

Closure Report

December 10, 2019

Re: NEDU Injection Trunk Line

API# 30-025-37028 Case # 1RP-5285

To: District 1 NM OCD Reps

Environmental Specialist-New Mexico Oil Conservation Division Energy, Minerals and Natural Resources Department 1625 N. French Drive Hobbs, New Mexico 88240

On November 12, 2018 a release occurred due to a buried injection line failure resulting in the loss of the produced water. An initial C-141 was submitted on November 21, 2018 to NMOCD and approved on December 20, 2018. The release (GPS Coordinates 32.49149, -103.14369) is located north of Eunice, NM in unit letter I section 10 township 21S ranger 37E. The release did impact a significant watercourse Monument Draw located east of the source of release. A 2,000-meter radius survey was conducted utilizing the NMOSE and USGS website for wells in the area. The two closest wells average depth to groundwater is 28.5 feet below ground surface.

To date the release area had been contained utilizing shovels to push up dirt berms around the release. Nine verticals were installed utilizing a backhoe with samples being collected in one-foot intervals to various depths. All samples collected were submitted to a commercial laboratory for analysis of Chloride, TPH, and BTEX.

A remediation plan was submitted on February 13, 2019 with approval dates of February 21, 2019 by OCD and March 4, 2019 by NMSLO. After approval Apache Corporation proceeded with the approved plan. Apache Corporation did divide this remediation plan into three (3) excavations with each of these areas being remediated at varying depths. Excavation 1 was remediated at depths of one and two feet. Excavation 2 was remediated at depths of one to eleven feet. Excavation 3 was remediated at depths of one to four feet.

Once excavations were completed final 5-point bottom and wall samples were collected in accordance with the approved NMOCD remediation plan and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. All excavated soil was exported to an NMOCD approved disposal facility. The lease road excavated areas have been backfilled with clean imported caliche and contoured to the surrounding area. The pasture area was backfilled with clean imported top soil and contoured to the surrounding area. In accordance with NMSLO guidelines the pasture was reseeded with NMSLO Shallow Mix. At this time Apache respectfully requests that *Case #1RP-5285 be closed*. If you have any questions, please feel free to contact us with any questions.

Enclosed: C-141, Maps, Data Table, Laboratory Results, Field Notes, Groundwater Data, Maps, and Photo Page

Submitted by;

Environmental Technician
Jeffrey.Broom@apachecorp.com

Cell# 432-664-4677 Off# 575-393-7106



Remediation Plan

February 13, 2019

Re: NEDU Injection Truck Line

API# 30-025-37028 Case # 1RP-5285

To: Christina Hernandez

Environmental Specialist-New Mexico Oil Conservation Division Energy, Minerals and Natural Resources Department 1625 N. French Drive Hobbs, New Mexico 88240

Background:

On 11/12/2018 a release occurred due to a buried injection line failed resulting in the loss of produced water. An initial C-141 was submitted to NMOCD and approved on 12/20/2018. The release (GPS Coordinates 32.49149 -103.14369) is located north of Eunice New Mexico in unit letter I section 10 township 21S range 37E. The release did impact a significant watercourse Monument Draw located east of the source of the release. A 2000 meter radius survey was conducted utilizing the NMOSE and USGS web site for wells in the area. The two closest wells average depth to groundwater is 28.5 feet below ground surface.

To date the release area has been contained utilizing shovels to push up dirt berms around the release. Nine verticals were installed utilizing a backhoe with samples being collected in one foot intervals to various depths. All samples collected were submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX.

Remediation Plan:

Apache Corporation proposes that during remediation activities to further delineate sample point 2 and sample point 7 to chloride values less than 600 mg/kg. The entire release area will be excavated to various depths until table one standards are meet for releases that occur in areas less than 50 feet to groundwater. Once the excavation is complete Apache Corporation proposes that five point composite field samples be collected not to exceed 200 square feet. All the samples collect will be field titrated utilizing method SM 4500CLB and submit every other sample to a commercial laboratory for analysis of Chloride, TPH, and BTEX. The sidewall five point composite samples will be collected and field titrated not to exceed 200 square feet and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. NMOCD will be notified 48 hours prior to final samples being collected. All excavated material (~3,000 yards) will be hauled to an NMOCD approved facility. The site will be backfilled with clean imported top soil and contoured to the surrounding area. The site will be seeded with approval from the NMSLO.

Enclosed: Initial C-141, Groundwater Data, Maps, Sample Data, Laboratory Results, Photos, Revegetation Plan

Submitted by;

Environmental Technician

larry.baker@apachecorp.com Cell# 432-631-6982 Off# 575-393-7106

Bruce Baker

Responsible Party

Apache Corporation

District I
1625 N French Dr. Hobbs, NM 88240
District II
811 5 First St. Artesia, NM 88210
District III
1000 Rio Brazos Road Aztec NM 87410
District IV
1220 5 St. Francis Dr. Santa Fe, NM 8750 5

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	NCH1835433141
District RP	1RP-5285
Facility ID	
Application ID	

Release Notification

Responsible Party

OGRID

873

Contact Name	В	ruce Baker		Comac	Telephone 43	32-631-6982	
Contact email	lar	ry.baker@apac					DU INJECTION
Contact mailing address 2350 W. Marland BLVD Hobbs, NM 88240			TRUNK LI	TRUNK LINE @ 30-025-37028			
			Location	of Release	Source		
atitude	32.4	9149		Longitus	e10	03.14369	
			(NAD 83 in dec	imal degrees to 5 a	ecimal places)		
Site Name	NEDU	Injection Trur	nk Line	Site Ty	lnjectio	n Line	
Date Release I	Discovered	11/12/2018		API# (y	applicable) 30-025	5-37028 (ne	arest well)
Unit Letter	Section	Township	Range		ounty	<u>·</u>	
OHL PEREL		218	37E		.ea	1	
U Conference Owners	10 State		ribal Private (/	Name:)
	: State	Federal T	ribal Private (/ Nature and	Name:	f Release		l below)
Crude Oil	State	Federal T	ribal Private (/ Nature and lithal apply and attached (bbls)	Name:	f Release	overed (bbls)	l below)
	State	Federal T	ribal Private (/ Nature and oil that apply and attach ed (bbls) ed (bbls) 200 bit	Vame: I Volume of special colors or spe	f Release fice justification for the Volume Reco	overed (bbls)	d below)
Crude Oil	State	Federal T	ribal Private (/ Nature and oil that apply and attach ed (bbls) ed (bbls) 200 be attion of dissolved co	Vame: I Volume of special colors or spe	f Release	overed (bbls)	
Crude Oil	Materia Water	Federal T	ribal Private (/ Nature and oil that apply and attach ed (bbls) ed (bbls) 200 be stion of dissolved c >10,000 mg/l?	Vame: I Volume of special colors or spe	f Release If it justification for the Volume Reco Volume Reco Yes N	overed (bbls)	
Crude Oil	Materia Water	Federal T	ribal Private (/ Nature and Nature and oil that apply and attach ed (bbls) ed (bbls) 200 ba stion of dissolved c >10,000 mg/t? ed (bbls)	Vame: I Volume of special colors or spe	f Release If it justification for the Volume Reco Volume Reco Yes N	overed (bbls) No overed (bbls)	
Crude Oil Produced Condensat	Materia Water	Federal T	ribal Private (/ Nature and Nature and oil that apply and attach ed (bbls) ed (bbls) 200 ba stion of dissolved c >10,000 mg/t? ed (bbls)	Vame: I Volume of special control of speci	f Release Volume Reco Volume Reco Volume Reco Volume Reco Volume Reco Volume Reco Volume Reco	overed (bbls) No overed (bbls) overed (bbls) overed (bbls)	

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major	If YES, for what reason(s) does	the responsible party consider this a major release?
release as defined by 19.15.29.7(A) NMAC?	The release was over 25	5 harrole
	1110 1010000 1100 0101 20	, barrols
☑ Yes ☐ No		
If YES, was immediate n	otice given to the OCD? By who	m? To whom? When and by what means (phone, email, etc)?
Bruce Baker notifie	d Jim Griswold and Olivia	Yu via email on 11/14/2018 at 7:25 a.m.
	In	nitial Response
The responsible	party must undertake the following action	as immediately unless they could create a safety hazard that would result in injury
The source of the rel		
[a	as been secured to protect human	
Released materials h	ave been contained via the use of	berms or dikes, absorbent pads, or other containment devices.
All free liquids and r	ecoverable materials have been re	emoved and managed appropriately.
If all the actions describe	d above have <u>not</u> been undertaker	n, explain why:
has begun, please attach	a narrative of actions to date. If	ommence remediation immediately after discovery of a release. If remediation fremediation fremediation.
I hereby certify that the infe	ormation given above is true and com-	plete 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 nort by the OCD does not relieve the operator of liability should their operations have
failed to adequately investig	gate and remediate contamination that	t pose a threat to groundwater, surface water, human health or the environment. In
addition, OCD acceptance (and/or regulations:	of a C-141 report does not relieve the	operator of responsibility for compliance with any other federal, state, or local laws
1	Dakas	Professional Profession OR
Printed Name: Bruce	paker	Title: Environmental Technician SR.
Signature: Buck	e Baher	Date: 11/21/2018
1	gapachecorp.com	Telephone: 431-631-6982
20704		
OCD Only RE	CEIVED	
Received by: By C	Hernandez at 9:15 am	, Dec 20, 2018

Volume Calculation

16,225 X .2= 3,245 cubic feet X 7.48 gallon per cubic foot= 24,272 gallons/42 gallons to barrel=577 barrels X .33 soil porosity= 190 barrels + 10 barrels recovered = 200 barrels lost.

State of New Mexico Oil Conservation Division

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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?	285 (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 Y 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 wel	ls.		
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.

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: Bruce Baker	Title: Environmental Tech SR.			
Signature: Bruce Baher	Date: 2-13-19			
email: lary baker@apachecorp.com	Telephone: 432 - 631 - 6982			
OCD Only				
Received by:	Date:			

State of New Mexico Oil Conservation Division

Incident ID	
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Remediation Plan

Remediation Plan Checklist: Each of the following items must be	e included in the plan.
	·
Detailed description of proposed remediation technique	
Scaled sitemap with GPS coordinates showing delineation poir Estimated volume of material to be remediated	its
Closure criteria is to Table 1 specifications subject to 19.15.29.	12/CVANNIMAC
Proposed schedule for remediation (note if remediation plan tir	neline is more than 90 days OCD approval is required)
1 tohogog gouegne to tettionington fuote it tettionings him at	mentic is more than 70 days Octo approvar is requires)
Deferral Requests Only: Each of the following items must be co	nfirmed as part of any request for deferral of remediation.
Contamination must be in areas immediately under or around p deconstruction.	roduction equipment where remediation could cause a major facility
Extents of contamination must be fully delineated.	
Contamination does not cause an imminent risk to human healt	h, the environment, or groundwater.
I hereby continues the information given should be two and complete	ete to the best of my knowledge and understand that pursuant to OCD
	certain release notifications and perform corrective actions for releases
	ance of a C-141 report by the OCD does not relieve the operator of
liability should their operations have failed to adequately investigate	
surface water, human health or the environment. In addition, OCD	
responsibility for compliance with any other federal, state, or local	laws and/or regulations.
Printed Name: Bruce Baken	Title: Environmental Tech.
Signature: Bruce Bahn	Date: 2-13-19
email: larry baker@apachecorpicom	Telephone: 432 - 631 - 6982
The First State of the State of	tachious Transfer Fa. C. C.
OCD Only	
	2/14/2019
Received by: Vanessa Fields	2/14/2019 Date:
Approved	Approval Denied Deferral Approved
	Libbiates C Section this con-
Signature: Varano Kielal	Date: 2/21/2019

State of New Mexico Oil Conservation Division

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

Incident ID	nCH1835433141
District RP	1RP-5285
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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.

A scaled site and sampling diagram as described in 19.15.29.11 NMA	
Photographs of the remediated site prior to backfill or photos of the li must be notified 2 days prior to liner inspection)	ner integrity if applicable (Note: appropriate OCD District office
☐ Laboratory analyses of final sampling (Note: appropriate ODC Distric	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 and regulations all operators are required to report and/or file certain release may endanger public health or the environment. The acceptance of a C-141 should their operations have failed to adequately investigate and remediate thuman health or the environment. In addition, OCD acceptance of a C-141 compliance with any other federal, state, or local laws and/or regulations. Trestore, reclaim, and re-vegetate the impacted surface area to the conditions accordance with 19.15.29.13 NMAC including notification to the OCD when Printed Name: Jeffrey Broom Title: Environmental Technician Signature: Jeffrey Broom@apachecorp.com Telephone: 432.664.4677	notifications and perform corrective actions for releases which report by the OCD does not relieve the operator of liability contamination that pose a threat to groundwater, surface water, report does not relieve the operator of responsibility for the responsible party acknowledges they must substantially that existed prior to the release or their final land use in n reclamation and re-vegetation are complete.
OCD Only	
Received by: Cristina Eads	Date: 02/19/2020
Closure approval by the OCD does not relieve the responsible party of liabilities remediate contamination that poses a threat to groundwater, surface water, huparty of compliance with any other federal, state, or local laws and/or regulations.	man health, or the environment nor does not relieve the responsible
Closure Approved by: Cristina Cads	Date: 02/20/2020
Printed Name: Cristina Eads	Title: 02/20/2020
	<u>.</u>

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National Water Information System: Web Interface

USGS Water Resources

Data Category:	Geographic Area:	
Groundwater ~	New Mexico	GO

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Table of data

Graph of data

Reselect period

Tab-separated data

Groundwater levels for New Mexico

Click to hide state-specific text

Search Results -- 1 sites found

Agency code = usgs site_no list =

• 322921103083001

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 322921103083001 21S.37E.11.311114

Available data for this site Groundwater: Field measurements GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°29'21", Longitude 103°08'30" NAD27

Land-surface elevation 3,431 feet above NAVD88

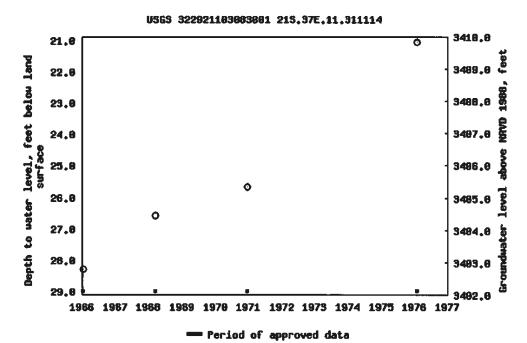
The depth of the well is 76 feet below land surface.

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

https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels/?site no=322921103083001&agency c... 2/13/2019

Output formats

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

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Title: Groundwater for New Mexico: Water Levels

URL: https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?

Page Contact Information: New Mexico Water Data Maintainer

Page Last Modified: 2019-02-13 13:57:59 EST

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National Water Information System: Web Interface

USGS Water Resources

Data Category:	Geographic Area:	
Groundwater ~	New Mexico	✓ GO

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Groundwater levels for New Mexico

Click to hide state-specific text

Search Results -- 1 sites found

Agency code = usgs site_no list =

• 322932103082701

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 322932103082701 21S.37E.11.311111

Available data for this site Groundwater: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code -
Latitude 32°29'32", Longitude 103°08'27" NAD27

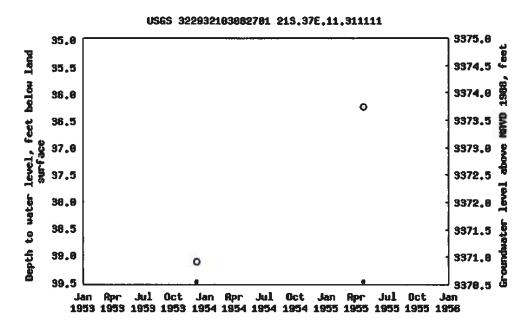
Land-surface elevation 3,410 feet above NAVD88

The depth of the well is 75 feet below land surface.

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

Table of data	
Tab-separated data	
Graph of data	
Reselect period	

Page 2 of 2



- Period of approved data

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

Download a presentation-quality graph

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Title: Groundwater for New Mexico: Water Levels

URL: https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?

Page Contact Information: New Mexico Water Data Maintainer

Page Last Modified: 2019-02-13 13:55:27 EST

5.12 0.91 nadww01

USA.gov

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New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW#### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C-the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(in leet)

		POD													
		Sub-			Q	_				v				epth W	
POD Number	Code		County						-	X	γ	Distance		Nater Co	lumn
CP 00286 POD1		CP	LE	2	1	2	10	215	37E	674019	3597338* 🚱	949	70		
CP 01741 POD1		CP	LE	1	3	4	03	21\$	37E	673895	3597759 🗳	1387	45		
CP 01185 POD1		CP	LE		1	3	14	215	37E	674598	3594689 🚱	1773	70		
CP 01185 POD2		CP	LE		1	3	14	218	37E	674623	3594674 🚱	1791	70		
CP 00554		CP	LE		2	2	16	21\$	37E	672744	3595610*	1796	80	70	10
CP 01110 PCD1		CP	LE		1	3	14	215	37E	674586	3594648 🚳	1811	70		
CP 01110 PC02		CP	LE		1	3	14	21\$	37E	674586	3594648 😂	1811	70		
CP 01110 POD3		CP	LΕ		1	3	14	21\$	37E	674586	3594648 🚱	1811	70		
CP 01110 POD4		CP	LE		1	3	14	218	37E	674586	3594648 🎱	1811	20		
CP 01110 POD5		CP	LE		ŧ	3	14	218	37E	674586	3594648 🚱	1811	20		
CP 01185 POD3		CP	LE		1	3	14	218	37E	674592	3594620 😂	1840	70		
CP 01185 POD4		CP	LE		1	3	14	215	37E	674633	3594610 🚱	1856	70		
CP 01574 POD1		CP	LE	2	4	4	15	218	37E	674559	3594598 🚱	1858	68	57	11
CP 01574 POD2		CP	LE	1	3	3	14	215	37E	674666	3594578 🚱	1893	68	57	11

Average Depth to Water: 61 feet

> Minimum Depth::: 57 feet 70 feet

Maximum Depth::

Record Count: 14

UTMNAD83 Radius Search (in meters);

Easting (X): 674336

Northing (Y): 3596443

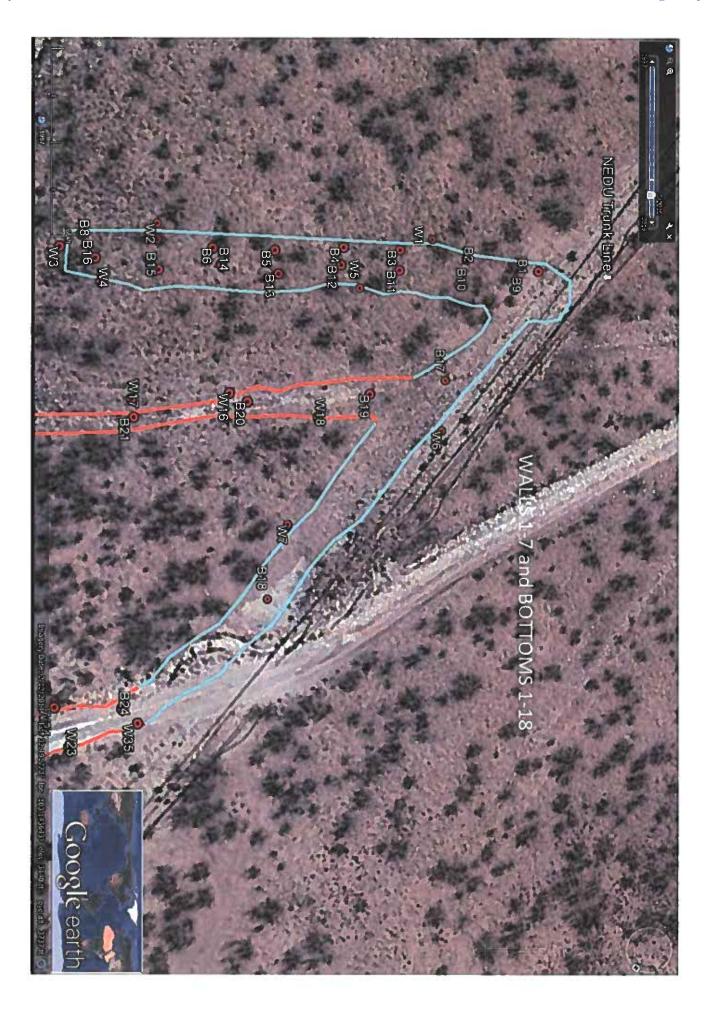
Radius: 2000

*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, reflability, usability, or suitability for any particular purpose of the data.

2/13/19 11:29 AM

WATER COLUMN/ AVERAGE **DEPTH TO WATER**



NEDU Injection Line

Excavation 1

LAB RESULTS IN RED FIELD SAMPLING SHOWN IN RED WITH CHLORIDE FINDINGS ONLY

32.491606,	<10.0	<10.0	<10.0	<0.300	<0.150	<0.050	<0.050	<0.050	32	Η.	EX1 BU @ 1	81/
-103.14322	╄									,		
32.491733,	<10.0	<10.0	<10.0	<0.300	<0.150	<0.050	<0.050	<0.050	64	2'	EX1 8BF	B16
-103.14328												
32.491703,									273	2'	EX1 7BF	815
-103.1433												
32.491660,	<10.0	<10.0	<10.0	<0.300	<0.150	<0.050	<0.050	<0.050	176	2'	EX1 6BF	B14
-103.14339												
32.491630,	<10.0	<10.0	<10.0	<0.300	<0.150	<0.050	<0.050	<0.050	463	2'	EX1 5BF	B13
-103.14345												
32.491581,	<10.0	<10.0	<10.0	<0.300	<0.150	<0.050	<0.050	<0.050	112	2'	EX1 4BF	B12
-103.14351												
32.491545,									352	2'	EX1 3BF	B11
-103.14358												
32.491514,	<10.0	<10.0	<10.0	<0.300	< 0.150	<0.050	<0.050	<0.050	272	2'	EX1 2BF	810
-103.14364												
32.491477,									598	2'	EX1 18F	В9
-103.14319												
32.491722,									273	2'	EX1 8AF	B8
-103.14326												
32.491680,									273	2'	EX1 7AF	В7
-103.14331												
32.491652,									543	2'	EX1 6AF	B6
-103.14337												
32.491613,						_			112	2'	EX1 5AF	85
-103.14344												
32.491165,									145	2'	EX1 4AF	B4
-103.14349												
32.491527,	<10.0	<10.0	<10.0	< 0.300	<0.150	<0.050	<0.050	<0.050	304	2'	EX1 3AF	В3
-103.14357												
32.491487,	<10.0	<10.0	<10.0	<0.300	<0.150	<0.050	<0.050	<0.050	496	2'	EX1 2AF	B2
-103.14365												
32.49144,	<10.0	<10.0	<10.0	<0.300	<0.150	<0.050	<0.050	<0.050	496	2'	EX1 1AF	B1
Coordinates		0,0	ů,	ВТЕХ	Xylenes	Luiyociizeile		Containe	Cindinae	Ceptii	Jampie	Triap io
346	EXT DBO	ב ב	פֿס	Total	Total	Ethyhonzono	Toulone	Renzene	CHORINA	Danth	Sample ID	

B18

EX1 B1 @ 1'

<0.050

<0.050

<0.050

< 0.150

<0.300

<10.0

<10.0

<10.0

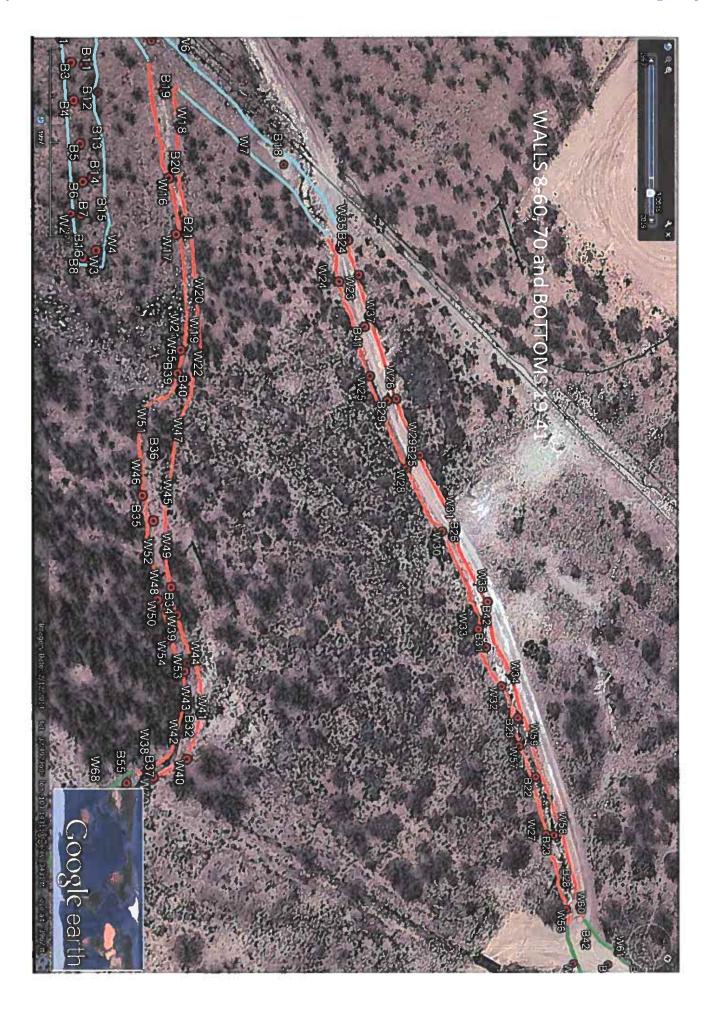
32.491902,

NEDU Injection Line

Excavation 1

LAB RESULTS IN RED FIELD SAMPLING SHOWN IN RED WITH CHLORIDE FINDINGS ONLY

												-103.14361
Wall Samples												
Map ID	Sample ID	Depth	Chloride	Benzene	Toulene	Ethybenzene	Total	Total	GRO	DRO	EXT DRO	
							Xylenes	BTEX				Coordinates
W1	AW1 @ 2'	2'	272	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.49150,
												-103.14350
W2	AW2 @ 2'	2'	224	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.49166,
												-103.14325
W3	AW3 @ 2'	2'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.491745,
												-103.14318
W4	BW1 @ 2'	2'	400	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.49162,
												-103.14345
W5	BW2 @ 2'	2*	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.49175,
												-103.14325
W6	EWC0 @ 1'	1	80	<0.050	<0.050	<0.050	<0.150	< 0.300	<10.0	<10.0	<10.0	32.491832,
												-103.14359
W7	WWC0 @ 1'	1'	<16.0	<0.050	<0.050	050.0>	<0.150	<0.300	<10.0	<10.0	<10.0	32.491501,
												-103.14368



		B34	833	832	831		0£8	B29		B28	B27	B26	825		824	823	B22		821		B20	B19	Map ID 9
	BFC9' -4	BFC9' -4	BFC9'-3	BFC 9' -2	3.5'	BRFC 1-5 @	BFC 2.5' -6	TRC 1.5' -3	BFC 3.5' 6-10	BRFC 3' 6-10	BFC 2' -7	TRC 1' -5	TRC 1' -4	TRC 1.5' -3	TRC 1' -1	BR 4'-3	BR 4'-1	T @ 7#19	BC 1' #2		BC2 2'	BC1 1'	Sample ID
	9'	9'	9	9	3.5'		2.5'	1.5'	4'	31	2'	1'	1'	1.5'	1'	4'	4'	١	<u>.</u>		2'	1'	Depth
	544	672	144	256	176		352	112	240	752	160	240	368	112	1020	336	352	144	912		544	512	Chloride
	<0.050	<0.050	<0.050	<0.050	<0.050		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	\0.U5U	<0.050		<0.050	<0.050	Benzene
5	<0.050	<0.050	<0.050	<0.050	<0.050		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050		<0.050	<0.050	Toulene
2000	<0.050	<0.050	<0.050	<0.050	<0.050		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050		<0.050	<0.050	Ethybenzene
VO 150	<0.150	<0.150	<0.150	<0.150	<0.150		<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	00.1.00	<0.150		<0.150	<0.150	Total Xylenes
000	<0.300	<0.300	<0.300	<0.300	<0.300		<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300		<0.300	<0.300	Total BTEX
7400	<10.0	<10.0	<10.0	<10.0	<10.0		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	0.01>	<10.0		<10.0	<10,0	GRO
/100	<10.0	<10.0	<10.0	<10.0	<10.0		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	15.4	<10.0	<10.0	0.01>	<10.0		<10.0	<10.0	DRO
<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	0.01>	<10.0		<10.0	<10.0	EXT DRO
n/a		n/a	n/a	n/a	n/a		n/a	n/a	n/a	32.493121, 103.14271	32.4928258, 103.1439579	32.4925563, 103.1431806	32.4924110, 103.1432627	n/a	32.4920713, 103.1435608	n/a	n/a	nya	103.1433680	32.4918346	32.4917769, 103.1434609	32.4916870, - 103.1435883	Note

