



303 Veterans Airpark Lane Midland, TX 79705

Closure Report

September 23, 2020

Re: Northeast Drinkard Unit Satellite 4A Emulsion Line
Case # NRM1927750734 (1RP-5732)

On 9/27/2019 a release occurred due to an 8 inch emulsion line failed resulting in the loss of fluid. The release (GPS: 32.4668, -103.1534) is located north of Eunice, New Mexico in unit letter E section 22 township 21S range 37E. A groundwater survey was conducted utilizing NMOSE and USGS wells of records. The nearest wells suggest that groundwater beneath the release is 35 feet below ground surface.

The release was excavated to various depths ranging from 1 foot to 17.5 feet. Beginning on 6/4/2020 5 point bottom and wall composite 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 facility. Once laboratory results confirmed the entire excavation was below table one standards for releases less than or equal to 50 feet the excavation was backfilled with clean imported caliche to a depth of 2 foot at the request of the surface landowner. The remaining two feet was backfilled with clean top soil from the surrounding area and contoured. The disturbed area will be reseeded in accordance with the surface landowner's guidelines.

Apache Corporation has completed remediation and respectfully request that the event be closed.

Enclosed: C-141, Groundwater Data, Sample Diagram, Sample Data, Laboratory Results, Photos, and Variance Request.

Submitted by;

Bruce Baker

Environmental Technician

larry.baker@apachecorp.com

Cell# 432-631-6982

Off# 432-818-1000

Incident ID	NRM1927750734
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>35</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 not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

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

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

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

Incident ID	NRM1927750734
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: 9/23/2020
email: larry.baker@apachecorp.com Telephone: 432-631-6982

OCD Only

Received by: Cristina Eads Date: 09/23/2020

Incident ID	NRM1927750734
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: 9/23/2020

email: larry.baker@apachecorp.com

Telephone: 432-631-6982

OCD Only

Received by: Cristina Eads

Date: 09/23/2020

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: Cristina Eads

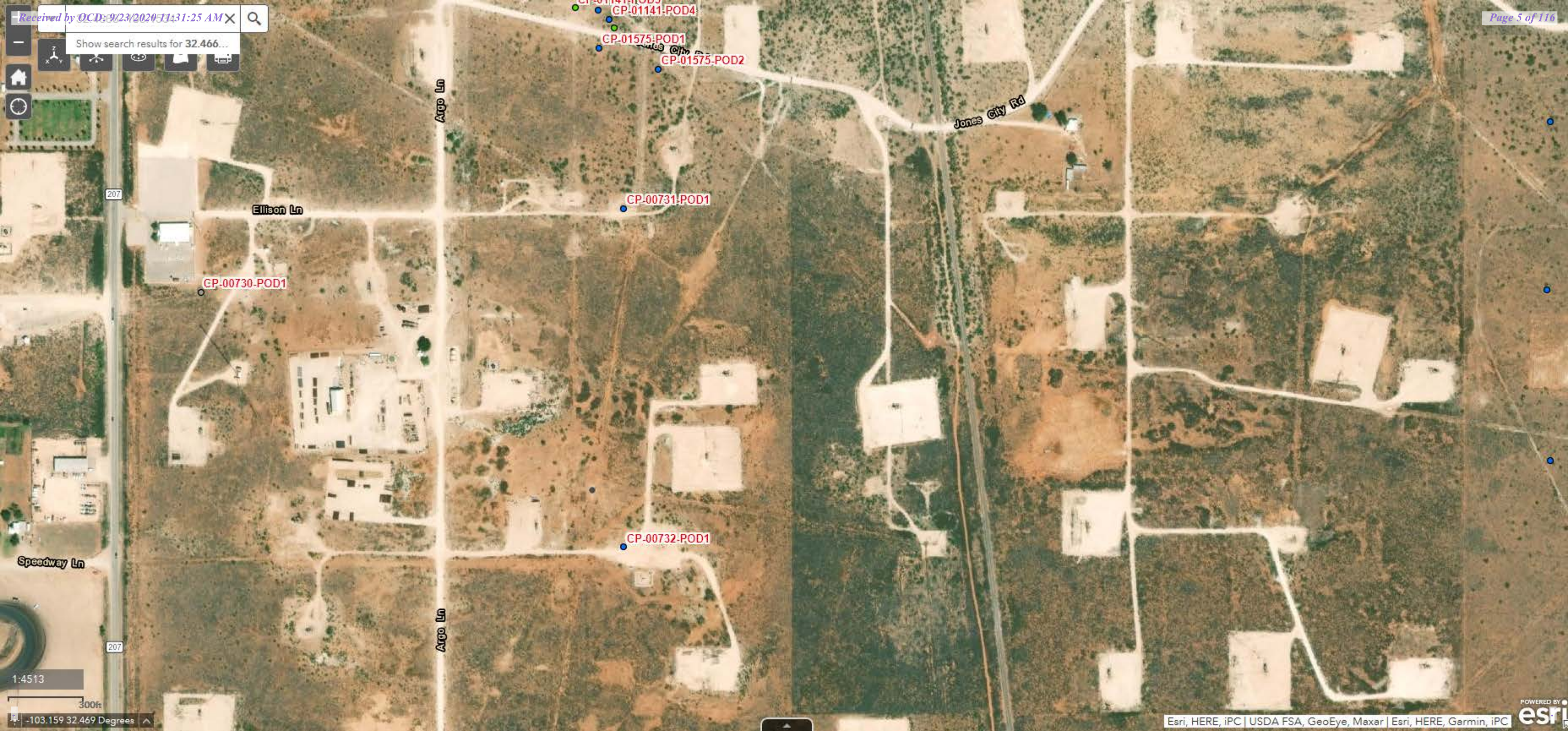
Date: 11/06/2020

Printed Name: Cristina Eads

Title: Environmental Specialist

Show search results for 32.466...


Navigation icons: Home, Back, Forward, Full Screen, Print, Measure, etc.





New Mexico Office of the State Engineer

Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)						(NAD83 UTM in meters)		
		Q64	Q16	Q4	Sec	Tws	Rng	X	Y	
	CP 01575 POD2	2	2	1	22	21S	37E	673615	3594181	
<hr/>										
Driller License:	1456	Driller Company:				WHITE DRILLING COMPANY				
Driller Name:	WHITE, JOHN W									
Drill Start Date:	12/15/2015	Drill Finish Date:				12/16/2015		Plug Date:		
Log File Date:	12/30/2015	PCW Rcv Date:							Source:	Shallow
Pump Type:		Pipe Discharge Size:							Estimated Yield:	
Casing Size:	2.00	Depth Well:				35 feet		Depth Water:		35 feet
<hr/>										
Water Bearing Stratifications:					Top	Bottom	Description			
					32	33	Sandstone/Gravel/Conglomerate			
					33	35	Shale/Mudstone/Siltstone			
<hr/>										
Casing Perforations:					Top	Bottom				
					25	35				
<hr/>										

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.


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POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)						(NAD83 UTM in meters)	
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	CP 01575 POD1	1	2	1	22	21S	37E	673544	3594204 
Driller License:	1456	Driller Company:				WHITE DRILLING COMPANY			
Driller Name:	WHITE, JOHN W								
Drill Start Date:	12/15/2015	Drill Finish Date:				12/16/2015		Plug Date:	
Log File Date:	12/30/2015	PCW Rcv Date:						Source:	Shallow
Pump Type:		Pipe Discharge Size:						Estimated Yield:	
Casing Size:	2.00	Depth Well:				40 feet		Depth Water:	35 feet
Water Bearing Stratifications:					Top	Bottom	Description		
					23	38	Sandstone/Gravel/Conglomerate		
					38	40	Shale/Mudstone/Siltstone		
Casing Perforations:					Top	Bottom			
					30	40			

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.

9/22/20 12:47 PM

POINT OF DIVERSION SUMMARY

Radius

Buffer Size (miles) : 0.5

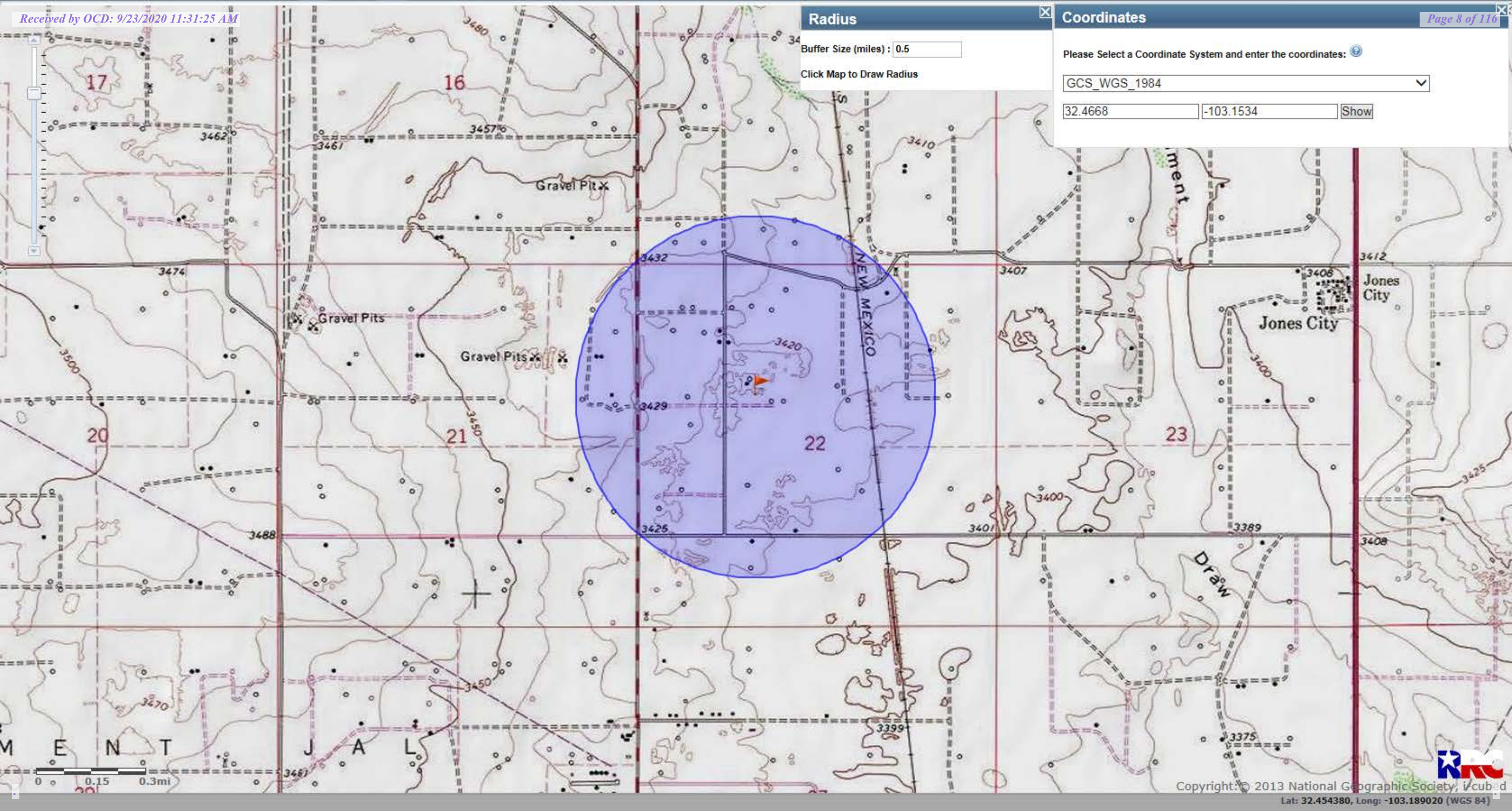
Click Map to Draw Radius

Coordinates

Please Select a Coordinate System and enter the coordinates:

GCS_WGS_1984

32.4668 -103.1534 Show





- B36
- B35
- B34
- B33
- B32
- B31
- B30
- B29
- B28
- B27
- B26
- B25
- B24
- B23
- B22
- B21
- B20
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- B11
- B10
- B9
- B8
- B7
- B6
- B5
- B4
- B3
- B2
- B1

NEDU 4A Release

100 ft

B14	6/4/2020	8'	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466817 -103.153416
B15	6/4/2020	8'	1170	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466840 -103.153405
	6/26/2020	8.5'	16									
B16	6/4/2020	8'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466868 -103.153383
B17	6/4/2020	8'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466837 -103.153452
B18	6/4/2020	8'	128	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466883 -103.153425
B19	6/4/2020	4'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466853 -103.153487
B20	6/4/2020	4'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466902 -103.153454
B21	6/4/2020	4'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466876 -103.153513
B22	6/4/2020	4'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466921 -103.153486
B23	6/4/2020	4'	96	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466885 -103.153560
B24	6/19/2020	1'	176	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466783 -103.153237
B25	6/19/2020	1'	112	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466798 -103.153174
B26	6/19/2020	1'	144	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	13.6	<10.0	32.466813 -103.153127
B27	6/19/2020	1'	112	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466831 -103.153091
B28	6/19/2020	1'	224	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466848 -103.153062
B29	6/19/2020	1'	192	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466877 -103.153031
B30	6/19/2020	1'	160	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466916 -103.152988

B31	6/19/2020	1'	96	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	39.2	<10.0	32.467000 -103.152898
B32	6/19/2020	1'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.467039 -103.152820
B33	6/19/2020	1'	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.467119 -103.152752
B34	6/19/2020	1'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	18.5	<10.0	32.467204 -103.152731
B35	6/19/2020	1'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	241	40	32.467258 -103.152732
	7/28/2020	1.5"		<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	25.1	<10.0	
B36	6/19/2020	1'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	36.4	<10.0	32.467301 -103.152735



Sample ID	Sample Date	Chloride	Benzene	Toulene	Ethybenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO	GPS Coordinates
W1	6/4/2020	320	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466733° -103.1534234
W2	6/16/2020	112	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466711 -103.153400
W3	6/16/2020	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466692 -103.153363
W4	6/16/2020	272	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466693 -103.153327
W5	6/4/2020	592	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466708 -103.153296
W6	6/4/2020	432	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466713 -103.153275
W7	6/16/2020	448	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466758 -103.153269
W8	6/16/2020	144	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466788 -103.153258
W9	6/16/2020	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466817 -103.153255
W10	6/4/2020	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466863 -103.153254
W11	6/4/2020	96	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	16.6	<10.0	32.466879 -103.153288
W12	6/4/2020	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	85	70.4	32.466885 -103.153334
W13	6/4/2020	192	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	35.3	22.3	32.466940 -103.153435
W14	6/4/2020	240	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	13	<10.0	32.466901 -103.153515
W15	6/16/2020	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466852 -103.153528
W16	6/16/2020	<16.0	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466778 -103.153435

W17	6/16/2020	128	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466782 -103.153395
W18	6/19/2020	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466809 -103.153990
W19	6/19/2020	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.467237 -103.152716
W20	6/19/2020	<16.0	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.467326 -103.152735
W21	6/19/2020	<16.0	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	154	16.5	32.467045 -103.152840
	8/24/2020		<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
W22	6/19/2020	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.466845 -103.153120



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

June 10, 2020

BRUCE BAKER

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 06/04/20 16:20.

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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: W 1 (H001521-01)

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	06/05/2020	ND	2.02	101	2.00	2.79	
Toluene*	<0.050	0.050	06/05/2020	ND	2.18	109	2.00	2.24	
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	2.08	104	2.00	2.19	
Total Xylenes*	<0.150	0.150	06/05/2020	ND	6.06	101	6.00	1.18	
Total BTEX	<0.300	0.300	06/05/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	06/08/2020	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	06/05/2020	ND	184	91.8	200	4.92	
DRO >C10-C28*	<10.0	10.0	06/05/2020	ND	187	93.3	200	3.63	
EXT DRO >C28-C36	<10.0	10.0	06/05/2020	ND					

Surrogate: 1-Chlorooctane 98.9 % 44.3-144

Surrogate: 1-Chlorooctadecane 110 % 42.2-156

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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: W 5 (H001521-02)

BTX 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	06/05/2020	ND	1.87	93.3	2.00	2.87	
Toluene*	<0.050	0.050	06/05/2020	ND	1.90	94.8	2.00	2.59	
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	96.2	2.00	2.50	
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.58	93.1	6.00	2.68	
Total BTX	<0.300	0.300	06/05/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	592	16.0	06/08/2020	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	06/05/2020	ND	184	91.8	200	4.92	
DRO >C10-C28*	<10.0	10.0	06/05/2020	ND	187	93.3	200	3.63	
EXT DRO >C28-C36	<10.0	10.0	06/05/2020	ND					

Surrogate: 1-Chlorooctane 103 % 44.3-144

Surrogate: 1-Chlorooctadecane 112 % 42.2-156

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: W 6 (H001521-03)

BTX 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	06/05/2020	ND	1.87	93.3	2.00	2.87	
Toluene*	<0.050	0.050	06/05/2020	ND	1.90	94.8	2.00	2.59	
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	96.2	2.00	2.50	
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.58	93.1	6.00	2.68	
Total BTX	<0.300	0.300	06/05/2020	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	06/08/2020	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	06/05/2020	ND	184	91.8	200	4.92	
DRO >C10-C28*	<10.0	10.0	06/05/2020	ND	187	93.3	200	3.63	
EXT DRO >C28-C36	<10.0	10.0	06/05/2020	ND					

Surrogate: 1-Chlorooctane 102 % 44.3-144

Surrogate: 1-Chlorooctadecane 110 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: W 10 (H001521-04)

BTX 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	06/05/2020	ND	1.87	93.3	2.00	2.87		
Toluene*	<0.050	0.050	06/05/2020	ND	1.90	94.8	2.00	2.59		
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	96.2	2.00	2.50		
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.58	93.1	6.00	2.68		
Total BTX	<0.300	0.300	06/05/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	06/08/2020	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	06/05/2020	ND	184	91.8	200	4.92	
DRO >C10-C28*	<10.0	10.0	06/05/2020	ND	187	93.3	200	3.63	
EXT DRO >C28-C36	<10.0	10.0	06/05/2020	ND					

Surrogate: 1-Chlorooctane 107 % 44.3-144

Surrogate: 1-Chlorooctadecane 109 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: W 11 (H001521-05)

BTX 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	06/05/2020	ND	1.87	93.3	2.00	2.87		
Toluene*	<0.050	0.050	06/05/2020	ND	1.90	94.8	2.00	2.59		
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	96.2	2.00	2.50		
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.58	93.1	6.00	2.68		
Total BTX	<0.300	0.300	06/05/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	06/08/2020	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	06/05/2020	ND	184	91.8	200	4.92	
DRO >C10-C28*	16.6	10.0	06/05/2020	ND	187	93.3	200	3.63	
EXT DRO >C28-C36	<10.0	10.0	06/05/2020	ND					

Surrogate: 1-Chlorooctane 102 % 44.3-144

Surrogate: 1-Chlorooctadecane 110 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: W 12 (H001521-06)

BTX 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	06/05/2020	ND	1.87	93.3	2.00	2.87	
Toluene*	<0.050	0.050	06/05/2020	ND	1.90	94.8	2.00	2.59	
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	96.2	2.00	2.50	
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.58	93.1	6.00	2.68	
Total BTX	<0.300	0.300	06/05/2020	ND					

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

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	06/08/2020	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	06/05/2020	ND	184	91.8	200	4.92	
DRO >C10-C28*	85.0	10.0	06/05/2020	ND	187	93.3	200	3.63	
EXT DRO >C28-C36	70.4	10.0	06/05/2020	ND					

Surrogate: 1-Chlorooctane 110 % 44.3-144

Surrogate: 1-Chlorooctadecane 114 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: W 13 (H001521-07)

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	06/05/2020	ND	1.87	93.3	2.00	2.87		
Toluene*	<0.050	0.050	06/05/2020	ND	1.90	94.8	2.00	2.59		
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	96.2	2.00	2.50		
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.58	93.1	6.00	2.68		
Total BTEX	<0.300	0.300	06/05/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	06/08/2020	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	06/05/2020	ND	184	91.8	200	4.92	
DRO >C10-C28*	35.3	10.0	06/05/2020	ND	187	93.3	200	3.63	
EXT DRO >C28-C36	22.3	10.0	06/05/2020	ND					

Surrogate: 1-Chlorooctane 107 % 44.3-144

Surrogate: 1-Chlorooctadecane 117 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: W 14 (H001521-08)

BTX 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	06/05/2020	ND	1.87	93.3	2.00	2.87	
Toluene*	<0.050	0.050	06/05/2020	ND	1.90	94.8	2.00	2.59	
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	96.2	2.00	2.50	
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.58	93.1	6.00	2.68	
Total BTX	<0.300	0.300	06/05/2020	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	06/08/2020	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	06/05/2020	ND	184	91.8	200	4.92	
DRO >C10-C28*	13.0	10.0	06/05/2020	ND	187	93.3	200	3.63	
EXT DRO >C28-C36	<10.0	10.0	06/05/2020	ND					

Surrogate: 1-Chlorooctane 106 % 44.3-144

Surrogate: 1-Chlorooctadecane 116 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



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

June 10, 2020

BRUCE BAKER

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 06/04/20 16:20.

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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 1 (H001522-01)

BTX 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	06/05/2020	ND	1.87	93.3	2.00	2.87	
Toluene*	<0.050	0.050	06/05/2020	ND	1.90	94.8	2.00	2.59	
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	96.2	2.00	2.50	
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.58	93.1	6.00	2.68	
Total BTX	<0.300	0.300	06/05/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	784	16.0	06/08/2020	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	06/05/2020	ND	184	91.8	200	4.92	
DRO >C10-C28*	<10.0	10.0	06/05/2020	ND	187	93.3	200	3.63	
EXT DRO >C28-C36	<10.0	10.0	06/05/2020	ND					

Surrogate: 1-Chlorooctane 108 % 44.3-144

Surrogate: 1-Chlorooctadecane 118 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 2 (H001522-02)

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	06/05/2020	ND	1.87	93.3	2.00	2.87		
Toluene*	<0.050	0.050	06/05/2020	ND	1.90	94.8	2.00	2.59		
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	96.2	2.00	2.50		
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.58	93.1	6.00	2.68		
Total BTEx	<0.300	0.300	06/05/2020	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	288	16.0	06/08/2020	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	06/05/2020	ND	184	91.8	200	4.92	
DRO >C10-C28*	<10.0	10.0	06/05/2020	ND	187	93.3	200	3.63	
EXT DRO >C28-C36	<10.0	10.0	06/05/2020	ND					

Surrogate: 1-Chlorooctane 105 % 44.3-144

Surrogate: 1-Chlorooctadecane 114 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 3 (H001522-03)

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	06/05/2020	ND	1.87	93.3	2.00	2.87		
Toluene*	<0.050	0.050	06/05/2020	ND	1.90	94.8	2.00	2.59		
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	96.2	2.00	2.50		
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.58	93.1	6.00	2.68		
Total BTEx	<0.300	0.300	06/05/2020	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	06/08/2020	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	06/05/2020	ND	184	91.8	200	4.92	
DRO >C10-C28*	<10.0	10.0	06/05/2020	ND	187	93.3	200	3.63	
EXT DRO >C28-C36	<10.0	10.0	06/05/2020	ND					

