



July 23, 2021

Mr. Bradford Billings  
State of New Mexico Oil Conservation Division  
1220 South St Francis Drive  
Santa Fe, NM 87505

RE: 1RP-1951 NEDU SAT. 4A

Mr. Billings,

In compliance with 19.15.29.15(B) NMAC and the agreement submitted by Apache Corporation on November 8, 2018, Apache Corporation is submitting information related to closure for the release occurring September 2, 2008. Apache is respectfully submitting the closure report based on remediation and studies occurring in 2021 that demonstrate the site meeting the requirements of the agency. Unless further information is requested by NMOCD, Apache Corporation considers this release closed.

If there are any questions, please feel free to contact me by telephone at 432-631-6982 or by e-mail at [larry.baker@apachecorp.com](mailto:larry.baker@apachecorp.com)

Sincerely,

A handwritten signature in black ink that reads "Larry Baker".

Larry Baker  
Environmental Technician SR.  
Apache Corporation

Attachment: Closure Report Dated July 23, 2021



303 Veterans Airpark Lane Midland, TX 79705

## **Closure Report**

July 23, 2021

Re: NEDU 4A

Case: 1RP-1951

On 09/02/2008 a release occurred due to a gathering line was damaged by a third party. The release (GPS: 32.463407, -103.154027) is north of Eunice, New Mexico in unit letter K section 22 township 21S range 37E. A groundwater survey was conducted utilizing NMOSE wells of record. The nearest well suggest that groundwater beneath the release to be 53 feet below ground surface.

On 10/14/2019 the release area was vertically delineated utilizing a hand auger. The center sample point was advanced to 2 feet below ground surface and north, south, east, and west sample points were advanced to a depth of 5 feet below ground surface. All samples collected were submitted to a commercial laboratory for analysis of chloride and the 1, 3, 5 foot samples were submitted to a commercial laboratory for analysis of TPH and BTEX. Laboratory results were above table one standards for chloride at south sample point. On 11/14/2019 a six foot sample was collected at the south sample point and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX.

The area around the south sample point was excavated to a depth of 6 feet below ground surface. On 6/18/2021 final 5 point bottom and wall samples were collected not exceeding 200 square feet and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. All excavated material was hauled to an OCD approved disposal facility. The excavation was backfilled with caliche up to 1 foot at the surface landowner request and the top foot was backfilled with top soil from the surrounding area. The disturbed area will be reseeded in accordance with the surface landowner.

Enclosed: C-141, Maps, Sample Data, Laboratory Results, and Photos.

Submitted by;

*Bruce Baker*

**Environmental Technician SR.**

*larry.baker@apachecorp.com*

**Cell# 432-631-6982**

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, 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  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company Apache Corporation	Contact Natalie Gladden
Address P.O. Box 1849 Eunice, NM 88231	Telephone No. 505-390-4186
Facility Name Nedu Sat 4A (Nedu #902 nearest well)	Facility Type Gathering Line

Surface Owner Deck	Mineral Owner BLM	Lease No. 30-025-06752
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**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	22	21S	37E	2080'	South Line	1650'	West Line	Lea

Latitude \_N32 deg 27.767'\_ Longitude \_W103 deg 09.252'

**NATURE OF RELEASE**

Type of Release Hydrocarbon/Produced Water	Volume of Release 50bbls	Volume Recovered 46bbls
Source of Release Gathering Line	Occurrence 09/2/08 5:25 pm	Discovery 09/02/08 5:25 pm
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Larry Johnson	
By Whom? Natalie Gladden	Date and Hour 09/02/08 6:04pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

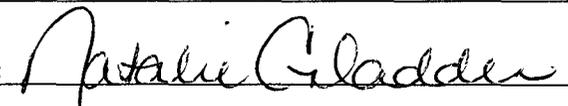
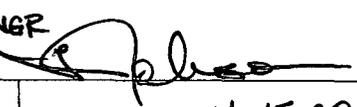
Describe Cause of Problem and Remedial Action Taken.\*

Southern Union was repairing a line when they struck Apache's gathering line. Production was shut in, 46bbls of fluid was recovered from ditch. All fluids were contained in ditch.

Describe Area Affected and Cleanup Action Taken.\*

All contaminates were dug out and line was repaired.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Natalie Gladden	Approved by District Supervisor: 	
Title: EH&S Environmental Tech	Approval Date: 9.15.08	Expiration Date: 11.15.08
E-mail Address: natalie.gladden@apachecorp.com	Conditions of Approval: SUBMIT FINAL C. #1	Attached <input type="checkbox"/> IRP-1951
Date: 09/03/08 Phone: 505-390-4186		

\* Attach Additional Sheets If Necessary

FQRL0826257267

Incident ID	
District RP	
Facility ID	
Application ID	

## Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>53</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

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

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

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

State of New Mexico  
Oil Conservation Division

Page 4

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: Larry Baker Title: Environmental Tech SR.  
 Signature: *Larry Baker* Date: 7/23/2021  
 email: larry.baker@apachecorp.com Telephone: 432-631-6982

**OCD Only**

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

Incident ID	
District RP	
Facility ID	
Application ID	

## Closure

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

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

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

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

Printed Name: Larry Baker Title: Environmental Tech SR.  
 Signature: *Larry Baker* Date: 7/23/2021  
 email: larry.baker@apachecorp.com Telephone: 432-631-6982

**OCD Only**

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

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

Closure Approved by: *Brittany Hall* Date: 2/10/2023  
 Printed Name: Brittany Hall Title: Environmental Specialist

Show search results for 32.463...



