

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

| District | 1 | 1625 N French Dr., Hobbs, NM 88240 | District | 1 | 11 | 15 | First St., Artesia, NM 88210 | District | 11 | 1000 Rto Brazos Road | Aztec, NM 87410 | District | 1 | 1020 S | St. | Francis Dr., Santa Fe, NM 87505

Responsible Party

Apache Corporation

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

| | the same of the sa |
|----------------|--|
| Incident ID | NCH1835433141 |
| District RP | 1RP-5285 |
| Facility ID | |
| Application ID | |

Release Notification

Responsible Party

OGRID

873

| Contact Nam | е в | ruce Baker | | | Contact Te | lephone | 432-631-6982 | | |
|-----------------------------------|--|-------------------|------------------------|----------|--------------------------|---|--|---------------------------------------|--|
| Contact emai | lar | ry.baker@apacl | hecorp.com | | Incident# | | | DU INJECTION | |
| Contact mail | ing address | 2350 W. Marla | nd BLVD Hobbs | , NM | 88240 | TRUNK | KLINE @ 30-0 | 25-37028 | |
| | Location of Release Source | | | | | | | | |
| Latitude | 32.49 | 9149 | | | Longitude _ | | -103.14369 | | |
| | | | (NAD 83 in dec | imal dej | grees to 5 decim | al places) | | | |
| Site Name | NEDU | Injection Trun | k Line | | Site Type Injection Line | | | | |
| Date Release | Discovered | 11/12/2018 | | | API# (if app | licable) 30- | 025-37028 (ne | arest well) | |
| | 6 | est | • | | | | | · · · · · · · · · · · · · · · · · · · | |
| Unit Letter | Section | Township | Range | | Coun | | | | |
| | 10 | 218 | 37E | | Lea | <u> </u> | | | |
| Surface Owner | r: State | Federal Tr | ibal 🔲 Private (/ | Vame: | | | |) | |
| | | | Nature and | l Wal | luma of I | Palanna | | | |
| | | | nature and | LVUI | uine of r | Velease | | | |
| Crude Oil | Material | | | calculat | ions or specific | | for the volumes provided Recovered (bbls) | below) | |
| | | | | | | | | | |
| Produced | water | \ \ \ Z00 barreis | | | | Recovered (bbls) | 10 recovered | | |
| 521 | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | | : in the | Yes | ⊔ No | | | | |
| Condensa | te | Volume Release | | | | Volume Recovered (bbls) | | | |
| Natural Gas Volume Released (Mcf) | | | Volume Recovered (Mcf) | | | | | | |
| Other (de | scribe) | Volume/Weight | Released (provide | units) |) | Volume Weight Recovered (provide units) | | | |
| | | | | | | | | | |
| Cause of Rel | ^{ease} A bui | ried injection l | ine failed caus | sing a | a release | of produ | iced water. | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
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| | | | | | | | | | |

State of New Mexico Oil Conservation Division

| Incident ID | |
|----------------|--|
| District RP | |
| Facility ID | |
| Application ID | |

| release as defined by | 11 YES, for what reason(s) does the respo | nsible party consider this a major release? | | | | |
|---|--|---|--|--|--|--|
| 19.15.29.7(A) NMAC? | | | | | | |
| Yes No | | | | | | |
| Yes I No | | | | | | |
| | | | | | | |
| If VES was immediate n | otice given to the OCD2. By whom? To w | hom? When and by what means (phone, email, etc)? | | | | |
| | | | | | | |
| Bruce Baker notified | d Jim Griswold and Olivia Yu via | email on 11/14/2018 at 7:25 a.m. | | | | |
| | Initial R | esponse | | | | |
| The responsible | party must undertake the following actions immediate | ly unless they could create a safety hazard that would result in injury | | | | |
| The source of the rele | ease has been stopped. | | | | | |
| | as been secured to protect human health and | I the environment. | | | | |
| [<i>)</i> | | dikes, absorbent pads, or other containment devices. | | | | |
| 1 4 | ecoverable materials have been removed ar | | | | | |
| | d above have <u>not</u> been undertaken, explain | | | | | |
| | _ | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Per 19.15.29.8 B. (4) NM | AC the responsible party may commence | remediation immediately after discovery of a release. If remediation | | | | |
| has begun, please attach | a narrative of actions to date. If remedial | efforts have been successfully completed or if the release occurred please attach all information needed for closure evaluation. | | | | |
| | | best of my knowledge and understand that pursuant to OCD rules and | | | | |
| regulations all operators are | required to report and/or file certain release not | ifications and perform corrective actions for releases which may endanger OCD does not relieve the operator of liability should their operations have | | | | |
| failed to adequately investig | gate and remediate contamination that pose a thr | eat to groundwater, surface water, human health or the environment. In | | | | |
| addition, OCD acceptance of 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 | | | | |
| Printed Name: Bruce | Baker | Title: Environmental Technician SR. | | | | |
| 0 | | | | | | |
| Signature: /Succ | e Bahir | Date: 11/21/2018 | | | | |
| email: larry.baker@ | apachecorp.com | Telephone: 431-631-6982 | | | | |
| | | | | | | |
| OCD Only RF | CEIVED | | | | | |
| | Hernandez at 9:15 am, Dec | 20 2018 | | | | |
| Бус | riernanuez at 3.10 am, Dec 1 | 2010 | | | | |

State of New Mexico Oil Conservation Division

| Incident ID | |
|----------------|--|
| District RP | |
| Facility ID | |
| Application ID | |

Site Assessment/Characterization

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

| What is the shallowest depth to groundwater beneath the area affected by the release? | 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 🇹 No | | | |
| Are the lateral extents of the release within a 100-year floodplain? | ▼ Yes □ No | | | |
| Did the release impact areas not on an exploration, development, production, or storage site? | Yes No | | | |
| Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics. | | | | |
| Characterization Report Checklist: Each of the following items must be included in the report. | | | | |
| Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells. Field data Data table of soil contaminant concentration data Depth to water determination | | | | |
| Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release | | | | |
| Boring or excavation logs Photographs including date and GIS information | | | | |
| Topographic/Aerial maps Laboratory data including chain of custody | | | | |
| | | | | |

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

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 regulations all operators are required to report and/or file certain release not public health or the environment. The acceptance of a C-141 report by the failed to adequately investigate and remediate contamination that pose a threaddition, OCD acceptance of a C-141 report does not relieve the operator of and/or regulations. | ifications and perform corrective actions for releases which may endanger OCD does not relieve the operator of liability should their operations have eat to groundwater, surface water, human health or the environment. In |
|---|--|
| Printed Name: Bruce Baker | Title: Environmental Tech SR. |
| Signature: Bruce Baher | Date: 2-13-19 |
| email: larry. baker@apachecorp.com | Telephone: 432 - 631 - 6982 |
| OCD Only | |
| Received by: | Date: |

State of New Mexico Oil Conservation Division

| Incident ID | |
|----------------|--|
| District RP | |
| Facility ID | |
| Application ID | |

Remediation Plan

| Remediation Plan Checklist: Each of the following items must be in | cluded in the plan. | | | |
|--|--|--|--|--|
| Detailed description of proposed remediation technique Scaled sitemap with GPS coordinates showing delineation points Estimated volume of material to be remediated Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required) | | | | |
| Deferral Requests Only: Each of the following items must be confir | med as part of any request for deferral of remediation | | | |
| Contamination must be in areas immediately under or around prod deconstruction. | | | | |
| Extents of contamination must be fully delineated. | | | | |
| Contamination does not cause an imminent risk to human health, the | ne environment, or groundwater. | | | |
| I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. Printed Name: Bruce Baker Title: Four rowment all Tech. Signature: Bruce Baker Date Corp. Telephone: 432-631-6982 | | | | |
| OCD Only | | | | |
| Received by: Vanessa Fields | Date: | | | |
| Approved Approved with Attached Conditions of Ap | proval | | | |
| Signature: Danous Violet Da | tte: 2/21/2019 | | | |

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.



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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 =

322921103083001

Minimum number of levels = 1

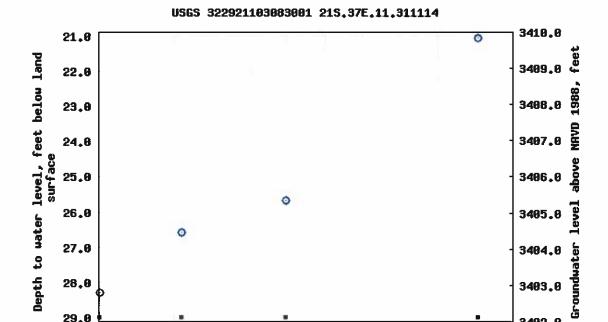
Save file of selected sites to local disk for future upload

USGS 322921103083001 21S.37E.11.311114

| Available data for this site | Groundwater: | Field measurements | | GO | |
|------------------------------|--------------|------------------------|-------|-------|---------|
| Lea County, New Mexico | | | | | |
| Hydrologic Unit Code 1307 | 0007 | | | | |
| Latitude 32°29'21", Longit | ude 103°08 | 3'30" NAD27 | | | |
| Land-surface elevation 3,4: | 31 feet abo | ve NAVD88 | | | |
| The depth of the well is 76 | feet below | land surface. | | | |
| This well is completed in th | e Alluvium, | Bolson Deposits | and (| Other | Surface |
| Deposits (110AVMB) local a | aquifer. | · | | | |

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

Output formats



- Period of approved data

1970 1971 1972 1973 1974 1975 1976

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

Download a presentation-quality graph

Questions about sites/data?

1966 1967 1968 1969

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3402.6

U.S. Department of the Interior | U.S. Geological Survey

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

0.94 0.89 nadww01





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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

Deposits (110AVMB) local aquifer.