Surrogate: 1-Chlorooctane 108 % 44.3-144

Surrogate: 1-Chlorooctadecane 116 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 4 (H001522-04)

BTX 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	06/05/2020	ND	1.87	93.3	2.00	2.87	
Toluene*	<0.050	0.050	06/05/2020	ND	1.90	94.8	2.00	2.59	
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	96.2	2.00	2.50	
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.58	93.1	6.00	2.68	
Total BTX	<0.300	0.300	06/05/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 73.3-129

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	06/08/2020	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	06/05/2020	ND	184	91.8	200	4.92	
DRO >C10-C28*	18.6	10.0	06/05/2020	ND	187	93.3	200	3.63	
EXT DRO >C28-C36	<10.0	10.0	06/05/2020	ND					

Surrogate: 1-Chlorooctane 105 % 44.3-144

Surrogate: 1-Chlorooctadecane 113 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 5 (H001522-05)

BTX 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	06/05/2020	ND	1.87	93.3	2.00	2.87	
Toluene*	<0.050	0.050	06/05/2020	ND	1.90	94.8	2.00	2.59	
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	96.2	2.00	2.50	
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.58	93.1	6.00	2.68	
Total BTX	<0.300	0.300	06/05/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	06/08/2020	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	06/05/2020	ND	184	91.8	200	4.92	
DRO >C10-C28*	<10.0	10.0	06/05/2020	ND	187	93.3	200	3.63	
EXT DRO >C28-C36	<10.0	10.0	06/05/2020	ND					

Surrogate: 1-Chlorooctane 104 % 44.3-144

Surrogate: 1-Chlorooctadecane 112 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 6 (H001522-06)

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	06/05/2020	ND	1.87	93.3	2.00	2.87	
Toluene*	<0.050	0.050	06/05/2020	ND	1.90	94.8	2.00	2.59	
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	96.2	2.00	2.50	
Total Xylenes*	0.192	0.150	06/05/2020	ND	5.58	93.1	6.00	2.68	
Total BTEX	<0.300	0.300	06/05/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	06/08/2020	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<50.0	50.0	06/06/2020	ND	190	94.8	200	7.81	
DRO >C10-C28*	2340	50.0	06/06/2020	ND	174	87.0	200	13.4	QM-07
EXT DRO >C28-C36	152	50.0	06/06/2020	ND					

Surrogate: 1-Chlorooctane 95.9 % 44.3-144

Surrogate: 1-Chlorooctadecane 157 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 7 (H001522-07)

BTX 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	06/05/2020	ND	1.87	93.3	2.00	2.87	
Toluene*	<0.050	0.050	06/05/2020	ND	1.90	94.8	2.00	2.59	
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	96.2	2.00	2.50	
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.58	93.1	6.00	2.68	
Total BTX	<0.300	0.300	06/05/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	06/08/2020	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	06/06/2020	ND	190	94.8	200	7.81	
DRO >C10-C28*	658	10.0	06/06/2020	ND	174	87.0	200	13.4	
EXT DRO >C28-C36	88.3	10.0	06/06/2020	ND					

Surrogate: 1-Chlorooctane 104 % 44.3-144

Surrogate: 1-Chlorooctadecane 134 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 8 (H001522-08)

BTX 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	06/05/2020	ND	1.87	93.3	2.00	2.87		
Toluene*	<0.050	0.050	06/05/2020	ND	1.90	94.8	2.00	2.59		
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	96.2	2.00	2.50		
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.58	93.1	6.00	2.68		
Total BTX	<0.300	0.300	06/05/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 73.3-129

Chloride, SM4500Cl-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	06/08/2020	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	06/06/2020	ND	190	94.8	200	7.81	
DRO >C10-C28*	<10.0	10.0	06/06/2020	ND	174	87.0	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	06/06/2020	ND					

Surrogate: 1-Chlorooctane 104 % 44.3-144

Surrogate: 1-Chlorooctadecane 114 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 9 (H001522-09)

BTX 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	06/05/2020	ND	1.87	93.3	2.00	2.87	
Toluene*	<0.050	0.050	06/05/2020	ND	1.90	94.8	2.00	2.59	
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	96.2	2.00	2.50	
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.58	93.1	6.00	2.68	
Total BTX	<0.300	0.300	06/05/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.3 % 73.3-129

Chloride, SM4500CI-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	06/08/2020	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	06/06/2020	ND	190	94.8	200	7.81	
DRO >C10-C28*	<10.0	10.0	06/06/2020	ND	174	87.0	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	06/06/2020	ND					

Surrogate: 1-Chlorooctane 105 % 44.3-144

Surrogate: 1-Chlorooctadecane 113 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 10 (H001522-10)

BTX 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	06/05/2020	ND	1.87	93.3	2.00	2.87		
Toluene*	<0.050	0.050	06/05/2020	ND	1.90	94.8	2.00	2.59		
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	96.2	2.00	2.50		
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.58	93.1	6.00	2.68		
Total BTX	<0.300	0.300	06/05/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1230	16.0	06/08/2020	ND	416	104	400	0.00	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*	<10.0	10.0	06/06/2020	ND	190	94.8	200	7.81	
DRO >C10-C28*	<10.0	10.0	06/06/2020	ND	174	87.0	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	06/06/2020	ND					

Surrogate: 1-Chlorooctane 98.6 % 44.3-144

Surrogate: 1-Chlorooctadecane 107 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 11 (H001522-11)

BTX 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	06/05/2020	ND	1.87	93.3	2.00	2.87		
Toluene*	<0.050	0.050	06/05/2020	ND	1.90	94.8	2.00	2.59		
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	96.2	2.00	2.50		
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.58	93.1	6.00	2.68		
Total BTX	<0.300	0.300	06/05/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	06/08/2020	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	06/06/2020	ND	190	94.8	200	7.81	
DRO >C10-C28*	<10.0	10.0	06/06/2020	ND	174	87.0	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	06/06/2020	ND					

Surrogate: 1-Chlorooctane 108 % 44.3-144

Surrogate: 1-Chlorooctadecane 117 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 12 (H001522-12)

BTX 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	06/05/2020	ND	1.87	93.3	2.00	2.87	
Toluene*	<0.050	0.050	06/05/2020	ND	1.90	94.8	2.00	2.59	
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	96.2	2.00	2.50	
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.58	93.1	6.00	2.68	
Total BTX	<0.300	0.300	06/05/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	672	16.0	06/08/2020	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	06/06/2020	ND	190	94.8	200	7.81	
DRO >C10-C28*	235	10.0	06/06/2020	ND	174	87.0	200	13.4	
EXT DRO >C28-C36	40.4	10.0	06/06/2020	ND					

Surrogate: 1-Chlorooctane 110 % 44.3-144

Surrogate: 1-Chlorooctadecane 133 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 13 (H001522-13)

BTX 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	06/05/2020	ND	1.87	93.3	2.00	2.87	
Toluene*	<0.050	0.050	06/05/2020	ND	1.90	94.8	2.00	2.59	
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	96.2	2.00	2.50	
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.58	93.1	6.00	2.68	
Total BTX	<0.300	0.300	06/05/2020	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1540	16.0	06/08/2020	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	06/06/2020	ND	190	94.8	200	7.81	
DRO >C10-C28*	105	10.0	06/06/2020	ND	174	87.0	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	06/06/2020	ND					

Surrogate: 1-Chlorooctane 98.3 % 44.3-144

Surrogate: 1-Chlorooctadecane 112 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 14 (H001522-14)

BTX 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	06/05/2020	ND	1.97	98.5	2.00	2.32	
Toluene*	<0.050	0.050	06/05/2020	ND	1.91	95.7	2.00	2.45	
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	95.9	2.00	2.34	
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.55	92.5	6.00	2.48	
Total BTX	<0.300	0.300	06/05/2020	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	06/08/2020	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	06/06/2020	ND	190	94.8	200	7.81	
DRO >C10-C28*	<10.0	10.0	06/06/2020	ND	174	87.0	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	06/06/2020	ND					

Surrogate: 1-Chlorooctane 94.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 104 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 15 (H001522-15)

BTX 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	06/05/2020	ND	1.97	98.5	2.00	2.32	
Toluene*	<0.050	0.050	06/05/2020	ND	1.91	95.7	2.00	2.45	
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	95.9	2.00	2.34	
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.55	92.5	6.00	2.48	
Total BTX	<0.300	0.300	06/05/2020	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1170	16.0	06/08/2020	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	06/06/2020	ND	190	94.8	200	7.81	
DRO >C10-C28*	<10.0	10.0	06/06/2020	ND	174	87.0	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	06/06/2020	ND					

Surrogate: 1-Chlorooctane 104 % 44.3-144

Surrogate: 1-Chlorooctadecane 114 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 16 (H001522-16)

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	06/05/2020	ND	1.97	98.5	2.00	2.32		
Toluene*	<0.050	0.050	06/05/2020	ND	1.91	95.7	2.00	2.45		
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	95.9	2.00	2.34		
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.55	92.5	6.00	2.48		
Total BTEx	<0.300	0.300	06/05/2020	ND						

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

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	06/08/2020	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	06/06/2020	ND	190	94.8	200	7.81	
DRO >C10-C28*	<10.0	10.0	06/06/2020	ND	174	87.0	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	06/06/2020	ND					

Surrogate: 1-Chlorooctane 104 % 44.3-144

Surrogate: 1-Chlorooctadecane 115 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 17 (H001522-17)

BTX 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	06/05/2020	ND	1.97	98.5	2.00	2.32		
Toluene*	<0.050	0.050	06/05/2020	ND	1.91	95.7	2.00	2.45		
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	95.9	2.00	2.34		
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.55	92.5	6.00	2.48		
Total BTX	<0.300	0.300	06/05/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.3 % 73.3-129

Chloride, SM4500Cl-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	06/08/2020	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	06/06/2020	ND	190	94.8	200	7.81	
DRO >C10-C28*	<10.0	10.0	06/06/2020	ND	174	87.0	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	06/06/2020	ND					

Surrogate: 1-Chlorooctane 99.7 % 44.3-144

Surrogate: 1-Chlorooctadecane 108 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 18 (H001522-18)

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	06/05/2020	ND	1.97	98.5	2.00	2.32		
Toluene*	<0.050	0.050	06/05/2020	ND	1.91	95.7	2.00	2.45		
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	95.9	2.00	2.34		
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.55	92.5	6.00	2.48		
Total BTEx	<0.300	0.300	06/05/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	06/08/2020	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	06/06/2020	ND	190	94.8	200	7.81	
DRO >C10-C28*	<10.0	10.0	06/06/2020	ND	174	87.0	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	06/06/2020	ND					

Surrogate: 1-Chlorooctane 85.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 92.8 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 19 (H001522-19)

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	06/05/2020	ND	1.97	98.5	2.00	2.32		
Toluene*	<0.050	0.050	06/05/2020	ND	1.91	95.7	2.00	2.45		
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	95.9	2.00	2.34		
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.55	92.5	6.00	2.48		
Total BTEx	<0.300	0.300	06/05/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.9 % 73.3-129

Chloride, SM4500Cl-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	06/08/2020	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	06/06/2020	ND	190	94.8	200	7.81	
DRO >C10-C28*	<10.0	10.0	06/06/2020	ND	174	87.0	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	06/06/2020	ND					

Surrogate: 1-Chlorooctane 99.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 109 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 20 (H001522-20)

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	06/05/2020	ND	1.97	98.5	2.00	2.32		
Toluene*	<0.050	0.050	06/05/2020	ND	1.91	95.7	2.00	2.45		
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	95.9	2.00	2.34		
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.55	92.5	6.00	2.48		
Total BTEx	<0.300	0.300	06/05/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 73.3-129

Chloride, SM4500Cl-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	06/08/2020	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	06/06/2020	ND	190	94.8	200	7.81	
DRO >C10-C28*	<10.0	10.0	06/06/2020	ND	174	87.0	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	06/06/2020	ND					

