



303 Veterans Airpark Lane Midland, TX 79705

## **Closure Report**

January 14, 2021

Re: NEDU 625

Case # NRM2019755640

### **Background:**

On 6/23/2020 a release occurred due to a stuffing box failure. The release (GPS: 32.4790459, -103.1551971) is located north of Eunice, New Mexico in unit letter E section 15 township 21S range 37E. A groundwater survey was conducted utilizing NMOSE and USGS. The nearest well of record suggest the groundwater depth below the release to be 63 feet below ground surface.

On 9/1/2020 a vertical (SP1) was conducted utilizing a backhoe with samples collected in one foot intervals to a depth of 3 feet. All samples were submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. Horizontal 5 point surface composite samples were collected and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. Laboratory results TPH were above table one standards for releases 51-100 feet to groundwater. A Remediation Plan was submitted and approved by OCD.

The release area was excavated to a depth of 1 foot. Final 5 point bottom and wall samples were collected and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. Laboratory analysis for TPH at B5, B6, B8, B9, B10, and B11 were above table one standards for releases 51-100 feet to groundwater. Those sample points were further excavated to a depth of 1.5 feet. Wall 3 and 4 were further excavated laterally. On 1/8/2021 final 5 point bottom and wall samples were collected and submitted to a commercial laboratory for TPH and BTEX. Laboratory analysis were below table one closure criteria for releases 51-100 feet to groundwater. Horizontal composite samples collected during delineation phase demonstrate that the entire release was contained to the lease pad. All excavated material was hauled to an OCD approved disposal facility and the excavation was backfilled with clean imported caliche and the pad restored.

Apache Corporation has completed remediation to below table one standards and respectfully request that event NRM2019755640 be closed.

Enclosed: C-141, Groundwater Data, Maps, Sample Data, Laboratory Results, and Field Notes.

Submitted by;

*Bruce Baker*

**Environmental Technician**

[larry.baker@apachecorp.com](mailto:larry.baker@apachecorp.com)

**Cell# 432-631-6982**

Incident ID	
District RP	
Facility ID	
Application ID	

## Closure

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

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

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

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

Printed Name: Larry Baker Title: Environmental Tech SR.  
Signature: Larry Baker Date: 4/7/2021  
email: larry.baker@apachecorp.com Telephone: 432-631-6982

**OCD Only**

Received by: Chad Hensley Date: 06/07/2021

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: Chad Hensley Date: 06/07/2021  
Printed Name: Chad Hensley Title: Environmental Specialist Advanced





CP 00554 70 ft.  
USGS 322902103093401 63 ft.

NEDU 625  
SP1  
HC4  
HC3  
HC2



Agency code = usgs

site\_no list =

- 322902103093401

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload**USGS 322902103093401 21S.37E.16.222321**

