



303 Veterans Airpark Lane Midland, TX 79705

Remediation Plan

December 21, 2020

Re: LM Lambert

Case #: NRM2024463389

Background:

On 08/24/2020 a release occurred at the LM Lambert Battery due to a line failure resulting in the loss of fluid. The release (GPS: 32.60642, -103.28715) is located south of Monument, NM in unit letter B section 6 township 20S range 37E. A groundwater survey was conducted utilizing the NMOSE wells of record. The 2 nearest wells of record suggest groundwater is less than 50 feet with the shallowest well 20 feet to groundwater but water was not encountered during the soil bore to a depth of 35 feet. This suggests that groundwater is at minimum 37 feet indicated by data from the second well of record.

Beginning on 11/3/2020 through 12/3/2020 vertical delineation was conducted utilizing a backhoe to a depth of 13 feet. The surface and 1 foot samples were submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX on 11/3/2020. Laboratory chloride results were below table one standards for release less than or equal to 50 feet to groundwater. The 2 feet to 13 feet samples were collected and submitted to a commercial laboratory for analysis of TPH and BTEX. Horizontal 5 point composite surface samples were collected not to exceed 200 square feet and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX.

On 12/15/2020 a soil bore was conducted at SP 1 was advanced in regular intervals beginning at 15 feet and advanced to a total depth of 35 feet below ground surface. All samples were collected utilizing a split spoon and submitted to a commercial laboratory for analysis for TPH and BTEX. Laboratory results were below table one standards for TPH and BTEX at a depth of 20 feet.

Remediation Plan:

Apache Corporation purposes that the top foot be excavated to a depth of 1 foot to remove the chloride contamination to below table one standards. Once the excavation is complete final 5 point bottom and wall samples will be collected not to exceed 200 square feet. Due to the release is inside an active facility within close proximity to processing equipment and the depth of contamination Apache Corporation will submit the final sample data and ask for deferment until system abandonment in the final report. All excavated soil (75 yards) will be hauled to a OCD approved disposal facility. The excavation will be backfilled with clean imported caliche. The remediation will be completed within 90 days of OCD approval of the plan.

Enclosed: C-141, Groundwater data, Maps, Sample Data, and Laboratory Results

Submitted by;

Bruce Baker

Environmental Technician

Larry.baker@apachecorp.com

Cell# 432-631-6982

Incident ID	NRM2024463389
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?	<u>37</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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

Page 4

Incident ID	NRM2024463389
District RP	
Facility ID	
Application ID	

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

Printed Name: Larry Baker Title: Environmental Tech SR.
Signature: Larry Baker Date: 12/21/2020
email: larry.baker@apachecorp.com Telephone: 432-631-6982

OCD Only

Received by: Cristina Eads Date: 12/21/2020

Incident ID	NRM2024463389
District RP	
Facility ID	
Application ID	

Remediation Plan

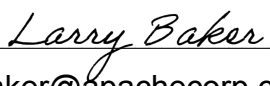
Remediation Plan Checklist: *Each of the following items must be included in the plan.*

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

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

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Larry Baker Title: Environmental Tech SR.
Signature:  Date: 12/21/2020
email: larry.baker@apachecorp.com Telephone: 432-631-6982

OCD Only

Received by: Cristina Eads Date: 12/21/2020

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

Signature:  Date: 03/12/2021



+

▼

32.606524 -103.287159

×

Q

—

Show search results for 32.606...



1:4513

500 ft

103.280 32.603 Degrees

Point of Diversion Summary

Driller License:	111	Driller Company:	BURKE, EDWARD B.		
Driller Name:					
Drill Start Date:	03/09/1958	Drill Finish Date:	03/09/1958	Plug Date:	
Log File Date:	03/19/1958	PCW Rcv Date:		Source:	Shallow
Pump Type:		Pipe Discharge Size:		Estimated Yield:	
Casing Size:	7.00	Depth Well:	86 feet	Depth Water:	37 feet

Casing Perforations:	Top	Bottom
	42	82

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.