Map ID W8	Sample ID NWC 6' #1	Depth 6'	Chloride	Benzene <0.050	Toulene	Ethybenzene <0.050	Total Xylenes <0.150		Total BTEX	Total GRO BTEX <0.300 <10.0	
W8	NWC 6' #1	οū	144	<0.050	<0.050	<0.050		<0.150		<0.300	<0.300 <10.0
W9	SWC 6' #1	6	784	<0.050	<0.050	<0.050		<0.150	<0.150 <0.300		<0.300
	SWC1 @ 6'	6,	80	<0.050	<0.050	<0.050		<0.150	<0.150 <0.300	+	<0.300
W10	SWC 6' #2	6'	128	<0.050	<0.050	<0.050		<0.150	<0.150 <0.300		<0.300
W11	SWC 11' #3	11'	160	<0.050	<0.050	<0.050		<0.150	<0.150 <0.300		<0.300
W12	EWC 11'	11'	176	<0.050	<0.050	<0.050		<0.150	<0.150 <0.300		<0.300
W13	WWC 11'	11'	176	<0.050	<0.050	<0.050		<0.150	<0.150 <0.300		<0.300
W14	NWC 1'-2	1'	112	<0.050	<0.050	<0.050		<0.150	<0.150 <0.300		<0.300
W15	SWC 1'-1	1'	160	<0.050	<0.050	<0.050		<0.150	<0.150 <0.300		<0.300
W16	SWC 2'	2'	80	<0.050	<0.050	<0.050		<0.150	<0.150 <0.300		<0.300
W17	SWC 1'-2	1'	192	<0.050	<0.050	<0.050		<0.150	<0.150 <0.300		<0.300
W18	NWC1'-1	1.	624	<0.050	<0.050	<0.050		<0.150	<0.150 <0.300	_	<0.300
	NWC1'-1	1'	306	<0.050	<0.050	<0.050		<0.150	<0.150 <0.300	+	<0.300
W19	NW 11'-2	11'	992	<0.050	<0.050	<0.050		<0.150	<0.150 <0.300		<0.300

103.1434481									264	1	TRC 1'-2	841
32.4921904,											_	
n/a	<10.0	<10.0	<10.0	< 0.300	<0.150	<0.050	<0.050	<0.050	208	11'	BC 11' 2	840
n/a	<10.0	<10.0	<10.0	<0.300	<0.150	<0.050	<0.050	<0.050	64	11'	BC 11' 1	В39
n/a	<10.0	<10.0	<10.0	<0.300	<0.150	<0.050	<0.050	<0.050	240	61	BC 6' 1	B38
	<10.0	<10.0	<10.0	<0.300	<0.150	<0.050	<0.050	<0.050	288	9	FC @ 9'-1	В37
n/a	<10.0	<10.0	<10.0	<0.300	<0.150	<0.050	<0.050	<0.050	336	9	BFC9' -8	B36

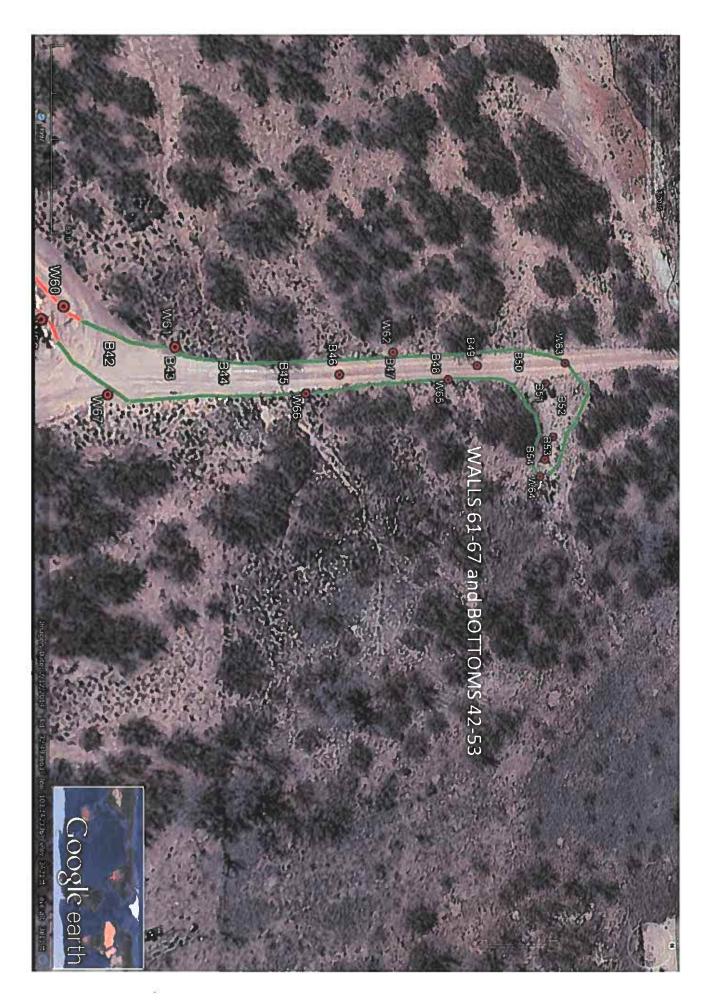
W38	W37	W36	W35	W34	W33	W32	W31	W30	W29	W28	W27	W26	W25	W24	W23	W22	W21	W20	
SWC @ 5'	WWC 2' -2	WWC 2.5' -6	WWC1'-2	WWC 2' -7	EWC 2' -6	EWC 2'-7	WWC 1' -5	EWC 1' -5	WWC1'-4	EWC 1' -4	EWC 4'-2	WWC 1' -3	EWC 1' -3	EWC 1'-2	WWC 1' -1	NW 11'-3	SW 11'-2	NW 7'	NWC2 @ 11'
2	2'	2.5'	1'	2'	2'	2'	1,	1'	1'	1'	4.	1'	1-1	1.	1'	11'	11'	7'	11'
32	48	144	208	128	16	<16.0	48	160	64	320	16	64	32	192	64	304	80	368	80
<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
050.0>	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150
<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300
<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
32.492313, - 103.142413	32.4923221, -103.143599	32.4927048, - 103.1430941	32.492191, - 103.143464	32.4928312, - 103.1429898	32.4927095, - 103.1430418	32.4928281, - 103.1429650	32.4925572, - 103.1431876	32.4925509, - 103.1431826	32.492417, - 103.1432895	32.4924070, - 103.1432476	32.493094, -103.142721	32.4923142, - 103.1433636	32.4922786, - 103.1433485	32.4921669, - 103.1434481	32.4920937, - 103.1435618	32.491971, 103.143180	32.491941, - 103.143165	32.491911, - 103.143274	

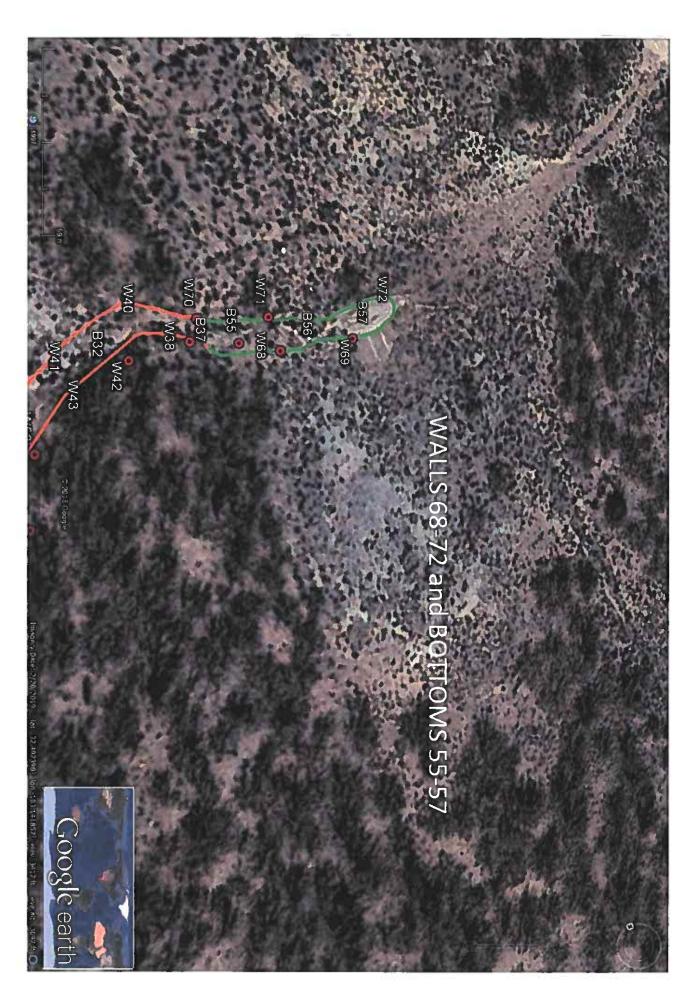
W58	W57	W56	W55	W54	W53	W52	W51	W50	W49	W48	W47	W46	W45	W44	W43	W42	W41	W40	W39
8RWW 4' -2	SP6 EWC4'-3	SP6 EWC 4'-1	SWC1 @ 6'	SWC4 @ 9'	SWC3 @ 9'	SWC9'-6	SWC9'-8	SWC9' -5	NWC9' -6	NWC9' -5	NWC9' -8	SWC9' -7	NWC9'-7	NWC4 @ 9'	SWC9' -2	SWC9' -1	NWC2 @ 9'	NWC1 @ 9'	NWC3 @ 9'
4'	4'	4'	6.	91	9,	ō.	9	19	بو	õ	ō.	9+	9	9	9	9.	õ	9 ⁱ	9.
48	592	32	80	80	64	400	240	16	64	48	544	80	464	32	160	32	512	48	48
<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
<0.050	<0.050	<0.050	<0,050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150
<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300
<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10 0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
32.493115, 103.142753	103.142863	103.142608	103.143119	103.142646	103.142608	32.492101, 103.142772	32.491998, - 103.142921	32.492164, - 103.142705	32.492121, - 103.142787	32.492174, - 103.142720	32.492044, - 103.142951	32.492036, - 103.142867	32.492063, - 103.142888	32.492230, - 103.142665	32.4923018, - 103.1425496	32.4923205, - 103.142812	32.49234, - 103.14254	32.49236, - 103.14245	32.4921980, - 103.1426964

W60

W59

BRWW 4' -1 4'	BRWW 4'-3 4'
336	384
<0.050	<0.050
<0.050	<0.050
0.050	<0.050
<0.150	<0.150
<0.300	<0.300
<10.0	<10 0
<10.0	<10.0
<10.0	<10.0
32.493229, - 103.142631	32.492947, 103.142891





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W72	W71	W70	W69	W68	W67	W66	W65	W64	W63	W62	W61	Sample Date	Wall Samples	857	856	855	854	853	852	851	850	849	848	B47	B46	B45	B44	B43	B42	Map ID	Floor Samples
WWC3 @ 4'	NWC2 @ 4'	NWC1 @ 4'	SWC3 @ 4'	EX2 SWC 2 @	BRW7	BRW6	BRW5	BRW4	BRW3	BRW2	BRW1	Sample ID		EX2 3B @ 4'	EX2 2B @ 4'	EX2 1B @ 4	BR13 @ 1'	BR12 @ 1'	BR11@1'	6R10 @ 1'	BR9 @ 1'	BR8 @ 1'	8R7 @ 1'	BR6 @ 1'	BR5 @ 1'	BR4 @ 1'	8R3 @ 1'	BR2 @ 1'	BR1 @ 1'	Sample ID	
4'	4.	4:	4.	4,	Η	1'	1'	1.	1'	1'	1'	Depth		4,	4'	4'	1'	1'	1'	1-	H.	1.	1	1,	<u></u>	1-2	1-2	Ηį	1'	Depth	
<16.0	128	96	128	<16.0	16	48	192	128	237	357	432	Chloride		48	87	416	08	118	240	190	192	484	144	136	224	407	288	533	496	Chloride	
<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0,050	<0.050	<0.050	<0.050	Benzene		<0.050		<0.050	<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050	Benzene	
<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	Toulene		<0.050		<0.050	<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050	Toulene	
<0.050	<0,050	<0,050	<0.050	<0,050	<0.050	<0,050	<0.050	<0,050	<0,050	<0.050	<0.050	Ethybenzene		<0.050		<0.050	<0.050		<0.050		<0.050		<0.050		<0.050		<0.050		<0.050	Ethybenzene	
<0.150	<0.150	<0,150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	Total Xylenes		<0.150		<0.150	<0.150		<0 150		<0 150		<0.150		<0.150		<0.150		<0.150	Total Xvienes	
<0.300	<0.300	<0.300	<0.300	<0,300	<0,300	<0.300	<0,300	<0.300	<0.300	<0.300	<0.300	Total BTEX		<0.300		<0.300	<0.300		<0.300		<0.300	4	<0.300		<0 300		<0.300		<0.300	Total	
<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	GRO		<10.0		<10.0	<10.0		<10.0		<10.0		<10.0	,	<10.0		<10.0		<10.0	GRO	:
<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	DRO		<10.0		<10.0	<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0	DRO	
<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	<10.0	<10.0	EXT DRO		<10.0		<10.0	<10.0		<10.0		<10.0		<10.0		<10.0		<10.0		<10.0	EXT DRO	
ω	ω	ω	ω	ω	ω	ω	ω	₃	з	u	ω	Excavation		3			3		3		ω		ω		ω		ω		ω	Excavation	
32.4922280, -103.142159	32.492289, -103.142259	32.492328, -103.142383	32.492247, -103.142186	32.492265, -103.142303	32.493396, -103.142493	32.493572, -103.142517	32.493809, -103.142561	32.493998, -103.142391	32.494041, -103.142615	32.493743, -103.142596	32.493471, -103.142560	GPS Coordinates																		Note	

EV.	EDU
avation	Trunk
ע	Line

W72	W71	W70	W69	W68	W67	W66	W65	W64	W63	W62	W61	Sample Date	Wall Samples	B57	856	B55	B54	B53	B52	B51	BSO	849	R48	B47	84.5	844	843	B42	Map ID	Floor Samples
WWC3 @ 4'	NWC2 @ 4'	NWC1 @ 4'	SWC3 @ 4'	EX2 SWC 2 @	BRW7	BRW6	BRW5	BRW4	BRW3	BRW2	BRW1	Sample ID		EX2 3B @ 4'	EX2 2B @ 4'	EX2 1B @ 4'	BR13 @ 1'	BR12 @ 1'	BR11 @ 1'	BR10 @ 1'	BR9 @ 1'	BR8 @ 1'	RR7 @ 1'	BR6 @ 1	BR4 @ 1	BR3 @ 1	BR2 @ 1'	BR1 @ 1'	Sample ID	
4.	42	4.	Ą	4,	1.	H <u>.</u>	<u></u>	1.	ι.	H.	1-	Depth		4.	4'	4'	1'	1.	-	1.		٠_ ١		1-1	<u>.</u>		1-1	1-1	Depth	
<16.0	128	96	128	<16.0	16	48	192	128	237	357	432	Chloride		48	87	416	80	118	240	190	193	484	144	136	45/	288	533	496	Chloride	
<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	Benzene		<0.050		<0.050	<0.050		<0.050	0.000	0.20	70,000	<0.050	70.000	200	<0.050		<0.050	Benzene	
<0.050	<0.050	<0,050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	Toulene		<0.050		<0.050	<0.050		<0.050	20,000	0.000	0.000	020 050	(0.000	2010	<0.050		<0.050	Toulene	
<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	Ethybenzene		<0.050		<0.050	<0.050		<0.050	000	V20.020	600	V0.050	\0.030		<0.050		<0.050	Ethybenzene	
<0.150	<0.150	<0 150	<0.150	<0 150	<0.150	<0 150	<0.150	<0.150	<0.150	<0 150	<0.150	Total Xylenes		<0.150		<0.150	<0.150		<0.150	70.1.00	20 150	70.130	20 150	00.100		<0.150		<0.150	Total Xylenes	
<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300	<0 300	<0.300	<0.300	Total BTEX		<0.300		<0.300	<0.300		<0.300	0.000	<0.300	70.000	200	VO.500	3	<0.300		<0.300	Total BTEX	
<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	GRO		<10.0		<10.0	<10.0		<10.0		<10.0	V.0.0	×100	V.10.0		<10.0		<10.0	GRO	
<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10,0	<10.0	<10.0	<10.0	<10.0	DRO		<10.0		<10.0	<10.0		<10.0	20.0	<10.0	V.TO. 0	×10.0	O.01>		<10.0		<10.0	DRO	
<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	EXT DRO		<10.0		<10.0	<10.0		<10.0	0.010	<10.0	V.0.0	100	0.0T>		<10.0		<10.0	EXT DRO	
32.4922280, -103.142159	32.492289, -103.142259	32.492328, -103.142383	32.492247, -103.142186	32.492265, -103.142303	32.493396, -103.142493	32.493572, -103.142517	32.493809, -103.142561	32.493998, -103.142391	32.494041, -103.142615	32.493743, -103.142596	32.493471, -103.142560	EXT DRO GPS Coordinates																	Note	



May 03, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU INJECTION TRUNKLINE

Enclosed are the results of analyses for samples received by the laboratory on 04/29/19 16:20.

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

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.

Celey L. Keene

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 BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Analyzed By: MS

Received:

BTEX 8021B

04/29/2019

Sampling Date:

04/29/2019

Reported:

05/03/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number: Project Location: NONE GIVEN **EUNICE NM**

mo/ka

Sample Received By:

Jodi Henson

Sample ID: ROAD 2ND 25' @ 1' (H901533-01)

BIEY 805TB	mg/	Kg	Analyze	u py: Ma					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2019	ND	1.89	94.4	2.00	4.16	
Toluene*	<0.050	0.050	05/01/2019	ND	1.92	96.0	2.00	2.53	
Ethylbenzene*	<0.050	0.050	05/01/2019	ND	1.94	97.2	2.00	0.662	
Total Xylenes*	<0.150	0.150	05/01/2019	ND	5.50	91.7	6.00	0.846	
Total BTEX	<0.300	0.300	05/01/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	83.4	% 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
Chioride	304	16.0	05/03/2019	ND	400	100	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
GRO C6-C10*	<10.0	10.0	05/01/2019	ND	207	104	200	3.32	
DRO >C10-C28*	<10.0	10.0	05/01/2019	ND	206	103	200	3.68	
EXT DRO >C28-C36	<10.0	10.0	05/01/2019	ND					
Surrogate: 1-Chlorooctane	73.2	% 41-142	?						
Surrogate: 1-Chlorooctadecane	73,3	% 37.6.14	7						

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*=Accredited Analyte

any other cause whatsoever shall be deemed valved unless made its writing and received by Cardinal within thirty (30) days after completion of the applicable service. In on event shall Cardinal be liable for incidental or consequential damages, including, without limited on the applicable service. In one event shall Cardinal be liable for incidental or consequential damages, including, without limitation, best of use, or loss of use, or loss of profits incurred by Chard, as a sinking 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 related only to the samples identified above. This report shall not be recorduced extract in full with written account of Cardinal Internation.

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Celey D. Keene, Lab Director/Quality Manager

Page 2 of 7



Analytical Results For:

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

Fax To:

(575) 393-2432

Analyzed By: MS

Received:

04/29/2019

Sampling Date:

04/29/2019

Reported:

BTEX 8021B

05/03/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Type: Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

mg/kg

Sample Received By:

Jodi Henson

Project Location:

EUNICE NM

Sample ID: 4TH 25' @ 1' (H901533-02)

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2019	ND	1.89	94.4	2.00	4.16	
Toluene*	<0.050	0.050	05/01/2019	ND	1.92	96.0	2.00	2.53	
Ethylbenzene*	<0.050	0.050	05/01/2019	ND	1.94	97.2	2.00	0.662	
Total Xylenes*	<0.150	0.150	05/01/2019	ND	5.50	91.7	6.00	0.846	
Total BTEX	<0.300	0.300	05/01/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIE	85.1	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	848	16.0	05/03/2019	ND	400	100	400	0.00	
TPH 8015M	mg/	'kg	Analyzo	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2019	ND	207	104	200	3.32	
DRO >C10-C28*	<10.0	10.0	05/01/2019	ND	206	103	200	3.68	
EXT DRO >C28-C36	<10.0	10.0	05/01/2019	ND					
Surrogate: 1-Chlorooctane	93.0	% 41-142	?						
Surrogate: 1-Chlorooctadecane	95.7	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager

Page 3 of 7



Analytical Results For:

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

Fax To:

(575) 393-2432

Received: Reported: 04/29/2019

05/03/2019

Sampling Date: Sampling Type: 04/29/2019

Sampling Condition:

Soil Cool & Intact

Project Name: Project Number: **NEDU INJECTION TRUNKLINE NONE GIVEN**

Sample Received By:

Jodi Henson

Project Location:

EUNICE NM

Sample ID: ROAD 6TH 25' @ 1' (H901533-03)

BTEX 8021B	mg/	'kg	Anatyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2019	ND	1.89	94.4	2.00	4.16	
Toluene*	<0.050	0.050	05/01/2019	ND	1.92	96.0	2.00	2.53	
Ethylbenzene*	<0.050	0.050	05/01/2019	ND	1.94	97.2	2.00	0.662	
Total Xylenes*	<0.150	0.150	05/01/2019	ND	5.50	91.7	6.00	0.846	
Total BTEX	<0.300	0.300	05/01/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	81.4	% 73.3-12	19						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	05/03/2019	ND	400	100	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	05/01/2019	ND	207	104	200	3.32	
DRO >C10-C28*	<10.0	10.0	05/01/2019	ND	206	103	200	3.68	
EXT DRO >C28-C36	<10.0	10.0	05/01/2019	ND					
Surrogate: 1-Chlorooctane	91.2	% 41-142	?						
Surrogate: 1-Chlorooctadecane	93.7	% 37.6-14	17						

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PLEASE NOTE Librity and Demages. Cardinal's lightify and clern's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed valved unless made in writing and received by Cardinal within thirty (30) days after conjection of the applicable service. In no event, shall Cardinal be field for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by Cardinal, regardless of successors arising and of or related to the performance of the services hereunder by Cardinal, regardless of whether such claims is based upon any of the above stated reasons or otherwise. Results related monitoring those for profits incurred by cardinal whose the reproduced except in list with written approval of Cardinal beloristics.

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Celey D. Keene, Lab Director/Quality Manager

Page 4 of 7



Analytical Results For:

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

Fax To:

(575) 393-2432

Analyzed By: MS

Received: Reported:

BTEX 8021B

04/29/2019

05/03/2019

Sampling Date:

04/29/2019

Project Name:

Sampling Type:

Soil

NEDU INJECTION TRUNKLINE NONE GIVEN

Sampling Condition: Sample Received By: Cool & Intact Jodi Henson

Project Number: Project Location:

EUNICE NM

mg/kg

Sample ID: WALL #1 40' @ 1' (H901533-04)

DIEX COLLD	11197	v.A	raintyse	4 5/1 1/10					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2019	ND	1.89	94.4	2.00	4.16	
Toluene*	<0.050	0.050	05/01/2019	ND	1.92	96.0	2.00	2.53	
Ethylbenzene*	<0.050	0.050	05/01/2019	ND	1.94	97.2	2.00	0.662	
Total Xylenes*	<0.150	0.150	05/01/2019	ND	5.50	91.7	6.00	0.846	
Total BTEX	<0.300	0.300	05/01/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	85.1	% 73.3-12	9						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Chloride	320	16.0	05/03/2019	ND	400	100	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	05/01/2019	ND	207	104	200	3.32	
DRO >C10-C28*	<10.0	10.0	05/01/2019	ND	206	103	200	3.68	
EXT DRO >C28-C36	<10.0	10.0	05/01/2019	ND					
Surrogate: 1-Chlorooctane	87.4	% 41-142	?						
Surrogate: I-Chlorooctadecane	88.0	% 37.6-14	17						

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College Thomas

Celey D. Keene, Lab Director/Quality Manager

Page 5 of 7



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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PLEASE NOTE: Liability and Damages. Cardinal's fieldity 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 analysiss. All claims, including those for negligence and any other cause whatboover shall be deemed walved unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be fisable for incidental or consequential damages, including, without limitation, unlesses intermycliens, loss of use, or loss of prifts incurred by Cardinals, and the statement of 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 Luboratories.

Carley I tream

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: 100cm	BILL TO ANALYSIS REC	REQUEST
Project Manager: Bulker Je Bru Breen		
0	Company:	
City: Volobos State: NV Zip: 85000	Attn:	
Phone #: Fax #:	Address:	
Project #: Project Owner:	City:	
Project Name:	State: Zip:	
Project Location: (FDA FAICCE on truck-line	Phone #:	
Sus On Senth	Fax #:	
FOR LAB USE DNLY MATRIX	PRESERV. SAMPLING	
Sample I.D. Sample I.D. AAB OR (C)OMPONTAINERS DUNDWATER STEWATER L	HER : D/BASE:) COOL	
# CO GRO	CO DATE TIME	
Though one	0	
Was It S'A!	5/20/07/20/20/20/20/20/20/20/20/20/20/20/20/20/	
1 1# IT	No.	
PLEASE NOTE: Lability and Damages. Cardinal's liability and clent's auctuative remarky for any claim arrang wwebsir based in contract or bot, shall be irritard to the amount paid by the clent for the supplies. All claims including those for negligence and any other cause whatsower shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable services. In overall shall Cardinal be labile for incidental or consequential damages, including writing inflation, business of use, or loss of posts incurred by clent, its subsidiaries, afficiency are consequently and of the post of the state of the post of the state of the st	tract or lort, shall be Imited to the amount paid by the cleat for the gand received by Castinal within 30 days after completion of the applicable ors, loss of task of posts incurred by cleat its subsidiaries.	
Relinquished By: Phone Residence Phone Resi	Phone Result:	
Delivered By: (Circle One) Sample Condition Cool Intact Cool Int	dition CHECKED BY:	



May 06, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU INJECTION TRUNKLINE

Enclosed are the results of analyses for samples received by the laboratory on 04/30/19 16:40.

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

Accreditation applies to public drinking water matrices.

Celeg & Keene

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 BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Analyzed By: ms

Received:

BTEX 8021B

04/30/2019

Sampling Date:

04/30/2019

Reported:

05/06/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition: Sample Received By: Cool & Intact Tamara Oldaker

Project Number:

NONE GIVEN

mg/kg

Project Location: **EUNICE NM**

Sample ID: BC 1' 1 (H901547-01)

	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/03/2019	ND	2.21	111	2.00	3.42	
Toluene*	<0.050	0.050	05/03/2019	ND	2.26	113	2.00	3.81	
Ethylbenzene*	<0.050	0.050	05/03/2019	ND	2.10	105	2.00	1.91	
Total Xylenes*	<0.150	0.150	05/03/2019	ND	6.38	106	6.00	1.98	
Total BTEX	<0.300	0.300	05/03/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	94.3	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Chloride	512	16.0	05/06/2019	ND	400	100	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	05/01/2019	ND	198	98.9	200	2.63	
DRO >C10-C28*	<10.0	10.0	05/01/2019	ND	210	105	200	5.65	
EXT DRO >C28-C36	<10.0	10.0	05/01/2019	ND					
Surrogate: 1-Chlorooctane	79.5	% 41-142	?						
Surrogate: 1-Chlorooctadecane	84.1	% 37.6-14	7						

Cardinal Laboratories

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any other cause whatcoever shall be deemed waved unless made in writing and neceived by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential demagns, including, without limitation, business interruptions, loss of use, or loss of profits incurred by cherk, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Liberatories.