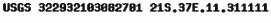
Save file of selected sites to local disk for future upload

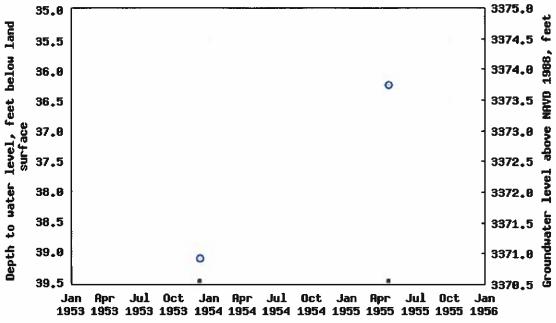
USGS 322932103082701 21S.37E.11.311111

| Available data for this site | Groundwater: Field measurements | ∨ GO |
|-------------------------------|---------------------------------|----------------|
| Lea County, New Mexico | | |
| Hydrologic Unit Code | | |
| Latitude 32°29'32", Longi | tude 103°08'27" NAD27 | |
| Land-surface elevation 3,4 | 10 feet above NAVD88 | |
| The depth of the well is 75 | feet below land surface. | |
| This well is completed in the | ne Alluvium. Bolson Deposits | and Other Surf |

Output formats

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





- Period of approved data

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

Download a presentation-quality graph

Questions about sites/data?

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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





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 feet)

| | | Sub- | | Q | Q | Q | | | | | | í | Depth C | epth Wa | ater |
|---------------|------|------|--------|----|----|---|-----|------|-------------|--------|------------|----------|---------|---------|------|
| POD Number | Code | | County | 64 | 16 | 4 | Sec | Tws | Rng | Х | Υ | Distance | | VaterCo | |
| CP 00286 POD1 | | CP | LE | 2 | 1 | 2 | 10 | 218 | 37E | 674019 | 3597338* 🍪 | 949 | 70 | | |
| CP 01741 POD1 | | CP | LE | 1 | 3 | 4 | 03 | 218 | 37E | 673895 | 3597759 🍪 | 1387 | 45 | | |
| CP 01185 POD1 | | CP | LE | | 1 | 3 | 14 | 218 | 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 | 218 | 37E | 672744 | 3595610* 🕓 | 1796 | 80 | 70 | 10 |
| CP 01110 POD1 | | CP | LE | | 1 | 3 | 14 | 21\$ | 37E | 674586 | 3594648 🍪 | 1811 | 70 | | |
| CP 01110 POD2 | | CP | LE | | 1 | 3 | 14 | 21\$ | 37E | 674586 | 3594648 🍪 | 1811 | 70 | | |
| CP 01110 POD3 | | CP | LE | | 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 | | 1 | 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 | 218 | 37 E | 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 | 218 | 37E | 674666 | 3594578 🌑 | 1893 | 68 | 57 | 11 |

Average Depth to Water:

61 feet

Minimum Depth:

57 feet

Maximum Depth:

70 feet

Record Count: 14

UTMNAD83 Radius Search (in meters):

Easting (X): 674336

Northing (Y): 3596443

Radius: 2000

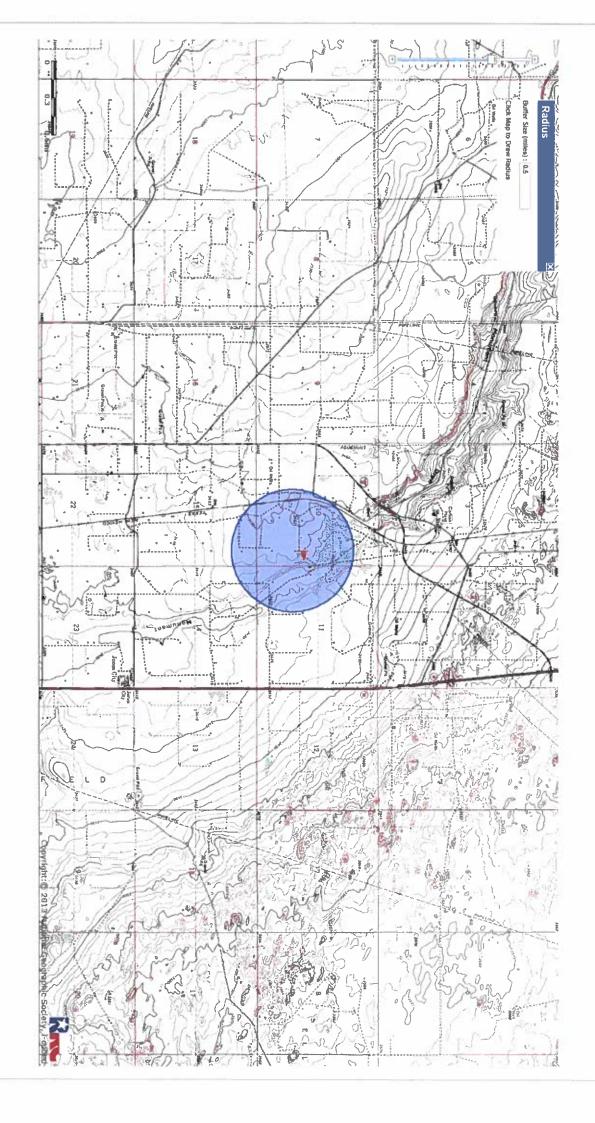
*UTM location was derived from PLSS - see Help

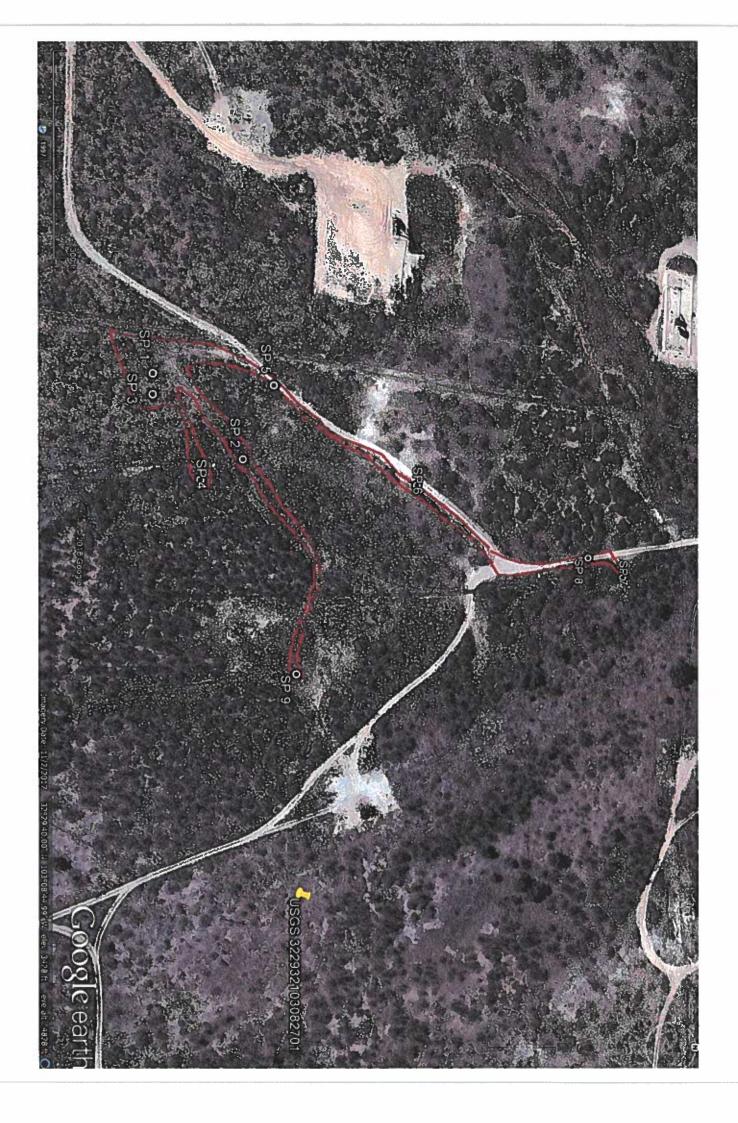
The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

2/13/19 11:29 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER







NEDU North Injection Trunkline

| | | | | SP 1 32.49 | SP 1 32.4916 -103.1435 | 35 | | | |
|---------|---------|---------|---------|--------------|------------------------|------------|-------|-------|---------|
| Depth | Lab Cl- | Benzene | Toluene | Ethybenzene | Total Xylenes | Total BTEX | GRO | DRO | EXT DRO |
| Surface | 4960 | 0.072 | 0.288 | <0.050 | 1.77 | 2.13 | <10.0 | 71.9 | <10.0 |
| 1' | 988 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |
| 2, | 240 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |
| | | | | SP 2 32.49 | SP 2 32.4920 -103.1431 | 31 | | | |
| Depth | Lab Cl- | Benzene | Toluene | Ethybenzene | Total Xylenes | Total BTEX | GRO | DRO | EXT DRO |
| Surface | 0089 | <0.050 | 0.052 | 0.067 | 0.199 | 0.318 | <10.0 | 28.7 | <10.0 |
| 1, | 1340 | <0.050 | 0.061 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |
| 2, | 2240 | <0.050 | 050'0> | <0.050 | <0.150 | <0.300 | <10.0 | 14.1 | <10.0 |
| 3' | 1880 | <0.050 | 0.092 | 0.064 | 0.188 | 0.344 | <10.0 | 28.7 | <10.0 |
| 4, | 3000 | <0.050 | 050'0> | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |
| | | | | SP 3 32.49 | SP 3 32.4916 -103.1434 | 34 | | | |
| Depth | Lab CI- | Benzene | Toluene | Ethybenzene | Total Xylenes | Total BTEX | GRO | DRO | EXT DRO |
| Surface | 6320 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |
| 1, | 3040 | 0.198 | 0.13 | <0.050 | <0.150 | 0.328 | <10.0 | <10.0 | <10.0 |
| 2, | 432 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |
| | | | | SP 4 32.4918 | 18-103.1430 | 30 | | | |
| Depth | Lab Cl- | Benzene | Toluene | Ethybenzene | Total Xylenes | Total BTEX | GRO | DRO | EXT DRO |
| Surface | 64 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |
| 1, | 16 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |
| 2, | 16 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |
| 3, | 16 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |
| | | | | SP 5 32.4921 | 21 -103.1435 | 35 | | | |
| Depth | Lab CI- | Benzene | Toluene | Ethybenzene | Total Xylenes | Total BTEX | GRO | DRO | EXT DRO |
| Surface | 1040 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | 613 | 203 |
| 1, | 304 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |
| | | | | SP 6 32.49 | SP 6 32.4928 -103.1430 | 30 | | | |
| Depth | Lab Cl- | Benzene | Toluene | Ethybenzene | Total Xylenes | Total BTEX | GRO | DRO | EXT DRO |
| | | | | | | | | | |

| Surface | 3200 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | 48.5 | <10.0 |
|---------|---------|---------|---------|-------------|------------------------|------------|-------|-------|---------|
| 1' | 3600 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |
| 2' | 2000 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |
| 3, | 1280 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |
| 4' | 384 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |
| | | | | SP 7 32.49 | SP 7 32.4940 -103.1424 | 24 | | | |
| Depth | Lab Cl- | Benzene | Toluene | Ethybenzene | Total Xylenes | Total BTEX | GRO | DRO | EXT DRO |
| Surface | 1780 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |
| | | | | SP 8 32.45 | SP 8 32.4937 -103.1425 | 52 | | | |
| Depth | Lab CI- | Benzene | Toluene | Ethybenzene | Total Xylenes | Total BTEX | GRO | DRO | EXT DRO |
| Surface | 2400 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | 48.5 | <10.0 |
| 1, | 80 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |
| 2, | 32 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |
| | | | | SP 9 32.49 | SP 9 32.4922 -103.1420 | 50 | | | |
| Depth | Lab Cl- | Benzene | Toluene | Ethybenzene | Total Xylenes | Total BTEX | GRO | DRO | EXT DRO |
| Surface | 1520 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |
| 1, | 1840 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |
| 2, | 2000 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |
| 3, | 3120 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |
| 4, | 416 | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 |



November 26, 2018

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 11/19/18 16:05.