Available data for this site

Groundwater: Field measurements



GO

Lea County, New Mexico

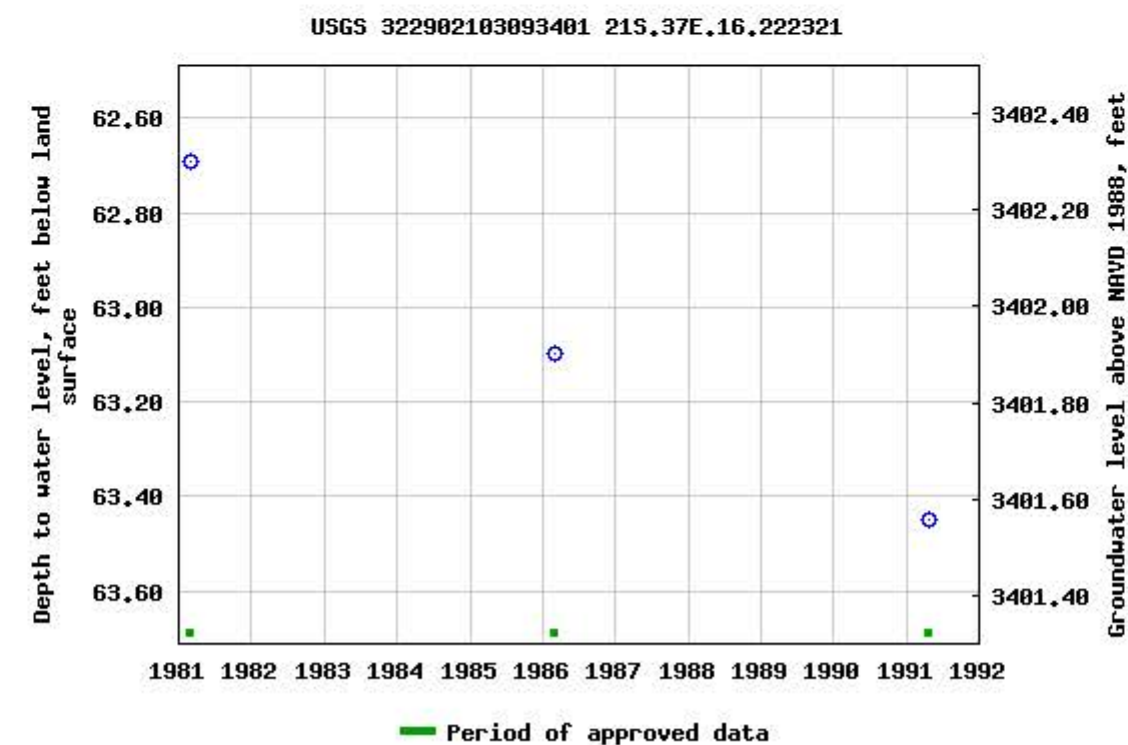
Hydrologic Unit Code 13070007

Latitude 32°29'02", Longitude 103°09'34" NAD27

Land-surface elevation 3,465 feet above NAVD88

The depth of the well is 80 feet below land surface.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

**Output formats**[Table of data](#)[Tab-separated data](#)[Graph of data](#)[Reselect period](#)


Breaks in the plot represent a gap of at least one year between field measurements.

[Download a presentation-quality graph](#)



# 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 00554		2	2	16	21S	37E	672744	3595610* 
<hr/>									
Driller License:	208	Driller Company:			VAN NOY, W.L.				
Driller Name:	VAN NOY, W.L.								
Drill Start Date:	06/01/1976	Drill Finish Date:			06/05/1976		Plug Date:		
Log File Date:	04/05/1977	PCW Rcv Date:					Source:		Shallow
Pump Type:		Pipe Discharge Size:					Estimated Yield:		
Casing Size:	5.00	Depth Well:			80 feet		Depth Water:		70 feet
<hr/>									
Water Bearing Stratifications:				Top	Bottom	Description			
				75	80	Sandstone/Gravel/Conglomerate			
<hr/>									
Casing Perforations:				Top	Bottom				
				64	80				
<hr/>									

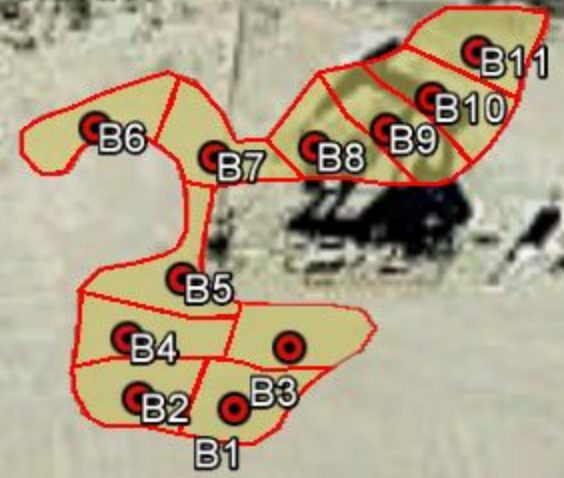
\*UTM location was derived from PLSS - see Help

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

9/21/20 9:56 AM

POINT OF DIVERSION SUMMARY





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Google earth





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Google earth



## Delineation Samples

Sample Date	Sample ID	Depth	Chloride Lab	Benzene	Toulene	Ethybenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO
12/31/2020	B1	1'	736	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0
12/31/2020	B2	1'	800	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	215	58.6
12/31/2020	B3	1'	1460	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	32.9	13.7
12/31/2020	B4	1'	928	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	503	134
12/31/2020	B5	1'	1150	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	2610	607
1/8/2021	B5	1.5'		<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	266	73.7
12/31/2020	B6	1'	320	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	1080	305
1/8/2021	B6	1.5'		<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	256	74.4
12/31/2020	B7	1'	896	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	378	149
12/31/2020	B8	1'	1170	<0.050	<0.050	<0.050	0.192	<0.300	25.1	2140	579
1/8/2021	B8	1.5'		<0.050	<0.050	<0.050	0.192	<0.300	<10.0	268	76.5
12/31/2020	B9	1'	1020	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	1730	503
1/8/2021	B9	1.5'		<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	249	78.4
12/31/2020	B10	1'	736	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	1230	363
1/8/2021	B10	1.5'		<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	263	76.7
12/31/2020	B11	1'	832	<0.050	<0.050	<0.050	<0.150	<0.300	11.3	1790	504
1/8/2021	B11	1.5'		<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	270	83.6
12/31/2020	W1		496	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0
12/31/2020	W2		128	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	82.5	18.6
12/31/2020	W3		416	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	106	39.9
1/8/2021	W3			<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	277	87.6
12/31/2020	W4		288	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	245	50
1/8/2021	W4			<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	277	87.6