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Celey D. Keene, Lab Director/Quality Manager

Page 2 of 6



Analytical Results For:

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

Fax To:

(575) 393-2432

Analyzed By: ms

Received: Reported:

BTEX 8021B

04/30/2019

05/06/2019

Sampling Date: Sampling Type: 04/30/2019

Project Name:

NEDU INJECTION TRUNKLINE

Soil

Sampling Condition:

Cool & Intact

Project Number: Project Location: **NONE GIVEN EUNICE NM**

mg/kg

Sample Received By:

Tamara Oldaker

Sample ID: BC 2' (H901547-02)

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	05/03/2019	ND	2.21	111	2.00	3.42	
Toluene*	<0.050	0.050	05/03/2019	ND	2.26	113	2.00	3.81	
Ethylbenzene*	<0.050	0.050	05/03/2019	ND	2.10	105	2.00	1.91	
Total Xylenes*	< 0.150	0.150	05/03/2019	ND	6.38	106	6.00	1.98	
Total BTEX	<0.300	0.300	05/03/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	94.2	% 73.3-12	9						
Chloride, SM4500CI-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	05/06/2019	ND	400	100	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	05/01/2019	ND	198	98.9	200	2.63	
DRO >C10-C28*	<10.0	10.0	05/01/2019	ND	210	105	200	5.65	
EXT DRO >C28-C36	<10.0	10.0	05/01/2019	ND					
Surrogate: 1-Chlorooctane	78.7	% 41-142	?						
Surrogate: 1-Chlorooctadecane	82.9	% 37.6-14	7						

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 3 of 6



Analytical Results For:

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

Fax To:

(575) 393-2432

Analyzed By: MS

Received:

04/30/2019

Sampling Date:

04/30/2019

Reported:

BTEX 8021B

05/06/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

mg/kg

Sample ID: BC 1' #2 (H901547-03)

DIEX OVZID	uig,	- Ng	Allalyze	u py. era					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/06/2019	ND	2.04	102	2.00	4.31	
Toluene*	<0.050	0.050	05/06/2019	ND	2.07	103	2.00	0.487	
Ethylbenzene*	<0.050	0.050	05/06/2019	ND	2.13	107	2.00	2.65	
Total Xylenes*	<0.150	0.150	05/06/2019	ND	6.08	101	6.00	2.33	
Total BTEX	<0.300	0.300	05/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	87.4	% 73.3-12	9						
Chloride, SM4500CI-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	912	16.0	05/06/2019	ND	400	100	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
GRO C6-C10*	<10.0	10.0	05/01/2019	ND	198	98.9	200	2.63	
DRO >C10-C28*	<10.0	10.0	05/01/2019	ND	210	105	200	5.65	
EXT DRO >C28-C36	<10.0	10.0	05/01/2019	ND					
Surrogate: 1-Chlorooctane	80.0	% 41-142	?						
Surrogate: 1-Chlorooctadecane	85.1	% 37.6-14	7						

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*=Accredited Analyte

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Calley & Kiena

Celey D. Keene, Lab Director/Quality Manager

Page 4 of 6

ND



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

Notes and Definitions

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

Analyte NOT DETECTED at or above the reporting limit

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Celey D. Keene, Lab Director/Quality Manager

Page 5 of 6

Relinquished By

Relinquished By:

Time:

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

Sample Condition Cool Intact Tes 7es

CHECKED BY: (Initials)

Phone Result: Fax Result: REMARKS:

□ Yes

□ □

Add'l Phone : Add'l Fax #:

1



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

	2	
TALLE CARCE CARL	TOX LOD BO. #	
1 3	Company:	
City: 140065 State: NIX Zip: 88-8410		
Phone #: Fax #:	Address:	
Project #: Project Owner:	City:	
Project Name:	State: Zip:	
Project Location: KEDY TAKETON TO	Phone #:	
Sampler Name: Occ. Child Science	Fax#:	
FOR LAB USE ONLY	MATRIX PRESERV SAMPLING	2/
Lab I.D. Sample I.D. (G)RAB OR (C)OMP # CONTAINERS	GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: ACID/BASE: ICE / COOL OTHER: DATE	CI EXTTS BIEY
-	1 1 4/30	
2 802	1 4136 410	
3 BC 1 02	7, 4, 24, P	1 1 1



May 06, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU INJECTION TRUNKLINE

Enclosed are the results of analyses for samples received by the laboratory on 04/30/19 16:40.

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

Accreditation applies to public drinking water matrices.

Celey & Keens

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 BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Analyzed By: MS

Received:

BTEX 8021B

04/30/2019

05/06/2019

Sampling Date:

04/30/2019

Reported: Project Name:

Sampling Type:

Soil

NEDU INJECTION TRUNKLINE NONE GIVEN

Sampling Condition:

Cool & Intact

Project Number: Project Location:

EUNICE NM

ma/ka

Sample Received By:

Tamara Oldaker

Sample ID: NWC 6' #1 (H901548-01)

DIEX 6021B	mg/	ky	Analyze	u by: Ma					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/03/2019	ND	2.12	106	2.00	3.96	
Toluene*	<0.050	0.050	05/03/2019	ND	2.10	105	2.00	2.19	
Ethylbenzene*	<0.050	0.050	05/03/2019	ND	2.12	106	2.00	8.31	
Total Xylenes*	<0.150	0.150	05/03/2019	ND	5.87	97.8	6.00	5.78	
Total BTEX	<0.300	0.300	05/03/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	75.6	% 73 3-12	9						
Chloride, SM4500CI-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	05/06/2019	ND	400	100	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*	10.3	10.0	05/01/2019	ND	198	98.9	200	2.63	
DRO >C10-C28*	<10.0	10.0	05/01/2019	ND	210	105	200	5.65	
EXT DRO >C28-C36	<10.0	10.0	05/01/2019	ND					
Surrogate: 1-Chlorooctane	91.1	% 41-142	?						
Surrogate: 1-Chlorooctadecane	98.9	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager

Page 2 of 12



Analytical Results For:

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

Fax To:

(575) 393-2432

Received:

04/30/2019

05/06/2019

Sampling Date:

04/30/2019

Reported:

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE NONE GIVEN

Sampling Condition: Sample Received By: Cool & Intact Tamara Oldaker

Project Number: Project Location:

EUNICE NM

90.5 %

37.6-147

Sample ID: SWC 6' #1 (H901548-02)

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	05/03/2019	ND	2.12	106	2.00	3.96	
Toluene*	<0.050	0.050	05/03/2019	ND	2.10	105	2.00	2.19	
Ethylbenzene*	<0.050	0.050	05/03/2019	ND	2.12	106	2.00	8.31	
Total Xylenes*	<0.150	0.150	05/03/2019	ND	5.87	97.8	6.00	5.78	
Total BTEX	<0.300	0.300	05/03/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	90.1	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	784	16.0	05/06/2019	ND	400	100	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	05/01/2019	ND	198	98.9	200	2.63	
DRO >C10-C28*	<10.0	10.0	05/01/2019	ND	210	105	200	5.65	
EXT DRO >C28-C36	<10.0	10.0	05/01/2019	ND					
Surrogate: 1-Chlorooctane	85.0	% 41-142							

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Surrogate: 1-Chlorooctadecane

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Page 3 of 12



Analytical Results For:

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

Fax To:

(575) 393-2432

Analyzed By: MS

Received:

04/30/2019

Sampling Date:

04/30/2019

Reported:

BTEX 8021B

05/06/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

mg/kg

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: SWC 6' #2 (H901548-03)

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	05/03/2019	ND	2.12	106	2.00	3.96	
Toluene*	<0.050	0.050	05/03/2019	ND	2.10	105	2.00	2.19	
Ethylbenzene*	<0.050	0.050	05/03/2019	ND	2.12	106	2.00	8.31	
Total Xylenes*	<0.150	0.150	05/03/2019	ND	5.87	97.8	6.00	5.78	
Total BTEX	<0.300	0.300	05/03/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	74.4	% 73.3-12	9						
Chloride, SM4500Ci-B	mg/kg		Analyzed By: AC			<u></u>			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	05/06/2019	ND	400	100	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BŞ	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2019	ND	198	98.9	200	2.63	
DRO >C10-C28*	<10.0	10.0	05/01/2019	ND	210	105	200	5.65	
EXT DRO >C28-C36	<10.0	10.0	05/01/2019	ND					
Surrogate: 1-Chlorooctane	85.8	% 41-142	•						
Surrogate: 1-Chlorooctadecane	92.5	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager

Page 4 of 12



Analytical Results For:

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

Fax To: (575) 393-2432

Received:

04/30/2019

Sampling Date:

04/30/2019

Reported:

BTEX 8021B

05/06/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

mg/kg

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: SWC 11' #3 (H901548-04)

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/03/2019	ND	2.12	106	2.00	3.96	
Toluene*	<0.050	0.050	05/03/2019	ND	2.10	105	2.00	2.19	
Ethylbenzene*	<0.050	0.050	05/03/2019	ND	2.12	106	2.00	8.31	
Total Xylenes*	<0.150	0.150	05/03/2019	ND	5.87	97.8	6.00	5.78	
Total BTEX	<0.300	0.300	05/03/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	74.6 9	% 73.3-12	9						
Chloride, SM4500Ci-B	mg/	kg	Analyze	d By: AC					

Analyzed By: MS

Chloride, SM4500Cl-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	05/06/2019	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	05/01/2019	ND	198	98.9	200	2.63	
DRO >C10-C28*	<10.0	10.0	05/01/2019	ND	210	105	200	5.65	
EXT DRO >C28-C36	<10.0	10.0	05/01/2019	ND					

Surrogate: 1-Chlorooctane

Cardinal Laboratories

85.0 %

41-142 37.6-147

Surrogate: 1-Chlorooctadecane

93.1 %

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Celey D. Keene, Lab Director/Quality Manager

Page 5 of 12



Analytical Results For:

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

Fax To:

(575) 393-2432

Analyzed By: MS

Received:

04/30/2019

Sampling Date:

04/30/2019

Reported:

BTEX 8021B

05/06/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

mg/kg

Project Location:

EUNICE NM

Sample Received By:

Tamara Oldaker

Sample ID: BC 6' 1 (H901548-05)

	*****	•							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/06/2019	ND	2.12	106	2.00	3.96	
Toluene*	<0.050	0.050	05/06/2019	ND	2.10	105	2.00	2.19	
Ethylbenzene*	<0.050	0.050	05/06/2019	ND	2.12	106	2.00	8.31	
Total Xylenes*	<0.150	0.150	05/06/2019	ND	5.87	97.8	6.00	5.78	
Total BTEX	<0.300	0.300	05/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	90.3 9	6 73.3-12	9						
Chloride, SM4500CI-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	05/06/2019	ND	400	100	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	05/01/2019	ND	198	98.9	200	2.63	
DRO >C10-C28*	<10.0	10.0	05/01/2019	ND	210	105	200	5.65	
EXT DRO >C28-C36	<10.0	10.0	05/01/2019	ND					
Surrogate: 1-Chlorooctane	77,9 9	6 41-142	!						
Surrogate: 1-Chlorooctadecane	82.8 9	6 37.6-14	7						

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 6 of 12



Analytical Results For:

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

(575) 393-2432 Fax To:

Received:

04/30/2019

Sampling Date: |

04/30/2019

Reported:

BTEX 8021B

05/06/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

mg/kg

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: EWC 11' (H901548-06)

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/03/2019	ND	2.12	106	2.00	3.96	
Toluene*	<0.050	0.050	05/03/2019	ND	2.10	105	2.00	2.19	
Ethylbenzene*	<0.050	0.050	05/03/2019	ND	2.12	106	2.00	8.31	
Total Xylenes*	<0.150	0.150	05/03/2019	ND	5.87	97.8	6.00	5.78	
Total BTEX	<0.300	0.300	05/03/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	81.3	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	05/06/2019	ND	400	100	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	05/01/2019	ND	198	98.9	200	2.63	
DRO >C10-C28*	<10.0	10.0	05/01/2019	ND	210	105	200	5.65	
EXT DRO >C28-C36	<10.0	10.0	05/01/2019	ND					
Surrogate: 1-Chlorooctane	83,3	% 41-142	!						
Surrogate: 1-Chlorooctadecane	88.3	% 37.6-14	7						

Analyzed By: MS

Cardinal Laboratories

*=Accredited Analyte

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Page 7 of 12



Analytical Results For:

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

Fax To:

(575) 393-2432

Analyzed By: MS

Received:

BTEX 8021B

04/30/2019

05/06/2019

Sampling Date:

04/30/2019

Reported:

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number: Project Location: **NONE GIVEN EUNICE NM**

ma/ka

Sample Received By:

Tamara Oldaker

Sample ID: BC 11'1 (H901548-07)

DIEX 0021D	uig/ kg		Allalyzou by. Fis		 .				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/03/2019	ND	2.12	106	2.00	3.96	
Toluene*	<0.050	0.050	05/03/2019	ND	2.10	105	2.00	2.19	
Ethylbenzene*	<0.050	0.050	05/03/2019	ND	2.12	106	2.00	8.31	
Total Xylenes*	<0.150	0.150	05/03/2019	ND	5.87	97.8	6.00	5.78	
Total BTEX	<0,300	0.300	05/03/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	77.9	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	05/06/2019	ND	400	100	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	05/01/2019	ND	198	98.9	200	2.63	
DRO >C10-C28*	<10.0	10.0	05/01/2019	ND	210	105	200	5.65	
EXT DRO >C28-C36	<10.0	10.0	05/01/2019	ND					
Surrogate: 1-Chlorooctane	87.9	% 41-142	?						
Surrogate: 1-Chlorooctadecane	93.2	% 37.6.14	17						

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Page 8 of 12



Analytical Results For:

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

Fax To:

(575) 393-2432

Received:

04/30/2019

Sampling Date:

04/30/2019

Reported:

05/06/2019

Sampling Type:

Soil

Project Name:

Sampling Condition:

Cool & Intact

Project Number:

NEDU INJECTION TRUNKLINE NONE GIVEN

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: BC 11' 2 (H901548-08)

BTEX 80218	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	05/03/2019	ND	2.12	106	2.00	3.96	
Toluene*	<0.050	0.050	05/03/2019	ND	2.10	105	2.00	2.19	
Ethylbenzene*	<0.050	0.050	05/03/2019	ND	2.12	106	2.00	8.31	
Total Xylenes*	<0.150	0.150	05/03/2019	ND	5.87	97.8	6.00	5.78	
Total BTEX	<0.300	0.300	05/03/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	73.7	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	05/06/2019	ND	400	100	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	05/01/2019	ND	198	98.9	200	2.63	
DRO >C10-C28*	<10.0	10.0	05/01/2019	ND	210	105	200	5.65	
EXT DRO >C28-C36	<10.0	10.0	05/01/2019	ND					
Surrogate: 1-Chlorooctane	77.4	% 41-142	?						
Surrogate. 1-Chlorooctadecane	81.8	% 37.6-14	7						

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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:

04/30/2019

Reported:

05/06/2019

Project Number

NEDU INJECTION TRUNKLINE

Project Number: Project Location:

NONE GIVEN EUNICE NM Sampling Date:

04/30/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

Sample ID: WWC 11' (H901548-09)

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	05/03/2019	ND	2.12	106	2.00	3.96	
Toluene*	<0.050	0.050	05/03/2019	ND	2.10	105	2.00	2.19	
Ethylbenzene*	<0.050	0.050	05/03/2019	ND	2.12	106	2.00	8.31	
Total Xylenes*	<0.150	0.150	05/03/2019	ND	5.87	97.8	6.00	5.78	
Total BTEX	<0.300	0.300	05/03/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	85.8	% 73.3-12	9						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	05/06/2019	ND	400	100	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	05/02/2019	ND	198	98.9	200	2.63	
DRO >C10-C28*	<10.0	10.0	05/02/2019	ND	210	105	200	5.65	
EXT DRO >C28-C36	<10.0	10.0	05/02/2019	ND					
Surrogate: 1-Chlorooctane	81.8	% 41-142	?						
Surrogate: 1-Chlorooctadecane	87.4	% 37.6-14	17						

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RPD



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

Notes and Definitions

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data. ND Analyte NOT DETECTED at or above the reporting limit

Samples not received at proper temperature of 6°C or below. Insufficient time to reach temperature.

Relative Percent Difference

Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

Relinquished By:

Date: 40

Received By:

Phone Result: Fax Result: REMARKS:

□ Yes

Add'l Phone #: Add'l Fax #:

Time:

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

i i

Sample Condition
Cool Intact
Gres Tes

CHECKED BY:
(Initials)



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company many Mach	110	OILL IV	ANALTOW KECCEVI	LCCLC.
Project Manager: Buch Buch ACC	90.#			
Address:	Company:			
City: Habbs State: N. M. Zip: 88246				
Phone #: Fax #:	Address:			
Project #: Project Owner:	city:			
Project Name:	State:	Zip:	all	
Project Location: NEXULTA Trunk has	Phone #:			
Sampler Name:	Fax #:			
FOR LAB USE ONLY	MATRIX PRESERV	SAMPLING		
)	VATER TER		TF	
Habisys Sample I.D.	# CONTAII GROUNDY WASTEWA SOIL OIL SLUDGE OTHER ACID/BASE ICE / COOI OTHER	DATE TIME	CI EXT	
-		4130 130	1 1 1 1	
14.90082		4130 133	1 1	
35wc 6 42		-	1 1	
1 Sinc 11. 43		4130 1:43	1 1	
5 8661	-	4/30 11:45	7 7 7 1	
1000 m		1130 1152	1 ()	
1 Re (1') C		16511 OS/h	-	
C.11 72 8		15:10811	7 7 7	
3 MWC 11.	1	4130 2200	(())	



May 06, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU INJECTION TRUNKLINE

Enclosed are the results of analyses for samples received by the laboratory on 05/01/19 16:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab-accred-certif.htm.

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.

Celey L. 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 BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Analyzed By: ms

Received:

BTEX 8021B

05/01/2019

Sampling Date:

05/01/2019

Reported:

05/06/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number: Project Location: **NONE GIVEN EUNICE NM**

ma/ka

Sample Received By:

Jodi Henson

Sample ID: NWC 1' - 2 (H901576-01)

DIEX OUSTR	mg,	/ kg	Analyze	o by: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2019	ND	2.02	101	2.00	1.53	
Toluene*	<0.050	0.050	05/04/2019	ND	2.06	103	2.00	1.33	
Ethylbenzene*	<0.050	0.050	05/04/2019	ND	1.95	97.7	2.00	0.724	
Total Xylenes*	<0.150	0.150	05/04/2019	ND	5.87	97.8	6.00	1.44	
Total BTEX	<0.300	0.300	05/04/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	93.7	% 73.3-12	9						
Chloride, SM4500Cl-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	05/06/2019	ND	400	100	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	05/03/2019	ND	189	94.7	200	11.5	
DRO >C10-C28*	<10.0	10.0	05/03/2019	ND	190	94.9	200	8.44	
EXT DRO >C28-C36	<10.0	10.0	05/03/2019	ND					
Surrogate I-Chlorooctane	80,1	% 41-142	!						
Surrogate: 1 Chlorooctadecane	74.7	% 37.6-14	7						

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Page 2 of 15



Analytical Results For:

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

Fax To:

(575) 393-2432

Received:

05/01/2019

Sampling Date:

05/01/2019

Reported:

05/06/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number: Project Location: NONE GIVEN **EUNICE NM**

Sample Received By:

Jodi Henson

Sample ID: SWC 1' - 1 (H901576-02)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	8\$	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2019	ND	2.02	101	2.00	1.53	
Toluene*	<0.050	0.050	05/04/2019	ND	2.06	103	2.00	1.33	
Ethylbenzene*	<0.050	0.050	05/04/2019	ND	1.95	97.7	2.00	0.724	
Total Xylenes*	<0.150	0.150	05/04/2019	ND	5.87	97.8	6.00	1.44	
Total BTEX	<0.300	0.300	05/04/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	95.7	% 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	160	16.0	05/06/2019	ND	400	100	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS		<u>-</u> .			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/03/2019	ND	189	94.7	200	11.5	
DRO >C10-C28*	<10.0	10.0	05/03/2019	ND	190	94.9	200	8.44	
EXT DRO >C28-C36	<10.0	10.0	05/03/2019	ND					
Surrogate: 1-Chlorooctane	95.7	% 41-142	?						
Surrogate: 1-Chlorooctadecane	90.7	% 37.6-14	17						

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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: Reported: 05/01/2019

05/06/2019

NEDU INJECTION TRUNKLINE

Project Name: Project Number:

NONE GIVEN

Sampling Date:

05/01/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact Jodi Henson

Project Location:

EUNICE NM

Sample ID: SWC 2' (H901576-03)

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	05/04/2019	ND	2.02	101	2.00	1.53	
Toluene*	<0.050	0.050	05/04/2019	ND	2.06	103	2.00	1.33	
Ethylbenzene*	<0.050	0.050	05/04/2019	ND	1.95	97.7	2.00	0.724	
Total Xylenes*	<0.150	0.150	05/04/2019	ND	5.87	97.8	6.00	1.44	
Total BTEX	<0.300	0.300	05/04/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	90.8	% 73.3-12	9						
Chloride, SM4500Cl-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	05/06/2019	ND	400	100	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	05/03/2019	ND	189	94.7	200	11.5	
DRO >C10-C28*	<10.0	10.0	05/03/2019	ND	190	94.9	200	8.44	
EXT DRO >C28-C36	<10.0	10.0	05/03/2019	ND					
Surrogate: 1-Chlorooctane	79.2	% 41-142	?						
Surrogate: 1 Chlorooctadecane	74.6	% 37.6-14	7						

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*=Accredited Analyte

Celary Treens

Celey D. Keene, Lab Director/Quality Manager

Page 4 of 15



Analytical Results For:

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

Fax To:

(575) 393-2432

Analyzed By: ms

Received:

05/01/2019

Sampling Date:

05/01/2019

Reported:

BTEX 8021B

05/06/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

EUNICE NM

mg/kg

Sample ID: SWC 1' - 2 (H901576-04)

		**9	741-172-						
	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2019	ND	2.02	101	2.00	1.53	
Toluene*	<0.050	0.050	05/04/2019	ND	2.06	103	2.00	1.33	
Ethylbenzene*	<0.050	0.050	05/04/2019	ND	1.95	97.7	2.00	0.724	
Total Xylenes*	<0.150	0.150	05/04/2019	ND	5.87	97.8	6.00	1.44	
Total BTEX	<0.300	0.300	05/04/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	92.9	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	05/06/2019	ND	400	100	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	8\$	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/03/2019	ND	189	94.7	200	11.5	
DRO >C10-C28*	<10.0	10.0	05/03/2019	ND	190	94.9	200	8.44	
EXT DRO >C28-C36	<10.0	10.0	05/03/2019	ND					
Surrogate: 1-Chlorooctane	84.4	% 41-142	?						
Surrogate: 1-Chlorooctadecane	80.9	% 37.6-14	7						

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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:

05/01/2019

Sampling Date:

05/01/2019

Reported:

BTEX 8021B

05/06/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

EUNICE NM

mg/kg

Sample ID: NWC 1' - 1 (H901576-05)

Алаlyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	05/04/2019	ND	2.02	101	2.00	1.53	
Toluene*	<0.050	0.050	05/04/2019	ND	2.06	103	2.00	1.33	
Ethylbenzene*	<0.050	0.050	05/04/2019	ND	1.95	97.7	2.00	0.724	
Total Xylenes*	<0.150	0.150	05/04/2019	ND	5.87	97.8	6.00	1.44	
Total BTEX	<0.300	0.300	05/04/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	95.2	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	lka	Analyze	d Rvs AC					
Ciliorine, SM-SDOCI-B	1119	ny .	-uioiya	u by. AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
		-			BS 400	% Recovery	True Value QC 400	RPD 0.00	Qualifier
Analyte	Result	Reporting Limit	Analyzed 05/06/2019	Method Blank		•	•		Qualifier
Analyte Chloride	Result	Reporting Limit	Analyzed 05/06/2019	Method Blank		•	•		Qualifier Qualifier
Analyte Chloride TPH 8015M	Result 624 mg,	Reporting Limit 16.0	Analyzed 05/06/2019 Analyze	Method Blank ND d By: M\$	400	100	400	0.00	

ND

05/03/2019

Analyzed By: ms

Surrogate: 1-Chlorooctane 81.1% 41-142 Surrogate: 1-Chlorooctadecane 76.4 % 37.6-147

<10.0

10.0

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EXT DRO >C28-C36

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 6 of 15



Analytical Results For:

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

Fax To:

(575) 393-2432

Analyzed By: MS

Received:

05/01/2019

Sampling Date:

05/01/2019

Reported:

BTEX 8021B

05/06/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

EUNICE NM

mg/kg

Sample ID: NW 11' - 2 (H901576-06)

BIEX 0021D	my/	r.A	Alleiyze	d by. Pla					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/06/2019	ND	2.00	99.8	2.00	2.33	
Toluene*	<0.050	0.050	05/06/2019	ND	1.99	99.3	2.00	3.04	
Ethylbenzene*	<0.050	0.050	05/06/2019	ND	2.00	99.9	2.00	2.87	
Total Xylenes*	<0.150	0.150	05/06/2019	ND	5.56	92.7	6.00	3.19	
Total BTEX	<0.300	0.300	05/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	97.6	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	992	16.0	05/06/2019	ND	400	100	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	05/03/2019	ND	189	94.7	200	11.5	
DRO >C10-C28*	<10.0	10.0	05/03/2019	ND	190	94.9	200	8.44	
EXT DRO >C28-C36	<10.0	10.0	05/03/2019	ND					
Surrogate: 1-Chlorooctane	86.3	% 41-142	!						
Surrogate: 1-Chlorooctadecane	82.4	% 37.6-14							

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 7 of 15



Analytical Results For:

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

Fax To:

(575) 393-2432

Received:

05/01/2019

05/06/2019

Sampling Date:

05/01/2019

Reported:

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number: Project Location: **NONE GIVEN EUNICE NM**

94.0 %

37.6-147

Sample Received By:

Jodi Henson

Sample ID: BRW 1 (H901576-07)

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	05/04/2019	ND	2.00	99.8	2.00	2.33	
Toluene*	<0.050	0.050	05/04/2019	ND	1.99	99.3	2.00	3.04	
Ethylbenzene*	<0.050	0.050	05/04/2019	ND	2.00	99.9	2.00	2.87	
Total Xylenes*	<0.150	0.150	05/04/2019	ND	5.56	92.7	6.00	3.19	
Total BTEX	<0.300	0.300	05/04/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIC	86.1	% 73.3-12	9						
Chloride, SM4500Cl-B	mg,	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chioride	432	16.0	05/06/2019	ND	400	100	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/03/2019	ND	189	94.7	200	11.5	
DRO >C10-C28*	<10.0	10.0	05/03/2019	ND	190	94.9	200	8.44	
EXT DRO >C28-C36	<10.0	10.0	05/03/2019	ND					
Surrogate: 1-Chlorooctane	99.5	% 41-142							

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Surrogate: 1-Chlorooctadecane

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 8 of 15



Analytical Results For:

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

Fax To:

(575) 393-2432

Analyzed By: MS

Received:

05/01/2019

Sampling Date:

05/01/2019

Reported:

BTEX 8021B

05/06/2019

Sampling Type:

Project Name:

NEDU INJECTION TRUNKLINE

Soil

Project Number:

NONE GIVEN

mg/kg

Sampling Condition: Sample Received By: Cool & Intact Jodi Henson

EUNICE NM

Project Location:

Sample ID: NW 7' (H901576-08)

		*							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2019	ND	2.00	99.8	2.00	2.33	
Toluene*	<0.050	0.050	05/04/2019	ND	1.99	99.3	2.00	3.04	
Ethylbenzene*	<0.050	0.050	05/04/2019	ND	2.00	99.9	2.00	2.87	
Total Xylenes*	<0.150	0.150	05/04/2019	ND	5.56	92.7	6.00	3.19	
Total BTEX	<0.300	0.300	05/04/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	87.7	% 73.3-12	9						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	05/06/2019	ND	400	100	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
GRO C6-C10*	<10.0	10.0	05/03/2019	ND	216	108	200	6.27	
DRO >C10-C28*	<10.0	10.0	05/03/2019	ND	203	101	200	5.49	
EXT DRO >C28-C36	<10.0	10.0	05/03/2019	ND					
Surrogate: 1-Chlorooctane	105	% 41-142	•						
Surrogate: 1-Chlorooctadecane	101	% 37.6-14	7						

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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: Reported: 05/01/2019

05/06/2019

Sampling Date:

05/01/2019

Project Name:

Sampling Type:

Soil

NEDU INJECTION TRUNKLINE NONE GIVEN

Sampling Condition: Sample Received By: Cool & Intact

Project Number: Project Location:

EUNICE NM

Jodi Henson

Sample ID: SW 11' - 2 (H901576-09)

BTEX 8021B	mg/	kg	Analyze	d By: MS			77.		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2019	ND	2.00	99.8	2.00	2.33	
Toluene*	<0.050	0.050	05/04/2019	ND	1.99	99.3	2.00	3.04	
Ethylbenzene*	<0.050	0.050	05/04/2019	ND	2,00	99.9	2.00	2.87	
Total Xylenes*	<0.150	0.150	05/04/2019	ND	5.56	92.7	6.00	3.19	
Total BTEX	<0.300	0.300	05/04/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	89.6	% 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	05/06/2019	ND	400	100	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	05/03/2019	ND	216	108	200	6.27	
DRO >C10-C28*	<10.0	10.0	05/03/2019	ND	203	101	200	5.49	
EXT DRO >C28-C36	<10.0	10.0	05/03/2019	ND					
Surrogate: 1-Chlorooctane	98.0	% 41-142	?						
Surrogate: 1-Chlorooctadecane	93.6	% 37.6-14	7						

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Cherry & Arran

Celey D. Keene, Lab Director/Quality Manager

Page 10 of 15



Analytical Results For:

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

Fax To:

(575) 393-2432

Received:

05/01/2019

Sampling Date:

05/01/2019

Reported:

05/06/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE NONE GIVEN

Sampling Condition: Sample Received By:

Cool & Intact Jodi Henson

Project Number:

Project Location:

EUNICE NM

Sample ID: BR 4' - 1 (H901576-10)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	88	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2019	ND	2.00	99.8	2.00	2.33	
Toluene*	<0.050	0.050	05/04/2019	ND	1.99	99.3	2.00	3.04	
Ethylbenzene*	<0.050	0.050	05/04/2019	ND	2.00	99.9	2.00	2.87	
Total Xylenes*	<0.150	0.150	05/04/2019	ND	5.56	92.7	6.00	3.19	
Total BTEX	<0.300	0.300	05/04/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	77.5	% 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	352	16.0	05/06/2019	ND	400	100	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	05/03/2019	ND	216	108	200	6.27	
DRO >C10-C28*	<10.0	10.0	05/03/2019	ND	203	101	200	5.49	
EXT DRO >C28-C36	<10.0	10.0	05/03/2019	ND					
Surrogate: 1-Chlorooctane	92.9	% 41-142	?						
Surrogate. 1-Chlorooctadecane	87.6	% 37.6-14	7						

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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

05/01/2019

ma/ka

Reported: 05/06/2019

Project Name: **NEDU INJECTION TRUNKLINE**

Project Number: NONE GIVEN Project Location: **EUNICE NM**

Sampling Date: Sampling Type: 05/01/2019 Soil

Sampling Condition: Cool & Intact Sample Received By:

Jodi Henson

Sample ID: BR 4' - 3 (H901576-11)

Received:

BTEX 8021B

BIEV 0051B	ilig	ky	Milalyze	u py; ma					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2019	ND	2.00	99.8	2.00	2.33	
Toluene*	<0.050	0.050	05/04/2019	ND	1.99	99.3	2.00	3.04	
Ethylbenzene*	<0.050	0.050	05/04/2019	ND	2.00	99.9	2.00	2.87	
Total Xylenes*	<0.150	0.150	05/04/2019	ND	5.56	92.7	6.00	3.19	
Total BTEX	<0.300	0.300	05/04/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	82.2	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	05/06/2019	ND	400	100	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	05/03/2019	ND	216	108	200	6.27	
DRO >C10-C28*	<10.0	10.0	05/03/2019	ND	203	101	200	5.49	
EXT DRO >C28-C36	<10.0	10.0	05/03/2019	ND					
Surrogate: 1-Chlorooctane	99.5	% 41-142	?						
Surrogate: 1-Chlorooctadecane	94.6	% 37.6-14	7						

Analyzed By: MS

Cardinal Laboratories

*=Accredited Analyte

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Carlos I triena

Celey D. Keene, Lab Director/Quality Manager



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 гесочегу.