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE)						(NAD83 UTM in meters)	
		(quarters are smallest to largest)						X	Y
L	01450	Q64	Q16	Q4	Sec	Tw	Rng	661393	3608698*
		3	1	05	20S	37E			

Driller License:	46	Driller Company:	ABBOTT BROTHERS COMPANY		
Driller Name:					
Drill Start Date:	05/19/1952	Drill Finish Date:	05/20/1952	Plug Date:	
Log File Date:	05/26/1952	PCW Rcv Date:	10/22/1953	Source:	Shallow
Pump Type:		Pipe Discharge Size:		Estimated Yield:	
Casing Size:	7.00	Depth Well:	80 feet	Depth Water:	20 feet

Water Bearing Stratifications:	Top	Bottom	Description
	50	80	Sandstone/Gravel/Conglomerate
Casing Perforations:	Top	Bottom	
	50	80	

*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.

11/19/20 11:57 AM

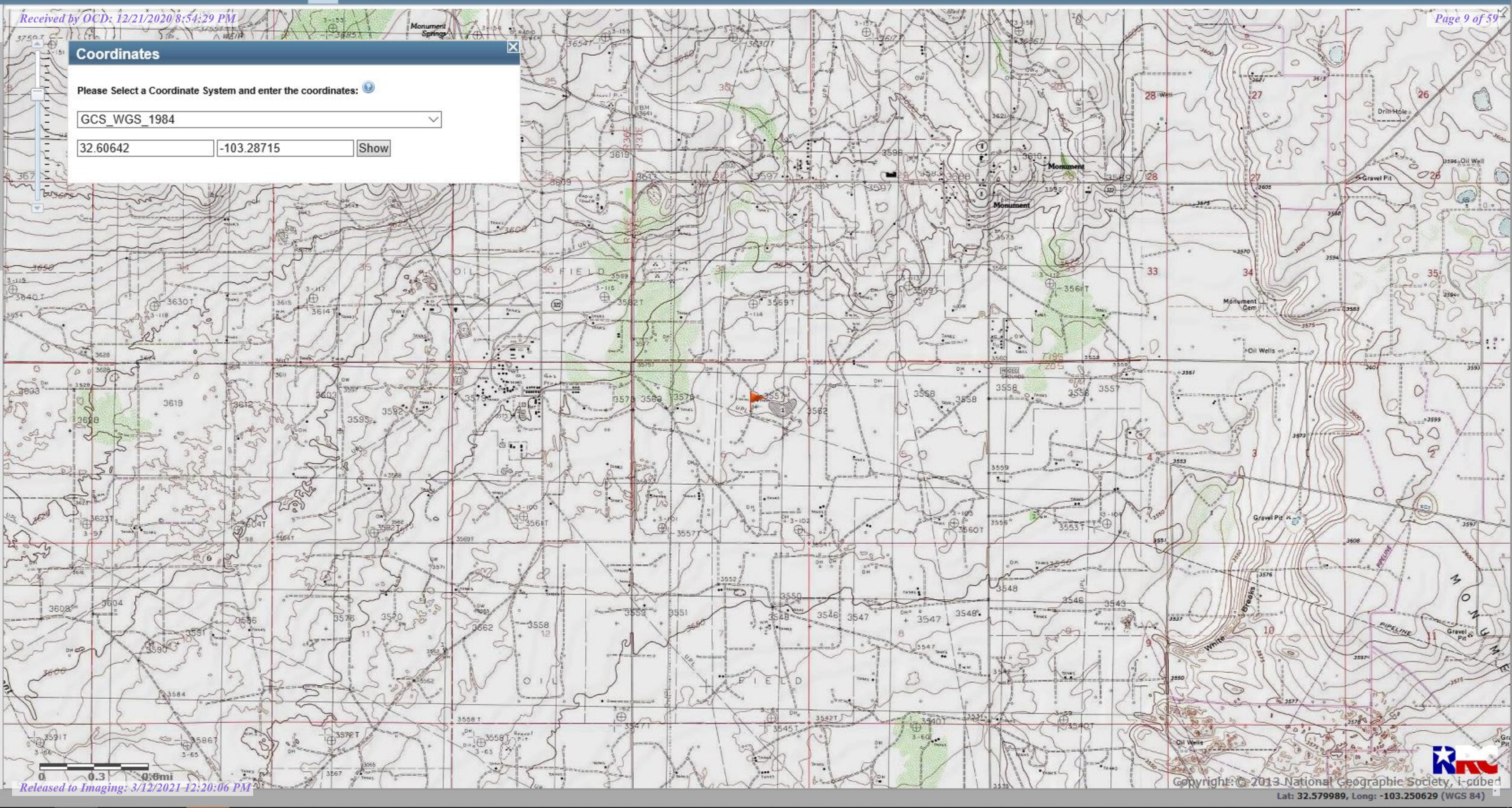
POINT OF DIVERSION SUMMARY

Coordinates

Please Select a Coordinate System and enter the coordinates:

GCS_WGS_1984

32.60642 -103.28715 Show





Lm Lambert

H2
H1
SP1
H3
H4

Google earth

NEDU Injection Line

Complete List

Sample Date	Sample ID	Depth	Field Chloride	Chloride	Benzene	Toulene	Ethybenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO	GPS Coordinates
Delineation and Horizontal Sampling													
11/3/2020	SP1	Surface	4,423	5120	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.606524 -103.287159
11/3/2020		1'	356	320	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	300	437	
11/4/2020		2'			<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	88.4	119	
11/4/2020		3'			<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	88.8	89.5	
11/18/2020		4'			<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	77	96.3	
11/18/2020		5'			<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	150	161	
11/20/2020		6'			<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
11/20/2020		7'			<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	78.9	70.5	
11/30/2020		8'			<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	202	159	
12/3/2020		9'			<0.100	0.407	5.94	10.100	16.5	940	6170	1020	