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.

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



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

Fax To:

(575) 393-2432

Received:

11/19/2018

Sampling Date:

11/19/2018

Reported:

BTEX 8021B

11/26/2018

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

ma/ka

Analyzed By: MS

Project Location: EUNICE NM

Sample Received By:

Jodi Henson

Sample ID: VERTICAL #1 SURFACE (H803383-01)

| DIEY 00510 | my, | / Ng | Analyze | u by: M3 | | | | | |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | 0.072 | 0.050 | 11/22/2018 | ND | 2.20 | 110 | 2.00 | 2.51 | |
| Toluene* | 0.288 | 0.050 | 11/22/2018 | ND | 2.19 | 110 | 2.00 | 3.05 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.11 | 106 | 2.00 | 3.51 | |
| Total Xylenes* | 1.77 | 0.150 | 11/22/2018 | ND | 6.29 | 105 | 6.00 | 3.35 | |
| Total BTEX | 2.13 | 0.300 | 11/22/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIE | 119 | % 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 | 4960 | 16.0 | 11/21/2018 | 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 | 11/21/2018 | ND | 193 | 96.6 | 200 | 3.04 | |
| DRO >C10-C28* | 71.9 | 10.0 | 11/21/2018 | ND | 192 | 95.9 | 200 | 4.07 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/21/2018 | ND | | | | | |
| Surrogate: I-Chlorooctane | 89.2 | % 41-142 | ? | | | | | | |
| Surrogate: 1-Chlorooctadecane | 95.2 | % 37.6-14 | 7 | | | | | | |
| | | | | | | | | | |

Cardinal Laboratories

*=Accredited Analyte

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Colog L. Kinn

Celey D. Keene, Lab Director/Quality Manager



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

Fax To:

(575) 393-2432

Received:

11/19/2018

Sampling Date:

11/19/2018

Reported:

11/26/2018

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

Sample ID: VERTICAL #1 1' (H803383-02)

| 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 | 11/22/2018 | ND | 2.20 | 110 | 2.00 | 2.51 | |
| Toluene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.19 | 110 | 2.00 | 3.05 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.11 | 106 | 2.00 | 3.51 | |
| Total Xylenes* | <0.150 | 0.150 | 11/22/2018 | ND | 6.29 | 105 | 6.00 | 3.35 | |
| Total BTEX | <0.300 | 0.300 | 11/22/2018 | ND | | | | | |
| Surrogate 4-Bromofluorobenzene (PIC | 94.3 | % 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 |
| Chioride | 336 | 16.0 | 11/21/2018 | 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 | 11/21/2018 | ND | 193 | 96.6 | 200 | 3.04 | |
| DRO >C10-C28* | <10.0 | 10.0 | 11/21/2018 | ND | 192 | 95.9 | 200 | 4.07 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/21/2018 | ND | | | | | |
| Surrogate: 1-Chloroociane | 89.1 | % 41-142 | ? | | | | | | |
| Surrogate: 1-Chlorooctadecane | 94.2 | % 37.6-14 | 7 | | | | | | |

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Fax To:

(575) 393-2432

Received:

11/19/2018

Sampling Date:

11/19/2018

Reported:

11/26/2018

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

Sample ID: VERTICAL #1 2' (H803383-03)

| BTEX 80218 | mg, | /kg | Analyze | d By: M\$ | | | | | |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.20 | 110 | 2.00 | 2.51 | |
| Toluene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.19 | 110 | 2.00 | 3.05 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.11 | 106 | 2.00 | 3.51 | |
| Total Xylenes* | <0.150 | 0.150 | 11/22/2018 | ND | 6.29 | 105 | 6.00 | 3.35 | |
| Total BTEX | <0.300 | 0.300 | 11/22/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIC | 97.0 | % 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 | Qualifier |
| Chloride | 240 | 16.0 | 11/21/2018 | ND | 432 | 108 | 400 | 0.00 | |
| TPH 8015M | mg, | /kg | Analyze | d By: MS | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BŚ | % Recovery | True Value QC | RPD | Qualifier |
| GRO C6-C10* | < 10.0 | 10.0 | 11/21/2018 | ND | 193 | 96.6 | 200 | 3.04 | |
| DRO >C10-C28* | <10.0 | 10.0 | 11/21/2018 | ND | 192 | 95.9 | 200 | 4.07 | |
| EXT DRO >C28-C36 | < 10.0 | 10.0 | 11/21/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 90,5 | % 41-142 | ? | | | | | | |
| Surrogate: 1-Chlorooctadecane | 96.9 | % 37.6-14 | 7 | | | | | | |

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Colog 2 . trains -

Celey D. Keene, Lab Director/Quality Manager

Page 4 of 19



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

Fax To:

(575) 393-2432

Received:

11/19/2018

Sampling Date:

11/19/2018

Reported:

11/26/2018

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

Sample ID: VERTICAL #2 SURFACE (H803383-04)

| 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 | 11/22/2018 | ND | 2.20 | 110 | 2.00 | 2.51 | |
| Toluene* | 0.052 | 0.050 | 11/22/2018 | ND | 2.19 | 110 | 2.00 | 3.05 | |
| Ethylbenzene* | 0.067 | 0.050 | 11/22/2018 | ND | 2.11 | 106 | 2.00 | 3.51 | |
| Total Xylenes* | 0.199 | 0.150 | 11/22/2018 | ND | 6.29 | 105 | 6.00 | 3.35 | |
| Total BTEX | 0.318 | 0.300 | 11/22/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIE | 97.5 | % 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 | 6800 | 16.0 | 11/21/2018 | 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 | 11/21/2018 | ND | 193 | 96.6 | 200 | 3.04 | |
| DRO >C10-C28* | 28.7 | 10.0 | 11/21/2018 | ND | 192 | 95.9 | 200 | 4.07 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/21/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 89.6 | % 41-142 | | | | | | | |
| Surrogate: 1-Chlorooctadecane | 101 9 | % 37.6-14 | 7 | | | | | | |

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*=Accredited Analyte

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Colog ? trans

Celey D. Keene, Lab Director/Quality Manager



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

Fax To:

(575) 393-2432

Analyzed By: MS

Received:

11/19/2018

Sampling Date:

11/19/2018

Reported:

BTEX 80218

11/26/2018

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

mg/kg

Sample Received By:

Jodi Henson

Project Location:

EUNICE NM

Sample ID: VERTICAL #2 1' (H803383-05)

| | | | | /- · · | | | | | |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | 88 | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.20 | 110 | 2.00 | 2.51 | |
| Toluene* | 0.061 | 0.050 | 11/22/2018 | ND | 2.19 | 110 | 2.00 | 3.05 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.11 | 106 | 2.00 | 3.51 | |
| Total Xylenes* | <0.150 | 0.150 | 11/22/2018 | ND | 6.29 | 105 | 6.00 | 3.35 | |
| Total BTEX | <0.300 | 0.300 | 11/22/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIE | 96.19 | % 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 | 1340 | 16.0 | 11/21/2018 | 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 | 11/21/2018 | ND | 193 | 96.6 | 200 | 3.04 | |
| DRO >C10-C28* | <10.0 | 10.0 | 11/21/2018 | ND | 192 | 95.9 | 200 | 4.07 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/21/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 92.2 | % 41-142 | | | | | | | |
| Surrogate: 1-Chlorooctadecane | 99.09 | 6 37.6-14 | _8 | | | | | | |

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*=Accredited Analyte

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Colleg Z. Kinne

Celey D. Keene, Lab Director/Quality Manager

Page 6 of 19



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

Fax To:

(575) 393-2432

Received:

11/19/2018

Sampling Date:

11/19/2018

Reported:

11/26/2018

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

Sample ID: VERTICAL #2 2' (H803383-06)

| 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 | 11/22/2018 | ND | 2.20 | 110 | 2.00 | 2.51 | |
| Toluene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.19 | 110 | 2.00 | 3.05 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.11 | 106 | 2.00 | 3.51 | |
| Total Xylenes* | <0.150 | 0.150 | 11/22/2018 | ND | 6.29 | 105 | 6.00 | 3.35 | |
| Total BTEX | <0.300 | 0.300 | 11/22/2018 | ND | | | | • | |
| Surrogate: 4-Bromofluorobenzene (PIC | 95,6 | % 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 | 2240 | 16.0 | 11/21/2018 | 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 | 11/21/2018 | ND | 193 | 96.6 | 200 | 3.04 | |
| DRO >C10-C28* | 14.1 | 10.0 | 11/21/2018 | ND | 192 | 95.9 | 200 | 4.07 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/21/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 84.7 | % 41-142 | ! | | | | | | |
| Surrogate: 1-Chlorooctadecane | 92.4 | % 37.6-14 | 7 | | | | | | |

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

Fax To:

(575) 393-2432

Received:

11/19/2018

Sampling Date:

11/19/2018

Reported:

11/26/2018

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

Sample ID: VERTICAL #2 3' (H803383-07)

| BTEX 8021B | mg/ | /kg | Analyze | d By: MS | | | | | |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|------|----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | 85 | % Recovery | True Value QC | RPD | Qualifie |
| Benzene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.20 | 110 | 2.00 | 2.51 | |
| Toluene* | 0.092 | 0.050 | 11/22/2018 | ND | 2.19 | 110 | 2.00 | 3.05 | |
| Ethylbenzene* | 0.064 | 0.050 | 11/22/2018 | ND | 2.11 | 106 | 2.00 | 3.51 | |
| Total Xylenes* | 0.188 | 0.150 | 11/22/2018 | ND | 6.29 | 105 | 6.00 | 3.35 | |
| Total BTEX | 0.344 | 0.300 | 11/22/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIE | 97,9 | % 73.3-12 | 9 | | | | | | |
| Chloride, SM4500CI-B | mg/ | /kg | Analyze | d By: HM | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | 8\$ | % Recovery | True Value QC | RPD | Qualifie |
| Chloride | 1880 | 16.0 | 11/21/2018 | ND | 432 | 108 | 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 | Qualifie |
| GRO C6-C10* | <10.0 | 10.0 | 11/21/2018 | ND | 193 | 96.6 | 200 | 3.04 | |
| DRO >C10-C28* | <10.0 | 10.0 | 11/21/2018 | ND | 192 | 95.9 | 200 | 4.07 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/21/2018 | ND | | | | | |
| Surragate: 1-Chlorooctane | 82.6 | % 41-142 | | | | | | | |
| Surrogate: I-Chlorooctadecane | 88.7 | % 37.6-14 | 7 | | | | | | |

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*=Accredited Analyte

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Colog L. treens

Celey D. Keene, Lab Director/Quality Manager

Page 8 of 19



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

Fax To:

(575) 393-2432

Received:

11/19/2018

Sampling Date:

11/19/2018

Reported:

11/26/2018

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

Sample ID: VERTICAL #2 4' (H803383-08)

| 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 | 11/22/2018 | ND | 2.20 | 110 | 2.00 | 2.51 | |
| Toluene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.19 | 110 | 2.00 | 3.05 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.11 | 106 | 2.00 | 3.51 | |
| Total Xylenes* | < 0.150 | 0.150 | 11/22/2018 | ND | 6.29 | 105 | 6.00 | 3.35 | |
| Total BTEX | <0.300 | 0.300 | 11/22/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIL | 99.6 | % 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 | 3000 | 16.0 | 11/21/2018 | 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 | 11/21/2018 | ND | 187 | 93.5 | 200 | 3.29 | |
| DRO >C10-C28* | <10.0 | 10.0 | 11/21/2018 | ND | 204 | 102 | 200 | 0.672 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/21/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 81.1 | % 41-142 | ! | | | | | | |
| Surrogate: 1-Chlorooctadecane | 79.7 | % 37.6-14 | 7 | | | | | | |

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 9 of 19



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

Fax To:

(575) 393-2432

Received:

11/19/2018

Sampling Date:

11/19/2018

Reported:

11/26/2018

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

Sample ID: VERTICAL #3 SURFACE (H803383-09)

| 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 | 11/22/2018 | ND | 2.20 | 110 | 2.00 | 2.51 | |
| Toluene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.19 | 110 | 2.00 | 3.05 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.11 | 106 | 2.00 | 3.51 | |
| Total Xylenes* | < 0.150 | 0.150 | 11/22/2018 | ND | 6.29 | 105 | 6.00 | 3.35 | |
| Total BTEX | <0.300 | 0.300 | 11/22/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIL | 97.7 | % 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 | 6320 | 16.0 | 11/21/2018 | 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 | 11/21/2018 | ND | 187 | 93.5 | 200 | 3.29 | |
| DRO >C10-C28* | < 10.0 | 10.0 | 11/21/2018 | ND | 204 | 102 | 200 | 0.672 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/21/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 85.5 | % 41-142 | | | | | | | |
| Surrogate: 1-Chlorooctadecane | 83.4 | % 37.6-14 | 7 | | | | | | |

Cardinal Laboratories

*=Accredited Analyte

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College L. trains

Celey D. Keene, Lab Director/Quality Manager

Page 10 of 19



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

Fax To:

(575) 393-2432

Received:

11/19/2018

Sampling Date:

11/19/2018

Reported:

11/26/2018

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

Sample ID: VERTICAL #3 1' (H803383-10)

| BTEX 8021B | mg, | /kg | Analyze | d By: MS | | | | | _ |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | 0.198 | 0.050 | 11/22/2018 | ND | 2.20 | 110 | 2.00 | 2.51 | |
| Toluene* | 0.130 | 0.050 | 11/22/2018 | ND | 2.19 | 110 | 2.00 | 3.05 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.11 | 106 | 2.00 | 3.51 | |
| Total Xylenes* | <0.150 | 0.150 | 11/22/2018 | ND | 6.29 | 105 | 6.00 | 3.35 | |
| Total BTEX | 0.328 | 0.300 | 11/22/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIC | 96.6 | % 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 | 3040 | 16.0 | 11/21/2018 | 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 | 11/21/2018 | ND | 187 | 93.5 | 200 | 3.29 | |
| DRO >C10-C28* | <10.0 | 10.0 | 11/21/2018 | ND | 204 | 102 | 200 | 0.672 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/21/2018 | ND | | | | | |
| Surragate: 1-Chlorooctane | 89.8 | % 41-142 | | | | | | | |
| Surrogate: 1-Chlorooctadecane | 88.6 | % 37.6-14 | 7 | | | | | | |

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Fax To:

(575) 393-2432

Received:

11/19/2018

Sampling Date:

11/19/2018

Reported:

11/26/2018

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

Sample ID: VERTICAL #3 2' (H803383-11)

| 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 | 11/22/2018 | ND | 2.20 | 110 | 2.00 | 2.51 | |
| Toluene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.19 | 110 | 2.00 | 3.05 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.11 | 106 | 2.00 | 3.51 | |
| Total Xylenes* | <0.150 | 0.150 | 11/22/2018 | ND | 6.29 | 105 | 6.00 | 3.35 | |
| Total BTEX | <0.300 | 0.300 | 11/22/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIL | 98 3 | % 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 | 432 | 16.0 | 11/21/2018 | 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 | 11/21/2018 | ND | 187 | 93.5 | 200 | 3.29 | |
| DRO >C10-C28* | <10.0 | 10.0 | 11/21/2018 | ND | 204 | 102 | 200 | 0.672 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/21/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 82.5 | % 41-142 | • | | | | | | |
| Surrogate: 1-Chlorooctadecane | 81.9 | % 37.6-14 | 7 | | | | | | |

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Colog " tream

Celey D. Keene, Lab Director/Quality Manager

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

Fax To:

(575) 393-2432

Received:

11/19/2018

Sampling Date:

11/19/2018

Reported:

11/26/2018

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

Sample ID: VERTICAL #4 SURFACE (H803383-12)

| 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 | 11/22/2018 | ND | 2.20 | 110 | 2.00 | 2.51 | |
| Toluene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.19 | 110 | 2.00 | 3.05 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.11 | 106 | 2.00 | 3.51 | |
| Total Xylenes* | <0.150 | 0.150 | 11/22/2018 | ND | 6.29 | 105 | 6.00 | 3.35 | |
| Total BTEX | <0.300 | 0.300 | 11/22/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIC | 97,6 | % 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 | 11/21/2018 | 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 | 11/21/2018 | ND | 187 | 93.5 | 200 | 3.29 | |
| DRO >C10-C28* | <10.0 | 10.0 | 11/21/2018 | ND | 204 | 102 | 200 | 0.672 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/21/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 81.6 | % 41-142 | | | | | | | |
| Surrogate: 1-Chlorooctadecane | 83.0 | % 37.6-14 | 7 | | | | | | |

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Celey D. Keene, Lab Director/Quality Manager

Page 13 of 19



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

Received:

11/19/2018

Sampling Date:

11/19/2018

Reported:

Sampling Type:

Soil

Project Name:

11/26/2018 **NEDU INJECTION TRUNKLINE**

Cool & Intact

Project Number:

NONE GIVEN

Sampling Condition:

Project Location:

EUNICE NM

Sample Received By:

Jodi Henson

Sample ID: VERTICAL #4 1' (H803383-13)

| 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 | 11/22/2018 | ND | 2.20 | 110 | 2.00 | 2.51 | |
| Toluene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.19 | 110 | 2.00 | 3.05 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.11 | 106 | 2.00 | 3.51 | |
| Total Xylenes* | <0.150 | 0.150 | 11/22/2018 | ND | 6.29 | 105 | 6.00 | 3.35 | |
| Total 8TEX | <0.300 | 0.300 | 11/22/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIC | 94.6 | % 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 | 11/21/2018 | 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 | 11/21/2018 | ND | 187 | 93.5 | 200 | 3.29 | |
| DRO >C10-C28* | <10.0 | 10.0 | 11/21/2018 | ND | 204 | 102 | 200 | 0.672 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/21/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 84.1 | % 41-142 | | | | | | | |
| Surrogate: 1-Chlorooctadecane | 85.0 | % 37.6-14 | 7 | | | | | | |

Cardinal Laboratories

*=Accredited Analyte

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College trees

Celey D. Keene, Lab Director/Quality Manager



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

Fax To:

(575) 393-2432

Received:

11/19/2018

Sampling Date:

11/19/2018

Reported:

11/26/2018

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

Sample ID: VERTICAL #4 2' (H803383-14)

| 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 | 11/22/2018 | ND | 2.20 | 110 | 2.00 | 2.51 | |
| Toluene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.19 | 110 | 2.00 | 3.05 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/22/2018 | ND | 2.11 | 106 | 2.00 | 3.51 | |
| Total Xylenes* | <0.150 | 0.150 | 11/22/2018 | ND | 6.29 | 105 | 6.00 | 3.35 | |
| Total BTEX | <0.300 | 0.300 | 11/22/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIL | 99.4 | % 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 | 11/21/2018 | 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 | 11/21/2018 | ND | 187 | 93.5 | 200 | 3.29 | |
| DRO >C10-C28* | <10.0 | 10.0 | 11/21/2018 | ND | 204 | 102 | 200 | 0.672 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/21/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 80.8 | % 41-142 | 1 | | | | | | |
| Surrogate: 1-Chlorooctadecane | 81.4 | % 37.6-14 | 7 | | | | | | |