Elison Ln  
 CP-00730-POD1  
 Argo Ln  
 CP-00731-POD1  
 CP-00732-POD1  
 Apache Ln  
 CP-00733-POD1  
 CP-00168-POD1

CP-00012-POD1  
 CP-00013-POD1  
 CP-00235-POD7  
 CP-00235-POD4  
 CP-00235-POD5  
 CP-00235-POD9  
 CP-00213-POD1  
 CP-00252-POD1  
 CP-00016-POD1  
 CP-00169-POD1  
 CP-00166-POD1  
 CP-00881  
 CP-00224-POD1  
 CP-00241-POD1  
 CP-00235-POD8  
 CP-00235-POD11  
 CP-00015-POD1  
 CP-00238-POD1

E Hill Rd

Apache Ln

Apache Ln

Apache Ln

Apach



# New Mexico Office of the State Engineer Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)							
Well Tag	POD Number	(quarters are smallest to largest)	(NAD83 UTM in meters)						
		Q64 Q16 Q4	Sec	Tws	Rng	X	Y		
	CP 00881	4 4 22	21S	37E	674402	3592824*			

Driller License:	571	Driller Company:	"GLASSPOOLE, GEORGE ""BILL"" W.E "		
Driller Name:	GLASSPOOLE, GEORGE W.				
Drill Start Date:	09/04/1999	Drill Finish Date:	09/07/1999	Plug Date:	
Log File Date:	09/10/1999	PCW Rcv Date:		Source:	Shallow
Pump Type:		Pipe Discharge Size:		Estimated Yield:	80 GPM
Casing Size:	5.50	Depth Well:	95 feet	Depth Water:	53 feet

Water Bearing Stratifications:	Top	Bottom	Description
	53	95	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom	
	75	95	

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

9/25/20 11:12 AM

POINT OF DIVERSION SUMMARY

Please Select a Coordinate System and enter the coordinates:

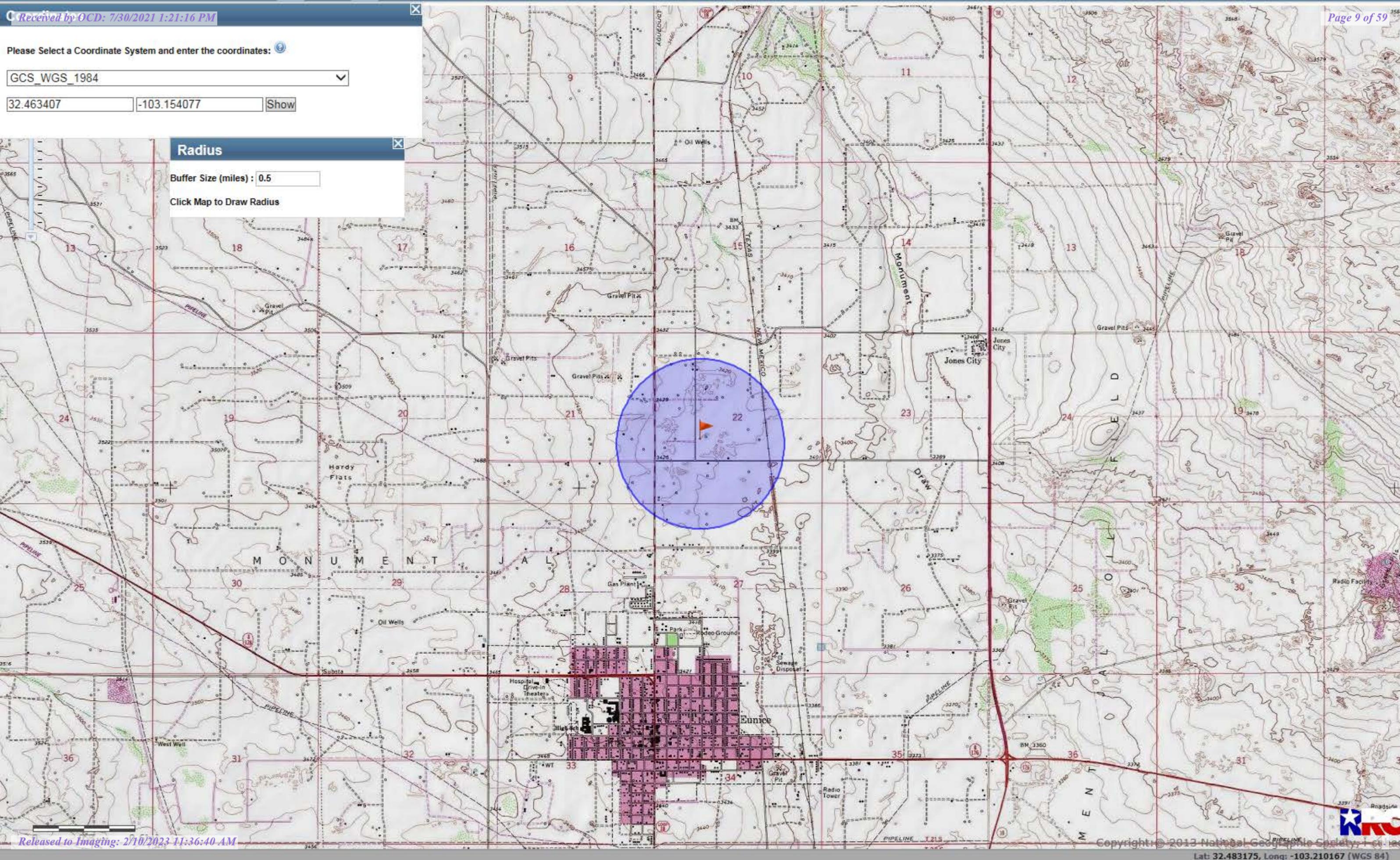
GCS\_WGS\_1984

32.463407 -103.154077 Show

**Radius**

Buffer Size (miles) : 0.5

Click Map to Draw Radius





WSP

NSP

CP

ESP 32.463406 -103.153932

SSP

67 ft

Google Earth

NW  
WW  
B1  
SW  
EW

Delineation Samples

Sample Date	Sample ID	Depth	Chloride Lab	Benzene	Toulene	Ethybenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO	GPS Coordinates
10/14/2019	North SP	1'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.463578, -103.154027
		2'	16									
		3'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
		4'	16									
		5'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
10/14/2019	East SP	1'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.463407, -103.153932
		2'	16									
		3'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	16.4	<10.0	
		4'	16									
		5'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
10/14/2019	South SP	1'	272	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.463233, -103.154149
		2'	704									
		3'	736	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
		4'	720									
		5'	688	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
11/14/2019		6'	309	ND	ND	ND	ND		ND	ND	ND	
10/14/2019	West SP	1'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.463437, -103.154213
		2'	<16									
		3'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
		4'	32									
		5'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
10/14/2019	Center SP	1'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.463407, -103.154077
		2'	16									

Remediation Samples

Sample Date	Sample ID	Depth	Chloride Lab	Benzene	Toulene	Ethybenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO	GPS Coordinates
6/18/2021	B1	6'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.463578, -103.154027