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

*=Accredited Analyte Cardinal Laboratories

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Calleng I tream

Celey D. Keene, Lab Director/Quality Manager

Retinquished By:

Sampler - UPS - Bus - Other: 3.96

497

Sample Condition
Cool Intact
Yes Yes

Delivered By: (Circle One)

Time:

Refeived By:

am of the above stated reasons or otherwise.

Phone Result:
Fax Result:
REMARKS:

☐ Yes

□ No Add'i Phone #:



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

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Company Name:	とがあ			8//	LF 10				ANALTOIS		אוניים בי	
Project Manager: 🏽 🎉	Les Bake			P.O. #:								
Address:				Company:			_			-	_	
city: Hablas	State NW Zip: 88240	\ zip:87	0783	Attn:						_		i Dyco .
Phone #:	Fax #:			Address:			_		_	VIII THE		
Project #:	Project Owner:	er:		City:			_		50.0	_		
Project Name:				State:	Zip:		_	-	_			
Project Location: NG Du	EDU In Truck Dar	4		Phone #:								
Sampler Name:	- 4			Fax #:			/			_		
FOR LAB USE ONLY			MATRIX	PRESERV	SAMPLING	NG	L			-		
Lab I.D.	Sample I.D.	OR (C)OMP.	WATER WATER	ASE: OOL			TTP	TEX		-0:		
M.SIGBH			-	OTHER ACID/8 ICE / C OTHER	DATE	TIME	CI	4.7				
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2	151'-1	C	•	-	`	10:14	-	'/				
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0 78 L' L C L C		0			7	1.41						_

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

290

/#q7

Time:

Received By:



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

State: D.J. Zip: 88940 Fax #:
Hobbs State: () IL Zip: 88240
State: O. J. Zio: KROW)
Carry argue
CHACK OFFICE
Project Manager: V. Projec
CAC.



May 09, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU INJECTION TRUNKLINE

Enclosed are the results of analyses for samples received by the laboratory on 05/02/19 16:20.

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

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. Keene

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 BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Received:

05/02/2019

Sampling Date:

05/02/2019

Reported:

05/09/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number: Project Location: NONE GIVEN **EUNICE NM**

Sample Received By:

Tamara Oldaker

Sample ID: NWC 11 - 3 (H901599-01)

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	05/07/2019	ND	2.07	103	2.00	0.266	
Toluene*	<0.050	0.050	05/07/2019	ND	2.17	108	2.00	1.44	
Ethylbenzene*	<0.050	0.050	05/07/2019	ND	2.07	104	2.00	0.912	
Total Xylenes*	<0.150	0.150	05/07/2019	ND	6.33	106	6.00	0.408	
Total BTEX	<0.300	0.300	05/07/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	105	% 73.3-12	19						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	05/07/2019	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Anaiyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qua lifler
GRO C6-C10*	<10.0	10.0	05/06/2019	ND	195	97.7	200	1.90	
DRO >C10-C28*	<10.0	10.0	05/06/2019	ND	201	101	200	10.0	
EXT DRO >C28-C36	<10.0	10.0	05/06/2019	ND					
Surrogate: 1-Chlorooctane	90.5	% 41-142	2						
Surrogate: 1-Chlorooctadecane	104	% 37.6-14	17						

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Page 2 of 30



Analytical Results For:

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

Fax To:

(575) 393-2432

Received:

05/02/2019

Sampling Date:

05/02/2019

Reported:

05/09/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: SP 6 EWC 4' - 1 (H901599-02)

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	05/07/2019	ND	2.07	103	2.00	0.266	
Toluene*	<0.050	0.050	05/07/2019	ND	2.17	108	2.00	1.44	
Ethylbenzene*	<0.050	0.050	05/07/2019	ND	2.07	104	2.00	0.912	
Total Xylenes*	<0.150	0.150	05/07/2019	ND	6.33	106	6.00	0.408	
Total BTEX	<0.300	0.300	05/07/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	107	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	05/07/2019	ND	416	104	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	05/06/2019	ND	195	97.7	200	1.90	
DRO >C10-C28*	<10.0	10.0	05/06/2019	ND	201	101	200	10.0	
EXT DRO >C28-C36	<10.0	10.0	05/06/2019	ND					
Surrogate: 1-Chlorooctane	103	% 41-142	?						
Surrogate: 1-Chlorooctadecane	117	% 37.6-14	7						

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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: Reported:

BTEX 8021B

05/02/2019

019

05/09/2019

NEDU INJECTION TRUNKLINE

Project Name: Project Number:

NONE GIVEN

Sampling Date:

05/02/2019

Sampling Type: Sampling Condition:

Sample Received By:

Soil Cool & Intact

Tamara Oldaker

Project Location:

EUNICE NM

mg/kg

Sample ID: SP 6 EWC 4' - 3 (H901599-03)

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualiffer
Benzene*	<0.050	0.050	05/07/2019	ND	2.07	103	2.00	0.266	
Toluene*	<0.050	0.050	05/07/2019	ND	2.17	108	2.00	1.44	
Ethylbenzene*	<0.050	0.050	05/07/2019	ND	2.07	104	2.00	0.912	
Total Xylenes*	<0.150	0.150	05/07/2019	ND	6.33	106	6.00	0.408	
Total BTEX	<0.300	0.300	05/07/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	107 9	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	592	16.0	05/07/2019	ND	416	104	400	0.00	QM-07
TPH 8015M	mg/	'kg	Analyze	d By: MS		. <u>-</u>			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifler
GRO C6-C10*	<10.0	10.0	05/06/2019	ND	195	97.7	200	1.90	

ND

ND

201

101

200

10.0

05/06/2019

05/06/2019

Analyzed By: ms

Surrogate: 1-Chlorooctane 95.0 % 41-142 Surrogate: 1-Chlorooctadecane 107 % 37.6-147

<10.0

<10.0

10.0

10.0

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DRO >C10-C28*

EXT DRO >C28 C36

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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:

05/02/2019

Sampling Date:

05/02/2019

Reported:

05/09/2019

Sampling Type:

Soil Cool & Intact

Project Name:

NEDU INJECTION TRUNKLINE NONE GIVEN

Sampling Condition: Sample Received By:

Tamara Oldaker

Project Number: Project Location:

EUNICE NM

Sample ID: BRWW 4' - 2 (H901599-04)

BTEX 8021B	mg,	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	05/07/2019	ND	2.07	103	2.00	0.266	
Toluene*	<0.050	0.050	05/07/2019	ND	2.17	108	2.00	1.44	
Ethylbenzene*	<0.050	0.050	05/07/2019	ND	2.07	104	2.00	0.912	
Total Xylenes*	<0.150	0.150	05/07/2019	ND	6.33	106	6.00	0.408	
Total BTEX	<0,300	0.300	05/07/201 9	ND					
Surrogate: 4-Bromofluorobenzene (PIL	106	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	05/07/2019	ND	416	104	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	05/04/2019	ND	207	103	200	0.983	
DRO >C10-C28*	<10.0	10.0	05/04/2019	ND	194	97.1	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/04/2019	ND					
Surrogate: 1-Chlorooctane	91.0	% 41-142	?						
Surrogate: 1-Chlorooctadecane	87.5	% 37.6-14	7						

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Analytical Results For:

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

Fax To:

(575) 393-2432

Analyzed By: ms

Received:

05/02/2019

Sampling Date:

05/02/2019

Reported:

RTEX 8021B

05/09/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: BRWWW 4' - 3 (H901599-05)

BTEX 8021B	mg/	Kg	Analyze	d RA: W2					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/07/2019	ND	2.07	103	2.00	0.266	
Toluene*	<0.050	0.050	05/07/2019	ND	2.17	108	2.00	1.44	
Ethylbenzene*	<0.050	0.050	05/07/2019	ND	2.07	104	2.00	0.912	
Total Xylenes*	<0.150	0.150	05/07/2019	ND	6.33	106	6.00	0.408	
Total BTEX	<0.300	0.300	05/07/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	107	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: HM				_	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	05/07/2019	ND	416	104	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	05/04/2019	ND	207	103	200	0.983	
DRO >C10-C28*	<10.0	10.0	05/04/2019	ND	194	97.1	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/04/2019	ND					
Surrogate: 1-Chlorooctane	87,1	% 41-142	?						
Surrogate: 1-Chlorooctadecane	83,9	% 37.6-14	7						

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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:

05/02/2019

Sampling Date:

05/02/2019

Reported:

05/09/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: BRWW 4' - 1 (H901599-06)

BTEX 8021B	mg/	/kg	Anatyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/07/2019	ND	2.07	103	2.00	0.266	
Toluene*	<0.050	0.050	05/07/2019	ND	2.17	108	2.00	1.44	
Ethylbenzene*	<0.050	0.050	05/07/2019	ND	2.07	104	2.00	0.912	
Total Xylenes*	<0.150	0.150	05/07/2019	ND	6.33	106	6.00	0.408	
Total BTEX	<0.300	0.300	05/07/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	107	% 73.3-12	9						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	05/07/2019	ND	416	104	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	05/04/2019	ND	207	103	200	0.983	
DRO >C10-C28*	<10.0	10.0	05/04/2019	ND	194	97.1	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/04/2019	ND					
Surrogate: 1-Chlorooctane	97.7	% 41-142	?						
Surrogate: 1-Chlorooctadecane	93.8	% 37.6-14	7						

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Analytical Results For:

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

Fax To:

(575) 393-2432

Analyzed By: ms

Received: Reported:

BTEX 8021B

05/02/2019

05/09/2019

Sampling Date:

05/02/2019

Project Name:

Sampling Type:

Soil Cool & Intact

Project Number:

NEDU INJECTION TRUNKLINE NONE GIVEN

Sampling Condition:

Project Location:

EUNICE NM

ma/ko

Sample Received By:

Tamara Oldaker

Sample ID: EWC 1' - 1 (H901599-07)

DIEY ONTIR	mg/	ĸģ	Analyze	a by: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/07/2019	ND	2.07	103	2.00	0.266	
Toluene*	<0.050	0.050	05/07/2019	ND	2.17	108	2.00	1.44	
Ethylbenzene*	<0.050	0.050	05/07/2019	ND	2.07	104	2.00	0.912	
Total Xylenes*	<0.150	0.150	05/07/2019	ND	6.33	106	6.00	0.408	
Total 8TEX	<0.300	0.300	05/07/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	105	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BŞ	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	05/07/2019	ND	416	104	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	05/04/2019	ND	207	103	200	0.983	
DRO >C10-C28*	<10.0	10.0	05/04/2019	ND	194	97.1	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/04/2019	ND					
Surrogate: 1-Chlorooctane	95.4	% 41-142	!						
Surrogate: 1-Chlorooctadecane	93.6	% 37.6-14	7						

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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

Analyzed By: ms

Received:

05/02/2019

Sampling Date:

05/02/2019

Reported:

BTEX 8021B

05/09/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

mg/kg

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: TRC 1' - 1 (H901599-08)

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/07/2019	ND	2.07	103	2.00	0.266	
Toluene*	<0.050	0.050	05/07/2019	ND	2.17	108	2.00	1.44	
Ethylbenzene*	<0.050	0.050	05/07/2019	ND	2.07	104	2.00	0.912	
Total Xylenes*	<0.150	0.150	05/07/2019	ND	6.33	106	6.00	0.408	
Total BTEX	<0,300	0.300	05/07/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	107 9	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1020	16.0	05/07/2019	ND	416	104	400	0.00	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BŞ	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/04/2019	ND	207	103	200	0.983	
DRO >C10-C28*	15.4	10.0	05/04/2019	ND	194	97.1	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/04/2019	ND					
Surrogate: 1-Chlorooctane	67.7	% 41-142	?						
Surrogate: 1-Chlorooctadecane	64.9	% 37.6-14	7						

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Analytical Results For:

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

(575) 393-2432

Analyzed By: MS

Fax To:

05/02/2019

Received: Reported:

BTEX 8021B

05/02/2019

Sampling Date: Sampling Type:

Soil

Project Name:

05/09/2019 **NEDU INJECTION TRUNKLINE**

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

mg/kg

Sample ID: WWC 1' - 1 (H901599-09)

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	05/07/2019	ND	1.93	96.4	2.00	0.556	
Toluene*	<0.050	0.050	05/07/2019	ND	1.96	98.1	2.00	0.865	
Ethylbenzene*	<0.050	0.050	05/07/2019	ND	2.01	100	2.00	1.26	
Total Xylenes*	<0.150	0.150	05/07/2019	ND	5.66	94.3	6.00	1.34	
Total BTEX	<0.300	0.300	05/07/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	88.9	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	05/07/2019	ND	416	104	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	05/04/2019	ND	207	103	200	0.983	
DRO >C10-C28*	<10.0	10.0	05/04/2019	ND	194	97.1	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/04/2019	ND					
Surrogate: 1-Chlorooctane	93.3	% 41-142							
Surrogate: 1-Chlorooctadecane	90.9	% 37.6-14	7						

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Analytical Results For:

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

Fax To:

(575) 393-2432

Analyzed By: MS

Received:

BTEX 8021B

05/02/2019

05/09/2019

Sampling Date:

05/02/2019

Reported: Project Name:

NEDU INJECTION TRUNKLINE

Sampling Type:

Soil

Project Number:

NONE GIVEN

Sampling Condition:

Cool & Intact

Project Location:

EUNICE NM

mg/kg

Sample Received By:

Tamara Oldaker

Sample ID: EWC 1' - 2 (H901599-10)

DIEX COLLD	1,6,	~ 9	74101720	4 0 1 1 1 1 0					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	05/07/2019	ND	1.93	96.4	2.00	0.556	
Toluene*	<0.050	0.050	05/07/2019	ND	1.96	98.1	2.00	0.865	
Ethylbenzene*	<0.050	0.050	05/07/2019	ND	2.01	100	2.00	1.26	
Total Xylenes*	<0.150	0.150	05/07/2019	ND	5.66	94.3	6.00	1.34	
Total BTEX	<0,300	0.300	05/07/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	85.2	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	05/07/2019	ND	416	104	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	05/04/2019	ND	207	103	200	0.983	
DRO >C10-C28*	<10.0	10.0	05/04/2019	ND	194	97.1	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/04/2019	ND					
Surrogate: 1-Chlorooctane	95.4	% 41-142	?						
Surrogate: 1-Chlorooctadecane	92.9	% 37.6-14	17						

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Page 11 of 30



Analytical Results For:

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

Fax To:

(575) 393-2432

Received:

05/02/2019

Sampling Date:

05/02/2019

Reported:

05/09/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: EWC 1' - 3 (H901599-11)

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	05/07/2019	ND	1.93	96.4	2.00	0.556	
Toluene*	<0.050	0.050	05/07/2019	ND	1.96	98.1	2.00	0.865	
Ethylbenzene*	<0.050	0.050	05/07/2019	ND	2.01	100	2.00	1.26	
Total Xylenes*	<0.150	0.150	05/07/2019	ND	5.66	94.3	6.00	1.34	
Total BTEX	<0.300	0.300	05/07/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	88.7	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	05/07/2019	ND	416	104	400	0.00	
ТРН 8015М	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	05/04/2019	ND	207	103	200	0.983	
DRO >C10-C28*	<10.0	10.0	05/04/2019	ND	194	97.1	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/04/2019	ND					
Surrogate: 1-Chlorooctane	100	% 41-142	?						
Surrogate: 1-Chlorooctadecane	97.6	% 37.6-14	7						

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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

Analyzed By: MS

Received: Reported:

BTEX 8021B

05/02/2019 05/09/2019

Project Name:

NEDU INJECTION TRUNKLINE

Project Number: Project Location: **NONE GIVEN EUNICE NM**

mg/kg

Sampling Date:

05/02/2019

Sampling Type: Sampling Condition: Soil Cool & Intact

Sample Received By:

Tamara Oldaker

Sample ID: WWC 1' - 3 (H901599-12)

BIEX 0021D	ing,	ny	Asidiyze	a by. ma					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/07/2019	ND	1.93	96.4	2.00	0.556	
Toluene*	<0.050	0.050	05/07/2019	ND	1.96	98.1	2.00	0.865	
Ethylbenzene*	<0.050	0.050	05/07/2019	ND	2.01	100	2.00	1.26	
Total Xylenes*	<0.150	0.150	05/07/2019	ND	5.66	94.3	6.00	1.34	
Total BTEX	<0.300	0.300	05/07/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	79.0	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Chloride	64.0	16.0	05/07/2019	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/04/2019	ND	207	103	200	0.983	
DRO >C10-C28*	<10.0	10.0	05/04/2019	ND	194	97.1	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/04/2019	ND					
Surrogate: 1-Chlorooctane	97.7	% 41-142	?						
Surrogate: 1-Chlorooctadecane	95.8	% 37.6-14	7						

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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:

05/02/2019

Sampling Date:

05/02/2019

Reported:

05/09/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number: Project Location: **NONE GIVEN EUNICE NM**

93.7%

37.6-147

Sample Received By:

Tamara Oldaker

Sample ID: EWC 4' - 2 (H901599-13)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	05/07/2019	ND	1.93	96.4	2.00	0.556	
Toluene*	<0.050	0.050	05/07/2019	ND	1.96	98.1	2.00	0.865	
Ethylbenzene*	<0.050	0.050	05/07/2019	ND	2.01	100	2.00	1.26	
Total Xylenes*	<0.150	0.150	05/07/2019	ND	5.66	94.3	6.00	1.34	
Total BTEX	<0.300	0.300	05/07/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	86.9	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	05/07/2019	ND	416	104	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	05/04/2019	ND	207	103	200	0.983	
DRO >C10-C28*	<10.0	10.0	05/04/2019	ND	194	97.1	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/04/2019	ND					
Surrogate: 1-Chlorooctane	95.8	% 41-142	!						

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Surrogate: 1-Chlorooctadecane

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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:

05/02/2019

Sampling Date:

05/02/2019

Reported:

BTEX 8021B

05/09/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

mg/kg

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: TRC 1' - 4 (H901599-14)

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/07/2019	ND	1.93	96.4	2.00	0.556	
Toluene*	<0.050	0.050	05/07/2019	ND	1.96	98.1	2.00	0.865	
Ethylbenzene*	<0.050	0.050	05/07/2019	ND	2.01	100	2.00	1.26	
Total Xylenes*	<0.150	0.150	05/07/2019	ND	5.66	94.3	6.00	1.34	
Total BTEX	<0.300	0.300	05/07/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	74.7 9	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BŞ	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	05/07/2019	ND	416	104	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	05/04/2019	ND	207	103	200	0.983	
DRO >C10-C28*	<10.0	10.0	05/04/2019	ND	194	97.1	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/04/2019	ND					
Surrogate: 1-Chlorooctane	94.7	% 41-142	?						
Surrogate: 1-Chlorooctadecane	91.45	% 37.6-14	7						

Analyzed By: MS

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Analytical Results For:

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

Fax To:

(575) 393-2432

Analyzed By: ms

Received:

BTEX 8021B

05/02/2019

Reported:

05/09/2019

Project Name: Project Number: **NEDU INJECTION TRUNKLINE NONE GIVEN**

mg/kg

Project Location:

EUNICE NM

Sampling Date:

Sampling Type:

05/02/2019

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

Sample ID: EWC 1' - 4 (H901599-15)

J. D. COLLO	9/	Ny	romyte	d by ma					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/08/2019	ND	2.09	104	2.00	3.25	
Toluene*	<0.050	0.050	05/08/2019	ND	2.18	109	2.00	1.96	
Ethylbenzene*	<0.050	0.050	05/08/2019	ND	2.09	105	2.00	1.39	
Total Xylenes*	<0.150	0.150	05/08/2019	ND	6.37	106	6.00	1.20	
Total BTEX	<0.300	0.300	05/08/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	107	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Chloride	320	16.0	05/07/2019	ND	416	104	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	B\$	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/04/2019	ND	207	103	200	0.983	
DRO >C10-C28*	<10.0	10.0	05/04/2019	ND	194	97.1	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/04/2019	ND					
Surrogate: 1-Chlorooctane	92.9	% 41-142	!						
Surrogate: 1-Chlorooctadecane	91.0	% 37.6-14	7						

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Page 16 of 30



Analytical Results For:

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

Fax To:

(575) 393-2432

Received:

05/02/2019

05/09/2019

Sampling Date:

05/02/2019

Reported: Project Name:

UJ/UJ/2013

Sampling Type:

Soil

Project Number:

NEDU INJECTION TRUNKLINE NONE GIVEN

Sampling Condition: Sample Received By: Cool & Intact
Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: WWC 1' - 4 (H901599-16)

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	05/08/2019	ND	2.09	104	2.00	3.25	
Toluene*	<0.050	0.050	05/08/2019	ND	2.18	109	2.00	1.96	
Ethylbenzene*	<0.050	0.050	05/08/2019	ND	2.09	105	2.00	1.39	
Total Xylenes*	<0.150	0.150	05/08/2019	ND	6.37	106	6.00	1.20	
Total BTEX	<0.300	0.300	05/08/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	106	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	'kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Chloride	64.0	16.0	05/07/2019	ND	416	104	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	05/04/2019	ND	207	103	200	0.983	
DRO >C10-C28*	<10.0	10.0	05/04/2019	ND	194	97.1	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/04/2019	ND					
Surrogate: 1-Chlorooctane	94.9	% 41-142	?						
Surrogate. 1-Chlorooctadecane	92.4	% 37.6-14	17						

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Analytical Results For:

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

Fax To:

(575) 393-2432

Analyzed By: ms

Received: Reported:

BTEX 8021B

05/02/2019

05/09/2019

Sampling Date:

05/02/2019

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Type:

Soil Cool & Intact

Project Number:

NONE GIVEN

Sampling Condition:

Tamara Oldaker

Project Location:

EUNICE NM

mg/kg

Sample Received By:

Sample ID: EWC 1' - 5 (H901599-17)

BIEX 0021B	III y	'NY	Autalyzo	u by. ma					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	05/08/2019	ND	2.09	104	2.00	3.25	
Toluene*	<0.050	0.050	05/08/2019	ND	2.18	109	2.00	1.96	
Ethylbenzene*	<0.050	0.050	05/08/2019	ND	2.09	105	2.00	1.39	
Total Xylenes*	<0.150	0.150	05/08/2019	ND	6.37	106	6.00	1.20	
Total 8TEX	<0.300	0.300	05/08/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIE	105	% 73.3-12	9						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	05/07/2019	ND	416	104	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	05/04/2019	ND	207	103	200	0.983	
DRO >C10-C28*	<10.0	10.0	05/04/2019	ND	194	97.1	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/04/2019	ND					
Surrogate: 1-Chlorooctane	90.4	% 41-142	?						
Surrogate: I-Chlorooctadecane	86.5	% 37.6-14	7						

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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

Analyzed By: ms

Received: Reported:

BTEX 8021B

05/02/2019

05/09/2019

Sampling Date:

05/02/2019

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Type:

Soil Cool & Intact

Project Number:

NONE GIVEN

Sampling Condition: Sample Received By:

Tamara Oldaker

EUNICE NM

mg/kg

Project Location:

Sample ID: TRC 1' - 5 (H901599-18)

DIEX COLLD	91	Ny	randiyac	a byt nib					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	05/08/2019	ND	2.09	104	2.00	3.25	
Toluene*	<0.050	0.050	05/08/2019	ND	2.18	109	2.00	1.96	
Ethylbenzene*	<0.050	0.050	05/08/2019	ND	2.09	105	2.00	1.39	
Total Xylenes*	<0.150	0.150	05/08/2019	ND	6.37	106	6.00	1.20	
Total BTEX	<0.300	0.300	05/08/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	107	% 73.3-12	9						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	05/07/2019	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
GRO C6-C10*	<10.0	10.0	05/04/2019	ND	207	103	200	0.983	
DRO >C10-C28*	<10.0	10.0	05/04/2019	ND	194	97.1	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/04/2019	ND					
Surrogate: 1-Chlorooctane	95.6	% 41-142	?						
Surrogate. 1-Chlorooctadecane	91.0	% 37.6-14	7						

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Any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within tithity (30) days after completion of the applicable service. In no event shall Cardinal be including, without firmtation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services here

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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: Reported: 05/02/2019

05/09/2019

Sampling Date:

05/02/2019

Project Name:

NECH INJECTION T

Sampling Type:

Soil Cool & Intact

Project Name:

NEDU INJECTION TRUNKLINE NONE GIVEN

Sampling Condition: Sample Received By:

Tamara Oldaker

Project Number: Project Location:

EUNICE NM

Sample ID: EX1 6BF (H901599-19)

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	05/08/2019	ND	2.09	104	2.00	3.25	
Toluene*	<0.050	0.050	05/08/2019	ND	2.18	109	2.00	1.96	
Ethylbenzene*	<0.050	0.050	05/08/2019	ND	2.09	105	2.00	1.39	
Total Xylenes*	<0.150	0.150	05/08/2019	ND	6.37	106	6.00	1.20	
Total BTEX	<0.300	0.300	05/08/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	107	% 73.3-12	9						
Chloride, SM4500Cl-8	mg/	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	672	16.0	05/07/2019	ND	416	104	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	05/04/2019	ND	207	103	200	0.983	
DRO >C10-C28*	<10.0	10.0	05/04/2019	ND	194	97.1	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/04/2019	ND					
Surrogate: 1-Chlorooctane	76.8	% 41-142	?						
Surrogate: 1-Chlorooctadecane	73.2	% 37.6-14	17						

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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: Reported:

DTEV POSTO

05/02/2019

05/09/2019

Project Name: Project Number: Project Location:

NONE GIVEN **EUNICE NM**

NEDU INJECTION TRUNKLINE

Sample Received By:

Analyzed By: me

Sampling Date: 05/02/2019 Sampling Type:

Sampling Condition:

Soil Cool & Intact

Tamara Oldaker

Sample ID: EX1 5AF (H901599-20)

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	05/08/2019	ND	2.09	104	2.00	3.25	
Toluene*	<0.050	0.050	05/08/2019	ND	2.18	109	2.00	1.96	
Ethylbenzene*	<0.050	0.050	05/08/2019	ND	2.09	105	2.00	1.39	
Total Xylenes*	<0.150	0.150	05/08/2019	ND	6.37	106	6.00	1.20	
Total BTEX	<0.300	0.300	05/08/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	106	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	656	16.0	05/07/2019	ND	416	104	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	05/04/2019	ND	207	103	200	0.983	
DRO >C10-C28*	<10.0	10.0	05/04/2019	ND	194	97.1	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/04/2019	ND					
Surrogate: 1-Chlorooctane	76.2	% 41-142	?						
Surrogate: 1-Chlorooctadecane	71.9	% 37.6-14	7						

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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: Reported:

BTEX 8021B

05/02/2019

05/09/2019

Sampling Date: Sampling Type: 05/02/2019

Project Name:

mg/kg

Soil

NEDU INJECTION TRUNKLINE NONE GIVEN

Sampling Condition:

Cool & Intact

Project Number: Project Location:

EUNICE NM

Sample Received By:

Tamara Oldaker

Sample ID: EX1 1AF @ 2' (H901599-21)

DIEY OASTD	livy/	Ny .	Aldiyeo	d by. Ins					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/08/2019	ND	2.09	104	2.00	3.25	
Toluene*	<0.050	0.050	05/08/2019	ND	2.18	109	2.00	1.96	
Ethylbenzene*	<0.050	0.050	05/08/2019	ND	2.09	105	2.00	1.39	
Total Xylenes*	<0.150	0.150	05/08/2019	ND	6.37	106	6.00	1.20	
Total BTEX	<0,300	0.300	05/08/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	105	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	496	16.0	05/07/2019	ND	416	104	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	05/04/2019	ND	207	103	200	0.983	
DRO >C10-C28*	<10.0	10.0	05/04/2019	ND	194	97.1	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/04/2019	ND					
Surrogate: 1-Chlorooctane	61.7	% 41-142	?						
Surrogate: 1-Chlorooctadecane	58.5	% 37.6-14	7						

Analyzed By: ms

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Analytical Results For:

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

Fax To:

(575) 393-2432

Analyzed By: ms

Received:

05/02/2019

Sampling Date:

05/02/2019

Reported:

BTEX 8021B

05/09/2019

Sampling Type:

Coil

Project Name:

NEDU INJECTION TRUNKLINE

Soil

Project Number:

ONE CIVEN

Sampling Condition:

Cool & Intact

Project Number.