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

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January 06, 2021

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU #625

Enclosed are the results of analyses for samples received by the laboratory on 12/31/20 14:40.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received: 12/31/2020  
 Reported: 01/06/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 12/31/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B1 - 1' (H003367-01)**

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	12/31/2020	ND	1.96	98.0	2.00	2.20	
Toluene*	<0.050	0.050	12/31/2020	ND	1.88	94.0	2.00	2.10	
Ethylbenzene*	<0.050	0.050	12/31/2020	ND	1.97	98.5	2.00	1.92	
Total Xylenes*	<0.150	0.150	12/31/2020	ND	5.63	93.8	6.00	1.90	
Total BTEX	<0.300	0.300	12/31/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 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	736	16.0	01/04/2021	ND	400	100	400	0.00	

TPH 8015M		mg/ kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/04/2021	ND	213	107	200	3.02	
DRO >C10-C28*	<10.0	10.0	01/04/2021	ND	195	97.7	200	3.33	
EXT DRO >C28-C36	<10.0	10.0	01/04/2021	ND					

Surrogate: 1-Chlorooctane 75.6 % 44.3-144

Surrogate: 1-Chlorooctadecane 73.4 % 42.2-156

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 12/31/2020  
 Reported: 01/06/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 12/31/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B2 - 1' (H003367-02)**

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	12/31/2020	ND	1.96	98.0	2.00	2.20	
Toluene*	<0.050	0.050	12/31/2020	ND	1.88	94.0	2.00	2.10	
Ethylbenzene*	<0.050	0.050	12/31/2020	ND	1.97	98.5	2.00	1.92	
Total Xylenes*	<0.150	0.150	12/31/2020	ND	5.63	93.8	6.00	1.90	
Total BTX	<0.300	0.300	12/31/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	800	16.0	01/04/2021	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/04/2021	ND	213	107	200	3.02	
DRO >C10-C28*	215	10.0	01/04/2021	ND	195	97.7	200	3.33	
EXT DRO >C28-C36	58.6	10.0	01/04/2021	ND					

Surrogate: 1-Chlorooctane 89.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 98.9 % 42.2-156

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 12/31/2020  
 Reported: 01/06/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 12/31/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B3 - 1' (H003367-03)**

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	12/31/2020	ND	1.96	98.0	2.00	2.20	
Toluene*	<0.050	0.050	12/31/2020	ND	1.88	94.0	2.00	2.10	
Ethylbenzene*	<0.050	0.050	12/31/2020	ND	1.97	98.5	2.00	1.92	
Total Xylenes*	<0.150	0.150	12/31/2020	ND	5.63	93.8	6.00	1.90	
Total BTX	<0.300	0.300	12/31/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	1460	16.0	01/04/2021	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/04/2021	ND	213	107	200	3.02	
DRO >C10-C28*	32.9	10.0	01/04/2021	ND	195	97.7	200	3.33	
EXT DRO >C28-C36	13.7	10.0	01/04/2021	ND					

Surrogate: 1-Chlorooctane 88.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 89.5 % 42.2-156

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 12/31/2020  
 Reported: 01/06/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 12/31/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B4 - 1' (H003367-04)**

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	12/31/2020	ND	1.96	98.0	2.00	2.20	
Toluene*	<0.050	0.050	12/31/2020	ND	1.88	94.0	2.00	2.10	
Ethylbenzene*	<0.050	0.050	12/31/2020	ND	1.97	98.5	2.00	1.92	
Total Xylenes*	<0.150	0.150	12/31/2020	ND	5.63	93.8	6.00	1.90	
Total BTX	<0.300	0.300	12/31/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	928	16.0	01/04/2021	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/04/2021	ND	213	107	200	3.02	
DRO >C10-C28*	503	10.0	01/04/2021	ND	195	97.7	200	3.33	
EXT DRO >C28-C36	134	10.0	01/04/2021	ND					

Surrogate: 1-Chlorooctane 84.0 % 44.3-144

Surrogate: 1-Chlorooctadecane 107 % 42.2-156

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 12/31/2020  
 Reported: 01/06/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 12/31/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B5 - 1' (H003367-05)**