12/3/2020		10'			<0.050	0.583	5.64	5.720	11.9	535	3780	778	
12/3/2020		11'			<0.100	0.979	9.36	12.200	22.5	564	3190	664	
12/3/2020		12'			<0.050	0.126	1.41	1.120	2.65	144	1830	449	
12/3/2020		13'			<0.100	1.68	11.5	13.900	27.1	1080	5250	937	
12/15/2020		15'			<0.050	<0.050	0.189	0.232	0.444	<10.0	204	22.6	
12/15/2020		20'			<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
12/15/2020		25'			<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
12/15/2020		30'			<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
12/15/2020		35'			<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
11/4/2020	H1	Surface	143	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.606530 -103.287230
11/4/2020	H2	Surface	149	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.606718 -103.287150
11/4/2020	H3	Surface	147	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.606526 -103.287113
11/4/2020	H4	Surface	144	96	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.606350 -103.287164



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

November 04, 2020

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: LM LAMBERT

Enclosed are the results of analyses for samples received by the laboratory on 11/03/20 15:52.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	11/03/2020	Sampling Date:	11/03/2020
Reported:	11/04/2020	Sampling Type:	Soil
Project Name:	LM LAMBERT	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: SP 1 @ SURFACE (H002909-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/03/2020	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	11/03/2020	ND	2.01	101	2.00	1.23	
Ethylbenzene*	<0.050	0.050	11/03/2020	ND	2.02	101	2.00	0.408	
Total Xylenes*	<0.150	0.150	11/03/2020	ND	5.85	97.6	6.00	0.240	
Total BTX	<0.300	0.300	11/03/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5120	16.0	11/04/2020	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/03/2020	ND	208	104	200	0.804	
DRO >C10-C28*	<10.0	10.0	11/03/2020	ND	210	105	200	1.06	
EXT DRO >C28-C36	<10.0	10.0	11/03/2020	ND					

