 2021

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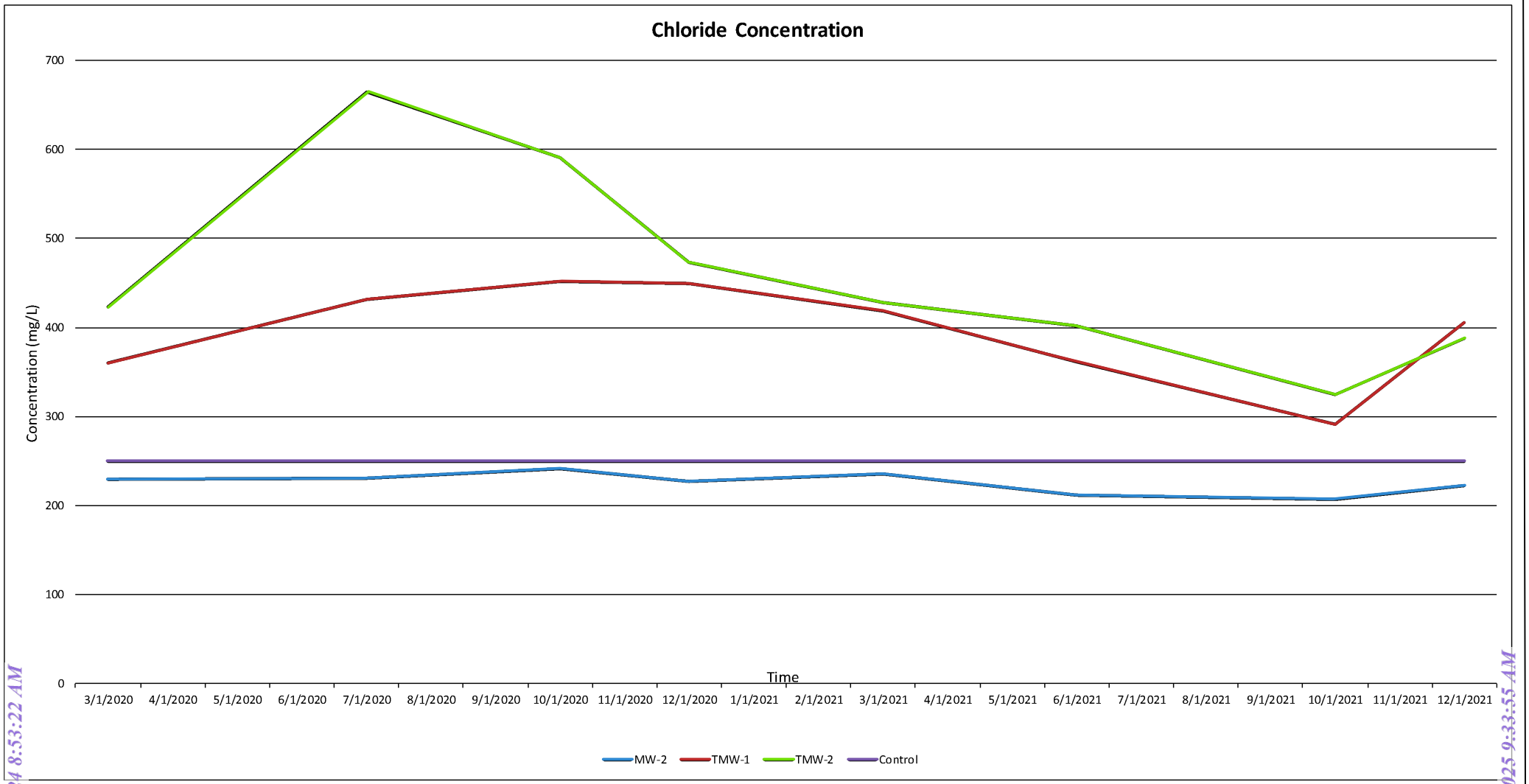

Apache Corporation
NMGSAU #2102
Unit O (SW 1/4 of SE 1/4)
Sec. 32, T. 19 S., R. 37 E.,
Lea County, New Mexico

Larson & Associates, Inc.
Environmental Consultants

Figure 6 - Chloride Concentration Control Chart

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Appendix A

Initial C-141

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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)

☑ Crude Oil	Volume Released (bbls) Unknown	Volume Recovered (bbls) 2.5 barrels
☑ 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?	☑ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ 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 corrdinates for the actual release will not match the actual well location.

Received by OCD: 9/3/2019 12:13:59 PM
Received by OCD: 8/14/2024 8:53:22 AM

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Form C-141
Page 2

State of New Mexico
Oil Conservation Division

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

Was this a major release as defined by 19.15.29.7(A) NMAC? ☑ Yes ☐ 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

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Appendix B

Variance Request

Hamlet, Robert, EMNRD

From: Hamlet, Robert, EMNRD
Sent: Wednesday, October 16, 2019 10:30 AM
To: 'Baker, Larry'
Cc: Bratcher, Mike, EMNRD; Venegas, Victoria, EMNRD; Billings, Bradford, EMNRD; Griswold, Jim, EMNRD
Subject: Variance Conditional Approval - Apache - North Monument GSA Unit #003 - (1RP-5677) 9-16-2019
Attachments: Variance Conditional Approval - Apache - North Monument GSA Unit #003 - (1RP-5677) 10.16.19.pdf

Larry,

We have received your variance request for **1RP-5677 North Monument GSA Unit #003**, thank you. This variance request is conditionally approved.

Your proposal calls for installation of two monitoring wells, with well TMW-1 installed as close as possible to the source of the release and TMW-2 installed hydraulically down gradient approximately 150 feet southeast of the excavation to monitor groundwater quality. Additionally, the OCD would like Apache to drill a monitoring well up gradient to be used for collecting back-ground groundwater samples.

Please keep us informed on your progress.

Please let me know if you have any further questions.

Regards,

Robert J Hamlet
State of New Mexico
Energy, Minerals, and Natural Resources
Oil Conservation Division
811 S. First St., Artesia NM 88210
(575) 748-1283
Robert.Hamlet@state.nm.us

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Appendix C

Karst Risk Potential Map

Received by OCD: 8/14/2024 8:53:22 AM

*New Mexico Kart or No Karst - QGIS

Project Edit View Layer Settings Plugins Vector Raster Database Web Mesh Processing Help

Browser

- Favorites
- Spatial Bookmarks
- Project Home
- Home
- C:\
- D:\
- L:\
- Z:\
- GeoPackage
- SpatiaLite
- PostGIS
- 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

Low

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Type to locate (Ctrl+K)

Coordinate 662471,3609979 Scale 1:4407 Magnifier 100% Rotation 0.0 ° Render EPSG:26913

Appendix D

Apache Confirmation Soil Sample Location Map

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

Appendix E

Apache Confirmation Soil Sample Laboratory Reports

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CARDINAL Laboratories

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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

Received by OCD: 8/14/2024 8:53:22 AM

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CARDINAL Laboratories

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

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	09/16/2019	ND	416	104	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

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

Surrogate: 1-Chlorooctane *85.0 %* *41-142*

Surrogate: 1-Chlorooctadecane *95.6 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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CARDINAL Laboratories

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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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CARDINAL Laboratories

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

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CARDINAL Laboratories

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

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CARDINAL Laboratories

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

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CARDINAL Laboratories

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

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CARDINAL Laboratories

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Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

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CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apache		**BILL TO**	
Project Manager: Jeffrey Brown		P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location: NM GSAU 219		Phone #:	
Sampler Name: Joe Quintana JC.		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV			SAMPLING		ANALYSIS REQUEST											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	DATE	TIME	Cl	Ext TPH	BTEX									
H903141																										
1	W3 32 612 955 2 -103 272 0152	C	1			/					/		9/11	12:09	1	1	1									
2	W4 -103 32 612 3918 272 3056	C	1			/					/			12:11	1	1	1									
3	W5 32 612 214 -103 [redacted] 30431	C	1			/					/			12:13	1	1	1									
4	W6 32 612 3255 -103 272 0421	C	1			/					/			12:15	1	1	1									
5	W7 32 612 2662 -103 272 9555	C	1			/					/			12:17	1	1	1									
6	B15 32 612 2403 -103 272 9741	C	1			/					/			13:18	1	1	1									
7	W10 32.612 1547 -103 272 9060	C	1			/					/			2:33 PM	1	1	1									
						/					/															
						/					/															
						/					/		9/11													

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Relinquished By:	Date: 9-11-19	Received By:		Phone Result: ☐ Yes ☐ No	Add'l Phone #:
	Time: 15:35			Fax Result: ☐ Yes ☐ No	Add'l Fax #:
Relinquished By:	Date:	Received By:		REMARKS: E-mail Results	
	Time:				
Delivered By: (Circle One) 2.2c #97		Sample Condition Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No	CHECKED BY: (Initials)		
Sampler - UPS - Bus - Other: Corrected 2.6c			TP		

Received by OCD: 8/14/2024 8:53:22 AM

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CARDINAL Laboratories

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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

Received by OCD: 8/14/2024 8:53:22 AM

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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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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CARDINAL Laboratories

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

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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 (PIL *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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CARDINAL Laboratories

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

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CARDINAL Laboratories

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

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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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, Lab Director/Quality Manager

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CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apache		**BILL TO**	
Project Manager: Tommy Brewer		P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location: WUG SAU #2119		Phone #:	
Sampler Name: Joe Quevedo Jr.		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	(ICE) COOL	OTHER	DATE	TIME	Cl	Ext. TPH	BTEX
H903162																	
1	B17 @ 12' 32.6122239 -103.2730310	C	1			/					/		9/12	8:08	/	/	/
2	B20 @ 12' 32.6121242 -103.2729113	C	1			/					/		9/12	10:54	/	/	/
3	B 15 @ 12' 32.6123148 -103.2728449	C	1			/					/		9/12	13:10	/	/	/
4	B 16 @ 12' 32.6123332 -103.2728691	C	1			/					/		9/12	13:14	/	/	/
5	W9 32.6123163 -103.2729334	C	1			/					/		9/12	1:50	/	/	/

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Relinquished By:	Date: 9/13/19	Received By:	
	Time: 07:30		
Relinquished By:	Date:	Received By:	
	Time:		

Delivered By: (Circle One) 4.6°C #97
Sampler - UPS - Bus - Other: Corrected 5.0°C

Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No
CHECKED BY: (Initials) TO

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

4.6°C

Email Results.

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apache		**BILL TO**	
Project Manager: Jeffrey Brown		P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location: NMG 32 19		Phone #:	
Sampler Name: Joe Quesada Jr.		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	(C)E/ COOL	OTHER	DATE	TIME	BTEX	EXT 1721	Cl									
H903162																										
6	WS 32.612216 3 -103.8729334	C	1			1					1		9/12	15:00	1	1	1									
7	319 32.6122829 -103.2728600	C	1			1					1		9/12	3:31	1	1	1									
8	B18 32.612 2566 -103.272.8781	C	1			1					1		9/12	3:29	1	1	1									

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Relinquished By:	Date: 9/13/19	Received By:		Phone Result: ☐ Yes ☐ No	Add'l Phone #:
	Time: 07:30			Fax Result: ☐ Yes ☐ No	Add'l Fax #:
Relinquished By:	Date:	Received By:		REMARKS:	
	Time:				
Delivered By: (Circle One)	4.6c	#97	Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	4.6°C
Sampler - UPS - Bus - Other:	Corrected	5.0c		TO	

Received by OCD: 8/14/2024 8:53:22 AM

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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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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Celey D. Keene, Lab Director/Quality Manager

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

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

Surrogate: 1-Chlorooctane *94.3 %* *41-142*

Surrogate: 1-Chlorooctadecane *104 %* *37.6-147*

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

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

Surrogate: 1-Chlorooctane *81.3 %* *41-142*

Surrogate: 1-Chlorooctadecane *99.3 %* *37.6-147*

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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 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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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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 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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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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 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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CARDINAL Laboratories

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

Analytical Results For:

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

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

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

BTEX 8021B mg/kg **Analyzed By: CK**

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

Surrogate: 4-Bromofluorobenzene (PID *95.5 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

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

Surrogate: 1-Chlorooctane *87.2 %* *41-142*

Surrogate: 1-Chlorooctadecane *96.4 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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 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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Celey D. Keene, Lab Director/Quality Manager

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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CARDINAL Laboratories

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

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Celey D. Keene, Lab Director/Quality Manager

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CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Apache	**BILL TO**	
Project Manager:	Seth Boom	P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:	WMASAU #219	Phone #:	
Sampler Name:	Jose Quezada	Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	PRESERV.: ACID/BASE	ICE / COOL	OTHER	SAMPLING: DATE	TIME	Cl	BTEX	8TTTPH
H903176	B24@12' 32.6124803 -103.2725909	C	1			1					1		9/13	9:20	1	1	1
2	W1 32.6124824 -103.2729247	C	1			1					1			9:35	1	1	1
3	W2 32.6124668 -103.2729945	C	1			1					1			9:37	1	1	1
4	W11 32.6125023 -103.2728862	C	1			1					1			10:15	1	1	1
5	B25@12' 32.6125097 -103.2729076	C	1			1			*		1			11:00	1	1	1

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Relinquished By:	Date: 9/16	Received By:	
	Time: 10:52	Jeff Brown	
Relinquished By:	Date: 9-16-19	Received By:	
	Time: 11:40		
Delivered By: (Circle One) 3.7° #97	Sample Condition: Cool ☐ Yes ☐ No; Intact ☐ Yes ☐ No	CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other: Corrected 4.1°			

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

Received by OCD: 8/14/2024 8:53:22 AM

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CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apache		**BILL TO**	
Project Manager: Jeffrey Bowers		P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location: WILLSTAU 2114		Phone #:	
Sampler Name: Lee Quesenberry Jr.		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST												
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE	(ICE) COOL	OTHER:	DATE	TIME	Cl	EXT TPH	BTEX											
H903776																											
6	BH6 @12 32.6023182 -103.2727883	C	1			1					1		9/13	11:45	1	1	1										
7	BH7@12' 32.624058 -103.2728697	C	1			1					1		9/13	13:00	1	1	1										
8	BH8 @12 32.6125523 -103.2728815	C	1			1					1		9/13	15:25	1	1	1										
9	BH9 @12' 32.6023391 -103.2728375	C	1			1					1		9/13	16:13	1	1	1										
10	BH10 @12' 32.6122533 -103.2727678	C	1			1					1		9/13	17:05	1	1	1										

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Relinquished By:	Date: 9/10	Received By:		Phone Result: ☐ Yes ☐ No	Add'l Phone #:
	Time: 1122			Fax Result: ☐ Yes ☐ No	Add'l Fax #:
Relinquished By:	Date: 9-16-19	Received By:		REMARKS: Email Results	
	Time: 11:40				
Delivered By: (Circle One) 3.7° #197		Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials) JO		
Sampler - UPS - Bus - Other: Corrected 4.1°					

Received by OCD: 8/14/2024 8:53:22 AM

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CARDINAL Laboratories

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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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 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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CARDINAL Laboratories

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

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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 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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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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 (PIL *96.2 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**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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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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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 (PIL *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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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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*

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Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

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CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Apache	**BILL TO**	
Project Manager:	Jeffrey Brown	P.O. #:	
Address:		Company:	
City:	Hobbs	State: NM Zip: 88240	Attn:
Phone #:		Fax #:	Address:
Project #:		Project Owner:	City:
Project Name:			State: Zip:
Project Location:	WILLIAMS #214		Phone #:
Sampler Name:	Joe Quesada Jr.		Fax #:

FOR LAB USE ONLY				MATRIX						PRESERV.		SAMPLING		ANALYSIS REQUEST										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	Cl	GRO / DRO / EXT TPH	BTEX								
H903177																								
1	B21 @12' 32.6121112 -103.2729187	C	1			1					1		9/14	8:16	1	1	1							
2	B22 @12' 32.6121214 -103.2728724	C	1			1					1		9/14	8:18	1	1	1							
3	B23 @12' 32.612 1264 -103. 272 8416.	C	1			1					1		9/14	8:20	1	1	1							
4	B30 @12' 32.6124509 -103.2727966	C	1			1					1		9/14	10:44	1	1	1							
5	B31 @12' 32.6124594 -103.2727499	C	1			1					1		9/14	12:30	1	1	1							

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Relinquished By:	Date: 9/16	Received By:	Phone Result: ☐ Yes ☐ No	Add'l Phone #:	
Joe Quesada Jr.	Time: 10:24	JEFF Brown	Fax Result: ☐ Yes ☐ No	Add'l Fax #:	
Relinquished By:	Date: 9-16-19	Received By:	REMARKS:		
	Time: 1:40	Tamara Oldaker	Enwart Results.		
Delivered By: (Circle One) 3.7° #97		Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials) TO.		
Sampler - UPS - Bus - Other: Corrected 4.1°					

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apache		**BILL TO**	
Project Manager: Jeffrey Brown		P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location: NM G-36 #219		Phone #:	
Sampler Name: Joe Quesada Jr.		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE	ICE/COOL	OTHER:	DATE	TIME	Cl	Ext TPH	BTEX
H903177																	
6	B32@12' 32.6124605 -103.2727883	C	1			1					1		9/14	12:38	1	1	1
7	B33@12' 32.6123673 -103.2727364	C	1			1					1		9/14	4:11pm	1	1	1
8	B34@12' 32.6124354 -103.2727041	C	1			1					1		9/14	4:24pm	1	1	1
9	B35@12' 32.6124687 -103.2727859	C	1			1					1		9/14	7:30	1	1	1
10	B36@12' 32.6123770 -103.2727806	C	1			1					1		9/14	7:36			

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Relinquished By: Joe Quesada Jr.	Date: 9/16 Time: 10:23	Received By:		Phone Result: ☐ Yes ☐ No	Add'l Phone #:
Relinquished By:	Date: 9-16-19 Time: 11:40	Received By:		Fax Result: ☐ Yes ☐ No	Add'l Fax #:
Delivered By: (Circle One) 3.7° #97	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)		REMARKS:	
Sampler - UPS - Bus - Other: Corrected 4.1°					

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apache		**BILL TO**	
Project Manager: Jeffrey Broom		P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location: Wilson 2119		Phone #:	
Sampler Name: Joe Quintana Jr.		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	DATE	TIME	Cl	BTEX	EXT TPH								
H963177																									
11	B32@12' 32.612 4351 -103.272 7172	C	1			1					1		9/14	7:58	1	1	1								

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Relinquished By:	Date: 9/16	Received By:		Phone Result: ☐ Yes ☐ No	Add'l Phone #:
	Time: 10:25			Fax Result: ☐ Yes ☐ No	Add'l Fax #:
Relinquished By:	Date: 9-16-24	Received By:		REMARKS:	
	Time: 11:40				
Delivered By: (Circle One) 3.7c #497		Sample Condition Cool: Yes / No; Intact: Yes / No	CHECKED BY: (Initials)		
Sampler - UPS - Bus - Other: Corrected 4.1c			TO		

Received by OCD: 8/14/2024 8:53:22 AM

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CARDINAL Laboratories

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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

Received by OCD: 8/14/2024 8:53:22 AM

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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 (PIL *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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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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 (PIL 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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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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CARDINAL Laboratories

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

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CARDINAL Laboratories

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

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

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Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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 (PIL *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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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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 (PIL *88.6 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1170**	16.0	09/19/2019	ND	400	100	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

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

Surrogate: 1-Chlorooctane *93.5 %* *41-142*

Surrogate: 1-Chlorooctadecane *96.7 %* *37.6-147*

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

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CARDINAL Laboratories

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

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CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Apache	**BILL TO**	
Project Manager:	Jeff Brown	P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:	NM GSAU #2119	Phone #:	
Sampler Name:	Jose Quesada	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	DATE	TIME	Cl	BTEX	8021 TPH
H903211																	
1	B38@12' 32.612 3281 -103.272 7551	C	1			1					1		9/14	9:30 am	1	1	1
2	B39@12 32.612 2818 -103.272 7108	C	1			1					1		9/14	9:32 am	1	1	1
3	B40@12' 32.612 2623 -103.272 7214	C	1			1					1		9/14	12:45 pm	1	1	1
4	B41@12 32.612 2736 -103.272 7326	C	1			1					1		9/14	12:42	1	1	1
5	B42@12' 32.612 2386 -103.272 7245	C	1			1					1		9/14	3:01 pm	1	1	1

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Relinquished By:	Date: 9/18/19 Time: 4:15	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: 9/18/19 Time: 4:15	Received By: Jodi Henson	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 1.7°C Corrected 2.1°		Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) JH

REMARKS: E-mail Results

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	APC Lat	**BILL TO**	
Project Manager:	Jeff Boom	P.O. #:	
Address:		Company:	
City:	Hobbs	State: NM Zip: 88246	Attn:
Phone #:		Fax #:	Address:
Project #:		Project Owner:	City:
Project Name:			State: Zip:
Project Location:	NM GSau #2115		Phone #:
Sampler Name:	Jose Quezada		Fax #:

FOR LAB USE ONLY				MATRIX							PRESERV.			SAMPLING		ANALYSIS REQUEST												
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	DATE	TIME														
H9D5211															300	BTEX	TPH											
6	B43@12' 32.612 2056 -103.2727759	C	1			1					1		9/16	3:03pm	1	1	1											
7	B44@12' 32.612525 -103.2729095	C	1			1					1		9/16	5:13pm	1	1	1											
8	B45@12' 32.612858 -103.2727806	C	1			1					1		9/16	5:15pm	1	1	1											

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Relinquished By:	Date: 9/18/19 Time: 9:15	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: 9/18/19 Time: 9:15	Received By: Jodi Henson	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 1.7°C #97 corrected 2.1°C	Sample Condition Cool: Yes / No Intact: Yes / No	CHECKED BY: (Initials)	REMARKS: E-Mail Results

Received by OCD: 8/14/2024 8:53:22 AM

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CARDINAL Laboratories

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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

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

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CARDINAL Laboratories

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

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Celey D. Keene, Lab Director/Quality Manager

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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CARDINAL Laboratories

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

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CARDINAL Laboratories

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

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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:	09/17/2019
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*

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CARDINAL Laboratories

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

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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:	09/17/2019
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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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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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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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apache		**BILL TO**	
Project Manager: Jeffrey Broom		P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location: NMGSAU 219		Phone #:	
Sampler Name: Joe Chavez Jr.		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Cl	Ext TPH	BTEX								
HG03212																									
1	B46 @2' 32.6120166 -103.2729757	C	1			✓					✓		9/17	10:14	✓	✓	✓								
2	B47 @2' 32.6120251 -103.2729522	C	1			✓					✓		9/17	10:16	✓	✓	✓								
3	B48 @2' 32.6119886 -103.2729556	C	1			✓					✓		9/17	11:18	✓	✓	✓								
4	B49 32.6119759 -103.2728862	C				✓					✓		9/17	14:16	✓	✓	✓								
5	B50 32.6119[illegible]1697 -103.2729909.	C				✓					✓		9/17	12:22	✓	✓	✓								

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Relinquished By: Joe Chavez Jr.	Date: 9/18/19 Time: 9:15	Received By: Jodi Henson	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 1.7°C corrected 2.1°C	#197	Sample Condition Cool: Yes / No Intact: Yes / No	CHECKED BY: (Initials)

REMARKS: Email Results.