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	12/31/2020	ND	1.96	98.0	2.00	2.20		
Toluene*	<0.050	0.050	12/31/2020	ND	1.88	94.0	2.00	2.10		
Ethylbenzene*	<0.050	0.050	12/31/2020	ND	1.97	98.5	2.00	1.92		
Total Xylenes*	<0.150	0.150	12/31/2020	ND	5.63	93.8	6.00	1.90		
Total BTX	<0.300	0.300	12/31/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	1150	16.0	01/04/2021	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/04/2021	ND	213	107	200	3.02	
DRO >C10-C28*	2610	10.0	01/04/2021	ND	195	97.7	200	3.33	
EXT DRO >C28-C36	607	10.0	01/04/2021	ND					

Surrogate: 1-Chlorooctane 95.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 200 % 42.2-156

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received: 12/31/2020  
 Reported: 01/06/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 12/31/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B6 - 1' (H003367-06)**

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	12/31/2020	ND	1.96	98.0	2.00	2.20	
Toluene*	<0.050	0.050	12/31/2020	ND	1.88	94.0	2.00	2.10	
Ethylbenzene*	<0.050	0.050	12/31/2020	ND	1.97	98.5	2.00	1.92	
Total Xylenes*	<0.150	0.150	12/31/2020	ND	5.63	93.8	6.00	1.90	
Total BTX	<0.300	0.300	12/31/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	320	16.0	01/04/2021	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/04/2021	ND	213	107	200	3.02	
DRO >C10-C28*	1080	10.0	01/04/2021	ND	195	97.7	200	3.33	
EXT DRO >C28-C36	305	10.0	01/04/2021	ND					

Surrogate: 1-Chlorooctane 101 % 44.3-144

Surrogate: 1-Chlorooctadecane 140 % 42.2-156

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 12/31/2020  
 Reported: 01/06/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 12/31/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B7 - 1' (H003367-07)**

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	12/31/2020	ND	1.96	98.0	2.00	2.20	
Toluene*	<0.050	0.050	12/31/2020	ND	1.88	94.0	2.00	2.10	
Ethylbenzene*	<0.050	0.050	12/31/2020	ND	1.97	98.5	2.00	1.92	
Total Xylenes*	<0.150	0.150	12/31/2020	ND	5.63	93.8	6.00	1.90	
Total BTX	<0.300	0.300	12/31/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	896	16.0	01/04/2021	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/04/2021	ND	213	107	200	3.02	
DRO >C10-C28*	378	10.0	01/04/2021	ND	195	97.7	200	3.33	
EXT DRO >C28-C36	149	10.0	01/04/2021	ND					

Surrogate: 1-Chlorooctane 93.7 % 44.3-144

Surrogate: 1-Chlorooctadecane 112 % 42.2-156

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received: 12/31/2020  
 Reported: 01/06/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 12/31/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B8 - 1' (H003367-08)**

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	12/31/2020	ND	1.96	98.0	2.00	2.20	
Toluene*	<0.050	0.050	12/31/2020	ND	1.88	94.0	2.00	2.10	
Ethylbenzene*	<0.050	0.050	12/31/2020	ND	1.97	98.5	2.00	1.92	
<b>Total Xylenes*</b>	<b>0.192</b>	0.150	12/31/2020	ND	5.63	93.8	6.00	1.90	
Total BTEx	<0.300	0.300	12/31/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 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	01/04/2021	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	25.0	10.0	01/04/2021	ND	213	107	200	3.02	
DRO >C10-C28*	2140	10.0	01/04/2021	ND	195	97.7	200	3.33	
EXT DRO >C28-C36	579	10.0	01/04/2021	ND					

Surrogate: 1-Chlorooctane 102 % 44.3-144

Surrogate: 1-Chlorooctadecane 180 % 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: 12/31/2020  
 Reported: 01/06/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 12/31/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B9 - 1' (H003367-09)**

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	12/31/2020	ND	1.96	98.0	2.00	2.20		
Toluene*	<0.050	0.050	12/31/2020	ND	1.88	94.0	2.00	2.10		
Ethylbenzene*	<0.050	0.050	12/31/2020	ND	1.97	98.5	2.00	1.92		
Total Xylenes*	<0.150	0.150	12/31/2020	ND	5.63	93.8	6.00	1.90		
Total BTX	<0.300	0.300	12/31/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	1020	16.0	01/04/2021	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/04/2021	ND	213	107	200	3.02	
DRO >C10-C28*	1730	10.0	01/04/2021	ND	195	97.7	200	3.33	
EXT DRO >C28-C36	503	10.0	01/04/2021	ND					

Surrogate: 1-Chlorooctane 91.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 160 % 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: 12/31/2020  
 Reported: 01/06/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 12/31/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B10 - 1' (H003367-10)**