NONE GIVEN

mg/kg

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: EX1 3AF @ 2' (H901599-22)

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	05/08/2019	ND	2.09	104	2.00	3.25	
Toluene*	<0.050	0.050	05/08/2019	ND	2.18	109	2.00	1.96	
Ethylbenzene*	< 0.050	0.050	05/08/2019	ND	2.09	105	2.00	1.39	
Total Xylenes*	<0.150	0.150	05/08/2019	ND	6.37	106	6.00	1.20	
Total BTEX	<0.300	0.300	05/08/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	106 9	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	05/07/2019	ND	416	104	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	05/04/2019	ND	207	103	200	0.983	
DRO >C10-C28*	<10.0	10.0	05/04/2019	ND	194	97.1	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/04/2019	ND					
Surrogate: 1-Chlorooctane	78.7	% 41-142	?						
Surrogate: 1-Chlorooctadecane	75.6	% 37.6-14	7						

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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:

05/02/2019

Sampling Date:

05/02/2019

Reported:

05/09/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: EX1 4BF @ 2' (H901599-23)

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	05/08/2019	ND	2.09	104	2.00	3.25	
Toluene*	<0.050	0.050	05/08/2019	ND	2.18	109	2.00	1.96	
Ethylbenzene*	<0.050	0.050	05/08/2019	ND	2.09	105	2.00	1.39	
Total Xylenes*	<0.150	0.150	05/08/2019	ND	6.37	106	6.00	1.20	
Total BTEX	<0,300	0.300	05/08/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIC	106 9	% 73.3-12	19						
Chloride, SM4500CI-B	mg/	'kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	912	16.0	05/07/2019	ND	432	108	400	3.77	
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	05/04/2019	ND	207	103	200	0.983	
DRO >C10-C28*	<10.0	10.0	05/04/2019	ND	194	97.1	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/04/2019	ND					
Surrogate: 1-Chlorooctane	75.2	% 41-142	2						
Surrogate: 1-Chlorooctadecane	73.1	% 37.6-14	17						

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Analytical Results For:

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

Fax To:

(575) 393-2432

Analyzed By: me

Received:

05/02/2019

Sampling Date:

05/02/2019

Reported:

RTEY SOCIE

05/09/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: EX1 8BF @ 2' (H901599-24)

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	05/08/2019	ND	2.09	104	2.00	3.25	
Toluene*	<0.050	0.050	05/08/2019	ND	2.18	109	2.00	1.96	
Ethylbenzene*	<0.050	0.050	05/08/2019	ND	2.09	105	2.00	1.39	
Total Xylenes*	<0.150	0.150	05/08/2019	ND	6.37	106	6.00	1.20	
Total 8TEX	<0.300	0.300	05/08/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIC	105	% 73.3-12	9						
Chloride, SM4500CI-8	mg.	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
Chioride	672	16.0	05/07/2019	ND	432	108	400	3.77	
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	05/06/2019	ND	205	103	200	4.85	
DRO >C10-C28*	<10.0	10.0	05/06/2019	ND	197	98.4	200	6.99	
EXT DRO >C28-C36	<10.0	10.0	05/06/2019	ND					
Surrogate: 1-Chlorooctane	78.1	% 41-142	?						
Surrogate. 1-Chlorooctadecane	75.1	% 37.6-14	17						

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Analytical Results For:

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

Reported: 05/09/2019

Project Name: NEDU INJECTION TRUNKLINE

05/02/2019

Project Number: NONE GIVEN
Project Location: EUNICE NM

Sampling Date:

05/02/2019 Soil

Sampling Type: Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

Sample ID: WWC 1' @ 5 (H901599-25)

Received:

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	05/08/2019	ND	2.09	104	2.00	3.25	
Toluene*	<0.050	0.050	05/08/2019	ND	2.18	109	2.00	1.96	
Ethylbenzene*	<0.050	0.050	05/08/2019	ND	2.09	105	2.00	1.39	
Total Xylenes*	<0.150	0.150	05/08/2019	ND	6.37	106	6.00	1.20	
Total BTEX	<0.300	0.300	05/08/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	105	% 73.3-12	9						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	05/07/2019	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BŞ	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/06/2019	ND	205	103	200	4.85	
DRO >C10-C28*	<10.0	10.0	05/06/2019	ND	197	98.4	200	6.99	
EXT DRO >C28-C36	<10.0	10.0	05/06/2019	ND					
Surrogate: I-Chlorooctane	96.0	% 41-142	?						
Surrogate. 1-Chlorooctadecane	89.9	% 37.6-14	7						

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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 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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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

		tion CHECKED BY: (Initials)	Sample Condition Cool Infact Tes Tres	(Circle One) Bus - Other:	Delivered By: (Circle One)
ania ani				Time:	
	Cher	9	Received By:	Date:	Relinquished By:
		Klobat She	1 anomal	Time: 20	2
Add'! Fax #:	if: Yes No	0/1/1	Received By:	S-2-19	Relinquished By:
		n is based upon any of the above stated rear	quental damages, including without limitation, business interruptions, bas of use of loss of profits incurred by client, its subsidiarie of services hereunder by Cardinal, requiratess of whether such claim is based upon any of the above stated ressort or otherwise.	service. In no event shall Cardinal be liable for incidental or consequental diamages, including without limitation, business interruptions, loss of use or loss of profits incurred by client, its subsidiaries, affiliates or successors withing out of or related to the purformance of services hereunder by Condinal, reperdiess of whether such claim is besed upon any of the above stitled reasons or otherwise.	service. In no event shall Can affiliates or successors within
Control of the contro	s by the stent for the	ct or tort, shall be limited to the amount paid nd received by Cardinal within 30 days after	y for any claim erising whether based in contra The deemed waved unless made in writing a	PLEASE NOTE: Lability and Demands. Candrial's liability and clear's exclusive remedy for any claim ensing whether based in contract or but, shall be limited to the amount fisid by the clean for the applicable analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waved unless made in whiting and received by Cardinal within 30 days after completion of the applicable	PLEASE NOTE: Liability and Dr. analyses. All cialms including the
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	2.050-1	1 3/2		WC1-1	7
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	10:1191 1 1	1 8/2	211	25004-2	4
	10:1741101	1 5/2		オンキックリース	200
	10:28-1 1	1 2/2	2	2% EWC4'-1	26
	2524 1 1 1	1 5/2		JWC11-3	
	CI El	OTHE ACID/I ICE / C OTHE DATE	# CON		H961549
	cT TE	R: BASE: COOL	B OR (C ITAINER INDWAT EWATER	Sample I.D.	Lab I.D.
	T† 4		S ER		
	\frac{1}{2}	PRESERV SAMPLING	MATRIX		FOR LAB USE ONLY
	/	Fax #:		Lice Bioxe	Sampler Name:
		Phone #:	Line	SFICK Triting	Project Location:
	- 000	State: Zip:			Project Name:
		City:	ner:	Project Owner:	Project #:
		Address:		Fax#:	Phone #:
	-012	Attn:	Mzip: 88240	State: NW Zip:	city: Hobb
		Company:			Address:
		P.O. #		Bruce Buke	Project Manager:
ANALYSIS REQUEST	AN	BILL TO		Asake	Company Name:
		-			

Delivered By: (Circle One)

Sample Condition
Cool Intact
Pres 1-Yes
No No

9

CHECKED BY: (Initials) Time:



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	+ Back		BILL TO			ANAI YSIS RI	REDIEST	
Project Manager:	Stuce Baker		P.O. #			_		
Address:			Company:					_
City: /toby	State:///// Zip:	Zip: 882do	Attn:					
Phone #:	Fax #:		Address:					
Project #:	Project Owner:	er:	City:		_			
Project Name:			State: Zip:			-		
Project Location: 1	DEDU In tout	line	Phone #:					
Sampler Name:	Desc Chierra	530	Fax #:				_	- 20
FOR LAB USE ONLY		MATRIX	PRESERV SAMPLING	No.	_			
Lab I.D.	Sample I.D.	OR (C)OMP. AINERS DWATER WATER			EX.			
Habisas		# CON GROU	OTHER ACID/B ICE / C OTHER	TIME	Ex			
12	n 153		5/2	2.15				
13 E	として	2		3.6	-			
156	C 1'34	0		349 1	-			
N E	S-1-4	, C -		7 LPS	ノ - ・			
KI W	MC JEA	-	-	WY.				
1 × 1	50 1-5	ar)		7 255	· [, [, [,] ,]			
36.	180	C -	7 /	3	<u>-</u> ا			
20 €	() 5A	811		3:45)			
PLEASE NOTE: Liability and Dame analyses. All claims including those service, in no event shall Cardinal to	PLEASE NOTE: Libbilly and Damages. Certinat's bielly and chert's exclusive remedy to may clean entity whether bead in contract or lord, the libbilly and brances controlled the measurement of the chart for the care with the chart for the personal exclusive. All claims inducting times for medigence and any other clause windows that the deamed where others made in withing and received by Cardinal within 30 days after completion of the applicable service. In one event shall Cardinal be fields for incidental or consequental damages, including without finisheds, business triansplaces loss of task or loss of profits incurred by claim, its substitutes,	any claim ansing whether based in contract a deemed walved unless made in writing and g without finitiation, business interruptions, is	or lord, shall be illimited to the empurit people teceived by Cardinal within 30 days after second or loss of profits incurred by d	d by the clean for the r completion of the applicable thent, its subsidiaries,				
Relinquished By:	Relinquished By: Date: Received By:	Received By:	t based upon, any of the above stored rea	"		Add'I Phone #:	1000	
58	Time:	Manage &	The kind	- 1 - 1	☐ Yes ☐ No	Add'l Fax #:		
Relinquished By:	Date:	Received By:	The same		_			



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:		BILL TO	ANALYS	ANALYSIS REQUEST
Project Manager: Bouck Bole		P.O. #:		
		Company:		
city: Hobbos start	State: N.M. Zip: SS2VO	Attn:		
**	34	Address:		
Project #: Proje	Project Owner:	City:		2.1
Project Name:	9	State: Zip:		
Project Location: 12015 Two	thing trivaling	Phone #:		
Sampler Name:)0	Fax #:		- 12
FOR LAB USE ONLY	MATRIX	PRESERV. SAMPLING	1	
Lab I.D. Sample I.D.	(G)RAB OR (C)OMI # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER: ACID/BASE: CE)/COOL OTHER: DATE	CU Ext TPT Bress	
21 EX 1 145 GS	0	更め	3:30 ///	
(b)	0		8:25	
18 1×2	> C		Sids /	
KXX X		+	4.10	
25 WWC1,62	-	1 5.2.49	15:57	
PLEASE NOTE: Liability and Damages, Cardinar's liability and clent's exclusive remedy for any claim ansizing whether besid in contract or fort, shall be firmed in the amount paid by the claim for the parables analyzes. All claims including those for negligance and any other cause whatever what he deemed waved unless made in writing and received by Cardinal within 30 days after completion of the speciable service. In no event shall Cardinal be liable for incidental or createquaried cameges, including without firstaches, substress in instruptions, loss of use, or loss of profits increased by cleric, its subsidiaries, afficiates or successors strilling out of or related to the performance of services hereunder by Cardina, in profits, or whether such claim is based upon any of the above stated reasons to otherwise.	d clent's exclusive remedy for say claim arising whether besid in contract or fort, shall be limited to the arrount paid by the claim for the fiber cause whatsoever shall be deemed waved unless made in whiting and received by Cardinal which 30 days after complishin of the appropriate processing and including without limited in business interruptions, but of use, or loss of profits incrumed by Cardinal without limited to business interruptions, but of use, or loss of profits incrumed by Cardinal without limited to the white stand or loss of profits hereunder by Cardinals, importalists of whether such claim to based upon any of lime above stand reasons or otherwise.	r tort, shall be limited to the arrount paid i received by Cardinal within 30 days after of ds of use, or loss of profits incurred by die based _pon_any of the above stated reass	pecable	
and l	S-2-19 Received By:	Malakur	Phone Result:	?* **
Time:			EWA,	
Delivered By: (Circle One)	Sample Condition Cool Infact Cool Infact Cool Infact Cool Infact Cool Infact Cool Infact	CHECKED BY: (Initials)		



May 13, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU INJECTION TRUNKLINE

Enclosed are the results of analyses for samples received by the laboratory on 05/03/19 15:33.

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

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.

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

Received:

05/03/2019

Reported:

05/13/2019

Project Name:

NEDU INJECTION TRUNKLINE

Project Number: Project Location:

NONE GIVEN **EUNICE NM**

Sampling Date:

05/03/2019

Sampling Type: Sampling Condition: Soil

Sample Received By:

Cool & Intact Tamara Oldaker

Sample ID: EWC 2' - 7 (H901612-01)

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	05/09/2019	ND	2.04	102	2.00	0.687	
Toluene*	<0.050	0.050	05/09/2019	ND	2.12	106	2.00	0.499	
Ethylbenzene*	<0.050	0.050	05/09/2019	ND	2.06	103	2.00	0.667	
Total Xylenes*	<0.150	0.150	05/09/2019	ND	6.25	104	6.00	1.14	
Total BTEX	<0.300	0.300	05/09/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	103	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	05/07/2019	ND	400	100	400	3.92	
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	05/07/2019	ND	222	111	200	2.49	
DRO >C10-C28*	<10.0	10.0	05/07/2019	ND	213	107	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	05/07/2019	ND					
Surrogate: 1-Chlorooctane	87.4	% 41-142	?						
Surrogate: 1-Chlorooctadecane	83.5	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 2 of 8



Analytical Results For:

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

Received:

05/03/2019

Reported:

05/13/2019

Project Name:

NEDU INJECTION TRUNKLINE

Project Number: Project Location: **NONE GIVEN EUNICE NM**

Sampling Date:

Sampling Type:

05/03/2019 Soil

Sampling Condition: Sample Received By: Cool & Intact Tamara Oldaker

Sample ID: EWC 2' - 6 (H901612-02)

BTEX 8021B	mg,	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	05/09/2019	ND	2.04	102	2.00	0.687	
Toluene*	<0.050	0.050	05/09/2019	ND	2.12	106	2.00	0.499	
Ethylbenzene*	<0.050	0.050	05/09/2019	ND	2.06	103	2.00	0.667	
Total Xylenes*	<0.150	0.150	05/09/2019	ND	6.25	104	6.00	1.14	
Total BTEX	<0.300	0.300	05/09/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	107	% 73_3-12	9						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	05/07/2019	ND	400	100	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
GRO C6-C10*	<10.0	10.0	05/07/2019	ND	222	111	200	2.49	
DRO >C10-C28*	<10.0	10.0	05/07/2019	ND	213	107	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	05/07/2019	ND					
Surrogate: 1-Chlorooctane	105	% 41-142	•						
Surrogate: 1-Chlorooctadecane	99.2	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager

Page 3 of 8



Analytical Results For:

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

Fax To:

(575) 393-2432

Received:

05/03/2019

Sampling Date:

05/03/2019

Reported:

05/13/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition: Sample Received By: Cool & Intact Tamara Oldaker

Project Number: Project Location: NONE GIVEN

EUNICE NM

Sample ID: WWC 2' - 7 (H901612-03)

BTEX 80218	mg/	'kg	Anaiyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	8\$	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	05/09/2019	ND	2.04	102	2.00	0.687	
Toluene*	<0.050	0.050	05/09/2019	ND	2.12	106	2.00	0.499	
Ethylbenzene*	<0.050	0.050	05/09/2019	ND	2.06	103	2.00	0.667	
Total Xylenes*	<0.150	0.150	05/09/2019	ND	6.25	104	6.00	1.14	
Total BTEX	<0.300	0.300	05/09/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIC	102 9	% 73.3-12	9						
Chloride, SM4500Cl-8	mg/	'kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	05/07/2019	ND	400	100	400	3.92	
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	05/07/2019	ND	222	111	200	2.49	
DRO >C10-C28*	<10.0	10.0	05/07/2019	ND	213	107	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	05/07/2019	ND					
Surrogate: 1-Chlorooctane	96.0	% 41-142	•						
Surrogate: 1-Chlorooctadecane	91.2	% 37.6-14	7						

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Page 4 of 8



Analytical Results For:

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

Fax To:

(575) 393-2432

Received: Reported: 05/03/2019

05/13/2019

Project Name:

NEDU INJECTION TRUNKLINE

NONE GIVEN

Project Number: Project Location:

EUNICE NM

Sampling Date:

05/03/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact Tamara Oldaker

Sample ID: BFC 2' - 7 (H901612-04)

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	05/09/2019	ND	2.04	102	2.00	0.687	
Toluene*	<0.050	0.050	05/09/2019	ND	2.12	106	2.00	0.499	
Ethylbenzene*	<0.050	0.050	05/09/2019	ND	2.06	103	2.00	0.667	
Total Xylenes*	<0.150	0.150	05/09/2019	ND	6.25	104	6.00	1.14	
Total BTEX	<0.300	0.300	05/09/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	98.2	% 73.3-12	9						
Chloride, SM4500Cl-B	mg,	'kg	Analyze	d By: HM		<u> </u>			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	05/07/2019	ND	400	100	400	3.92	
TPH 8015M	mg,	kg	Analyza	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/07/2019	ND	222	111	200	2.49	
DRO >C10-C28*	<10.0	10.0	05/07/2019	ND	213	107	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	05/07/2019	ND					
Surrogate: 1-Chlorooctane	110 9	% 41-142							
Surrogate: 1-Chlorooctadecane	108	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager

Page 5 of 8



Analytical Results For:

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

Fax To:

(575) 393-2432

Received:

05/03/2019

05/13/2019

Sampling Date:

05/03/2019

Reported:

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: BRFC 3' - 6-10 (H901612-05)

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	05/09/2019	ND	2.04	102	2.00	0.687	
Toluene*	<0.050	0.050	05/09/2019	ND	2.12	106	2.00	0.499	
Ethylbenzene*	<0.050	0.050	05/09/2019	ND	2.06	103	2.00	0.667	
Total Xylenes*	<0.150	0.150	05/09/2019	ND	6.25	104	6.00	1.14	
Total BTEX	<0.300	0.300	05/09/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	101	% 73.3-12	9						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	752	16.0	05/07/2019	ND	400	100	400	3.92	
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	05/07/2019	ND	222	111	200	2.49	
DRO >C10-C28*	<10.0	10.0	05/07/2019	ND	213	107	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	05/07/2019	ND					
Surrogate: 1-Chlorooctane	96.7	% 41-142	?						
Surrogate: 1-Chlorooctadecane	94.1	% 37.6-14	17						

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Celey D. Keene, Lab Director/Quality Manager

Page 6 of 8

ND



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

Notes and Definitions

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

Analyte NOT DETECTED at or above the reporting limit

Cardinal Laboratories *=Accredited Analyte

PLEASE MOTE: Usbillty and Damages. Cardinal's liability and clients's exclusive remedy for any claim arising, whether based in contract or toxt, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatabover shall be deemed welved 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 claimages including, without firmtation, business interruptions, loss of use, or loss of use, or loss of profits incurred by Clerin, its subsidients, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether succident is based upon any of the above stated reasons or otherwise. Results related only to the samples identified above. This report shall not be reproduced except in fall with written approval of Cardinal Laboratories.

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Celey D. Keene, Lab Director/Quality Manager

Page 7 of 8



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Hoden		BILL TO	ANALYSIS REQUEST	
Project Manager: Rock	Le / Je Real Brown	P.O.#		_
Address:	0	Company:		
city: Hobbos	State: DU Zip: 858UO	Attn:		
Phone #:	Fax #:	Address:		
Project #:	Project Owner:	City:		
Project Name:		State: Zip:		_
Project Location: RRY	rection truck-bias	*		
Sampler Name: Cop Callette		Fax#:		
FOR LAB USE ONLY	MATRIX	PRESERV SAMPLING		_
Lab I.D. Sample I.D.	IR (C))DMP INERS WATER		77°/	
2	(G)RAB O # CONTAI GROUND WASTEW/ SOIL OIL SLUDGE	OTHER: ACID/BASI ICE / COO OTHER: DATE	C/ Et+ BTE	
1 - 2 - 2 - 2		\ 5/3 :		
2 - INC 9, - 10		7	9	
1 0 0 0 0 1 J				
5 BREC3.6-	-10 61 (CSW 1		
analyses. All claims including those for negligence and any other service. In no event shall Cardinal be šable for incidental or cost shall service out of or related to the parluments	analyses. All claims including those for inapplence and any other custom whatever shall be deemed waved unless made in ordinad on the shall be fined to the annual gold by the claim for the service. In no event shall Cardinal within 30 days after completed to the substances of the service. In no event shall Cardinal be fable for incidental or corsequental damages, including whose sintences inharmages, base of use, or loss of profits incurred by service shall be substances. The service is not service of the service of services hereunder by Cardinal, requirems of whether such claim by service into the above stated reasons to otherwise.	r tort, shall be limited to the emoturi gaid by the clai received by Candinal within 30 days after composite as of use, or loss of profits incurred by client, its sui bassed upon any of the above stated reasons or opt	nt too the applicable stoldings	
	Time: Received By:	Phone Resi Fax Result: REMARKS:	Phone Result: ☐ Yes ☐ No Add'l Phone #: Fax Result: ☐ Yes ☐ No Add'l Fax #; REMARKS:	
Relinquished By:	Date: Received By:	Krawa Ja		
Delivered By: (Circle One)	Sample Condition Cool Intact City Tes City	CHECKED BY: (Initials)	Enail Results	
	OC 13	7.0		



May 13, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU INJECTION TRUNKLINE

Enclosed are the results of analyses for samples received by the laboratory on 05/03/19 15:33.

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

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 Li Keene

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

Received:

05/03/2019

Reported: Project Name: 05/13/2019

NEDU INJECTION TRUNKLINE

Project Number:

NONE GIVEN

Project Location:

EUNICE NM

Sampling Date:

Sampling Type:

05/03/2019

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

Sample ID: 2 BF 1S EXC. (H901613-01)

BTEX 8021B	mg/	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qua ifle
Benzene*	<0.050	0.050	05/09/2019	ND	2.04	102	2.00	0.687	
Toluene*	<0.050	0.050	05/09/2019	ND	2.12	106	2.00	0.499	
Ethylbenzene*	<0.050	0.050	05/09/2019	ND	2.06	103	2.00	0.667	
Total Xylenes*	<0.150	0.150	05/09/2019	ND	6.25	104	6.00	1.14	
Total BTEX	<0.300	0.300	05/09/2019	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	272	16.0	05/08/2019	ND	400	100	400	3.92	
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	05/07/2019	ND	222	111	200	2.49	
DRO >C10-C28*	<10.0	10.0	05/07/2019	ND	213	107	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	05/07/2019	ND					
Surrogate: 1-Chlorooctane	95.9	% 41-142	?						
Surrogate: 1-Chlorooctadecane	93.8	% 37.6-14	7						

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*=Accredited Analyte

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Colleg I trans

Celey D. Keene, Lab Director/Quality Manager

Page 2 of 6



Analytical Results For:

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

Received:

05/03/2019

05/13/2019

Sampling Date:

05/03/2019

Reported: Project Name:

Sampling Type:

Soil

NEDU INJECTION TRUNKLINE NONE GIVEN

Sampling Condition: Sample Received By: Cool & Intact Tamara Oldaker

Project Number: Project Location:

EUNICE NM

Sample ID: AW1 @ 2' EXC1 (H901613-02)

BTEX 8021B	mg/	'kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	05/09/2019	ND	2.04	102	2.00	0.687	
Toluene*	<0.050	0.050	05/09/2019	ND	2.12	106	2.00	0.499	
Ethylbenzene*	<0.050	0.050	05/09/2019	ND	2.06	103	2.00	0.667	
Total Xylenes*	<0.150	0.150	05/09/2019	ND	6.25	104	6.00	1.14	
Total BTEX	<0.300	0.300	05/09/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIC	97.9	% 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	224	16.0	05/08/2019	ND	400	100	400	3.92	
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	05/07/2019	ND	222	111	200	2.49	
DRO >C10-C28*	<10.0	10.0	05/07/2019	ND	213	107	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	05/07/2019	ND					
Surrogate: 1-Chlorooctane	98.5	% 41-142	?						
Surrogate: 1-Chlorooctadecane	95.4	% 37.6-14	17						

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 3 of 6



Analytical Results For:

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

Fax To: (575) 393-2432

Received:

05/03/2019

Sampling Date:

05/03/2019

Reported:

05/13/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: AW2 @ 2' EXC1 (H901613-03)

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	05/09/2019	ND	2.04	102	2.00	0.687	
Toluene*	<0.050	0.050	05/09/2019	ND	2.12	106	2.00	0.499	
Ethylbenzene*	<0.050	0.050	05/09/2019	ND	2.06	103	2.00	0.667	
Total Xylenes*	<0.150	0.150	05/09/2019	ND	6.25	104	6.00	1.14	
Total BTEX	<0.300	0.300	05/09/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	101	% 73.3-12	9						
Chloride, SM4500CI-8	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	05/08/2019	ND	400	100	400	3.92	
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	05/07/2019	ND	222	111	200	2.49	
DRO >C10-C28*	<10.0	10.0	05/07/2019	ND	213	107	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	05/07/2019	ND					
Surrogate: 1-Chlorooctane	103	% 41-142	?						
Surrogate: 1-Chlorooctadecane	101	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

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Color There

Celey D. Keene, Lab Director/Quality Manager

Page 4 of 6

ND



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

Notes and Definitions

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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Celey D. Keene, Lab Director/Quality Manager

Page 5 of 6

Relinquished By:

CETTO Now

Time: 3:00

Date: 5-3-19 Received By:

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

5-36

#97

Sample Condition Cool Intart Tes Yes No No

CHECKED BY:
(Initials)

Time:



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	A		BILL TO			ANALYSIS REQUEST	FST
Project Manager:	Tour Rules (Jellice Brown	Creu Browns	P.O. #	+			
Address:		_	Company:		-		
city: Hobbs	s State: DH Zip: 8	O 778 CS : drz 7	Attn:				
	Fax #:		Address:				0:
Project #:	Project Owner:	er:	City:				U/S
Project Name:			State: Zip:		_		
Project Location:	DEDU TORKLION	Twi link	#		_		
Sampier Name:	Jelleu Born	1	Fax#:				
FOR LAB USE DNLY		MATRIX	PRESERV SAMPLING	LING	1		
Lab I.D.	Sample I.D.	(G)RAB OF (C)OME # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER ACID/BASE COOL OTHER	TIME C/	EXT TPH		
	28F LEXC.	-	1 5/8	1818	/		
7	Awa of Exc1	c -	-		/		
w	100	0) (S)	7		
PLEASE NOTE: Liability an analyses, AI claims including service. In no event shall Ca affliates or successors are no affliates or successors are no affinite and a affliates or successors are no affinite and a affinite are no affinite are no a a a a a a a a a a a a a a a a a a	PLEASE NOTE: Lability and Damages. Candinat's lability and client's exclusive remery for any claim arising whether based in contract or toxt, shall be Immed to the amount paid by the client for the analyses. All claims including those for neighbores and any other cause whatborers shall be determed welved unless media in writing and necked by Candinat within 30 days after competency of the applicable service. In no event shall Candinate habe for incidental or consequential demanges, including without initiation, business intermitted to, bos of predict incrumed by Figure and Candinates. stillates or successor stating out of or related to the antiferance of services hereinfor by Candinating and the services and the above stated teamors or otherwise.	r any daim ansing whether based in contra- se deemed waked unlass made in writing as ing without limitation, business interruptions Continual securities of whether such daim	ct or tort, shall be arrived to the arrount nd received by Cardinol within 30 days , bos of use or loss of profits incurred n is based worn arrived the above states	paid by the client for the after completion of the applica by client, its subsidiaries.	ple		
Relinquished By:	Date: 5-3-15	S Received By:		Phone Result: Fax Result:	☐ Yes ☐ No	Add'l Phone #: Add'l Fax #:	
(TO)		1	11	REMARKS:			



May 13, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU INJECTION TRUNKLINE

Enclosed are the results of analyses for samples received by the laboratory on 05/06/19 16:40.