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:		**BILL TO**	
Project Manager:		P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:		Phone #:	
Sampler Name:		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE	OTHER:	DATE	TIME	Cl	EXT TPH	BTEX
H903212																	
6	BS1 @12' 32.6119770 -103.2729381	C	1			1					1		9/17	15:17	1	1	1
7	BS2 @12' 32.6119550 -103.2728067	C	1			1					1		9/17	16:24	1	1	1
8	BS3 @ 12 32.6120324 -103.2728724	C	1			1					1		9/17	17:18	1	1	1
9	BS4 @ 12' 32.6120653 -103.2728127	C	1			1					1		9/17	18:58	1	1	1

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Relinquished By: Jesse Quesada	Date: 9/19/19 Time: 9:15	Received By: Jodi Henson	
Relinquished By:	Date: Time:	Received By:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 1.7°C Corrected 2°	#97	Sample Condition Cool: Yes / No; Intact: Yes / No	CHECKED BY: (Initials)

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

Email Results

Received by OCD: 8/14/2024 8:53:22 AM

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CARDINAL Laboratories

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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

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CARDINAL Laboratories

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

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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 (PIL 137 % 73.3-129

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
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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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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CARDINAL Laboratories

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

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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Celey D. Keene, Lab Director/Quality Manager

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Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

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

BTEX 8021B mg/kg Analyzed By: CK

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

Surrogate: 4-Bromofluorobenzene (PID *96.7 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**928**	16.0	09/20/2019	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

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

Surrogate: 1-Chlorooctane *93.6 %* *41-142*

Surrogate: 1-Chlorooctadecane *94.9 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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Celey D. Keene, Lab Director/Quality Manager

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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Celey D. Keene, Lab Director/Quality Manager

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CARDINAL Laboratories

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

Analytical Results For:

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

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

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

BTEX 8021B mg/kg **Analyzed By: BF**

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

Surrogate: 4-Bromofluorobenzene (PIL *89.6 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**976**	16.0	09/20/2019	ND	432	108	400	3.64	

TPH 8015M mg/kg **Analyzed By: MS**

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

Surrogate: 1-Chlorooctane *90.9 %* *41-142*

Surrogate: 1-Chlorooctadecane *95.5 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

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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.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
GC-NC	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

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Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Apache	**BILL TO**	
Project Manager:	Tiffany Brown	P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State:	Zip:
Project Location:	NMGSAU 2119	Phone #:	
Sampler Name:	Joe Quintero Jr	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV			SAMPLING		ANALYSIS REQUEST										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE	ICE	OTHER	DATE	TIME	Cl	Ext TPH	Btex								
H903232																									
1	BS5 @12' 32.6120731 -103.2728734	C	1			/					/		9/18	7:38	/	/	/								
2	BS6 @12 32.6120793 -103.2728684	C	1			/					/		9/18	8:43	/	/	/								
3	BS7 @12 32.6121233 -103.2729716	C	1			/					/		9/18	10:05	/	/	/								
4	BS8 @12' 32.6121260 -103 2727816	C	1			/					/		9/18	10:13	/	/	/								
5	BS9 @12' 32.6121327 -103.2727604	C	1			/					/		9/18	13:08											

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Relinquished By: Joe Quintero Jr	Date: 9/18/19 Time: 14:07	Received By: Jodi Henson	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time: 1:9 correction	Received By:	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler / UPS - Bus - Other: 2.0C 2.4C	#97	Sample Condition: Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials)

REMARKS:

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

2

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Apache	**BILL TO**	
Project Manager:	Jeff Broom	P.O. #:	
Address:		Company:	
City:	Hobbs	State: NM Zip: 88240	Attn:
Phone #:		Fax #:	Address:
Project #:		Project Owner:	City:
Project Name:			State: Zip:
Project Location:	DUGSAU 2119		Phone #:
Sampler Name:	Joe Quesada Jr.		Fax #:

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE:	ICE / COOL	OTHER	DATE	TIME	Cl	EXT TPH	BTEX
H903252																	
6	BG0 @12' (612146 -103.2797276	C	1			1					1		9/18	13:10	1	1	1
7	BG1 @12 32.6119948 -103.2728627	C	1			1					1		9/18	13:31	1	1	1
8	BG2 @12 32.6120276 -103.2728493	C	1			1					1		9/18	14:06	1	1	1
9	BG3 @12 32.6119728 -103.2729054	C	1			1					1		9/18	14:57	1	1	1
10	BG4 @12 32.6120652 -103.2727886	C	1			1					1		9/18	16:00	1	1	1

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Relinquished By:	Date: 9/18/19 Time: 17:01	Received By: Jodi Henson	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
			All Results are emailed. Please provide Email address: Email Results
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One)	Observed Temp. °C 2.0	Sample Condition Cool Intact	CHECKED BY: (Initials)	Turnaround Time: Standard ☐ Rush ☐
Sampler - UPS - Bus - Other:	Corrected Temp. °C 2.4	☐ Yes ☐ Yes ☐ No ☐ No		Thermometer ID #97 Correction Factor +0.4 °C

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C ____ Corrected Temp. °C ____

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

FORM-006 R 3 0

Received by OCD: 8/14/2024 8:53:22 AM

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CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:		**BILL TO**	
Project Manager:		P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location: NMCRSAU 2119		Phone #:	
Sampler Name:		Fax #:	

FOR LAB USE ONLY				MATRIX							PRESERV.			SAMPLING		ANALYSIS REQUEST															
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE	COOL	OTHER :	DATE	TIME	1 01	EXT TPH	BTEX													
H903232																															
11	B65 @12' 32.6120756 -103.2727755	C	1			1						1	1	4/18	16:36	1	1	1													

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Relinquished By:	Date: 4/18/19	Received By:	Verbal Result: ☐ Yes ☐ No	Add'l Phone #:	
	Time: 17:07	Jodi Henson	All Results are emailed. Please provide Email address:		
Relinquished By:	Date:	Received By:	REMARKS:		
	Time:				
Delivered By: (Circle One)	Observed Temp. °C 2.0	Sample Condition Cool / Intact	CHECKED BY: (Initials)	Turnaround Time: Standard ☑ Rush ☐	Bacteria (only) Sample Condition Cool / Intact
Sampler - UPS - Bus - Other:	Corrected Temp. °C 2.4	☐ Yes ☑ Yes ☐ No ☐ No		Thermometer ID #97 Correction Factor + 0.4 °C	☐ Yes ☐ Yes ☐ No ☐ No
FORM-006 R 3.0					Observed Temp. °C / Corrected Temp. °C

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

Received by OCD: 8/14/2024 8:53:22 AM

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CARDINAL Laboratories

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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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CARDINAL Laboratories

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

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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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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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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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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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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 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 (PIL *90.0 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**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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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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 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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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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CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

		BILL TO	
Company Name:	Apache Corp.	P.O. #:	
Project Manager:	Jeffrey Bowen	Company:	
Address:		Attn:	
City:	Hobbs	State: NM Zip: 88240	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:	NEGSAU 2119	Phone #:	
Sampler Name:	Jose Quintero JC	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV		SAMPLING		ANALYSIS REQUEST												
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE	ICE / COOL	OTHER :	DATE	TIME	Cl	CxT TPH	BTEX									
H903252																										
1	B.66@12.32.612085N3 -103.2727075	C	1			✓					✓		9/19	8:13	✓	✓	✓									
2	B67 E/2 32 6120324 -103.2727400	C	1			✓					✓		9/19	11:30	✓	✓	✓									
3	B68 @12 32 6120239 -103.2727504	C	1			✓					✓		9/19	11:36	✓	✓	✓									
4	B69 32.6120.28 -103.2727537	C	1			✓					✓		9/19	11:42	✓	✓	✓									
5	B70 @ 32 612021? -103.2727578	C	1			✓					✓		9/19	11:57	✓	✓	✓									

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Relinquished By:	Date: 9/19-19	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 17:05		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS: Email Results to Jeff Bowen
	Time:		
Delivered By: (Circle One)	Observed Temp. °C 0.6	Sample Condition Cool Intact	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	Corrected Temp. °C 1.0	☑ Yes ☑ Yes ☐ No ☐ No	
FORM-006 R 3.0			Turnaround Time: Standard ☑ Rush ☐
			Thermometer ID #97 Correction Factor + 0.4 °C
			Bacteria (only) Sample Condition Cool Intact Observed Temp. °C ☐ Yes ☐ Yes ☐ No ☐ No Corrected Temp. °C

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Received by OCD: 8/14/2024 8:53:22 AM

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CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Apache Corp		**BILL TO** P.O. #:	
Project Manager: Jeffrey Bowers		Company:	
Address:		Attn:	
City: Hobbs	State: NM Zip: 88240	Address:	
Phone #:	Fax #:	City:	
Project #:	Project Owner:	State: Zip:	
Project Name:		Phone #:	
Project Location: Williams #119		Fax #:	
Sampler Name: Joe Quintero, Jr.			

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING DATE	SAMPLING TIME	Cl	Ext TPH	BTEX
H903252																	
6	B71@12' 32.6120217 -103.2727578	C	1			/					/		9/19	12:03	/	/	/
7	B72@12' 32.6119186 -103.2727507	C	1			/					/		9/19	13:30	/	/	/
8	B73@12' 32.6119110 -103.2727598	C	1			/					/		9/19	13:36	/	/	/
9	B74@12' 32.6119056 -103.2727768	C	1			/					/		9/19	14:51	/	/	/
10	B75@12' 32.6119189 -103.2727712	C	1			/					/		9/19	14:57	/	/	/

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Relinquished By: Joe Quintero Jr.	Date: 9-19-19 Time: 17:05	Received By: Samara Alderete	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: Email Results to Jeffrey Bowers
			REMARKS:

Delivered By: (Circle One)	Observed Temp. °C 0.6	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) TR.	Turnaround Time: Standard ☐ Rush ☐
Sampler - UPS - Bus - Other:	Corrected Temp. °C 1.0			Thermometer ID #97 Correction Factor +0.4 °C

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

FORM-006 R 3 0

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Received by OCD: 8/14/2024 8:53:22 AM

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CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Apache Corp	**BILL TO**	
Project Manager:	Jeffrey Broom	P.O. #:	
Address:		Company:	
City:	Hobbs	State: NM Zip: 88240	Attn:
Phone #:		Fax #:	Address:
Project #:		Project Owner:	City:
Project Name:			State: Zip:
Project Location:	NMGSAU 211G		Phone #:
Sampler Name:	Jay Quesada Jr.		Fax #:

FOR LAB USE ONLY				MATRIX							PRESERV.			SAMPLING		ANALYSIS REQUEST											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	Cl	EXT TOLL	BTEX										
H903252																											
11	BT6 012 32.6146612 -103.2727239	C	1			✓							9/19	15:25	✓	✓	✓										
12	BT7 012 32.6119985 -103.2727396	C	1			✓					✓		9/19	16:30	✓	✓	✓										
13	BT8 012 32.6120200 -103.2727826	C	1			✓					✓		9/19	16:36	✓	✓	✓										

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Relinquished By:	Date: 9-19-19	Received By:	Verbal Result: ☐ Yes ☐ No	Add'l Phone #:
	Time: 7:05		All Results are emailed. Please provide Email address:	
Relinquished By:	Date:	Received By:	REMARKS: Email Result to Jeffery Broom	
	Time:			
Delivered By: (Circle One)	Observed Temp. °C 0.6	Sample Condition Cool Intact	CHECKED BY: (Initials)	Turnaround Time: Standard ☑ Rush ☐
Sampler - UPS - Bus - Other:	Corrected Temp. °C 1.0	☑ Yes ☑ Yes ☐ No ☐ No	TO	Bacteria (only) Sample Condition Cool Intact Observed Temp. °C ☐ Yes ☐ Yes ☐ No ☐ No Corrected Temp. °C
FORM-006 R 3.0				Thermometer ID #97 Correction Factor +0.4 °C

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

Received by OCD: 8/14/2024 8:53:22 AM

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CARDINAL Laboratories

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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

Received by OCD: 8/14/2024 8:53:22 AM

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CARDINAL Laboratories

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

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

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

Analytical Results For:

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

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

Sample ID: B 80 @ 12' 32.6120273-103.2726743 (H903272-02)

BTEX 8021B mg/kg Analyzed By: BF

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83	
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39	
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18	
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956	
Total BTEX	<0.300	0.300	09/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *85.0 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**384**	16.0	09/25/2019	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/24/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/24/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/24/2019	ND					

Surrogate: 1-Chlorooctane *88.2 %* *41-142*

Surrogate: 1-Chlorooctadecane *90.8 %* *37.6-147*

Cardinal Laboratories

*=Accredited Analyte

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

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

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

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

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CARDINAL Laboratories

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

BTEX 8021B mg/kg **Analyzed By: BF**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83	
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39	
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18	
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956	
Total BTEX	<0.300	0.300	09/25/2019	ND					

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

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**416**	16.0	09/25/2019	ND	416	104	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/24/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/24/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/24/2019	ND					

Surrogate: 1-Chlorooctane *86.4 %* *41-142*

Surrogate: 1-Chlorooctadecane *89.2 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Received by OCD: 8/14/2024 8:53:22 AM

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CARDINAL Laboratories

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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

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

Received by OCD: 8/14/2024 8:53:22 AM

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CARDINAL Laboratories

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

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

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

Received by OCD: 8/14/2024 8:53:22 AM

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Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Apache	**BILL TO**	
Project Manager:	Tom Bynum	P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:	NMGSAU #2119	Phone #:	
Sampler Name:	Jose Rosales	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	DATE	TIME	
H903065															
1	U2 Surface	G	1			X							9/4	4:54pm	X
2	U2 @ 4'	G	1			X								4:58pm	X
3	U2 @ 8'	G	1			X								5:00pm	X
4	U1 Surface	G	1			X								5:02	X
5	U1 @ 2'	G	1			X								5:04	X
6	U1 @ 4'	G	1			X								5:06	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 9/5/19	Received By:	
	Time: 07:40		
Relinquished By:	Date:	Received By:	
	Time:		
Delivered By: (Circle One)	0.5° #197	Sample Condition Cool: Yes / No; Intact: Yes / No	CHECKED BY: (Initials) TD.
Sampler - UPS - Bus - Other:	Corrected 0.9°		

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

Email Results
Rush

Received by OCD: 8/14/2024 8:53:22 AM

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CARDINAL Laboratories

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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

Page 167 of 522

CARDINAL Laboratories

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

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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, 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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CARDINAL Laboratories

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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CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apache		**BILL TO**	
Project Manager: Jeff Brown		P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location: NMGSAU #219		Phone #:	
Sampler Name: Jose Rodriguez		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	DATE	TIME	Cl	BTEX	EXT TPH
H903092																	
1	BH12' 32.612468 -103.272 9471	C	1			1					1		9/6	12:09	1	1	1
2	BH12' 32.612 2356 -103.272 5844	C	1			1					1		9/6	3:52pm	1	1	1

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Relinquished By: Jose Rodriguez	Date: 9-6-19	Received By:	Phone Result: ☐ Yes ☐ No	Add'l Phone #:
	Time: 17:00		Fax Result: ☐ Yes ☐ No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: Email Results	
	Time:			
Delivered By: (Circle One) 2.9c #197		Sample Condition Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No	CHECKED BY: (Initials) TO.	
Sampler - UPS - Bus - Other: Corrected 3.3c				

Received by OCD: 8/14/2024 8:53:22 AM

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CARDINAL Laboratories

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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

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

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Celey D. Keene, Lab Director/Quality Manager

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CARDINAL Laboratories

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

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CARDINAL Laboratories

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

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CARDINAL Laboratories

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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

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

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apache	BILL TO	P.O. #:	
Project Manager: Jeffrey Bacon		Company:	
Address:		Attn:	
City: Hobbs State: NM Zip: 88240		Address:	
Phone #: Fax #:		City:	
Project #: Project Owner:		State: Zip:	
Project Name:		Phone #:	
Project Location: Hugshall 2119		Fax #:	
Sampler Name: Joe Quesada Jr.			

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV: ACID/BASE	ICE	COOL	OTHER	SAMPLING DATE	TIME	ANALYSIS REQUEST: Cl	Ext. TPH	BTEX
H903114																		
1	B11@12' 32.6123456 -103.9729049	C	1			X					X			9/10	7:57	X	X	X
2	B12@12' 32.6123464 -103.9729328	C	1			X					X			9/10	7:59	X	X	X
3	B13@12' 32.6123561 -103.9729757	C	1			X					X			9/10	8:01	X	X	X
4	B14@12' 32.6123143 -103.9729556	C	1			X						X		9/10	11:47	X	X	X

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Relinquished By: Joe Quesada Jr.	Date: 9/10 Time: 12:25	Received By: Tamara Oldaker	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) 5.6°C #97	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) T.O.	REMARKS: (Regular) Email Results.
Sampler - UPS - Bus - Other: Corrected 6.0°C			

Received by OCD: 8/14/2024 8:53:22 AM

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CARDINAL Laboratories

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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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CARDINAL Laboratories

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

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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CARDINAL Laboratories

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

*=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

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

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

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Celey D. Keene, Lab Director/Quality Manager

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Apache
Project Manager:	Bruce Baker / Jeffrey Brown
Address:	
City: Hobbs	State: NM Zip: 88240
Phone #:	Fax #:
Project #:	Project Owner:
Project Name:	
Project Location:	WILDCAT #219
Sampler Name:	Juan Quintero

BILL TO

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

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	PRESERV: ACID/BASE	ICE	COOL	OTHER	SAMPLING: DATE	TIME	BTEX	TPH	Cl
H903102																		
1	B3 @ 12' 32.6123770 -103.2730917	C	1			X						X		9/9	7:55	X	X	X
2	B5 @ 12' 32.6121193 -103.2728535	C	1			X						X		9/9	9:45	X	X	X
3	B6 @ 12' 32.6123555 -103.2729123	C	1			X						X		9/9	9:47	X	X	X
4	B7 @ 12' 32.6123532 -103.2728598	C	1			X						X		9/9	10:59	X	X	X
5	B8 @ 12' 32.6123088 -103.2730307	C	1			X						X		9/9	13:56	X	X	X
6	B9 @ 12' 32.6123885 -103.2728852	C	1			X						X		9/9	13:58	X	X	X
7	B10 @ 12' 32.6123023 -103.2728235	C	1			X						X		9/9	13:40	X	X	X
8	B20 12' 32.6124214 -103.2730507	C	1			X						X		9/9	4:03	X	X	X

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Relinquished By:	Date: 9/9	Received By:	
	Time: 16:54		
Relinquished By:	Date:	Received By:	
	Time:		

Delivered By: (Circle One) 2.7° #97
Sampler - UPS - Bus - Other: Corrected 3.1°

Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials) TO

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

Email Results.

Received by OCD: 8/14/2024 8:53:22 AM

CARDINAL Laboratories

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 accreditated 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

CARDINAL Laboratories

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

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	09/05/2019	Sampling Date:	09/04/2019
Reported:	09/05/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Mike Snyder
Project Location:	NOT GIVEN		

Sample ID: V 1 @ 2' (H903065-05)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1650**	16.0	09/05/2019	ND	416	104	400	0.00	

Sample ID: V 1 @ 4' (H903065-06)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**416**	16.0	09/05/2019	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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, Lab Director/Quality Manager

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CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Apache	**BILL TO**	
Project Manager:	Tef Broom	P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:	NMGSAU #2119	Phone #:	
Sampler Name:	Jose Rivera	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	
H903065															
1	U2 Surface	G				1							9/4	4:54pm	1
2	U2 @ 4'	G				1								4:58pm	1
3	U2 @ 8'	G				1								5:00pm	1
4	U1 @ Surface	G				1								5:02	1
5	U1 @ 2'	G				1								5:04	1
6	U1 @ 4'	G				1								5:06	1

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Relinquished By:	Date: 9/5/19	Received By:		Phone Result: ☐ Yes ☐ No	Add'l Phone #:
	Time: 07:40			Fax Result: ☐ Yes ☐ No	Add'l Fax #:
Relinquished By:	Date:	Received By:		REMARKS:	
	Time:			Email Results Rush	
Delivered By: (Circle One)	0.5° #197	Sample Condition Cool Intact	CHECKED BY: (Initials)		
Sampler - UPS - Bus - Other:	Corrected 0.9°	☑ Yes ☑ Yes ☐ No ☐ No	TD.		

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

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 accreditated 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

CARDINAL Laboratories

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

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	09/09/2019	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2019	ND	207	103	200	2.73	
DRO >C10-C28*	<10.0	10.0	09/10/2019	ND	215	107	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	09/10/2019	ND					

Surrogate: 1-Chlorooctane *75.0 %* *41-142*

Surrogate: 1-Chlorooctadecane *78.7 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

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

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, Lab Director/Quality Manager

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CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apache		BILL TO	
Project Manager: Jeff Brown		P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location: NMGSAU #211		Phone #:	
Sampler Name: Jose Rivera		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Cl	BTEX	EXT+PH
H903092																	
1	B1@12' 32.612468 -103.272987	C	1			1					1		9/6	12:09	1	1	1
2	B4@12' 32.612356 -103.272848	C	1			1					1		9/6	3:52pm	1	1	1

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Relinquished By: Jose Rivera	Date: 9-6-19	Received By: Tamara Oldaker	Phone Result: ☐ Yes ☐ No	Add'l Phone #:	
	Time: 17:00		Fax Result: ☐ Yes ☐ No	Add'l Fax #:	
Relinquished By:	Date:	Received By:	REMARKS: Email Results		
	Time:				
Delivered By: (Circle One) 2.9° #197	Sample Condition Cool Intact	CHECKED BY: (Initials)			
Sampler - UPS - Bus - Other: Corrected 3.3°	☐ Yes ☐ Yes ☐ No ☐ No	TC			

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

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 accreditated 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

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CARDINAL Laboratories

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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: 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

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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 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

CARDINAL Laboratories

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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 (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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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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 (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

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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 *=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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Celey D. Keene, Lab Director/Quality Manager

Page 209 of 522

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Apache	**BILL TO**	
Project Manager:	Bruce Baker / Jeffry Brewm	P.O. #:	
Address:		Company:	
City:	Hobbs	State: NM Zip: 88240	Attn:
Phone #:		Fax #:	Address:
Project #:		Project Owner:	City:
Project Name:			State: Zip:
Project Location:	NUGSAU #2119		Phone #:
Sampler Name:	Jesse Quesada Jr.		Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE	COOL	OTHER:	SAMPLING: DATE	TIME	BTEX	GRO TPH	DRO TPH
H903102																		
1	BS @ 12' 32.612 23770 -103.2730917	C	1			1						1		9/9	7:55	1	1	1
2	BS @ 12' 32.612 9123 -103.2728535	C	1			1						1		9/9	9:45	1	1	1
3	B10 @ 12' 32.612 0535 -103.2729123	C	1			1						1		9/9	9:47	1	1	1
4	B9 @ 12' 32.612 55 32 -103.2730508	C	1			1						1		9/9	10:59	1	1	1
5	B8 @ 12' 32.612 3088 -103.2730307	C	1			1						1		9/9	13:56	1	1	1
6	B9 @ 12' 32.612 3068 -103.2728872	C	1			1						1		9/9	13:58	1	1	1
7	B10 @ 12' 32.612 30 23 -103.2728035	C	1			1						1		9/9	13:40	1	1	1
8	B2 @ 12' 32.612 4214 -103.2730967	C	1			1						1		9/9	4:03	1	1	1

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 consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 9/9	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 16:54		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: Email Results.
	Time:		
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	2.7c Corrected 3.1c	#497	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No — CHECKED BY: (Initials) TO

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

CARDINAL Laboratories

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

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Page 216 of 522

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apache		**BILL TO**	
Project Manager: Jeffrey Bacon		P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location: Wiggsall 2119		Phone #:	
Sampler Name: Joe Quesada Jr.		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Cl	Ext. TPH	BTEX
H903114																	
1	B11 @12' 32.6123450 -103.2729049	C	1			/					/		9/10	7:57	/	/	/
2	B12 @12' 32.6123464 -103.2729328	C	1			/					/		9/10	7:59	/	/	/
3	B13 @12' 32.6123561 -103.2729757	C	1			/					/		9/10	8:01	/	/	/
4	B14 @12' 32.6102143 -103.2729556	C	1			/					/		9/10	11:47	/	/	/

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 consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 9/10	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 12:25	Tamara Oldaker	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: (Regular)
	Time:		Email Results.
Delivered By: (Circle One) 5.6° #197		Sample Condition Cool Intact ☑ Yes ☑ Yes ☐ No ☐ No	CHECKED BY: (Initials) TO.
Sampler - UPS - Bus - Other: Corrected 6.0°			

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

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 accreditated 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

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

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

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	09/16/2019	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

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

Surrogate: 1-Chlorooctane *85.0 %* *41-142*

Surrogate: 1-Chlorooctadecane *95.6 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CARDINAL Laboratories

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

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CARDINAL Laboratories

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

CARDINAL Laboratories

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

CARDINAL Laboratories

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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Page 226 of 522

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apache	**BILL TO**
Project Manager: Jeffrey Broom	P.O. #:
Address:	Company:
City: Hobbs State: NM Zip: 88240	Attn:
Phone #: Fax #:	Address:
Project #: Project Owner:	City:
Project Name:	State: Zip:
Project Location: NM GSAU 219	Phone #:
Sampler Name: Joe Quesada JC.	Fax #:

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	(C)/ COOL	OTHER :	DATE	TIME	CL	EXT. TPH	BTEX								
H903141																									
1	W3 32.612455 2 -103.2720152	C	1			1					1		9/11	12:09	1	1	1								
2	W4-103 32.612 3218 -103.305 68	C	1			1					1			12:11	1	1	1								
3	W5 32.612 2114 -103.27 30431	C	1			1					1			12:13	1	1	1								
4	W6 32.612 3233 -103 2730421	C	1			1					1			12:15	1	1	1								
5	W7 32.612 2662 -103.272 9145	C	1			1					1			12:17	1	1	1								
6	B15 32.612 2703 -103.2724741	C	1			1					1			13:18	1	1	1								
7	W10 32.612 1547 -103.2729090	C	1			1					1			2:33pm	1	1	1								
						1					1														
						1					1														
						1					1		9/11												

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Relinquished By:	Date: 9-11-19	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 15:35		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: E-Mail Results
	Time:		
Delivered By: (Circle One) 2.2° #97	Sample Condition Cool ☑ Yes ☐ No Intact ☐ Yes ☐ No	CHECKED BY: (Initials) T.O.	
Sampler - UPS - Bus - Other: Corrected 2.6°			

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

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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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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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)

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

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Analytical Results For:

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

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

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

BTEX 8021B mg/kg Analyzed By: CK

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

Surrogate: 4-Bromofluorobenzene (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

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: W 9 32.6122163-103.2729334 (H903162-05)

BTEX 8021B mg/kg Analyzed By: CK

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

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

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	09/16/2019	ND	400	100	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

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

Surrogate: 1-Chlorooctane *94.6 %* *41-142*

Surrogate: 1-Chlorooctadecane *103 %* *37.6-147*

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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: 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*

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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 (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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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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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)

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

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, Lab Director/Quality Manager

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CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apache		BILL TO	
Project Manager: Tabby Brewer		P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location: NMGSAU #2119		Phone #:	
Sampler Name: Jose Quezada Jr.		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST												
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	(ICE) COOL	OTHER:	DATE	TIME	CL	EXT. TPH	BTEX										
H203162																											
1	B17 @ 12' 32.6122239 -103.2730310	C	1			/					-		9/12	8:08	/	/	/										
2	B20 @12' 32.6121242 -103.2729113	C	1			/					1		9/12	10:54	/	/	/										
3	B 15 @12' 32.6123148 -103.2728449	C	1			/					1		9/12	13:10	/	/	/										
4	B 16 @12' 32.6123332 -103.2728691	C	1			/					1		9/12	13:14	/	/	/										
5	W9 32.6123163 -103.2729334	C	1			/					1		9/12	1:50	/	/	/										

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Relinquished By:	Date: 09/13/19	Received By:	
	Time: 07:30		
Relinquished By:	Date:	Received By:	
	Time:		

Delivered By: (Circle One) 4.6c #97
Sampler - UPS - Bus - Other: Corrected 5.0°C

Sample Condition: Cool ☒ Yes ☐ No; Intact ☒ Yes ☐ No

CHECKED BY: (Initials) T.O.