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	01/04/2021	ND	1.99	99.4	2.00	1.76	
Toluene*	<0.050	0.050	01/04/2021	ND	1.92	96.1	2.00	1.63	
Ethylbenzene*	<0.050	0.050	01/04/2021	ND	1.98	98.9	2.00	1.46	
Total Xylenes*	<0.150	0.150	01/04/2021	ND	5.65	94.2	6.00	1.27	
Total BTX	<0.300	0.300	01/04/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	736	16.0	01/04/2021	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/04/2021	ND	213	107	200	3.02	
DRO >C10-C28*	1230	10.0	01/04/2021	ND	195	97.7	200	3.33	
EXT DRO >C28-C36	363	10.0	01/04/2021	ND					

Surrogate: 1-Chlorooctane 85.6 % 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: 12/31/2020  
 Reported: 01/06/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 12/31/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B11 - 1' (H003367-11)**

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	01/04/2021	ND	1.99	99.4	2.00	1.76	
Toluene*	<0.050	0.050	01/04/2021	ND	1.92	96.1	2.00	1.63	
Ethylbenzene*	<0.050	0.050	01/04/2021	ND	1.98	98.9	2.00	1.46	
Total Xylenes*	<0.150	0.150	01/04/2021	ND	5.65	94.2	6.00	1.27	
Total BTX	<0.300	0.300	01/04/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 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	832	16.0	01/04/2021	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	11.3	10.0	01/04/2021	ND	213	107	200	3.02	
DRO >C10-C28*	1790	10.0	01/04/2021	ND	195	97.7	200	3.33	
EXT DRO >C28-C36	504	10.0	01/04/2021	ND					

Surrogate: 1-Chlorooctane 82.7 % 44.3-144

Surrogate: 1-Chlorooctadecane 148 % 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: 12/31/2020  
 Reported: 01/06/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 12/31/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: W 1 (H003367-12)**

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	01/04/2021	ND	1.99	99.4	2.00	1.76		
Toluene*	<0.050	0.050	01/04/2021	ND	1.92	96.1	2.00	1.63		
Ethylbenzene*	<0.050	0.050	01/04/2021	ND	1.98	98.9	2.00	1.46		
Total Xylenes*	<0.150	0.150	01/04/2021	ND	5.65	94.2	6.00	1.27		
Total BTEx	<0.300	0.300	01/04/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 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	496	16.0	01/04/2021	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/04/2021	ND	213	107	200	3.02	
DRO >C10-C28*	<10.0	10.0	01/04/2021	ND	195	97.7	200	3.33	
EXT DRO >C28-C36	<10.0	10.0	01/04/2021	ND					

Surrogate: 1-Chlorooctane 86.0 % 44.3-144

Surrogate: 1-Chlorooctadecane 86.0 % 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: 12/31/2020  
 Reported: 01/06/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 12/31/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: W 2 (H003367-13)**

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	01/04/2021	ND	1.99	99.4	2.00	1.76	
Toluene*	<0.050	0.050	01/04/2021	ND	1.92	96.1	2.00	1.63	
Ethylbenzene*	<0.050	0.050	01/04/2021	ND	1.98	98.9	2.00	1.46	
Total Xylenes*	<0.150	0.150	01/04/2021	ND	5.65	94.2	6.00	1.27	
Total BTX	<0.300	0.300	01/04/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 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	128	16.0	01/04/2021	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/04/2021	ND	213	107	200	3.02	
DRO >C10-C28*	82.5	10.0	01/04/2021	ND	195	97.7	200	3.33	
EXT DRO >C28-C36	18.6	10.0	01/04/2021	ND					

Surrogate: 1-Chlorooctane 96.6 % 44.3-144

Surrogate: 1-Chlorooctadecane 102 % 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: 12/31/2020  
 Reported: 01/06/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 12/31/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: W 3 (H003367-14)**

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	01/04/2021	ND	1.99	99.4	2.00	1.76	
Toluene*	<0.050	0.050	01/04/2021	ND	1.92	96.1	2.00	1.63	
Ethylbenzene*	<0.050	0.050	01/04/2021	ND	1.98	98.9	2.00	1.46	
Total Xylenes*	<0.150	0.150	01/04/2021	ND	5.65	94.2	6.00	1.27	
Total BTX	<0.300	0.300	01/04/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.9 % 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	416	16.0	01/04/2021	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/04/2021	ND	213	107	200	3.02	
DRO >C10-C28*	106	10.0	01/04/2021	ND	195	97.7	200	3.33	
EXT DRO >C28-C36	39.9	10.0	01/04/2021	ND					

Surrogate: 1-Chlorooctane 87.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 91.1 % 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: 12/31/2020  
 Reported: 01/06/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 12/31/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: W 4 (H003367-15)**