Surrogate: 1-Chlorooctane 81.7 % 44.3-144

Surrogate: 1-Chlorooctadecane 87.8 % 42.2-156

Cardinal Laboratories

*=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: 11/03/2020
 Reported: 11/04/2020
 Project Name: LM LAMBERT
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 11/03/2020
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 1' (H002909-02)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/03/2020	ND	2.07	103	2.00	1.27		
Toluene*	<0.050	0.050	11/03/2020	ND	2.01	101	2.00	1.23		
Ethylbenzene*	<0.050	0.050	11/03/2020	ND	2.02	101	2.00	0.408		
Total Xylenes*	<0.150	0.150	11/03/2020	ND	5.85	97.6	6.00	0.240		
Total BTEx	<0.300	0.300	11/03/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	11/04/2020	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/04/2020	ND	208	104	200	0.804	
DRO >C10-C28*	300	10.0	11/04/2020	ND	210	105	200	1.06	
EXT DRO >C28-C36	437	10.0	11/04/2020	ND					

Surrogate: 1-Chlorooctane 103 % 44.3-144

Surrogate: 1-Chlorooctadecane 140 % 42.2-156

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: **Apach Corporation**

Project Manager: **Bruce Baker**

Address:

City: State: Zip:

Phone #: Fax #:

Project Owner:

Project Name: **LM LAMBERT**

Project Location: **LM LAMBERT**

Project #: State: Zip:

Phone #: Fax #:

Sampler Name: **Jeff Brown**

FOR LAB USE ONLY

P.O. #:

Company:

Attn:

Address:

City: State: Zip:

Phone #: Fax #:

Lab I.D. Sample I.D.

HC02909 **SP10 Surface**

45P101

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

MATRIX	PRESERV	SAMPLING	DATE	TIME	CL	BTEX	EXT. TPH
✓			11/3/20	10:45	✓	✓	✓
✓			11/3/20	2:41	✓	✓	✓

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

Relinquished By: **Jeff Brown**

Reindustrialized By: **Jeff Brown**

Date: **11/3/20** Received By: **Jeff Brown**

Time: **1:53**

Observed Temp. °C **7.8**

Corrected Temp. °C

Sample Condition

Cool ☒ Intact ☒

Yes ☒ No ☐

Checked BY: **JE**

Turnaround Time: **Standard** ☒ **Rush** ☐

Thermometer ID **#13**

Correction Factor **11/3/20**

Bacteria (only) Sample Condition

Cool ☒ Intact ☒

Yes ☒ No ☐

Observed Temp. °C

Corrected Temp. °C

REMARKS:

Verbal Result: ☐ Yes ☐ No Add'l Phone #:

All Results are emailed. Please provide Email address:



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

November 09, 2020

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: LM LAMBERT

Enclosed are the results of analyses for samples received by the laboratory on 11/04/20 14:06.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

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:	11/04/2020	Sampling Date:	11/04/2020
Reported:	11/09/2020	Sampling Type:	Soil
Project Name:	LM LAMBERT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: H 1 (H002924-01)

BTX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/05/2020	ND	1.93	96.3	2.00	5.05	
Toluene*	<0.050	0.050	11/05/2020	ND	1.87	93.7	2.00	5.48	
Ethylbenzene*	<0.050	0.050	11/05/2020	ND	1.86	93.0	2.00	4.69	
Total Xylenes*	<0.150	0.150	11/05/2020	ND	5.40	90.0	6.00	4.74	
Total BTX	<0.300	0.300	11/05/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: GM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/05/2020	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	11/05/2020	ND	241	120	200	1.93	
DRO >C10-C28*	<10.0	10.0	11/05/2020	ND	226	113	200	3.41	
EXT DRO >C28-C36	<10.0	10.0	11/05/2020	ND					

Surrogate: 1-Chlorooctane 98.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 92.8 % 42.2-156