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

4.6°C

Email Results.

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

Page 238 of 522

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apache		**BILL TO**	
Project Manager: Jeffrey Broom		P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location: NMGSAU 211 9		Phone #:	
Sampler Name: Joe Quesenberry Jr.		Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX	EXT TPH	CL
H903162																	
6	WS 32.6122163	C	1			1					1		9/12	1500	1	1	1
	-103.8729334																
7	319 32.6122829	C	1			1					1		9/12	3:31pm	1	1	1
	-103.2728600																
8	BH 32.6122566	C	1			1					1		9/12	3:29	1	1	1
	-103.272.8781																

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Relinquished By:	Date: 9/13/19	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 07:30		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		
Delivered By: (Circle One) 4.6°C	#97	Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials) TO
Sampler - UPS - Bus - Other: Corrected 5.0°C			4.6°C

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

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

Surrogate: 1-Chlorooctane *94.3 %* *41-142*

Surrogate: 1-Chlorooctadecane *104 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

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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 11 32.6125023-103.2728862 (H903176-04)

BTEX 8021B mg/kg Analyzed By: CK

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

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

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

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

Surrogate: 1-Chlorooctane *81.3 %* *41-142*

Surrogate: 1-Chlorooctadecane *99.3 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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 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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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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 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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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

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

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

BTEX 8021B mg/kg Analyzed By: CK

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

Surrogate: 4-Bromofluorobenzene (PID *95.5 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	09/17/2019	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

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

Surrogate: 1-Chlorooctane *87.2 %* *41-142*

Surrogate: 1-Chlorooctadecane *96.4 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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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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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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.
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

Page 251 of 522

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apex Lit	BILL TO
Project Manager: Seth Boom	P.O. #:
Address:	Company:
City: Hobbs State: NM Zip: 88240	Attn:
Phone #: Fax #:	Address:
Project #: Project Owner:	City:
Project Name:	State: Zip:
Project Location: WMASAU #219	Phone #:
Sampler Name: Jose Rivera	Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Cl	BTEX	EXTTPH	ANALYSIS REQUEST
H903176																		
1	B24@12' 32.6124803 -103.2728909	C	1			1					1		9/13	9:20	1	1	1	
2	W1 32.6124824 -103.2729247	C	1			1					1			9:35	1	1	1	
3	W2 32.6124668 -103.2729945	C	1			1					1			9:37	1	1	1	
4	W11 32.6123023 -103.2728862	C	1			1					1			10:15	1	1	1	
5	B25@12' 32.6125097 -103.2729076	C	1			1					1			11:00	1	1	1	

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Relinquished By:	Date: 9/16	Received By: Jeff Broom	
	Time: 10:22		
Relinquished By: Jeff B	Date: 9-16-19	Received By: Tamara Oldaker	
	Time: 11:40		
Delivered By: (Circle One) 3.7c #97	Sample Condition: Cool Yes / Intact Yes	CHECKED BY: (Initials)	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Sampler - UPS - Bus - Other: Corrected 4.1c	☐ No ☐ No	TO	Fax Result: ☐ Yes ☐ No Add'l Fax #:
			REMARKS:

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

Page 252 of 522

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apache		BILL TO	
Project Manager: Jeffrey Brown		P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location: NM GSAU 211H		Phone #:	
Sampler Name: Joe Quesada Jr.		Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	(ICE) COOL	OTHER:	SAMPLING: DATE	TIME	Cl	EXT TPH	BTEX	ANALYSIS REQUEST
H903176																		
6	B26 @12 32.6123182 -103.2727883	C	1			1					1		9/13	11:45	1	1	1	
7	B27@12' 32.6124058 -103.2728697	C	1			1					1		9/13	13:00	1	1	1	
8	B28 @12 32.6125523 -103.2728815	C	1			1					1		9/13	15:45	1	1	1	
9	B28 @12 32.6123591 -103.2728375	C	1			1					1		9/13	16:13	1	1	1	
10	B29 @12' 32.6122533 -103.2727678	C	1			1					1		9/13	17:05	1	1	1	

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Relinquished By:	Date: 9/16	Received By:	
	Time: 1122		
Relinquished By:	Date: 9-16-13	Received By:	
	Time: 11:40		
Delivered By: (Circle One) 3.7° #97	Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other: Corrected 4.1°		JO.	

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

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

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 accreditated 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

CARDINAL Laboratories

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

CARDINAL Laboratories

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

CARDINAL Laboratories

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

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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, Lab Director/Quality Manager

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CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Apache	**BILL TO**	
Project Manager:	Jeffrey Brown	P.O. #:	
Address:		Company:	
City:	Hobbs	State: NM Zip: 88240	Attn:
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:	Mc GRATH #2114	Phone #:	
Sampler Name:	Joe Quesada Jr.	Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Cl	GxT TPH	BTEX
H903177																	
1	B21 @12' 32.6121112 -103.2729187	C	1			✓					✓		9/4	8:16	✓	✓	✓
2	B22 @12' 32.6121214 -103.2728724	C	1			✓					✓		9/4	8:18	✓	✓	✓
3	B23 @12' 32.612 1264 -103. 272 8416.	C	1			✓					✓		9/14	8:20	✓	✓	✓
4	B30 @12' 32.6124509 -103.2727966	C	1			✓					✓		9/14	10:44	✓	✓	✓
5	B31 @12' 32.6124594 -103.2727499	C	1			✓					✓		9/14	12:30	✓	✓	✓

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Relinquished By:	Date: 9/16	Received By:	Phone Result: ☐ Yes ☐ No	Add'l Phone #:
	Time: 10:24	Jeff Brown	Fax Result: ☐ Yes ☐ No	Add'l Fax #:
Relinquished By:	Date: 9-16-19	Received By:	REMARKS:	
	Time: 11:40	Tamara Oldaker	Enart Results.	
Delivered By: (Circle One)	3.7c #97	Sample Condition: Cool ☑ Yes ☐ No; Intact ☐ Yes ☐ No	CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other:	Corrected 4.1c		T.O.	

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Apache	**BILL TO**	
Project Manager:	Jeffrey Brown	P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:	WILGSAU #219	Phone #:	
Sampler Name:	Joel Quesada Jr.	Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE/COOL	OTHER:	SAMPLING: DATE	TIME	ANALYSIS REQUEST: Cl	6x+ TPH	BTEX
H903177																	
6	B32@12' 32.6124605 -103.2727853	C	1			1					1		9/14	12:38	1	1	1
7	B33@12' 32.6123673 -103.2727364	C	1			1					1		9/14	4:11pm	1	1	1
8	B34@12' 32.6124354 -103.2727041	C	1			1					1		9/14	4:24pm	1	1	1
9	B35@12' 32.6124687 -103.2727859	C	1			1					1		9/14	7:34	1	1	1
10	B36@12' 32.6123770 -103.2727806	C	1			1					1		9/14	7:36			

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Relinquished By:	Date: 9/16 Time: 10:23	Received By:	
Relinquished By:	Date: 9-16-19 Time: 11:40	Received By:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	3.7° Corrected 4.1° #97	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) TC

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

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

Page 268 of 522

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apache		**BILL TO**	
Project Manager: Jeffrey Brown		P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location: Unit 2119		Phone #:	
Sampler Name: Joe Quintana Jr.		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Cl	BTEX	EXT TPH								
H963177																									
11	B37@12' 32.612 4351 -103.272 7172	C	1			1					1		9/14	7:38	1	1	1								

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Relinquished By: Joe Quintana Jr.	Date: 9/16 Time: 10:25	Received By: Jeff Brown	
Relinquished By: Jeff Brown	Date: 9-16-19 Time: 11:40	Received By: Tamara Oldaker	
Delivered By: (Circle One) 3.7c #97 Sampler - UPS - Bus - Other: Corrected 4.1c	Sample Condition Cool: Yes / No Intact: Yes / No	CHECKED BY: (Initials) TO	

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

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

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 accreditated 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

CARDINAL Laboratories

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

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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:	09/16/2019
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

CARDINAL Laboratories

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

CARDINAL Laboratories

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

CARDINAL Laboratories

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

CARDINAL Laboratories

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

CARDINAL Laboratories

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

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1170**	16.0	09/19/2019	ND	400	100	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

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

Surrogate: 1-Chlorooctane *93.5 %* *41-142*

Surrogate: 1-Chlorooctadecane *96.7 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Apache	**BILL TO** P.O. #:	
Project Manager:	Jeff Brown	Company:	
Address:		Attn:	
City:	Hobbs	State: NM Zip: 88240	Address:
Phone #:	Fax #:	City:	
Project #:	Project Owner:	State: Zip:	
Project Name:		Phone #:	
Project Location:	NM BS#4 #219	Fax #:	
Sampler Name:	Jose Rocha		

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Cl	BTEX	Ext TPH	ANALYSIS REQUEST
H903211																		
1	B38@12' 32.6123281 -103.2727551	C	1			1					1		9/16	9:30 am	1	1	1	
2	B39@12 32.6122818 -103.2727108	C	1			1					1		9/16	9:32 am	1	1	1	
3	B40@12' 32.6122623 -103.2727218	C	1			1					1		9/16	12:45 pm	1	1	1	
4	B41@12 32.6122730 -103.2727326	C	1			1					1		9/16	12:48	1	1	1	
5	B42@12' 32.6122386 -103.2727245	C	1			1					1		9/16	3:01 pm	1	1	1	

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Relinquished By:	Date: 9/16/19 Time: 4:00 PM	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: 9/18/19 Time: 9:15	Received By: Jodi Henson	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 1.7°C corrected 2.1° #497	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) JA	REMARKS: E-mail Results

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

Page 280 of 522

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Apache	**BILL TO**	
Project Manager:	Jeff Broom	P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:	New Gsau #2119	Phone #:	
Sampler Name:	Jose Quesada	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Cl	BTEX	TPH 8021										
H9D3211																										
6	B43@12 32.612 ~~2259~~ 2086 −103.2727754	C	1			1					1		9/16	3:03pm	1	1	1									
7	B44@12 32.6126575 −103.2729095	C	1			1					1		9/16	3:13pm	1	1	1									
8	B45@12' 32.6121858 −103.2727806	C	1			1					1		9/16	3:15pm	1	1	1									

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Relinquished By:	Date: 9/16/19 Time: 4:00pm	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: 9/18/19 Time: 9:15	Received By: Jodi Henson	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 1.7°C corrected 2.1°C #97	Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	REMARKS: E-Mail Results

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

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 accreditated 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

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

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

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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Celey D. Keene, Lab Director/Quality Manager

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

Analytical Results For:

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

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

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

BTEX 8021B mg/kg Analyzed By: BF

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

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

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	09/19/2019	ND	400	100	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

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

Surrogate: 1-Chlorooctane *88.2 %* *41-142*

Surrogate: 1-Chlorooctadecane *94.5 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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Celey D. Keene, Lab Director/Quality Manager

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

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*

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Celey D. Keene, Lab Director/Quality Manager

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

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*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

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

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

Sample ID: B 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

CARDINAL Laboratories

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Page 292 of 522

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apache		**BILL TO**	
Project Manager: Jeffrey Broom		P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location: NMGSAU 219		Phone #:	
Sampler Name: Joe Quesada Jr.		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Cl	Ext TPH	BTEX									
HG03212																										
1	B46 @12' 32.6120666 -103.2729757	C	1			1					1		9/17	10:14	1	1	1									
2	B47 @12' 32.6120251 -103.2729522	C	1			1					1		9/17	10:16	1	1	1									
3	B48 @12' 32.6119886 -103.2729556	C	1			1					1		9/17	11:18	1	1	1									
4	B49 32.6119759 -103.2728562	C				1					1		9/17	14:16	1	1	1									
5	B50 32.6119[illegible]1697 -103.2728909.	C				1					1		9/17	14:22	1	1	1									

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Relinquished By: Joe Quesada Jr.	Date: 9/18/19 Time: 9:15	Received By: Jodi Henson	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	Fax Result: ☐ Yes ☐ No Add'l Fax #: REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 1.7° corrected 2.1° #97	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)	Email Results.

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

Page 293 of 522

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:		**BILL TO**	
Project Manager:		P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:		Phone #:	
Sampler Name:		Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE	OTHER:	SAMPLING: DATE	TIME	ANALYSIS REQUEST: Cl	GRO TPH	BTEX
H903212																	
6	B51 @12' 32.6119770 -103.2729381	C	1			1					1		9/17	15:17	1	1	1
7	B52 @12' 32.6119550 -103.2728067	C	1			1					1		9/17	16:24	1	1	1
8	B53 @12 32.6120324 -103.2728724	C	1			1					1		9/17	17:18	1	1	1
9	B54 @12' 32.6120753 -103.2728127	C	1			1					1		9/17	18:38	1	1	1

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Relinquished By: Steve Quinnard	Date: 9/18/19 Time: 9:15	Received By: Jodi Henson	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 1.7°C #97 Corrected 2.6	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)	REMARKS: Email Results

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

CARDINAL Laboratories

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

CARDINAL Laboratories

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

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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 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

CARDINAL Laboratories

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

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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 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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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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*

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

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

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

BTEX 8021B mg/kg **Analyzed By: BF**

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

Surrogate: 4-Bromofluorobenzene (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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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
GC-NC	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

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CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Apache	**BILL TO**	
Project Manager:	Tiffany Bowers	P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:	NMGSAU 211	Phone #:	
Sampler Name:	Joe Quintero Jr.	Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (COMP.)	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE	COOL	OTHER:	SAMPLING: DATE	TIME	ANALYSIS REQUEST: Cl	Ext TPH	BTEX
H903232																		
1	BS5 @12' 32.6120731 -103.2728784	C	1			✓						✓		9/18	7:38	✓	✓	✓
2	BS6 @12 32.6220793 -103.2728684	C	1			✓						✓		9/18	8:43	✓	✓	✓
3	BS7 @12 32.6121233 -103.2729716	C	1			✓						✓		9/18	10:09	✓	✓	✓
4	BS8 @12' 32.6121360 -103 2727816	C	1			✓						✓		9/18	10:13	✓	✓	✓
5	BS9 @12' 32.6121327 -103.2727604	C	1			✓						✓		9/18	13:05			

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Relinquished By: Joe Quintero Jr.	Date: 9/18/19	Received By: Jodi Henson	Phone Result: ☐ Yes ☐ No	Add'l Phone #:
	Time: 11:07		Fax Result: ☐ Yes ☐ No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:	
	Time: 1.4 correction			
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	2.0°C 2.4°C #97	Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Apache	**BILL TO**	P.O. #:	ANALYSIS REQUEST
Project Manager: Jeff Broom		Company:	
Address:		Attn:	
City: Hobbs State: NM Zip: 88240		Address:	
Phone #: Fax #:		City:	
Project #: Project Owner:		State: Zip:	
Project Name:		Phone #:	
Project Location: DUGSAU 2119		Fax #:	
Sampler Name: Joe Quesada Jr.			

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING					
Lab I.D. H903232	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE/ COOL	OTHER :	DATE	TIME	Cl	ExT TPH	BTEX	
6	BG0 @12' (6121446 -103.2727276	C	1			/					/		9/18	13:10	/	/	/	
7	BG1 @12 32.6119948 -103.2728627	C	1			/					/		9/18	13:31	/	/	/	
8	BG2 @12 32.6120276 -103.2728493	C	1			/					/		9/18	14:06	/	/	/	
9	BG3 @12 32.6119728 -103.2729059	C	1			/					/		9/18	14:51	/	/	/	
10	BG4 @12 32.6120652 -103.2727886	C	1			/					/		9/18	16:00	/	/	/	

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Relinquished By: Joe Quesada Jr	Date: 9/18/19 Time: 17:01	Received By: Jodi Henson	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: Email Results
			REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other: FORM-006 R 3.0	Observed Temp. °C 2.0 Corrected Temp. °C 2.4	Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials)
			Turnaround Time: Standard ☐ Rush ☐ Thermometer ID #97 Correction Factor +0.4 °C
			Bacteria (only) Sample Condition Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

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

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:		**BILL TO**	
Project Manager:		P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:	NUCKSAU 2119	Phone #:	
Sampler Name:		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST												
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	(E) COOL	OTHER :	DATE	TIME	8015	EXT TPH	BTEX										
H903232																										
11	BG5 @12' 32.6120756 -103.2727755	C	1			1					1		9/18	16:36	1	1	1										

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Relinquished By:	Date: 9/18/19	Received By:	Verbal Result: ☐ Yes ☐ No	Add'l Phone #:	
	Time: 17:07	Jodi Henson	All Results are emailed. Please provide Email address:		
Relinquished By:	Date:	Received By:	REMARKS:		
	Time:				
Delivered By: (Circle One)	Observed Temp. °C 2.0	Sample Condition Cool Intact	CHECKED BY: (Initials)	Turnaround Time: Standard ☑ Rush ☐	Bacteria (only) Sample Condition Cool Intact Observed Temp. °C
Sampler - UPS - Bus - Other:	Corrected Temp. °C 2.4	☐ Yes ☑ Yes ☐ No ☐ No		Thermometer ID #97 Correction Factor +0.4 °C	☐ Yes ☐ Yes ☐ No ☐ No Corrected Temp. °C

FORM-006 R 3.0

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Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

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 accreditated 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

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

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

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**17200**	16.0	09/20/2019	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	205	103	200	0.584	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	205	103	200	2.08	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane *94.8 %* *41-142*

Surrogate: 1-Chlorooctadecane *96.1 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

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

Received:	09/19/2019	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, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**24400**	16.0	09/20/2019	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	205	103	200	0.584	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	205	103	200	2.08	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane *94.1 %* *41-142*

Surrogate: 1-Chlorooctadecane *97.1 %* *37.6-147*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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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, Lab Director/Quality Manager

Page 316 of 522

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

		BILL TO	
Company Name:	Apache Corporation	P.O. #:	
Project Manager:	Bruce Baker	Company:	
Address:		Attn:	
City:	State: Zip:	Address:	
Phone #:	Fax #:	City:	
Project #:	Project Owner:	State: Zip:	
Project Name:		Phone #:	
Project Location:	NEDU 929	Fax #:	
Sampler Name:	Josh Brown		

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	CL	BTEX	EXT. TPH
H903247																	
1	SP3 @ 5'												9/19/19	11:08	✓	✓	✓
2	SP3 @ 10'												1	11:18	|	|	|
3	SP3 @ 15'												1	11:35	|	|	|
4	SP3 @ 19'												9/19/19	11:52	|	|	|

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Relinquished By: Josh Brown	Date: 9/19/19	Received By: Samara Oldaker	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 3:50		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One)	Observed Temp. °C 3.8	Sample Condition Cool Intact	CHECKED BY: (Initials)	Turnaround Time: Standard ☑ Rush ☐	Bacteria (only) Sample Condition Cool Intact Observed Temp. °C
Sampler - UPS - Bus - Other:	Corrected Temp. °C 4.2	☑ Yes ☑ Yes ☐ No ☐ No	TO.	Thermometer ID #97 Correction Factor +0.4 °C	☐ Yes ☐ Yes ☐ No ☐ No Corrected Temp. °C

FORM-006 R 3.0

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

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

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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:	09/18/2019
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 @ 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*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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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:	09/18/2019
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, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**4560**	16.0	09/20/2019	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	205	103	200	0.584	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	205	103	200	2.08	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane *96.0 %* *41-142*

Surrogate: 1-Chlorooctadecane *100 %* *37.6-147*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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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:	09/18/2019
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, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**9330**	16.0	09/20/2019	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/20/2019	ND	205	103	200	0.584	
DRO >C10-C28*	<10.0	10.0	09/20/2019	ND	205	103	200	2.08	
EXT DRO >C28-C36	<10.0	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane *98.6 %* *41-142*

Surrogate: 1-Chlorooctadecane *103 %* *37.6-147*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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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:	09/18/2019
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, SM4500Cl-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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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, Lab Director/Quality Manager

Page 323 of 522

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Apache Corp.	BILL TO	
Project Manager:	Bruce Baker	P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location:	NEDU 928	Phone #:	
Sampler Name:	J. Broom	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	CL	TPH Ext	BTEX
H203248																	
1	SP2 @ 5'												9/18/19	13:11	✓	✓	✓
2	SP2 @ 10'													13:20			
3	SP2 @ 15'													13:29			
4	SP2 @ 20'												9/18/19	13:45			

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Relinquished By:	Date: 9/19/19	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 3:44		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One)	Observed Temp. °C 3.8	Sample Condition Cool Intact	CHECKED BY: (Initials)	Turnaround Time: Standard ☑ Rush ☐	Bacteria (only) Sample Condition Cool Intact Observed Temp. °C
Sampler - UPS - Bus - Other:	Corrected Temp. °C 4.2	☑ Yes ☑ Yes ☐ No ☐ No	JC	Thermometer ID #97 Correction Factor +0.4 °C	☐ Yes ☐ Yes ☐ No ☐ No Corrected Temp. °C

FORM-006 R 3.0

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

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

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 accreditated 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

CARDINAL Laboratories

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

CARDINAL Laboratories

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

CARDINAL Laboratories

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

CARDINAL Laboratories

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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

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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 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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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CARDINAL Laboratories

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

CARDINAL Laboratories

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

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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 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

CARDINAL Laboratories

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

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CARDINAL Laboratories

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

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CARDINAL Laboratories

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:	Jeffrey Breem
Address:	
City:	Hobbs State: NM Zip: 88240
Phone #:	Fax #:
Project #:	Project Owner:
Project Name:	
Project Location:	NEGSAU #119
Sampler Name:	Joe Quesada Jr.

BILL TO

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

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE	COOL	OTHER :	SAMPLING: DATE	TIME	Cl	EXT TPH	BTEX
H903252 1	B.66@12.32.6120853 -103.2727075	C	1			✓					✓			9/19	8:13	✓	✓	✓
2	B67@12.32.6120324 -103.2727400	C	1			✓					✓			9/19	11:30	✓	✓	✓
3	B68@12.32.6120239 -103.2727504	C	1			✓					✓			9/19	11:36	✓	✓	✓
4	B69 32.6120188 -103.2727537	C	1			✓					✓			9/19	11:42	✓	✓	✓
5	B70@12 32.6120217 -103.2727578	C	1			✓					✓			9/19	11:57	✓	✓	✓

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Relinquished By:	Date: 9/19-19	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 17:05		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS: Email Results to Jeff Breem
	Time:		

Delivered By: (Circle One)	Observed Temp. °C 0.6	Sample Condition Cool Intact	CHECKED BY: (Initials)	Turnaround Time: ☑ Standard ☐ Rush
Sampler - UPS - Bus - Other:	Corrected Temp. °C 1.0	☑ Yes ☑ Yes ☐ No ☐ No	T.O.	Thermometer ID #97 Correction Factor + 0.4 °C

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.0

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

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Apache Corp	**BILL TO** P.O. #:
Project Manager: Jeffrey Broom	Company:
Address:	Attn:
City: Hobbs State: NM Zip: 88240	Address:
Phone #: Fax #:	City:
Project #: Project Owner:	State: Zip:
Project Name:	Phone #:
Project Location: Williams Fed 011	Fax #:
Sampler Name: Joe Quintero Jr.	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: Cl	Ext TPH	BTEX
H903252-6	B71 @12 32.6120217 -103.2727578	C	1			✓					✓		9/19	12:03	✓	✓	✓
7	B72 @12' 32.6119186 -103.2727507	C	1			✓					✓		9/19	13:30	✓	✓	✓
8	B73 @12' 32.6119110 -103.2727598	C	1			✓					✓		9/19	13:36	✓	✓	✓
9	B74 @2' 32.6119056 -103.2727760	C	1			✓					✓		9/19	14:51	✓	✓	✓
10	B75 @12' 32.6119189 -103.2727712	C	1			✓					✓		9/19	14:57	✓	✓	✓

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 consequental 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: Joe Quintero Jr.	Date: 9-19-19 Time: 17:05	Received By: Samara Waldrop	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: Email Results to Jeffrey Broom
			REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other: FORM-006 R 3.0	Observed Temp. °C 0.6 Corrected Temp. °C 1.0	Sample Condition Cool: Yes / No Intact: Yes / No	CHECKED BY: (Initials) TO.
			Turnaround Time: Standard ✓ Rush ☐ Thermometer ID #97 Correction Factor +0.4 °C
			Bacteria (only) Sample Condition Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

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

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

		BILL TO	
Company Name:	Apache Corp.	P.O. #:	
Project Manager:	Jeffery Brown	Company:	
Address:		Attn:	
City:	Hobbs	State: NM Zip: 88240	Address:
Phone #:	Fax #:	City:	
Project #:	Project Owner:	State: Zip:	
Project Name:		Phone #:	
Project Location:	NMGSAU 211G	Fax #:	
Sampler Name:	Jon Quesada Jr.		