Surrogate: 1-Chlorooctane 108 % 44.3-144

Surrogate: 1-Chlorooctadecane 123 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 21 (H001522-21)

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	06/05/2020	ND	1.97	98.5	2.00	2.32		
Toluene*	<0.050	0.050	06/05/2020	ND	1.91	95.7	2.00	2.45		
Ethylbenzene*	<0.050	0.050	06/05/2020	ND	1.92	95.9	2.00	2.34		
Total Xylenes*	<0.150	0.150	06/05/2020	ND	5.55	92.5	6.00	2.48		
Total BTEx	<0.300	0.300	06/05/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 73.3-129

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	06/08/2020	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	06/06/2020	ND	190	94.8	200	7.81	
DRO >C10-C28*	<10.0	10.0	06/06/2020	ND	174	87.0	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	06/06/2020	ND					

Surrogate: 1-Chlorooctane 100 % 44.3-144

Surrogate: 1-Chlorooctadecane 110 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 22 (H001522-22)

BTX 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	06/06/2020	ND	1.99	99.6	2.00	0.880	
Toluene*	<0.050	0.050	06/06/2020	ND	1.94	96.9	2.00	0.901	
Ethylbenzene*	<0.050	0.050	06/06/2020	ND	1.96	98.1	2.00	0.890	
Total Xylenes*	<0.150	0.150	06/06/2020	ND	5.65	94.2	6.00	1.12	
Total BTX	<0.300	0.300	06/06/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 73.3-129

Chloride, SM4500Cl-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	06/08/2020	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	06/06/2020	ND	190	94.8	200	7.81	
DRO >C10-C28*	<10.0	10.0	06/06/2020	ND	174	87.0	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	06/06/2020	ND					

Surrogate: 1-Chlorooctane 93.9 % 44.3-144

Surrogate: 1-Chlorooctadecane 105 % 42.2-156

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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: 06/04/2020
 Reported: 06/10/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 06/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kelly Jacobson

Sample ID: B 23 (H001522-23)

BTX 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	06/06/2020	ND	1.99	99.6	2.00	0.880	
Toluene*	<0.050	0.050	06/06/2020	ND	1.94	96.9	2.00	0.901	
Ethylbenzene*	<0.050	0.050	06/06/2020	ND	1.96	98.1	2.00	0.890	
Total Xylenes*	<0.150	0.150	06/06/2020	ND	5.65	94.2	6.00	1.12	
Total BTX	<0.300	0.300	06/06/2020	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	06/08/2020	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	06/06/2020	ND	190	94.8	200	7.81	
DRO >C10-C28*	<10.0	10.0	06/06/2020	ND	174	87.0	200	13.4	
EXT DRO >C28-C36	<10.0	10.0	06/06/2020	ND					

Surrogate: 1-Chlorooctane 108 % 44.3-144

Surrogate: 1-Chlorooctadecane 125 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

82 jo 92 ebed



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Apex Corporation</u>		P.O. #:		BILL TO				ANALYSIS REQUEST			
Project Manager: <u>Bruce Baker</u>		Company:									
Address:		Attn:									
City:		Address:									
Phone #:		City:									
Project #:		State:									
Project Name: <u>NEOU 4A</u>		Zip:									
Project Location: <u>NEOU 4A</u>		Phone #:									
Sampler Name: <u>J. Brown</u>		Fax #:									

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.			DATE	TIME	CL-	BTEX	EXT. TPH	ANALYSIS REQUEST			
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :									
H001522	B1	C	1										6/4/20	0957	✓	✓	✓				
	B2	C	1											0955	✓	✓	✓				
	B3	C	1											0956	✓	✓	✓				
	B4	C	1											0957	✓	✓	✓				
	B5	C	1											0958	✓	✓	✓				
	B6	C	1											0959	✓	✓	✓				
	B7	C	1											1000	✓	✓	✓				
	B8	C	1											1001	✓	✓	✓				
	B9	C	1											1002	✓	✓	✓				
	B10	C	1											6/4/20 1003	✓	✓	✓				

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Relinquished By: <u>Jeff Brown</u>	Date: <u>6/4/20</u>	Received By: <u>[Signature]</u>	Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #:
Relinquished By:	Date:	Received By:	All Results are emailed. Please provide Email address:
Delivered By: (Circle One)	Observed Temp. °C: <u>5.8°C</u>	Sample Condition: <input checked="" type="checkbox"/> Cool <input type="checkbox"/> Intact	Turnaround Time: <u>Standard</u>
Sampler - UPS - Bus - Other:	Corrected Temp. °C:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Thermometer ID: <u>#407</u>
			Correction Factor: <u>±0.4°C</u>
			Bacteria (only) Sample Condition: <input checked="" type="checkbox"/> Cool <input type="checkbox"/> Intact
			Observed Temp. °C:
			Corrected Temp. °C:

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

82 jo LZ eba



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:		P.O. #:		BILL TO		ANALYSIS REQUEST							
Project Manager:		Company:											
Address:		Attn:											
City:		Address:											
State:		City:											
Zip:		State:											
Phone #:		Phone #:											
Fax #:		Fax #:											
Project #:		Project Owner:											
Project Name:		State:											
Project Location:		Zip:											
Sampler Name:		Phone #:											
FOR LAB USE ONLY		Fax #:											
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX		PRESERV.		SAMPLING	
								GROUNDWATER					
								WASTEWATER					
								SOIL					
								OIL					
								SLUDGE					
								OTHER :					
								ACID/BASE:					
								ICE / COOL					
								OTHER :					
								DATE					
								TIME					
H001522		611		C		1		6/4/20		1004		✓	
H05121		612		C		1		6/4/20		1005		✓	
H05122		613		C		1		6/4/20		1006		✓	
H05123		614		C		1		6/4/20		1007		✓	
H05124		615		C		1		6/4/20		1008		✓	
H05125		616		C		1		6/4/20		1009		✓	
H05126		617		C		1		6/4/20		1010		✓	
H05127		618		C		1		6/4/20		1011		✓	
H05128		619		C		1		6/4/20		1012		✓	
H05129		620		C		1		6/4/20		1013		✓	
H05130		621		C		1		6/4/20		1014		✓	
H05131		622		C		1		6/4/20		1015		✓	
H05132		623		C		1		6/4/20		1016		✓	
H05133		624		C		1		6/4/20		1017		✓	
H05134		625		C		1		6/4/20		1018		✓	
H05135		626		C		1		6/4/20		1019		✓	
H05136		627		C		1		6/4/20		1020		✓	
H05137		628		C		1		6/4/20		1021		✓	
H05138		629		C		1		6/4/20		1022		✓	
H05139		630		C		1		6/4/20		1023		✓	
H05140		631		C		1		6/4/20		1024		✓	
H05141		632		C		1		6/4/20		1025		✓	
H05142		633		C		1		6/4/20		1026		✓	
H05143		634		C		1		6/4/20		1027		✓	
H05144		635		C		1		6/4/20		1028		✓	
H05145		636		C		1		6/4/20		1029		✓	
H05146		637		C		1		6/4/20		1030		✓	
H05147		638		C		1		6/4/20		1031		✓	
H05148		639		C		1		6/4/20		1032		✓	
H05149		640		C		1		6/4/20		1033		✓	
H05150		641		C		1		6/4/20		1034		✓	
H05151		642		C		1		6/4/20		1035		✓	
H05152		643		C		1		6/4/20		1036		✓	
H05153		644		C		1		6/4/20		1037		✓	
H05154		645		C		1		6/4/20		1038		✓	
H05155		646		C		1		6/4/20		1039		✓	
H05156		647		C		1		6/4/20		1040		✓	
H05157		648		C		1		6/4/20		1041		✓	
H05158		649		C		1		6/4/20		1042		✓	
H05159		650		C		1		6/4/20		1043		✓	
H05160		651		C		1		6/4/20		1044		✓	
H05161		652		C		1		6/4/20		1045		✓	
H05162		653		C		1		6/4/20		1046		✓	
H05163		654		C		1		6/4/20		1047		✓	
H05164		655		C		1		6/4/20		1048		✓	
H05165		656		C		1		6/4/20		1049		✓	
H05166		657		C		1		6/4/20		1050		✓	
H05167		658		C		1		6/4/20		1051		✓	
H05168		659		C		1		6/4/20		1052		✓	
H05169		660		C		1		6/4/20		1053		✓	
H05170		661		C		1		6/4/20		1054		✓	
H05171		662		C		1		6/4/20		1055		✓	
H05172		663		C		1		6/4/20		1056		✓	
H05173		664		C		1		6/4/20		1057		✓	
H05174		665		C		1		6/4/20		1058		✓	
H05175		666		C		1		6/4/20		1059		✓	
H05176		667		C		1		6/4/20		1060		✓	
H05177		668		C		1		6/4/20		1061		✓	
H05178		669		C		1		6/4/20		1062		✓	
H05179		670		C		1		6/4/20		1063		✓	
H05180		671		C		1		6/4/20		1064		✓	
H05181		672		C		1		6/4/20		1065		✓	
H05182		673		C		1		6/4/20		1066		✓	
H05183		674		C		1		6/4/20		1067		✓	
H05184		675		C		1		6/4/20		1068		✓	
H05185		676		C		1		6/4/20		1069		✓	
H05186		677		C		1		6/4/20		1070		✓	
H05187		678		C		1		6/4/20		1071		✓	
H05188		679		C		1		6/4/20		1072		✓	
H05189		680		C		1		6/4/20		1073		✓	
H05190		681		C		1		6/4/20		1074		✓	
H05191		682		C		1		6/4/20		1075		✓	
H05192		683		C		1		6/4/20		1076		✓	
H05193		684		C		1		6/4/20		1077		✓	
H05194		685		C		1		6/4/20		1078		✓	
H05195		686		C		1		6/4/20		1079		✓	
H05196		687		C		1		6/4/20		1080		✓	
H05197		688		C		1		6/4/20		1081		✓	
H05198		689		C		1		6/4/20		1082		✓	
H05199		690		C		1		6/4/20		1083		✓	
H05200		691		C		1		6/4/20		1084		✓	
H05201		692		C		1		6/4/20		1085		✓	
H05202		693		C		1		6/4/20		1086		✓	
H05203		694		C		1		6/4/20		1087		✓	
H05204		695		C		1		6/4/20		1088		✓	
H05205		696		C		1		6/4/20		1089		✓	
H05206		697		C		1		6/4/20		1090		✓	
H05207		698		C		1		6/4/20		1091		✓	
H05208		699		C		1		6/4/20		1092		✓	
H05209		700		C		1		6/4/20		1093		✓	
H05210		701		C		1		6/4/20		1094		✓	
H05211		702		C		1		6/4/20		1095		✓	
H05212		703		C		1		6/4/20		1096		✓	
H05213		704		C		1		6/4/20		1097		✓	
H05214		705		C		1		6/4/20		1098		✓	
H05215		706		C		1		6/4/20		1099		✓	
H05216		707		C		1		6/4/20		1100		✓	
H05217		708		C		1		6/4/20		1101		✓	
H05218		709		C		1		6/4/20		1102		✓	
H05219		710		C		1		6/4/20		1103		✓	
H05220		711		C		1		6/4/20		1104		✓	
H05221		712		C		1		6/4/20		1105		✓	
H05222		713		C		1		6/4/20		1106		✓	
H05223		714		C		1		6/4/20		1107		✓	
H05224		715		C		1		6/4/20		1108		✓	
H05225		716		C		1		6/4/20		1109		✓	
H05226		717		C		1		6/4/20		1110		✓	
H05227		718		C		1		6/4/20		1111		✓	
H05228		719		C		1		6/4/20		1112		✓	
H05229		720		C		1		6/4/20		1113		✓	
H05230		721		C		1		6/4/20		1114		✓	
H05231		722		C		1		6/4/20		1115		✓	
H05232		723		C		1		6/4/20		1116		✓	
H05233		724		C		1		6/4/20		1117		✓	
H05234		725		C		1		6/4/20		1118		✓	
H05235		726		C		1		6/4/20					

Page 28 of 28



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Apple Corporation Project Manager: Bruce Baker Address: City: State: Zip: Phone #: Fax #: Project #: Project Owner: Project Name: NEGR 4A Project Location: NEOR 7A Sample Name: J. Brown FOR LAB USE ONLY										BILL TO P.O. #: Company: Attn: Address: City: State: Zip: Phone #: Fax #: ANALYSIS REQUEST																			
Lab I.D. Sample I.D. H001522 21 B01 22 B02 23 B03										(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER : DATE TIME										MATRIX PRESERV. SAMPLING CL- BTEX- EXT. TPH									
Relinquished By: Jeff Brown Relinquished By: Date: 6/4/20 Time: 10:27 Date: 6/4/20 Time: 10:20										Received By: [Signature] Date: 6/4/20 Time: 10:20										REMARKS: Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #: All Results are emailed. Please provide Email address:									
Delivered By: (Circle One) Sampler - UPS - Bus - Other:										Observed Temp. °C 5.86 Corrected Temp. °C 5.86										Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Bacteria (only) Sample Condition <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No Thermometer ID #97 Correction Factor +0.4°C #113									



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

June 22, 2020

BRUCE BAKER

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 06/16/20 15:53.