Cardinal Laboratories

*=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: 11/04/2020
 Reported: 11/09/2020
 Project Name: LM LAMBERT
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 11/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: H 2 (H002924-02)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/05/2020	ND	1.93	96.3	2.00	5.05	
Toluene*	<0.050	0.050	11/05/2020	ND	1.87	93.7	2.00	5.48	
Ethylbenzene*	<0.050	0.050	11/05/2020	ND	1.86	93.0	2.00	4.69	
Total Xylenes*	<0.150	0.150	11/05/2020	ND	5.40	90.0	6.00	4.74	
Total BTX	<0.300	0.300	11/05/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.1 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/05/2020	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	11/05/2020	ND	241	120	200	1.93	
DRO >C10-C28*	<10.0	10.0	11/05/2020	ND	226	113	200	3.41	
EXT DRO >C28-C36	<10.0	10.0	11/05/2020	ND					

Surrogate: 1-Chlorooctane 87.7 % 44.3-144

Surrogate: 1-Chlorooctadecane 81.7 % 42.2-156

Cardinal Laboratories

*=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: 11/04/2020
 Reported: 11/09/2020
 Project Name: LM LAMBERT
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 11/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: H 3 (H002924-03)

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	11/05/2020	ND	1.93	96.3	2.00	5.05		
Toluene*	<0.050	0.050	11/05/2020	ND	1.87	93.7	2.00	5.48		
Ethylbenzene*	<0.050	0.050	11/05/2020	ND	1.86	93.0	2.00	4.69		
Total Xylenes*	<0.150	0.150	11/05/2020	ND	5.40	90.0	6.00	4.74		
Total BTEx	<0.300	0.300	11/05/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.4 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/05/2020	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	11/05/2020	ND	241	120	200	1.93	
DRO >C10-C28*	<10.0	10.0	11/05/2020	ND	226	113	200	3.41	
EXT DRO >C28-C36	<10.0	10.0	11/05/2020	ND					

Surrogate: 1-Chlorooctane 86.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 80.5 % 42.2-156

Cardinal Laboratories

*=Accredited Analyte

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

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: 11/04/2020
 Reported: 11/09/2020
 Project Name: LM LAMBERT
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 11/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: H 4 (H002924-04)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/05/2020	ND	1.93	96.3	2.00	5.05	
Toluene*	<0.050	0.050	11/05/2020	ND	1.87	93.7	2.00	5.48	
Ethylbenzene*	<0.050	0.050	11/05/2020	ND	1.86	93.0	2.00	4.69	
Total Xylenes*	<0.150	0.150	11/05/2020	ND	5.40	90.0	6.00	4.74	
Total BTX	<0.300	0.300	11/05/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	11/05/2020	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	11/06/2020	ND	241	120	200	1.93	
DRO >C10-C28*	<10.0	10.0	11/06/2020	ND	226	113	200	3.41	
EXT DRO >C28-C36	<10.0	10.0	11/06/2020	ND					

Surrogate: 1-Chlorooctane 89.9 % 44.3-144

Surrogate: 1-Chlorooctadecane 83.7 % 42.2-156

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

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

Celey D. Keene, Lab Director/Quality Manager



ANALYSIS REQUEST

+ Cardinal cannot accept verbal changes. Please email changes to celej.keelie@calumianadecor.com



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

November 09, 2020

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: LM LAMBERT

Enclosed are the results of analyses for samples received by the laboratory on 11/04/20 14:06.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	11/04/2020	Sampling Date:	11/04/2020
Reported:	11/09/2020	Sampling Type:	Soil
Project Name:	LM LAMBERT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: SP 1 @ 2' (H002925-01)

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	11/05/2020	ND	1.93	96.3	2.00	5.05	
Toluene*	<0.050	0.050	11/05/2020	ND	1.87	93.7	2.00	5.48	
Ethylbenzene*	<0.050	0.050	11/05/2020	ND	1.86	93.0	2.00	4.69	
Total Xylenes*	<0.150	0.150	11/05/2020	ND	5.40	90.0	6.00	4.74	
Total BTEX	<0.300	0.300	11/05/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 73.3-129

