303 Veterans Airpark Lane Midland, TX 79705

Remediation Plan

December 18, 2020
Re: NEDU 222
Case # NRM2026946157

Background:

On 9/20/2020 a release occurred due to a ½ inch valve was left open on the casing resulting in the loss fluid. The release (GPS: 32.5124741, -103.12847) is located north of Eunice, New Mexico in unit letter I section 2 township 21S range 37E. A groundwater survey was conducted utilizing NMOSE and USGS wells of record and data from a soil bore that Apache Corporation conducted in the area from a previous case. The soil bore is ½ mile east of the NEDU 222 and was drilled on 7/31/2019 to a depth of 60 feet. The soil bore data indicates that groundwater is greater than 50 feet.

On 12/1/2020 two verticals were conducted utilizing a backhoe. Samples were collected in one foot intervals and all samples were submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. Horizontal 5 point surface samples were collected not to exceed 200 square feet and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. On 12/4/2020 SP 2 was advanced to 2 feet and the sample was submitted to a commercial laboratory for analysis of chloride. The laboratory results confirmed that the release area has been delineated to below table one standards for release 51-100 feet to groundwater.

Remediation Plan:

Apache Corporation proposes that the release area on the pad (SP1) be excavated to a depth of 6 inches to 1 foot. The release area in the pasture (SP 2) be excavated to a depth of two feet. Once excavation is complete final 5 point bottom and wall samples will be collected not to exceed 200 square feet and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. All excavated soil (75 yards) will be hauled to an OCD approved disposal facility. Once laboratory results are below table one standards for releases 51-100 feet to groundwater and below reclamation standards the excavation will be backfilled with clean imported caliche for the pad and clean imported top soil for the pasture to ground surface and contoured to the surrounding area. The pasture area will be reseeded in accordance with the NMSLO. The remediation will be completed within 180 days of OCD approval of the remediation plan.

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

Submitted by;

Bruce Baker

Environmental Technician
larry.baker@apachecorp.com
Cell# 432-631-6982

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	61 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☑ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☑ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☑ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☑ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☑ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☑ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☑ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☑ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☑ Yes ☐ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
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: 12/21/2020

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

- ☑ Detailed description of proposed remediation technique
- ☑ Scaled sitemap with GPS coordinates showing delineation points
- ☑ Estimated volume of material to be remediated
- ☑ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☑ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Larry Baker Title: Environmental Tech SR.

Signature: Larry Baker Date: 12/21/2020

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

OCD Only

Received by: Chad Hensley Date: 03/04/2021

☐ Approved ☒ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: Chad Hensley Date: 03/04/2021


207
18
NEDU 218 Soil Bore
NEDU 222
© 2020 Google
1420 ft
1997
Google earth
SAP Secure Login Client
Network connectivity is fine
Imagery Date: 2/20/201
ev 3499 ft
eye alt 9672 ft

Table 1
Confirmation Soil Sample Analytical Data Summary
Apache Corporation, NEDU 218
Lea County, New Mexico
32° 30' 44.10 North 103° 08' 11.80 West

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Remediation Level:				**10**	**50**				**100**	**600**
BH-1	15	02/28/2019	In-Situ							678
	20	02/28/2019	In-Situ							848
	25	02/28/2019	In-Situ							1170
	30	02/28/2019	In-Situ							1120
	31	02/28/2019	In-Situ							1250
	40	7/31/2019	In-Situ							1670
	45	7/31/2019	In-Situ							1120
	50	7/31/2019	In-Situ							1810
	55	7/31/2019	In-Situ							1350
	60	7/31/2019	In-Situ							272

Notes: analysis performed by Permian Basin Environmental Lab, Midland, Texas by EPA 300 (chloride)
Depth in feet below ground surface (bgs)
mg/Kg: milligrams per kilogram equivalent to parts per million (ppm)
< denotes concentration less than analytical method reporting limit

Received by OCD: 12/21/2020 9:24:15 AM
Released to Imaging: 3/4/2021 8:12:14 AM

SCARBOROUGH DRILLING, INC.