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	01/04/2021	ND	1.99	99.4	2.00	1.76	
Toluene*	<0.050	0.050	01/04/2021	ND	1.92	96.1	2.00	1.63	
Ethylbenzene*	<0.050	0.050	01/04/2021	ND	1.98	98.9	2.00	1.46	
Total Xylenes*	<0.150	0.150	01/04/2021	ND	5.65	94.2	6.00	1.27	
Total BTX	<0.300	0.300	01/04/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	288	16.0	01/04/2021	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/04/2021	ND	213	107	200	3.02	
DRO >C10-C28*	245	10.0	01/04/2021	ND	195	97.7	200	3.33	
EXT DRO >C28-C36	50.0	10.0	01/04/2021	ND					

Surrogate: 1-Chlorooctane 91.0 % 44.3-144

Surrogate: 1-Chlorooctadecane 102 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager





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### Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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

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Celey D. Keene, Lab Director/Quality Manager



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 18 of 19





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

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

<b>Company Name:</b> Apache Corp <b>Project Manager:</b> Larry Baker <b>Address:</b> 8350 W. Marland <b>City:</b> Hobbs <b>State:</b> NM <b>Zip:</b> 88240 <b>Phone #:</b> 432-631-6982 <b>Fax #:</b> <b>Project #:</b> <b>Project Name:</b> NEDU 6035 <b>Project Location:</b> <b>Sampler Name:</b> Diego Miranda <b>FOR LAB USE ONLY</b>		<b>P.O. #:</b> <b>Company:</b> Apache <b>Attn:</b> Larry Baker <b>Address:</b> 8350 W. Marland <b>City:</b> Hobbs <b>State:</b> NM <b>Zip:</b> 88240 <b>Phone #:</b> 432-631-6982 <b>Fax #:</b>	
<b>Lab I.D.</b> <b>Sample I.D.</b>		<b>BILL TO</b>	
<b>PLEASE NOTE:</b> Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal regardless of whether such claim is based upon any of the above stated reasons or otherwise.		<b>ANALYSIS REQUEST</b>	
<b>Relinquished By:</b> [Signature] <b>Relinquished By:</b> [Signature]		<b>Received By:</b> [Signature] <b>Received By:</b> [Signature]	
<b>Date:</b> 12-31-20 <b>Time:</b> 14:40 <b>Date:</b> 12-31-20 <b>Time:</b>		<b>DATE</b> <b>TIME</b>	
<b>Observed Temp. °C</b> 4.6 <b>Corrected Temp. °C</b>		<b>Turnaround Time:</b> Standard <input type="checkbox"/> Rush <input type="checkbox"/>	
<b>Sample Condition</b> <b>Cool</b> <input checked="" type="checkbox"/> <b>Intact</b> <input checked="" type="checkbox"/> <b>No</b> <input type="checkbox"/> <b>Yes</b> <input type="checkbox"/>		<b>Bacteria (only)</b> <input type="checkbox"/> <b>Sample Condition</b> <input type="checkbox"/> <b>Cool</b> <input type="checkbox"/> <b>Intact</b> <input type="checkbox"/> <b>No</b> <input type="checkbox"/> <b>Yes</b> <input type="checkbox"/>	
<b>Thermometer ID #113</b> <b>Correction Factor</b> None		<b>Observed Temp. °C</b> <b>Corrected Temp. °C</b>	
<b>REMARKS:</b>		<b>REMARKS:</b>	

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



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

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January 11, 2021

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU #625

Enclosed are the results of analyses for samples received by the laboratory on 01/08/21 15:10.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". 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: 01/08/2021  
 Reported: 01/11/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 01/08/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 5 (H210059-01)**

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	01/08/2021	ND	1.66	82.8	2.00	1.23	
Toluene*	<0.050	0.050	01/08/2021	ND	1.75	87.4	2.00	2.98	
Ethylbenzene*	<0.050	0.050	01/08/2021	ND	1.74	87.2	2.00	2.77	
Total Xylenes*	<0.150	0.150	01/08/2021	ND	5.65	94.1	6.00	1.06	
Total BTEX	<0.300	0.300	01/08/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 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	01/09/2021	ND	237	119	200	1.45	
<b>DRO &gt;C10-C28*</b>	<b>266</b>	10.0	01/09/2021	ND	231	115	200	0.871	
<b>EXT DRO &gt;C28-C36</b>	<b>73.7</b>	10.0	01/09/2021	ND					

Surrogate: 1-Chlorooctane 80.3 % 44.3-144

Surrogate: 1-Chlorooctadecane 87.6 % 42.2-156

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**Analytical Results For:**

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

Received: 01/08/2021  
 Reported: 01/11/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 01/08/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 6 (H210059-02)**