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Cl	EXT TOH	BTEX									
H903252																										
11	B76 @12 32.6114612 -103.2727234	C	1			✓					✓		9/19	15:28	✓	✓	✓									
12	B77 @12 32.6114985 -103.2727396	C	1			✓					✓		9/19	16:30	✓	✓	✓									
13	B78 @12 32.6120200 -103.2727286	C	1			✓					✓		9/19	16:36	✓	✓	✓									

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 consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 9-19-19 Time: 7:05	Received By:	Verbal Result: ☐ Yes ☐ No	Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: Email Result to Jeffery Brown	
			REMARKS:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other: FORM-006 R 3.0	Observed Temp. °C 10.6 Corrected Temp. °C 1.0	Sample Condition Cool Intact ☑ Yes ☑ Yes ☐ No ☐ No	CHECKED BY: (Initials) TO	Turnaround Time: Standard ☑ Rush ☐ Thermometer ID #97 Correction Factor + 0.4 °C

Bacteria (only) Sample Condition Cool Intact ☐ Yes ☐ Yes ☐ No ☐ No Observed Temp. °C Corrected Temp. °C

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

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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 *=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

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

CARDINAL Laboratories

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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

CARDINAL Laboratories

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

Page 348 of 522

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Apache Corp.	**BILL TO** P.O. #:	
Project Manager:	Jeffrey Broom	Company:	
Address:		Attn:	
City:	Hobbs	State: NM Zip: 88240	Address:
Phone #:	Fax #:	City:	
Project #:	Project Owner:	State: Zip:	
Project Name:		Phone #:	
Project Location:	NMBSAU 21H	Fax #:	
Sampler Name:	Joe Quesada Jr.		

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	(ICE)/COOL	OTHER :	SAMPLING: DATE	TIME	BTEX	Ext TPH	Cl
H903276																	
1	B74@12 32.6119567 -103.272-7105	C	1			✓					✓		9/20	2:32	✓	✓	✓
2	B80@12 32.6120273 -103.2726743	C	1			✓					✓		9/20	2:36	✓	✓	✓
3	B81 32.6121375 -103.2726161	C	1			✓					✓		9/20	13:50	✓	✓	✓
4	B82@12 32.6120784 -103.2726877	C	1			✓					✓		9/20	13:54	✓	✓	✓

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 consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 9/24 Time: 7:30	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: Email to Jeffrey Broom
			REMARKS:
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: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)
Turnaround Time: ☐ Standard ☐ Rush Thermometer ID #97 Correction Factor +0.4 °C	Bacteria (only) Sample Condition Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No	Observed Temp. °C 5.8 5.3 Corrected Temp. °C 6.2 5.7	

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

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	09/24/2019	Sampling Date:	09/23/2019
Reported:	09/30/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Mike Snyder
Project Location:	NOT GIVEN		

Sample ID: W 13 32.61248 - 103.2727665 (H903273-01)

BTEX 8021B mg/kg Analyzed By: BF

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/25/2019	ND	1.89	94.7	2.00	1.83	
Toluene*	<0.050	0.050	09/25/2019	ND	1.88	94.2	2.00	1.39	
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.86	93.0	2.00	1.18	
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.52	92.1	6.00	0.956	
Total BTEX	<0.300	0.300	09/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *82.4 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	09/25/2019	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/30/2019	ND	196	97.8	200	1.80	
DRO >C10-C28*	<10.0	10.0	09/30/2019	ND	193	96.6	200	1.78	
EXT DRO >C28-C36	<10.0	10.0	09/30/2019	ND					

Surrogate: 1-Chlorooctane *85.7 %* *41-142*

Surrogate: 1-Chlorooctadecane *93.6 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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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:	09/24/2019	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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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:	09/24/2019	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*

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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 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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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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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*

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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 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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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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Celey D. Keene, Lab Director/Quality Manager

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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 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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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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 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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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:	09/24/2019	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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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:	09/24/2019	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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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

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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 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

CARDINAL Laboratories

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

CARDINAL Laboratories

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	09/24/2019	Sampling Date:	09/23/2019
Reported:	09/30/2019	Sampling Type:	Soil
Project Name:	NMGSAU #2119	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Mike Snyder
Project Location:	NOT GIVEN		

Sample ID: B 87 @ 12' 32.6119386 - 103.2726686 (H903273-31)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/25/2019	ND	2.14	107	2.00	0.302	
Toluene*	<0.050	0.050	09/25/2019	ND	1.90	94.9	2.00	1.27	
Ethylbenzene*	<0.050	0.050	09/25/2019	ND	1.91	95.6	2.00	0.902	
Total Xylenes*	<0.150	0.150	09/25/2019	ND	5.80	96.7	6.00	0.683	
Total BTEX	<0.300	0.300	09/25/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.5 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	09/25/2019	ND	400	100	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/25/2019	ND	204	102	200	1.35	
DRO >C10-C28*	**41.5**	10.0	09/25/2019	ND	192	96.2	200	1.88	
EXT DRO >C28-C36	<10.0	10.0	09/25/2019	ND					

Surrogate: 1-Chlorooctane *98.1 %* *41-142*

Surrogate: 1-Chlorooctadecane *98.1 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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(1)

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apache Corp.	**BILL TO** P.O. #:
Project Manager: Jeffrey Broom	Company:
Address:	Attn:
City: Hobbs State: NM Zip: 88240	Address:
Phone #: Fax #:	City:
Project #: Project Owner:	State: Zip:
Project Name:	Phone #:
Project Location: NMOSAU 219	Fax #:
Sampler Name: Joe Quesada Jr.	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE	COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: Cl	EXT TPH	BTEX
H903273																		
1	W13 32.612148 -103.2727665	C	1			✓						✓		9/23	11:32	✓	✓	✓
2	W14 32.6124795 -103.2727571	C	1			✓						✓		9/23	13:38	✓	✓	✓
3	W15 32.6124631 -103.2727360	C	1			✓						✓		9/23	13:40	✓	✓	✓
4	W16 32.6124149 -103.2727075	C	1			✓						✓		9/23	11:42	✓	✓	✓
5	W17 32.6123939 -103.2726937	C	1			✓						✓		9/23	11:44	✓	✓	✓

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Relinquished By: Joe Quesada	Date: 9/24 Time: 7:30	Received By: Mike Lund	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: Email Results to Jeff Broom
			REMARKS:
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 ☑ Yes Intact ☑ Yes ☐ No ☐ No	CHECKED BY: (Initials)
Turnaround Time: Standard ☑ Rush ☐ Thermometer ID #97 Correction Factor + 0.4 °C	Bacteria (only) Sample Condition Cool ☐ Yes Intact ☐ Yes ☐ No ☐ No	Observed Temp. °C 5.8 5.3 Corrected Temp. °C 6.2 5.7	

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CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

(2) (1)

Company Name: Apache		**BILL TO**	
Project Manager: Jeffrey Broom		P.O. #:	
Address:		Company:	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:		State: Zip:	
Project Location: NMGSAU 2119		Phone #:	
Sampler Name: Joe Quesada Jr.		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE	COOL	OTHER :	DATE	TIME	Cl	Ext TPH	BTEX								
H903273																										
6	W18 32.6123357 -103.2726951	C	1			/						/		9/23	11:46	/	/	/								
7	W19 32.6123092 -103.2726910	C	1			/						/			11:48	/	/	/								
8	W20 32.6122682 -103.2726873	C	1			/						/			11:50	/	/	/								
9	W21 32.6122346 -103.2726930	C	1			/						/			11:52	/	/	/								
10	W22 32.6122019 -103.2726934	C	1			/						/		9/28	11:54	/	/	/								

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Relinquished By:	Date: 9/24	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 7:31		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One)	Observed Temp. °C 5.3	Sample Condition Cool Intact	CHECKED BY: (Initials)	Turnaround Time: Standard ☒ Rush ☐
Sampler - UPS - Bus - Other:	Corrected Temp. °C 5.7	☐ Yes ☐ Yes ☐ No ☐ No		Thermometer ID #97 Correction Factor + 0.4 °C

Bacteria (only) Sample Condition Cool Intact ☐ Yes ☐ Yes ☐ No ☐ No — Observed Temp. °C 5.3 — Corrected Temp. °C 5.7

FORM-006 R 3.0

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(8)

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Apache	**BILL TO** P.O. #:	
Project Manager:	Jeffrey Broom	Company:	
Address:		Attn:	
City:	Hobbs	State: NM Zip: 88240	Address:
Phone #:	Fax #:	City:	
Project #:	Project Owner:	State: Zip:	
Project Name:		Phone #:	
Project Location:	NMOSU 011Q	Fax #:	
Sampler Name:	Joe Quesada Jr.		

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	(ICE) / COOL	OTHER :	DATE	TIME	Cl	6x4 TPH	BTEX									
H903273																										
11	w23 32.6120985 -103.2726837	C	1			✓					✓		9/23	11:56	✓	✓	✓									
12	w24 32.6120621 -103.2726645	C	1			✓					✓			15:22	✓	✓	✓	DELETED per Customer								
13	w25 32.6120527 -103.2726072	C	1			✓					✓			15:24	✓	✓	✓									
14	w26 32.6120011 -103.2726267	C	1			✓					✓			15:26	✓	✓	✓									
15	w27 32.6119516 -103.2726119	C	1			✓					✓			15:28	✓	✓	✓									

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Relinquished By: Joe Quesada	Date: 9/24 Time: 7:31	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: REMARKS:
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: ☑ Yes ☐ No Intact: ☐ Yes ☑ No	CHECKED BY: (Initials)
Turnaround Time: Standard ☑ Rush ☐ Thermometer ID #97 Correction Factor +0.4 °C	Bacteria (only) Sample Condition Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No	Observed Temp. °C 5.8 → 5.3 Corrected Temp. °C 6.2 → 5.7	

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(4)

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Apache	**BILL TO** 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:		Phone #:	
Project Location:	NMOSHA 2119	Fax #:	
Sampler Name:	Joe Quesada Jr.		

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX	EXT TPH	BTEX
H903273																	
16	W28 32.6119220 -103.2726662	C	1			✓					✓		9/23	15:30	✓	✓	✓
17	W29 32.6118895 -103.2727079	C	1			✓					✓			15:32	✓	✓	✓
18	W30 32.6118697 -103.2727410	C	1			✓					✓			15:34	✓	✓	✓
19	W31 32.6118670 -103.2727785	C	1			✓					✓			15:36	✓	✓	✓
20	W32. 6118898 -103 2728308	C	1			✓					✓			15:38	✓	✓	✓

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Relinquished By: Joe Quesada	Date: 9/24 Time: 7:32	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: Email to Jeff Brown
			REMARKS:
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: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)
			Turnaround Time: Standard ☑ Rush ☐ Thermometer ID #97 Correction Factor +0.4 °C
			Bacteria (only) Sample Condition Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No Observed Temp. °C 5.8 5.3 Corrected Temp. °C 6.2 5.7

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Apache	**BILL TO** 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:		Phone #:	
Project Location:	NMGSAU 211a	Fax #:	
Sampler Name:	Joe Quesada		

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	Cl	Ext TPH	BTEX										
H903273																										
21	W33 32.6148474 -103.2278855	C	1			1					1		9/23	15:40	1	1	1									
22	W34 32.6119175 -103.2279113	C	1			1					1			15:42	1	1	1									
23	W35 32.6119641 -103.2279160	C	1			1					1			15:44	1	1	1									
24	W36 32.6120056 -103.2279210	C	1			1					1			15:46	1	1	1									
25	W37 32.6120561 -103.2279204					1					1			15:48	1	1	1									

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Relinquished By: Joe Quesada	Date: 9/24 Time: 7:33	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: Email Jeffrey Brown
			REMARKS:

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: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)	Turnaround Time: ☐ Standard ☐ Rush Thermometer ID #97 Correction Factor +0.4 °C	Bacteria (only) Sample Condition Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No Observed Temp. °C 5.8 5.3 Corrected Temp. °C 6.2 5.7

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CARDINAL Laboratories

(6)

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Apache	**BILL TO** P.O. #:	
Project Manager:	Jeffrey Broom	Company:	
Address:		Attn:	
City:	Hobbs	State: NM Zip: 88240	Address:
Phone #:	Fax #:	City:	
Project #:	Project Owner:	State: Zip:	
Project Name:		Phone #:	
Project Location:	Wrigley 21H	Fax #:	
Sampler Name:	Joe Quesada Jr.		

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Cl	TPH	BTEX	ANALYSIS REQUEST
H903273																		
26	B38 @12' 32.612264 -103.2729116	C	1			1					1		9/23	15:50	✓	✓	✓	DELETED per Customer
27	B83@12 32.612 0468 -103.2726427	C	1			1					1		9/23	16:10	✓	✓	✓	
28	B84@12 32.6120565 -103.2726910	C	1			1					1			16:12	✓	✓	✓	
29	B85@12 32.6120426 -103.2726833	C	1			1					1			16:14	✓	✓	✓	
30	B86@12' 32.6119847 -103.2726850	C	1			1					1			16:16	✓	✓	✓	

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Relinquished By: Joe Quesada	Date: 9/24 Time: 7:30	Received By: Mike Smith	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: Email Results to Jeffrey Broom
			REMARKS:

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 5.3 Corrected Temp. °C 5.7	Sample Condition Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No	CHECKED BY: (Initials)	Turnaround Time: Standard ☐ Rush ☐ Thermometer ID #97 Correction Factor +0.4 °C

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No
Observed Temp. °C ~~5.8~~ 5.3
Corrected Temp. °C ~~6.2~~ 5.1

FORM-006 R 3.0

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Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

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CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Apache	**BILL TO** P.O. #:	
Project Manager:	Jeffrey Broom	Company:	
Address:		Attn:	
City:	Hobbs	State: NM Zip: 88240	Address:
Phone #:		Fax #:	City:
Project #:		Project Owner:	State: Zip:
Project Name:			Phone #:
Project Location:	NUGGET 27H		Fax #:
Sampler Name:	Joe Quesada Jr.		

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE	COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: 1 Cl / 1 GRO + TPH / 1 BTEX											
H903273 31	B870N2 32.4043864 -103.2726486	C	1			/								9/23	16:58	1	1	1									

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 consequental 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: Joe Quesada	Date: 9/24 Time: 7:35	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #: All Results are emailed. Please provide Email address: Email Results
Relinquished By:	Date: Time:	Received By:	REMARKS:

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 5.3 Corrected Temp. °C 5.1	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)	Turnaround Time: ☐ Standard ☐ Rush	Bacteria (only) Sample Condition Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No Observed Temp. °C 5.4 5.3 Corrected Temp. °C 5.2 5.1

FORM-006 R 3.0

Thermometer ID #97
Correction Factor + 0.4 °C

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

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

CARDINAL Laboratories

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 accreditated 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

CARDINAL Laboratories

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

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, 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, 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	09/26/2019	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/25/2019	ND	192	95.8	200	1.40	
DRO >C10-C28*	<10.0	10.0	09/25/2019	ND	188	94.0	200	2.83	
EXT DRO >C28-C36	<10.0	10.0	09/25/2019	ND					

Surrogate: 1-Chlorooctane *90.7 %* *41-142*

Surrogate: 1-Chlorooctadecane *98.0 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

		BILL TO	
Company Name:	Apache Corp.	P.O. #:	
Project Manager:	Jeffrey Broom	Company:	
Address:		Attn:	
City:	Hobbs	State: NM Zip: 88240	Address:
Phone #:	Fax #:	City:	
Project #:	Project Owner:	State: Zip:	
Project Name:		Phone #:	
Project Location:	NM GS Au 2119	Fax #:	
Sampler Name:	Joe Quintero Jr.		

ANALYSIS REQUEST: Cl | Ext TPH | BTEX

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE	COOL	OTHER :	SAMPLING: DATE	TIME	Cl	Ext TPH	BTEX
H903288																		
1	W24 32.612 0392 -103.272 6575	C	1			X					X			9/24	13:36	X	X	X
2	W 38 32.612 1246 -103.222 9116	C	1			X					X			9/24	14:15	X	X	X
3	W 25 32.612 0527 -103.272 6072	C	1			X					X			9/24	14:21	X	X	X

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Relinquished By:	Date: 9-24-19 Time: 16:15	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: Email Jeffrey Broom
			REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 4.0 Corrected Temp. °C 4.4	Sample Condition Cool Intact ☑ Yes ☑ Yes ☐ No ☐ No	CHECKED BY: (Initials) TO.
Turnaround Time: Standard ☑ Rush ☐	Thermometer ID #97 Correction Factor +0.4 °C	Bacteria (only) Sample Condition Cool Intact ☐ Yes ☐ Yes ☐ No ☐ No	Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.0

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

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

Appendix F

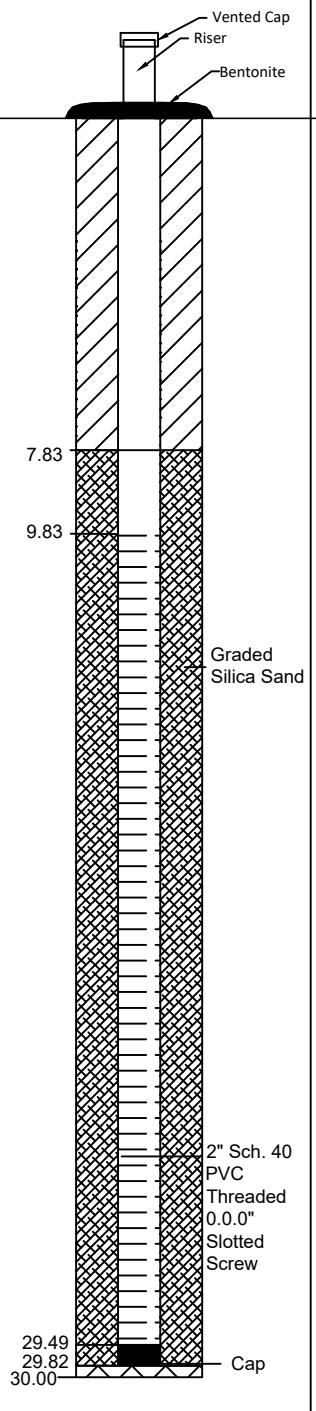
Boring Logs

BORING RECORD

Start: 10:29
Finish: 11:45

Surface Elevation:
TOC Elecation:

GEOLOGIC UNIT	DEPTH	DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG
	0	Sand, 7.5YR, 6/5 to 6/4, Well Sorted, Very Fine Grained Quartz Sand, Light Brown	ML	
	5	Caliche, 7.5YR, 8/3, Pink, 2-10mm Subangular Clast Inclusions, Fine Grained	Caliche	
	10	Silty Sand, 7.5YR, 8/4, Pink, Moderately Sorted with Subangular 1-6mm Clast Inclusions		
	15	7.5YR, 8/6, Reddish Yellow, Moderately Sorted with Subangular 2-6mm Clast Inclusions	ML	
	20			
	25			
	30	TD: 30'		



NUMBER | RECOVERY | DEPTH

REMARKS
BACKGROUND PID READING
SOIL : _____ PPM
SOIL : _____ PPM

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

Larson & Associates, Inc. Environmental Consultants

DRILL DATE : 03-11-2020

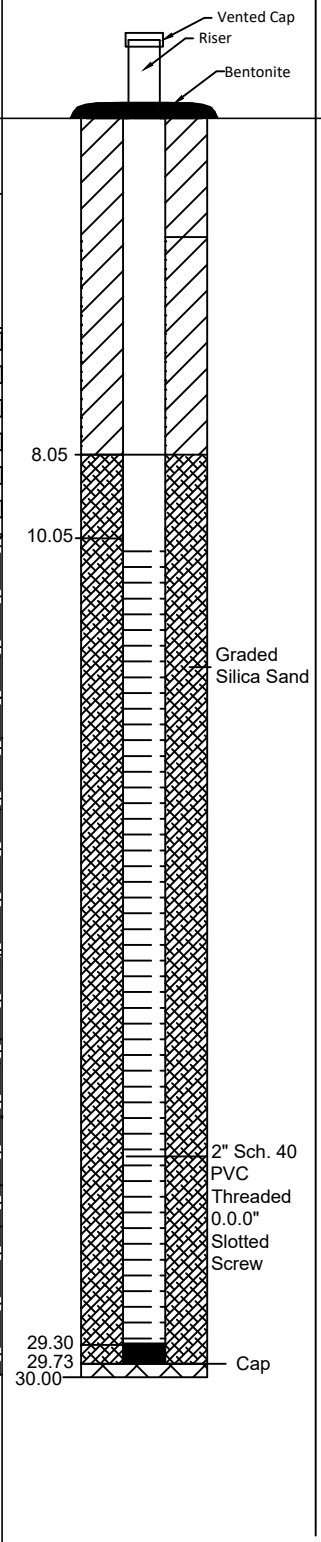
BORING NUMBER : TMW-1

BORING RECORD

Start: 12:36
Finish: 1:09

GEOLOGIC UNIT	DEPTH	DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG
	0	Sand, 7.5YR, 6/5 to 6/4, Well Sorted, Very Fine Quartz Grained Sand, Light Brown	ML	
	5	Caliche, 7.5YR, 8/3, Pink, 2-10mm Subangular Clast Inclusions, Fine Grained	Caliche	
	10	Silty Sand, 7.5YR, 8/4, Pink, Moderately Sorted with Subangular 1-6mm Clast Inclusions		
	15	7.5YR, 8/6, Reddish Yellow, Moderately Sorted with Subangular 2-6mm Clast Inclusions	ML	
	20			
	25			
	30	TD: 30'		

Surface Elevation:
TOC Elecation:



NUMBER	RECOVERY	DEPTH	REMARKS BACKGROUND PID READING
			SOIL : PPM
			SOIL : PPM

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

Larson & Associates, Inc. Environmental Consultants

DRILL DATE : 03-11-2020

BORING NUMBER : TMW-2

Appendix G

Groundwater Sample Laboratory Reports

Certificate of Analysis Summary 655568

Larson and Associates, Inc., Midland, TX

Project Name: Apache-NM GSAU 2102

Project Id: 19-0112-51
Contact: Mark Larson
Project Location:

Date Received in Lab: Fri 03.13.2020 08:45
Report Date: 03.19.2020 14:19
Project Manager: Holly Taylor

Analysis Requested													
	Lab Id:	655568-001		655568-002		655568-003		655568-004					
	Field Id:	MW-2		DUP-1		TMW-2		TMW-1					
	Depth:												
	Matrix:	WATER		WATER		WATER		WATER					
	Sampled:	03.12.2020 11:25		03.12.2020 11:30		03.12.2020 12:15		03.12.2020 13:00					
BTEX by EPA 8021B	***Extracted:***	03.17.2020 15:30		03.17.2020 15:30		03.17.2020 15:30		03.17.2020 15:30					
SUB: T104704219-19-21	***Analyzed:***	03.17.2020 21:04		03.17.2020 22:41		03.17.2020 23:06		03.17.2020 23:30					
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL				
Benzene		<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100				
Toluene		<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100				
Ethylbenzene		<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100				
m,p-Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
o-Xylene		<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100				
Total Xylenes		<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100				
Total BTEX		<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100				
Chloride by EPA 300	***Extracted:***	03.13.2020 18:30		03.13.2020 18:30		03.13.2020 18:30		03.13.2020 18:30					
	Analyzed:	03.13.2020 23:22		03.13.2020 22:14		03.13.2020 22:21		03.13.2020 22:28					
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL				
Chloride		230	2.50	223	2.50	423	5.00	360	5.00				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Holly Taylor
Project Manager

Analytical Report 655568

for

Larson and Associates, Inc.

Project Manager: Mark Larson

Apache-NM GSAU 2102

19-0112-51

03.19.2020

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

03.19.2020

Project Manager: **Mark Larson**
Larson and Associates, Inc.
P. O. Box 50685
Midland, TX 79710

Reference: XENCO Report No(s): **655568**
Apache-NM GSAU 2102
Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 655568. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 655568 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Holly Taylor

Holly Taylor
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Sample Cross Reference 655568

Larson and Associates, Inc., Midland, TX

Apache-NM GSAU 2102

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	03.12.2020 11:25		655568-001
DUP-1	W	03.12.2020 11:30		655568-002
TMW-2	W	03.12.2020 12:15		655568-003
TMW-1	W	03.12.2020 13:00		655568-004

CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: Apache-NM GSAU 2102

Project ID: *19-0112-51*
Work Order Number(s): *655568*

Report Date: *03.19.2020*
Date Received: *03.13.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3120085 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7699174-1-BKS,7699174-1-BLK,655568-001 S,655568-001 SD,655568-001,655568-003,655568-002.

Surrogate a,a,a-Trifluorotoluene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7699174-1-BKS,7699174-1-BLK,7699174-1-BSD,655568-001 S,655568-001 SD,655568-003,655568-004,655568-002,655568-001.

Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.
Samples in the analytical batch are: 655568-001, -002, -003, -004

Lab Sample ID 655568-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 655568-001, -002, -003, -004.
The Laboratory Control Sample for m,p-Xylenes, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analytical Results 655568

Larson and Associates, Inc., Midland, TX

Apache-NM GSAU 2102

Sample Id: **MW-2** Matrix: Water Date Received:03.13.2020 08:45

Lab Sample Id: 655568-001 Date Collected: 03.12.2020 11:25

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 03.13.2020 18:30

Seq Number: 3119665

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**230**	2.50	mg/L	03.13.2020 23:22		5

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.17.2020 15:30

Seq Number: 3120085 SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/L	03.17.2020 21:04	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/L	03.17.2020 21:04	UF	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/L	03.17.2020 21:04	UF	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	03.17.2020 21:04	UXF	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/L	03.17.2020 21:04	UXF	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/L	03.17.2020 21:04	U	1
Total BTEX		<0.00100	0.00100	mg/L	03.17.2020 21:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
a,a,a-Trifluorotoluene	98-08-8	124	%	66-120	03.17.2020 21:04	**
4-Bromofluorobenzene	460-00-4	124	%	67-120	03.17.2020 21:04	**

Certificate of Analytical Results 655568

Larson and Associates, Inc., Midland, TX

Apache-NM GSAU 2102

Sample Id: **DUP-1** Matrix: Water Date Received:03.13.2020 08:45

Lab Sample Id: 655568-002 Date Collected: 03.12.2020 11:30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 03.13.2020 18:30

Seq Number: 3119665

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**223**	2.50	mg/L	03.13.2020 22:14		5

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.17.2020 15:30

Seq Number: 3120085 SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/L	03.17.2020 22:41	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/L	03.17.2020 22:41	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/L	03.17.2020 22:41	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	03.17.2020 22:41	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/L	03.17.2020 22:41	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/L	03.17.2020 22:41	U	1
Total BTEX		<0.00100	0.00100	mg/L	03.17.2020 22:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
a,a,a-Trifluorotoluene	98-08-8	123	%	66-120	03.17.2020 22:41	**
4-Bromofluorobenzene	460-00-4	125	%	67-120	03.17.2020 22:41	**

Certificate of Analytical Results 655568

Larson and Associates, Inc., Midland, TX

Apache-NM GSAU 2102

Sample Id: **TMW-2** Matrix: Water Date Received:03.13.2020 08:45

Lab Sample Id: 655568-003 Date Collected: 03.12.2020 12:15

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 03.13.2020 18:30

Seq Number: 3119665

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**423**	5.00	mg/L	03.13.2020 22:21		10

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.17.2020 15:30

Seq Number: 3120085 SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/L	03.17.2020 23:06	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/L	03.17.2020 23:06	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/L	03.17.2020 23:06	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	03.17.2020 23:06	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/L	03.17.2020 23:06	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/L	03.17.2020 23:06	U	1
Total BTEX		<0.00100	0.00100	mg/L	03.17.2020 23:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
a,a,a-Trifluorotoluene	98-08-8	129	%	66-120	03.17.2020 23:06	**
4-Bromofluorobenzene	460-00-4	129	%	67-120	03.17.2020 23:06	**

Certificate of Analytical Results 655568

Larson and Associates, Inc., Midland, TX

Apache-NM GSAU 2102

Sample Id: **TMW-1** Matrix: Water Date Received:03.13.2020 08:45

Lab Sample Id: 655568-004 Date Collected: 03.12.2020 13:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 03.13.2020 18:30

Seq Number: 3119665

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**360**	5.00	mg/L	03.13.2020 22:28		10

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.17.2020 15:30

Seq Number: 3120085 SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/L	03.17.2020 23:30	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/L	03.17.2020 23:30	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/L	03.17.2020 23:30	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/L	03.17.2020 23:30	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/L	03.17.2020 23:30	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/L	03.17.2020 23:30	U	1
Total BTEX		<0.00100	0.00100	mg/L	03.17.2020 23:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
a,a,a-Trifluorotoluene	98-08-8	126	%	66-120	03.17.2020 23:30	**
4-Bromofluorobenzene	460-00-4	96	%	67-120	03.17.2020 23:30	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 655568

Larson and Associates, Inc.

Apache-NM GSAU 2102

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3119665 Matrix: Water Date Prep: 03.13.2020
MB Sample Id: 7698877-1-BLK LCS Sample Id: 7698877-1-BKS LCSD Sample Id: 7698877-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	0.0549	25.0	25.1	100	25.2	101	90-110	0	20	mg/L	03.13.2020 21:38	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3119665 Matrix: Water Date Prep: 03.13.2020
Parent Sample Id: 655568-001 MS Sample Id: 655568-001 S MSD Sample Id: 655568-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	230	125	352	98	351	97	90-110	0	20	mg/L	03.13.2020 23:27	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3119665 Matrix: Drinking Water Date Prep: 03.13.2020
Parent Sample Id: 655579-001 MS Sample Id: 655579-001 S MSD Sample Id: 655579-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.33	25.0	32.6	101	32.5	101	90-110	0	20	mg/L	03.13.2020 21:59	

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3120085 Matrix: Water Date Prep: 03.17.2020
MB Sample Id: 7699174-1-BLK LCS Sample Id: 7699174-1-BKS LCSD Sample Id: 7699174-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0994	99	0.0982	98	74-120	1	20	mg/L	03.17.2020 19:01	
Toluene	<0.00100	0.100	0.106	106	0.103	103	74-120	3	20	mg/L	03.17.2020 19:01	
Ethylbenzene	<0.00100	0.100	0.109	109	0.106	106	74-120	3	20	mg/L	03.17.2020 19:01	
m,p-Xylenes	<0.00200	0.200	0.219	110	0.212	106	73-120	3	25	mg/L	03.17.2020 19:01	
o-Xylene	<0.00100	0.100	0.108	108	0.106	106	73-120	2	25	mg/L	03.17.2020 19:01	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	124	**	124	**	121	**	66-120	%	03.17.2020 19:01
4-Bromofluorobenzene	123	**	123	**	118		67-120	%	03.17.2020 19:01

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

QC Summary 655568

Larson and Associates, Inc.

Apache-NM GSAU 2102

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3120085 Matrix: Water Date Prep: 03.17.2020

Parent Sample Id: 655568-001 MS Sample Id: 655568-001 S MSD Sample Id: 655568-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0186	19	0.0234	23	15-147	23	25	mg/L	03.17.2020 21:28	
Toluene	<0.00100	0.100	0.0187	19	0.0242	24	11-147	26	25	mg/L	03.17.2020 21:28	F
Ethylbenzene	<0.00100	0.100	0.0186	19	0.0254	25	10-149	31	25	mg/L	03.17.2020 21:28	F
m,p-Xylenes	<0.00200	0.200	0.0295	15	0.0421	21	62-124	35	25	mg/L	03.17.2020 21:28	XF
o-Xylene	<0.00100	0.100	0.0180	18	0.0249	25	62-124	32	25	mg/L	03.17.2020 21:28	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	123	**	122	**	66-120	%	03.17.2020 21:28
4-Bromofluorobenzene	123	**	124	**	67-120	%	03.17.2020 21:28

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

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Q555568

№ 0892

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

Data Reported to:

DATE: 3/13/2020 PAGE 1 OF 1

PO#: LAB WORK ORDER#:

PROJECT LOCATION OR NAME: Apache - NMLSAU 2102

LAI PROJECT #: 19-0112-51 COLLECTOR: RN/DS

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES: BTEX ☐ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	OIL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐	PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐	8151 HERBICIDES ☐	8082 PCBS ☐	TBLP - METALS (RCRA) ☐	TCLP - PEST ☐	TCLP VOC ☐	TOTAL METALS (RCRA) ☐	HERB ☐	Semi-VOC ☐	LEAD - TOTAL ☐	D.W. 200.8 ☐	OTHER LIST ☐	RCI ☐	TOX ☐	TCLP ☐	TDS ☐	TSS ☐	FLASHPOINT ☐	pH ☐	% MOISTURE ☐	HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐	CYANIDE ☐	CHLORIDE ☐	PECHLORATE ☐	ANIONS ☐	ALKALINITY ☐	FIELD NOTES
MW-2		3/12/20	11:25	W	8	X			X		X																																	
Dup-1		"	11:30	"	"	"			"		"																																	
TMW-2		"	12:15	"	"	"			"		"																																	
TMW-1		"	13:00	"	"	"			"		"																																	
TOTAL																																													

RELINQUISHED BY:(Signature) DATE/TIME 3/13/20 8:45 RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY: Xenco

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 5.3/5.0 THERM#: D9
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Received by OCD: 8/14/2024 8:53:22 AM
Released to Imaging: 5/9/2025 9:33:55 AM
Page 13 of 16
Final 1.000

Inter-Office Shipment

IOS Number : 60346

Date/Time:	03.16.2020	Created by:	Allison Johnson	Please send report to:	Holly Taylor
Lab# From:	**Midland**	Delivery Priority:		Address:	1211 W. Florida Ave
Lab# To:	**Lubbock**	Air Bill No.:	770044520695	E-Mail:	holly.taylor@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
655568-001	W	MW-2	03.12.2020 11:25	SW8021B	BTEX by EPA 8021B	**03.19.2020**	03.26.2020	HTA	BR4FBZ BZ BZME EBZ	
655568-002	W	DUP-1	03.12.2020 11:30	SW8021B	BTEX by EPA 8021B	**03.19.2020**	03.26.2020	HTA	BR4FBZ BZ BZME EBZ	
655568-003	W	TMW-2	03.12.2020 12:15	SW8021B	BTEX by EPA 8021B	**03.19.2020**	03.26.2020	HTA	BR4FBZ BZ BZME EBZ	
655568-004	W	TMW-1	03.12.2020 13:00	SW8021B	BTEX by EPA 8021B	**03.19.2020**	03.26.2020	HTA	BR4FBZ BZ BZME EBZ	

Inter Office Shipment or Sample Comments:

Relinquished By: Allison Johnson

Date Relinquished: 03.16.2020

Received By: Ashley Derstine

Date Received: 03.17.2020

Cooler Temperature: 2.9

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Lubbock

IOS #: 60346

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used :

Sent By: Allison Johnson **Date Sent:** 03.16.2020 03.33 PM

Received By: Ashley Derstine **Date Received:** 03.17.2020 10.45 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.9	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 *Custody Seals Signed and dated for Containers/coolers	**N/A**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: _____ Date: 03.17.2020

Ashley Derstine

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 03.13.2020 08.45.00 AM

Work Order #: 655568

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R9

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: AJA

PH Device/Lot#: 10BDH1991

Checklist completed by: Brianna Teel — Date: 03.13.2020

Checklist reviewed by: Holly Taylor — Date: 03.19.2020

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Certificate of Analysis Summary 667700

Larson and Associates, Inc., Midland, TX

Project Name: NMGSAU #2102

Project Id: 19-0112-51
Contact: Mark Larson
Project Location:

Date Received in Lab: Tue 07.21.2020 08:35
Report Date: 07.28.2020 16:46
Project Manager: Holly Taylor

Analysis Requested													
	Lab Id:	667700-001		667700-002		667700-003		667700-004					
	Field Id:	MW-2		DUP-1		TMW-1		TMW-2					
	Depth:												
	Matrix:	WATER		WATER		WATER		WATER					
	Sampled:	07.20.2020 11:20		07.20.2020 11:40		07.20.2020 12:40		07.20.2020 12:50					
BTEX by EPA 8021B	***Extracted:***	07.25.2020 14:45		07.25.2020 14:45		07.25.2020 14:45		07.25.2020 14:45					
	Analyzed:	07.26.2020 05:32		07.26.2020 05:53		07.26.2020 06:13		07.26.2020 06:33					
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL				
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
m,p-Xylenes		<0.00400	0.00400	<0.00400	0.00400	<0.00400	0.00400	<0.00400	0.00400				
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	07.22.2020 16:50		07.22.2020 16:50		07.22.2020 16:50		07.22.2020 16:50					
	Analyzed:	07.24.2020 09:55		07.24.2020 10:00		07.24.2020 10:05		07.24.2020 10:10					
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL				
Chloride		231	2.50	242	2.50	432	5.00	664	5.00				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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Analytical Report 667700

for

Larson and Associates, Inc.

Project Manager: Mark Larson

NMGSAU #2102

19-0112-51

07.28.2020

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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07.28.2020

Project Manager: **Mark Larson**
Larson and Associates, Inc.
P. O. Box 50685
Midland, TX 79710

Reference: Eurofins Xenco, LLC Report No(s): **667700**
NMGSAU #2102
Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 667700. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 667700 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Holly Taylor

Holly Taylor
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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Sample Cross Reference 667700

Larson and Associates, Inc., Midland, TX

NMGSAU #2102

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	07.20.2020 11:20		667700-001
DUP-1	W	07.20.2020 11:40		667700-002
TMW-1	W	07.20.2020 12:40		667700-003
TMW-2	W	07.20.2020 12:50		667700-004

CASE NARRATIVE

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Client Name: Larson and Associates, Inc.

Project Name: NMGSAU #2102

Project ID: *19-0112-51*
Work Order Number(s): *667700*

Report Date: *07.28.2020*
Date Received: *07.21.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results 667700

Larson and Associates, Inc., Midland, TX

NMGSAU #2102

Sample Id: **MW-2** Matrix: Water Date Received:07.21.2020 08:35

Lab Sample Id: 667700-001 Date Collected: 07.20.2020 11:20

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 07.22.2020 16:50

Seq Number: 3132512

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**231**	2.50	mg/L	07.24.2020 09:55		5

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: KTL % Moisture:

Analyst: KTL Date Prep: 07.25.2020 14:45

Seq Number: 3132608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	07.26.2020 05:32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	07.26.2020 05:32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	07.26.2020 05:32	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	07.26.2020 05:32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	07.26.2020 05:32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	07.26.2020 05:32	U	1
Total BTEX		<0.00200	0.00200	mg/L	07.26.2020 05:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	07.26.2020 05:32	
4-Bromofluorobenzene	460-00-4	95	%	70-130	07.26.2020 05:32	

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Certificate of Analytical Results 667700

Larson and Associates, Inc., Midland, TX

NMGSAU #2102

Sample Id: **DUP-1** Matrix: Water Date Received:07.21.2020 08:35

Lab Sample Id: 667700-002 Date Collected: 07.20.2020 11:40

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 07.22.2020 16:50

Seq Number: 3132512

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**242**	2.50	mg/L	07.24.2020 10:00		5

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: KTL % Moisture:

Analyst: KTL Date Prep: 07.25.2020 14:45

Seq Number: 3132608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	07.26.2020 05:53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	07.26.2020 05:53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	07.26.2020 05:53	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	07.26.2020 05:53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	07.26.2020 05:53	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	07.26.2020 05:53	U	1
Total BTEX		<0.00200	0.00200	mg/L	07.26.2020 05:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.26.2020 05:53	
4-Bromofluorobenzene	460-00-4	92	%	70-130	07.26.2020 05:53	

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Certificate of Analytical Results 667700

Larson and Associates, Inc., Midland, TX

NMGSAU #2102

Sample Id: **TMW-1** Matrix: Water Date Received:07.21.2020 08:35

Lab Sample Id: 667700-003 Date Collected: 07.20.2020 12:40

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 07.22.2020 16:50

Seq Number: 3132512

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**432**	5.00	mg/L	07.24.2020 10:05		10

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: KTL % Moisture:

Analyst: KTL Date Prep: 07.25.2020 14:45

Seq Number: 3132608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	07.26.2020 06:13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	07.26.2020 06:13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	07.26.2020 06:13	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	07.26.2020 06:13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	07.26.2020 06:13	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	07.26.2020 06:13	U	1
Total BTEX		<0.00200	0.00200	mg/L	07.26.2020 06:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.26.2020 06:13	
4-Bromofluorobenzene	460-00-4	93	%	70-130	07.26.2020 06:13	

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Certificate of Analytical Results 667700

Larson and Associates, Inc., Midland, TX

NMGSAU #2102

Sample Id: **TMW-2** Matrix: Water Date Received:07.21.2020 08:35

Lab Sample Id: 667700-004 Date Collected: 07.20.2020 12:50

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 07.22.2020 16:50

Seq Number: 3132512

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**664**	5.00	mg/L	07.24.2020 10:10		10

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: KTL % Moisture:

Analyst: KTL Date Prep: 07.25.2020 14:45

Seq Number: 3132608

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	07.26.2020 06:33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	07.26.2020 06:33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	07.26.2020 06:33	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	07.26.2020 06:33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	07.26.2020 06:33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	07.26.2020 06:33	U	1
Total BTEX		<0.00200	0.00200	mg/L	07.26.2020 06:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.26.2020 06:33	
4-Bromofluorobenzene	460-00-4	99	%	70-130	07.26.2020 06:33	

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Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

eurofins | Environment Testing Xenco

QC Summary 667700

Larson and Associates, Inc.

NMGSAU #2102

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3132512 Matrix: Water Date Prep: 07.22.2020
MB Sample Id: 7707864-1-BLK LCS Sample Id: 7707864-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Chloride	<0.500	25.0	26.0	104	90-110	mg/L	07.24.2020 08:41	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3132512 Matrix: Drinking Water Date Prep: 07.22.2020
Parent Sample Id: 667828-001 MS Sample Id: 667828-001 S MSD Sample Id: 667828-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	12.8	25.0	40.2	110	41.3	114	90-110	3	20	mg/L	07.24.2020 09:02	X

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3132608 Matrix: Water Date Prep: 07.25.2020
MB Sample Id: 7708080-1-BLK LCS Sample Id: 7708080-1-BKS LCSD Sample Id: 7708080-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0935	94	0.0921	92	70-130	2	25	mg/L	07.26.2020 03:11	
Toluene	<0.00200	0.100	0.0903	90	0.0900	90	70-130	0	25	mg/L	07.26.2020 03:11	
Ethylbenzene	<0.00200	0.100	0.0919	92	0.0906	91	70-130	1	25	mg/L	07.26.2020 03:11	
m,p-Xylenes	<0.00400	0.200	0.180	90	0.178	89	70-130	1	25	mg/L	07.26.2020 03:11	
o-Xylene	<0.00200	0.100	0.0924	92	0.0898	90	70-130	3	25	mg/L	07.26.2020 03:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		101		103		70-130	%	07.26.2020 03:11
4-Bromofluorobenzene	84		98		98		70-130	%	07.26.2020 03:11

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3132608 Matrix: Water Date Prep: 07.25.2020
Parent Sample Id: 667805-005 MS Sample Id: 667805-005 S MSD Sample Id: 667805-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0952	95	0.0921	92	70-130	3	25	mg/L	07.26.2020 03:51	
Toluene	<0.00200	0.100	0.0929	93	0.0929	93	70-130	0	25	mg/L	07.26.2020 03:51	
Ethylbenzene	<0.00200	0.100	0.0931	93	0.0917	92	70-130	2	25	mg/L	07.26.2020 03:51	
m,p-Xylenes	<0.00400	0.200	0.183	92	0.181	91	70-130	1	25	mg/L	07.26.2020 03:51	
o-Xylene	<0.00200	0.100	0.0937	94	0.0914	91	70-130	2	25	mg/L	07.26.2020 03:51	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		101		70-130	%	07.26.2020 03:51
4-Bromofluorobenzene	98		94		70-130	%	07.26.2020 03:51

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

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№1204

WO7700

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

Data Reported to:

DATE: 7/20/20 PAGE 1 OF 1

PO#: _____ LAB WORK ORDER#: _____

PROJECT LOCATION OR NAME: NMGSAU #2102

LAI PROJECT #: 19-0112-51 COLLECTOR: TT+DS

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl (8 VOA)	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE (Poly)	UNPRESSERVED	ANALYSES: BTEX ☒ MTBE ☐	TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	OIL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TBLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDES ☒ ANIONS ☐ ALKALINITY ☐	FIELD NOTES
MW-2		7/20/20	1120	W	4	X			X		X																	X	
DUP 1		"	1140	"	4	"			"		"																	"	
TMW 1		"	1240	"	4	"			"		"																	"	
TMW 2		"	1250	"	4	"			"		"																	"	
TOTAL					16																								

RELINQUISHED BY:(Signature) DATE/TIME 7/21/20 0855 RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY: XENCO

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 2.6°C THERM#: TMS
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL # _____
☐ HAND DELIVERED

Received by OCD: 8/14/2024 8:53:22 AM
Released to Imaging: 5/9/2025 9:33:55 AM
Final 1.000
Page 12 of 13

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 07.21.2020 08.35.00 AM

Work Order #: 667700

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**Yes**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: AJA

PH Device/Lot#: 10BDH1991

Checklist completed by: Brianna Teel Date: 07.21.2020

Brianna Teel

Checklist reviewed by: Holly Taylor Date: 07.22.2020

Holly Taylor

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Certificate of Analysis Summary 674149

Larson and Associates, Inc., Midland, TX

Project Name: NMG SAU 2102

Project Id: 19-0112-51
Contact: Mark Larson
Project Location:

Date Received in Lab: Fri 10.02.2020 09:20
Report Date: 10.07.2020 16:39
Project Manager: Holly Taylor

Analysis Requested													
	Lab Id:	674149-001		674149-002		674149-003		674149-004					
	Field Id:	MW-2		DUP-1		TMW-1		TMW-2					
	Depth:												
	Matrix:	WATER		WATER		WATER		WATER					
	Sampled:	10.01.2020 10:20		10.01.2020 13:00		10.01.2020 11:00		10.01.2020 12:00					
BTEX by EPA 8021B	***Extracted:***	10.04.2020 10:30		10.04.2020 10:30		10.04.2020 10:30		10.04.2020 10:30					
	Analyzed:	10.04.2020 16:04		10.04.2020 17:29		10.04.2020 17:50		10.04.2020 18:10					
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL				
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
m,p-Xylenes		<0.00400	0.00400	<0.00400	0.00400	<0.00400	0.00400	<0.00400	0.00400				
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	10.06.2020 11:15		10.06.2020 11:15		10.06.2020 11:15		10.06.2020 11:15					
	Analyzed:	10.06.2020 14:30		10.06.2020 14:35		10.06.2020 14:41		10.06.2020 14:46					
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL				
Chloride		241	2.50	245	2.50	452	5.00	591	5.00				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer

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Analytical Report 674149

for

Larson and Associates, Inc.

Project Manager: Mark Larson

NMG SAU 2102

19-0112-51

10.07.2020

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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10.07.2020

Project Manager: **Mark Larson**
Larson and Associates, Inc.
P. O. Box 50685
Midland, TX 79710

Reference: Eurofins Xenco, LLC Report No(s): **674149**
NMG SAU 2102
Project Address:

Mark Larson :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 674149. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 674149 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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Sample Cross Reference 674149

Larson and Associates, Inc., Midland, TX

NMG SAU 2102

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	10.01.2020 10:20		674149-001
DUP-1	W	10.01.2020 13:00		674149-002
TMW-1	W	10.01.2020 11:00		674149-003
TMW-2	W	10.01.2020 12:00		674149-004

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CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: NMG SAU 2102

Project ID: *19-0112-51*
Work Order Number(s): *674149*

Report Date: *10.07.2020*
Date Received: *10.02.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results 674149

Larson and Associates, Inc., Midland, TX

NMG SAU 2102

Sample Id: **MW-2** Matrix: Water Date Received:10.02.2020 09:20

Lab Sample Id: 674149-001 Date Collected: 10.01.2020 10:20

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.06.2020 11:15 % Moisture:

Seq Number: 3139032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**241**	2.50	mg/L	10.06.2020 14:30		5

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: KTL

Analyst: KTL Date Prep: 10.04.2020 10:30 % Moisture:

Seq Number: 3138793

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	10.04.2020 16:04	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	10.04.2020 16:04	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	10.04.2020 16:04	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	10.04.2020 16:04	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	10.04.2020 16:04	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	10.04.2020 16:04	U	1
Total BTEX		<0.00200	0.00200	mg/L	10.04.2020 16:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	10.04.2020 16:04	
4-Bromofluorobenzene	460-00-4	106	%	70-130	10.04.2020 16:04	

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Certificate of Analytical Results 674149

Larson and Associates, Inc., Midland, TX

NMG SAU 2102

Sample Id: **DUP-1** Matrix: Water Date Received:10.02.2020 09:20

Lab Sample Id: 674149-002 Date Collected: 10.01.2020 13:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.06.2020 11:15 % Moisture:

Seq Number: 3139032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**245**	2.50	mg/L	10.06.2020 14:35		5

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: KTL

Analyst: KTL Date Prep: 10.04.2020 10:30 % Moisture:

Seq Number: 3138793

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	10.04.2020 17:29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	10.04.2020 17:29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	10.04.2020 17:29	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	10.04.2020 17:29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	10.04.2020 17:29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	10.04.2020 17:29	U	1
Total BTEX		<0.00200	0.00200	mg/L	10.04.2020 17:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	10.04.2020 17:29	
4-Bromofluorobenzene	460-00-4	109	%	70-130	10.04.2020 17:29	

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Certificate of Analytical Results 674149

Larson and Associates, Inc., Midland, TX

NMG SAU 2102

Sample Id: **TMW-1** Matrix: Water Date Received:10.02.2020 09:20

Lab Sample Id: 674149-003 Date Collected: 10.01.2020 11:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.06.2020 11:15 % Moisture:

Seq Number: 3139032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**452**	5.00	mg/L	10.06.2020 14:41		10

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: KTL

Analyst: KTL Date Prep: 10.04.2020 10:30 % Moisture:

Seq Number: 3138793

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	10.04.2020 17:50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	10.04.2020 17:50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	10.04.2020 17:50	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	10.04.2020 17:50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	10.04.2020 17:50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	10.04.2020 17:50	U	1
Total BTEX		<0.00200	0.00200	mg/L	10.04.2020 17:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	10.04.2020 17:50	
4-Bromofluorobenzene	460-00-4	104	%	70-130	10.04.2020 17:50	

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Certificate of Analytical Results 674149

Larson and Associates, Inc., Midland, TX

NMG SAU 2102

Sample Id: **TMW-2** Matrix: Water Date Received:10.02.2020 09:20

Lab Sample Id: 674149-004 Date Collected: 10.01.2020 12:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.06.2020 11:15 % Moisture:

Seq Number: 3139032

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**591**	5.00	mg/L	10.06.2020 14:46		10

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: KTL

Analyst: KTL Date Prep: 10.04.2020 10:30 % Moisture:

Seq Number: 3138793

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	10.04.2020 18:10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	10.04.2020 18:10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	10.04.2020 18:10	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	10.04.2020 18:10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	10.04.2020 18:10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	10.04.2020 18:10	U	1
Total BTEX		<0.00200	0.00200	mg/L	10.04.2020 18:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	10.04.2020 18:10	
4-Bromofluorobenzene	460-00-4	103	%	70-130	10.04.2020 18:10	

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Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

eurofins | Environment Testing Xenco

QC Summary 674149

Larson and Associates, Inc.