TEST HOLES • WATER WELLS

P.O. Box 305 - Ph. 806-872-3285 or 872-9349

LAMESA, TEXAS 79331

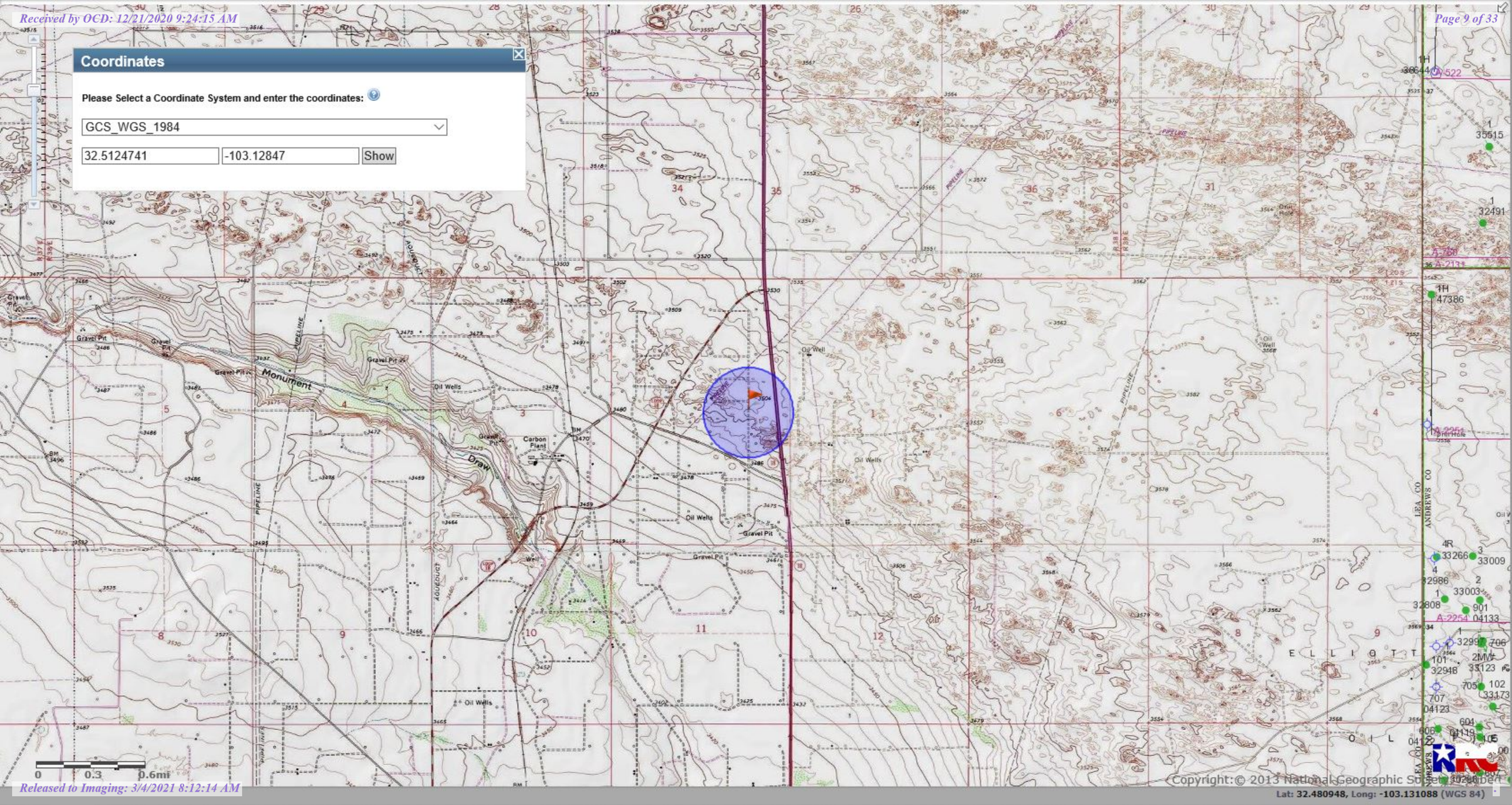
2001 South Hwy. 87

Larson

WELL LOG

From	To	FORMATION
		Apache NEDU 218
0	11	Backfill
11	16	Sandy Clay
16	60	Sand

Date 7-31-19 Driller Lane Scarborough


Coordinates
Please Select a Coordinate System and enter the coordinates:
GCS_WGS_1984
32.5124741
-103.12847
Show
Monument
Draw
Carbon Plant
Gravel Pit
Oil Wells
PIPELINE
AQUEDUCT
LEA CO
ANDREWS CO
E L L I O T T
O I L
0
0.3
0.6mi
Copyright: © 2013 National Geographic Society, i-cubed
Lat: 32.480948, Long: -103.131088 (WGS 84)


H3
H4
SP2
SP1
H1
H2
NEDU 222
100 ft
© 2020 Google
Google earth
Imagery Date: 2/20/2019 lat 32.512338° lon -103.128131° elev 3509 ft eye alt 3940 ft

Sample Date	Sample ID	Depth	Field Chloride	Chloride	Benzene	Toulene	Ethybenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO	GPS Coordinates
Horizontal Samples													
12/4/2020	H1	Surface	145	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.51261 -103.12846
12/4/2020	H2	Surface	178	160	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.51255 -103.12864
12/4/2020	H3	Surface	119	<16.0	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.51266 -103.12869
12/4/2020	H4	Surface	120	<16.0	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.51267 -103.12859
Delineation Samples													
12/1/2020	SP1 @ Surface	Surface	926	1,340	<0.050	0.076	<0.050	5.33	5.41	724	29,200	4,950	32.51262 -103.12859
12/1/2020	SP1 @ 1'	1'	908	720	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	91.0	23.8	
12/1/2020	SP2 @ Surface	Surface	1,002	1,040	<0.050	0.060	0.454	4.58	5.09	667	17,500	3,030	32.51265 -103.12869
12/1/2020	SP2 @ 1'	1'	911	784	<0.050	0.109	<0.050	0.213	<0.300	<10.0	43.2	<10.0	