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	01/08/2021	ND	1.66	82.8	2.00	1.23	
Toluene*	<0.050	0.050	01/08/2021	ND	1.75	87.4	2.00	2.98	
Ethylbenzene*	<0.050	0.050	01/08/2021	ND	1.74	87.2	2.00	2.77	
Total Xylenes*	<0.150	0.150	01/08/2021	ND	5.65	94.1	6.00	1.06	
Total BTX	<0.300	0.300	01/08/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	01/09/2021	ND	237	119	200	1.45	
DRO >C10-C28*	256	10.0	01/09/2021	ND	231	115	200	0.871	
EXT DRO >C28-C36	74.4	10.0	01/09/2021	ND					

Surrogate: 1-Chlorooctane 76.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 83.4 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 01/08/2021  
 Reported: 01/11/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 01/08/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 8 (H210059-03)**

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	01/08/2021	ND	1.66	82.8	2.00	1.23	
Toluene*	<0.050	0.050	01/08/2021	ND	1.75	87.4	2.00	2.98	
Ethylbenzene*	<0.050	0.050	01/08/2021	ND	1.74	87.2	2.00	2.77	
Total Xylenes*	<0.150	0.150	01/08/2021	ND	5.65	94.1	6.00	1.06	
Total BTEX	<0.300	0.300	01/08/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	01/09/2021	ND	237	119	200	1.45	
DRO >C10-C28*	268	10.0	01/09/2021	ND	231	115	200	0.871	
EXT DRO >C28-C36	76.5	10.0	01/09/2021	ND					

Surrogate: 1-Chlorooctane 86.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 93.1 % 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: 01/08/2021  
 Reported: 01/11/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 01/08/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 9 (H210059-04)**

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	01/08/2021	ND	1.66	82.8	2.00	1.23	
Toluene*	<0.050	0.050	01/08/2021	ND	1.75	87.4	2.00	2.98	
Ethylbenzene*	<0.050	0.050	01/08/2021	ND	1.74	87.2	2.00	2.77	
Total Xylenes*	<0.150	0.150	01/08/2021	ND	5.65	94.1	6.00	1.06	
Total BTEX	<0.300	0.300	01/08/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 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	01/09/2021	ND	237	119	200	1.45	
DRO >C10-C28*	249	10.0	01/09/2021	ND	231	115	200	0.871	
EXT DRO >C28-C36	78.4	10.0	01/09/2021	ND					

Surrogate: 1-Chlorooctane 71.6 % 44.3-144

Surrogate: 1-Chlorooctadecane 78.3 % 42.2-156

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**Analytical Results For:**

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

Received: 01/08/2021  
 Reported: 01/11/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 01/08/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 10 (H210059-05)**

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	01/08/2021	ND	1.66	82.8	2.00	1.23	
Toluene*	<0.050	0.050	01/08/2021	ND	1.75	87.4	2.00	2.98	
Ethylbenzene*	<0.050	0.050	01/08/2021	ND	1.74	87.2	2.00	2.77	
Total Xylenes*	<0.150	0.150	01/08/2021	ND	5.65	94.1	6.00	1.06	
Total BTEx	<0.300	0.300	01/08/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	01/09/2021	ND	237	119	200	1.45	
DRO >C10-C28*	263	10.0	01/09/2021	ND	231	115	200	0.871	
EXT DRO >C28-C36	76.7	10.0	01/09/2021	ND					

Surrogate: 1-Chlorooctane 84.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 92.5 % 42.2-156

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 01/08/2021  
 Reported: 01/11/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 01/08/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B 11 (H210059-06)**

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	01/08/2021	ND	1.66	82.8	2.00	1.23	
Toluene*	<0.050	0.050	01/08/2021	ND	1.75	87.4	2.00	2.98	
Ethylbenzene*	<0.050	0.050	01/08/2021	ND	1.74	87.2	2.00	2.77	
Total Xylenes*	<0.150	0.150	01/08/2021	ND	5.65	94.1	6.00	1.06	
Total BTEx	<0.300	0.300	01/08/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	01/09/2021	ND	237	119	200	1.45	
DRO >C10-C28*	270	10.0	01/09/2021	ND	231	115	200	0.871	
EXT DRO >C28-C36	83.6	10.0	01/09/2021	ND					

Surrogate: 1-Chlorooctane 76.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 84.3 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 01/08/2021  
 Reported: 01/11/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 01/08/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: W 3 (H210059-07)**

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	01/08/2021	ND	1.66	82.8	2.00	1.23	
Toluene*	<0.050	0.050	01/08/2021	ND	1.75	87.4	2.00	2.98	
Ethylbenzene*	<0.050	0.050	01/08/2021	ND	1.74	87.2	2.00	2.77	
Total Xylenes*	<0.150	0.150	01/08/2021	ND	5.65	94.1	6.00	1.06	
Total BTEX	<0.300	0.300	01/08/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 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	01/09/2021	ND	237	119	200	1.45	
DRO >C10-C28*	277	10.0	01/09/2021	ND	231	115	200	0.871	
EXT DRO >C28-C36	87.6	10.0	01/09/2021	ND					

