

Remediation Plan

March 6, 2020

Re: NEDU Satellite 1 Case # NCE200283913

Background:

On 12/3/2019 a release occurred due to a pump seal failure. An initial C-141 was submitted an approved by NMOCD on 2/6/2020. The NEDU Satellite 1 (GPS: 32.505037, -103.135828) is located north of Eunice, New Mexico in unit letter K section 2 township 21S range 37E. A groundwater survey was conducted utilizing data USGS and NMOSE wells of record and data from a soil bore that Apache Corporation conducted in the area from a previous case. The soil bore is $\frac{1}{2}$ mile north of the NEDU Satellite 1 and was drilled on $\frac{7}{31/2019}$ to a depth of 60 feet. The soil bore data indicates that groundwater is greater than 50 feet.

On 12/31/2019 surface samples were collected and submitted to a commercial laboratory for analysis of chloride, TPH, and BETX. The laboratory results for SP1 and SP 3 were above table one standards for TPH. On 1/27/2020 1 foot samples were collected utilizing a hand auger at SP 1 and SP 3 and submitted to a commercial laboratory for analysis of TPH and BTEX. The laboratory results were below table one standards. On 2/18/2020 5 point composite horizontal samples were collected and submitted to a commercial laboratory.

Remediation Plan:

Apache Corporation proposes that the release area (140 cubic yards) surface be loosen and micro-blaze be applied to the release area. 5 point bottom composite samples will be collect not to exceed 500 square feet and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. If table one standards cannot be achieved after 90 days the elevated levels will be excavated and hauled to a NMOCD approved facility and backfilled with clean imported caliche.

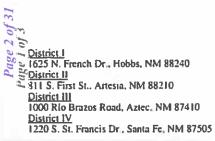
Enclosed: C-141, Soil Bore Data, Sample Data, Maps, and Laboratory Results

Submitted by;

Bruce Baker Environmental Technician SR.

larry.baker@apachecorp.com

Cell# 432-631-6982 Off# 575-393-7106



State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

Incident ID	NCE200839139
District RP	
Facility ID	
Application ID	

Release Notification

			Res	sponsi	ble Part	y
Responsible	Party: Apac	he Corporation			OGRID	873
Contact Nam	e: Bruce B	aker			Contact To	elephone: (432) 631-6982
Contact ema	l: Larry.Bal	cer@apachecorp.c	com		Incident #	(ussigned by OCD)
Contact Mai 88240	ing Address	s: 2350 W. Marla	nd Blvd, Hobbs,	NM		= 0
			Locatio	n of R	telease S	ource
		L	atitude: <u>W 32.50</u>	5037	Longitude	e: <u>N -103.135828</u>
			(NAD 83 in	decimal de	grees to 5 decir	nal places)
Site Name: N	EDU Satelli	ite 1			Site Type:	Battery
Date Release	Discovered	December 3, 20	19		API#	
** ** *		T 4:	В	T		
Unit Letter K	Section 2	Township 21S	Range 37E	LEA	Cour	nty
urface Owne	r: 🔯 State	☐ Federal ☐ T	Cribal Private	(Name:	Not Applica	hle)
						Neicase
Crude Oi		il(s) Released (Select :	all that apply and atta			instification for the volumes provided below) Volume Recovered (2 Barrels)
Crude Oi		Volume Releas	all that apply and atta			justification for the volumes provided below)
		Volume Releas Volume Releas Is the concentra	all that apply and atta led (4 Barrels) led (10 Barrels) ation of dissolved	ach calculat	tions or specific	volume Recovered (2 Barrels)
	Water	Volume Releas Volume Releas Is the concentra	all that apply and atta sed (4 Barrels) sed (10 Barrels) ation of dissolved r >10,000 mg/l?	ach calculat	tions or specific	Volume Recovered (3 Barrels)
Produced	Water	Volume Releas Volume Releas Is the concentrate produced water	all that apply and atta sed (4 Barrels) sed (10 Barrels) attion of dissolved r >10,000 mg/l? sed (bbls)	ach calculat	tions or specific	volume Recovered (2 Barrels) Volume Recovered (3 Barrels) Yes ⊠ No
☑ Produced ☐ Condense	Water	Volume Releas Volume Releas Is the concentra produced water Volume Releas Volume Releas	all that apply and atta sed (4 Barrels) sed (10 Barrels) attion of dissolved r >10,000 mg/l? sed (bbls)	ach calculat	tions or specific	Volume Recovered (3 Barrels) Yes
☐ Condensa	Water ate ias scribe)	Volume Releas Volume Releas Is the concentra produced water Volume Releas Volume Releas	all that apply and atta ded (4 Barrels) ded (10 Barrels) atton of dissolved r > 10,000 mg/l? ded (bbls) ded (Mcf)	ach calculat	tions or specific	Volume Recovered (2 Barrels) Volume Recovered (3 Barrels) Yes
Condense Natural C Other (de	Water ite ias scribe)	Volume Releas Volume Releas Is the concentrate produced water Volume Releas Volume Releas Volume/Weigh	all that apply and atta ied (4 Barrels) ied (10 Barrels) ation of dissolved r >10,000 mg/l? ied (bbls) ied (Mcf) at Released (prov	d chloride	tions or specific	Volume Recovered (2 Barrels) Volume Recovered (3 Barrels) Yes
Condense Natural C Other (de	Water ite ias scribe)	Volume Releas Volume Releas Is the concentra produced water Volume Releas Volume Releas	all that apply and atta ied (4 Barrels) ied (10 Barrels) ation of dissolved r >10,000 mg/l? ied (bbls) ied (Mcf) at Released (prov	d chloride	tions or specific	Volume Recovered (2 Barrels) Volume Recovered (3 Barrels) Yes
Condense Natural C Other (de	Water ite ias scribe)	Volume Releas Volume Releas Is the concentrate produced water Volume Releas Volume Releas Volume/Weigh	all that apply and atta ied (4 Barrels) ied (10 Barrels) ation of dissolved r >10,000 mg/l? ied (bbls) ied (Mcf) at Released (prov	d chloride	tions or specific	Volume Recovered (2 Barrels) Volume Recovered (3 Barrels) Yes
Condense Natural C Other (de	Water ite ias scribe)	Volume Releas Volume Releas Is the concentrate produced water Volume Releas Volume Releas Volume/Weigh	all that apply and atta ied (4 Barrels) ied (10 Barrels) ation of dissolved r >10,000 mg/l? ied (bbls) ied (Mcf) at Released (prov	d chloride	tions or specific	Volume Recovered (2 Barrels) Volume Recovered (3 Barrels) Yes
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State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release? release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No If YES, for what reason(s) does the responsible party consider this a major release? ☐ Yes ☒ No If YES, for what reason(s) does the responsible party consider this a major release? ☐ Yes ☒ No
Initial Response
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury
 ☑ The source of the release has been stopped. ☑ The impacted area has been secured to protect human health and the environment. ☑ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☑ All free liquids and recoverable materials have been removed and managed appropriately. If all the actions described above have not been undertaken, explain why:
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name: <u>Jeff Broom</u> Title: <u>Environmental Technician</u>
Signature: Date: 1/28/2020
Email: <u>Jeffrey.Broom@apachecorp.com</u> Telephone: (432) 664-4677
OCD Only
Received by: Date:

Received by OCD: 3/6/2020 9:16:33 AM Received by OCD: 1/28/2020 1:25:54 PM

Received by OCD: 3/6/2020 9:16:33 AM Received by OCD: 1/28/2020 1:25:54 PM

Volume Calculation

150.24 cubic feet of soil contamination X 7.48 gallons per cubic foot = 1,123 gallons/42 gallons to a barrel=26 barrels X .33 soil porosity= 9 barrels fluid in soil + 5 barrels recovered = 14 barrels total loss.

State of New Mexico Oil Conservation Division

Incident ID	
District RP	
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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?	grenter +Lnn 50 (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 V 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 vectorial to the contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.	ertical extents of soi
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 we Field data	ells.
Data table of soil contaminant concentration data Depth to water determination	
Determination of water sources and significant watercourses within 1/2-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

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. Title: Environmental Tech SR. Printed Name: Bruce Baker Signature: Bruce Bahu

email: larry.baker@apachecorp.com Date: 3-6-20 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 time	
Deferral Requests Only: Each of the following items must be confi	rmed as part of any request for deferral of remediation.
Contamination must be in areas immediately under or around prodeconstruction.	duction equipment where remediation could cause a major facility
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 ce	rtain release notifications and perform corrective actions for releases
which may endanger public health or the environment. The acceptan- liability should their operations have failed to adequately investigate:	
surface water, human health or the environment. In addition, OCD ac	ceptance of a C-141 report does not relieve the operator of
responsibility for compliance with any other federal, state, or local la	
Printed Name: Bruce Baker	Title: Environmental Tech. SR.
Signature: Bruce Bahr	Date: 8-6-20
Printed Name: Bruce Baker Signature: Bruce Baker email: larry. baker@apachecorp.com	Telephone: 432 - 631 - 6982
OCD Only	
Received by:	Date:
Approved Approved with Attached Conditions of A	pproval Denied Deferral Approved
Signature: [Date:



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

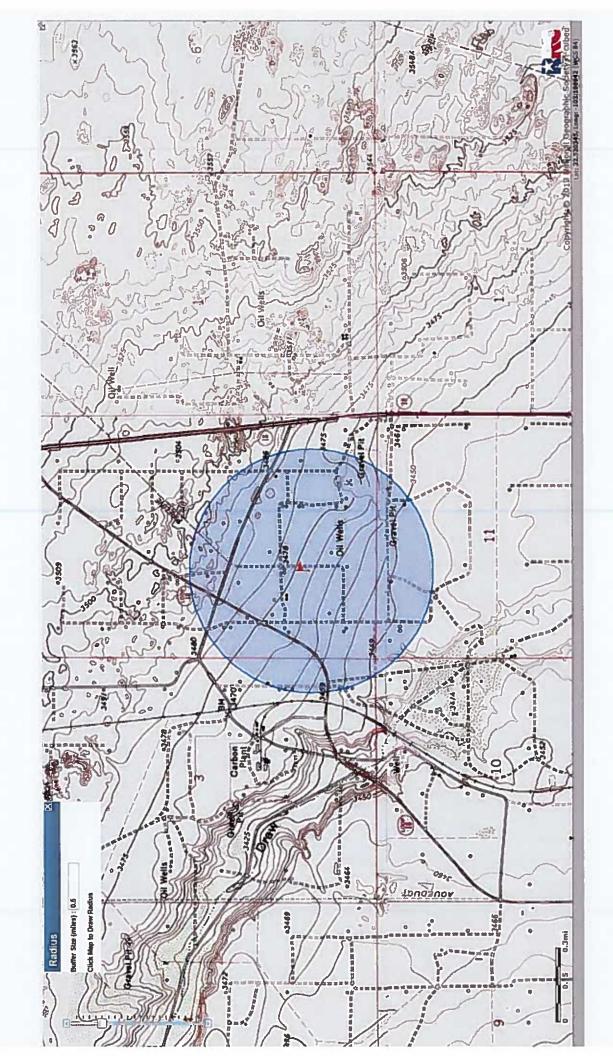
Page 1 of 1

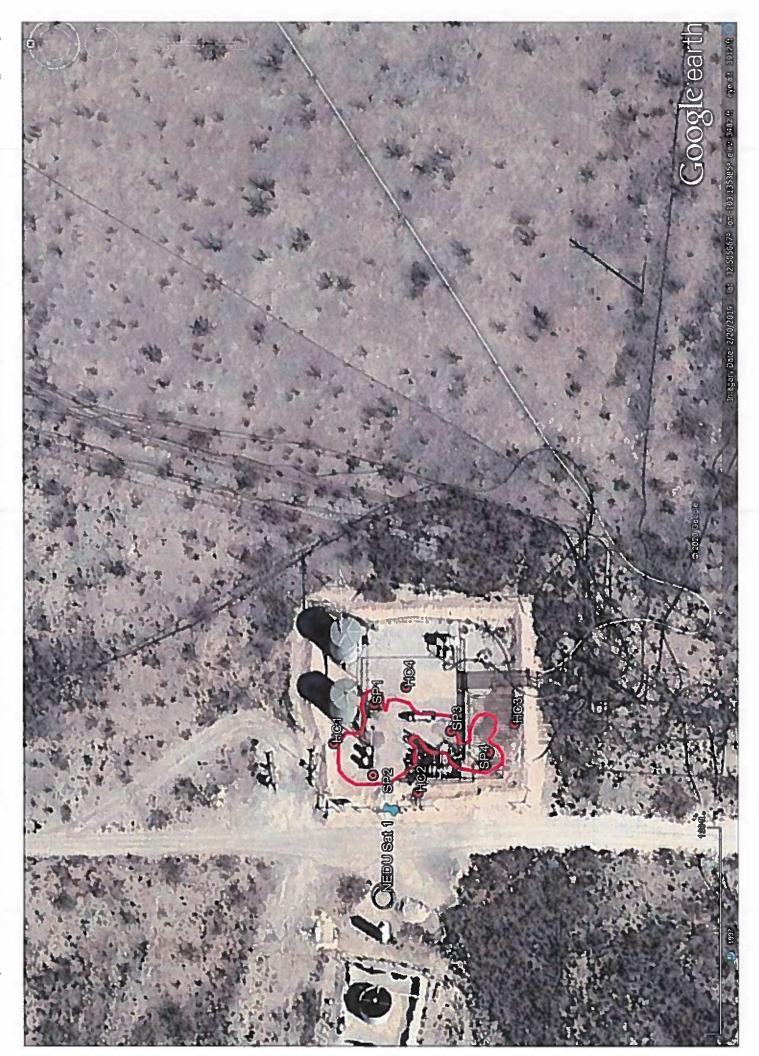
Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Remediation	Level:			10	50				100	600
ВН-1	15	02/28/2019	in-Situ							678
	20	02/28/2019	In-Situ							848
	25	02/28/2019	In-Situ							1170
1	30	02/28/2019	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





	GPS	Coordinates	32.505076	- 103.135656			32.505077	-103.135768	32.504974	-103.135598			32.504923	-103.135731
		S	32	- 10		_	32	-10	32	-19			32	-10
	EXT DRO			452	0.012			121		4720		145		196
İ	DRO			2000	14.4			458		25600		685		9//
	GRO			<10.0	710 O	2017		<10.0		2260		<10.0		<10.0
	Total	ВТЕХ		<0.300	00300	2000		<0.300		111		0.713		<0.300
	Total	Xylenes		<0.150	0.150	201107		<0.150		70.1		0.384	1	<0.150
Sample Points	Ethybenzene			<0.050	70 050	2000		<0.050	-	25.7		0.277		<0.050
01	Toulene			<0.050	70.050	2000		<0.050		14.9		0.052		<0.050
	Benzene		_	<0.050	70.050	0000		<0.050		0.675		<.050		<0.050
	Chloride			5120	V/N	٧/٠		2960		416		A/N	-	3360
	Depth			5	ĩ	1		S		S		1,		S
	Sample ID Sample Date			12/31/2019	01/02/2010	7,21,2017		12/31/2019		12/31/2019	= 1	1/27/2019		12/31/2019
	Sample ID			SP1	100	5		SP2		SP3		SP3		SP4