NMG SAU 2102

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3139032 — Matrix: Water — Date Prep: 10.06.2020
MB Sample Id: 7712703-1-BLK — LCS Sample Id: 7712703-1-BKS — LCSD Sample Id: 7712703-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.500	25.0	26.2	105	26.2	105	90-110	0	20	mg/L	10.06.2020 13:53	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3139032 — Matrix: Drinking Water — Date Prep: 10.06.2020
Parent Sample Id: 674336-001 — MS Sample Id: 674336-001 S — MSD Sample Id: 674336-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.54	25.0	35.5	108	35.3	107	90-110	1	20	mg/L	10.06.2020 14:15	

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3138793 — Matrix: Water — Date Prep: 10.04.2020
MB Sample Id: 7712592-1-BLK — LCS Sample Id: 7712592-1-BKS — LCSD Sample Id: 7712592-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0934	93	0.0908	91	70-130	3	25	mg/L	10.04.2020 10:56	
Toluene	<0.00200	0.100	0.0899	90	0.0871	87	70-130	3	25	mg/L	10.04.2020 10:56	
Ethylbenzene	<0.00200	0.100	0.0983	98	0.0939	94	70-130	5	25	mg/L	10.04.2020 10:56	
m,p-Xylenes	<0.00400	0.200	0.201	101	0.192	96	70-130	5	25	mg/L	10.04.2020 10:56	
o-Xylene	<0.00200	0.100	0.0980	98	0.0946	95	70-130	4	25	mg/L	10.04.2020 10:56	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		97		98		70-130	%	10.04.2020 10:56
4-Bromofluorobenzene	100		96		97		70-130	%	10.04.2020 10:56

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3138793 — Matrix: Ground Water — Date Prep: 10.04.2020
Parent Sample Id: 674046-014 — MS Sample Id: 674046-014 S — MSD Sample Id: 674046-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0958	96	0.104	104	70-130	8	25	mg/L	10.04.2020 11:37	
Toluene	<0.00200	0.100	0.0921	92	0.0992	99	70-130	7	25	mg/L	10.04.2020 11:37	
Ethylbenzene	<0.00200	0.100	0.100	100	0.110	110	70-130	10	25	mg/L	10.04.2020 11:37	
m,p-Xylenes	<0.00400	0.200	0.206	103	0.224	112	70-130	8	25	mg/L	10.04.2020 11:37	
o-Xylene	<0.00200	0.100	0.100	100	0.110	110	70-130	10	25	mg/L	10.04.2020 11:37	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		96		70-130	%	10.04.2020 11:37
4-Bromofluorobenzene	93		97		70-130	%	10.04.2020 11:37

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

Page 436 of 522

674149 ~~674147~~ 674149 JK 10/2/20 NG 1359

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

Data Reported to:

DATE: 10/2/20 PAGE 1 OF 1

PO#: LAB WORK ORDER#:

PROJECT LOCATION OR NAME: NMGSAU 3102

LAI PROJECT #: 19-0112-51 COLLECTOR: DS / TJ

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MNT

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES: BTEX ☒ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐	TPH 1006 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	OIL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐	PAH 8270 ☐	HOLDPAH ☐	8081 PESTICIDES ☐	8151 HERBICIDES ☐	8082 PCBS ☐	TBLP - METALS (RCRA) ☐	TCLP VOC ☐	TCLP - PEST ☐	HERB ☐	Semi-VOC ☐	TOTAL METALS (RCRA) ☐	OTHER LIST ☐	LEAD - TOTAL ☐	D.W. 200.8 ☐	TCLP ☐	RCI ☐	TOX ☐	FLASHPOINT ☐	TDS ☐	TSS ☐	% MOISTURE ☐	pH ☐	CYANIDE ☐	HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐	PECHLORATE ☐	CHLORIDE ☒	ANIONS ☐	ALKALINITY ☐	FIELD NOTES
MW-2		10/1/20	1020	W	5	X			X		X																															X			
DUP-1		10/1/20	1300	W	5	X			X		X																															X			
TMW-1		10/1/20	1100	W	5	X			X		X																															X			
TMW-2		10/1/20	1200	W	5	X			X		X																															X			
																																												BILL DIRECT TO APACHE
TOTAL 4																																												

RELINQUISHED BY:(Signature) DATE/TIME 10/2/20 0920 RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY: XENCO

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 3.2°C THERM#:
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Received by OCD: 8/14/2024 8:53:22 AM
Released to Imaging: 5/9/2025 9:33:55 AM
Final 1.000
Page 12 of 13

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 10.02.2020 09.20.00 AM

Work Order #: 674149

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**Yes**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: AJA

PH Device/Lot#: 10BDH1991

Checklist completed by: Brianna Teel — Date: 10.02.2020

Checklist reviewed by: Holly Taylor — Date: 10.07.2020

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Certificate of Analysis Summary 680333

Larson and Associates, Inc., Midland, TX

Project Name: NMGSAU 2102

Project Id: 19-0112-51
Contact: Mark Larson
Project Location:

Date Received in Lab: Wed 12.09.2020 08:51
Report Date: 12.15.2020 11:42
Project Manager: Holly Taylor

Analysis Requested													
	Lab Id:	680333-001		680333-002		680333-003		680333-004					
	Field Id:	TMW-02		TMW-1		MW-2		DUP-1					
	Depth:												
	Matrix:	WATER		WATER		WATER		WATER					
	Sampled:	12.08.2020 10:09		12.08.2020 10:34		12.08.2020 10:58		12.08.2020 00:00					
BTEX by EPA 8021B	***Extracted:***	12.10.2020 15:00		12.10.2020 15:00		12.10.2020 15:00		12.10.2020 15:00					
	Analyzed:	12.11.2020 07:43		12.11.2020 08:09		12.11.2020 08:35		12.11.2020 09:00					
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL				
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
m,p-Xylenes		<0.00400	0.00400	<0.00400	0.00400	<0.00400	0.00400	<0.00400	0.00400				
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Total Xylenes		<0.002000	0.002000	<0.002000	0.002000	<0.002000	0.002000	<0.002000	0.002000				
Total BTEX		<0.002000	0.002000	<0.002000	0.002000	<0.002000	0.002000	<0.002000	0.002000				
Chloride by EPA 300	***Extracted:***	12.10.2020 15:15		12.10.2020 15:15		12.10.2020 15:15		12.10.2020 15:15					
	Analyzed:	12.10.2020 17:19		12.10.2020 17:27		12.10.2020 17:52		12.10.2020 17:57					
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL				
Chloride		473	5.00	449	5.00	227	2.50	226	2.50				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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Analytical Report 680333

for

Larson and Associates, Inc.

Project Manager: Mark Larson

NMGSAU 2102

19-0112-51

12.15.2020

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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12.15.2020

Project Manager: **Mark Larson**
Larson and Associates, Inc.
P. O. Box 50685
Midland, TX 79710

Reference: Eurofins Xenco, LLC Report No(s): **680333**
NMGSAU 2102
Project Address:

Mark Larson:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 680333. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 680333 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Holly Taylor

Holly Taylor
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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Sample Cross Reference 680333

Larson and Associates, Inc., Midland, TX

NMGSAU 2102

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TMW-02	W	12.08.2020 10:09		680333-001
TMW-1	W	12.08.2020 10:34		680333-002
MW-2	W	12.08.2020 10:58		680333-003
DUP-1	W	12.08.2020 00:00		680333-004

CASE NARRATIVE

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Client Name: Larson and Associates, Inc.

Project Name: NMGSAU 2102

Project ID: *19-0112-51*
Work Order Number(s): *680333*

Report Date: *12.15.2020*
Date Received: *12.09.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3144538 BTEX by EPA 8021B

Surrogate 1,4-Difluorobenzene recovered above QC limits . Samples affected are: 7716864-1-BKS,7716864-1-BSD,680330-001 S,680330-001 SD,680333-002,680333-001,680333-003,680333-004.

Surrogate 4-Bromofluorobenzene recovered above QC limits . Samples affected are: 7716864-1-BSD,680333-001,680333-002,680333-003,680333-004.

Toluene RPD was outside laboratory control limits.

Samples in the analytical batch are: 680333-001, -002, -003, -004

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Certificate of Analytical Results 680333

Larson and Associates, Inc., Midland, TX

NMGSAU 2102

Sample Id: **TMW-02** Matrix: Water Date Received:12.09.2020 08:51

Lab Sample Id: 680333-001 Date Collected: 12.08.2020 10:09

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.10.2020 15:15 % Moisture:

Seq Number: 3144579

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**473**	5.00	mg/L	12.10.2020 17:19		10

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MNR

Analyst: MNR Date Prep: 12.10.2020 15:00 % Moisture:

Seq Number: 3144538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.11.2020 07:43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.11.2020 07:43	UF	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.11.2020 07:43	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	12.11.2020 07:43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.11.2020 07:43	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/L	12.11.2020 07:43	U	1
Total BTEX		<0.002000	0.002000	mg/L	12.11.2020 07:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	195	%	70-130	12.11.2020 07:43	**
4-Bromofluorobenzene	460-00-4	138	%	70-130	12.11.2020 07:43	**

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Certificate of Analytical Results 680333

Larson and Associates, Inc., Midland, TX

NMGSAU 2102

Sample Id: **TMW-1** Matrix: Water Date Received:12.09.2020 08:51

Lab Sample Id: 680333-002 Date Collected: 12.08.2020 10:34

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.10.2020 15:15 % Moisture:

Seq Number: 3144579

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**449**	5.00	mg/L	12.10.2020 17:27		10

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MNR

Analyst: MNR Date Prep: 12.10.2020 15:00 % Moisture:

Seq Number: 3144538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.11.2020 08:09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.11.2020 08:09	UF	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.11.2020 08:09	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	12.11.2020 08:09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.11.2020 08:09	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/L	12.11.2020 08:09	U	1
Total BTEX		<0.002000	0.002000	mg/L	12.11.2020 08:09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	187	%	70-130	12.11.2020 08:09	**
4-Bromofluorobenzene	460-00-4	135	%	70-130	12.11.2020 08:09	**

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Certificate of Analytical Results 680333

Larson and Associates, Inc., Midland, TX

NMGSAU 2102

Sample Id: **MW-2** Matrix: Water Date Received:12.09.2020 08:51

Lab Sample Id: 680333-003 Date Collected: 12.08.2020 10:58

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.10.2020 15:15 % Moisture:

Seq Number: 3144579

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**227**	2.50	mg/L	12.10.2020 17:52		5

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MNR

Analyst: MNR Date Prep: 12.10.2020 15:00 % Moisture:

Seq Number: 3144538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.11.2020 08:35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.11.2020 08:35	UF	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.11.2020 08:35	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	12.11.2020 08:35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.11.2020 08:35	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/L	12.11.2020 08:35	U	1
Total BTEX		<0.002000	0.002000	mg/L	12.11.2020 08:35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	176	%	70-130	12.11.2020 08:35	**
4-Bromofluorobenzene	460-00-4	136	%	70-130	12.11.2020 08:35	**

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Certificate of Analytical Results 680333

Larson and Associates, Inc., Midland, TX

NMGSAU 2102

Sample Id: **DUP-1** Matrix: Water Date Received:12.09.2020 08:51

Lab Sample Id: 680333-004 Date Collected: 12.08.2020 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.10.2020 15:15 % Moisture:

Seq Number: 3144579

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**226**	2.50	mg/L	12.10.2020 17:57		5

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MNR

Analyst: MNR Date Prep: 12.10.2020 15:00 % Moisture:

Seq Number: 3144538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	12.11.2020 09:00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	12.11.2020 09:00	UF	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	12.11.2020 09:00	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	12.11.2020 09:00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	12.11.2020 09:00	U	1
Total Xylenes	1330-20-7	<0.002000	0.002000	mg/L	12.11.2020 09:00	U	1
Total BTEX		<0.002000	0.002000	mg/L	12.11.2020 09:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	164	%	70-130	12.11.2020 09:00	**
4-Bromofluorobenzene	460-00-4	135	%	70-130	12.11.2020 09:00	**

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Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

eurofins | Environment Testing Xenco

QC Summary 680333

Larson and Associates, Inc.

NMGSAU 2102

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3144579 Matrix: Water Date Prep: 12.10.2020
MB Sample Id: 7716819-1-BLK LCS Sample Id: 7716819-1-BKS LCSD Sample Id: 7716819-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.500	25.0	26.4	106	26.4	106	90-110	0	20	mg/L	12.10.2020 16:22	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3144579 Matrix: Drinking Water Date Prep: 12.10.2020
Parent Sample Id: 680611-001 MS Sample Id: 680611-001 S MSD Sample Id: 680611-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	15.9	25.0	44.5	114	43.4	110	90-110	3	20	mg/L	12.10.2020 16:47	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3144579 Matrix: Drinking Water Date Prep: 12.10.2020
Parent Sample Id: 680614-001 MS Sample Id: 680614-001 S MSD Sample Id: 680614-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	12.8	25.0	40.8	112	40.2	110	90-110	1	20	mg/L	12.10.2020 18:26	X

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3144538 Matrix: Water Date Prep: 12.10.2020
MB Sample Id: 7716864-1-BLK LCS Sample Id: 7716864-1-BKS LCSD Sample Id: 7716864-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.107	107	0.0935	94	70-130	13	25	mg/L	12.11.2020 02:07	
Toluene	<0.00200	0.100	0.112	112	0.0813	81	70-130	32	25	mg/L	12.11.2020 02:07	F
Ethylbenzene	<0.00200	0.100	0.110	110	0.0900	90	70-130	20	25	mg/L	12.11.2020 02:07	
m,p-Xylenes	<0.00400	0.200	0.223	112	0.185	93	70-130	19	25	mg/L	12.11.2020 02:07	
o-Xylene	<0.00200	0.100	0.111	111	0.0983	98	70-130	12	25	mg/L	12.11.2020 02:07	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		147	**	163	**	70-130	%	12.11.2020 02:07
4-Bromofluorobenzene	105		118		133	**	70-130	%	12.11.2020 02:07

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

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QC Summary 680333

Larson and Associates, Inc.

NMGSAU 2102

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3144538 Matrix: Water Date Prep: 12.10.2020

Parent Sample Id: 680330-001 MS Sample Id: 680330-001 S MSD Sample Id: 680330-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.112	112	0.110	110	70-130	2	25	mg/L	12.11.2020 02:59	
Toluene	<0.00200	0.100	0.0939	94	0.112	112	70-130	18	25	mg/L	12.11.2020 02:59	
Ethylbenzene	<0.00200	0.100	0.108	108	0.111	111	70-130	3	25	mg/L	12.11.2020 02:59	
m,p-Xylenes	<0.00400	0.200	0.221	111	0.228	114	70-130	3	25	mg/L	12.11.2020 02:59	
o-Xylene	<0.00200	0.100	0.112	112	0.115	115	70-130	3	25	mg/L	12.11.2020 02:59	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	160	**	151	**	70-130	%	12.11.2020 02:59
4-Bromofluorobenzene	120		130		70-130	%	12.11.2020 02:59

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

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№1430

6900333 CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 12/8/20 PAGE 1 OF 1

PO#: LAB WORK ORDER#:

PROJECT LOCATION OR NAME: NMGSAU 202

LAI PROJECT #: 19-0112-51 COLLECTOR: TJ+RN

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES	FIELD NOTES
TMW-2		12/8/20	1009	W	5	X			X	X		
TMW-1		"	1034	"	"	"			"	"		
MW-2		"	1058	"	"	"			"	"		
DUP-1				"	"	"			"	"		

ANALYSES: BTEX ☐ MTBE ☐ | TRPH 418.1 ☐ | TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 ☐ | DIESEL - MOD 8015 ☐ | OIL - MOD 8015 ☐ | VOC 8260 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ | 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ | 8082 PCBS ☐ | TBLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ | TOTAL METALS (RCRA) ☐ OTHER LIST ☐ | LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ | RCI ☐ TOX ☐ FLASHPOINT ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | pH ☐ HEXAVALENT CHROMIUM ☐ | EXPLOSIVES ☐ PECHLORATE ☐ | CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐

TOTAL 4

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME 12/09/20 8:51am RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY: Xenco

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 5.9c THERM#: IR-8
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED
☐ CARRIER BILL #
☑ HAND DELIVERED

Received by OCD: 8/14/2024 8:53:22 AM
Final 1.000
Page 13 of 14
Released to Imaging: 5/9/2025 9:38:55 AM

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 12.09.2020 08.51.00 AM

Work Order #: 680333

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.9
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**Yes**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: JKR PH Device/Lot#: 10BDH1991

Checklist completed by: Brianna Teel Date: 12.09.2020

Brianna Teel

Checklist reviewed by: Holly Taylor Date: 12.09.2020

Holly Taylor

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Certificate of Analysis Summary 691511

Larson and Associates, Inc., Midland, TX

Project Name: NMGSAU 2102

Project Id: 19-0112-51
Contact: Mark Larson
Project Location:

Date Received in Lab: Thu 03.11.2021 15:46
Report Date: 03.19.2021 17:08
Project Manager: Holly Taylor

Analysis Requested													
	Lab Id:	691511-001		691511-002		691511-003		691511-004					
	Field Id:	MW-2		TMW-1		TMW-2		DUP-1					
	Depth:												
	Matrix:	WATER		WATER		WATER		WATER					
	Sampled:	03.10.2021 10:17		03.10.2021 10:40		03.10.2021 11:45		03.10.2021 00:00					
BTEX by EPA 8021B	***Extracted:***	03.16.2021 12:00		03.16.2021 12:00		03.16.2021 12:00		03.16.2021 12:00					
	Analyzed:	03.19.2021 01:00		03.19.2021 01:52		03.19.2021 02:18		03.19.2021 02:44					
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL				
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
m,p-Xylenes		<0.00400	0.00400	<0.00400	0.00400	<0.00400	0.00400	<0.00400	0.00400				
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	03.11.2021 17:45		03.11.2021 17:45		03.11.2021 17:45		03.11.2021 17:45					
	Analyzed:	03.11.2021 18:27		03.11.2021 18:36		03.11.2021 19:01		03.11.2021 19:10					
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL				
Chloride		235	2.50	418	5.00	428	5.00	237	5.00				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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Analytical Report 691511

for

Larson and Associates, Inc.

Project Manager: Mark Larson

NMGSAU 2102

19-0112-51

03.19.2021

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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03.19.2021

Project Manager: **Mark Larson**
Larson and Associates, Inc.
P. O. Box 50685
Midland, TX 79710

Reference: Eurofins Xenco, LLC Report No(s): **691511**
NMGSAU 2102
Project Address:

Mark Larson:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 691511. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 691511 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Holly Taylor

Holly Taylor
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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Sample Cross Reference 691511

Larson and Associates, Inc., Midland, TX

NMGSAU 2102

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-2	W	03.10.2021 10:17		691511-001
TMW-1	W	03.10.2021 10:40		691511-002
TMW-2	W	03.10.2021 11:45		691511-003
DUP-1	W	03.10.2021 00:00		691511-004

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CASE NARRATIVE

Client Name: Larson and Associates, Inc.

Project Name: NMGSAU 2102

Project ID:	*19-0112-51*	Report Date:	*03.19.2021*
Work Order Number(s):	*691511*	Date Received:	*03.11.2021*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results 691511

Larson and Associates, Inc., Midland, TX

NMGSAU 2102

Sample Id: **MW-2** Matrix: Water Date Received:03.11.2021 15:46

Lab Sample Id: 691511-001 Date Collected: 03.10.2021 10:17

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 03.11.2021 17:45 % Moisture:

Seq Number: 3153434

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**235**	2.50	mg/L	03.11.2021 18:27		5

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: KTL

Analyst: KTL Date Prep: 03.16.2021 12:00 % Moisture:

Seq Number: 3154191

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	03.19.2021 01:00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	03.19.2021 01:00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	03.19.2021 01:00	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	03.19.2021 01:00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	03.19.2021 01:00	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	03.19.2021 01:00	U	1
Total BTEX		<0.00200	0.00200	mg/L	03.19.2021 01:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	03.19.2021 01:00	
4-Bromofluorobenzene	460-00-4	98	%	70-130	03.19.2021 01:00	

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Certificate of Analytical Results 691511

Larson and Associates, Inc., Midland, TX

NMGSAU 2102

Sample Id: **TMW-1** Matrix: Water Date Received:03.11.2021 15:46

Lab Sample Id: 691511-002 Date Collected: 03.10.2021 10:40

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 03.11.2021 17:45 % Moisture:

Seq Number: 3153434

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**418**	5.00	mg/L	03.11.2021 18:36		10

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: KTL

Analyst: KTL Date Prep: 03.16.2021 12:00 % Moisture:

Seq Number: 3154191

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	03.19.2021 01:52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	03.19.2021 01:52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	03.19.2021 01:52	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	03.19.2021 01:52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	03.19.2021 01:52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	03.19.2021 01:52	U	1
Total BTEX		<0.00200	0.00200	mg/L	03.19.2021 01:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	117	%	70-130	03.19.2021 01:52	
4-Bromofluorobenzene	460-00-4	103	%	70-130	03.19.2021 01:52	

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Certificate of Analytical Results 691511

Larson and Associates, Inc., Midland, TX

NMGSAU 2102

Sample Id: **TMW-2** Matrix: Water Date Received:03.11.2021 15:46

Lab Sample Id: 691511-003 Date Collected: 03.10.2021 11:45

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 03.11.2021 17:45 % Moisture:

Seq Number: 3153434

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**428**	5.00	mg/L	03.11.2021 19:01		10

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: KTL

Analyst: KTL Date Prep: 03.16.2021 12:00 % Moisture:

Seq Number: 3154191

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	03.19.2021 02:18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	03.19.2021 02:18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	03.19.2021 02:18	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	03.19.2021 02:18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	03.19.2021 02:18	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	03.19.2021 02:18	U	1
Total BTEX		<0.00200	0.00200	mg/L	03.19.2021 02:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	03.19.2021 02:18	
4-Bromofluorobenzene	460-00-4	78	%	70-130	03.19.2021 02:18	

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Certificate of Analytical Results 691511

Larson and Associates, Inc., Midland, TX

NMGSAU 2102

Sample Id: **DUP-1** Matrix: Water Date Received:03.11.2021 15:46

Lab Sample Id: 691511-004 Date Collected: 03.10.2021 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 03.11.2021 17:45 % Moisture:

Seq Number: 3153434

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**237**	5.00	mg/L	03.11.2021 19:10		10

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: KTL

Analyst: KTL Date Prep: 03.16.2021 12:00 % Moisture:

Seq Number: 3154191

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/L	03.19.2021 02:44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/L	03.19.2021 02:44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/L	03.19.2021 02:44	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/L	03.19.2021 02:44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/L	03.19.2021 02:44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/L	03.19.2021 02:44	U	1
Total BTEX		<0.00200	0.00200	mg/L	03.19.2021 02:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	117	%	70-130	03.19.2021 02:44	
4-Bromofluorobenzene	460-00-4	105	%	70-130	03.19.2021 02:44	

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Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

eurofins | Environment Testing Xenco

QC Summary 691511

Larson and Associates, Inc.