Surrogate: 1-Chlorooctane 80.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 92.1 % 42.2-156

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**Analytical Results For:**

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

Received: 01/08/2021  
 Reported: 01/11/2021  
 Project Name: NEDU #625  
 Project Number: NONE GIVEN  
 Project Location: NONE GIVEN

Sampling Date: 01/08/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: W 4 (H210059-08)**

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	01/08/2021	ND	1.66	82.8	2.00	1.23		
Toluene*	<0.050	0.050	01/08/2021	ND	1.75	87.4	2.00	2.98		
Ethylbenzene*	<0.050	0.050	01/08/2021	ND	1.74	87.2	2.00	2.77		
Total Xylenes*	<0.150	0.150	01/08/2021	ND	5.65	94.1	6.00	1.06		
Total BTEx	<0.300	0.300	01/08/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	01/09/2021	ND	237	119	200	1.45	
DRO >C10-C28*	283	10.0	01/09/2021	ND	231	115	200	0.871	
EXT DRO >C28-C36	80.5	10.0	01/09/2021	ND					

Surrogate: 1-Chlorooctane 84.0 % 44.3-144

Surrogate: 1-Chlorooctadecane 91.3 % 42.2-156

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### Notes and Definitions

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

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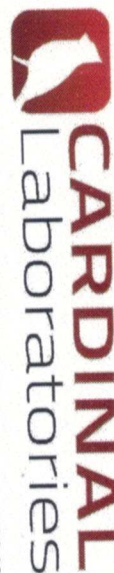
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A handwritten signature in black ink, appearing to read "Celey D. Keene".

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Celey D. Keene, Lab Director/Quality Manager



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

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

<b>Company Name:</b> Apache Corporation <b>Project Manager:</b> Bruce Baker <b>Address:</b> 2350 W. Maryland <b>City:</b> Hobbs <b>State:</b> NM <b>Zip:</b> 88240 <b>Phone #:</b> 432-431-6098 <b>Fax #:</b> <b>Project #:</b> <b>Project Owner:</b> <b>Project Name:</b> MEDU # 425 <b>Project Location:</b> Juan Talavera <b>Sampler Name:</b> Juan Talavera <small>FOR LAB USE ONLY</small>				<b>P.O. #:</b> <b>Company:</b> Apache <b>Attn:</b> Bruce Baker <b>Address:</b> <b>City:</b> SAME <b>State:</b> Zip: <b>Phone #:</b> <b>Fax #:</b>			
<b>Lab I.D.</b> H210059 <b>Sample I.D.</b>				<b>BILL TO</b>			
<b>PLEASE NOTE:</b> Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.				<b>ANALYSIS REQUEST</b>			
<b>Relinquished By:</b> [Signature] <b>Relinquished By:</b> [Signature]				<b>Verbal Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Phone #:</b>			
<b>Date:</b> 1/8/20 <b>Received By:</b> [Signature] <b>Time:</b> 3:10 <b>Received By:</b> [Signature] <b>Date:</b> <b>Time:</b>				<b>Matrix:</b> <input type="checkbox"/> GROUNDWATER <input type="checkbox"/> WASTEWATER <input type="checkbox"/> SOIL <input type="checkbox"/> OIL <input type="checkbox"/> SLUDGE <input type="checkbox"/> OTHER: <b>Preserv:</b> <input type="checkbox"/> ACID/BASE: <input type="checkbox"/> ICE / COOL <input type="checkbox"/> OTHER:			
<b>FOR LAB USE ONLY</b>				<b>SAMPLING</b>			
<b>Observed Temp. °C</b> 4.5 <b>Corrected Temp. °C</b> <b>Sample Condition</b> <input type="checkbox"/> Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Checked By:</b> [Signature] (Initials)				<b>TPH</b> <b>BTEX</b> <b>Extended</b>			
<b>Turnaround Time:</b> Standard <input type="checkbox"/> Rush <input checked="" type="checkbox"/> <b>Thermometer ID #113</b> <b>Correction Factor</b> None <b>Bacteria (only)</b> <input type="checkbox"/> Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Sample Condition</b>				<b>Remarks:</b> Rush <b>email:</b> Bruce			







**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS  
  
Action 23335

CONDITIONS

Operator: APACHE CORPORATION 303 Veterans Airpark Ln Midland, TX 79705	OGRID: 873
	Action Number: 23335
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	None	6/7/2021