Cardinal Laboratories

*=Accredited Analyte

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along L. Kinn

Celey D. Keene, Lab Director/Quality Manager

Page 15 of 19



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

Fax To:

(575) 393-2432

Received:

11/19/2018

Sampling Date:

11/19/2018

Reported:

11/26/2018

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

Sample ID: VERTICAL #4 3' (H803383-15)

| 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 | 11/24/2018 | ND | 2.15 | 108 | 2.00 | 2.25 | |
| Toluene* | <0.050 | 0.050 | 11/24/2018 | ND | 2.07 | 103 | 2.00 | 0.874 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/24/2018 | ND | 2.01 | 100 | 2.00 | 1.42 | |
| Total Xylenes* | <0.150 | 0.150 | 11/24/2018 | ND | 5.90 | 98.4 | 6.00 | 1.89 | |
| Total BTEX | <0.300 | 0.300 | 11/24/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIL | 97.6 | % 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 | 11/21/2018 | 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 | 11/21/2018 | ND | 187 | 93.5 | 200 | 3.29 | |
| DRO >C10-C28* | <10.0 | 10.0 | 11/21/2018 | ND | 204 | 102 | 200 | 0.672 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/21/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 83.1 | % 41-142 | | | | | | | |
| Surrogate: 1-Chlorooctadecane | 85.2 | % 37.6-14 | 7 | | | | | | |

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 16 of 19



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 SM4500CI-B does not require samples be received at or below 6°C

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

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liablify and Damages. Cardinal's liablify and cherry's eviduality and cherry's eviduality

Colog it . trisma -

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

| | | Relinquished By: Date: Received By: |
|--|---|--|
| RKS: | MENUEN REMARKS: | The Down of the Down of |
| □ Yes □ No | | Relinquished by: |
| 7 | Phone | out of or related to the performance of services hereunder of |
| zacida rives. | Interruptions, loss of use, or loss of profits incurred by client, its su | service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidialities, |
| nt for the applicable | ed in contract or fort, shall be knilled to the africunt plad by the cit- in writing and received by Cardinal within 30 days after completio | PLEASE NOTE: Liability and Chamages. Cardinate lability and clear's exclusive remedy for any claim ensing whether based in contract or lost, shall be limited to the amount plad by the clear for the applicable analyses. All claims including those for negligence and any other cause whatboover shall be deemed welved unless made in writing and received by Cardinal within 30 days after completion of the applicable |
| | 1 1 11-19-102:10 Pm | 10 Westical#3 1 Ft. 6 11 V |
| | V 1-19-19 2:05 Pm | W/4"121#3 Su |
| | N 4-19-18 1:50 | 8 1/e/1:6/#2 4 Foot. 611 V/ 1 |
| | 14:18 8461-11 11 | Viction 1#2 31 |
| ラングノ | 14: (81-4-14) | 1422 |
| 7 7 7 | V /11-9-18 1:43/m | 5 Nextice/#2 / Fast 62 V/1 |
| 3, 1/1/ | <u> </u> | 4 Wortical # 2 Surface 61V/V |
| | 1 181.18 1:18 LW | 1#2 2 |
| | 11-19-18 6:15 m | Vertical#2 /For |
| | 1/11-19-18 1:15 | 1 Streetical # 1 Surfau GIV/V |
| 1 | OIL SLUI OTH ACIE | # CC GRC |
| 3TE | DGE | TEWAT |
| <i>Ty</i> | | RS ATER |
| \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | MATRIX PRESERV. SAMPLING | > |
| | Fax #: | Bei |
| | Phone #: | 6 |
| | State: Zip: | ame: NEdil injecti |
| | City: | Project #: Project Owner: |
| | Address: | Phone #: 432 -63/-6982 Fax #: |
| | O Attn: | City: HALS State: () M Zip: 8924 |
| | Company: | X |
| | P.O. #: | Project Manager: 13,000 Pake |
| ANALYSIS REQUEST | BILL TO | Company Name: HHChe |
| ı | | |

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

3.60

Sample Condition
Cool Intact
Yes A Yes
No No No

Time:



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

| | A A | Sampler - UPS - Bus - Other: 8.6% TY 1 TYES TYES |
|-----------------------------|--|--|
| | ON CHECKED BY: | \dashv |
| | | Time: |
| | | Relinquished By: Date: Received By: |
| i | MON REMARKS: | 100 A 11 |
| JY: ☐ Yes ☐ No Add'I Fax #: | Phone Result: | Relinquished By: Date: Page: |
| | oss of Use, of loss of profes incurred by Capita, as subsequents bested upon any of the above stated reasons of otherwise | service. In no event shall Cardinal be liable for incidental or consequential damages, including without intization, business interruptions, toss of use, or loss or prints incurring of capit. Its selections of the performance of services between by Cardinal, regardless of whether such claim is besed upon any of the above striked hascons or otherwise. |
| a pplicable | or tort, shall be inneed to the amount paid by the Creix for it received by Certhial within 30 days after completion of the | FLEASE NOTE: Liability and Damages. Cardinal's liability and clerk's exclusive remedy for any claim arising whether begind in contract or tor, shall be intended to the amount paid or you want or use shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable small paid. |
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| | | |
| | V 11-1918 2:50 m | 3 |
| | | 14 WHICE 1#4 2 Feat 67 V/V/ |
| | 1. | Vostical#4 / Foot |
| | 11-19-19 -130 m | 12 Varticul# 4 Surface 64 VAV |
| | 11-19-18 7-18/1 | Vertual #3 - Foot |
| | | |
| EXT. T. | OTHER: ACID/BASE: IGE_/COOL OTHER: DATE | G)RAB OR (C)OME CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE |
| | PRESERV. SAMPLING | |
| | 1 | Juan Bernal |
| | Phone #: | on: |
| | State: Zip: | me: MEDU injustion frunt line |
| | City: | 8NV/50375 Project Owner: |
| | Address: | 1e# 432 631-6982 Fax#: |
| | Attn: | 40445 State: 17, 1/17, Zip: 882, 40 |
| | Company: | |
| | P.O. #: | Baker |
| ANALYSIS REQUEST | BILL TO | Company Name: April |
| - 8 | | (3/3) 333-2320 (7/2) 030-24-0 |

+ Cordinal connet accept upshal changes Dlages for written changes to IETE1 102.2778



November 29, 2018

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 11/20/18 14:25.

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/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. Keena

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



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

Fax To:

(575) 393-2432

Received:

11/20/2018

Sampling Date:

11/20/2018

Reported:

11/29/2018

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: VERTICAL #5 SURFACE (H803402-01)

| BTEX 8021B | mg/kg | | Analyzed By: MS | | | | | | |
|--------------------------------------|--------|-----------------|-----------------|--------------|------|------------|---------------|-------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 11/27/2018 | ND | 2.07 | 104 | 2.00 | 6.57 | |
| Toluene* | <0.050 | 0.050 | 11/27/2018 | ND | 2.04 | 102 | 2.00 | 6.45 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/27/2018 | ND | 1.97 | 98.4 | 2.00 | 5.48 | |
| Total Xylenes* | <0.150 | 0.150 | 11/27/2018 | ND | 5.79 | 96.5 | 6.00 | 5.61 | |
| Total BTEX | <0.300 | 0.300 | 11/27/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIL | 96.0 | % 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 | 1040 | 16.0 | 11/28/2018 | 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 | 11/26/2018 | ND | 208 | 104 | 200 | 0.163 | |
| DRO >C10-C28* | 613 | 10.0 | 11/26/2018 | ND | 234 | 117 | 200 | 0.618 | |
| EXT DRO >C28-C36 | 203 | 10.0 | 11/26/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 73.2 | % 41-142 | } | | | | | | |
| Surrogate: 1-Chlorooctadecane | 101 | % 37.6-14 | 7 | | | | | | |

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*=Accredited Analyte

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

Fax To:

(575) 393-2432

Received:

11/20/2018

Sampling Date:

11/20/2018

Reported:

11/29/2018

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: VERTICAL #5 1' (H803402-02)

| 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 | 11/27/2018 | ND | 2.07 | 104 | 2.00 | 6.57 | |
| Toluene* | <0.050 | 0.050 | 11/27/2018 | ND | 2.04 | 102 | 2.00 | 6.45 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/27/2018 | ND | 1.97 | 98.4 | 2.00 | 5.48 | |
| Total Xylenes* | <0.150 | 0.150 | 11/27/2018 | ND | 5.79 | 96.5 | 6.00 | 5.61 | |
| Total BTEX | <0.300 | 0.300 | 11/27/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIL | 95.8 | % 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 | 304 | 16.0 | 11/28/2018 | 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 | 11/26/2018 | ND | 200 | 100 | 200 | 13.2 | |
| DRO >C10-C28* | <10.0 | 10.0 | 11/26/2018 | ND | 221 | 111 | 200 | 10.5 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/26/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 82.9 | % 41-142 | ! | | | | | | |
| Surrogate: 1-Chlorooctadecane | 90.6 | % 37.6-14 | 7 | | | | | | |

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*=Accredited Analyte

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

Fax To:

(575) 393-2432

Received:

11/20/2018

Sampling Date:

11/20/2018

Reported:

11/29/2018

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: VERTICAL #6 SURFACE (H803402-03)

| BTEX 8021B | mg/kg | | Analyzed By: MS | | | | | | |
|--------------------------------------|--------|-----------------|-----------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 11/27/2018 | ND | 2.07 | 104 | 2.00 | 6.57 | |
| Toluene* | <0.050 | 0.050 | 11/27/2018 | ND | 2.04 | 102 | 2.00 | 6.45 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/27/2018 | ND | 1.97 | 98.4 | 2.00 | 5.48 | |
| Total Xylenes* | <0.150 | 0.150 | 11/27/2018 | ND | 5.79 | 96.5 | 6.00 | 5.61 | |
| Total BTEX | <0.300 | 0.300 | 11/27/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIE | 98.3 | % 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 | 3200 | 16.0 | 11/28/2018 | 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 | 11/26/2018 | ND | 200 | 100 | 200 | 13.2 | |
| DRO >C10-C28* | 48.5 | 10.0 | 11/26/2018 | ND | 221 | 111 | 200 | 10.5 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/26/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 81.3 | % 41-142 | | | | | | | |
| Surrogate: 1-Chlorooctadecane | 88.7 | % 37.6-14 | 7 | | | | | | |