					유	Horizontal Samples	ın					
Sample ID	Sample ID Sample Date	Depth	Depth Chloride Benzene	Benzene	Toulene	Ethybenzene	Total	Total	GRO	DRO	EXT DRO	GPS
							Xylenes	ВТЕХ				Coordinates
												32.50514
HC1	2/18/2020	Surface	112	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	-103.13572
												32.50502
HC2	2/18/2020	Surface	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	- 103.13580
2												32.50490
HG3	2/18/2020	Surface	<16.0	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	-103.13568
												32.50507
HC4	2/18/2020	Surface	<16.0	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	-103.13566

Note: Horizontal Samples GPS is the middle point of the 5 point composite



January 06, 2020

JEFFREY BROOM

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU SATELLITE 1

Enclosed are the results of analyses for samples received by the laboratory on 12/31/19 11:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab-accred-certif.html.

Cardinal Laboratories is 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)

Celeg D. Keine

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



Analytical Results For:

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

Fax To:

(575) 393-2432

Received:

12/31/2019

01/06/2020

Reported: Project Name:

NEDU SATELLITE 1

Project Number:

NONE GIVEN

Project Location:

NONE GIVEN

Sampling Date:

Sampling Type: Sampling Condition:

Sample Received By:

12/31/2019

Soil

Cool & Intact Jodi Henson

Sample ID: SP 1 @ SURFACE (H904322-01)

BTEX	8021B

m	a	1	ke

Analy	zed	By:	MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/02/2020	ND	1.95	97.7	2.00	2.10	
Toluene*	<0.050	0.050	01/02/2020	ND	1.95	97.6	2.00	1.84	
Ethylbenzene*	<0.050	0.050	01/02/2020	ND	2.00	100	2.00	2.09	
Total Xylenes*	<0.150	0.150	01/02/2020	ND	5.83	97.1	6.00	2.08	
Total BTEX	<0.300	0.300	01/02/2020	ND					

Surrogate: 4-Bromofluorobenzene (PIE

99.4%

73.3-129

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5120	16.0	12/31/2019	ND	432	108	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/01/2020	ND	208	104	200	1.37	
DRO >C10-C28*	2000	10.0	01/01/2020	ND	226	113	200	2.30	
EXT DRO >C28-C36	452	10.0	01/01/2020	ND					

Surrogate: 1-Chlorooctane

87.4%

41-142

Surrogate: 1-Chlorooctadecane

147%

37.6-147

Cardinal Laboratories *=Accredited Analyte

any other clause whatspever shall be deemed waved unless made in writing and received by Cardinal within thirty [30] days after complesion of the applicable service. In no event shall Cardinal be liable including, wichout limitation, business interruptions, loss of use, or loss of profits incurred by chert, its autoestance, affiliates or successors arising out of or related to the performance of the services hereunder claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratomes.

Colony i treemo-



Analytical Results For:

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

Fax To:

(575) 393-2432

Received:

12/31/2019

Reported:

01/06/2020

Project Name: Project Number: **NEDU SATELLITE 1**

Project Location:

NONE GIVEN NONE GIVEN

Sampling Date:

Sampling Type:

Sampling Condition: Sample Received By: 12/31/2019 Soil

Cool & Intact

Jodi Henson

Sample ID: SP 2 @ SURFACE (H904322-02)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/02/2020	ND	1.95	97.7	2.00	2.10	
Toluene*	<0.050	0.050	01/02/2020	ND	1.95	97.6	2.00	1.84	
Ethylbenzene*	<0.050	0.050	01/02/2020	ND	2.00	100	2.00	2.09	
Total Xylenes*	< 0.150	0.150	01/02/2020	ND	5.83	97.1	6.00	2.08	
Total BTEX	<0.300	0.300	01/02/2020	ND					
Surrogate: 4-Bromofluorobenzene (PIE	98.5	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
Chloride	2960	16.0	12/31/2019	ND	432	108	400	0.00	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/01/2020	ND	208	104	200	1.37	
DRO >C10-C28*	458	10.0	01/01/2020	ND	226	113	200	2.30	
EXT DRO >C28-C36	121	10.0	01/01/2020	ND					
Surrogate: 1-Chlorooctane	87.5	% 41-142	?						
Surrogate: 1-Chlorooctadecane	111 5	6 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

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

Chy Litima



Analytical Results For:

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

Fax To:

(575) 393-2432

Received:

12/31/2019

Sampling Date:

12/31/2019

Reported:

01/06/2020

Sampling Type:

Soil

Project Name:

NEDU SATELLITE 1

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

NONE GIVEN

Sample ID: SP 3 @ SURFACE (H904322-03)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.675	0.500	01/02/2020	ND	1.95	97.7	2.00	2.10	
Toluene*	14.9	0.500	01/02/2020	ND	1.95	97.6	2.00	1.84	
Ethylbenzene*	25.7	0.500	01/02/2020	ND	2.00	100	2.00	2.09	
Total Xylenes*	70.1	1.50	01/02/2020	ND	5.83	97.1	6.00	2.08	
Total BTEX	111	3.00	01/02/2020	ND					
Surrogate: 4-Bromofluorobenzene (PIE	147	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	12/31/2019	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	2260	50.0	01/01/2020	ND	208	104	200	1.37	
DRO >C10-C28*	25600	50.0	01/01/2020	ND	226	113	200	2.30	
EXT DRO >C28-C36	4720	50.0	01/01/2020	ND					
Surrogate: 1-Chlorooctane	213	% 41-142	?						
Surrogate: 1-Chlorooctadecane	675	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

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

Colony L. tream



Analytical Results For:

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

(575) 393-2432

Received:

12/31/2019

12/31/2019

Reported:

01/06/2020

Sampling Date: Sampling Type:

Soil

Project Name:

NEDU SATELLITE 1

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

NONE GIVEN

Sample ID:	SP 4 @	SURFACE	(H904322-04)
BTEX 8021B			mg/kg

- 17	ne.	1	k

Analyzed By: MS

		9		0 0 7					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/02/2020	ND	1.95	97.7	2.00	2.10	
Toluene*	<0.050	0.050	01/02/2020	ND	1.95	97.6	2.00	1.84	
Ethylbenzene*	<0.050	0.050	01/02/2020	ND	2.00	100	2.00	2.09	
Total Xylenes*	<0.150	0.150	01/02/2020	ND	5.83	97.1	6.00	2.08	
Total BTEX	< 0.300	0.300	01/02/2020	ND					

mg/	kg	Analyze	d By: AC					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
3360	16.0	12/31/2019	ND	432	108	400	0.00	
mg/	'kg	Analyze	d By: MS					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<10.0	10.0	01/03/2020	ND	215	107	200	4.76	
776	10.0	01/03/2020	ND	239	119	200	2.39	QM-07
//0	10.0	01/03/2020	ND	233	113	200	2.33	Qiriru7
_	Result 3360 mg/	3360 16.0 mg/kg Result Reporting Limit <10.0 10.0	Result Reporting Limit Analyzed 3360 16.0 12/31/2019 mg/kg Analyze Result Reporting Limit Analyzed <10.0	Result Reporting Limit Analyzed Method Blank 3360 16.0 12/31/2019 ND mg/kg Analyzed By: MS Result Reporting Limit Analyzed Method Blank <10.0	Result Reporting Limit Analyzed Method Blank BS 3360 16.0 12/31/2019 ND 432 mg/kg Analyzed By: MS Result Reporting Limit Analyzed Method Blank BS <10.0	Result Reporting Limit Analyzed Method Blank BS % Recovery 3360 16.0 12/31/2019 ND 432 108 mg/kg Analyzed By: MS Result Reporting Limit Analyzed Method Blank BS % Recovery <10.0	Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC 3360 16.0 12/31/2019 ND 432 108 400 mg/kg Analyzed By: MS Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC < 10.0	Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD 3360 16.0 12/31/2019 ND 432 108 400 0.00 mg/kg Analyzed By: MS Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD <10.0

Surrogate: 1-Chlorooctane

103 %

41-142

Surrogate 1-Chlorooctadecane

129 %

37.6-147

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Chang Z trans



Notes and Definitions

5-06	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.
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 SM4500CI-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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Clary Henry

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



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

(5/5) 393-2326 FAX (3/3) 393-24/0		ANA I VOIC
ompany Name: Apache Carpolation	BILL 10	ANALIGIO ALGORO
	P.O. #:	
ddress:	Company:	
ity: State:	Zip: Attn:	
hone #: Fax #:	Address:	
roject #: Project Owner:	wner: City:	
roject Name: Nedec Satellite 2	State: Zip:	
Jak	Phone #:	
Jest 13	1	
	MATRIX PRESERV.	SAMPCING S
Lab I.D. Sample I.D.	(G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: ACID/BASE: ICE / COOL OTHER:	CL- BTEX EXT. TPH
2 SP 2 @ Soutace		9
4 Set O Sentace	6/54/1	
REASE NOTE: Luckley and Demages, Cardine's lackley and claim's accidate remarks and card the resistance remarks and cards included increase for recipience and any other cards included increase for recipience and any other cards included increase for recipience and any other cards of cardined definitions. **The Cardine State Cardined to Builde for Incidental or consequential duringes.**	8 6 9	paid by the clear for the play completen of the applicable by clear, it is subsidiaries.
	Date: 7.11/15 Cates: 7.11/15	All Results are emailed. Please provide Email address: REMARKS:
Delivered By: (Circle One) Observed Temp. *C 1 7 Sampler - UPS - Bus - Other: Corrected Temp. *C 5	Observed Temp. °C (1, "] Sample Condition CHECKED BY: Conscied Temp. °C 5 Yes Yes Corrected Temp. °C 5 Yes Yes	Turnaround Time: Standard Bacteria (only) Sample Condition Rush Cool Intact Observed Temp. °C Thermometer ID #97 Correction Factor +0.4 °C No Corrected Temp. °C

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

Page 7 of 7



January 28, 2020

JEFFREY BROOM

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU SATELLITE 1

Enclosed are the results of analyses for samples received by the laboratory on 01/27/20 14:42.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solld 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.qov/field/qa/lab accredited 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.