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/06/2020	ND	241	120	200	1.93	
DRO >C10-C28*	88.4	10.0	11/06/2020	ND	226	113	200	3.41	
EXT DRO >C28-C36	119	10.0	11/06/2020	ND					

Surrogate: 1-Chlorooctane 103 % 44.3-144

Surrogate: 1-Chlorooctadecane 121 % 42.2-156

Cardinal Laboratories

*=Accredited Analyte

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

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: 11/04/2020
 Reported: 11/09/2020
 Project Name: LM LAMBERT
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 11/04/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 3' (H002925-02)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/05/2020	ND	1.93	96.3	2.00	5.05	
Toluene*	<0.050	0.050	11/05/2020	ND	1.87	93.7	2.00	5.48	
Ethylbenzene*	<0.050	0.050	11/05/2020	ND	1.86	93.0	2.00	4.69	
Total Xylenes*	<0.150	0.150	11/05/2020	ND	5.40	90.0	6.00	4.74	
Total BTX	<0.300	0.300	11/05/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.1 % 73.3-129

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/06/2020	ND	241	120	200	1.93	
DRO >C10-C28*	88.8	10.0	11/06/2020	ND	226	113	200	3.41	
EXT DRO >C28-C36	89.5	10.0	11/06/2020	ND					

Surrogate: 1-Chlorooctane 104 % 44.3-144

Surrogate: 1-Chlorooctadecane 123 % 42.2-156

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Apache Corporation				P.O. #:		BILL TO		ANALYSIS REQUEST			
Project Manager: Bruce Baker				Company:							
Address:				Attn:							
City:				State:		Zip:					
Phone #:				Fax #:		Address:					
Project #:				Project Owner:		City:					
Project Name: LM LAMBERT				State:		Zip:					
Project Location: LM Lambert				Phone #:							
Sampler Name: Jeff Baum				Fax #:							

FOR LAB USE ONLY		MATRIX		PRESERV.	SAMPLING														
Lab I.D. Sample I.D. 4002925 1 SP1 @ 2' 2 SP1 @ 3'	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	EXT. TPH	BTEX				
												11/4/20	1312	✓	✓				
						✓						11/4/20	1313	✓	✓				

RELEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.		Relinquished By: Jeff Baum Date: 11/4/20 Time: 1400		Received By: Shawna Williams Date: 11/4/20 Time: 1400		Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Add'l Phone #:	
Relinquished By: Jeff Baum Date: 11/4/20 Time:		Received By: Shawna Williams Date: 11/4/20 Time:		REMARKS:		All Results are emailed. Please provide Email address:	

Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Observed Temp.: °C 4.4 Corrected Temp.: °C		Sample Condition Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		CHECKED BY: (Initials) TP		Turnaround Time:		Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/> TP #13 11/4/20		Bacteria (only) Sample Condition Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>		Observed Temp.: °C Corrected Temp.: °C	
--	--	--	--	--	--	-------------------------------------	--	------------------	--	---	--	---	--	---	--



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

November 19, 2020

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: LM LAMBERT

Enclosed are the results of analyses for samples received by the laboratory on 11/18/20 14:25.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Snyder".

Mike Snyder For 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: 11/18/2020
 Reported: 11/19/2020
 Project Name: LM LAMBERT
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 11/18/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 4' (H003059-01)

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	11/18/2020	ND	1.99	99.4	2.00	4.48	
Toluene*	<0.050	0.050	11/18/2020	ND	1.90	95.0	2.00	5.18	
Ethylbenzene*	<0.050	0.050	11/18/2020	ND	2.01	100	2.00	5.23	
Total Xylenes*	<0.150	0.150	11/18/2020	ND	5.75	95.8	6.00	5.01	
Total BTEX	<0.300	0.300	11/18/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2020	ND	196	97.8	200	11.8	
DRO >C10-C28*	77.0	10.0	11/18/2020	ND	211	106	200	18.1	
EXT DRO >C28-C36	96.3	10.0	11/18/2020	ND					