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 4 of 15



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

Fax To:

(575) 393-2432

Received:

11/20/2018

Reported:

11/29/2018 **NEDU INJECTION TRUNKLINE**

Project Name: Project Number:

NONE GIVEN

Project Location:

EUNICE NM

Sampling Date:

11/20/2018

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

Sample ID: VERTICAL #6 1' (H803402-04)

| BTEX 8021B | mg/kg | | Analyzed By: MS | | | | | | |
|--------------------------------------|--------|-----------------|-----------------|--------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BŞ | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 11/27/2018 | ND | 2.07 | 104 | 2.00 | 6.57 | |
| Toluene* | <0.050 | 0.050 | 11/27/2018 | ND | 2.04 | 102 | 2.00 | 6.45 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/27/2018 | ND | 1.97 | 98.4 | 2.00 | 5.48 | |
| Total Xylenes* | <0.150 | 0.150 | 11/27/2018 | ND | 5.79 | 96.5 | 6.00 | 5.61 | |
| Total BTEX | <0.300 | 0.300 | 11/27/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIL | 96.5 | % 73.3-12 | 9 | | | | | | |
| Chloride, SM4500CI-B | mg/ | mg/kg | | d By: AC | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 3600 | 16.0 | 11/28/2018 | 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 | 11/27/2018 | ND | 200 | 100 | 200 | 13.2 | |
| DRO >C10-C28* | <10.0 | 10.0 | 11/27/2018 | ND | 221 | 111 | 200 | 10.5 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/27/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 79.3 | % 41-142 | | | | | | | |
| Surrogate: 1-Chlorooctadecane | 85.4 | % 37.6-14 | 7 | | | | | | |

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 5 of 15



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

Fax To:

Reported: Project Name: 11/20/2018 11/29/2018

NEDU INJECTION TRUNKLINE

Project Number:

Received:

NONE GIVEN EUNICE NM

Project Location:

11/29/2018

Samp

Sampling Date:

11/20/2018

Sampling Type:

Soil

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

Sample ID: VERTICAL #6 2' (H803402-05)

| 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 | 11/27/2018 | ND | 2.07 | 104 | 2.00 | 6.57 | |
| Toluene* | <0.050 | 0.050 | 11/27/2018 | ND | 2.04 | 102 | 2.00 | 6.45 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/27/2018 | ND | 1.97 | 98.4 | 2.00 | 5.48 | |
| Total Xylenes* | <0.150 | 0.150 | 11/27/2018 | ND | 5.79 | 96.5 | 6.00 | 5.61 | |
| Total BTEX | <0.300 | 0.300 | 11/27/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIE | 98.2 | % 73.3-12 | 9 | | | | | | |
| Chloride, SM4500CI-B | mg/ | /kg | Analyze | Analyzed By: AC | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 2000 | 16.0 | 11/28/2018 | 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 | 11/27/2018 | ND | 200 | 100 | 200 | 13.2 | |
| DRO >C10-C28* | <10.0 | 10,0 | 11/27/2018 | ND | 221 | 111 | 200 | 10.5 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/27/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 81.2 | % 41-142 | | | | | | | |
| Surrogate: 1-Chlorooctadecane | 89.0 | % 37.6-14 | 7 | | | | | | |

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*=Accredited Analyte

PLEASE NOTE: Labeley and Damages. Cardinal's habeley and client's eviduave remedy for any client 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 clause whitsower shall be determed wered unless made in whong and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be bable for inodereal or consequential claimages, including, without immetion, business interruptions, loss of use, or loss of use, or loss of profits incurred by client, its subsidiances, 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 Laboratones.

Colog L. trains

Celey D. Keene, Lab Director/Quality Manager

Page 6 of 15



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

Analytical Results For:

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

Fax To:

(575) 393-2432

Received:

11/20/2018

Sampling Date:

11/20/2018

Reported:

11/29/2018

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: VERTICAL #6 3' (H803402-06)

| 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 | 11/27/2018 | ND | 2.07 | 104 | 2.00 | 6.57 | |
| Toluene* | <0.050 | 0.050 | 11/27/2018 | ND | 2.04 | 102 | 2.00 | 6.45 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/27/2018 | ND | 1.97 | 98.4 | 2.00 | 5.48 | |
| Total Xylenes* | <0.150 | 0.150 | 11/27/2018 | ND | 5.79 | 96.5 | 6.00 | 5.61 | |
| Total BTEX | <0.300 | 0.300 | 11/27/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIE | 99.5 | % 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 | 1280 | 16.0 | 11/28/2018 | 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 | 11/27/2018 | ND | 200 | 100 | 200 | 13.2 | |
| DRO >C10-C28* | <10.0 | 10.0 | 11/27/2018 | ND | 221 | 111 | 200 | 10.5 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/27/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 79.4 | % 41-142 | ? | | | | | | |
| Surrogate: 1-Chlorooctadecane | 86.6 | % 37.6-14 | 7 | | | | | | |

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*=Accredited Analyte

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

Fax To:

(575) 393-2432

Received: Reported: 11/20/2018

11/29/2018

NEDU INJECTION TRUNKLINE

Project Number:

Project Name:

NONE GIVEN

Project Location:

EUNICE NM

Sampling Date:

11/20/2018

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

Sample ID: VERTICAL #6 4' (H803402-07)

| 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 | 11/27/2018 | ND | 2.07 | 104 | 2.00 | 6.57 | |
| Toluene* | <0.050 | 0.050 | 11/27/2018 | ND | 2.04 | 102 | 2.00 | 6.45 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/27/2018 | ND | 1.97 | 98.4 | 2.00 | 5.48 | |
| Total Xylenes* | <0.150 | 0.150 | 11/27/2018 | ND | 5.79 | 96.5 | 6.00 | 5.61 | |
| Total BTEX | <0.300 | 0.300 | 11/27/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIL | 97.3 | % 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 | 384 | 16.0 | 11/28/2018 | 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 | 11/27/2018 | ND | 200 | 100 | 200 | 13.2 | |
| DRO >C10-C28* | <10.0 | 10.0 | 11/27/2018 | ND | 221 | 111 | 200 | 10.5 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/27/2018 | ND | | | | | |
| Surrogate 1-Chlorooctane | 81.1 | % 41-142 | • | | | | | | |
| Surrogate 1-Chlorooctadecane | 88.7 | % 37.6-14 | 7 | | | | | | |

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Page 8 of 15



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

Fax To:

(575) 393-2432

Received:

11/20/2018

.

Sampling Date:

11/20/2018

Reported:

11/29/2018

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: VERTICAL #7 SURFACE (H803402-08)

| 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 | 11/27/2018 | ND | 2.07 | 104 | 2.00 | 6.57 | |
| Toluene* | <0.050 | 0.050 | 11/27/2018 | ND | 2.04 | 102 | 2.00 | 6.45 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/27/2018 | ND | 1.97 | 98.4 | 2.00 | 5.48 | |
| Total Xylenes* | <0.150 | 0.150 | 11/27/2018 | ND | 5.79 | 96.5 | 6.00 | 5.61 | |
| Total BTEX | <0.300 | 0.300 | 11/27/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIC | 99.8 | % 73.3-12 | 9 | | | | | | |
| Chloride, SM4500CI-B | mg/kg | | Analyze | Analyzed By: AC | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 1780 | 16.0 | 11/28/2018 | 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 | 11/27/2018 | ND | 200 | 100 | 200 | 13.2 | |
| DRO >C10-C28* | <10.0 | 10.0 | 11/27/2018 | ND | 221 | 111 | 200 | 10.5 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/27/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 75.8 | % 41-142 | | | | | | | |
| Surrogate: 1-Chlorooctadecane | 82.5 | % 37.6-14 | 7 | | | | | | |

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Page 9 of 15



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

Fax To:

(575) 393-2432

Received:

11/20/2018

Sampling Date:

11/20/2018

Reported:

11/29/2018

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: VERTICAL #8 SURFACE (H803402-09)

| 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 | 11/27/2018 | ND | 2.07 | 104 | 2.00 | 6.57 | |
| Toluene* | <0.050 | 0.050 | 11/27/2018 | ND | 2.04 | 102 | 2.00 | 6.45 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/27/2018 | ND | 1.97 | 98.4 | 2.00 | 5.48 | |
| Total Xylenes* | <0.150 | 0.150 | 11/27/2018 | ND | 5.79 | 96.5 | 6.00 | 5.61 | |
| Total BTEX | <0.300 | 0.300 | 11/27/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIC | 95.5 | % 73.3-12 | 9 | | | | | | |
| Chloride, SM4500CI-B | mg/ | kg | Analyze | d By: AC | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | 85 | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 2400 | 16.0 | 11/28/2018 | ND | 400 | 100 | 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 | 11/27/2018 | ND | 200 | 100 | 200 | 13.2 | |
| DRO >C10-C28* | <10.0 | 10.0 | 11/27/2018 | ND | 221 | 111 | 200 | 10.5 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/27/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 78.4 | % 41-142 | ? | | | | | | |
| Surrogate: 1-Chlorooctadecane | 85.2 | % 37.6-14 | 7 | | | | | | |

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Page 10 of 15



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

Received:

11/20/2018

Sampling Date:

11/20/2018

Reported:

11/29/2018

Sampling Type:

Soil

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

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: VERTICAL #8 1' (H803402-10)

| BTEX 8021B | mg/kg | | Analyze | Analyzed By: MS | | | | | _ |
|--------------------------------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 11/27/2018 | ND | 2.07 | 104 | 2.00 | 6.57 | |
| Toluene* | <0.050 | 0.050 | 11/27/2018 | ND | 2.04 | 102 | 2.00 | 6.45 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/27/2018 | ND | 1.97 | 98.4 | 2.00 | 5.48 | |
| Total Xylenes* | <0,150 | 0.150 | 11/27/2018 | ND | 5.79 | 96.5 | 6.00 | 5.61 | |
| Total BTEX | <0.300 | 0.300 | 11/27/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIE | 96.1 | % 73,3-12 | 9 | | | | | | |
| Chloride, SM4500CI-B | mg/ | /kg | Analyze | Analyzed By: AC | | | | | |
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Chloride | 80.0 | 16.0 | 11/28/2018 | 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 | 11/27/2018 | ND | 200 | 100 | 200 | 13.2 | |
| DRO >C10-C28* | <10.0 | 10.0 | 11/27/2018 | ND | 221 | 111 | 200 | 10.5 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/27/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 77.8 | % 41-142 | ? | | | | | | |
| Surrogate: 1-Chlorooctadecane | 84.3 | % 37.6-14 | 7 | | | | | | |

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APACHE CORP - HOBBS

BRUCE BAKER

2350 W. MARLAND BLVD.

HOBBS NM, 88240

Fax To:

(575) 393-2432

Received:

11/20/2018

Sampling Date:

11/20/2018

Reported:

11/29/2018

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: VERTICAL #8 2' (H803402-11)

| 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 | 11/27/2018 | ND | 2.07 | 104 | 2.00 | 6.57 | |
| Toluene* | <0.050 | 0.050 | 11/27/2018 | ND | 2.04 | 102 | 2.00 | 6.45 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/27/2018 | ND | 1.97 | 98.4 | 2.00 | 5.48 | |
| Total Xylenes* | <0.150 | 0.150 | 11/27/2018 | ND | 5.79 | 96.5 | 6.00 | 5.61 | |
| Total 8TEX | <0.300 | 0.300 | 11/27/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIE | 100 | % 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 | 11/28/2018 | 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 | 11/27/2018 | ND | 200 | 100 | 200 | 13.2 | |
| DRO >C10-C28* | <10.0 | 10.0 | 11/27/2018 | ND | 221 | 111 | 200 | 10.5 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/27/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 82.8 | % 41-142 | | | | | | | |
| Surrogate 1-Chlorooctadecane | 88.7 | % 37.6-14 | 7 | | | | | | |

Cardinal Laboratories

*=Accredited Analyte

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College trains

Celey D. Keene, Lab Director/Quality Manager

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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

Cardinal Laboratories

*=Accredited Analyte

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Colegi trans



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

| Company Name: 1 10/10 | 3/14/70 | ANALIGIO |
|--|--|---------------------|
| Project Manager: A//// / / / / / // | P.O. #: | |
| | Company: | |
| City: 14066 State: 0.M Zip: | 882,40 Aun: | |
| * 422-631-1992 F | Address: | |
| 18/11/15/0.375 | City: | |
| Broject Name: 15 1/1 Myortion fron K | Tine State: Zip: | |
| | Phone #: | |
| | Fax#: | |
| Sampler Name: | MATRIX PRESERV SAMPLING | |
| | R | |
| Sample I.D. | CONTAINERS ROUNDWATE ASTEWATER DIL LUDGE THER CID/BASE: CE / COOL THER: | BT |
| S DOLLOS S# WILLOW DOLCARH | | |
| | 1 - March 8 8 10 1-1 | |
| 5 Vertical # 6 Systall 6 | N. W. W. S. 43.00 V | |
| 5 /ectica/ 4 6 2 Feet 6 | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | |
| 1#638 | The state of the s | |
| 1466 | 2 | |
| S PATICA SHIPTING S | 1 N 1 1 1 1 1 20 1 1 2 30 1 1 1 | |
| 10 Vertice IX8 1 ft. 6 V V V Standard or local part of the amount paid by the chart for the | a nigarg whether besed in contract or lost, shall be limited to the unrount paid by the chert for the | |
| P_EASE NOTE: Listery and unmages, conserved and any other cause whatsoever shall be deemed unless made in writing and received by Captural water to see any other cause whatsoever shall be deemed unless made in writing and received by Captural water to see any other cause whatsoever to see the capture of the body capture by cleanf, as any other cause what captured by latery to consequential damages, including without limitation, business interruptors, loss of use, or less of use, or less of the body stated respons or otherwise. | PLEASE NOTE: Library and Learnagem. And any other cause whistoever shall be deemed unless made in writing and reboved by Caternal warm or only a lier consequential analysis. All claims including those for negligence and any other cause whistoever shall be deemed unless made in writing and reboved by Caternal warm or other of profits including without Emitted in the profits of the or less of profits including the cause whistoever shall be deemed unless including without Emitted unless interruptors, less of use, or less of profits include a variety of the above stated responsion of characters. | |
| Relinquished By: | Received By: Phone Result: D | Yes No Add'l Fax #: |
| tellunou H; 25 | Received By: | |
| Time: | | |
| Delivered By: (Circle One) | | |
| Sampler - UPS - Bus - Other: 3.0 c 1 | CA) TINO TINO TINO | |



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (675) 202-2226 EAY (675) 202-2476

| (5/5) 393-Z3Z6 FAA (9/5) 393-Z47/5 | | ANALYSIS REDIEST |
|---|--|--|
| | BILL TO | ANALIGO |
| e Baker | P.O. #: | |
| Address: | Company: | |
| City: Hobbs State: 11-14 Zip: 88-70 | Attn: | |
| Phone #: 432 - 63/-632 Fax #: | Address: | |
| Project #: /8// //5/)375 Project Owner: | City: | |
| me: NEDU inject | State: Zip: | |
| ? - | Phone #: | |
| Sampler Name: Tillian Barren | Fax#: | <u>-</u> |
| | PRESERV. SAMPLING | P. |
| G)OMP RS | | |
| Sample I.D. Sample I.D. Sample I.D. Sample I.D. Sample I.D. | OTHER: ACID/BASE: CE / COOL OTHER: DATE | EXF. |
| 7 | Z | |
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| PLEASE NOTE: Lability and Demogos. Cardina's lability and clearts exclusive remedy for any cleam arising whether besed in contract or lot, shill be injust to the amount paid by the cleart for the properties of | ct or ton, shall be limited to the amount paid by the c nd received by Cardinal within 30 days after complet t less of use, or less of profits incurred by citent, its s | en ent oor me en ent oor me uustdisfere. |
| service. In no event shall Cardinal be liable for indocental or consequental contemper, allowands of the services between the cardinal regardless of whether such claim is based upon any of the above stated reasons or otherwise affiliates or successors stating out of or related to the performance of services between by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Phone Result | n is based upon any of the above stated reasons or o | t: 🗆 Yes 🗓 No |
| Relinquished By: Date: 20-18 Received By: | Fax P | □ Yes □ No |
| Relinquished By: Howards 14'25 Received By: | Name of | |
| Time: | 1 | |
| _ | <u>=</u> | |
| Sampler - UPS - Bus - Other: 3.0c #97 Pres Fives | es 4 | |



November 30, 2018

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 11/26/18 13:35.

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/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. 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



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

Fax To:

(575) 393-2432

Received:

11/26/2018

Sampling Date:

11/26/2018

Reported:

11/30/2018

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

** (See Notes)

Project Number:

18NV150375

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: VERTICAL #9 SURFACE (H803439-01)

| 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 | 11/29/2018 | ND | 1.92 | 95.9 | 2.00 | 5.23 | |
| Toluene* | <0.050 | 0.050 | 11/29/2018 | ND | 1.90 | 95.0 | 2.00 | 6.49 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/29/2018 | ND | 1.86 | 92.8 | 2.00 | 5.42 | |
| Total Xylenes* | <0.150 | 0.150 | 11/29/2018 | ND | 5.58 | 92.9 | 6.00 | 4.89 | |
| Total BTEX | <0.300 | 0.300 | 11/29/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIE | 94.6 | % 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 | 1520 | 16.0 | 11/29/2018 | 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 | 11/29/2018 | ND | 206 | 103 | 200 | 7.28 | |
| DRO >C10-C28* | <10.0 | 10.0 | 11/29/2018 | ND | 215 | 107 | 200 | 10.2 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/29/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 84.3 | % 41-142 | | | | | | | |
| Surrogate: 1-Chlorooctadecane | 97.4 | % 37.6-14 | 7 | | | | | | |

Cardinal Laboratories

*=Accredited Analyte

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Cologie tiens



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

Fax To:

(575) 393-2432

Received:

11/26/2018

Sampling Date:

11/26/2018

Reported:

11/30/2018

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

** (See Notes)

Project Number:

18NV150375

Sample Received By:

Tamara Oldaker

Project Location:

EUNICE NM

Sample ID: VERTICAL #9 1' (H803439-02)

| 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 | 11/29/2018 | ND | 1.92 | 95.9 | 2.00 | 5.23 | |
| Toluene* | <0.050 | 0.050 | 11/29/2018 | ND | 1.90 | 95.0 | 2.00 | 6.49 | |
| Ethylbenzene* | <0.050 | 0.050 | 11/29/2018 | ND | 1.86 | 92.8 | 2.00 | 5.42 | |
| Total Xylenes* | <0.150 | 0.150 | 11/29/2018 | ND | 5.58 | 92.9 | 6.00 | 4.89 | |
| Total BTEX | <0.300 | 0.300 | 11/29/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIL | 97.3 | % 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 | 1840 | 16.0 | 11/29/2018 | 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 | 11/29/2018 | ND | 206 | 103 | 200 | 7.28 | |
| DRO >C10-C28* | <10.0 | 10.0 | 11/29/2018 | ND | 215 | 107 | 200 | 10.2 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 11/29/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 83.0 | % 41-142 | ? | | | | | | |
| Surrogate: 1-Chlorooctadecane | 90.6 | % 37.6-14 | 7 | | | | | | |

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*=Accredited Analyte

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College time



ND

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-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