Celeg D. Keine

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



Analytical Results For:

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

Fax To:

(575) 393-2432

Received:

01/27/2020

Sampling Date:

01/27/2020

Reported:

01/28/2020

Sampling Type:

Soil

Project Name:

NEDU SATELLITE 1

Sampling Condition:

Cool & Intact

Project Number:

Project Location:

NONE GIVEN NONE GIVEN Sample Received By:

Jodi Henson

Sample ID: SP 1 @ 1' (H000250-01)

BTEX 8021B	mg/	kg	Analyze	d By: M5					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.050	0.050	01/28/2020	ND	1.89	94.4	2.00	13.4	
Toluene*	<0.050	0.050	01/28/2020	ND	1.84	92.0	2.00	13.7	
Ethylbenzene*	<0.050	0.050	01/28/2020	ND	1.83	91.3	2.00	13.9	
Total Xylenes*	<0.150	0.150	01/28/2020	ND	5.36	89.4	6.00	14.1	
Total BTEX	<0.300	0.300	01/28/2020	ND					
Surrogate: 4-Bromoftuorobenzene (PIE	98.8	% 73.3-12	9						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2020	ND	200	100	200	1.10	
DRO >C10-C28*	14.4	10,0	01/28/2020	ND	214	107	200	0.308	
EXT DRO >C28-C36	<10.0	10.0	01/28/2020	ND					
Surrogate: 1-Chlorooctane	103 9	6 41-143	?						
Surrogate: 1-Chlorooctadecane	107 9	37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

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Analytical Results For:

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

Fax To:

(575) 393-2432

Received:

01/27/2020

01/27/2020

Reported:

01/28/2020

Sampling Date: Sampling Type:

Soil

Project Name:

NEDU SATELLITE 1

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

NONE GIVEN

Sample ID: SP 3 @ 1' (H000250-02)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					5-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/28/2020	ND	1.89	94.4	2.00	13.4	
Toluene*	0.052	0.050	01/28/2020	ND	1.84	92.0	2.00	13.7	
Ethylbenzene*	0.277	0.050	01/28/2020	ND	1.83	91.3	2.00	13.9	
Total Xylenes*	0.384	0.150	01/28/2020	ND	5.36	89.4	6.00	14.1	
Total BTEX	0.713	0.300	01/28/2020	ND					
Surrogate: 4-Bromofluorobenzene (PIE	171	% 73.3-12	9						
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2020	ND	200	100	200	1.10	
DRO >C10-C28*	685	10.0	01/28/2020	ND	214	107	200	0.308	
EXT DRO >C28-C36	145	10.0	01/28/2020	ND					
Surrogate 1-Chlorooctane	106	% 41-142	?						
Surrogate 1-Chlorooctadecane	103	% 37.6-14	7						

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*=Accredited Analyte

any other clause whatsoerver shall be deemed waved unless made in writing and received by Cardinal within thirty [30] days after completion of the applicable service. In no event shall Cardinals be hable for indicated or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by clernt, its subsidiance, affiliation or successors around out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Colony it trums



Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

Insufficient time to reach temperature.

Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

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CARDINAL

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

	the sale of the sa			
Company Name:	apache Corporation	2	BILL TO	ANALYSIS REQUEST
Project Manager:	Physics BAKER		P.O. #:	
Address:	•		Company:	
City:	State:	Zip:	Attn:	-
Phone #:	Fax #:		Address:	
Project #:	Project Owner:		City:	
Project Name: 🙏	Project Name: NEW SAT. 7		State: Zip:	
Project Location:	Project Location: NEDU SAT. 2		Phone #:	
Sampler Name: (CEFF BOOM	1	Tax N.	
\neg	(MATRIX	PRESERV. SAMPLING	
Lab I.D. H000250	Sample I.D.	(G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER: ACID/BASE: ICE / COOL OTHER: DATI TIME BTEX CAT. TPA) 4
77-	1 SP3@ 1'			

PLEASE WOTE: Labelity and Demogra. Cardina's bability and claim's ambuse intensity for any claim analog whether based in contend or loci, shall be larend to the amount paid by the claim to the applicable analyses. All claims including those for indifference and any other cases and shopment and the demonst waved unless model in writing and received by Cardinal within 30 days after contribution of the applicable specific is no exect that Cardinal be included or consequential dismapse, including which distribute, business seatmaptons, bear diseas, or loss of profes incurred by claim's, the season and the contribution of the consequential dismapse, including which distribute, business seatmaptons, bear diseas, or loss of profes incurred by claim's as well as a contribution of the
Bacteria (only) Sample Condition Cool Intact Observed Temp. *C Yes Yes		Standard	Turnaround Time:	CHECKED BY:	240	Observed Temp. °C 2.4° Sample Condition	Delivered By: (Circle One)
						Time:	
			REMARKS:	By:	Reeived	Date:	Relinquished By:
				a summer	0	Time: Kary	Jose Low
hone #: il address:	Add'l Pi	d. Please provide Email addres	Verbal Result: Yes No Add'l Phone #: All Results are emailed. Please provide Email address		Received	Date: 272	Relinquished By:

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





February 20, 2020

JEFFREY BROOM

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU SATELLITE 1

Enclosed are the results of analyses for samples received by the laboratory on 02/18/20 15:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. 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.qov/field/ga/lab accredited 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.