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/ga/lab_accred_certif.html.

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

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

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

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

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

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

APACHE CORP - HOBBS
2350 W. MARLAND BLVD.
HOBBS NM, 88240

Project: NEDU 4A
Project Number: NONE GIVEN
Project Manager: BRUCE BAKER
Fax To: (575) 393-2432

Reported:
22-Jun-20 11:38

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W 2	H001598-01	Soil	16-Jun-20 09:35	16-Jun-20 15:53
W 3	H001598-02	Soil	16-Jun-20 12:16	16-Jun-20 15:53
W 4	H001598-03	Soil	16-Jun-20 09:37	16-Jun-20 15:53
W 7	H001598-04	Soil	16-Jun-20 11:24	16-Jun-20 15:53
W 8	H001598-05	Soil	16-Jun-20 10:00	16-Jun-20 15:53
W 9	H001598-06	Soil	16-Jun-20 10:01	16-Jun-20 15:53
W 15	H001598-07	Soil	16-Jun-20 10:50	16-Jun-20 15:53
W 16	H001598-08	Soil	16-Jun-20 10:51	16-Jun-20 15:53
W 17	H001598-09	Soil	16-Jun-20 12:16	16-Jun-20 15:53

06/22/20 - Client changed the name of the project via email. This is the revised report and will replace the one sent on 06/18/20.

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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
2350 W. MARLAND BLVD.
HOBBS NM, 88240

Project: NEDU 4A
Project Number: NONE GIVEN
Project Manager: BRUCE BAKER
Fax To: (575) 393-2432

Reported:
22-Jun-20 11:38

W 2**H001598-01 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	112		16.0	mg/kg	4	0061808	GM	18-Jun-20	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0061709	MS	17-Jun-20	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			104 %	73.3-129		0061709	MS	17-Jun-20	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	

Surrogate: 1-Chlorooctane			128 %	44.3-144		0061611	MS	17-Jun-20	8015B	
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Surrogate: 1-Chlorooctadecane			144 %	42.2-156		0061611	MS	17-Jun-20	8015B	
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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
2350 W. MARLAND BLVD.
HOBBS NM, 88240

Project: NEDU 4A
Project Number: NONE GIVEN
Project Manager: BRUCE BAKER
Fax To: (575) 393-2432

Reported:
22-Jun-20 11:38

W 3**H001598-02 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	64.0		16.0	mg/kg	4	0061808	GM	18-Jun-20	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0061709	MS	17-Jun-20	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			106 %	73.3-129		0061709	MS	17-Jun-20	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	

Surrogate: 1-Chlorooctane			127 %	44.3-144		0061611	MS	17-Jun-20	8015B	
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Surrogate: 1-Chlorooctadecane			141 %	42.2-156		0061611	MS	17-Jun-20	8015B	
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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
2350 W. MARLAND BLVD.
HOBBS NM, 88240

Project: NEDU 4A
Project Number: NONE GIVEN
Project Manager: BRUCE BAKER
Fax To: (575) 393-2432

Reported:
22-Jun-20 11:38

W 4**H001598-03 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	272		16.0	mg/kg	4	0061808	GM	18-Jun-20	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0061709	MS	17-Jun-20	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			106 %	73.3-129		0061709	MS	17-Jun-20	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	

Surrogate: 1-Chlorooctane			126 %	44.3-144		0061611	MS	17-Jun-20	8015B	
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Surrogate: 1-Chlorooctadecane			140 %	42.2-156		0061611	MS	17-Jun-20	8015B	
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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
2350 W. MARLAND BLVD.
HOBBS NM, 88240

Project: NEDU 4A
Project Number: NONE GIVEN
Project Manager: BRUCE BAKER
Fax To: (575) 393-2432

Reported:
22-Jun-20 11:38

W 7**H001598-04 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	448		16.0	mg/kg	4	0061808	GM	18-Jun-20	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Toluene*	<0.050	0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	0061709	MS	17-Jun-20	8021B	

Surrogate: 4-Bromofluorobenzene (PID)	105 %	73.3-129	0061709	MS	17-Jun-20	8021B
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B
DRO >C10-C28*	<10.0	10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B

Surrogate: 1-Chlorooctane	131 %	44.3-144	0061611	MS	17-Jun-20	8015B
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Surrogate: 1-Chlorooctadecane	147 %	42.2-156	0061611	MS	17-Jun-20	8015B
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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
2350 W. MARLAND BLVD.
HOBBS NM, 88240

Project: NEDU 4A
Project Number: NONE GIVEN
Project Manager: BRUCE BAKER
Fax To: (575) 393-2432

Reported:
22-Jun-20 11:38

W 8**H001598-05 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	144		16.0	mg/kg	4	0061808	GM	18-Jun-20	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0061709	MS	17-Jun-20	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			106 %	73.3-129		0061709	MS	17-Jun-20	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	

<i>Surrogate: 1-Chlorooctane</i>			122 %	44.3-144		0061611	MS	17-Jun-20	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			136 %	42.2-156		0061611	MS	17-Jun-20	8015B	
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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
2350 W. MARLAND BLVD.
HOBBS NM, 88240

Project: NEDU 4A
Project Number: NONE GIVEN
Project Manager: BRUCE BAKER
Fax To: (575) 393-2432

Reported:
22-Jun-20 11:38

W 9**H001598-06 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	16.0		16.0	mg/kg	4	0061809	GM	18-Jun-20	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0061709	MS	17-Jun-20	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			106 %	73.3-129		0061709	MS	17-Jun-20	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	

Surrogate: 1-Chlorooctane			119 %	44.3-144		0061611	MS	17-Jun-20	8015B	
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Surrogate: 1-Chlorooctadecane			132 %	42.2-156		0061611	MS	17-Jun-20	8015B	
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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
2350 W. MARLAND BLVD.
HOBBS NM, 88240

Project: NEDU 4A
Project Number: NONE GIVEN
Project Manager: BRUCE BAKER
Fax To: (575) 393-2432

Reported:
22-Jun-20 11:38

W 15**H001598-07 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	64.0		16.0	mg/kg	4	0061809	GM	18-Jun-20	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0061709	MS	17-Jun-20	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			106 %	73.3-129		0061709	MS	17-Jun-20	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	

Surrogate: 1-Chlorooctane			125 %	44.3-144		0061611	MS	17-Jun-20	8015B	
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Surrogate: 1-Chlorooctadecane			140 %	42.2-156		0061611	MS	17-Jun-20	8015B	
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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
2350 W. MARLAND BLVD.
HOBBS NM, 88240

Project: NEDU 4A
Project Number: NONE GIVEN
Project Manager: BRUCE BAKER
Fax To: (575) 393-2432

Reported:
22-Jun-20 11:38

W 16**H001598-08 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	<16.0		16.0	mg/kg	4	0061809	GM	18-Jun-20	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0061709	MS	17-Jun-20	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			104 %	73.3-129		0061709	MS	17-Jun-20	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	

Surrogate: 1-Chlorooctane			129 %	44.3-144		0061611	MS	17-Jun-20	8015B	
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Surrogate: 1-Chlorooctadecane			146 %	42.2-156		0061611	MS	17-Jun-20	8015B	
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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
2350 W. MARLAND BLVD.
HOBBS NM, 88240

Project: NEDU 4A
Project Number: NONE GIVEN
Project Manager: BRUCE BAKER
Fax To: (575) 393-2432

Reported:
22-Jun-20 11:38

W 17**H001598-09 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	128		16.0	mg/kg	4	0061809	GM	18-Jun-20	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Toluene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	0061709	MS	17-Jun-20	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	0061709	MS	17-Jun-20	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			106 %	73.3-129		0061709	MS	17-Jun-20	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	0061611	MS	17-Jun-20	8015B	

Surrogate: 1-Chlorooctane			129 %	44.3-144		0061611	MS	17-Jun-20	8015B	
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Surrogate: 1-Chlorooctadecane			144 %	42.2-156		0061611	MS	17-Jun-20	8015B	
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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
2350 W. MARLAND BLVD.
HOBBS NM, 88240

Project: NEDU 4A
Project Number: NONE GIVEN
Project Manager: BRUCE BAKER
Fax To: (575) 393-2432

Reported:
22-Jun-20 11:38

Inorganic Compounds - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch 0061808 - 1:4 DI Water**Blank (0061808-BLK1)**

Prepared & Analyzed: 18-Jun-20

Chloride	ND	16.0	mg/kg						
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LCS (0061808-BS1)

Prepared & Analyzed: 18-Jun-20

Chloride	432	16.0	mg/kg	400	108	80-120			
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LCS Dup (0061808-BSD1)

Prepared & Analyzed: 18-Jun-20

Chloride	432	16.0	mg/kg	400	108	80-120	0.00	20	
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Batch 0061809 - 1:4 DI Water**Blank (0061809-BLK1)**

Prepared & Analyzed: 18-Jun-20

Chloride	ND	16.0	mg/kg						
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LCS (0061809-BS1)

Prepared & Analyzed: 18-Jun-20

Chloride	400	16.0	mg/kg	400	100	80-120			
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LCS Dup (0061809-BSD1)

Prepared & Analyzed: 18-Jun-20

Chloride	416	16.0	mg/kg	400	104	80-120	3.92	20	
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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
2350 W. MARLAND BLVD.
HOBBS NM, 88240

Project: NEDU 4A
Project Number: NONE GIVEN
Project Manager: BRUCE BAKER
Fax To: (575) 393-2432

Reported:
22-Jun-20 11:38

Volatile Organic Compounds by EPA Method 8021 - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 0061709 - Volatiles**Blank (0061709-BLK1)**

Prepared & Analyzed: 17-Jun-20

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0523		mg/kg	0.0500		105	73.3-129			

LCS (0061709-BS1)

Prepared & Analyzed: 17-Jun-20

Benzene	1.93	0.050	mg/kg	2.00		96.7	72.2-131			
Toluene	1.83	0.050	mg/kg	2.00		91.5	71.7-126			
Ethylbenzene	1.82	0.050	mg/kg	2.00		91.1	68.9-126			
Total Xylenes	5.28	0.150	mg/kg	6.00		88.1	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	0.0523		mg/kg	0.0500		105	73.3-129			

LCS Dup (0061709-BSD1)