Analyte NOT DETECTED at or above the reporting limit

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*=Accredited Analyte

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

| | | (Initials) | -9 | Cool Intact Yes TYes No | | 3 | 7.9° \$ | Sampler - UPS - Bus - Other: | Sampler - UPS - |
|-----------------------|--|---------------------------------------|---|--------------------------------------|--|----------------------------|--|--|------------------------------|
| | | S S S S S S S S S S S S S S S S S S S | 1 | To Condi | | | Time: | Circle | |
| | | | | | Received By: | Receiv | \rightarrow | X. | Relinquished By |
| | | REMARKS: | | 040 | The state of the s | | 76:5% | | |
| S O No Add'l Phone #: | Result: Yes | Phone Result: | , | | Received By: | (ecei) | 81-96-18 | ÿ | Relipquished By: |
| | or one appropriation included in a suppropriation in a supprepriation in a superprint in a sup | of the above stated reasons or other | loss of use, or loss is besed upon any | sa interruptions, ther such claim | don, busine | hout limite real, regar | cause vineacover shall be been quental damages, including will of services beneunder by Card | sampan, we termin including trace for implyance and any owns below in all sources are consist service, through any and service of the terminal many of the performance of services from the construction of th | service. In no event shall (|
| | a for the | rited to the amount paid by the cler | t or tort, shall be lim | ased in contrac | ng whether t | taim arisi | ent's acclusive remedy for any | PLEASE NOTE: Liability and Damages. Cerdina's leability and client's exclusive remedy for any claim essing whether bessed in contract or ton, shall be finited to the amount paid by the client for the | PLEASE NOTE: Linbilly |
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| 878 | - X + | R: | BASE: | GE | NOWATE EWATER | B OR (C) | | Sample I.D. | Lab I.D. |
| | 7 | XX | TX EUC XV | A KIX | | | | | FOR LAB USE ONLY |
| | P | 1 | Fax #: | | | | Shal | Juan Be | Sampler Name: |
| | 4 | | Phone #: | | | | Š | n: EUNIU) | Project Location: |
| | | Zip: | State: | | Line | 1 | ection HUNK | NEDU Injec | Project Name: |
| | | | City: | ! | | | Project Owner: | VVIS0375 | Project #: /8/ |
| | | | Address: | | , | | Fax #: | -631 -6982 | Phone #: 432 |
| | | | Attn: | ap | 188 | ip: | State:////////Sip: | ζ` | city: Hobb |
| | | • | Company: | | | | | ì | Address: |
| | | | P.O. #: | | | | | Ro | Project Manager: |
| ANALYSIS REQUEST | | BILL TO | ASSESSED BY | | | | | » Heiche | Company Name: |



December 26, 2018

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 12/18/18 16:45.

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/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. 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



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

Received: 12/18/2018 Reported: 12/26/2018

Project Name: NEDU INJECTION TRUNKLINE
Project Number: NONE GIVEN

Project Location: EUNICE NM

Sampling Date:

12/18/2018

Sampling Type: Soil

Sampling Condition: Sample Received By: Cool & Intact

Celey D. Keene

Sample ID: VERTICAL 9 @ 3' (H803691-01)

| 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 | 12/21/2018 | ND | 2.26 | 113 | 2.00 | 0.196 | |
| Toluene* | <0.050 | 0.050 | 12/21/2018 | ND | 2.22 | 111 | 2.00 | 0.484 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/21/2018 | ND | 2.20 | 110 | 2.00 | 0.628 | |
| Total Xylenes* | < 0.150 | 0.150 | 12/21/2018 | ND | 6.63 | 110 | 6.00 | 0.101 | |
| Total BTEX | <0.300 | 0.300 | 12/21/2018 | ND | | | | | |
| Surrogate: 4-Bromofluorobenzene (PIC | 99.5 | % 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 |
| Chłoride | 3120 | 16.0 | 12/20/2018 | 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 | 12/20/2018 | ND | 190 | 94.8 | 200 | 3.55 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/20/2018 | ND | 207 | 103 | 200 | 8.43 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/20/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 96.3 | % 41-142 | | | | | | | |
| Surrogate: 1-Chlorooctadecane | 99.5 | % 37.6-14 | 7 | | | | | | |

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College trains

Celey D. Keene, Lab Director/Quality Manager

Page 2 of 5



APACHE CORP - HOBBS

BRUCE BAKER

2350 W. MARLAND BLVD.

HOBBS NM, 88240

Fax To:

(575) 393-2432

Received:

12/18/2018

Sampling Date:

12/18/2018

Reported:

12/26/2018

Sampling Type:

Soil

Project Name:

NEDU INJECTION TRUNKLINE

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Celey D. Keene

Project Location:

EUNICE NM

Sample ID: VERTICAL 9 @ 4' (H803691-02)

| 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 | 12/21/2018 | ND | 2.06 | 103 | 2.00 | 1.70 | |
| Toluene* | <0.050 | 0.050 | 12/21/2018 | ND | 2.02 | 101 | 2.00 | 1.54 | |
| Ethylbenzene* | <0.050 | 0.050 | 12/21/2018 | ND | 2.02 | 101 | 2.00 | 1.51 | |
| Total Xylenes* | <0.150 | 0.150 | 12/21/2018 | ND | 6.13 | 102 | 6.00 | 1.91 | |
| Total BTEX | <0.300 | 0.300 | 12/21/2018 | 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 | 416 | 16.0 | 12/20/2018 | 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 | 12/20/2018 | ND | 190 | 94.8 | 200 | 3.55 | |
| DRO >C10-C28* | <10.0 | 10.0 | 12/20/2018 | ND | 207 | 103 | 200 | 8.43 | |
| EXT DRO >C28-C36 | <10.0 | 10.0 | 12/20/2018 | ND | | | | | |
| Surrogate: 1-Chlorooctane | 96.8 | % 41-142 | | | | | | | |
| Surrogate: 1-Chlorooctadecane | 102 | % 37.6-14 | 7 | | | | | | |

Cardinal Laboratories

*=Accredited Analyte

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Colog i triena

Celey D. Keene, Lab Director/Quality Manager

Page 3 of 5



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 SM4S00Cl-B does not require samples be received at or below 6°C

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

Cardinal Laboratories

*=Accredited Analyte

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

| | | | | | | | ı | 1 | | | | | | ŀ | | | | | l | l | | | | | | | 1 |
|--|--|--|--|----------------|----------|-----------|----------|----------|----------|----------|---------|---|---|--------|-------|-----|-----|-----------------|--------|----|----------|----------|---|---|----------|----------|----------|
| Company Name: | Apache | | | | | | | 10 | | | 81 | BILL TO | | | | | | ANALYSIS | SISA | | 5 | REQUEST | ┛ | | | | |
| Project Manager: | | | | | | | | Ġ. | P.O. #: | 1" | | | | | | | | | | | \dashv | \dashv | | | \dashv | \dashv | _ |
| Address: | ı | | | | | | | ဂ္ဂ | Đ Đ | Company: | | | | | | | | | | | | | | | | | |
| city: Habbos | State:]] A Zip: 88341 | Σp: | B | S. | Ô | | | Attn: | 5 | | | | | | | | | | | | | | | | | | |
| Phone #: | Fax #: | | | | | | | Ž | Address: | 8 | | | | | | | | | | | | | | | | | |
| Project #: | Project Owner: | | | | | | | city: | Ÿ | | | | | | | | | | | | | | | | - | | |
| Project Name: | | 1 | | | | | | St | State: | | | Zip: | | | | | | | | | | | | | | | |
| Project Location: | DEDU INVITA | Fract line | _ | 4 | . | | | 맞 | Phone #: | # | | | | | | | | | | | | | | | | | |
| Sampler Name: | Or Chicago | | 9 | | 9 | | | Fa | Fax # | | | | | | | | | | | | | | | | | | |
| FOR USE ONLY | A | 4 | Н | | × | MATRIX | ^ | П | PR | PRESERV. | ₹ < | SAMPLING | G | | | | | | | | | | | | | | |
| | | (C)OMP. | | | | | | | | | | | | | ГРЦ | r | | | | | | | | | | | |
| Lab I.D. | Sample I.D. | AB OR (| | UNDWA TEWAT | | | GE | ER: | /BASE: | COOL | R: | | |) | 41 | 3tc | | | | | | | | | | | |
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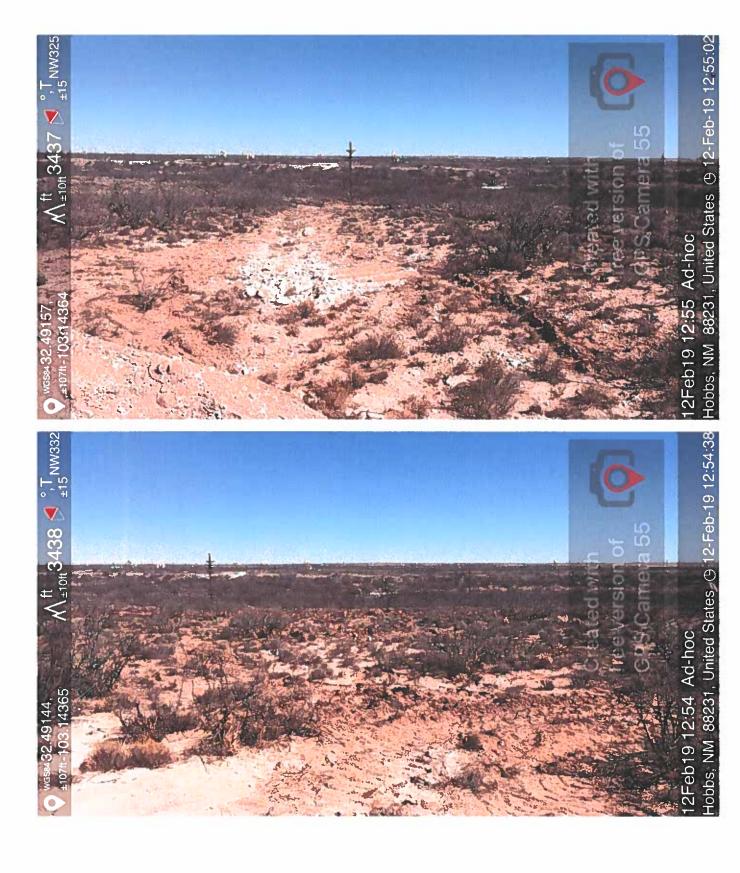
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NEDU Injection Trunk Line
1RP-5285
Revegetation
and
Noxious Weed Plan

Revegetation Plan:

All the disturbed areas in the pasture will be properly prepared and seeded with shallow seed mixture. The disturbed area will be monitored to ensure successful revegetation is achieved. If revegetation is not successful after a couple of growing seasons the site will be reseeded.

Noxious Weed Plan:

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