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

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 L. Keene

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 BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To: (575) 393-2432

Received:

05/06/2019

Sampling Date:

05/06/2019

Reported:

BTEX 8021B

05/13/2019

Sampling Type:

Project Name:

ma/ka

Soil

Project Number:

NEDU INJECTION TRUNKLINE NONE GIVEN

Sampling Condition:

Cool & Intact

Project Location:

EUNICE NM

Sample Received By:

Tamara Oldaker

Sample ID: WWC 1' - 2 (H901635-01)

DIEX 00210	mg/	kg	Allalyze	u by: Ma					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
8enzene*	<0.050	0.050	05/10/2019	ND	1.81	90.6	2.00	0.728	
Toluene*	<0.050	0.050	05/10/2019	ND	2.18	109	2.00	1.95	
Ethylbenzene*	<0.050	0.050	05/10/2019	ND	2.36	118	2.00	7.32	
Total Xylenes*	<0.150	0.150	05/10/2019	ND	6.75	113	6.00	8.28	
Total BTEX	<0.300	0.300	05/10/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIC	94.2	% 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	208	16.0	05/10/2019	ND	416	104	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
GRO C6-C10*	<10.0	10.0	05/08/2019	ND	219	109	200	5.54	
DRO >C10-C28*	<10.0	10.0	05/08/2019	ND	206	103	200	3.68	
EXT DRO >C28-C36	<10.0	10.0	05/08/2019	ND					
Surrogate: 1-Chlorooctane	1025	% 41-142							
Surrogate: I-Chlorooctadecane	98.9	% 37.6-14	7						

Analyzed By: MS

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages.

Carlag I trans

Celey D. Keene, Lab Director/Quality Manager

Page 2 of 9



Analytical Results For:

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

Fax To:

(575) 393-2432

Received:

05/06/2019

05/13/2019

Reported: Project Name:

NEDU INJECTION TRUNKLINE

Project Number: Project Location: NONE GIVEN

EUNICE NM

Sampling Date: Sampling Type: 05/06/2019

Sampling Condition:

Soil Cool & Intact

Sample Received By:

Tamara Oldaker

Sample ID: TRC 1.5' - 3 (H901635-02)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Slank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/10/2019	ND	1.81	90.6	2.00	0.728	
Toluene*	<0.050	0.050	05/10/2019	ND	2.18	109	2.00	1.95	
Ethylbenzene*	<0.050	0.050	05/10/2019	ND	2.36	118	2.00	7.32	
Total Xylenes*	<0.150	0.150	05/10/2019	ND	6.75	113	6.00	8.28	
Total BTEX	<0.300	0.300	05/10/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	96.9	% 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	112	16.0	05/10/2019	ND	416	104	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	05/08/2019	ND	219	109	200	5.54	
DRO >C10-C28*	<10.0	10.0	05/08/2019	ND	206	103	200	3.68	
EXT DRO >C28-C36	<10.0	10.0	05/08/2019	ND					
Surrogate: 1-Chlorooctane	98.2	% 41-142							
Surrogate: 1-Chlorooctadecane	95.2	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager

Page 3 of 9



Analytical Results For:

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

Fax To: (575) 393-2432

Received:

05/06/2019

Sampling Date:

05/06/2019

Reported:

05/13/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: WWC 2.5' - 6 (H901635-03)

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	05/10/2019	ND	1.81	90.6	2.00	0.728	
Toluene*	<0.050	0.050	05/10/2019	ND	2.18	109	2.00	1.95	
Ethylbenzene*	<0.050	0.050	05/10/2019	ND	2.36	118	2.00	7.32	
Total Xylenes*	<0.150	0.150	05/10/2019	ND	6.75	113	6.00	8.28	
Total BTEX	<0.300	0.300	05/10/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	99.3	% 73.3-12	9						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	05/10/2019	ND	416	104	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	05/08/2019	ND	219	109	200	5.54	
DRO >C10-C28*	<10.0	10.0	05/08/2019	ND	206	103	200	3.68	
EXT DRO >C28-C36	<10.0	10.0	05/08/2019	ND					
Surrogate: 1-Chlorooctane	96.1	% 41-142	?						
Surrogate: 1-Chlorooctadecane	95.0	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 4 of 9



Analytical Results For:

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

Fax To: (575) 393-2432

Received: Reported: 05/06/2019

05/13/2019

NEDU INJECTION TRUNKLINE

Project Name: Project Number:

NONE GIVEN

Project Location:

EUNICE NM

Sampling Date:

05/06/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

Sample ID: BFC 2.5' - 6 (H901635-04)

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	05/10/2019	ND	1.81	90.6	2.00	0.728	
Toluene*	<0.050	0.050	05/10/2019	ND	2.18	109	2.00	1.95	
Ethylbenzene*	<0.050	0.050	05/10/2019	ND	2.36	118	2.00	7.32	
Total Xylenes*	<0.150	0.150	05/10/2019	ND	6.75	113	6.00	8.28	
Total BTEX	<0.300	0.300	05/10/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	94.6	% 73.3-12	9						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	05/10/2019	ND	416	104	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	05/08/2019	ND	219	109	200	5.54	
DRQ >C10-C28*	<10.0	10.0	05/08/2019	ND	206	103	200	3.68	
EXT DRO >C28-C36	<10.0	10.0	05/08/2019	ND					
Surrogate: 1-Chlorooctane	90.0	% 41-142	?						
Surrogate: 1-Chlorooctadecane	89.8	% 37.6-14	17						

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Analytical Results For:

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

Received:

05/06/2019

Reported:

05/13/2019

Project Name:

NEDU INJECTION TRUNKLINE

Project Number: Project Location: **NONE GIVEN EUNICE NM**

Sampling Date:

Sampling Type:

05/06/2019

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

Sample ID: BRFC 1-5 @ 3.5' (H901635-05)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	05/10/2019	ND	1.81	90.6	2.00	0.728	
Toluene*	<0.050	0.050	05/10/2019	ND	2.18	109	2.00	1.95	
Ethylbenzene*	<0.050	0.050	05/10/2019	ND	2.36	118	2.00	7.32	
Total Xylenes*	<0.150	0.150	05/10/2019	ND	6.75	113	6.00	8.28	
Total BTEX	<0.300	0.300	05/10/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	98.8	% 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	176	16.0	05/10/2019	ND	416	104	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	05/08/2019	ND	219	109	200	5.54	
DRO >C10-C28*	<10.0	10.0	05/08/2019	ND	206	103	200	3.68	
EXT DRO >C28-C36	<10.0	10.0	05/08/2019	ND					
Surrogate: 1-Chlorooctane	93.5	% 41-142							
Surrogate: 1-Chlorooctadecane	96.4	37.6-14	7						

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*=Accredited Analyte

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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: Reported: 05/06/2019

05/13/2019

NEDU INJECTION TRUNKLINE

Project Name: Project Number:

NONE GIVEN EUNICE NM

Project Location:

Sampling Date:

05/06/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact Tamara Oldaker

Sample Received By:

Project Location:

Sample ID: WWC 2' - 2 (H901635-06)

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	05/10/2019	ND	1.81	90.6	2.00	0.728	
Toluene*	<0.050	0.050	05/10/2019	ND	2.18	109	2.00	1.95	
Ethylbenzene*	<0.050	0.050	05/10/2019	ND	2.36	118	2.00	7.32	
Total Xylenes*	<0.150	0.150	05/10/2019	ND	6.75	113	6.00	8.28	
Total BTEX	<0.300	0.300	05/10/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	95.8	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	/kg	Anatyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	05/10/2019	ND	416	104	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qua ifier
GRO C6-C10*	<10.0	10.0	05/08/2019	ND	219	109	200	5.54	
DRO >C10-C28*	<10.0	10.0	05/08/2019	ND	206	103	200	3.68	
EXT DRO >C28-C36	<10.0	10.0	05/08/2019	ND					
Surrogate: 1-Chlorooctane	66.2	% 41-142	?						
Surrogate. 1-Chlorooctadecane	65.6	% 37.6-14	17						

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Notes and Definitions

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

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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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apply	BILL TO ANALYSIS REQUEST
Project Manager: Bruce Behall Milantinon	
Address:	Company:
city: Hobbs states Out zip: 8520/5	Attn:
Phone #: Fax #:	Address:
Project #: Project Owner:	City:
Project Name:	State: Zip:
Project Location: DED is Trent Line	Phone #:
Sampler Name: Total Riverback	
FOR LAB USE ONLY MATRIX	ESERY, SAMPLING
(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL	SLUDGE OTHER: ACID/BASE: ICE / COOL OTHER: DATE TIME L/ EXT T BTEX
2 TRC 15'-3	(5.330m
BFC 25'-6	. (53%)
5 3366 1503.5'	(/ //.034))
6 20 (C)	J. 11:8A
PLEASE NOTE: Liability and Damages. Cardinal's tability and client's exclusive remedy for any claim analog whether based in contract or lort, shall be Irrilad to the amount gold by the client for the analysiss. All claims including most are repilipance and any other course whatboever shall be deemed where duriness made in writing and received by Cardinal within 30 days after completion of the applicable service, in no sevent shall Cardinal dos labels for incidental or sense upon including without introducing without introducing, loss of use, or base of profits incurred by clernt, its subsciames, affected or sense upon the course of or including without measures of whether such expended in the performance of senders hereunded by Cardinal based clients to send upon any of the above stated response to defaults.	It's exclusive remedy for any claim analog whether based in contract of lort, shall be imited to the amount paid by the cleant for the transport of the deemed watered unless made in writing and received by Cardinal within 30 days after completion of the applicable grant including without similation, business interruptions, loss of use, or loss of type, or loss of by Cardinal within 30 days after completion of the applicable grant including without similation, business interruptions, loss of use, or loss of type, or loss of type
shed By	ılt: □ Yes □ Yes
Reiniquished By: Date: Received By: Time:	Emme Results
Delivered By: (Circle One) Sample Condition Cool Intact Cool Intact Tes	CHECKED BY: (Initials)
1 4/	1



May 13, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU INJECTION TRUNKLINE

Enclosed are the results of analyses for samples received by the laboratory on 05/07/19 16:20.

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

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 L. 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 BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Application MC

Received: Reported:

DTEV 00310

05/07/2019

05/13/2019

Project Name:

NEDU INJECTION TRUNKLINE

Project Number:

NONE GIVEN

Project Location:

EUNICE NM

Sampling Date:

05/07/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

Sample ID: FC @ 9' - 1 (H901651-01)

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	05/10/2019	ND	1.81	90.6	2.00	0.728	
Toluene*	<0.050	0.050	05/10/2019	ND	2.18	109	2.00	1.95	
Ethylbenzene*	<0.050	0.050	05/10/2019	ND	2.36	118	2.00	7.32	
Total Xylenes*	<0.150	0.150	05/10/2019	ND	6.75	113	6.00	8.28	
Total BTEX	<0.300	0.300	05/10/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	98.0	% 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	288	16.0	05/10/2019	ND	384	96.0	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	05/09/2019	ND	203	101	200	0.161	
DRO >C10-C28*	<10.0	10.0	05/09/2019	ND	194	97.1	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	05/09/2019	ND					
Surrogate. 1-Chlorooctane	85.4	% 41-142	?						
Surrogate: 1-Chlorooctadecane	90.2	% 37.6-14	17						

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Page 2 of 11



Analytical Results For:

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

Fax To:

(575) 393-2432

Analyzed By: MS

Received:

BTEX 8021B

05/07/2019

Reported:

05/13/2019

Project Name: Project Number: NEDU INJECTION TRUNKLINE NONE GIVEN

Project Location:

EUNICE NM

Sampling Date:

05/07/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

Sample ID: EX2 SWC 2 @ 4' (H901651-02)

BIEY 805TR	mg/	KQ	Analyze	и ву: мэ					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/10/2019	ND	1.81	90.6	2.00	0.728	
Toluene*	<0.050	0.050	05/10/2019	ND	2.18	109	2.00	1.95	
Ethylbenzene*	<0.050	0.050	05/10/2019	ND	2.36	118	2.00	7.32	
Total Xylenes*	<0.150	0.150	05/10/2019	ND	6.75	113	6.00	8.28	
Total BTEX	<0.300	0.300	05/10/201 9	ND					
Surrogate: 4-Bromofluorobenzene (PIL	97.0	% 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	05/10/2019	ND	384	96.0	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	05/09/2019	ND	203	101	200	0.161	
DRO >C10-C28*	<10.0	10.0	05/09/2019	ND	194	97.1	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	05/09/2019	ND					
Surrogate: 1-Chlorooctane	84.0	% 41-142							
Surrogate: 1-Chlorooctadecane	87.8	37.6-14	7						

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Analytical Results For:

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

Idix

05/07/2019

Reported: 05/13/2019

Received:

Project Name: NEDU INJECTION TRUNKLINE

Project Number: NONE GIVEN
Project Location: EUNICE NM

Sampling Date:

05/07/2019

Sampling Type: Soil Sampling Condition: Cool

Cool & Intact

Sample Received By:

Tamara Oldaker

Sample ID: SWC 3 @ 4' (H901651-03)

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	05/10/2019	ND	1.81	90.6	2.00	0.728	
Toluene*	<0.050	0.050	05/10/2019	ND	2.18	109	2.00	1.95	
Ethylbenzene*	<0.050	0.050	05/10/2019	ND	2.36	118	2.00	7.32	
Total Xylenes*	<0.150	0.150	05/10/2019	ND	6.75	113	6.00	8.28	
Total BTEX	<0.300	0.300	05/10/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	96.4	% 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	128	16.0	05/10/2019	ND	384	96.0	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	05/09/2019	ND	203	101	200	0.161	
DRO >C10-C28*	<10.0	10.0	05/09/2019	ND	194	97.1	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	05/09/2019	ND					
Surrogate: 1-Chlorooctane	87.3	% 41-142	?						
Surrogate. 1-Chlorooctadecane	91.5	% 37.6-14	17						

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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:

05/07/2019

Sampling Date:

05/07/2019

Reported:

05/13/2019

Sampling Type:

Project Name:

Soil

Project Number:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Location:

NONE GIVEN **EUNICE NM**

Sample Received By:

Tamara Oldaker

Sample ID: NWC 1 @ 4' (H901651-04)

BTEX 8021B	mg/	'kg	Anatyze	d By: MS					
Analyte	Result	Reporting Limit	Anatyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/10/2019	ND	1.81	90.6	2.00	0.728	
Toluene*	<0.050	0.050	05/10/2019	ND	2.18	109	2.00	1.95	
Ethylbenzene*	<0.050	0.050	05/10/2019	ND	2.36	118	2.00	7.32	
Total Xylenes*	<0.150	0.150	05/10/2019	ND	6.75	113	6.00	8.28	
Total BTEX	<0.300	0.300	05/10/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	91.9	% 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	96.0	16.0	05/10/2019	ND	384	96.0	400	0.00	
TPH 8015M	mg,	kg	Analyze	d By: MS					
Analyte	Resuit	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/09/2019	ND	203	101	200	0.161	
DRO >C10-C28*	<10.0	10.0	05/09/2019	ND	194	97.1	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	05/09/2019	ND					
Surrogate: 1-Chlorooctane	89.9	% 41-142	!						
Surrogate: 1-Chlorooctadecane	89.5	% 37.6-14	7						

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Analytical Results For:

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

05/07/2019 Reported: 05/13/2019

Received:

Project Name: **NEDU INJECTION TRUNKLINE**

Project Number: **NONE GIVEN** Project Location: **EUNICE NM**

Sampling Date:

Sample Received By:

05/07/2019

Sampling Type: Sampling Condition: Soil Cool & Intact

Tamara Oldaker

Sample ID: NWC 2 @ 4' (H901651-05)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	05/10/2019	ND	1.81	90.6	2.00	0.728	
Toluene*	<0.050	0.050	05/10/2019	ND	2.18	109	2.00	1.95	
Ethylbenzene*	<0.050	0.050	05/10/2019	ND	2.36	118	2.00	7.32	
Total Xylenes*	<0.150	0.150	05/10/2019	ND	6.75	113	6.00	8.28	
Total BTEX	<0.300	0.300	05/10/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	97.0	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Chloride	128	16.0	05/10/2019	ND	384	96.0	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	05/09/2019	ND	203	101	200	0.161	
DRO >C10-C28*	<10.0	10.0	05/09/2019	ND	194	97.1	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	05/09/2019	ND					
Surrogate: I-Chlorooctane	82.4	% 41-142	!						
Surrogate: 1-Chlorooctadecane	81.3	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager

Page 6 of 11



Analytical Results For:

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

Fax To:

Received:

05/07/2019

Reported: Project Name: 05/13/2019

Project Number:

NEDU INJECTION TRUNKLINE NONE GIVEN

Project Location:

EUNICE NM

Sampling Date:

Sampling Type:

05/07/2019

у Туре:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

Sample ID: WWC 3 @ 4' (H901651-06)

BTEX 8021B	mg,	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	05/10/2019	ND	2.01	101	2.00	2.29	
Toluene*	<0.050	0.050	05/10/2019	ND	2.18	109	2.00	5.49	
Ethylbenzene*	<0.050	0.050	05/10/2019	ND	2.07	103	2.00	2.66	
Total Xylenes*	<0.150	0.150	05/10/2019	ND	6.29	105	6.00	2.36	
Total BTEX	<0.300	0.300	05/10/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	100	% 73.3-12	9						
Chloride, SM4500Cl-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	05/10/2019	ND	384	96.0	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	05/09/2019	ND	203	101	200	0.161	
DRO >C10-C28*	<10.0	10.0	05/09/2019	ND	194	97.1	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	05/09/2019	ND					
Surrogate: 1-Chlorooctane	88.6	% 41-142	!						
Surrogate: 1-Chlorooctadecane	86.5	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager

Page 7 of 11



Analytical Results For:

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

Fax To:

Го: (575) 393-2432

Received:

05/07/2019

Reported: Project Name: 05/13/2019

Project Number:

NEDU INJECTION TRUNKLINE NONE GIVEN

Project Location:

EUNICE NM

Sampling Date:

Sampling Type:

05/07/2019

Soil

2011

Sampling Condition: Sample Received By: Cool & Intact Tamara Oldaker

Sample ID: EX2 1B @ 4' (H901651-07)

BTEX 8021B	mg/	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	05/10/2019	ND	2.01	101	2.00	2.29	
Toluene*	<0.050	0.050	05/10/2019	ND	2.18	109	2.00	5.49	
Ethylbenzene*	<0.050	0.050	05/10/2019	ND	2.07	103	2.00	2.66	
Total Xylenes*	<0.150	0.150	05/10/2019	ND	6.29	105	6.00	2.36	
Total BTEX	<0.300	0.300	05/10/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIE	103	% 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	05/10/2019	ND	384	96.0	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	05/09/2019	ND	203	101	200	0.161	
DRO >C10-C28*	<10.0	10.0	05/09/2019	ND	194	97.1	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	05/09/2019	ND					
Surrogate: I-Chlorooctane	94.4	% 41-142	?						
Surrogate: 1-Chlorooctadecane	93.5	% 37.6-14	7						

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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:

05/07/2019

Sampling Date: Sampling Type: 05/07/2019

Reported:

05/13/2019

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: EX2 3B @ 4' (H901651-08)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	05/10/2019	ND	2.01	101	2.00	2.29	
Toluene*	<0.050	0.050	05/10/2019	ND	2.18	109	2.00	5.49	
Ethylbenzene*	<0.050	0.050	05/10/2019	ND	2.07	103	2.00	2.66	
Total Xylenes*	<0.150	0.150	05/10/2019	ND	6.29	105	6.00	2.36	
Total BTEX	<0.300	0.300	05/10/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	104	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	05/10/2019	ND	384	96.0	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BŞ	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/09/2019	ND	203	101	200	0.161	
DRO >C10-C28*	<10.0	10.0	05/09/2019	ND	194	97.1	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	05/09/2019	ND					
Surrogate: 1-Chlorooctane	87.5	% 41-142	?						
Surrogate: 1-Chlorooctadecane	86.5	% 37.6-14	7						

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Notes and Definitions

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

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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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: #	00-60		BILL TO	ANALYSIS REQUEST
Project Manager:	Bruce Bake	o;	P.O. #:	
Address:	•	C	Company:	
City Hobbs	State: NU/ Zip:	02538	Attn:	
Phone #:	Fax#:	A	Address:	
Project #:	Project Owner:		City:	
Project Name:		St	State: Zip:	
Project Location:	LEDU In Trank	PI	Phone #:	
Sampler Name:	Sise Cheesender	Fa	Fax #:	
FOR LAB USE ONLY		MATRIX	PRESERV SAMPLING	
		ERS ATER		11
Lab I.D.	Sample I.D.	(G)RAB OR # CONTAIN! GROUNDW. WASTEWAT SOIL OIL SLUDGE OTHER	ACID/BASE ICE / COOL OTHER :	EXT BT F
12	1-,50		1 5/7	12:32
25	TO BOU			12:01
W S	W(304.	0	/	12/25
SA	mc lod.	-		10.00.111
S S	€ 52@ 4.	2		0:57 / / /
6 2	we304.	, C	/ /	13:00
36	x21004	0 -	~	3:25 / / /
3.8	x23804'	0	4	13.70
PLEASE NOTE: Liability and Dame	FLEASE NOTE: Labelly and Damages. Cardinal's labelly and clean's exclusive remedy for any clean strang whether passed in contract or ton, shall be firsted to the amount paid by the clean to the	any claim shising whether based in contract or to	or, shall be imited to the amount paid b	by the client for the
service. In no event shall Certifical t	service. In no event shall Cardinal be labile for incidental or consequential damages, including veltoud imitation, business interruptions, loss of use, or loss of profits incurred by defent, its supplications, affisiates or successors where such claims of or released to the personness of services hardwards of veltous subject in the personness of services hardwards of veltous subject in the personness of services hardwards of services hardwards of services hardwards of veltous subject in the personness of the personness of otherwise.	g without imitation, business interruptions, loss interruptions loss interruptions of whether such claim is ba	of use, or loss of profits incurred by clies sed upon erry of the above stated reaso	nni ita alapatanien. Ini ita alapatanien. One oi odverwise.
Relinquished By:	Date: 7-19	Received By:	11111	Phone Result: ☐ Yes ☐ No Add'l Phone #: Fax Result: ☐ Yes ☐ No Add'l Fax #: REMARKS:
Relinquished By:	Date: Time:	Received By:		1 Bisilts
Delivered By: (Ci Sampler - UPS - Bu	(Circle One) Bus - Other:	Sample Condition Cool Intact Pres Tres	CHECKED BY: (Initials)	



May 14, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU INJECTION TRUNKLINE

Enclosed are the results of analyses for samples received by the laboratory on 05/08/19 16:40.

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

Accreditation applies to public drinking water matrices.

Celeg D. Keene

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 BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Received:

05/08/2019

Reported: Project Name: 05/14/2019

Project Number:

NEDU INJECTION TRUNKLINE NONE GIVEN

Project Location:

EUNICE NM

Sampling Date:

05/08/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact Jodi Henson

Sample ID: SWC @ 5' (H901682-01)

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	05/11/2019	ND	1.87	93.5	2.00	1.99	
Toluene*	<0.050	0.050	05/11/2019	ND	2.23	112	2.00	1.21	
Ethylbenzene*	<0.050	0.050	05/11/2019	ND	2.39	120	2.00	0.565	
Total Xylenes*	<0.150	0.150	05/11/2019	ND	6.93	116	6.00	1.63	
Total BTEX	<0.300	0.300	05/11/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	90.1	% 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	32.0	16.0	05/13/2019	ND	416	104	400	3.92	
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	05/11/2019	ND	206	103	200	8.80	
DRO >C10-C28*	<10.0	10.0	05/11/2019	ND	193	96.3	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/11/2019	ND					
Surrogate: 1-Chlorooctane	98.0	% 41-142	?						
Surrogate: 1-Chlorooctadecane	100	% 376-14	7						

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Page 2 of 8



Analytical Results For:

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

Fax To:

Received:

05/08/2019

Reported:

05/14/2019

Project Name: Project Number: **NEDU INJECTION TRUNKLINE**

Project Location:

NONE GIVEN

Sampling Date:

05/08/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact Jodi Henson

EUNICE NM

Sample ID: BFC 9' - 2 (H901682-02)

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	05/11/2019	ND	1.87	93.5	2.00	1.99	
Toluene*	<0.050	0.050	05/11/2019	ND	2.23	112	2.00	1.21	
Ethylbenzene*	<0.050	0.050	05/11/2019	ND	2.39	120	2.00	0.565	
Total Xylenes*	<0.150	0.150	05/11/2019	ND	6.93	116	6.00	1.63	
Total BTEX	<0.300	0.300	05/11/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	90.3	% 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	256	16.0	05/13/2019	ND	416	104	400	3.92	
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	05/11/2019	ND	206	103	200	8.80	
DRO >C10-C28*	<10.0	10.0	05/11/2019	ND	193	96.3	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/11/2019	ND					
Surrogate: 1-Chlorooctane	100	% 41-142	?						
Surrogate: 1-Chlorooctadecane	99,9	% 37.6-14	17						

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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:

05/08/2019

Reported:

05/14/2019

Project Name:

NEDU INJECTION TRUNKLINE

Project Number: Project Location: NONE GIVEN

EUNICE NM

Sampling Date:

05/08/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

Sample ID: NWC 3 @ 9' (H901682-03)

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	05/11/2019	ND	1.87	93.5	2.00	1.99	
Toluene*	<0.050	0.050	05/11/2019	ND	2.23	112	2.00	1.21	
Ethylbenzene*	<0.050	0.050	05/11/2019	ND	2.39	120	2.00	0.565	
Total Xylenes*	<0.150	0.150	05/11/2019	ND	6.93	116	6.00	1.63	
Total BTEX	<0.300	0.300	05/11/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	85.3	% 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	Qualifler
Chloride	736	16.0	05/13/2019	ND	416	104	400	3.92	
ТРН 8015М	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/11/2019	ND	206	103	200	8.80	
DRO >C10-C28*	<10.0	10.0	05/11/2019	ND	193	96.3	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/11/2019	ND					
Surrogate: 1-Chlorooctane	114 9	% 41-142	?						
Surrogate: 1-Chlorooctadecane	114 9	% 37.6-14	17						

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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:

DTEV PO31D

05/08/2019

Reported:

05/14/2019

Project Name: Project Number: **NEDU INJECTION TRUNKLINE**

Project Location:

NONE GIVEN

EUNICE NM

Sampling Date:

05/08/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: NWC 1 @ 9' (H901682-04)

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	05/11/2019	ND	1.87	93.5	2.00	1.99	
Toluene*	<0.050	0.050	05/11/2019	ND	2.23	112	2.00	1.21	
Ethylbenzene*	<0.050	0.050	05/11/2019	ND	2.39	120	2.00	0.565	
Total Xylenes*	<0.150	0.150	05/11/2019	ND	6.93	116	6.00	1.63	
Total BTEX	<0.300	0.300	05/11/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	90.2	% 73.3-12	9						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	05/13/2019	ND	416	104	400	3.92	
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	05/11/2019	ND	206	103	200	8.80	
DRQ >C10-C28*	<10.0	10.0	05/11/2019	ND	193	96.3	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	05/11/2019	ND					
Surrogate: 1-Chlorooctane	104	% 41-142	?						
Surrogate: 1-Chlorooctadecane	105	% 37.6-14	7						

Applicad By: MC

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Dama any other cause whatsoever shall PLEASE NOTE: Labelity and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tont, shall be limited to the amount paid by clie
any other clusie whistosever shall be deemed wieled unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event
including, without limitation, business interruptions, loss of use, or loss of prafts incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of
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 fall with written approval of Cardinal Laboratories.