Prepared & Analyzed: 17-Jun-20

Benzene	2.15	0.050	mg/kg	2.00		107	72.2-131	10.4	14.6	
Toluene	2.00	0.050	mg/kg	2.00		99.9	71.7-126	8.71	17.4	
Ethylbenzene	1.96	0.050	mg/kg	2.00		98.2	68.9-126	7.50	18.9	
Total Xylenes	5.68	0.150	mg/kg	6.00		94.7	71.4-125	7.23	18.5	
Surrogate: 4-Bromofluorobenzene (PID)	0.0523		mg/kg	0.0500		105	73.3-129			

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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
2350 W. MARLAND BLVD.
HOBBS NM, 88240

Project: NEDU 4A
Project Number: NONE GIVEN
Project Manager: BRUCE BAKER
Fax To: (575) 393-2432

Reported:
22-Jun-20 11:38

Petroleum Hydrocarbons by GC FID - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch 0061611 - General Prep - Organics**Blank (0061611-BLK1)**

Prepared: 16-Jun-20 Analyzed: 17-Jun-20

GRO C6-C10	ND	10.0	mg/kg						
DRO >C10-C28	ND	10.0	mg/kg						
EXT DRO >C28-C36	ND	10.0	mg/kg						
Surrogate: 1-Chlorooctane	55.6		mg/kg	50.0		111 44.3-144			
Surrogate: 1-Chlorooctadecane	62.1		mg/kg	50.0		124 42.2-156			

LCS (0061611-BS1)

Prepared: 16-Jun-20 Analyzed: 17-Jun-20

GRO C6-C10	220	10.0	mg/kg	200		110 78.8-127			
DRO >C10-C28	237	10.0	mg/kg	200		118 80-132			
Total TPH C6-C28	457	10.0	mg/kg	400		114 81.3-128			
Surrogate: 1-Chlorooctane	63.3		mg/kg	50.0		127 44.3-144			
Surrogate: 1-Chlorooctadecane	70.8		mg/kg	50.0		142 42.2-156			

LCS Dup (0061611-BSD1)

Prepared: 16-Jun-20 Analyzed: 17-Jun-20

GRO C6-C10	205	10.0	mg/kg	200		103 78.8-127	6.84	15.1	
DRO >C10-C28	230	10.0	mg/kg	200		115 80-132	2.94	17.1	
Total TPH C6-C28	435	10.0	mg/kg	400		109 81.3-128	4.80	15	
Surrogate: 1-Chlorooctane	66.0		mg/kg	50.0		132 44.3-144			
Surrogate: 1-Chlorooctadecane	70.7		mg/kg	50.0		141 42.2-156			

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

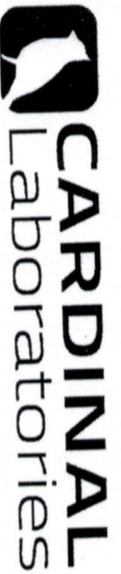
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A handwritten signature in cursive script, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Apache Corporation				P.O. #:				BILL TO				ANALYSIS REQUEST			
Project Manager: Gina Baker				Company:											
Address:				Attn:											
City:				Address:											
State:				City:											
Zip:				State:											
Phone #:				Fax #:											
Project #:				Project Owner:											
Project Name: EBBot 37 LTR NEDU4A *				State:											
Project Location: EBBot 37 LTR NEDU4A				Phone #:											
Sampler Name: J. Brown				Fax #:											

FOR LAB USE ONLY		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME		CL -		BTX		EXT. TPH	
H001598	1 W2	C																						4/16/02	0935		✓						
	2 W3	C																						1/8/16	0537		✓						
	3 W4	C																						1/24	1000		✓						
	4 W7	C																						1/01	1050		✓						
	5 W8	C																						1/51			✓						
	6 W9	C																						4/16/02	1216		✓						
	7 W15	C																															
	8 W16	C																															
	9 W17	C																															

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Relinquished By: [Signature]		Date: 6/16/02		Received By: [Signature]		Date: 6/16/02	
Time: 1553				Time:			
Relinquished By:				Received By:			

REMARKS: * Project name changed as per JLF. 6/22/02. CL

Delivered By: (Circle One)	Observed Temp. °C	Corrected Temp. °C	Sample Condition	CHECKED BY: (Initials)	Turnaround Time:	Standard	Bacteria (only)	Sample Condition
Sampler - UPS - Other:	-0.6°C		Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	K5		<input checked="" type="checkbox"/>	Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	Observed Temp. °C
								Corrected Temp. °C

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

All Results are emailed. Please provide Email address:



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

June 24, 2020

BRUCE BAKER

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 06/19/20 13:54.

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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/19/2020
 Reported: 06/24/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NEDU 4A

Sampling Date: 06/19/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: W 18 (H001635-01)

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	06/22/2020	ND	1.95	97.5	2.00	5.72	
Toluene*	<0.050	0.050	06/22/2020	ND	1.95	97.5	2.00	5.85	
Ethylbenzene*	<0.050	0.050	06/22/2020	ND	1.99	99.5	2.00	5.62	
Total Xylenes*	<0.150	0.150	06/22/2020	ND	5.80	96.6	6.00	5.46	
Total BTEx	<0.300	0.300	06/22/2020	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	06/22/2020	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	06/20/2020	ND	216	108	200	7.38	
DRO >C10-C28*	<10.0	10.0	06/20/2020	ND	220	110	200	6.73	
EXT DRO >C28-C36	<10.0	10.0	06/20/2020	ND					

Surrogate: 1-Chlorooctane 111 % 44.3-144

Surrogate: 1-Chlorooctadecane 122 % 42.2-156

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: 06/19/2020
 Reported: 06/24/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NEDU 4A

Sampling Date: 06/19/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: W 19 (H001635-02)

BTX 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	06/22/2020	ND	1.95	97.5	2.00	5.72	
Toluene*	<0.050	0.050	06/22/2020	ND	1.95	97.5	2.00	5.85	
Ethylbenzene*	<0.050	0.050	06/22/2020	ND	1.99	99.5	2.00	5.62	
Total Xylenes*	<0.150	0.150	06/22/2020	ND	5.80	96.6	6.00	5.46	
Total BTX	<0.300	0.300	06/22/2020	ND					

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

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	06/22/2020	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	06/20/2020	ND	216	108	200	7.38	
DRO >C10-C28*	<10.0	10.0	06/20/2020	ND	220	110	200	6.73	
EXT DRO >C28-C36	<10.0	10.0	06/20/2020	ND					

Surrogate: 1-Chlorooctane 116 % 44.3-144

Surrogate: 1-Chlorooctadecane 127 % 42.2-156

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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: 06/19/2020
 Reported: 06/24/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NEDU 4A

Sampling Date: 06/19/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: W 20 (H001635-03)

BTX 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	06/22/2020	ND	1.95	97.5	2.00	5.72	
Toluene*	<0.050	0.050	06/22/2020	ND	1.95	97.5	2.00	5.85	
Ethylbenzene*	<0.050	0.050	06/22/2020	ND	1.99	99.5	2.00	5.62	
Total Xylenes*	<0.150	0.150	06/22/2020	ND	5.80	96.6	6.00	5.46	
Total BTX	<0.300	0.300	06/22/2020	ND					

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

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	06/22/2020	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	06/20/2020	ND	216	108	200	7.38	
DRO >C10-C28*	<10.0	10.0	06/20/2020	ND	220	110	200	6.73	
EXT DRO >C28-C36	<10.0	10.0	06/20/2020	ND					

Surrogate: 1-Chlorooctane 116 % 44.3-144

Surrogate: 1-Chlorooctadecane 125 % 42.2-156

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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: 06/19/2020
 Reported: 06/24/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NEDU 4A

Sampling Date: 06/19/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: W 21 (H001635-04)

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	06/22/2020	ND	1.95	97.5	2.00	5.72	
Toluene*	<0.050	0.050	06/22/2020	ND	1.95	97.5	2.00	5.85	
Ethylbenzene*	<0.050	0.050	06/22/2020	ND	1.99	99.5	2.00	5.62	
Total Xylenes*	<0.150	0.150	06/22/2020	ND	5.80	96.6	6.00	5.46	
Total BTEx	<0.300	0.300	06/22/2020	ND					

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

Chloride, SM4500Cl-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	06/22/2020	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	06/20/2020	ND	209	104	200	4.46	
DRO >C10-C28*	154	10.0	06/20/2020	ND	238	119	200	0.420	
EXT DRO >C28-C36	16.5	10.0	06/20/2020	ND					

Surrogate: 1-Chlorooctane 129 % 44.3-144

Surrogate: 1-Chlorooctadecane 154 % 42.2-156

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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: 06/19/2020
 Reported: 06/24/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NEDU 4A

Sampling Date: 06/19/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: W 22 (H001635-05)

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	06/22/2020	ND	1.95	97.5	2.00	5.72		
Toluene*	<0.050	0.050	06/22/2020	ND	1.95	97.5	2.00	5.85		
Ethylbenzene*	<0.050	0.050	06/22/2020	ND	1.99	99.5	2.00	5.62		
Total Xylenes*	<0.150	0.150	06/22/2020	ND	5.80	96.6	6.00	5.46		
Total BTEx	<0.300	0.300	06/22/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	06/22/2020	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	06/20/2020	ND	209	104	200	4.46	
DRO >C10-C28*	<10.0	10.0	06/20/2020	ND	238	119	200	0.420	
EXT DRO >C28-C36	<10.0	10.0	06/20/2020	ND					

Surrogate: 1-Chlorooctane 119 % 44.3-144

Surrogate: 1-Chlorooctadecane 134 % 42.2-156

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

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

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
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.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



CARDINAL
Laboratories

Apfel. Cirsium

[illegible]



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

June 24, 2020

BRUCE BAKER

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 06/19/20 13:54.

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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/19/2020
 Reported: 06/24/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NEDU 4A

Sampling Date: 06/19/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: B 24 (H001636-01)

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	06/22/2020	ND	1.95	97.5	2.00	5.72	
Toluene*	<0.050	0.050	06/22/2020	ND	1.95	97.5	2.00	5.85	
Ethylbenzene*	<0.050	0.050	06/22/2020	ND	1.99	99.5	2.00	5.62	
Total Xylenes*	<0.150	0.150	06/22/2020	ND	5.80	96.6	6.00	5.46	
Total BTEx	<0.300	0.300	06/22/2020	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	06/22/2020	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	06/20/2020	ND	209	104	200	4.46	
DRO >C10-C28*	<10.0	10.0	06/20/2020	ND	238	119	200	0.420	
EXT DRO >C28-C36	<10.0	10.0	06/20/2020	ND					

Surrogate: 1-Chlorooctane 113 % 44.3-144

Surrogate: 1-Chlorooctadecane 129 % 42.2-156

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/19/2020
 Reported: 06/24/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NEDU 4A

Sampling Date: 06/19/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: B 25 (H001636-02)

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	06/22/2020	ND	1.95	97.5	2.00	5.72	
Toluene*	<0.050	0.050	06/22/2020	ND	1.95	97.5	2.00	5.85	
Ethylbenzene*	<0.050	0.050	06/22/2020	ND	1.99	99.5	2.00	5.62	
Total Xylenes*	<0.150	0.150	06/22/2020	ND	5.80	96.6	6.00	5.46	
Total BTEX	<0.300	0.300	06/22/2020	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	06/22/2020	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	06/20/2020	ND	209	104	200	4.46	
DRO >C10-C28*	<10.0	10.0	06/20/2020	ND	238	119	200	0.420	
EXT DRO >C28-C36	<10.0	10.0	06/20/2020	ND					

Surrogate: 1-Chlorooctane 117 % 44.3-144

Surrogate: 1-Chlorooctadecane 131 % 42.2-156

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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: 06/19/2020
 Reported: 06/24/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NEDU 4A