6/18/2021	SW	0-6'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
6/18/2021	NW	0-6'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
6/18/2021	EW	0-6'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
6/18/2021	WW	0-6'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	



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

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October 18, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NORTH EAST DRINKARD SATELLITE 4A

Enclosed are the results of analyses for samples received by the laboratory on 10/14/19 14:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	10/14/2019	Sampling Date:	10/14/2019
Reported:	10/18/2019	Sampling Type:	Soil
Project Name:	NORTH EAST DRINKARD SATELLITE 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: NORTH SP - 1' (H903485-01)**

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	10/16/2019	ND	1.90	95.0	2.00	3.01	
Toluene*	<0.050	0.050	10/16/2019	ND	1.93	96.6	2.00	2.21	
Ethylbenzene*	<0.050	0.050	10/16/2019	ND	1.95	97.5	2.00	3.04	
Total Xylenes*	<0.150	0.150	10/16/2019	ND	5.88	98.0	6.00	3.48	
Total BTEX	<0.300	0.300	10/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 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	10/17/2019	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	10/16/2019	ND	190	94.9	200	0.134	
DRO >C10-C28*	<10.0	10.0	10/16/2019	ND	199	99.3	200	1.44	
EXT DRO >C28-C36	<10.0	10.0	10/16/2019	ND					

Surrogate: 1-Chlorooctane 87.2 % 41-142

Surrogate: 1-Chlorooctadecane 99.3 % 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



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

**Analytical Results For:**

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

Received:	10/14/2019	Sampling Date:	10/14/2019
Reported:	10/18/2019	Sampling Type:	Soil
Project Name:	NORTH EAST DRINKARD SATELLITE 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: NORTH SP - 2' (H903485-02)**

Chloride, SM4500CI-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>16.0</b>	16.0	10/17/2019	ND	416	104	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	10/14/2019	Sampling Date:	10/14/2019
Reported:	10/18/2019	Sampling Type:	Soil
Project Name:	NORTH EAST DRINKARD SATELLITE 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: NORTH SP - 3' (H903485-03)**

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	10/16/2019	ND	1.90	95.0	2.00	3.01		
Toluene*	<0.050	0.050	10/16/2019	ND	1.93	96.6	2.00	2.21		
Ethylbenzene*	<0.050	0.050	10/16/2019	ND	1.95	97.5	2.00	3.04		
Total Xylenes*	<0.150	0.150	10/16/2019	ND	5.88	98.0	6.00	3.48		
Total BTEX	<0.300	0.300	10/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.1 % 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	10/17/2019	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	10/16/2019	ND	190	94.9	200	0.134		
DRO >C10-C28*	<10.0	10.0	10/16/2019	ND	199	99.3	200	1.44		
EXT DRO >C28-C36	<10.0	10.0	10/16/2019	ND						

Surrogate: 1-Chlorooctane 90.7 % 41-142

Surrogate: 1-Chlorooctadecane 100 % 37.6-147

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	10/14/2019	Sampling Date:	10/14/2019
Reported:	10/18/2019	Sampling Type:	Soil
Project Name:	NORTH EAST DRINKARD SATELLITE 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: NORTH SP - 4' (H903485-04)**

Chloride, SM4500CI-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>16.0</b>	16.0	10/17/2019	ND	416	104	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	10/14/2019	Sampling Date:	10/14/2019
Reported:	10/18/2019	Sampling Type:	Soil
Project Name:	NORTH EAST DRINKARD SATELLITE 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: NORTH SP - 5' (H903485-05)**

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	10/16/2019	ND	1.90	95.0	2.00	3.01		
Toluene*	<0.050	0.050	10/16/2019	ND	1.93	96.6	2.00	2.21		
Ethylbenzene*	<0.050	0.050	10/16/2019	ND	1.95	97.5	2.00	3.04		
Total Xylenes*	<0.150	0.150	10/16/2019	ND	5.88	98.0	6.00	3.48		
Total BTEX	<0.300	0.300	10/16/2019	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	10/17/2019	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	10/16/2019	ND	190	94.9	200	0.134		
DRO >C10-C28*	<10.0	10.0	10/16/2019	ND	199	99.3	200	1.44		
EXT DRO >C28-C36	<10.0	10.0	10/16/2019	ND						

Surrogate: 1-Chlorooctane 92.8 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	10/14/2019	Sampling Date:	10/14/2019
Reported:	10/18/2019	Sampling Type:	Soil
Project Name:	NORTH EAST DRINKARD SATELLITE 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: EAST SP - 1' (H903485-06)**

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	10/16/2019	ND	1.90	95.0	2.00	3.01		
Toluene*	<0.050	0.050	10/16/2019	ND	1.93	96.6	2.00	2.21		
Ethylbenzene*	<0.050	0.050	10/16/2019	ND	1.95	97.5	2.00	3.04		
Total Xylenes*	<0.150	0.150	10/16/2019	ND	5.88	98.0	6.00	3.48		
Total BTEX	<0.300	0.300	10/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 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	10/17/2019	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	10/16/2019	ND	190	94.9	200	0.134		
DRO >C10-C28*	<10.0	10.0	10/16/2019	ND	199	99.3	200	1.44		
EXT DRO >C28-C36	<10.0	10.0	10/16/2019	ND						

Surrogate: 1-Chlorooctane 88.9 % 41-142

Surrogate: 1-Chlorooctadecane 99.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	10/14/2019	Sampling Date:	10/14/2019
Reported:	10/18/2019	Sampling Type:	Soil
Project Name:	NORTH EAST DRINKARD SATELLITE 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: EAST SP - 2' (H903485-07)**

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>16.0</b>	16.0	10/17/2019	ND	416	104	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	10/14/2019	Sampling Date:	10/14/2019
Reported:	10/18/2019	Sampling Type:	Soil
Project Name:	NORTH EAST DRINKARD SATELLITE 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: EAST SP - 3' (H903485-08)**

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	10/16/2019	ND	1.90	95.0	2.00	3.01		
Toluene*	<0.050	0.050	10/16/2019	ND	1.93	96.6	2.00	2.21		
Ethylbenzene*	<0.050	0.050	10/16/2019	ND	1.95	97.5	2.00	3.04		
Total Xylenes*	<0.150	0.150	10/16/2019	ND	5.88	98.0	6.00	3.48		
Total BTEX	<0.300	0.300	10/16/2019	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	
<b>Chloride</b>	<b>16.0</b>	16.0	10/17/2019	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	10/15/2019	ND	202	101	200	0.0346		
<b>DRO &gt;C10-C28*</b>	<b>16.4</b>	10.0	10/15/2019	ND	185	92.7	200	2.66		
EXT DRO >C28-C36	<10.0	10.0	10/15/2019	ND						