12/4/2020	SP2 @ 2'	2'	148	48									

CARDINAL Laboratories

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

December 03, 2020

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU #222

Enclosed are the results of analyses for samples received by the laboratory on 12/01/20 15:30.

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 accreditated through the State of Colorado Department of Public Health and Environment for:

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	12/01/2020	Sampling Date:	12/01/2020
Reported:	12/03/2020	Sampling Type:	Soil
Project Name:	NEDU #222	Sampling Condition:	Cool & Intact
Project Number:	NEDU #222	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ SURFACE (H003143-01)

BTEX 8021B mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2020	ND	2.12	106	2.00	4.42	
Toluene*	**0.076**	0.050	12/03/2020	ND	2.01	101	2.00	4.82	
Ethylbenzene*	<0.050	0.050	12/03/2020	ND	2.09	105	2.00	4.82	
Total Xylenes*	**5.33**	0.150	12/03/2020	ND	5.95	99.2	6.00	4.19	
Total BTEX	**5.41**	0.300	12/03/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *312 %* *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	**1340**	16.0	12/02/2020	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*	**724**	100	12/02/2020	ND	212	106	200	1.78	
DRO >C10-C28*	**29200**	100	12/02/2020	ND	203	101	200	4.35	
EXT DRO >C28-C36	**4950**	100	12/02/2020	ND					

Surrogate: 1-Chlorooctane *204 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *750 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	12/01/2020	Sampling Date:	12/01/2020
Reported:	12/03/2020	Sampling Type:	Soil
Project Name:	NEDU #222	Sampling Condition:	Cool & Intact
Project Number:	NEDU #222	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ 1' (H003143-02)