Sampling Date: 06/19/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: B 26 (H001636-03)

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	06/22/2020	ND	1.95	97.5	2.00	5.72	
Toluene*	<0.050	0.050	06/22/2020	ND	1.95	97.5	2.00	5.85	
Ethylbenzene*	<0.050	0.050	06/22/2020	ND	1.99	99.5	2.00	5.62	
Total Xylenes*	<0.150	0.150	06/22/2020	ND	5.80	96.6	6.00	5.46	
Total BTEX	<0.300	0.300	06/22/2020	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	06/22/2020	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	06/20/2020	ND	209	104	200	4.46	
DRO >C10-C28*	13.6	10.0	06/20/2020	ND	238	119	200	0.420	
EXT DRO >C28-C36	<10.0	10.0	06/20/2020	ND					

Surrogate: 1-Chlorooctane 123 % 44.3-144

Surrogate: 1-Chlorooctadecane 140 % 42.2-156

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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: 06/19/2020
 Reported: 06/24/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NEDU 4A

Sampling Date: 06/19/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: B 27 (H001636-04)

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	06/22/2020	ND	1.95	97.5	2.00	5.72		
Toluene*	<0.050	0.050	06/22/2020	ND	1.95	97.5	2.00	5.85		
Ethylbenzene*	<0.050	0.050	06/22/2020	ND	1.99	99.5	2.00	5.62		
Total Xylenes*	<0.150	0.150	06/22/2020	ND	5.80	96.6	6.00	5.46		
Total BTEx	<0.300	0.300	06/22/2020	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	06/22/2020	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	06/22/2020	ND	216	108	200	1.38	QR-03
DRO >C10-C28*	<10.0	10.0	06/22/2020	ND	214	107	200	0.714	
EXT DRO >C28-C36	<10.0	10.0	06/22/2020	ND					

Surrogate: 1-Chlorooctane 101 % 44.3-144

Surrogate: 1-Chlorooctadecane 111 % 42.2-156

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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: 06/19/2020
 Reported: 06/24/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NEDU 4A

Sampling Date: 06/19/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: B 28 (H001636-05)

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	06/22/2020	ND	1.95	97.5	2.00	5.72		
Toluene*	<0.050	0.050	06/22/2020	ND	1.95	97.5	2.00	5.85		
Ethylbenzene*	<0.050	0.050	06/22/2020	ND	1.99	99.5	2.00	5.62		
Total Xylenes*	<0.150	0.150	06/22/2020	ND	5.80	96.6	6.00	5.46		
Total BTEx	<0.300	0.300	06/22/2020	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	06/22/2020	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	06/22/2020	ND	216	108	200	1.38	
DRO >C10-C28*	<10.0	10.0	06/22/2020	ND	214	107	200	0.714	
EXT DRO >C28-C36	<10.0	10.0	06/22/2020	ND					

Surrogate: 1-Chlorooctane 97.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 105 % 42.2-156

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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: 06/19/2020
 Reported: 06/24/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NEDU 4A

Sampling Date: 06/19/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: B 29 (H001636-06)

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	06/22/2020	ND	1.95	97.5	2.00	5.72	
Toluene*	<0.050	0.050	06/22/2020	ND	1.95	97.5	2.00	5.85	
Ethylbenzene*	<0.050	0.050	06/22/2020	ND	1.99	99.5	2.00	5.62	
Total Xylenes*	<0.150	0.150	06/22/2020	ND	5.80	96.6	6.00	5.46	
Total BTEx	<0.300	0.300	06/22/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	06/22/2020	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	06/22/2020	ND	216	108	200	1.38	
DRO >C10-C28*	<10.0	10.0	06/22/2020	ND	214	107	200	0.714	
EXT DRO >C28-C36	<10.0	10.0	06/22/2020	ND					

Surrogate: 1-Chlorooctane 112 % 44.3-144

Surrogate: 1-Chlorooctadecane 124 % 42.2-156

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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: 06/19/2020
 Reported: 06/24/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NEDU 4A

Sampling Date: 06/19/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: B 30 (H001636-07)

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	06/22/2020	ND	1.95	97.5	2.00	5.72		
Toluene*	<0.050	0.050	06/22/2020	ND	1.95	97.5	2.00	5.85		
Ethylbenzene*	<0.050	0.050	06/22/2020	ND	1.99	99.5	2.00	5.62		
Total Xylenes*	<0.150	0.150	06/22/2020	ND	5.80	96.6	6.00	5.46		
Total BTEx	<0.300	0.300	06/22/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	06/22/2020	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	06/22/2020	ND	216	108	200	1.38	
DRO >C10-C28*	<10.0	10.0	06/22/2020	ND	214	107	200	0.714	
EXT DRO >C28-C36	<10.0	10.0	06/22/2020	ND					

Surrogate: 1-Chlorooctane 91.3 % 44.3-144

Surrogate: 1-Chlorooctadecane 101 % 42.2-156

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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: 06/19/2020
 Reported: 06/24/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NEDU 4A

Sampling Date: 06/19/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: B 31 (H001636-08)

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	06/22/2020	ND	1.95	97.5	2.00	5.72		
Toluene*	<0.050	0.050	06/22/2020	ND	1.95	97.5	2.00	5.85		
Ethylbenzene*	<0.050	0.050	06/22/2020	ND	1.99	99.5	2.00	5.62		
Total Xylenes*	<0.150	0.150	06/22/2020	ND	5.80	96.6	6.00	5.46		
Total BTEx	<0.300	0.300	06/22/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	06/22/2020	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	06/22/2020	ND	216	108	200	1.38	
DRO >C10-C28*	39.2	10.0	06/22/2020	ND	214	107	200	0.714	
EXT DRO >C28-C36	<10.0	10.0	06/22/2020	ND					

Surrogate: 1-Chlorooctane 110 % 44.3-144

Surrogate: 1-Chlorooctadecane 126 % 42.2-156

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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: 06/19/2020
 Reported: 06/24/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NEDU 4A

Sampling Date: 06/19/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: B 32 (H001636-09)

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	06/22/2020	ND	1.95	97.5	2.00	5.72		
Toluene*	<0.050	0.050	06/22/2020	ND	1.95	97.5	2.00	5.85		
Ethylbenzene*	<0.050	0.050	06/22/2020	ND	1.99	99.5	2.00	5.62		
Total Xylenes*	<0.150	0.150	06/22/2020	ND	5.80	96.6	6.00	5.46		
Total BTEx	<0.300	0.300	06/22/2020	ND						

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

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	06/22/2020	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	06/22/2020	ND	216	108	200	1.38	
DRO >C10-C28*	<10.0	10.0	06/22/2020	ND	214	107	200	0.714	
EXT DRO >C28-C36	<10.0	10.0	06/22/2020	ND					

Surrogate: 1-Chlorooctane 94.6 % 44.3-144

Surrogate: 1-Chlorooctadecane 105 % 42.2-156

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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: 06/19/2020
 Reported: 06/24/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NEDU 4A

Sampling Date: 06/19/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: B 33 (H001636-10)

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	06/24/2020	ND	2.03	102	2.00	5.21		
Toluene*	<0.050	0.050	06/24/2020	ND	2.04	102	2.00	4.90		
Ethylbenzene*	<0.050	0.050	06/24/2020	ND	2.07	104	2.00	4.22		
Total Xylenes*	<0.150	0.150	06/24/2020	ND	6.01	100	6.00	4.21		
Total BTEx	<0.300	0.300	06/24/2020	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	06/22/2020	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	06/22/2020	ND	216	108	200	1.38	
DRO >C10-C28*	<10.0	10.0	06/22/2020	ND	214	107	200	0.714	
EXT DRO >C28-C36	<10.0	10.0	06/22/2020	ND					

Surrogate: 1-Chlorooctane 102 % 44.3-144

Surrogate: 1-Chlorooctadecane 115 % 42.2-156

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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: 06/19/2020
 Reported: 06/24/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NEDU 4A

Sampling Date: 06/19/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: B 34 (H001636-11)

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	06/24/2020	ND	2.03	102	2.00	5.21		
Toluene*	<0.050	0.050	06/24/2020	ND	2.04	102	2.00	4.90		
Ethylbenzene*	<0.050	0.050	06/24/2020	ND	2.07	104	2.00	4.22		
Total Xylenes*	<0.150	0.150	06/24/2020	ND	6.01	100	6.00	4.21		
Total BTEx	<0.300	0.300	06/24/2020	ND						

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

Chloride, SM4500Cl-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	06/22/2020	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	06/22/2020	ND	216	108	200	1.38	
DRO >C10-C28*	18.5	10.0	06/22/2020	ND	214	107	200	0.714	
EXT DRO >C28-C36	<10.0	10.0	06/22/2020	ND					

Surrogate: 1-Chlorooctane 98.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 110 % 42.2-156

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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: 06/19/2020
 Reported: 06/24/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NEDU 4A

Sampling Date: 06/19/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: B 35 (H001636-12)

BTX 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	06/24/2020	ND	2.03	102	2.00	5.21		
Toluene*	<0.050	0.050	06/24/2020	ND	2.04	102	2.00	4.90		
Ethylbenzene*	<0.050	0.050	06/24/2020	ND	2.07	104	2.00	4.22		
Total Xylenes*	<0.150	0.150	06/24/2020	ND	6.01	100	6.00	4.21		
Total BTX	<0.300	0.300	06/24/2020	ND						

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

Chloride, SM4500Cl-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	06/22/2020	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	06/22/2020	ND	216	108	200	1.38	
DRO >C10-C28*	241	10.0	06/22/2020	ND	214	107	200	0.714	
EXT DRO >C28-C36	40.0	10.0	06/22/2020	ND					

Surrogate: 1-Chlorooctane 106 % 44.3-144

Surrogate: 1-Chlorooctadecane 131 % 42.2-156

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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: 06/19/2020
 Reported: 06/24/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NEDU 4A

Sampling Date: 06/19/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: B 36 (H001636-13)

BTX 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	06/24/2020	ND	2.03	102	2.00	5.21	
Toluene*	<0.050	0.050	06/24/2020	ND	2.04	102	2.00	4.90	
Ethylbenzene*	<0.050	0.050	06/24/2020	ND	2.07	104	2.00	4.22	
Total Xylenes*	<0.150	0.150	06/24/2020	ND	6.01	100	6.00	4.21	
Total BTX	<0.300	0.300	06/24/2020	ND					

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

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	06/22/2020	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	06/22/2020	ND	216	108	200	1.38	
DRO >C10-C28*	36.4	10.0	06/22/2020	ND	214	107	200	0.714	
EXT DRO >C28-C36	<10.0	10.0	06/22/2020	ND					

Surrogate: 1-Chlorooctane 102 % 44.3-144

Surrogate: 1-Chlorooctadecane 118 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Apple Corporation</u> Project Manager: <u>Paul Baker</u>				BILL TO			
Address: City: _____ State: _____ Zip: _____ Phone #: _____ Fax #: _____ Project #: _____ Project Owner: _____ Project Name: <u>NEBU 4A</u> State: _____ Zip: _____ Project Location: <u>NEBU 4A</u> Phone #: _____ Sample Name: <u>J. Brown</u> Fax #: _____				P.O. #: _____ Company: _____ Attn: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone #: _____ Fax #: _____			
FOR LAB USE ONLY				ANALYSIS REQUEST			
Lab I.D. <u>H001636</u>		Sample I.D.		(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER :		DATE TIME	
1 <u>B24</u> 2 <u>B25</u> 3 <u>B26</u> 4 <u>B27</u> 5 <u>B28</u> 6 <u>B29</u> 7 <u>B30</u> 8 <u>B31</u> 9 <u>B32</u> 10 <u>B33</u>		C C C C C C C C C C		6/19/20 1128 1124 1126 1128 1130 1132 1134 1136 6/19/20 1138		✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	
Reinquinshed By: <u>J. Brown</u>		Received By: <u>Janet A. Delaney</u>		Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Add'l Phone #: _____ REMARKS: All Results are emailed. Please provide Email address: _____		Turnaround Time: <u>Standard</u> <input checked="" type="checkbox"/> <u>Rush</u> <input type="checkbox"/> Thermometer ID #113 <input type="checkbox"/> Bacteria (only) <input type="checkbox"/> Correction Factor None <input type="checkbox"/> Cool Intact <input type="checkbox"/> Sample Condition <input type="checkbox"/> Observed Temp. °C <u>3.8</u> Observed Temp. °C <u>4.5</u>	