Surrogate: 1-Chlorooctane 84.7 % 41-142

Surrogate: 1-Chlorooctadecane 90.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	10/14/2019	Sampling Date:	10/14/2019
Reported:	10/18/2019	Sampling Type:	Soil
Project Name:	NORTH EAST DRINKARD SATELLITE 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: EAST SP - 4' (H903485-09)**

Chloride, SM4500CI-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>16.0</b>	16.0	10/17/2019	ND	416	104	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	10/14/2019	Sampling Date:	10/14/2019
Reported:	10/18/2019	Sampling Type:	Soil
Project Name:	NORTH EAST DRINKARD SATELLITE 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: EAST SP - 5' (H903485-10)**

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	10/16/2019	ND	1.90	95.0	2.00	3.01		
Toluene*	<0.050	0.050	10/16/2019	ND	1.93	96.6	2.00	2.21		
Ethylbenzene*	<0.050	0.050	10/16/2019	ND	1.95	97.5	2.00	3.04		
Total Xylenes*	<0.150	0.150	10/16/2019	ND	5.88	98.0	6.00	3.48		
Total BTEX	<0.300	0.300	10/16/2019	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	10/17/2019	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	10/15/2019	ND	202	101	200	0.0346		
DRO >C10-C28*	<10.0	10.0	10/15/2019	ND	185	92.7	200	2.66		
EXT DRO >C28-C36	<10.0	10.0	10/15/2019	ND						

Surrogate: 1-Chlorooctane 85.9 % 41-142

Surrogate: 1-Chlorooctadecane 89.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	10/14/2019	Sampling Date:	10/14/2019
Reported:	10/18/2019	Sampling Type:	Soil
Project Name:	NORTH EAST DRINKARD SATELLITE 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: SOUTH SP - 1' (H903485-11)**

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	10/16/2019	ND	2.19	110	2.00	11.1		
Toluene*	<0.050	0.050	10/16/2019	ND	2.29	114	2.00	11.4		
Ethylbenzene*	<0.050	0.050	10/16/2019	ND	2.22	111	2.00	10.1		
Total Xylenes*	<0.150	0.150	10/16/2019	ND	6.80	113	6.00	11.1		
Total BTEX	<0.300	0.300	10/16/2019	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	10/17/2019	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	10/15/2019	ND	202	101	200	0.0346		
DRO >C10-C28*	<10.0	10.0	10/15/2019	ND	185	92.7	200	2.66		
EXT DRO >C28-C36	<10.0	10.0	10/15/2019	ND						

Surrogate: 1-Chlorooctane 90.1 % 41-142

Surrogate: 1-Chlorooctadecane 94.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	10/14/2019	Sampling Date:	10/14/2019
Reported:	10/18/2019	Sampling Type:	Soil
Project Name:	NORTH EAST DRINKARD SATELLITE 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: SOUTH SP - 2' (H903485-12)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>704</b>	16.0	10/17/2019	ND	416	104	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	10/14/2019	Sampling Date:	10/14/2019
Reported:	10/18/2019	Sampling Type:	Soil
Project Name:	NORTH EAST DRINKARD SATELLITE 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: SOUTH SP - 3' (H903485-13)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/16/2019	ND	2.19	110	2.00	11.1	
Toluene*	<0.050	0.050	10/16/2019	ND	2.29	114	2.00	11.4	
Ethylbenzene*	<0.050	0.050	10/16/2019	ND	2.22	111	2.00	10.1	
Total Xylenes*	<0.150	0.150	10/16/2019	ND	6.80	113	6.00	11.1	
Total BTEX	<0.300	0.300	10/16/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	10/17/2019	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	10/15/2019	ND	202	101	200	0.0346	
DRO >C10-C28*	<10.0	10.0	10/15/2019	ND	185	92.7	200	2.66	
EXT DRO >C28-C36	<10.0	10.0	10/15/2019	ND					

Surrogate: 1-Chlorooctane 90.5 % 41-142

Surrogate: 1-Chlorooctadecane 93.7 % 37.6-147

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	10/14/2019	Sampling Date:	10/14/2019
Reported:	10/18/2019	Sampling Type:	Soil
Project Name:	NORTH EAST DRINKARD SATELLITE 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: SOUTH SP - 4' (H903485-14)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>720</b>	16.0	10/17/2019	ND	416	104	400	3.92	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	10/14/2019	Sampling Date:	10/14/2019
Reported:	10/18/2019	Sampling Type:	Soil
Project Name:	NORTH EAST DRINKARD SATELLITE 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: SOUTH SP - 5' (H903485-15)**

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	10/16/2019	ND	2.19	110	2.00	11.1	
Toluene*	<0.050	0.050	10/16/2019	ND	2.29	114	2.00	11.4	
Ethylbenzene*	<0.050	0.050	10/16/2019	ND	2.22	111	2.00	10.1	
Total Xylenes*	<0.150	0.150	10/16/2019	ND	6.80	113	6.00	11.1	
Total BTEX	<0.300	0.300	10/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	688	16.0	10/17/2019	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	10/16/2019	ND	202	101	200	0.0346	
DRO >C10-C28*	<10.0	10.0	10/16/2019	ND	185	92.7	200	2.66	
EXT DRO >C28-C36	<10.0	10.0	10/16/2019	ND					

Surrogate: 1-Chlorooctane 91.3 % 41-142

Surrogate: 1-Chlorooctadecane 94.5 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	10/14/2019	Sampling Date:	10/14/2019
Reported:	10/18/2019	Sampling Type:	Soil
Project Name:	NORTH EAST DRINKARD SATELLITE 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: WEST SP - 1' (H903485-16)**