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	12/03/2020	ND	2.12	106	2.00	4.42	
Toluene*	<0.050	0.050	12/03/2020	ND	2.01	101	2.00	4.82	
Ethylbenzene*	<0.050	0.050	12/03/2020	ND	2.09	105	2.00	4.82	
Total Xylenes*	<0.150	0.150	12/03/2020	ND	5.95	99.2	6.00	4.19	
Total BTEX	<0.300	0.300	12/03/2020	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	**720**	16.0	12/02/2020	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	12/02/2020	ND	212	106	200	1.78	
DRO >C10-C28*	**91.0**	10.0	12/02/2020	ND	203	101	200	4.35	
EXT DRO >C28-C36	**23.8**	10.0	12/02/2020	ND					

Surrogate: 1-Chlorooctane *86.0 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *84.6 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	12/01/2020	Sampling Date:	12/01/2020
Reported:	12/03/2020	Sampling Type:	Soil
Project Name:	NEDU #222	Sampling Condition:	Cool & Intact
Project Number:	NEDU #222	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 2 @ SURFACE (H003143-03)

BTEX 8021B mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2020	ND	2.12	106	2.00	4.42	
Toluene*	**0.060**	0.050	12/03/2020	ND	2.01	101	2.00	4.82	
Ethylbenzene*	**0.454**	0.050	12/03/2020	ND	2.09	105	2.00	4.82	
Total Xylenes*	**4.58**	0.150	12/03/2020	ND	5.95	99.2	6.00	4.19	
Total BTEX	**5.09**	0.300	12/03/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *207 %* *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	**1040**	16.0	12/02/2020	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*	**667**	100	12/02/2020	ND	212	106	200	1.78	
DRO >C10-C28*	**17500**	100	12/02/2020	ND	203	101	200	4.35	
EXT DRO >C28-C36	**3030**	100	12/02/2020	ND					

Surrogate: 1-Chlorooctane *178 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *530 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

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

Analytical Results For:

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

Received:	12/01/2020	Sampling Date:	12/01/2020
Reported:	12/03/2020	Sampling Type:	Soil
Project Name:	NEDU #222	Sampling Condition:	Cool & Intact
Project Number:	NEDU #222	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 2 @ 1' (H003143-04)

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	12/03/2020	ND	2.12	106	2.00	4.42	
Toluene*	**0.109**	0.050	12/03/2020	ND	2.01	101	2.00	4.82	
Ethylbenzene*	<0.050	0.050	12/03/2020	ND	2.09	105	2.00	4.82	
Total Xylenes*	<0.150	0.150	12/03/2020	ND	5.95	99.2	6.00	4.19	
Total BTEX	<0.300	0.300	12/03/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.7 %* *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	**784**	16.0	12/02/2020	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	12/02/2020	ND	212	106	200	1.78	
DRO >C10-C28*	**43.2**	10.0	12/02/2020	ND	203	101	200	4.35	
EXT DRO >C28-C36	<10.0	10.0	12/02/2020	ND					

Surrogate: 1-Chlorooctane *76.0 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *76.7 %* *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.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Apache Corporation	**BILL TO**	
Project Manager:	Bruce Baker	P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:	NEDU 222	State: Zip:	
Project Location:	NEDU 222	Phone #:	
Sampler Name:	JEFF Brown	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	CL –	BTEX	EXT. TPH									
H003143																										
1	SP1 @ Surface	G				✓							12/1/20	1220	✓	✓	✓									
2	SP1 @ 1'	G				✓								1503	✓	✓	✓									
3	SP1 @ Surface	G				✓								1222	✓	✓	✓									
4	SP1 @ 1'	G				✓							12/1/20	1506	✓	✓	✓									

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Relinquished By:	Date: 12/1/20	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
JEFF Brown	Time: 1530	Tamara Oldaker	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One)	Sample Condition	CHECKED BY:
Sampler - UPS - Bus - Other: 4.2° #113	Cool: Yes / No Intact: Yes / No	(Initials) T.O.

+ Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

Received by OCD: 12/21/2020 9:24:15 AM

Released to Imaging: 3/4/2021 8:12:14 AM

CARDINAL Laboratories

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

December 04, 2020

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU #222

Enclosed are the results of analyses for samples received by the laboratory on 12/04/20 9:53.