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Celey D. Keene, Lab Director/Quality Manager

Page 5 of 8



Analytical Results For:

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

Fax To:

(575) 393-2432

Analyzad By MC

Received: Reported:

RTEY 80218

05/08/2019

05/14/2019

NEDU INJECTION TRUNKLINE

Project Name: Project Number:

NONE GIVEN

Project Location:

EUNICE NM

Sampling Date:

05/08/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: NWC 2 @ 9' (H901682-05)

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	05/11/2019	ND	1.87	93.5	2.00	1.99	
Toluene*	<0.050	0.050	05/11/2019	ND	2.23	112	2.00	1.21	
Ethylbenzene*	<0.050	0.050	05/11/2019	ND	2.39	120	2.00	0.565	
Total Xylenes*	<0.150	0.150	05/11/2019	ND	6.93	116	6.00	1.63	
Total BTEX	<0.300	0.300	05/11/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	101	% 73.3-12	9						
Chloride, SM4500Ct-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	05/13/2019	ND	416	104	400	3.92	
TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/10/2019	ND	200	99.8	200	2.58	
DRO >C10-C28*	<10.0	10.0	05/10/2019	ND	192	96.0	200	2.50	
EXT DRO >C28-C36	<10.0	10.0	05/10/2019	ND					
Surrogate: 1-Chlorooctane	91.1	% 41-142	?						
Surrogate: 1-Chlorooctadecane	87.9	% 37.6-14	17						

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Celey D. Keene, Lab Director/Quality Manager

Page 6 of 8



Notes and Definitions

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

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Celey D. Keene, Lab Director/Quality Manager

Page 7 of 8



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Houch	BILL TO	ANALYSIS REQUEST
Project Manager: Souce Backer	P.O. #:	
Address;	Company:	
city: 10065 state: 1011 Zip: 89240	Attn:	
Phone #: Fax #:	Address:	
Project #: Project Owner:	City:	
Project Name:	State: Zip:	
Project Location: NEDU In: Tunk Line	Phone #:	
Sampler Name: Jose Weekold	Fax #:	
FOR LAB USE ONLY MATRIX	PRESERV. SAMPLING	
GRAB OR (C)OMF # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL	SLUDGE OTHER: ACID/BASE: ICE / COOL OTHER: DATE	EXT PH BHEY
Siples" C11 1	1 5/8 5	
2 BRC 4'-2	((//:59*)	
1	7) (31/000)	
1000 100 1 6 1 1 1	1 (3)00%	
CI CI	13:85	
of Damagnes, Certificat's laskily and chard's exclusive remoty for an dig those for negligence and any other ceuse whatsoever chall be profiled be lable for incidental or consequential damagnes, including and of or related to the partners on a sovices here and it by Co.	y claim arising whather based in contract or tort, shall be limited to the amount paid by the claim for the serind waved unkers made in writing and revelved by Cardinal within 30 days shar compulsion of the applicable without firmitation, business interruptions, boss of use, or loss of profits incurred by Cardin, its subsidiaries, until the contract of whather such ham is beard upon any of the above stated respons or otherwise.	
04:0/18/60 Date:	늄	☐ Yes ☐ No Add'I Phone #: ☐ Yes ☐ No Add'I Fax #:
Time:	25 Established	seu (
Sampler - UPS - Bus - Other: 5 10 # 40 Cook Intact	ition CHECKERBY:	



May 17, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU INJECTION TRUNKLINE

Enclosed are the results of analyses for samples received by the laboratory on 05/09/19 16:35.

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

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 & Keene

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 BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Analysed Gyr me

Received:

05/09/2019

Reported:

RTEY 8021B

05/17/2019

Project Name:

NEDU INJECTION TRUNKLINE

ma ika

Project Number: Project Location:

NONE GIVEN EUNICE NM Sampling Date:

05/09/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

ed By: Jodi Henson

Sample ID: BFC 9' - 3 (H901712-01)

BTEX 8021B	mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	05/16/2019	ND	1.86	93.0	2.00	0.927	
Toluene*	<0.050	0.050	05/16/2019	ND	2.00	100	2.00	0.186	
Ethylbenzene*	<0.050	0.050	05/16/2019	ND	1.92	96.2	2.00	1.09	
Total Xylenes*	<0.150	0.150	05/16/2019	ND	5.84	97.4	6.00	0.479	
Total BTEX	<0.300	0.300	05/16/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIC	97.7	% 73,3-12	9						
Chloride, SM4500CI-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Chioride	144	16.0	05/17/2019	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	05/15/2019	ND	234	117	200	4.96	
DRO >C10-C28*	<10.0	10.0	05/15/2019	ND	248	124	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	05/15/2019	ND					
Surrogate: 1-Chlorooctane	85.2	% 41-142	?						
Surrogate: 1-Chlorooctadecane	84.7	% 37.6-14	17						

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Colony 2 tions

Celey D. Keene, Lab Director/Quality Manager

Page 2 of 7



Analytical Results For:

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

Fax To:

(575) 393-2432

Received: Reported: 05/09/2019

05/17/2019

Project Name: Project Number: NEDU INJECTION TRUNKLINE NONE GIVEN

Sampling Date:

05/09/2019

Sampling Type:

Sampling Condition: Sample Received By: Cool & Intact Jodi Henson

Project Location:

EUNICE NM

Sample ID: NWC 9' - 3 (H901712-02)

BTEX 8021B	mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	05/16/2019	ND	1.86	93.0	2.00	0.927	
Toluene*	<0.050	0.050	05/16/2019	ND	2.00	100	2.00	0.186	
Ethylbenzene*	<0.050	0.050	05/16/2019	ND	1.92	96.2	2.00	1.09	
Total Xylenes*	<0.150	0.150	05/16/2019	ND	5.84	97.4	6.00	0.479	
Total BTEX	<0.300	0.300	05/16/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	97.8	% 73.3-12	9						
Chloride, SM4500CI-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	05/17/2019	ND	400	100	400	0.00	
TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/15/2019	ND	234	117	200	4.96	
DRO >C10-C28*	<10.0	10.0	05/15/2019	ND	248	124	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	05/15/2019	ND					
Surrogate: 1-Chlorooctane	90.5	% 41-142	?						
Surrogate: 1-Chlorooctadecane	92 0	% 37.6-14	17						

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Carry I trans

Celey D. Keene, Lab Director/Quality Manager

Page 3 of 7



Analytical Results For:

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

Fax To:

(575) 393-2432

Received:

05/09/2019

Reported:

05/17/2019

Project Name:

NEDU INJECTION TRUNKLINE

Project Number: Project Location:

EUNICE NM

NONE GIVEN

Sampling Date:

05/09/2019

Sampling Type:

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

Sample ID: SWC 9' - 1 (H901712-03)

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	05/16/2019	ND	1.86	93.0	2.00	0.927	
Toluene*	<0.050	0.050	05/16/2019	ND	2.00	100	2.00	0.186	
Ethylbenzene*	<0.050	0.050	05/16/2019	ND	1.92	96.2	2.00	1.09	
Total Xylenes*	<0.150	0.150	05/16/2019	ND	5.84	97.4	6.00	0.479	
Total BTEX	<0.300	0.300	05/16/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	97.4	% 73.3-12	9						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	05/17/2019	ND	400	100	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	05/15/2019	ND	234	117	200	4.96	
DRO >C10-C28*	<10.0	10.0	05/15/2019	ND	248	124	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	05/15/2019	ND					
Surrogate: 1-Chlorooctane	90.5	% 41-142	2						
Surrogate: 1-Chlorooctadecane	92.4	% 37.6-14	17						

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t or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential der sors arising out of or related to the performance of the services hareunder by Cardinal, regardless of whether

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Celey D. Keene, Lab Director/Quality Manager

Page 4 of 7



Analytical Results For:

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

Fax To:

(575) 393-2432

Received: Reported: 05/09/2019

05/17/2019

Project Name: Project Number: NEDU INJECTION TRUNKLINE

Project Location:

EUNICE NM

NONE GIVEN

Sampling Date:

05/09/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

Sample ID: SWC 9' - 2 (H901712-04)

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	05/16/2019	ND	1.86	93.0	2.00	0.927	
Toluene*	<0.050	0.050	05/16/2019	ND	2.00	100	2.00	0.186	
Ethylbenzene*	<0.050	0.050	05/16/2019	ND	1.92	96.2	2.00	1.09	
Total Xylenes*	<0.150	0.150	05/16/2019	ND	5.84	97.4	6.00	0.479	
Total BTEX	<0.300	0.300	05/16/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	98.7	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					_
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	05/17/2019	ND	400	100	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	05/15/2019	ND	234	117	200	4.96	
DRO >C10-C28*	<10.0	10.0	05/15/2019	ND	248	124	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	05/15/2019	ND					
Surrogate: 1-Chlorooctane	89.0	% 41-142	?						
Surrogate: 1-Chlorooctadecane	88.8	% 37.6-14	7						

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*=Accredited Analyte

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Colon & Kinne

Celey D. Keene, Lab Director/Quality Manager

Page 5 of 7

ND



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

Notes and Definitions

Analyte NOT DETECTED at or above the reporting limit Relative Percent Difference RPD Samples not received at proper temperature of 6°C or below. Insufficient time to reach temperature. Chloride by SM4500Cl-8 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

PLEASE NOTE: Uability and Danages. Cardinal's flability and client's exclusive remedy for any claim arising, whether based in contract or sort, shall be femiled to the amount paid by client for analysics. All claims, including those for negligence any other cause whatebooker shall be deemed valved unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall builded for incidental or consequential dam including, without Inntition, business interruptions, loss of use, or loss of profits incurred by Clerk, as subsidiately, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether claim is based upon any of the above stated reasons or otherwise. Results related only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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Celey D. Keene, Lab Director/Quality Manager

Page 6 of 7



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Reinquished By:	analyses. All claims including thous for negleance and any other ex- service. In no event shall Carcind be leable for incidental or transact efflicting programments, actionated of for related to the performance of	PLEASE NOTE: LIANEY and Damages. Cardina's Indies		1 2 2mg 4	2/1/2	Lync d'-	大てて い	H9D17172	Lab I.D. Sample I.D.		FOR LAB USE ONLY	Sampler Name:) Oc () 120 S	Project Location: LEDU T	Project Name:	Project #:	Phone #:	city: Holobs	Address:	Comment of the second	SCHOOL STATE &	101 East Mariar ச <i>டுறுசுசு</i> ர். (575) 393-2326
5.2° / £ 97 Sample Condition Cool Intact Yes No No	Time: Received By:	se whatsoever shall be deemed without an including without the majors, including without the majors of the majors	and dentity exclusion parents for		200-	C -		1 V	# CON GROU WAST SOIL OIL	B OR (C ITAINER INDWAT EWATE	ER	MATRIX	'	apprehier Touch link		Project Owner:	Fax #:	State: D.M. Zip: 98240	. 05	(compare)	Baker John Chron	101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476 ↑↑ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦
CHECKED BY: COLLUL	Phone Result: Fax Result: REMARKS:	Insurancy wretters cased in contract of lost, shall be finited to the amount paid by the clean text in a wave of unless made in writing and received by Cardinal within 20 days after completion of the applicable if limitation, business interruptions, loss of use, or base of profile incurred by cleant, its subsidiaries. ""Santiless of whether such claim is based upon any of the above stated reasons or otherwise.			11 (9:530)	1 9:50a/\	1 (9:4%)	1 5/9 9460	OTHER ACIDIE OTHER OTHER	R: BASE: BOOL		PRESERV. SAMPLING	Fax #:	Phone #:	State: Zip:	City:	Address:	Attn:	Company:	P.O. #:	BILL TO	
Results.	☐ Yes ☐ No Add'! Phone #: ☐ Yes ☐ No Add'! Fax #:								Ext B1	+ 114 EX	2/										ANALYSIS REQUEST	



May 20, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU INJECTION TRUNKLINE

Enclosed are the results of analyses for samples received by the laboratory on 05/13/19 14:50.

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

Accreditation applies to public drinking water matrices.

Celey & 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 BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Received: Reported: 05/13/2019

05/20/2019

Project Name:

NEDU INJECTION TRUNKLINE

Project Number:

NONE GIVEN

Project Location:

Analyte

Analyte

Analyte

EUNICE NM

Sampling Date:

05/13/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

Sample ID: 4BFR @ 2' (H901727-01)

Chloride, SM4500Cl-B

Analyzed

Analyzed

05/20/2019

Method Blank

BS % Recovery True Value QC

Qualifier

Chloride

Chloride

Chloride

Chloride

Result 112

Result

112

Result

176

16.0 05/20/2019

Reporting Limit

Reporting Limit

16.0

16.0

16.0

ND

448

112

400

Sample ID: 5BFR @ 2' (H901727-02)

Chloride, SM4500CI-8

Analyzed By: AC

Analyzed By: AC

Method Blank

BS

% Recovery True Value QC RPD

3.64

RPD

RPD

3.64

Qualifier

Sample ID: 6BFR @ 2' (H901727-03)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AC

448

112

400

Reporting Limit Analyzed

Method Blank ND

ND

BS 448 % Recovery 112

True Value QC

400

Qualifier

Sample ID: 8BFR @ 2' (H901727-04)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

05/20/2019

3.64

Qualifier

Analyte

Result

64.0

Reporting Limit

Analyzed 05/20/2019 Method Blank ND

BS **448** % Recovery 112

True Value QC 400

RPD 3.64

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rithin thirty (30) days sors arising out of or related to the performance

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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:

05/13/2019

Reported:

05/20/2019

Project Name: Project Number: NEDU INJECTION TRUNKLINE NONE GIVEN

Project Location:

FIGURE CAVEL

EUNICE NM

Sampling Date:

05/13/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

Sample ID: BFC 9'-4 (H901727-05)

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	05/15/2019	ND	1.80	90.2	2.00	0.253	
Toluene*	<0.050	0.050	05/15/2019	ND	1.98	99.2	2.00	1.15	
Ethylbenzene*	<0.050	0.050	05/15/2019	ND	2.00	100	2.00	2.59	
Total Xylenes*	<0.150	0.150	05/15/2019	ND	6.45	107	6.00	2.57	
Total BTEX	<0,300	0.300	05/15/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	94.7	% 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	672	16.0	05/20/2019	ND	448	112	400	3.64	
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	05/15/2019	ND	210	105	200	1.14	
DRO >C10-C28*	<10.0	10.0	05/15/2019	ND	213	106	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	05/15/2019	ND					
Surrogate: 1-Chlorooctane	101	% 41-142	?						
Surrogate: 1-Chlorooctadecane	102	% 37.6-14	17						

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Page 3 of 16



Analytical Results For:

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

Fax To:

(575) 393-2432

Received: Reported: 05/13/2019

05/20/2019

NEDU INJECTION TRUNKLINE NONE GIVEN

Project Number: Project Location:

Project Name:

EUNICE NM

Sampling Date:

05/13/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact Tamara Oldaker

Sample ID: NWC 9'-7 (H901727-06)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BŞ	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/15/2019	ND	1.80	90.2	2.00	0.253	
Toluene*	<0.050	0.050	05/15/2019	ND	1.98	99.2	2.00	1.15	
Ethylbenzene*	<0.050	0.050	05/15/2019	ND	2.00	100	2.00	2.59	
Total Xylenes*	<0.150	0.150	05/15/2019	ND	6.45	107	6.00	2.57	
Total BTEX	<0.300	0.300	05/15/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	93.9	% 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	464	16.0	05/20/2019	ND	448	112	400	3.64	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
GRO C6-C10*	<10.0	10.0	05/15/2019	ND	210	105	200	1.14	
DRO >C10-C28*	<10.0	10.0	05/15/2019	ND	213	106	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	05/15/2019	ND					
Surrogate: 1-Chlorooctane	90.5	% 41-142	?						
Surrogate: 1-Chlorooctadecane	90.3	% 37.6-14	7						

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Page 4 of 16



Analytical Results For:

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

Fax To:

: (575) 393-2432

Received: Reported: 05/13/2019

05/20/2019

03/20/2019

Project Name: Project Number: NEDU INJECTION TRUNKLINE

Project Location:

NONE GIVEN EUNICE NM Sampling Date:

05/13/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

Sample ID: SWC 9'-7 (H901727-07)

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	05/16/2019	ND	1.81	90.3	2.00	7.76	
Toluene*	<0.050	0.050	05/16/2019	ND	2.03	101	2.00	5.59	
Ethylbenzene*	<0.050	0.050	05/16/2019	ND	2.12	106	2.00	11.8	
Total Xylenes*	<0.150	0.150	05/16/2019	ND	6.80	113	6.00	11.8	
Total BTEX	<0.300	0.300	05/16/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	103	% 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	05/20/2019	ND	448	112	400	3.64	
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	05/15/2019	ND	210	105	200	1.14	
DRO >C10-C28*	<10.0	10.0	05/15/2019	ND	213	106	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	05/15/2019	ND					
Surrogate: 1-Chlorooctane	98.5	% 41-142	?						
Surrogate: 1-Chlorooctadecane	100	% 37.6-14	17						

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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:

05/13/2019

Sampling Date:

05/13/2019

Reported:

05/20/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition: Sample Received By: Cool & Intact Tamara Oldaker

Project Number:

NONE GIVEN

Project Location:

EUNICE NM

Sample ID: BFC 9'-6 (H901727-08)

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	05/16/2019	ND	1.81	90.3	2.00	7.76	
Toluene*	<0.050	0.050	05/16/2019	ND	2.03	101	2.00	5.59	
Ethylbenzene*	<0.050	0.050	05/16/2019	ND	2.12	106	2.00	11.8	
Total Xylenes*	<0.150	0.150	05/16/2019	ND	6.80	113	6.00	11.8	
Total BTEX	<0.300	0.300	05/16/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	97.7	% 73.3-12	9						
Chloride, SM4500Ct-B	mg,	/kg	Analyze	d By: AC		<u></u>			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	05/20/2019	ND	448	112	400	3.64	
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	05/16/2019	ND	210	105	200	1.14	
DRO >C10-C28*	<10.0	10.0	05/16/2019	ND	213	106	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	05/16/2019	ND					
Surrogate: I-Chlorooctane	101	% 41-142	?						
Surrogate: 1-Chlorooctadecane	103	% 37.6-14	17						

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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: Reported: 05/13/2019

05/20/2019

NEDU INJECTION TRUNKLINE NONE GIVEN

Project Number: Project Location:

Project Name:

EUNICE NM

Sampling Date:

05/13/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

Sample ID: NWC 9'-8 (H901727-09)

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	05/16/2019	ND	1.81	90.3	2.00	7.76	
Toluene*	<0.050	0.050	05/16/2019	ND	2.03	101	2.00	5.59	
Ethylbenzene*	<0.050	0.050	05/16/2019	ND	2.12	106	2.00	11.8	
Total Xylenes*	<0.150	0.150	05/16/2019	ND	6.80	113	6.00	11.8	
Total BTEX	<0.300	0.300	05/16/2019	ND				25	
Surrogate: 4-Bromofluorobenzene (PIL	92.3	% 73.3-12	19						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC			·		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	05/20/2019	ND	448	112	400	3.64	
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	05/16/2019	ND	210	105	200	1.14	
DRO >C10-C28*	<10.0	10.0	05/16/2019	ND	213	106	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	05/16/2019	ND					
Surrogate: 1-Chlorooctane	92.6	% 41-142	2						
Surrogate: 1-Chlorooctadecane	92.4	% 37.6-14	17						

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Analytical Results For:

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

Fax To:

o: (575) 393-2432

Received:

05/13/2019

Reported:

05/20/2019

Project Name: Project Number: NEDU INJECTION TRUNKLINE NONE GIVEN

Project Location:

EUNICE NM

Sampling Date:

05/13/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

Sample ID: NWC 9'-5 (H901727-10)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	05/16/2019	ND	1.81	90.3	2.00	7.76	
Toluene*	<0.050	0.050	05/16/2019	ND	2.03	101	2.00	5.59	
Ethylbenzene*	<0.050	0.050	05/16/2019	ND	2.12	106	2.00	11.8	
Total Xylenes*	<0.150	0.150	05/16/2019	ND	6.80	113	6.00	11.8	
Total BTEX	<0.300	0.300	05/16/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	101	% 73.3-12	9						
Chloride, SM4500Cl-B	mg	/kg	Алајуге	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	05/20/2019	ND	448	112	400	3.64	
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	05/16/2019	ND	211	106	200	4.53	
DRO >C10-C28*	<10.0	10.0	05/16/2019	ND	215	107	200	7.41	
EXT DRO >C28-C36	<10.0	10.0	05/16/2019	ND					
Surrogate: 1-Chlorooctane	90.0	% 41-142	?						
Surrogate: 1-Chlorooctadecane	87.2	% 37.6-14	7						

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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:

05/13/2019

Reported:

05/20/2019

Project Name: Project Number: NEDU INJECTION TRUNKLINE

Project Location:

NONE GIVEN

EUNICE NM

Sampling Date:

05/13/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

Sample ID: NWC 9'-6 (H901727-11)

BTEX 8021B	mg,	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Quallfler
Benzene*	<0.050	0.050	05/16/2019	ND	1.81	90.3	2.00	7.76	
Toluene*	<0.050	0.050	05/16/2019	ND	2.03	101	2.00	5.59	
Ethylbenzene*	<0.050	0.050	05/16/2019	ND	2.12	106	2.00	11.8	
Total Xylenes*	<0.150	0.150	05/16/2019	ND	6.80	113	6.00	11.8	
Total BTEX	<0.300	0.300	05/16/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIC	89.5	% 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	64.0	16.0	05/20/2019	ND	448	112	400	3.64	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
GRO C6-C10*	<10.0	10.0	05/16/2019	ND	211	106	200	4.53	
DRO >C10-C28*	<10.0	10.0	05/16/2019	ND	215	107	200	7.41	
EXT DRO >C28-C36	<10.0	10.0	05/16/2019	ND					
Surrogate: 1-Chlorooctane	99.7	% 41-142	?						
Surrogate: 1-Chlorooctadecane	96.4	% 37.6-14	7						

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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:

05/13/2019

Sampling Date:

05/13/2019

Reported:

05/20/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: SWC 9'-5 (H901727-12)

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	05/16/2019	ND	1.81	90.3	2.00	7.76	
Toluene*	<0.050	0.050	05/16/2019	ND	2.03	101	2.00	5.59	
Ethylbenzene*	<0.050	0.050	05/16/2019	ND	2.12	106	2.00	11.8	
Total Xylenes*	<0.150	0.150	05/16/2019	ND	6.80	113	6.00	11.8	
Total BTEX	<0,300	0.300	05/16/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	87.1	% 73.3-12	9						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	88	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	05/20/2019	ND	416	104	400	3.92	
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	05/16/2019	ND	211	106	200	4.53	
DRO >C10-C28*	<10.0	10.0	05/16/2019	ND	215	107	200	7.41	
EXT DRO >C28-C36	<10.0	10.0	05/16/2019	ND					
Surrogate: 1-Chlorooctane	94.9	% 41-142	?						
Surrogate: 1-Chlorooctadecane	94 2	% 37.6-14	70						

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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:

05/13/2019

Sampling Date:

05/13/2019

Reported:

05/20/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE NONE GIVEN

Sampling Condition:

Cool & Intact

Project Number:

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: BFC 9'-8 (H901727-13)

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	05/16/2019	ND	1.81	90.3	2.00	7.76	
Toluene*	<0.050	0.050	05/16/2019	ND	2.03	101	2.00	5.59	
Ethylbenzene*	<0.050	0.050	05/16/2019	ND	2.12	106	2.00	11.8	
Total Xylenes*	<0.150	0.150	05/16/2019	ND	6.80	113	6.00	11.8	
Total BTEX	<0.300	0.300	05/16/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	105	% 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	Qualifler
Chloride	336	16.0	05/20/2019	ND	416	104	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
GRO C6-C10*	<10.0	10.0	05/16/2019	ND	211	106	200	4.53	
DRO >C10-C28*	<10.0	10.0	05/16/2019	ND	215	107	200	7.41	
EXT DRO >C28-C36	<10.0	10.0	05/16/2019	ND					
Surrogate: 1-Chlorooctane	72.1	% 41-142	?						
Surrogate: 1-Chlorooctadecane	69.5	% 37.6-14	17						

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Celey D. Keene, Lab Director/Quality Manager

Page 11 of 16



Analytical Results For:

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

Fax To:

(575) 393-2432

Received:

05/13/2019

Sampling Date:

05/13/2019

Reported:

05/20/2019

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE NONE GIVEN

Sampling Condition: Sample Received By: Cool & Intact Tamara Oldaker

Project Number:

Project Location:

EUNICE NM

Sample ID: SWC 9'-8 (H901727-14)

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	05/16/2019	ND	1.81	90.3	2.00	7.76	
Toluene*	<0.050	0.050	05/16/2019	ND	2.03	101	2.00	5.59	
Ethylbenzene*	<0.050	0.050	05/16/2019	ND	2.12	106	2.00	11.8	
Total Xylenes*	<0.150	0.150	05/16/2019	ND	6.80	113	6.00	11.8	
Total BTEX	<0.300	0.300	05/16/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	110	% 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	240	16.0	05/20/2019	ND	416	104	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS	_				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/16/2019	ND	211	106	200	4.53	
DRO >C10-C28*	<10.0	10.0	05/16/2019	ND	215	107	200	7.41	
EXT DRO >C28-C36	<10.0	10.0	05/16/2019	ND					
Surrogate: 1-Chlorooctane	84.9	% 41-142	2						
Surragate: 1-Chlorooctadecane	84.5	% 37.6-14	17						

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Celey D. Keene, Lab Director/Quality Manager

Page 12 of 16



Analytical Results For:

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

Fax To:

(575) 393-2432

Received: Reported: 05/13/2019

05/20/2019

Project Name:

NEOU INJECTION TRUNKLINE

Project Number:

NONE GIVEN

Project Location:

EUNICE NM

Sampling Date:

05/13/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

Sample ID: SWC 9'-6 (H901727-15)

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	05/16/2019	ND	1.81	90.3	2.00	7.76	
Toluene*	<0.050	0.050	05/16/2019	ND	2.03	101	2.00	5.59	
Ethylbenzene*	<0.050	0.050	05/16/2019	ND	2.12	106	2.00	11.8	
Total Xylenes*	<0.150	0.150	05/16/2019	ND	6.80	113	6.00	11.8	
Total BTEX	<0.300	0.300	05/16/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	116	% 73.3-12	9						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC	-				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	05/20/2019	ND	416	104	400	3.92	
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	05/16/2019	ND	211	106	200	4.53	
DRO >C10-C28*	<10.0	10.0	05/16/2019	ND	215	107	200	7.41	
EXT DRO >C28-C36	<10.0	10.0	05/16/2019	ND					
Surrogate: 1-Chlorooctane	87.9	% 41-142	?						
Surrogate: 1-Chlorooctadecane	88.7	% 37.6-14	17						

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Chaz & time

Celey D. Keene, Lab Director/Quality Manager

Page 13 of 16



Notes and Definitions

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

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

PLEASE NOTE: Liability and Damages. Cerdinal's Rebility and client's exclusive remerty for any clein arising, whether based in contract or tort, shall be lented to the emount paid by dient for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed valved unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be fielde for incidental or coresquential damages, including, without limitation, business interruptions, loss of use, or loss of purchs incurred by Cardinal, subscidents, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claims is based upon any of the above stated reasons or otherwise. Results relate only to the samples described above. This report shall not be expredicted except in full with written approval of Cardinal Laboratories.