CARDINAL
Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Atlantic Corporation				BILL TO		ANALYSIS REQUEST															
Project Manager: Grace Baker																					
Address:				P.O. #:		Company:															
City:				Attn:																	
Phone #:				Address:																	
Project #:				City:																	
Project Name: Medu 4A				State:																	
Project Location: Medu 4A				Phone #:																	
Sampler Name: J. Brown				Fax #:																	

FOR LAB USE ONLY		LAB I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME		CL		BTEX		EXT. TPH	
		H001636																																			
		11		B34		C																															
		12		B35		C																															
		13		B36		C																															

Relinquished By: J. Brown		Date: 6/19/20		Received By: J. Brown		Date: 6/19/20		Time: 1:34		Time: 1:34		Time: 1:34		Time: 1:34		Time: 1:34		Time: 1:34		Time: 1:34		Time: 1:34		Time: 1:34		Time: 1:34		Time: 1:34		Time: 1:34		Time: 1:34		Time: 1:34	
Relinquished By:		Date:		Received By:		Date:		Time:		Time:		Time:		Time:		Time:		Time:		Time:		Time:		Time:		Time:		Time:		Time:		Time:		Time:	

Delivered By: (Circle One)		Observed Temp. °C		Corrected Temp. °C		Sample Condition		CHECKED BY: (Initials)		Turnaround Time:		Standard		Bacteria (only)		Sample Condition	
Sampler - UPS - Bus - Other:		3.8				Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>		J.P.				Rush <input checked="" type="checkbox"/>		Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>		Observed Temp. °C	



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

June 29, 2020

BRUCE BAKER

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 06/26/20 16:20.

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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/26/2020
 Reported: 06/29/2020
 Project Name: NEDU 4A
 Project Number: NEDU 4A
 Project Location: NEDU 4A

Sampling Date: 06/26/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: B 1 (H001684-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	06/29/2020	ND	416	104	400	3.77	

Sample ID: B 6 (H001684-02)

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	06/27/2020	ND	1.92	96.0	2.00	0.265	
Toluene*	<0.050	0.050	06/27/2020	ND	1.92	96.1	2.00	0.437	
Ethylbenzene*	<0.050	0.050	06/27/2020	ND	1.96	98.2	2.00	0.215	
Total Xylenes*	<0.150	0.150	06/27/2020	ND	5.73	95.5	6.00	0.162	
Total BTEX	<0.300	0.300	06/27/2020	ND					

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

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/29/2020	ND	191	95.4	200	0.529	
DRO >C10-C28*	<10.0	10.0	06/29/2020	ND	176	88.1	200	1.12	
EXT DRO >C28-C36	<10.0	10.0	06/29/2020	ND					

Surrogate: 1-Chlorooctane 127 % 44.3-144

Surrogate: 1-Chlorooctadecane 140 % 42.2-156

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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:	06/26/2020	Sampling Date:	06/26/2020
Reported:	06/29/2020	Sampling Type:	Soil
Project Name:	NEDU 4A	Sampling Condition:	Cool & Intact
Project Number:	NEDU 4A	Sample Received By:	Tamara Oldaker
Project Location:	NEDU 4A		

Sample ID: B 7 (H001684-03)

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	06/27/2020	ND	1.92	96.0	2.00	0.265	
Toluene*	<0.050	0.050	06/27/2020	ND	1.92	96.1	2.00	0.437	
Ethylbenzene*	<0.050	0.050	06/27/2020	ND	1.96	98.2	2.00	0.215	
Total Xylenes*	<0.150	0.150	06/27/2020	ND	5.73	95.5	6.00	0.162	
Total BTEX	<0.300	0.300	06/27/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.9 % 73.3-129

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/29/2020	ND	191	95.4	200	0.529	
DRO >C10-C28*	<10.0	10.0	06/29/2020	ND	176	88.1	200	1.12	
EXT DRO >C28-C36	<10.0	10.0	06/29/2020	ND					

Surrogate: 1-Chlorooctane 124 % 44.3-144

Surrogate: 1-Chlorooctadecane 137 % 42.2-156

Sample ID: B 10 (H001684-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	06/29/2020	ND	416	104	400	3.77	

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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: 06/26/2020
 Reported: 06/29/2020
 Project Name: NEDU 4A
 Project Number: NEDU 4A
 Project Location: NEDU 4A

Sampling Date: 06/26/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: B 12 (H001684-05)

BTX 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	06/27/2020	ND	1.92	96.0	2.00	0.265		
Toluene*	<0.050	0.050	06/27/2020	ND	1.92	96.1	2.00	0.437		
Ethylbenzene*	<0.050	0.050	06/27/2020	ND	1.96	98.2	2.00	0.215		
Total Xylenes*	<0.150	0.150	06/27/2020	ND	5.73	95.5	6.00	0.162		
Total BTX	<0.300	0.300	06/27/2020	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	06/29/2020	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	06/29/2020	ND	191	95.4	200	0.529	
DRO >C10-C28*	<10.0	10.0	06/29/2020	ND	176	88.1	200	1.12	
EXT DRO >C28-C36	<10.0	10.0	06/29/2020	ND					

Surrogate: 1-Chlorooctane 123 % 44.3-144

Surrogate: 1-Chlorooctadecane 136 % 42.2-156

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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: 06/26/2020
 Reported: 06/29/2020
 Project Name: NEDU 4A
 Project Number: NEDU 4A
 Project Location: NEDU 4A

Sampling Date: 06/26/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: B 13 (H001684-06)

BTX 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	06/27/2020	ND	1.92	96.0	2.00	0.265		
Toluene*	<0.050	0.050	06/27/2020	ND	1.92	96.1	2.00	0.437		
Ethylbenzene*	<0.050	0.050	06/27/2020	ND	1.96	98.2	2.00	0.215		
Total Xylenes*	<0.150	0.150	06/27/2020	ND	5.73	95.5	6.00	0.162		
Total BTX	<0.300	0.300	06/27/2020	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	06/29/2020	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	06/29/2020	ND	191	95.4	200	0.529	
DRO >C10-C28*	<10.0	10.0	06/29/2020	ND	176	88.1	200	1.12	
EXT DRO >C28-C36	<10.0	10.0	06/29/2020	ND					

Surrogate: 1-Chlorooctane 113 % 44.3-144

Surrogate: 1-Chlorooctadecane 124 % 42.2-156

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: 06/26/2020
 Reported: 06/29/2020
 Project Name: NEDU 4A
 Project Number: NEDU 4A
 Project Location: NEDU 4A

Sampling Date: 06/26/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: B 15 (H001684-07)

Chloride, SM4500Cl-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	06/29/2020	ND	416	104	400	3.77	

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

8 jo 8 eba


CARDINAL
Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Cardinal Corporation		BILL TO		P.O. #:		ANALYSIS REQUEST	
Project Manager: Bruce Baker		Company:		Attn:			
Address:		State:		Zip:			
City:		Address:		City:			
Phone #:		Fax #:		State:		Zip:	
Project #:		Project Owner:		Phone #:			
Project Name: NEDU 4A		Project Location: NEDU 4A		Fax #:			
Sample Name: Jeff Ryan		FOR LAB USE ONLY		MATRIX		PRESERV	
Lab I.D. H061684		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS	
1 B1							
2 B6							
3 B7							
4 B10							
5 B12							
6 B13							
7 B15							
DATE		TIME		CL-		BTEx	
6/26/20		1303		✓		✓	
6/26/20		1304		✓		✓	
6/26/20		1306		✓		✓	
6/26/20		1324		✓		✓	
6/26/20		1326		✓		✓	
6/26/20		1328		✓		✓	
REMARKS:		Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:			
All Results are emailed. Please provide Email address:							
Relinquished By: Jeff Ryan		Date: 6/26/20		Received By: Amara Roberts		Date: 6/26/20	
Relinquished By: Jeff Ryan		Date: 6/26/20		Received By: Amara Roberts		Date: 6/26/20	
Delivered By: (Circle One) 2.0		Observed Temp. °C		Sample Condition		CHECKED BY: (Initials) YO	
Sampler - UPS - Bus - Other:		Corrected Temp. °C		Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Turnaround Time:		Standard Rush		Bacteria (only) Sample Condition		Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Thermometer ID #113		Correction Factor None		Observed Temp. °C		Corrected Temp. °C	

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



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

July 28, 2020

BRUCE BAKER

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 07/28/20 12:43.

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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 07/28/2020
 Reported: 07/28/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NEDU 4A

Sampling Date: 07/28/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: B 35 (H001952-01)

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	07/28/2020	ND	1.83	91.5	2.00	4.16	
Toluene*	<0.050	0.050	07/28/2020	ND	1.85	92.5	2.00	3.95	
Ethylbenzene*	<0.050	0.050	07/28/2020	ND	1.86	93.0	2.00	3.90	
Total Xylenes*	<0.150	0.150	07/28/2020	ND	5.33	88.9	6.00	3.97	
Total BTEX	<0.300	0.300	07/28/2020	ND					

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

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/28/2020	ND	208	104	200	0.448	
DRO >C10-C28*	25.1	10.0	07/28/2020	ND	200	99.8	200	1.20	
EXT DRO >C28-C36	<10.0	10.0	07/28/2020	ND					

Surrogate: 1-Chlorooctane 99.3 % 44.3-144

Surrogate: 1-Chlorooctadecane 111 % 42.2-156

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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

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A handwritten signature in cursive script, appearing to read "Celey D. Keene", written in black ink.

Celey D. Keene, Lab Director/Quality Manager



CARDINAL
Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

August 25, 2020

BRUCE BAKER

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 08/24/20 13:50.

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.

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Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 08/24/2020
 Reported: 08/25/2020
 Project Name: NEDU 4A
 Project Number: NONE GIVEN
 Project Location: NEDU 4A

Sampling Date: 08/24/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: W 21 (H002223-01)

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	08/24/2020	ND	2.06	103	2.00	3.86	
Toluene*	<0.050	0.050	08/24/2020	ND	2.06	103	2.00	4.18	
Ethylbenzene*	<0.050	0.050	08/24/2020	ND	2.04	102	2.00	3.97	
Total Xylenes*	<0.150	0.150	08/24/2020	ND	5.90	98.4	6.00	4.08	
Total BTEX	<0.300	0.300	08/24/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 73.3-129

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/24/2020	ND	183	91.6	200	6.67	
DRO >C10-C28*	<10.0	10.0	08/24/2020	ND	182	91.0	200	5.19	
EXT DRO >C28-C36	<10.0	10.0	08/24/2020	ND					

Surrogate: 1-Chlorooctane 92.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 100 % 42.2-156

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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RPD	Relative Percent Difference
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***	Insufficient time to reach temperature.
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Celey D. Keene, Lab Director/Quality Manager

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

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

Photos











303 Veterans Airpark Lane Midland, TX 79705

Variance Request

Apache Corporation request a variance to the reclamation rule regarding the top four feet being top soil. The surface landowner requested that the excavation be backfilled to a depth of 2 feet with caliche and utilizing the natural top soil from the edges of the excavation to cover the caliche.