Celeg D. Keine

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



Analytical Results For:

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

Received:

02/18/2020

Reported:

02/20/2020 **NEDU SATELLITE 1**

Project Name: Project Number:

NONE GIVEN

Project Location:

NONE GIVEN

Sampling Date:

Sampling Type:

Sampling Condition: Sample Received By: 02/18/2020

Soil

Cool & Intact

Tamara Oldaker

Sample ID: HORIZONTAL C 1 @ SURFACE 32.50514 -103.13572 (H00050

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/19/2020	ND	1.99	99.6	2.00	2.34	
Toluene*	<0.050	0.050	02/19/2020	ND	2.01	101	2.00	2.52	
Ethylbenzene*	<0.050	0.050	02/19/2020	ND	2.02	101	2.00	3.11	
Total Xylenes*	<0.150	0.150	02/19/2020	ND	5.87	97.8	6.00	3.08	
Total BTEX	<0.300	0.300	02/19/2020	ND					
Surrogate: 4-Bromofluorobenzene (PIL	102	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	02/19/2020	ND	432	108	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Umit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/19/2020	ND	194	97.1	200	0.915	
DRO >C10-C28*	<10.0	10.0	02/19/2020	ND	182	90.8	200	3.41	
EXT DRO >C28-C36	<10.0	10.0	02/19/2020	ND					
Surrogate: 1-Chlorooctane	86.2	% 44.3-14	4						
Surrogate 1-Chlorooctadecane	86.4	% 42.2-15	6						

Cardinal Laboratories

*=Accredited Analyte

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Chy Z. trum



Analytical Results For:

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

Fax To:

(575) 393-2432

Received:

02/18/2020

Reported:

02/20/2020

Project Name:

NEDU SATELLITE 1

Project Number:

NONE GIVEN

Project Location:

NONE GIVEN

Sampling Date:

Sample Received By:

Sampling Type: Soil

Sampling Condition:

Cool & Intact

02/18/2020

Tamara Oldaker

Sample ID: HORIZONTAL C 2 @ SURFACE 32.50502 -103.13580 (H00050

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/19/2020	ND	1.99	99.6	2.00	2.34	
Toluene*	<0.050	0.050	02/19/2020	ND	2.01	101	2.00	2.52	
Ethylbenzene*	<0.050	0.050	02/19/2020	ND	2.02	101	2.00	3.11	
Total Xylenes*	<0.150	0.150	02/19/2020	ND	5.87	97.8	6.00	3.08	
Total BTEX	<0.300	0.300	02/19/2020	ND					
Surrogate: 4-Bromofluorobenzene (PIE	101 5	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	02/19/2020	ND	432	108	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/19/2020	ND	194	97.1	200	0.915	
DRO >C10-C28*	< 10.0	10.0	02/19/2020	ND	182	90.8	200	3.41	
EXT DRO >C28-C36	< 10.0	10.0	02/19/2020	ND					
Surrogate: 1-Chlorooctane	87.3	% 44.3-14	4						
Surrogate 1-Chlorooctadecane	88.5	% 42.2-15	6						

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liablety and Damages. Cardenal's Bability and chenck enclusive remedy for any claim arising, whether based in contract or tort, shall be airreted to the amount paid by cleint for analyses. All claims, including those for negligence and any other cause whistoners shall be deemed weived unless made in writing and necewed by Cardenal within thirty (30) days after completion of the applicable service. In no event shall Cardenal be Bable for incidental damages, michaling, without limitation, business interruptions, loss of use, or loss of profits incurred by cleint, its subsidiaries, affiliates or successions arising out of or related to the performance of the services hereinder by Cardenal, regardless of whether such claims a based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. The report shall not be reproduced except in full with written approved of Cardenal laboratories.

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Analytical Results For:

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

Fax To:

(575) 393-2432

Received: Reported: 02/18/2020

02/20/2020 **NEDU SATELLITE 1**

Project Name: Project Number: Project Location:

NONE GIVEN **NONE GIVEN**

Sampling Date:

Sampling Type: Soil

Sampling Condition: Sample Received By: Cool & Intact

02/18/2020

Tamara Oldaker

Sample ID: HORIZONTAL C 3 @ SURFACE 32.50490 -103.13568 (H00050

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.050	0.050	02/19/2020	ND	1.99	99.6	2.00	2.34	
Toluene*	<0.050	0.050	02/19/2020	ND	2.01	101	2.00	2.52	
Ethylbenzene*	<0.050	0.050	02/19/2020	ND	2.02	101	2.00	3.11	
Total Xylenes*	<0.150	0.150	02/19/2020	ND	5.87	97.8	6.00	3.08	
Total STEX	<0.300	0.300	02/19/2020	ND					
Surrogate: 4-Bromofluorobenzene (PIE	102 %	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/19/2020	ND	432	108	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/19/2020	ND	194	97.1	200	0.915	
DRO >C10-C28*	<10.0	10.0	02/19/2020	ND	182	90.8	200	3.41	
EXT DRO >C28-C36	<10.0	10.0	02/19/2020	ND					
Surrogate: 1-Chlorooctane	89.9	% 44.3-14	4						
Surrogate: 1-Chlorooctadecane	91.6	% 42.2-15	б						

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Colony I trans



Analytical Results For:

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

Fax To:

(575) 393-2432

Received:

02/18/2020

02/20/2020

Reported: Project Name:

NEDU SATELLITE 1

Project Number:

NONE GIVEN

Project Location:

NONE GIVEN

Sampling Date:

02/18/2020 Sampling Type: Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

Sample ID: HORIZONTAL C 4 @ SURFACE 32.50507 -103.13566 (H00050

BTEX 8021B	mg/	kg	Analyze	d By: M5					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.050	0.050	02/19/2020	ND	1.99	99.6	2.00	2.34	
Toluene*	<0.050	0.050	02/19/2020	ND	2.01	101	2.00	2.52	
Ethylbenzene*	<0.050	0.050	02/19/2020	ND	2.02	101	2.00	3.11	
Total Xylenes*	<0.150	0.150	02/19/2020	ND	5.87	97.8	6.00	3.08	
Total BTEX	<0.300	0.300	02/19/2020	ND					
Surrogate: 4-Bromofluorobenzene (PIC	102 9	% 73.3-12	?9						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/19/2020	ND	432	108	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/19/2020	ND	194	97.1	200	0.915	
DRO >C10-C28*	<10.0	10.0	02/19/2020	ND	182	90.8	200	3.41	
EXT DRO >C28-C36	<10.0	10.0	02/19/2020	ND					
Surrogate: 1-Chlorooctane	91.0	% 44.3-1-	14						
Surrogate: 1-Chlorooctadecane	92.2	% 42.2-1:	56						

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*=Accredited Analyte

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Chaz Z. Kinn



Notes and Definitions

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 SM4500CI-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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Change trans

Relinquished By:

Date:

Time:

Time:

1 EFF

Sampler - UPS - Bus - Other: Delivered By: (Circle One)

Observed Temp. *C 4,6

Corrected Temp. *C

CHECKED BY: (Initials) 10

Turnaround Time:

Standard Rush

Bacteria (only) Sample Condition
Cool Intact Observed Temp. "C

Yes Yes
No Corrected Temp. "C

Corrected Temp. *C

REMARKS:

Correction Factor +0.446



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	a secte Compaction		B/LL 70	ANALYSIS REQUEST	
Project Manager:	Bruce !		P.O. #:		
Address:			Company:		
City:	State:	Zip:	Attn:		
Phone #:	Tax #:		Address:		
Project #:	Project Owners		City:		
Project Name:	NEW SAT. I		State: Zip:		
Project Location	Project Location: NEDU SAT. I		Phone #:		
Sampler Name:	1 Brean		Fax #:		
FOR LAB USE DMLY		MATRIX	PRESERV. SAMPLING	ING	
		ERS ATER		PH_	
Lab I.D.	Sample I.D.	DUNDWASTEWAT	D/BASE: / COOL	CL- 37ex 31.7	
H000508		# CC GRC WAS SOII	-	1	
_	Paramal CI @ Surface	2	2/18/00	13:20 0	
	32. 50514, -103.13572				
				1.00	
7	Horizontal (2 @ Surton	0		2 2 2 40.6	
	32. 50502, -102 13580				
U	Hizotal C3 @ Sutice	7		1 1 1 At:T	
	32.50490, -163.13568				
4	HUNZINTAL CH @ Surtace	7		2:31	
	32.50507, -103.13566		1/18/20		
PLEASE NOTE: Liability and analyses. All claims including service. In no event shall Car	PLEASE NOTE: Labely and Damages. Cardeat's labely and clent's exclusive enterior (or any cleim nating weather based on contact or lot, shell be limited to the amount paid by the cleent for the participte analyses. All claims including those for negligence and any other cause weathereders and be deserved webset made in writing and needed by Cardeal within 30 days after completion of the applicable service. In no event shall Cardeal be take for included an consequental damages, including without fination, business mismaglores, took of the consequent to the consequent of the consequen	ty claim arising whether based in continud to be seened walved unless made in writing and whost interruptions, it	or lost, shall be limited to the amount paid received by Candrial within 30 days after rss of use, or loss of profits incurred by di	y the client for the amplication ampliants of the application of the a	
Relinquished By:	Relinquished By: Received By: Date: 1 1	Services herounder by Cardinal, Insulptiess of whether such claim I Date: 7 / 1 /- Received By:	s based upon any of the above stated rea	verbal Result: ☐ Yes ☐ No Add'I Phone #:	
1		1		emailed. Please provi	

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