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/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	12/04/2020	Sampling Date:	12/04/2020
Reported:	12/04/2020	Sampling Type:	Soil
Project Name:	NEDU #222	Sampling Condition:	Cool & Intact
Project Number:	NEDU #222	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 2 @ 2' (H003185-01)

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	12/04/2020	ND	432	108	400	3.77	

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Apache Corporation	**BILL TO**	
Project Manager:	Bruce Baker	P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:	NEDU 222	State: Zip:	
Project Location:	NEDU 222	Phone #:	
Sampler Name:	Jeff Broom	Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	CL-											
H003185-1	SP2@2'	G				✓							12/4/20	0850	✓											

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

Relinquished By: Jeff Broom	Date: 12/4/20	Received By: Tamara Oldaker	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 9:53		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: 5.9°c #113

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

CHECKED BY: (Initials) T.O.

+ Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

Received by OCD: 12/21/2020 9:24:15 AM

Released to Imaging: 3/4/2021 8:12:14 AM

CARDINAL Laboratories

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

December 08, 2020

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU #222

Enclosed are the results of analyses for samples received by the laboratory on 12/04/20 9:50.

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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	12/04/2020	Sampling Date:	12/04/2020
Reported:	12/08/2020	Sampling Type:	Soil
Project Name:	NEDU #222	Sampling Condition:	Cool & Intact
Project Number:	NEDU #222	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: H 1 (H003186-01)

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	12/07/2020	ND	2.13	107	2.00	6.87	
Toluene*	<0.050	0.050	12/07/2020	ND	2.06	103	2.00	6.60	
Ethylbenzene*	<0.050	0.050	12/07/2020	ND	2.15	108	2.00	7.61	
Total Xylenes*	<0.150	0.150	12/07/2020	ND	6.12	102	6.00	7.30	
Total BTEX	<0.300	0.300	12/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.8 %* *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	**32.0**	16.0	12/04/2020	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/07/2020	ND	234	117	200	0.000862	
DRO >C10-C28*	<10.0	10.0	12/07/2020	ND	231	115	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/07/2020	ND					

Surrogate: 1-Chlorooctane *92.2 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *91.9 %* *42.2-156*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	12/04/2020	Sampling Date:	12/04/2020
Reported:	12/08/2020	Sampling Type:	Soil
Project Name:	NEDU #222	Sampling Condition:	Cool & Intact
Project Number:	NEDU #222	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: H 2 (H003186-02)

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	12/07/2020	ND	2.13	107	2.00	6.87	
Toluene*	<0.050	0.050	12/07/2020	ND	2.06	103	2.00	6.60	
Ethylbenzene*	<0.050	0.050	12/07/2020	ND	2.15	108	2.00	7.61	
Total Xylenes*	<0.150	0.150	12/07/2020	ND	6.12	102	6.00	7.30	
Total BTEX	<0.300	0.300	12/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.2 %* *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	**160**	16.0	12/04/2020	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/07/2020	ND	234	117	200	0.000862	
DRO >C10-C28*	<10.0	10.0	12/07/2020	ND	231	115	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/07/2020	ND					

Surrogate: 1-Chlorooctane *94.8 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *91.0 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	12/04/2020	Sampling Date:	12/04/2020
Reported:	12/08/2020	Sampling Type:	Soil
Project Name:	NEDU #222	Sampling Condition:	Cool & Intact
Project Number:	NEDU #222	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: H 3 (H003186-03)

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	12/07/2020	ND	2.13	107	2.00	6.87	
Toluene*	<0.050	0.050	12/07/2020	ND	2.06	103	2.00	6.60	
Ethylbenzene*	<0.050	0.050	12/07/2020	ND	2.15	108	2.00	7.61	
Total Xylenes*	<0.150	0.150	12/07/2020	ND	6.12	102	6.00	7.30	
Total BTEX	<0.300	0.300	12/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.7 %* *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	<16.0	16.0	12/04/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/07/2020	ND	234	117	200	0.000862	
DRO >C10-C28*	<10.0	10.0	12/07/2020	ND	231	115	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/07/2020	ND					