NMGSAU 2102

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3153434 — Matrix: Water — Date Prep: 03.11.2021
MB Sample Id: 7723127-1-BLK — LCS Sample Id: 7723127-1-BKS — LCSD Sample Id: 7723127-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.500	25.0	24.4	98	24.4	98	90-110	0	20	mg/L	03.11.2021 17:27	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3153434 — Matrix: Drinking Water — Date Prep: 03.11.2021
Parent Sample Id: 691256-001 — MS Sample Id: 691256-001 S — MSD Sample Id: 691256-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	22.8	25.0	47.2	98	47.1	97	90-110	0	20	mg/L	03.11.2021 17:53	

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3154191 — Matrix: Water — Date Prep: 03.16.2021
MB Sample Id: 7723688-1-BLK — LCS Sample Id: 7723688-1-BKS — LCSD Sample Id: 7723688-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.108	108	0.102	102	70-130	6	25	mg/L	03.18.2021 23:17	
Toluene	<0.00200	0.100	0.103	103	0.0981	98	70-130	5	25	mg/L	03.18.2021 23:17	
Ethylbenzene	<0.00200	0.100	0.103	103	0.0993	99	70-130	4	25	mg/L	03.18.2021 23:17	
m,p-Xylenes	<0.00400	0.200	0.213	107	0.203	102	70-130	5	25	mg/L	03.18.2021 23:17	
o-Xylene	<0.00200	0.100	0.103	103	0.101	101	70-130	2	25	mg/L	03.18.2021 23:17	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		115		117		70-130	%	03.18.2021 23:17
4-Bromofluorobenzene	75		88		95		70-130	%	03.18.2021 23:17

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3154191 — Matrix: Water — Date Prep: 03.16.2021
Parent Sample Id: 691511-001 — MS Sample Id: 691511-001 S — MSD Sample Id: 691511-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0781	78	0.0865	87	70-130	10	25	mg/L	03.19.2021 07:41	
Toluene	<0.00200	0.100	0.0828	83	0.0871	87	70-130	5	25	mg/L	03.19.2021 07:41	
Ethylbenzene	<0.00200	0.100	0.0863	86	0.0903	90	70-130	5	25	mg/L	03.19.2021 07:41	
m,p-Xylenes	<0.00400	0.200	0.174	87	0.185	93	70-130	6	25	mg/L	03.19.2021 07:41	
o-Xylene	<0.00200	0.100	0.0874	87	0.0935	94	70-130	7	25	mg/L	03.19.2021 07:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		116		70-130	%	03.19.2021 07:41
4-Bromofluorobenzene	113		94		70-130	%	03.19.2021 07:41

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

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№ 1537

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

Data Reported to:

DATE: 3/10/21 PAGE 1 OF 1

PO#:

LAB WORK ORDER#: ~~69151~~ 69151

PROJECT LOCATION OR NAME: NMGSAU 2102 3.11.21 AJ

LAI PROJECT #: 19-0112-51 COLLECTOR: TJ + MB

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: 3 VOA	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	1 poly	UNPRESERVED	ANALYSES: BTEX ☒ MTBE ☐	TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	OIL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TBLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐	FIELD NOTES
MW-2		3/10/21	1017	W	4	X				X			X																X				
TMW-1		↓	1040	↓	4	X				X			X																X				Bill to Apache
TMW-2			1145		4	X				X			X																X				
DUP-1		↓		↓	4	X				X			X																X				

TOTAL 4

RELINQUISHED BY:(Signature) Grant Om DATE/TIME 3/11/21 1546 RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) Lindall DATE/TIME 03-11-21 1546 RECEIVED BY: (Signature)

LABORATORY: Xenco

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 6.0 THERM#: IR-8
CUSTODY SEALS - ☐ BROKEN ☒ INTACT ☐ NOT USED
☐ CARRIER BILL #
☒ HAND DELIVERED

Received by OCD: 8/14/2024 8:53:32 AM
Released to Imaging: 5/9/2025 9:33:55 AM
Final 1.000
Page 12 of 13

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Larson and Associates, Inc.

Date/ Time Received: 03.11.2021 03.46.00 PM

Work Order #: 691511

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	6
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**Yes**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: JKR PH Device/Lot#: 10BDH1991

Checklist completed by: Brianna Teel Date: 03.11.2021

Brianna Teel

Checklist reviewed by: Holly Taylor Date: 03.15.2021

Holly Taylor

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Xenco, Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-3000-1
Laboratory Sample Delivery Group: 19-0112-51
Client Project/Site: Apache - NMGSAU 2102

For:
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Attn: Mr. Mark J Larson

Holly Taylor

Authorized for release by:
6/16/2021 4:43:49 PM

Holly Taylor, Project Manager
(806)794-1296
holly.taylor@eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Larson & Associates, Inc.
Project/Site: Apache - NMGSAU 2102

Laboratory Job ID: 880-3000-1
SDG: 19-0112-51

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Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-3000-1
Project/Site: Apache - NMGSAU 2102 SDG: 19-0112-51

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: Apache - NMGSAU 2102

Job ID: 880-3000-1
SDG: 19-0112-51

Job ID: 880-3000-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative
880-3000-1

Receipt
The samples were received on 6/14/2021 8:37 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 6.0°C

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache - NMGSAU 2102

Job ID: 880-3000-1
SDG: 19-0112-51

Client Sample ID: MW-2

Lab Sample ID: 880-3000-1
Matrix: Water
Date Collected: 06/11/21 09:10
Date Received: 06/14/21 08:37

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			06/14/21 13:50	1
Toluene	<0.00200	U	0.00200		mg/L			06/14/21 13:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			06/14/21 13:50	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			06/14/21 13:50	1
o-Xylene	<0.00200	U	0.00200		mg/L			06/14/21 13:50	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			06/14/21 13:50	1
Total BTEX	<0.00400	U	0.00400		mg/L			06/14/21 13:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*06/14/21 13:50*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*		*06/14/21 13:50*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**212**		2.50		mg/L			06/15/21 16:38	5

Client Sample ID: Dup1

Lab Sample ID: 880-3000-2
Matrix: Water
Date Collected: 06/11/21 00:00
Date Received: 06/14/21 08:37

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			06/14/21 14:15	1
Toluene	<0.00200	U	0.00200		mg/L			06/14/21 14:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			06/14/21 14:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			06/14/21 14:15	1
o-Xylene	<0.00200	U	0.00200		mg/L			06/14/21 14:15	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			06/14/21 14:15	1
Total BTEX	<0.00400	U	0.00400		mg/L			06/14/21 14:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*06/14/21 14:15*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*		*06/14/21 14:15*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**213**		2.50		mg/L			06/15/21 16:45	5

Client Sample ID: TMW-1

Lab Sample ID: 880-3000-3
Matrix: Water
Date Collected: 06/11/21 09:30
Date Received: 06/14/21 08:37

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			06/14/21 14:40	1
Toluene	<0.00200	U	0.00200		mg/L			06/14/21 14:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			06/14/21 14:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			06/14/21 14:40	1
o-Xylene	<0.00200	U	0.00200		mg/L			06/14/21 14:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			06/14/21 14:40	1
Total BTEX	<0.00400	U	0.00400		mg/L			06/14/21 14:40	1

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache - NMGSAU 2102

Job ID: 880-3000-1
SDG: 19-0112-51

Client Sample ID: TMW-1

Lab Sample ID: 880-3000-3
Matrix: Water
Date Collected: 06/11/21 09:30
Date Received: 06/14/21 08:37

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*		*06/14/21 14:40*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*		*06/14/21 14:40*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**361**		5.00		mg/L			06/15/21 17:15	10

Client Sample ID: TMW-2

Lab Sample ID: 880-3000-4
Matrix: Water
Date Collected: 06/11/21 10:00
Date Received: 06/14/21 08:37

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			06/14/21 15:06	1
Toluene	<0.00200	U	0.00200		mg/L			06/14/21 15:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			06/14/21 15:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			06/14/21 15:06	1
o-Xylene	<0.00200	U	0.00200		mg/L			06/14/21 15:06	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			06/14/21 15:06	1
Total BTEX	<0.00400	U	0.00400		mg/L			06/14/21 15:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*		*06/14/21 15:06*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*		*06/14/21 15:06*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**402**		5.00		mg/L			06/15/21 17:22	10

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Apache - NMGSAU 2102

Job ID: 880-3000-1
SDG: 19-0112-51

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-2930-A-1 MS	Matrix Spike	99	104										
880-2930-A-1 MSD	Matrix Spike Duplicate	100	101										
880-3000-1	MW-2	103	99										
880-3000-2	Dup1	102	100										
880-3000-3	TMW-1	109	106										
880-3000-4	TMW-2	105	101										
LCS 880-4074/3	Lab Control Sample	104	104										
LCSD 880-4074/4	Lab Control Sample Dup	99	107										
MB 880-4074/8	Method Blank	71	84										

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache - NMGSAU 2102

Job ID: 880-3000-1
SDG: 19-0112-51

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-4074/8
Matrix: Water
Analysis Batch: 4074

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			06/14/21 12:59	1
Toluene	<0.00200	U	0.00200		mg/L			06/14/21 12:59	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			06/14/21 12:59	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/L			06/14/21 12:59	1
o-Xylene	<0.00200	U	0.00200		mg/L			06/14/21 12:59	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			06/14/21 12:59	1
Total BTEX	<0.00400	U	0.00400		mg/L			06/14/21 12:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*71*		*70 - 130*		*06/14/21 12:59*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*		*06/14/21 12:59*	*1*

Lab Sample ID: LCS 880-4074/3
Matrix: Water
Analysis Batch: 4074

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09419		mg/L		94	70 - 130		
Toluene			0.100	0.1038		mg/L		104	70 - 130		
Ethylbenzene			0.100	0.1078		mg/L		108	70 - 130		
m-Xylene & p-Xylene			0.200	0.1914		mg/L		96	70 - 130		
o-Xylene			0.100	0.09672		mg/L		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-4074/4
Matrix: Water
Analysis Batch: 4074

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09313		mg/L		93	70 - 130	1	20
Toluene			0.100	0.1006		mg/L		101	70 - 130	3	20
Ethylbenzene			0.100	0.1055		mg/L		106	70 - 130	2	20
m-Xylene & p-Xylene			0.200	0.1875		mg/L		94	70 - 130	2	20
o-Xylene			0.100	0.09438		mg/L		94	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: 880-2930-A-1 MS
Matrix: Water
Analysis Batch: 4074

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	0.00880		0.100	0.1055		mg/L		97	70 - 130		

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache - NMGSAU 2102

Job ID: 880-3000-1
SDG: 19-0112-51

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-2930-A-1 MS
Matrix: Water
Analysis Batch: 4074

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	0.0123		0.100	0.1165		mg/L		104	70 - 130
Ethylbenzene	<0.00200	U	0.100	0.1064		mg/L		106	70 - 130
m-Xylene & p-Xylene	0.00594		0.200	0.1952		mg/L		95	70 - 130
o-Xylene	<0.00200	U	0.100	0.09681		mg/L		96	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 880-2930-A-1 MSD
Matrix: Water
Analysis Batch: 4074

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.00880		0.100	0.09846		mg/L		90	70 - 130	7	25
Toluene	0.0123		0.100	0.1114		mg/L		99	70 - 130	4	25
Ethylbenzene	<0.00200	U	0.100	0.1028		mg/L		103	70 - 130	3	25
m-Xylene & p-Xylene	0.00594		0.200	0.1878		mg/L		91	70 - 130	4	25
o-Xylene	<0.00200	U	0.100	0.09330		mg/L		92	70 - 130	4	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-4120/3
Matrix: Water
Analysis Batch: 4120

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500		mg/L			06/15/21 14:49	1

Lab Sample ID: LCS 880-4120/4
Matrix: Water
Analysis Batch: 4120

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride			25.0	23.77		mg/L		95	90 - 110

Lab Sample ID: LCSD 880-4120/5
Matrix: Water
Analysis Batch: 4120

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			25.0	23.31		mg/L		93	90 - 110	2	20

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Apache - NMGSAU 2102

Job ID: 880-3000-1
SDG: 19-0112-51

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-3040-A-1 MS
Matrix: Water
Analysis Batch: 4120

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	17.9		25.0	42.53		mg/L		98	90 - 110		

Lab Sample ID: 880-3040-A-1 MSD
Matrix: Water
Analysis Batch: 4120

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	17.9		25.0	42.28		mg/L		97	90 - 110	1	20

Lab Sample ID: 880-3041-A-1 MS
Matrix: Water
Analysis Batch: 4120

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	16.4		25.0	40.52		mg/L		96	90 - 110		

Lab Sample ID: 880-3041-A-1 MSD
Matrix: Water
Analysis Batch: 4120

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	16.4		25.0	41.69		mg/L		101	90 - 110	3	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Apache - NMGSAU 2102

Job ID: 880-3000-1
SDG: 19-0112-51

GC VOA

Analysis Batch: 4074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-3000-1	MW-2	Total/NA	Water	8021B	
880-3000-2	Dup1	Total/NA	Water	8021B	
880-3000-3	TMW-1	Total/NA	Water	8021B	
880-3000-4	TMW-2	Total/NA	Water	8021B	
MB 880-4074/8	Method Blank	Total/NA	Water	8021B	
LCS 880-4074/3	Lab Control Sample	Total/NA	Water	8021B	
LCSD 880-4074/4	Lab Control Sample Dup	Total/NA	Water	8021B	
880-2930-A-1 MS	Matrix Spike	Total/NA	Water	8021B	
880-2930-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	

HPLC/IC

Analysis Batch: 4120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-3000-1	MW-2	Total/NA	Water	300.0	
880-3000-2	Dup1	Total/NA	Water	300.0	
880-3000-3	TMW-1	Total/NA	Water	300.0	
880-3000-4	TMW-2	Total/NA	Water	300.0	
MB 880-4120/3	Method Blank	Total/NA	Water	300.0	
LCS 880-4120/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-4120/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-3040-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
880-3040-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
880-3041-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
880-3041-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Apache - NMGSAU 2102

Job ID: 880-3000-1
SDG: 19-0112-51

Client Sample ID: MW-2
Date Collected: 06/11/21 09:10
Date Received: 06/14/21 08:37

Lab Sample ID: 880-3000-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	4074	06/14/21 13:50	MR	XEN MID
Total/NA	Analysis	300.0		5			4120	06/15/21 16:38	CH	XEN MID

Client Sample ID: Dup1
Date Collected: 06/11/21 00:00
Date Received: 06/14/21 08:37

Lab Sample ID: 880-3000-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	4074	06/14/21 14:15	MR	XEN MID
Total/NA	Analysis	300.0		5			4120	06/15/21 16:45	CH	XEN MID

Client Sample ID: TMW-1
Date Collected: 06/11/21 09:30
Date Received: 06/14/21 08:37

Lab Sample ID: 880-3000-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	4074	06/14/21 14:40	MR	XEN MID
Total/NA	Analysis	300.0		10			4120	06/15/21 17:15	CH	XEN MID

Client Sample ID: TMW-2
Date Collected: 06/11/21 10:00
Date Received: 06/14/21 08:37

Lab Sample ID: 880-3000-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	4074	06/14/21 15:06	MR	XEN MID
Total/NA	Analysis	300.0		10			4120	06/15/21 17:22	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: Apache - NMGSAU 2102

Job ID: 880-3000-1
SDG: 19-0112-51

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8021B		Water	Total BTEX

Method Summary

Client: Larson & Associates, Inc.
Project/Site: Apache - NMGSAU 2102

Job ID: 880-3000-1
SDG: 19-0112-51

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5030B	Purge and Trap	SW846	XEN MID

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: Apache - NMGSAU 2102

Job ID: 880-3000-1
SDG: 19-0112-51

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
880-3000-1	MW-2	Water	06/11/21 09:10	06/14/21 08:37	
880-3000-2	Dup1	Water	06/11/21 00:00	06/14/21 08:37	
880-3000-3	TMW-1	Water	06/11/21 09:30	06/14/21 08:37	
880-3000-4	TMW-2	Water	06/11/21 10:00	06/14/21 08:37	

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880-3000 Nº 1577

880-3000 Chain of Custody

CHAIN-OF-CUSTODY

6/16/2021

Larson & Associates, Inc.
Environmental Consultants
Midland, TX 79701
432-687-0901

DATE: 6-11-21 PAGE 1 OF 1

PO#: ~~19-0112-51~~ LAB WORK ORDER#:

PROJECT LOCATION OR NAME: NMGSAU 2102

LAI PROJECT #: 19-0112-51 COLLECTOR: MB, TJ, TP

Data Reported to

TRRP report? ☐ Yes ☒ No

TIME ZONE Time zone/State: MST

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

Field Sample I D	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl x 3 VOA	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE x 1 Poly	UNPRESSERVED	ANALYSES: BTEX ☒ MTBE ☐	TPH 418.1 ☐	TPH 1005 ☐	TPH 1006 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	OIL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐	PAH 8270 ☐	HOLDPAH ☐	8081 PESTICIDES ☐	8151 HERBICIDES ☐	8082 PCBS ☐	TCLP VOC ☐	TBLP - METALS (RCRA) ☐	TCLP SVOC ☐	TCLP - PEST ☐	HERB ☐	Semi-VOC ☐	TOTAL METALS (RCRA) ☐	OTHER LIST ☐	LEAD - TOTAL ☐	D W 200.8 ☐	TCLP ☐	RCI ☐	TOX ☐	FLASHPOINT ☐	TDS ☐	TSS ☐	% MOISTURE ☐	pH ☐	CYANIDE ☐	HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐	PECHLORATE ☐	CHLORIDES ☒	ANIONS ☐	ALKALINITY ☐	FIELD NOTES
MW-2		6/11/21	0910	W	4	X	\		X		X																															X			Direct Bill to
Dup 1		"		"	4	X			X		X																															X			Apache
TMW-1		"	0930	"	4	X			X		X																															X			
TMW-2		"	1000	"	4	X			X		X																															X			

TOTAL 4

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
[signature]	6/14	[signature] 0837
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)

LABORATORY XENCO

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP 5.5/6.0 THERM# IR8
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☑ NOT USED
☐ CARRIER BILL #
☑ HAND DELIVERED

Page 16 of 17

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-3000-1
SDG Number: 19-0112-51

Login Number: 3000
List Number: 1
Creator: Phillips, Kerianna

List Source: Eurofins Xenco, Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Xenco, Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-7155-1
Laboratory Sample Delivery Group: 19-0112-51
Client Project/Site: NMGSAU 2102

For:
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Attn: Mr. Mark J Larson

Holly Taylor

Authorized for release by:
10/21/2021 5:32:04 PM

Holly Taylor, Project Manager
(806)794-1296
holly.taylor@eurofinset.com

LINKS

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www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Laboratory Job ID: 880-7155-1
SDG: 19-0112-51

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Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-7155-1
Project/Site: NMGSAU 2102 SDG: 19-0112-51

Qualifiers

GC VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-7155-1
SDG: 19-0112-51

Job ID: 880-7155-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative
880-7155-1

Receipt
The samples were received on 10/13/2021 9:08 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-9936/8). Evidence of matrix interferences is not obvious.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 880-9936 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Released to Imaging: 5/9/2025 9:33:55 AM

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-7155-1
SDG: 19-0112-51

Client Sample ID: MW-2

Lab Sample ID: 880-7155-1
Matrix: Water
Date Collected: 10/12/21 10:00
Date Received: 10/13/21 09:08

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U F2	0.00200		mg/L			10/20/21 14:27	1
Toluene	<0.00200	U F2	0.00200		mg/L			10/20/21 14:27	1
Ethylbenzene	<0.00200	U F2	0.00200		mg/L			10/20/21 14:27	1
m,p-Xylenes	<0.00400	U F2	0.00400		mg/L			10/20/21 14:27	1
o-Xylene	<0.00200	U F2	0.00200		mg/L			10/20/21 14:27	1
Xylenes, Total	<0.00400	U F2	0.00400		mg/L			10/20/21 14:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*		*10/20/21 14:27*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*		*10/20/21 14:27*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			10/19/21 14:04	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**207**		2.50		mg/L			10/15/21 18:57	5

Client Sample ID: TMW-1

Lab Sample ID: 880-7155-2
Matrix: Water
Date Collected: 10/12/21 10:20
Date Received: 10/13/21 09:08

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			10/20/21 14:54	1
Toluene	<0.00200	U	0.00200		mg/L			10/20/21 14:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			10/20/21 14:54	1
m,p-Xylenes	<0.00400	U	0.00400		mg/L			10/20/21 14:54	1
o-Xylene	<0.00200	U	0.00200		mg/L			10/20/21 14:54	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			10/20/21 14:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*10/20/21 14:54*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*		*10/20/21 14:54*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			10/19/21 14:04	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**291**		5.00		mg/L			10/15/21 19:10	10

Client Sample ID: TMW-2

Lab Sample ID: 880-7155-3
Matrix: Water
Date Collected: 10/12/21 10:37
Date Received: 10/13/21 09:08

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			10/20/21 15:20	1
Toluene	<0.00200	U	0.00200		mg/L			10/20/21 15:20	1

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-7155-1
SDG: 19-0112-51

Client Sample ID: TMW-2

Lab Sample ID: 880-7155-3
Matrix: Water
Date Collected: 10/12/21 10:37
Date Received: 10/13/21 09:08

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200		mg/L			10/20/21 15:20	1
m,p-Xylenes	<0.00400	U	0.00400		mg/L			10/20/21 15:20	1
o-Xylene	<0.00200	U	0.00200		mg/L			10/20/21 15:20	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			10/20/21 15:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*10/20/21 15:20*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*		*10/20/21 15:20*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			10/19/21 14:04	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**325**		5.00		mg/L			10/15/21 19:51	10

Client Sample ID: DUP-1

Lab Sample ID: 880-7155-4
Matrix: Water
Date Collected: 10/12/21 00:00
Date Received: 10/13/21 09:08

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			10/20/21 15:46	1
Toluene	<0.00200	U	0.00200		mg/L			10/20/21 15:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			10/20/21 15:46	1
m,p-Xylenes	<0.00400	U	0.00400		mg/L			10/20/21 15:46	1
o-Xylene	<0.00200	U	0.00200		mg/L			10/20/21 15:46	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			10/20/21 15:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*10/20/21 15:46*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*		*10/20/21 15:46*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			10/19/21 14:04	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**305**		5.00		mg/L			10/15/21 20:23	10

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-7155-1
SDG: 19-0112-51

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-7155-1	MW-2	112	93										
880-7155-1 MS	MW-2	76	107										
880-7155-1 MSD	MW-2	98	112										
880-7155-2	TMW-1	98	108										
880-7155-3	TMW-2	101	106										
880-7155-4	DUP-1	96	105										
LCS 880-9936/3	Lab Control Sample	89	109										
LCSD 880-9936/4	Lab Control Sample Dup	93	105										
MB 880-9936/8	Method Blank	60 S1-	92										

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-7155-1
SDG: 19-0112-51

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-9936/8
Matrix: Water
Analysis Batch: 9936

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			10/20/21 14:01	1
Toluene	<0.00200	U	0.00200		mg/L			10/20/21 14:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			10/20/21 14:01	1
m,p-Xylenes	<0.00400	U	0.00400		mg/L			10/20/21 14:01	1
o-Xylene	<0.00200	U	0.00200		mg/L			10/20/21 14:01	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			10/20/21 14:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*60*	*S1-*	*70 - 130*		*10/20/21 14:01*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*		*10/20/21 14:01*	*1*

Lab Sample ID: LCS 880-9936/3
Matrix: Water
Analysis Batch: 9936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09418		mg/L		94	70 - 130		
Toluene			0.100	0.1004		mg/L		100	70 - 130		
Ethylbenzene			0.100	0.09588		mg/L		96	70 - 130		
m,p-Xylenes			0.200	0.1885		mg/L		94	70 - 130		
o-Xylene			0.100	0.09721		mg/L		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: LCSD 880-9936/4
Matrix: Water
Analysis Batch: 9936

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.08533		mg/L		85	70 - 130	10	20
Toluene			0.100	0.09115		mg/L		91	70 - 130	10	20
Ethylbenzene			0.100	0.08712		mg/L		87	70 - 130	10	20
m,p-Xylenes			0.200	0.1706		mg/L		85	70 - 130	10	20
o-Xylene			0.100	0.08803		mg/L		88	70 - 130	10	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 880-7155-1 MS
Matrix: Water
Analysis Batch: 9936

Client Sample ID: MW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00200	U F2	0.100	0.07712		mg/L		77	70 - 130		
Toluene	<0.00200	U F2	0.100	0.07940		mg/L		79	70 - 130		

Eurofins Xenco, Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-7155-1
SDG: 19-0112-51

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-7155-1 MS
Matrix: Water
Analysis Batch: 9936

Client Sample ID: MW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00200	U F2	0.100	0.07699		mg/L		77	70 - 130
m,p-Xylenes	<0.00400	U F2	0.200	0.1519		mg/L		76	70 - 130
o-Xylene	<0.00200	U F2	0.100	0.07664		mg/L		77	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: 880-7155-1 MSD
Matrix: Water
Analysis Batch: 9936

Client Sample ID: MW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U F2	0.100	0.1005	F2	mg/L		100	70 - 130	26	25
Toluene	<0.00200	U F2	0.100	0.1069	F2	mg/L		107	70 - 130	30	25
Ethylbenzene	<0.00200	U F2	0.100	0.1055	F2	mg/L		105	70 - 130	31	25
m,p-Xylenes	<0.00400	U F2	0.200	0.2078	F2	mg/L		104	70 - 130	31	25
o-Xylene	<0.00200	U F2	0.100	0.1050	F2	mg/L		105	70 - 130	31	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-9543/3
Matrix: Water
Analysis Batch: 9543

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500		mg/L			10/15/21 16:28	1

Lab Sample ID: LCS 880-9543/4
Matrix: Water
Analysis Batch: 9543

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride			25.0	24.59		mg/L		98	90 - 110

Lab Sample ID: LCSD 880-9543/5
Matrix: Water
Analysis Batch: 9543

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			25.0	24.85		mg/L		99	90 - 110	1	20

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-7155-1
SDG: 19-0112-51

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-7234-A-1 MS
Matrix: Water
Analysis Batch: 9543

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	41.8	F1	25.0	65.73		mg/L		96	90 - 110		

Lab Sample ID: 880-7234-A-1 MSD
Matrix: Water
Analysis Batch: 9543

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	41.8	F1	25.0	62.53	F1	mg/L		83	90 - 110	5	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-7155-1
SDG: 19-0112-51

GC VOA

Analysis Batch: 9900

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-7155-1	MW-2	Total/NA	Water	Total BTEX	
880-7155-2	TMW-1	Total/NA	Water	Total BTEX	
880-7155-3	TMW-2	Total/NA	Water	Total BTEX	
880-7155-4	DUP-1	Total/NA	Water	Total BTEX	