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	10/16/2019	ND	2.19	110	2.00	11.1	
Toluene*	<0.050	0.050	10/16/2019	ND	2.29	114	2.00	11.4	
Ethylbenzene*	<0.050	0.050	10/16/2019	ND	2.22	111	2.00	10.1	
Total Xylenes*	<0.150	0.150	10/16/2019	ND	6.80	113	6.00	11.1	
Total BTEX	<0.300	0.300	10/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>16.0</b>	16.0	10/17/2019	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	10/16/2019	ND	202	101	200	0.0346	
DRO >C10-C28*	<10.0	10.0	10/16/2019	ND	185	92.7	200	2.66	
EXT DRO >C28-C36	<10.0	10.0	10/16/2019	ND					

Surrogate: 1-Chlorooctane 92.6 % 41-142

Surrogate: 1-Chlorooctadecane 94.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	10/14/2019	Sampling Date:	10/14/2019
Reported:	10/18/2019	Sampling Type:	Soil
Project Name:	NORTH EAST DRINKARD SATELLITE 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: WEST SP - 2' (H903485-17)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/17/2019	ND	416	104	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	10/14/2019	Sampling Date:	10/14/2019
Reported:	10/18/2019	Sampling Type:	Soil
Project Name:	NORTH EAST DRINKARD SATELLITE 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: WEST SP - 3' (H903485-18)**

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	10/16/2019	ND	2.19	110	2.00	11.1		
Toluene*	<0.050	0.050	10/16/2019	ND	2.29	114	2.00	11.4		
Ethylbenzene*	<0.050	0.050	10/16/2019	ND	2.22	111	2.00	10.1		
Total Xylenes*	<0.150	0.150	10/16/2019	ND	6.80	113	6.00	11.1		
Total BTEX	<0.300	0.300	10/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.6 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	10/17/2019	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	10/16/2019	ND	202	101	200	0.0346		
DRO >C10-C28*	<10.0	10.0	10/16/2019	ND	185	92.7	200	2.66		
EXT DRO >C28-C36	<10.0	10.0	10/16/2019	ND						

Surrogate: 1-Chlorooctane 88.5 % 41-142

Surrogate: 1-Chlorooctadecane 91.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	10/14/2019	Sampling Date:	10/14/2019
Reported:	10/18/2019	Sampling Type:	Soil
Project Name:	NORTH EAST DRINKARD SATELLITE 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: WEST SP - 4' (H903485-19)**

Chloride, SM4500CI-B	mg/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>32.0</b>	16.0	10/17/2019	ND	416	104	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	10/14/2019	Sampling Date:	10/14/2019
Reported:	10/18/2019	Sampling Type:	Soil
Project Name:	NORTH EAST DRINKARD SATELLITE 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: WEST SP - 5' (H903485-20)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/17/2019	ND	1.65	82.5	2.00	4.24	
Toluene*	<0.050	0.050	10/17/2019	ND	1.69	84.7	2.00	2.07	
Ethylbenzene*	<0.050	0.050	10/17/2019	ND	1.65	82.7	2.00	3.95	
Total Xylenes*	<0.150	0.150	10/17/2019	ND	4.98	82.9	6.00	3.25	
Total BTEX	<0.300	0.300	10/17/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/17/2019	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	10/16/2019	ND	202	101	200	0.0346	
DRO >C10-C28*	<10.0	10.0	10/16/2019	ND	185	92.7	200	2.66	
EXT DRO >C28-C36	<10.0	10.0	10/16/2019	ND					

Surrogate: 1-Chlorooctane 89.0 % 41-142

Surrogate: 1-Chlorooctadecane 91.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	10/14/2019	Sampling Date:	10/14/2019
Reported:	10/18/2019	Sampling Type:	Soil
Project Name:	NORTH EAST DRINKARD SATELLITE 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: CENTER SP - 1' (H903485-21)**

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/17/2019	ND	1.59	79.3	2.00	0.819	
Toluene*	<0.050	0.050	10/17/2019	ND	1.58	78.8	2.00	1.02	
Ethylbenzene*	<0.050	0.050	10/17/2019	ND	1.61	80.3	2.00	0.941	
Total Xylenes*	<0.150	0.150	10/17/2019	ND	4.82	80.4	6.00	0.635	
Total BTEX	<0.300	0.300	10/17/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/17/2019	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	10/16/2019	ND	202	101	200	0.0346	
DRO >C10-C28*	<10.0	10.0	10/16/2019	ND	185	92.7	200	2.66	
EXT DRO >C28-C36	<10.0	10.0	10/16/2019	ND					

Surrogate: 1-Chlorooctane 89.1 % 41-142

Surrogate: 1-Chlorooctadecane 92.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	10/14/2019	Sampling Date:	10/14/2019
Reported:	10/18/2019	Sampling Type:	Soil
Project Name:	NORTH EAST DRINKARD SATELLITE 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: CENTER SP - 2' (H903485-22)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>16.0</b>	16.0	10/17/2019	ND	416	104	400	3.92	

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Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
\*\* Samples not received at proper temperature of 6°C or below.
\*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

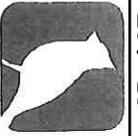
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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



# CARDINAL Laboratories

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

### BILL TO

### ANALYSIS REQUEST

Company Name: Apache Corp P.O. #: \_\_\_\_\_  
 Project Manager: \_\_\_\_\_ Company: Apache  
 Address: \_\_\_\_\_ Attn: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_  
 Project #: \_\_\_\_\_ Project Owner: \_\_\_\_\_  
 Project Name: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Project Location: North East Drinkard Satellite 4A Phone #: \_\_\_\_\_  
 Sampler Name: \_\_\_\_\_ Fax #: \_\_\_\_\_  
 FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	Chlorides	BTEX	PH
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
H903485	North SP-1'	G				X				6/14/19	9:00	X	X	X
	North SP-2'	G				X				9:02	9:02	X	X	X
	North SP-3'	G				X				9:04	9:04	X	X	X
	North SP-4'	G				X				9:06	9:06	X	X	X
	North SP-5'	G				X				9:10	9:10	X	X	X
	East SP-1'	G				X				9:36	9:36	X	X	X
	East SP-2'	G				X				9:38	9:38	X	X	X
	East SP-3'	G				X				9:41	9:41	X	X	X
	East SP-4'	G				X				9:44	9:44	X	X	X
	East SP-5'	G				X				9:46	9:46	X	X	X

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Relinquished By: \_\_\_\_\_ Date: 10-14-19  
 Relinquished By: \_\_\_\_\_ Time: 14:35  
 Received By: \_\_\_\_\_  
 Received By: \_\_\_\_\_

Delivered By: (Circle One) 0.72 # 97 Sample Condition:  Cool  Intact  
 Sampler - UPS - Bus - Other: Permitted 1.12  Yes  No  Yes  No  
 CHECKED BY: \_\_\_\_\_ (Initials) TP  
 REMARKS: K Montan ez @ Hungry - Hor se . Com  
Larry. Baker @ Apache Corp. Com







## Analytical Report

### Report Summary

Client: Apache Corp.