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Celey D. Keene, Lab Director/Quality Manager

Page 14 of 16



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

(575) 393-23	(575) 393-2326 FAX (575) 393-2476			2
Company Name: 4006	7	BILL TO		ANALYSIS REQUEST
Project Manager:		P.O. #:		-
Address:		Company:		
city: Habbs	State: 1 1 Zip: 35270	Attn:		
Phone #:	Fax #:	Address:		
Project #:	Project Owner:	City:		
Project Name:		State: Zip:		
Project Location: NEDU	In Truck !	į.		
1	Care	Fax#		
FOR LAB USE ONLY	CA ROUNT	Pax #:		
	S ER	TRESERV SAMPLING	Ph	`
Lab I.D. Sai	(G)RAB OR (C)C # CONTAINERS GROUNDWATE WASTEWATER SOIL OIL	SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER :	C/ Ext 1	BIEK
1 YBFR @	92	>	630	
258FR @	٩		6:57 \	
3 6 BFR 6	02'		11:00	
4 8886 6	94		(3:6)	
S BFC9'	4		12:21	
6 NWC9	7		7 55.20	
7 SWC 9	7		1:01 / /	
X 8FC61			1.02 0 0	
4 NMC 4.	200		1:05 1	`
10 Muc 615	S C C C C C C C C C C C C C C C C C C C	5-13-15	1:07 V V	
analyses. All chairs including those for negligence and service. In no event shall Cardinal be liable for incident affiliates or successors until or out of or related to the pu	any other cause whatspever shall be deemed of cause whatspever shall be deemed of consequental damages, including without share of services hereauder by Consequental	contract or tort, shall be invited to the emount painting and received by Cardinal within 30 days afte priors, loss of use, or lose of profits incurred by c	id by the client for the er completion of the applicable client, its subsidiaries. assors or amendes	
Relinquished By:	Date: Re	ceived By: Phone Ress Fax Result: REMARKS:	Phone Result: U Yes Fax Result: U Yes REMARKS:	s □ No Add't Phone #: s □ No Add't Fax #:
Delivered By: (Circle One)	Samp	ondition CHECKED BY:		
Sampler - UPS - Bus - Other:) Jo			
	D. Je # T	4		



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

(575) 393-2326 FAX (575) 393-2476	93-2476		222
Company Name: Project Manager:	BO# BILL	70 A	ANALYSIS REQUEST
Address:	Company:		-
City: State:	Zip: Attn:		
Phone #: Fax #:	Address:		
Project #: Project	Project Owner: City:		
Project Name:	State: Zip:		
Project Location:	Phone #:		
Sampler Name:	Fax #:		
FOR LAB USE ONLY	ESERV.	SAMPLING	
	rs Ter Er	1/2	
Lab I.D. Sample I.D.	(G)RAB OR (C) # CONTAINEF GROUNDWAT WASTEWATE SOIL OIL SLUDGE OTHER: ACID/BASE: ICE / COOL OTHER:	DATE TIME CL. BYEK	
11 NWC9-6		7 1 1 1 50:1 31.8.5	
12 SUC 91-5			
BR-9/-		113 / / /	
50651		1.4 1.1	
15 Duc 9- 6		1.9.1	
14 Nm64-8 to - 2/13	2/19		
	\$7	5/3/16	
EASE NOTE: Liability and Demages. Centinat's flability and client's exclusive a subyeas. All claims including those for negligence and any other cause whatsom much. In no event shall Centinate is bable for incidental or consequental carrage and the consequence of the contract of the authority of sections.	PLEASE MOTE: Liability and Demages. Cardinals abbitsy and clearly exclusive remody for any claim satisfug whether based in contract or tort, shall be limited to the amount peed by the cleant for the analyses. All claims including those for negligence and any other cause whether or the definition of which divides made in writing and network by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be fable for incidential or consequential dampens, including without limitation, business interruptions, bus of use, or loss, or profess including the profession of the substitution of t	mount peat by the client for the days after completion of the applicable curred by client, the subsidiaries,	- S- 100
Relinquished By: Date: Time:	Relinquished By: Date: 3-19 Received By: Phone Rest Fax Result: REMARKS:	Jit: □ Yes □ No □ Yes □ No	Add'i Phone #: Add'i Fax #:
Neminquistred by:	Neceived by:		
Delivered By: (Circle One)	- 4	3Y:	
Sampler - UPS - Bus - Other:	20 #97 Pres Pres	Alon III	



May 20, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU INJECTION TRUNKLINE

Enclosed are the results of analyses for samples received by the laboratory on 05/14/19 16:24.

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

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.

Celey & Keene

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 BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Analyzed By: ms

Received: Reported:

RTFY 8021B

05/14/2019

05/20/2019

NEDU INJECTION TRUNKLINE

Project Name: Project Number:

NONE GIVEN

Project Location:

EUNICE NM

Sampling Date:

05/14/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

Sample ID: SWC 3 @ 9' (H901753-01)

B1EX 8021B	mg/	kg	Anaiyze	u by: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/17/2019	ND	1.91	95.3	2.00	1.62	
Toluene*	<0.050	0.050	05/17/2019	ND	2.03	102	2.00	1.19	
Ethylbenzene*	<0.050	0.050	05/17/2019	ND	1.97	98.7	2.00	0.0969	
Total Xylenes*	<0.150	0.150	05/17/2019	ND	5.93	98.8	6.00	0.504	
Total BTEX	<0.300	0.300	05/17/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	94.3	% 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	64.0	16.0	05/20/2019	ND	416	104	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
GRO C6-C10*	<10.0	10.0	05/17/2019	ND	193	96.6	200	4.25	
DRO >C10-C28*	<10.0	10.0	05/17/2019	ND	189	94.7	200	2.64	
EXT DRO >C28-C36	<10.0	10.0	05/17/2019	ND					
Surrogate: 1-Chlorooctane	95.8	% 41-142	?						
Surrogate: 1-Chlorooctadecane	96.9	% 37.6-14	17						

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Celey D. Keene, Lab Director/Quality Manager

Page 2 of 7



Analytical Results For:

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

Fax To:

(575) 393-2432

A -- I -- and Dave and

Received:

05/14/2019

05/20/2019

Sampling Date:

05/14/2019

Reported:

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: NWC 4 @ 9' (H901753-02)

BTEX 8021B	mg/	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/16/2019	ND	1.97	98.3	2.00	4.04	
Toluene*	<0.050	0.050	05/16/2019	ND	2.09	104	2.00	2.16	
Ethylbenzene*	<0.050	0.050	05/16/2019	ND	1.99	99.5	2.00	2.17	
Total Xylenes*	<0.150	0.150	05/16/2019	ND	6.00	99.9	6.00	2.13	
Total BTEX	<0.300	0.300	05/16/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	96.9	% 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	32.0	16.0	05/20/2019	ND	416	104	400	3.92	
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	05/17/2019	ND	193	96.6	200	4.25	
DRO >C10-C28*	<10.0	10.0	05/17/2019	ND	189	94.7	200	2.64	
EXT DRO >C28-C36	<10.0	10.0	05/17/2019	ND					
Surrogate: 1-Chlorooctane	94.7	% 41-142	2						
Surrogate: 1-Chlorooctadecane	95.4	% 37.6-14	17						

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Celey D. Keene, Lab Director/Quality Manager

Page 3 of 7



Analytical Results For:

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

Fax To:

(575) 393-2432

Received: Reported: 05/14/2019

05/20/2019

NEDU INJECTION TRUNKLINE NONE GIVEN

Project Number: Project Location:

Project Name:

EUNICE NM

Sampling Date:

05/14/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

Sample ID: SWC 4 @ 9' (H901753-03)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	05/16/2019	ND	1.97	98.3	2.00	4.04	
Toluene*	<0.050	0.050	05/16/2019	ND	2.09	104	2.00	2.16	
Ethylbenzene*	<0.050	0.050	05/16/2019	ND	1.99	99.5	2.00	2.17	
Total Xylenes*	<0.150	0.150	05/16/2019	ND	6.00	99.9	6.00	2.13	
Total 8TEX	<0.300	0.300	05/16/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	93.8	% 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	05/20/2019	ND	416	104	400	3.92	
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	05/17/2019	ND	193	96.6	200	4.25	
DRO >C10-C28*	<10.0	10.0	05/17/2019	ND	189	94.7	200	2.64	
EXT DRO >C28-C36	<10.0	10.0	05/17/2019	ND					
Surrogate: 1-Chlorooctane	95.5	% 41-142	?						
Surrogate: 1-Chlorooctadecane	96.6	% 37.6-14	17						

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Celey D. Keene, Lab Director/Quality Manager

Page 4 of 7



Analytical Results For:

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

Fax To:

(575) 393-2432

Analyzed By: AC

Received:

05/14/2019

Reported:

Chioride, SM4500Cl-B

05/20/2019 **NEDU INJECTION TRUNKLINE**

Project Name: Project Number:

NONE GIVEN

EUNICE NM

Sampling Date:

05/14/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact Tamara Oldaker

Sample Received By:

Project Location:

Sample ID: NWC 2 @ 11' (H901753-04)

	•								
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	05/20/2019	ND	416	104	400	3.92	
Sample ID: BFC #2 @ 1'(H901753-0!	5)							
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	05/20/2019	ND	416	104	400	3.92	
Sample ID: BFC 6-10 (H901	1753-06)								
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	05/20/2019	ND	416	104	400	3.92	
Sample ID: BW 1 (H901753	3-07)								
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	05/20/2019	ND	416	104	400	3.92	
Sample ID: BW 2 (H901753	3-08)								
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie

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ors arising out of or related to the performance of

College there

Celey D. Keene, Lab Director/Quality Manager

Page 5 of 7



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 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

PLEASE NOTE: Usubality and Damages. Cardinal's Rability and clear's exclusive romedy for any claim arising, whether based in contract or tort, shall be lenked to the amount paid by client for analyses. All claims, including those for negligence and any other canage whatsoever shall be deemed varied unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages including, without limitation, business interruptions, loss of use, or loss of profits incurred by Clerk, its subsidiaries, affiliates or successions arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether sudicident is based upon any of the above stated reasons or otherwise. Results relate only to the services hereunder by Cardinal, regardless of whether sudicident specific for the services are considered to the control of Cardinal Laboratories.

Colony I trains

Celey D. Keene, Lab Director/Quality Manager

Page 6 of 7



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name. Design Associate		BILL TO		ANALYSIS REQUEST
Project Manager: Bruce Baker				- 1
Address:		Company:		
City: Lobbs State N.M.	Zip: 88240	Attn:		
Phone #: ** Fax #:		Address:		
Project #: Project Owner:		City:		
Project Name:		State: Zip:		
Project Location: NEDU TA: Truc	Lline	Phone #:		
Sampler Name: Son Krigen C		Fax #:	7	
FOR LAB USE ONLY	MATRIX	PRESERV SAMPLING	K	
Lab I.D. Sample I.D.	DGE	ER : D/BASE: COOL ER :	KT TËY	
HSC1108H	# C GR WA SOIL OIL SLU	ICE	TIME	
180 m 200 C		1	1.1811	
3 500 409		7	150 / //	
4 NOC 2011		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1:52 /	
SDRADI		ST.	11.25	
6 BEC 6-10			11.27	
700			00.0	
8 Bw 2			2:02	
PLEASE NOTE: Lightly and Damogra, Catelnal's liability and cleant's archains remady for any down strong whether based in contract or ton, shall be limited to the procure paid by the cleant for the	dy for any claim mining whether based in contract o	r tort, shall be limited to the emount paid	d by the cleant to: the	
unce on negagerice and any out- dinal be liable for incidental or con- out and related to the performen	r curso winasonevi shau be desined wavod unleas nede in witing and nexisoid by Continsi within 30 days after completion of the sequential damages, including without in materio, business interruptions, loss of use, or loss of profiss incurred by disent, its subsidiant se of services hereunder by Coadrins), requestes of whether such basin is based upon any of the above stride desports or chispways.	received by Cardinal within 30 days after 33 of use, or loss of profits incurred by of based upon any of the above stated rea	r compleban of the applicable Sent, its subsidipnes. Sons or otherwise.	
Relinguished By:	Received By:	701	Phone Result: Pes No	Add'l Phone #:
	200	ldakya	es C	Add'l Fax#:
Time:				
Delivered By: (Circle One)	Sample Condition	H CH		
Sampler - UPS - Bus - Other: /. 3 c	to the lines	(Initials)		



May 21, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU INJECTION TRUNKLINE

Enclosed are the results of analyses for samples received by the laboratory on 05/16/19 15:05.

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

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.

Celey & Keene

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

Received: 05/16/2019 Reported: 05/21/2019

NEDU INJECTION TRUNKLINE Project Name:

Project Number: NONE GIVEN

Project Location: **EUNICE NM** Sampling Date:

05/16/2019

Sampling Type: Soil

Sampling Condition: Sample Received By:

Cool & Intact

Tamara Oldaker

Sample ID: SWC 1 @ 6' (H901794-01)

Chloride, SM4500Cl-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	05/21/2019	ND	416	104	400	3.92	
Sample ID: NWC 3 @ 9'	(H901794-02))							
Chioride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Chloride	48.0	16.0	05/21/2019	ND	416	104	400	3.92	

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*=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 dilent for analyses. All cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable including, without limitation, business interruptions, loss of use, or loss of profits incurred by chert, its subsidiaries, 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 Laboratories.

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Celey D. Keene, Lab Director/Quality Manager

Page 2 of 4

ND



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

Notes and Definitions

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

Analyte NOT DETECTED at or above the reporting limit

Cardinal Laboratories

*=Accredited Analyte

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

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Celey D. Keene, Lab Director/Quality Manager

Page 3 of 4



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

的

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

Company Name: Brazz De America	2	BILL TO	ANALYSIS REQUEST
20		P.O. #:	
		Company:	
lobbs	State: NM Zip: 88246	Attn:	
	Fax #:	Address:	
Project #: Pro	Project Owner:	City:	
ime:		State: Zip:	
Project Location: NC DU In I	runk Line	Phone #:	
٧I	B	Fax #:	
FOR LAB USE ONLY	MATRIX	PRESERV. SAMPLING	NG
	IERS IATER		
Hab I.D. Sample I.D.	(G)RAB OR # CONTAIN GROUNDW WASTEWAT SOIL OIL SLUDGE	OTHER: ACID/BASE ICE / COOL OTHER	TIME
1701701S	1 1	-	11.079
2 NIWC3@9'	1 1 2	1 5-14	11.0584.1
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Relingushed By: Date: Phone Res. Fax Result:	Date: Received By:	(111)	Phone Result:
Relinquished By:	Time: OS Mulara	Makin	
7	Time:		
Delivered By: (Circle One)	Sample Condition Cool Intact These Three	rtion CHECKED BY: (Initials)	
	Q.Go THY NO NO	No T. ~	



May 24, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU INJECTION TRUNKLINE

Enclosed are the results of analyses for samples received by the laboratory on 05/20/19 16:25.

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

Accreditation applies to public drinking water matrices.

Celey L. Keene

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 BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To: (575) 393-2432

Received: Reported: 05/20/2019

05/24/2019

Project Name:

NEDU INJECTION TRUNKLINE

Project Number:

NONE GIVEN

Project Location:

EUNICE NM

Sampling Date:

05/20/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By: Tamara Oldaker

Sample ID: BC 4 @ 9' (H901815-01)

Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	05/24/2019	ND	384	96.0	400	4.08	

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*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardina's liability and clern's exclusive remedy for any claim arising, whether based in centract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligorous and yother clause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall cardinal be labels for incidental or corresponding within thirty (30) days after completion of the applicable service. In no event shall cardinal be labels for incidental or corresponding including, whether interest interruptions, loss of use, or loss of profits incurred by Clern's including, whether such claims is based upon any of the above stated nassons 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.

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Celey D. Keene, Lab Director/Quality Manager

Page 2 of 4

ND



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

Notes and Definitions

Analyte NOT DETECTED at or above the reporting limit Relative Percent Difference RPD 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

PLEASE ROTE

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Celey D. Keene, Lab Director/Quality Manager

Page 3 of 4

Relinquished By:

Time: 25

Received By:

Date: 20-19

Phone Result:
Fax Result:
REMARKS:

□ Yes

□ □

Add'l Phone #: Add'l Fax #:

Time:

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

Sample Condition
Cool Intact
Coel Intact
Tes 176s
No No

40

CHECKED BY: (Initials)



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Herecht							9	BILL TO		A	ANALYSIS REQUEST	REC	DUES	4		,	
Project Manager:	Bruce Baker				O.	P.O. #	"				\dashv					_		
Address:	l .				೧	Company:	š											
city: Hobbs	State:///// Zip: 88240	Zip:	00	0788	Ą	Attn:												
Phone #:	Fax #:		-		A	Address:	28				•							
Project #:	Project Owner:				City:	2												
Project Name:					Ş	State:			Zip:									
Project Location:	NEDA Hai Kan	7	~		팢	Phone #:	*											
Sampler Name:	Some Liessen	'			71	Fax #:	••											
FOR LAB USE ONLY				MATRIX		밁	PRESERV.	2	SAMPLING									
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	<i>C1</i>								
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PLEASE NOTE: Liability and enalyses. All claims including	PLEASE NOTE: Libbliny and Damages. Cardinal's lability and clean's exclusive remedy for any claim strong whether based in contract or tort, shall be bridge to the amount paid by the clean for the analyses. All cleans including those for negligence and any other cause whatspewer shall be deeped waved unless made in contract has Cardinal whith 30 dates after commonance of the analyses.	iny claim	ANA GIRLAN	g whether based in contract I unless made in writing ac	2 P P P	2 2			to the amount paid by the clie	Tor the	-	-		-	ŀ	-	-	L



July 25, 2019

JEFFREY BROOM

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU INJECTION TRUNKLINE

Enclosed are the results of analyses for samples received by the laboratory on 07/19/19 13:45.

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

Accreditation applies to public drinking water matrices.

Celeg & Keene

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: Reported: 07/19/2019

07/25/2019

Project Name: Project Number: **NEDU INJECTION TRUNKLINE**

NONE GIVEN

Project Location:

EUNICE NM

Sampling Date:

07/19/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By: Tamara Oldaker

Sample ID: EWC 0 @ 1' (H902490-01)

BTEX 80218	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	07/24/2019	ND	1.74	87.0	2.00	2.24	
Toluene*	<0.050	0.050	07/24/2019	ND	1.77	88.6	2.00	2.18	
Ethylbenzene*	<0.050	0.050	07/24/2019	ND	1.69	84.3	2.00	2.24	
Total Xylenes*	<0.150	0.150	07/24/2019	ND	5.08	84.7	6.00	2.60	
Total BTEX	<0.300	0.300	07/24/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIC	102	% 73,3-12	9						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC			-		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	07/22/2019	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	07/22/2019	ND	194	96.8	200	1.17	
DRO >C10-C28*	<10.0	10.0	07/22/2019	ND	184	92.2	200	0.398	
EXT DRO >C28-C36	<10.0	10.0	07/22/2019	ND					
Surrogate: 1-Chlorooctane	83.0	% 41-142	2						
Surrogate: 1-Chlorooctadecane	87.6	% 37.6-14	17						

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 2 of 5



Analytical Results For:

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

Fax To:

Received:

07/19/2019

Reported: Project Name: 07/25/2019

Project Number:

NEDU INJECTION TRUNKLINE NONE GIVEN

Project Location:

EUNICE NM

Sampling Date:

07/19/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

Sample ID: WWC 0 @ 1' (H902490-02)

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	07/24/2019	ND	1.74	87.0	2.00	2.24	
Toluene*	<0.050	0.050	07/24/2019	ND	1.77	88.6	2.00	2.18	
Ethylbenzene*	<0.050	0.050	07/24/2019	ND	1.69	84.3	2.00	2.24	
Total Xylenes*	<0.150	0.150	07/24/2019	ND	5.08	84.7	6.00	2.60	
Total BTEX	<0.300	0.300	07/24/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	104	% 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	07/22/2019	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d Bγ: MS					_
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/22/2019	ND	194	96.8	200	1.17	
DRO >C10-C28*	<10.0	10.0	07/22/2019	ND	184	92.2	200	0.398	
EXT DRO >C28-C36	<10.0	10.0	07/22/2019	ND					
Surrogate: 1-Chlorooctane	81.4	% 41-142	?						
Surrogate: 1-Chlorooctadecane	84.7	% 37.6-14	17						

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 3 of 5

ND



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

Notes and Definitions

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

Analyte NOT DETECTED at or above the reporting limit

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Demages. Cardinal's liability and client's exclusive remody for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and neceived by Cardinal within thirty (30) days after completion of the applicable service. In no event, shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by claims, is substitution; affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claims is based unabout any and of the approval of Cardinal laboratories.

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Celey D. Keene, Lab Director/Quality Manager

Page 4 of 5



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: (1) / 0		BILL TO			SISA IVNV	ASIS BEOLIEST	
Project Manager: St. F. Brown		P.O. #					
Address:		Сотралу:		_			
City: Ho bbs State: NM Zi	Zip: 382 40	Attn:		_			
Phone #: Fax #:		Address:		_			<u> </u>
Project #: Project Owner:		City:					
Project Name:		State: Zip:		_	_		
Project Location: NEDU Tox Trun H L.		*		_			
Se Duegan		Fax #:		<u></u>			
FOR LAB USE ONLY	MATRIX	PRESERV. SAMPLING	ING	4			
CIOMP	RS			TP	<u>¥</u>		
Lab I.D. Sample I.D.	CONTAINE ROUNDWA WASTEWATI OIL LUDGE	THER: CID/BASE: CE / COOL THER:	('/		BTE		
5w6001'	_	-	57	, ,			
2 WINCO @1.	1	. 5	13:17	-	-=		
analyses. All claims including those for regigence and any other cause whatsoever shall be deemed wewed unless made in withing and received by Cardinal within 30 days after completion of the applicable services. In no event shall Cardinal be based for including the consequential damages including without including, besides interruptions, loss of use, or loss of profits incurred by cleant, its publicables. affiliates of successions where out of or reliefed to the arthumence of services hereunder by Cardinal of whether such before study and of the reliefed to the arthumence of services hereunder by Cardinal and whether such before study and of the service study and the consequence of theories.	with an angular with the control of which and control of which and on the middle of th	or ion, sawa de irmiga to ma arrount paid by the clash liot (I received by Cardinal within 10 days after completion of the loss of use or loss of profits incurred by Sebril, its subsidiary is based usen arm of the above stoled harsons or otherwise is based usen arm of the above stoled harsons or otherwise.	and by the caerni for the her completion of the appli- calent, its subsidiaries.	cable			
Relinquished By: Date: 7.00 Ri	Received By:	11110	Phone Result:	□ Yes	□ No Add'I Phone #:	Dne #:	
10	Received By:	Make	REMARKS:		U WO Add Fax #2	***	
Time:							
Delivered By: (Circle One) 1.32 #9	7 Sample Condition	n CH					
Sampler - UPS - Bus - Other: My 1. 72	72 Tyes Tyes	(Inmais)					
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August 02, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: NEDU TRUNKLINE

Enclosed are the results of analyses for samples received by the laboratory on 08/01/19 13:43.

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

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.

Celey & Keene

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

•

Received: Reported: 08/01/2019 08/02/2019

Project Name:

NEDU TRUNKLINE

Project Number: Project Location:

NONE GIVEN EUNICE NM Sampling Date:

08/01/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By: Tamara Oldaker

Sample ID: AW 3 @ 2' (H902634-01)

BTEX 8021B	mg,	/kg	Analyze	d By: ms					
Analyte	Resuit	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/01/2019	ND	1.95	97.5	2.00	2.95	
Toluene*	<0.050	0.050	08/01/2019	ND	2.07	103	2.00	2.48	
Ethylbenzene*	<0.050	0.050	08/01/2019	ND	2.01	100	2.00	2.59	
Total Xylenes*	<0.150	0.150	08/01/2019	ND	6.03	100	6.00	2.35	
Total BTEX	<0.300	0.300	08/01/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	101	% 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	08/02/2019	ND	432	108	400	3.77	
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	08/01/2019	ND	201	101	200	7.96	
DRO >C10-C28*	<10.0	10.0	08/01/2019	ND	198	98.8	200	13.3	
EXT DRO >C28-C36	<10.0	10.0	08/01/2019	ND					
Surrogate: 1-Chlorooctane	114	% 41-142	?						
Surrogate: 1-Chlorooctadecane	125	% 37.6-14	17						

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Celey D. Keene, Lab Director/Quality Manager

Page 2 of 6



Analytical Results For:

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

Received:

08/01/2019

Reported:

BTEX 80216

08/02/2019

Project Name:

NEDU TRUNKLINE NONE GIVEN

mg/kg

Project Number:

Project Location:

EUNICE NM

Sampling Date:

08/01/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

Sample ID: B 0 @ 1' (H902634-02)

B1EX 00518	my/	Ng .	Allalyze	u by. ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/01/2019	ND	1.95	97.5	2.00	2.95	
Toluene*	<0.050	0.050	08/01/2019	ND	2.07	103	2.00	2.48	
Ethylbenzene*	<0.050	0.050	08/01/2019	ND	2.01	100	2.00	2.59	
Total Xylenes*	<0.150	0.150	08/01/2019	ND	6.03	100	6.00	2.35	
Total BTEX	<0.300	0.300	08/01/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	101	% 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	32.0	16.0	08/02/2019	ND	432	108	400	3.77	
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	08/01/2019	ND	201	101	200	7.96	
DRO >C10-C28*	<10.0	10.0	08/01/2019	ND	198	98.8	200	13.3	
EXT DRO >C28-C36	<10.0	10.0	08/01/2019	ND					
Surrogate: 1-Chlorooctane	110	% 41-142	?						
Surrogate: 1-Chlorooctadecane	122	% 37.6-14	17						

Analyzed By: ms

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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: Reported: 08/01/2019

08/02/2019

Project Name: Project Number: NEDU TRUNKLINE NONE GIVEN

Project Location:

EUNICE NM

Sampling Date:

08/01/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

Sample ID: B 1 @ 1' (H902634-03)

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	08/01/2019	ND	1.95	97.5	2.00	2.95	
Toluene*	<0.050	0.050	08/01/2019	ND	2.07	103	2.00	2.48	
Ethylbenzene*	<0.050	0.050	08/01/2019	ND	2.01	100	2.00	2.59	
Total Xylenes*	<0.150	0.150	08/01/2019	ND	6.03	100	6.00	2.35	
Total BTEX	<0.300	0.300	08/01/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	101	% 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	08/02/2019	ND	432	108	400	3.77	
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	08/01/2019	ND	201	101	200	7.96	
DRO >C10-C28*	<10.0	10.0	08/01/2019	ND	198	98.8	200	13.3	
EXT DRO >C28-C36	<10.0	10.0	08/01/2019	ND					
Surrogate: 1-Chlorooctane	109	% 41-142	?						
Surrogate: 1 Chlorooctadecane	119	37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

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

*** Insufficient time to reach temperature.

Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Page 5 of 6



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

rempair repache Conduction	BILL TO	ANALYSIS REQUEST
Project Manager: Mult BAKEK	P.O. #	
Address:	Company:	
City: State: Zip:	Attn:	
Phone #: Fax #:	Address:	
Project #: Project Owner:	City:	
Project Name: NEDW TRUNK LINE	State: Zip:	
Project Location: NEDW TRUME LINE	Phone #:	
	Fax #:	
	PRESERV. SAMPLING	
(G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL	SLUDGE OTHER: ACID/BASE ICE / COOL OTHER: DATE	EXT. 18H
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arabyes. All claims including those for regispance and any other cause whatsoever shall be deemed varied unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be label for includental or consequental damages, including without surfaces to tensions, business interruptions, business interruptions, business are reas of use or to see a point incurred by claim, by without writings of whether such claim is based use any of the above shallof reasons or otherwise. Refinquished By: Date:	pplicat	5
Time: /3 43 Date:	300	S No Add' Fax #: SAMES Mease.
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