Surrogate: 1-Chlorooctane *109 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *109 %* *42.2-156*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	12/04/2020	Sampling Date:	12/04/2020
Reported:	12/08/2020	Sampling Type:	Soil
Project Name:	NEDU #222	Sampling Condition:	Cool & Intact
Project Number:	NEDU #222	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: H 4 (H003186-04)

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	12/07/2020	ND	2.13	107	2.00	6.87	
Toluene*	<0.050	0.050	12/07/2020	ND	2.06	103	2.00	6.60	
Ethylbenzene*	<0.050	0.050	12/07/2020	ND	2.15	108	2.00	7.61	
Total Xylenes*	<0.150	0.150	12/07/2020	ND	6.12	102	6.00	7.30	
Total BTEX	<0.300	0.300	12/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.5 %* *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	<16.0	16.0	12/04/2020	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/07/2020	ND	234	117	200	0.000862	
DRO >C10-C28*	<10.0	10.0	12/07/2020	ND	231	115	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/07/2020	ND					

Surrogate: 1-Chlorooctane *107 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *104 %* *42.2-156*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Apache Corporation
Project Manager:	Bruce Baker
Address:	
City:	State: Zip:
Phone #:	Fax #:
Project #:	Project Owner:
Project Name:	NEDU 222
Project Location:	NEDU 222
Sampler Name:	Jeff Brown

BILL TO

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

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	Cl-	BTEX	EXT. TPH
H003186																	
1	H1	G	6			✓							12/4/20	0852	✓	✓	✓
2	H2	G	6			✓							12/4/20	0854	✓	✓	✓
3	H3	G	6			✓							12/4/20	0855	✓	✓	✓
4	H4	G	6			✓							12/4/20	0857	✓	✓	✓

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

Relinquished By: Jeff Brown	Date: 12/4/20	Received By: Tamara Oldaker	
	Time: 0950		
Relinquished By:	Date:	Received By:	
	Time:		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: 5.9c #113

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

CHECKED BY: (Initials) JD

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

+ Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

Received by OCD: 12/21/2020 9:24:15 AM

Released to Imaging: 3/4/2021 8:12:14 AM

NEDU 222 12/1/20

SP1 @ Surface - 32.51262, -103.12859

10.1/30.2 = 2.99 = .31 = 926

SP1 @ 1'

10.0/30.3 = 3.03 = .30 = 908

SP2 @ Surface — 32.51265, -103.12869

10.2/30.2 = 2.95 = .34 = 1,002

SP2 @ 1'

10.3/30.3 = 2.94 = .31 = 911

NEDU 222 12/4/20

SP2 @ 2'

10.1/30.1 = 2.98 = .05 = 148

H1 -32.51261, -103.12846

10.3/30.1 = 2.92 = .05 = 145

H2 -32.51258, -103.12861

10.1/30.1 = 2.98 = .06 = 178

H3 -32.51266, -103.12869

10.1/30.2 = 2.99 = .04 = 119

H4 - 32.51267, -103.12859

10.0/30.2 = 3.02 = .04 = 120

Revegetation
And
Noxious Weed Plan

Revegetation Plan:

All the disturbed area in the pasture will be properly prepared and prior to seeding will contact the Authorized Officer for seed mixture and will be reseeded. The disturbed area will be monitored to ensure successful revegetation is achieved. If revegetation is not successful after a couple of growing seasons the site will be reseeded.

Noxious Weed Plan:

Apache Corporation will treat noxious weeds if they become established within the area of remediation. Weed control will be maintained on the disturbed land where noxious weeds exist both prior to remediation and restoration. Apache Corporation will consult with the Authorized Officer for acceptable weed control methods.

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 12792

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
APACHE CORPORATION 303 Veterans Airpark Ln #1000 Midland, TX79705	873	12792	C-141

OCD Reviewer	Condition
chensley	On Closure please include photographs including date and GIS information of before and after reclamation.
chensley	Remediation approved. Closure due date 6/4/2021