Samples Received: 11/7/2019

Job Number: 19054-0003

Work Order: P911021

Project Name/Location: Satellite 4A

## Draft

Report Reviewed By:

\_\_\_\_\_  
Walter Hinchman, Laboratory Director

Date:

11/7/19



Envirotech Inc. certifies the test results meet all requirements of TNi unless footnoted otherwise.  
 Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.  
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 Envirotech, Inc, holds the Utah TNi certification NM009792018-1 for the data reported.  
 Envirotech, Inc, holds the Texas TNi certification T104704557-19-2 for the data reported.



Apache Corp. PO Box 1058 Hobbs NM, 88240	Project Name: Satellite 4A Project Number: 19054-0003 Project Manager: Traci Jennings	<b>Reported:</b> 11/07/19 16:46
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### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
South Sample Point 6'	P911021-01A	Soil	11/04/19	11/07/19	Glass Jar, 4 oz.

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Apache Corp. PO Box 1058 Hobbs NM, 88240	Project Name: Satellite 4A Project Number: 19054-0003 Project Manager: Traci Jennings	<b>Reported:</b> 11/07/19 16:46
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**South Sample Point 6'  
P911021-01 (Solid)**

Analyte	Result	Reporting							
		Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

**Volatile Organics by EPA 8021**

Benzene	ND	0.0250	mg/kg	1	1945032	11/07/19	11/07/19	EPA 8021B	
Toluene	ND	0.0250	mg/kg	1	1945032	11/07/19	11/07/19	EPA 8021B	
Ethylbenzene	ND	0.0250	mg/kg	1	1945032	11/07/19	11/07/19	EPA 8021B	
p,m-Xylene	ND	0.0500	mg/kg	1	1945032	11/07/19	11/07/19	EPA 8021B	
o-Xylene	ND	0.0250	mg/kg	1	1945032	11/07/19	11/07/19	EPA 8021B	
Total Xylenes	ND	0.0250	mg/kg	1	1945032	11/07/19	11/07/19	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		107 %		50-150	1945032	11/07/19	11/07/19	EPA 8021B	

**Nonhalogenated Organics by 8015 - DRO/ORO**

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1945033	11/07/19	11/07/19	EPA 8015D	
Oil Range Organics (C28-C40)	ND	50.0	mg/kg	1	1945033	11/07/19	11/07/19	EPA 8015D	
<i>Surrogate: n-Nonane</i>		104 %		50-200	1945033	11/07/19	11/07/19	EPA 8015D	

**Nonhalogenated Organics by 8015 - GRO**

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1945032	11/07/19	11/07/19	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		97.3 %		50-150	1945032	11/07/19	11/07/19	EPA 8015D	

**Anions by 300.0/9056A**

Chloride	<b>309</b>	20.0	mg/kg	1	1945022	11/07/19	11/07/19	EPA 300.0/9056A	
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Apache Corp.	Project Name:	Satellite 4A	<b>Reported:</b> 11/07/19 16:46
PO Box 1058	Project Number:	19054-0003	
Hobbs NM, 88240	Project Manager:	Traci Jennings	

### Volatile Organics by EPA 8021 - Quality Control

#### Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 1945032 - Purge and Trap EPA 5030A

##### Blank (1945032-BLK1)

Prepared: 11/07/19 0 Analyzed: 11/07/19 1

Benzene	ND	0.0250	mg/kg							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
p,m-Xylene	ND	0.0500	"							
o-Xylene	ND	0.0250	"							
Total Xylenes	ND	0.0250	"							
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	8.48		"	8.00		106	50-150			

##### LCS (1945032-BS1)

Prepared: 11/07/19 0 Analyzed: 11/07/19 1

Benzene	4.62	0.0250	mg/kg	5.00		92.3	70-130			
Toluene	4.58	0.0250	"	5.00		91.6	70-130			
Ethylbenzene	4.56	0.0250	"	5.00		91.1	70-130			
p,m-Xylene	9.11	0.0500	"	10.0		91.1	70-130			
o-Xylene	4.55	0.0250	"	5.00		91.0	70-130			
Total Xylenes	13.7	0.0250	"	15.0		91.0	70-130			
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	8.54		"	8.00		107	50-150			

##### Matrix Spike (1945032-MS1)

Source: P911021-01

Prepared: 11/07/19 0 Analyzed: 11/07/19 1

Benzene	4.61	0.0250	mg/kg	5.00	ND	92.1	54.3-133			
Toluene	4.57	0.0250	"	5.00	ND	91.3	61.4-130			
Ethylbenzene	4.55	0.0250	"	5.00	ND	91.0	61.4-133			
p,m-Xylene	9.09	0.0500	"	10.0	ND	90.9	63.3-131			
o-Xylene	4.54	0.0250	"	5.00	ND	90.8	63.3-131			
Total Xylenes	13.6	0.0250	"	15.0	ND	90.8	63.3-131			
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	8.42		"	8.00		105	50-150			

##### Matrix Spike Dup (1945032-MSD1)

Source: P911021-01

Prepared: 11/07/19 0 Analyzed: 11/07/19 1

Benzene	4.51	0.0250	mg/kg	5.00	ND	90.2	54.3-133	2.15	20	
Toluene	4.46	0.0250	"	5.00	ND	89.3	61.4-130	2.28	20	
Ethylbenzene	4.44	0.0250	"	5.00	ND	88.8	61.4-133	2.36	20	
p,m-Xylene	8.88	0.0500	"	10.0	ND	88.8	63.3-131	2.33	20	
o-Xylene	4.44	0.0250	"	5.00	ND	88.8	63.3-131	2.19	20	
Total Xylenes	13.3	0.0250	"	15.0	ND	88.8	63.3-131	2.28	20	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	8.51		"	8.00		106	50-150			

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Apache Corp. PO Box 1058 Hobbs NM, 88240	Project Name: Satellite 4A Project Number: 19054-0003 Project Manager: Traci Jennings	Reported: 11/07/19 16:46
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**Nonhalogenated Organics by 8015 - GRO - Quality Control**

**Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1945032 - Purge and Trap EPA 5030A**

**Blank (1945032-BLK1)**

Prepared: 11/07/19 0 Analyzed: 11/07/19 1

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.66		"	8.00		95.8	50-150			

**LCS (1945032-BS2)**

Prepared: 11/07/19 0 Analyzed: 11/07/19 1

Gasoline Range Organics (C6-C10)	56.9	20.0	mg/kg	50.0		114	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.71		"	8.00		96.4	50-150			

**Matrix Spike (1945032-MS2)**

Source: P911021-01

Prepared: 11/07/19 0 Analyzed: 11/07/19 1

Gasoline Range Organics (C6-C10)	57.6	20.0	mg/kg	50.0	ND	115	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.74		"	8.00		96.8	50-150			

**Matrix Spike Dup (1945032-MSD2)**

Source: P911021-01

Prepared: 11/07/19 0 Analyzed: 11/07/19 1

Gasoline Range Organics (C6-C10)	56.6	20.0	mg/kg	50.0	ND	113	70-130	1.78	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.75		"	8.00		96.9	50-150			

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Apache Corp. PO Box 1058 Hobbs NM, 88240	Project Name: Satellite 4A Project Number: 19054-0003 Project Manager: Traci Jennings	<b>Reported:</b> 11/07/19 16:46
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**Anions by 300.0/9056A - Quality Control**

**Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1945022 - Anion Extraction EPA 300.0/9056A**

**Blank (1945022-BLK1)**

Prepared: 11/06/19 0 Analyzed: 11/06/19 1

Chloride	ND	20.0	mg/kg							
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**LCS (1945022-BS1)**

Prepared: 11/06/19 0 Analyzed: 11/06/19 1

Chloride	252	20.0	mg/kg	250		101	90-110			
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**Matrix Spike (1945022-MS1)**

Source: P911013-01

Prepared: 11/06/19 0 Analyzed: 11/06/19 1

Chloride	990	40.0	mg/kg	250	717	109	80-120			
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**Matrix Spike Dup (1945022-MSD1)**

Source: P911013-01

Prepared: 11/06/19 0 Analyzed: 11/06/19 1

Chloride	946	40.0	mg/kg	250	717	91.8	80-120	4.51	20	
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QC Summary Report

Comment:

Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

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Apache Corp.	Project Name:	Satellite 4A	
PO Box 1058	Project Number:	19054-0003	<b>Reported:</b>
Hobbs NM, 88240	Project Manager:	Traci Jennings	11/07/19 16:46

**Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

RPD Relative Percent Difference

\*\* Methods marked with \*\* are non-accredited methods.

Soil data is reported on an "as received" weight basis, unless reported otherwise.

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B.11 to Hungry - Horse

Project Information

Chain of Custody

Page 1 of 1

Email: tjennings@hungry-horse.com

Client: Apache Corp  
 Project: SHELLITE 4A  
 Project Manager: Traci Jennings  
 Address: Ennise  
 City, State, Zip: Ennise MN 55231  
 Phone:  
 Email:

Report Attention  
 Report due by: Larry Baker  
 Attention:  
 Address:  
 City, State, Zip  
 Phone:  
 Email: Larry.Baker@Apache Corp Com

Lab Use Only  
 Lab WO# P911021 Job Number 19054-0003  
 TAT 1D  3D  
 EPA Program RCRA CWA SDWA

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	Analysis and Method						State				Remarks
						DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	NM	CO	UT	AZ	
8:45	11/4/19	S	1	South Sample Point 6'	1	X	X	X	X	X						

Additional Instructions:

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: \_\_\_\_\_

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 5 °C on subsequent days.

Relinquished by: (Signature) <u>Larry Baker</u>	Date <u>11/5/19</u>	Time <u>7:00</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>11/5/19</u>	Time <u>1055</u>	Lab Use Only Received on ice: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Relinquished by: (Signature) <u>FedEx</u>	Date <u>11/7/19</u>	Time <u>10:00</u>	Received by: (Signature) <u>Rainia Lopez</u>	Date <u>11/7/19</u>	Time <u>10:00</u>	T1 _____ T2 _____ T3 _____ AVG Temp °C <u>4</u>

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other \_\_\_\_\_ Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.



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Ph (505) 632-1881 Fx (505) 632-1855

envirotech-inc.com  
 labadmin@envirotech-inc.com



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

---

June 22, 2021

JEFFREY BROOM

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU 4A

Enclosed are the results of analyses for samples received by the laboratory on 06/18/21 8:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	06/18/2021	Sampling Date:	06/17/2021
Reported:	06/22/2021	Sampling Type:	Soil
Project Name:	NEDU 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NEDU 4A		

**Sample ID: B 1 @ 6' (H211569-01)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/18/2021	ND	2.07	104	2.00	2.02	
Toluene*	<0.050	0.050	06/18/2021	ND	1.96	98.1	2.00	2.55	
Ethylbenzene*	<0.050	0.050	06/18/2021	ND	1.91	95.4	2.00	1.98	
Total Xylenes*	<0.150	0.150	06/18/2021	ND	5.80	96.7	6.00	2.12	
Total BTEX	<0.300	0.300	06/18/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/18/2021	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	06/21/2021	ND	212	106	200	2.61	
DRO >C10-C28*	<10.0	10.0	06/21/2021	ND	228	114	200	2.10	
EXT DRO >C28-C36	<10.0	10.0	06/21/2021	ND					

Surrogate: 1-Chlorooctane 82.8 % 44.3-133

Surrogate: 1-Chlorooctadecane 88.0 % 38.9-142

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	06/18/2021	Sampling Date:	06/17/2021
Reported:	06/22/2021	Sampling Type:	Soil
Project Name:	NEDU 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NEDU 4A		

**Sample ID: SW (H211569-02)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/18/2021	ND	2.07	104	2.00	2.02	
Toluene*	<0.050	0.050	06/18/2021	ND	1.96	98.1	2.00	2.55	
Ethylbenzene*	<0.050	0.050	06/18/2021	ND	1.91	95.4	2.00	1.98	
Total Xylenes*	<0.150	0.150	06/18/2021	ND	5.80	96.7	6.00	2.12	
Total BTEX	<0.300	0.300	06/18/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	06/18/2021	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	06/18/2021	ND	212	106	200	2.61	
DRO >C10-C28*	<10.0	10.0	06/18/2021	ND	228	114	200	2.10	
EXT DRO >C28-C36	<10.0	10.0	06/18/2021	ND					