Analysis Batch: 9936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-7155-1	MW-2	Total/NA	Water	8021B	
880-7155-2	TMW-1	Total/NA	Water	8021B	
880-7155-3	TMW-2	Total/NA	Water	8021B	
880-7155-4	DUP-1	Total/NA	Water	8021B	
MB 880-9936/8	Method Blank	Total/NA	Water	8021B	
LCS 880-9936/3	Lab Control Sample	Total/NA	Water	8021B	
LCSD 880-9936/4	Lab Control Sample Dup	Total/NA	Water	8021B	
880-7155-1 MS	MW-2	Total/NA	Water	8021B	
880-7155-1 MSD	MW-2	Total/NA	Water	8021B	

HPLC/IC

Analysis Batch: 9543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-7155-1	MW-2	Total/NA	Water	300.0	
880-7155-2	TMW-1	Total/NA	Water	300.0	
880-7155-3	TMW-2	Total/NA	Water	300.0	
880-7155-4	DUP-1	Total/NA	Water	300.0	
MB 880-9543/3	Method Blank	Total/NA	Water	300.0	
LCS 880-9543/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-9543/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-7234-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
880-7234-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-7155-1
SDG: 19-0112-51

Client Sample ID: MW-2
Date Collected: 10/12/21 10:00
Date Received: 10/13/21 09:08

Lab Sample ID: 880-7155-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	9936	10/20/21 14:27	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			9900	10/19/21 14:04	AJ	XEN MID
Total/NA	Analysis	300.0		5			9543	10/15/21 18:57	CH	XEN MID

Client Sample ID: TMW-1
Date Collected: 10/12/21 10:20
Date Received: 10/13/21 09:08

Lab Sample ID: 880-7155-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	9936	10/20/21 14:54	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			9900	10/19/21 14:04	AJ	XEN MID
Total/NA	Analysis	300.0		10			9543	10/15/21 19:10	CH	XEN MID

Client Sample ID: TMW-2
Date Collected: 10/12/21 10:37
Date Received: 10/13/21 09:08

Lab Sample ID: 880-7155-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	9936	10/20/21 15:20	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			9900	10/19/21 14:04	AJ	XEN MID
Total/NA	Analysis	300.0		10			9543	10/15/21 19:51	CH	XEN MID

Client Sample ID: DUP-1
Date Collected: 10/12/21 00:00
Date Received: 10/13/21 09:08

Lab Sample ID: 880-7155-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	9936	10/20/21 15:46	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			9900	10/19/21 14:04	AJ	XEN MID
Total/NA	Analysis	300.0		10			9543	10/15/21 20:23	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-7155-1
SDG: 19-0112-51

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Total BTEX		Water	Total BTEX

Method Summary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-7155-1
SDG: 19-0112-51

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5030B	Purge and Trap	SW846	XEN MID

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-7155-1
SDG: 19-0112-51

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-7155-1	MW-2	Water	10/12/21 10:00	10/13/21 09:08
880-7155-2	TMW-1	Water	10/12/21 10:20	10/13/21 09:08
880-7155-3	TMW-2	Water	10/12/21 10:37	10/13/21 09:08
880-7155-4	DUP-1	Water	10/12/21 00:00	10/13/21 09:08

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No. 2218

7155 CHAIN-OF-CUSTODY

10/21/2021

Larson & Associates, Inc.
Environmental Consultants

Midland TX 79701
432-687 0901

10-13-21 PAGE 1 OF 1

Data Reported to

LAB WORK ORDER#

PROJECT LOCATION OR NAME NMGSAU 2102

LAI PROJECT # 19-0112-51 COLLECTOR MB & TP

TRRP report? ☐ Yes ☒ No

TIME ZONE Time zone/State MST

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

PRESERVATION: HCl (3 VOA) | HNO_3 | H_2SO_4 NaOH | ICE (1 Poly) | UNPRESERVED

ANALYSES: BTEX MTBE | TRPH 418.1 | TPH 1005 | TPH 1006 | GASOLINE MOD 8015 | DIESEL - MOD 8015 | OIL - MOD 8015 | VOC 8260 | SVOC 8270 | PAH 8270 | HOLDPAH | 8081 PESTICIDES | 8151 HERBICIDES | 8082 PCBS | TCLP - METALS (RCRA) | TCLP VOC | TCLP PEST | HERB | TOTAL METALS (RCRA) | Semi-VOC | LEAD - TOTAL | OTHER LIST | RCI | TOX | D W 200.8 | TCLP | TDS | TSS | FLASHPOINT | pH | % MOISTURE | HEXAVALENT CHROMIUM | EXPLOSIVES | CYANIDE | CHLORIDE | PECHLORATE | ANIONS | ALKALINITY

Field Sample I D	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 NaOH	ICE	UNPRESERVED	ANALYSES	FIELD NOTES
MW-2		10/12/21	1000	W	4	X			X		X	Bill Direct to Apache
TMW-1			1020									
TMW-2			1037									
DUP-1												

TOTAL 4

RELINQUISHED BY (Signature) DATE/TIME 10/13/21 RECEIVED BY (Signature)

RELINQUISHED BY (Signature) DATE/TIME RECEIVED BY (Signature) 10.13.21 908

RELINQUISHED BY (Signature) DATE/TIME RECEIVED BY (Signature)

LABORATORY Xenco

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP 3.1/3.2 THERM# IR8
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Page 16 of 17

Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-7155-1
SDG Number: 19-0112-51

Login Number: 7155
List Number: 1
Creator: Kramer, Jessica

List Source: Eurofins Xenco, Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Xenco, Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-9656-1
Laboratory Sample Delivery Group: 19-0112-51
Client Project/Site: NMGSAU 2102
Revision: 1

For:
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Attn: Mr. Mark J Larson

Holly Taylor

Authorized for release by:
1/6/2022 8:47:33 AM

Holly Taylor, Project Manager
(806)794-1296
holly.taylor@eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Laboratory Job ID: 880-9656-1
SDG: 19-0112-51

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-9656-1
SDG: 19-0112-51

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-9656-1
SDG: 19-0112-51

Job ID: 880-9656-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative
880-9656-1

Comments
No additional comments.

Revision
The report being provided is a revision of the original report sent on 1/3/2022. The report (revision 1) is being revised to change the project name per Robert Nelson (email)..

Receipt
The samples were received on 12/22/2021 3:48 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 7.7º C.

GC VOA
Method 8021B: The surrogate recovery for the blank associated with analytical batch 880-15480 was outside the upper control limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-9656-1
SDG: 19-0112-51

Client Sample ID: MW-2

Date Collected: 12/21/21 10:38
Date Received: 12/22/21 15:48

Lab Sample ID: 880-9656-1
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/27/21 19:33	1
Toluene	<0.00200	U	0.00200		mg/L			12/27/21 19:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/27/21 19:33	1
m,p-Xylenes	<0.00400	U	0.00400		mg/L			12/27/21 19:33	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/27/21 19:33	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/27/21 19:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*12/27/21 19:33*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*		*12/27/21 19:33*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/28/21 10:58	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**222**		5.00		mg/L			12/30/21 13:35	10

Client Sample ID: TMW-1

Date Collected: 12/21/21 11:08
Date Received: 12/22/21 15:48

Lab Sample ID: 880-9656-2
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/27/21 19:59	1
Toluene	<0.00200	U	0.00200		mg/L			12/27/21 19:59	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/27/21 19:59	1
m,p-Xylenes	<0.00400	U	0.00400		mg/L			12/27/21 19:59	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/27/21 19:59	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/27/21 19:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*12/27/21 19:59*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*		*12/27/21 19:59*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/28/21 10:58	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**406**		5.00		mg/L			12/30/21 13:58	10

Client Sample ID: TMW-2

Date Collected: 12/21/21 11:38
Date Received: 12/22/21 15:48

Lab Sample ID: 880-9656-3
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/27/21 20:27	1
Toluene	<0.00200	U	0.00200		mg/L			12/27/21 20:27	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-9656-1
SDG: 19-0112-51

Client Sample ID: TMW-2

Date Collected: 12/21/21 11:38
Date Received: 12/22/21 15:48

Lab Sample ID: 880-9656-3

Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/27/21 20:27	1
m,p-Xylenes	<0.00400	U	0.00400		mg/L			12/27/21 20:27	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/27/21 20:27	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/27/21 20:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*12/27/21 20:27*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*		*12/27/21 20:27*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/28/21 10:58	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**388**		5.00		mg/L			12/30/21 14:06	10

Client Sample ID: DUP-1

Date Collected: 12/21/21 00:00
Date Received: 12/22/21 15:48

Lab Sample ID: 880-9656-4

Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/27/21 20:54	1
Toluene	<0.00200	U	0.00200		mg/L			12/27/21 20:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/27/21 20:54	1
m,p-Xylenes	<0.00400	U	0.00400		mg/L			12/27/21 20:54	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/27/21 20:54	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/27/21 20:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*12/27/21 20:54*	*1*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*		*12/27/21 20:54*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			12/28/21 10:58	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**226**		5.00		mg/L			12/30/21 14:14	10

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-9656-1
SDG: 19-0112-51

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-9656-1	MW-2	101	85
880-9656-2	TMW-1	100	82
880-9656-3	TMW-2	102	86
880-9656-4	DUP-1	98	79
880-9665-A-1 MS	Matrix Spike	87	102
880-9665-A-1 MSD	Matrix Spike Duplicate	93	101
LCS 880-15480/3	Lab Control Sample	83	89
LCSD 880-15480/4	Lab Control Sample Dup	98	111
MB 880-15480/8	Method Blank	61 S1-	84

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-9656-1
SDG: 19-0112-51

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-15480/8
Matrix: Water
Analysis Batch: 15480

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/L			12/27/21 12:26	1
Toluene	<0.00200	U	0.00200		mg/L			12/27/21 12:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/L			12/27/21 12:26	1
m,p-Xylenes	<0.00400	U	0.00400		mg/L			12/27/21 12:26	1
o-Xylene	<0.00200	U	0.00200		mg/L			12/27/21 12:26	1
Xylenes, Total	<0.00400	U	0.00400		mg/L			12/27/21 12:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*61*	*S1-*	*70 - 130*		*12/27/21 12:26*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*		*12/27/21 12:26*	*1*

Lab Sample ID: LCS 880-15480/3
Matrix: Water
Analysis Batch: 15480

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.07091		mg/L		71	70 - 130		
Toluene			0.100	0.07094		mg/L		71	70 - 130		
Ethylbenzene			0.100	0.07376		mg/L		74	70 - 130		
m,p-Xylenes			0.200	0.1484		mg/L		74	70 - 130		
o-Xylene			0.100	0.07449		mg/L		74	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: LCSD 880-15480/4
Matrix: Water
Analysis Batch: 15480

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09074		mg/L		91	70 - 130	NaN	20
Toluene			0.100	0.09033		mg/L		90	70 - 130	NaN	20
Ethylbenzene			0.100	0.09409		mg/L		94	70 - 130	NaN	20
m,p-Xylenes			0.200	0.1898		mg/L		95	70 - 130	NaN	20
o-Xylene			0.100	0.09717		mg/L		97	70 - 130	NaN	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: 880-9665-A-1 MS
Matrix: Water
Analysis Batch: 15480

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00200	U	0.100	0.08065		mg/L		81	70 - 130		
Toluene	<0.00200	U	0.100	0.07143		mg/L		71	70 - 130		

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-9656-1
SDG: 19-0112-51

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-9665-A-1 MS
Matrix: Water
Analysis Batch: 15480

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00200	U	0.100	0.08394		mg/L		84	70 - 130
m,p-Xylenes	<0.00400	U	0.200	0.1699		mg/L		85	70 - 130
o-Xylene	<0.00200	U	0.100	0.08593		mg/L		86	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 880-9665-A-1 MSD
Matrix: Water
Analysis Batch: 15480

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.08531		mg/L		85	70 - 130	6	25
Toluene	<0.00200	U	0.100	0.08270		mg/L		83	70 - 130	15	25
Ethylbenzene	<0.00200	U	0.100	0.08893		mg/L		89	70 - 130	6	25
m,p-Xylenes	<0.00400	U	0.200	0.1802		mg/L		90	70 - 130	6	25
o-Xylene	<0.00200	U	0.100	0.09161		mg/L		92	70 - 130	6	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-15806/3
Matrix: Water
Analysis Batch: 15806

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500		mg/L			12/30/21 12:24	1

Lab Sample ID: LCS 880-15806/4
Matrix: Water
Analysis Batch: 15806

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride			25.0	24.54		mg/L		98	90 - 110

Lab Sample ID: LCSD 880-15806/5
Matrix: Water
Analysis Batch: 15806

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			25.0	24.59		mg/L		98	90 - 110	0	20

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-9656-1
SDG: 19-0112-51

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-9657-B-3 MS
Matrix: Water
Analysis Batch: 15806

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	284		250	535.7		mg/L		101	90 - 110		

Lab Sample ID: 880-9657-B-3 MSD
Matrix: Water
Analysis Batch: 15806

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	284		250	532.8		mg/L		100	90 - 110	1	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-9656-1
SDG: 19-0112-51

GC VOA

Analysis Batch: 15480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9656-1	MW-2	Total/NA	Water	8021B	
880-9656-2	TMW-1	Total/NA	Water	8021B	
880-9656-3	TMW-2	Total/NA	Water	8021B	
880-9656-4	DUP-1	Total/NA	Water	8021B	
MB 880-15480/8	Method Blank	Total/NA	Water	8021B	
LCS 880-15480/3	Lab Control Sample	Total/NA	Water	8021B	
LCSD 880-15480/4	Lab Control Sample Dup	Total/NA	Water	8021B	
880-9665-A-1 MS	Matrix Spike	Total/NA	Water	8021B	
880-9665-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	

Analysis Batch: 15634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9656-1	MW-2	Total/NA	Water	Total BTEX	
880-9656-2	TMW-1	Total/NA	Water	Total BTEX	
880-9656-3	TMW-2	Total/NA	Water	Total BTEX	
880-9656-4	DUP-1	Total/NA	Water	Total BTEX	

HPLC/IC

Analysis Batch: 15806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9656-1	MW-2	Total/NA	Water	300.0	
880-9656-2	TMW-1	Total/NA	Water	300.0	
880-9656-3	TMW-2	Total/NA	Water	300.0	
880-9656-4	DUP-1	Total/NA	Water	300.0	
MB 880-15806/3	Method Blank	Total/NA	Water	300.0	
LCS 880-15806/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-15806/5	Lab Control Sample Dup	Total/NA	Water	300.0	
880-9657-B-3 MS	Matrix Spike	Total/NA	Water	300.0	
880-9657-B-3 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-9656-1
SDG: 19-0112-51

Client Sample ID: MW-2
Date Collected: 12/21/21 10:38
Date Received: 12/22/21 15:48

Lab Sample ID: 880-9656-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	15480	12/27/21 19:33	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			15634	12/28/21 10:58	AJ	XEN MID
Total/NA	Analysis	300.0		10			15806	12/30/21 13:35	CH	XEN MID

Client Sample ID: TMW-1
Date Collected: 12/21/21 11:08
Date Received: 12/22/21 15:48

Lab Sample ID: 880-9656-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	15480	12/27/21 19:59	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			15634	12/28/21 10:58	AJ	XEN MID
Total/NA	Analysis	300.0		10			15806	12/30/21 13:58	CH	XEN MID

Client Sample ID: TMW-2
Date Collected: 12/21/21 11:38
Date Received: 12/22/21 15:48

Lab Sample ID: 880-9656-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	15480	12/27/21 20:27	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			15634	12/28/21 10:58	AJ	XEN MID
Total/NA	Analysis	300.0		10			15806	12/30/21 14:06	CH	XEN MID

Client Sample ID: DUP-1
Date Collected: 12/21/21 00:00
Date Received: 12/22/21 15:48

Lab Sample ID: 880-9656-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	15480	12/27/21 20:54	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			15634	12/28/21 10:58	AJ	XEN MID
Total/NA	Analysis	300.0		10			15806	12/30/21 14:14	CH	XEN MID

Laboratory References:
XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-9656-1
SDG: 19-0112-51

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Total BTEX		Water	Total BTEX

Method Summary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-9656-1
SDG: 19-0112-51

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5030B	Purge and Trap	SW846	XEN MID

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: NMGSAU 2102

Job ID: 880-9656-1
SDG: 19-0112-51

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-9656-1	MW-2	Water	12/21/21 10:38	12/22/21 15:48
880-9656-2	TMW-1	Water	12/21/21 11:08	12/22/21 15:48
880-9656-3	TMW-2	Water	12/21/21 11:38	12/22/21 15:48
880-9656-4	DUP-1	Water	12/21/21 00:00	12/22/21 15:48

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No. 2298

9656 CHAIN-OF-CUSTODY

1/6/2022 (Rev. 1)

Larson & Associates, Inc.
Environmental Consultants
507 N Marienfeld Ste 202
Midland TX 79701
432 687 0901

DATE 12/22/2021 PAGE 1 OF 1

PO# _____ LAB WORK ORDER# _____

PROJECT LOCATION OR NAME NMGSAU 2102

LAI PROJECT # 19-0112-51 COLLECTOR DS & JR

Data Reported to

TRRP report? ☐ Yes ☒ No

TIME ZONE Time zone/State: MST NM

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

Field Sample I D	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl x2	HNO_3	H_2SO_4 NaOH	ICE x2	UNPRESSERVED	ANALYSES: BTEX MTBE	TRPH 418.1	TPH 1005	TPH 1006	GASOLINE MOD 8015	DIESEL MOD 8015	OIL - MOD 8015	VOC 8260	SVOC 8270	PAH 8270	HOLDPAH	8081 PESTICIDES	8151 HERBICIDES	8082 PCBS	TCLP METALS (RCRA)	TCLP VOC	TCLP PEST	HERB	TOTAL METALS (RCRA)	Semi-VOC	LEAD TOTAL	OTHER LIST	DW 200.8	RCI	TCLP	TOX	FLASHPOINT	TDS	TSS	% MOISTURE	pH	HEXAVALENT CHROMIUM	EXPLOSIVES	CYANIDE	PECHLORATE	CHLORIDE	ANIONS	ALKALINITY	FIELD NOTES
MW-2		12/21/21	1038	W	5	X			X		X																																					Direct Bill to Apache
TMW-1		"	1108	"	"	"			"		"																																					
TMW-2		"	1138	"	"	"			"		"																																					
Dup-1		"	-	"	"	"			"		"																																					
TOTAL																																														

RELINQUISHED BY (Signature) _____ DATE/TIME 12/22/2021 15:45 RECEIVED BY (Signature) _____

RELINQUISHED BY (Signature) _____ DATE/TIME _____ RECEIVED BY (Signature) _____

RELINQUISHED BY (Signature) _____ DATE/TIME _____ RECEIVED BY (Signature) _____

LABORATORY Xenco

880-9656 Chain of Custody

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP 7.6/7.7 THERM# IR8
CUSTODY SEALS - ☐ BROKEN ☑ INTACT ☐ NOT USED
☐ CARRIER BILL # _____
☑ HAND DELIVERED

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Received by OCD: 8/14/2024 8:53:22 AM

Released to Imaging: 5/9/2025 9:33:55 AM

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-9656-1
SDG Number: 19-0112-51

Login Number: 9656
List Number: 1
Creator: Teel, Brianna

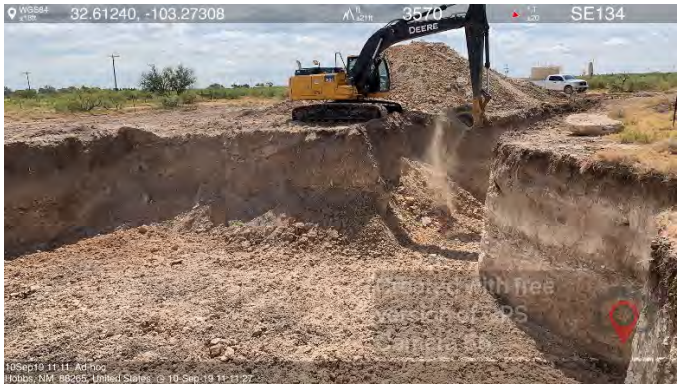
List Source: Eurofins Xenco, Midland

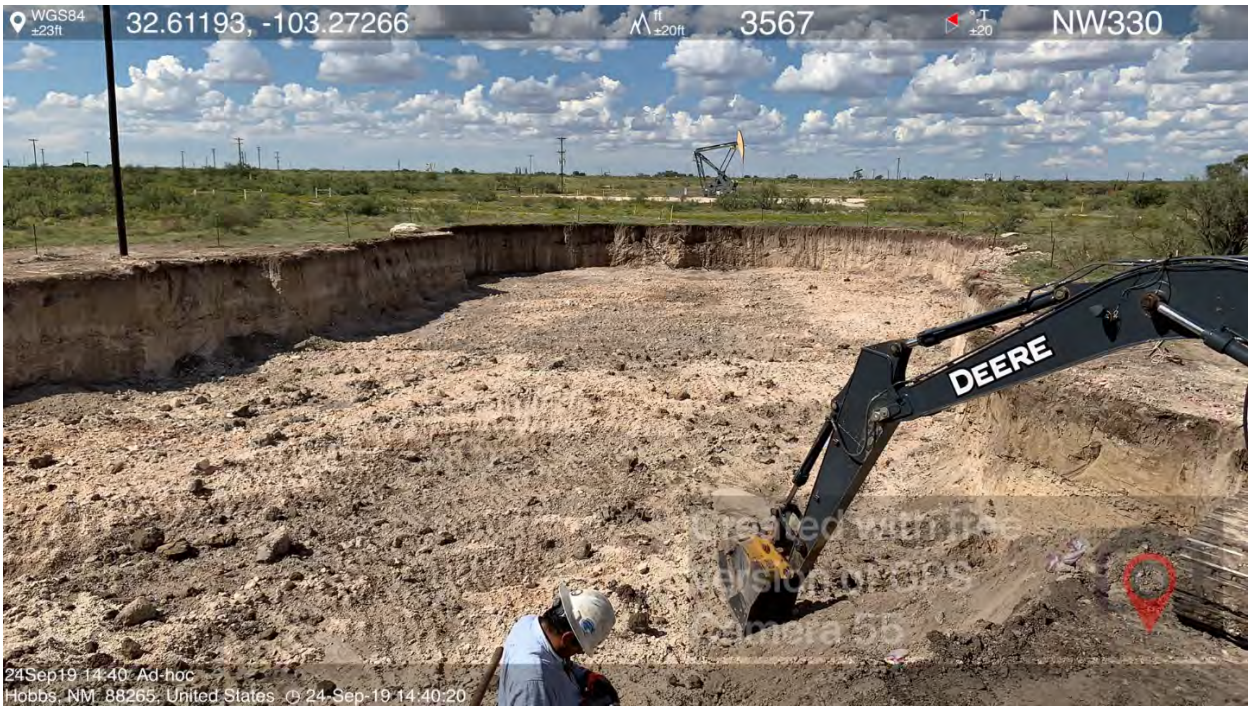
Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Appendix H

Photographic Documentation

32.61210, -103.27284
3568
N14
DEERE


32.61240, -103.27308
3570
SE134
DEERE


WGS84
±23ft
32.61193, -103.27266
ft
±20ft
3567
°T
±20
NW330
DEERE
24Sep19 14:40 Ad-hoc
Hobbs, NM, 88265, United States 24-Sep-19 14:40:20

32.61193, -103.27265
3562
NW334
18Oct19 16:06 Ad-hoc
Hobbs, NM 88265, United States -a 18-Oct-19 16:06:13

32.61186, -103.27274
3562
NW342
22Oct19 15:36 Ad-hoc
Hobbs, NM 88265, United States -a 22-Oct-19 15:36:34

WGS84
±16ft
32.61188, -103.27270
ft
±10ft
3563
°,T
±15
NW339
22Oct19 12:12
Lea County, NM 22-Oct-19 13:12:56

WGS84 ±16ft 32.61195, -103.27295
ft ±10ft 3565
°T ±21 NE35
30Oct19 07:57
Lea County, NM 30-Oct-19 08:57:57

WGS84 ±16ft 32.61208, -103.27267
ft ±10ft 3566
°T ±17 SW235
30Oct19 09:52
Lea County, NM 30-Oct-19 10:52:54

WGS84 ±16ft 32.61187, -103.27282
ft ±10ft 3563
°T ±16 NE23
30Oct19 10:41
Lea County, NM 30-Oct-19 11:41:25

WGS84 ±17ft
32.61248, -103.27274
ft ±9ft
3567
°,T ±12
SW199
14Nov19 15:02 Ad-hoc
Hobbs, NM 88265, United States 14-Nov-19 16:02:25

WGS84 ±16ft
32.61255, -103.27292
ft ±13ft
3561
°,T ±14
SE135
Photo
Lea County, NM 15-Nov-19 13:50:35

WGS84 ±16ft
32.61185, -103.27271
ft ±10ft
3562
°,T ±18
NW335
Photo
Lea County, NM 15-Nov-19 13:48:20

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https://www.emnrd.nm.gov/ocd/contact-us

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 373661

CONDITIONS

Operator: APACHE CORPORATION 303 Veterans Airpark Ln Midland, TX 79705	OGRID: 873
	Action Number: 373661
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
bhall	Accepted for record only. Historic report dated June 3, 2022. Please be advised that this acceptance does not approve any conclusions or closure requests. Additional groundwater monitoring and analytical results showing impacts to groundwater have been submitted in subsequent reports.	5/9/2025