Surrogate: 1-Chlorooctane 84.2 % 44.3-133

Surrogate: 1-Chlorooctadecane 83.9 % 38.9-142

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	06/18/2021	Sampling Date:	06/17/2021
Reported:	06/22/2021	Sampling Type:	Soil
Project Name:	NEDU 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NEDU 4A		

**Sample ID: NW (H211569-03)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/18/2021	ND	2.07	104	2.00	2.02	
Toluene*	<0.050	0.050	06/18/2021	ND	1.96	98.1	2.00	2.55	
Ethylbenzene*	<0.050	0.050	06/18/2021	ND	1.91	95.4	2.00	1.98	
Total Xylenes*	<0.150	0.150	06/18/2021	ND	5.80	96.7	6.00	2.12	
Total BTEX	<0.300	0.300	06/18/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	06/18/2021	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	06/18/2021	ND	212	106	200	2.61	
DRO >C10-C28*	<10.0	10.0	06/18/2021	ND	228	114	200	2.10	
EXT DRO >C28-C36	<10.0	10.0	06/18/2021	ND					

Surrogate: 1-Chlorooctane 79.9 % 44.3-133

Surrogate: 1-Chlorooctadecane 79.8 % 38.9-142

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	06/18/2021	Sampling Date:	06/17/2021
Reported:	06/22/2021	Sampling Type:	Soil
Project Name:	NEDU 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NEDU 4A		

**Sample ID: EW (H211569-04)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/18/2021	ND	2.07	104	2.00	2.02	
Toluene*	<0.050	0.050	06/18/2021	ND	1.96	98.1	2.00	2.55	
Ethylbenzene*	<0.050	0.050	06/18/2021	ND	1.91	95.4	2.00	1.98	
Total Xylenes*	<0.150	0.150	06/18/2021	ND	5.80	96.7	6.00	2.12	
Total BTEX	<0.300	0.300	06/18/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	06/18/2021	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/18/2021	ND	212	106	200	2.61	
DRO >C10-C28*	<10.0	10.0	06/18/2021	ND	228	114	200	2.10	
EXT DRO >C28-C36	<10.0	10.0	06/18/2021	ND					

Surrogate: 1-Chlorooctane 84.2 % 44.3-133

Surrogate: 1-Chlorooctadecane 84.6 % 38.9-142

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	06/18/2021	Sampling Date:	06/17/2021
Reported:	06/22/2021	Sampling Type:	Soil
Project Name:	NEDU 4A	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NEDU 4A		

**Sample ID: WW (H211569-05)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/18/2021	ND	2.07	104	2.00	2.02	
Toluene*	<0.050	0.050	06/18/2021	ND	1.96	98.1	2.00	2.55	
Ethylbenzene*	<0.050	0.050	06/18/2021	ND	1.91	95.4	2.00	1.98	
Total Xylenes*	<0.150	0.150	06/18/2021	ND	5.80	96.7	6.00	2.12	
Total BTEX	<0.300	0.300	06/18/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/18/2021	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/18/2021	ND	212	106	200	2.61	
DRO >C10-C28*	<10.0	10.0	06/18/2021	ND	228	114	200	2.10	
EXT DRO >C28-C36	<10.0	10.0	06/18/2021	ND					

Surrogate: 1-Chlorooctane 80.4 % 44.3-133

Surrogate: 1-Chlorooctadecane 81.3 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Notes and Definitions**

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

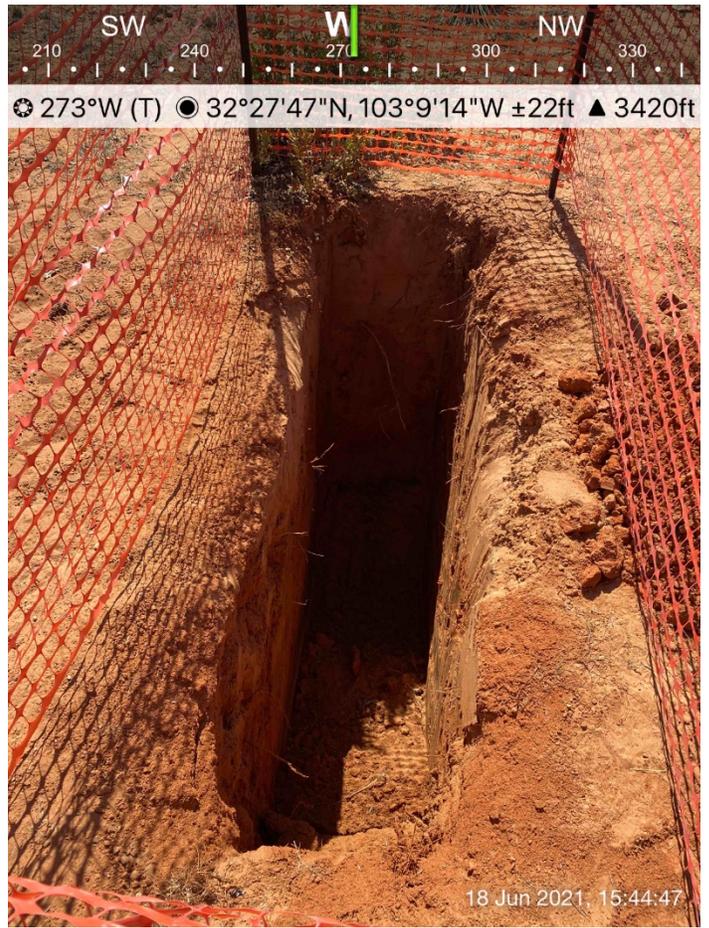
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Celey D. Keene, Lab Director/Quality Manager





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**District IV**  
 1220 S. St Francis Dr., Santa Fe, NM 87505  
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**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS  
 Action 38943

**CONDITIONS**

Operator: APACHE CORPORATION 303 Veterans Airpark Ln Midland, TX 79705	OGRID: 873
	Action Number: 38943
	Action Type: [C-141] Release Corrective Action (C-141)

**CONDITIONS**

Created By	Condition	Condition Date
bhall	None	2/10/2023