Surrogate: 1-Chlorooctane 83.7 % 44.3-144

Surrogate: 1-Chlorooctadecane 95.3 % 42.2-156

Cardinal Laboratories

*=Accredited Analyte

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

Mike Snyder For 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: 11/18/2020
 Reported: 11/19/2020
 Project Name: LM LAMBERT
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 11/18/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 5' (H003059-02)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/18/2020	ND	1.99	99.4	2.00	4.48		
Toluene*	<0.050	0.050	11/18/2020	ND	1.90	95.0	2.00	5.18		
Ethylbenzene*	<0.050	0.050	11/18/2020	ND	2.01	100	2.00	5.23		
Total Xylenes*	<0.150	0.150	11/18/2020	ND	5.75	95.8	6.00	5.01		
Total BTEX	<0.300	0.300	11/18/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2020	ND	196	97.8	200	11.8	
DRO >C10-C28*	150	10.0	11/18/2020	ND	211	106	200	18.1	
EXT DRO >C28-C36	161	10.0	11/18/2020	ND					

Surrogate: 1-Chlorooctane 81.9 % 44.3-144

Surrogate: 1-Chlorooctadecane 103 % 42.2-156

Cardinal Laboratories

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
ND	Analyte NOT DETECTED at or above the reporting limit
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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A handwritten signature in black ink, appearing to read "Mike Snyder", is written over a horizontal line.

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

November 23, 2020

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: LM LAMBERT

Enclosed are the results of analyses for samples received by the laboratory on 11/20/20 9:55.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Mike Snyder For 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: 11/20/2020
 Reported: 11/23/2020
 Project Name: LM LAMBERT
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 11/20/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 6' (H003078-01)

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	11/20/2020	ND	1.89	94.4	2.00	7.75		
Toluene*	<0.050	0.050	11/20/2020	ND	1.82	91.1	2.00	8.19		
Ethylbenzene*	<0.050	0.050	11/20/2020	ND	1.89	94.3	2.00	9.22		
Total Xylenes*	<0.150	0.150	11/20/2020	ND	5.42	90.3	6.00	8.77		
Total BTEX	<0.300	0.300	11/20/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/20/2020	ND	251	125	200	0.615	
DRO >C10-C28*	<10.0	10.0	11/20/2020	ND	236	118	200	1.33	
EXT DRO >C28-C36	<10.0	10.0	11/20/2020	ND					

Surrogate: 1-Chlorooctane 95.7 % 44.3-144

Surrogate: 1-Chlorooctadecane 87.5 % 42.2-156

Cardinal Laboratories

*=Accredited Analyte

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Mike Snyder For 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: 11/20/2020
 Reported: 11/23/2020
 Project Name: LM LAMBERT
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 11/20/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 7' (H003078-02)

BTX 8021B			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/20/2020	ND	1.89	94.4	2.00	7.75		
Toluene*	<0.050	0.050	11/20/2020	ND	1.82	91.1	2.00	8.19		
Ethylbenzene*	<0.050	0.050	11/20/2020	ND	1.89	94.3	2.00	9.22		
Total Xylenes*	<0.150	0.150	11/20/2020	ND	5.42	90.3	6.00	8.77		
Total BTX	<0.300	0.300	11/20/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

TPH 8015M			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	11/20/2020	ND	251	125	200	0.615		
DRO >C10-C28*	78.9	10.0	11/20/2020	ND	236	118	200	1.33		
EXT DRO >C28-C36	70.5	10.0	11/20/2020	ND						

Surrogate: 1-Chlorooctane 93.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 89.0 % 42.2-156

Cardinal Laboratories

*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Mike Snyder", is written over a horizontal line.

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

December 02, 2020

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: LM LAMBERT

Enclosed are the results of analyses for samples received by the laboratory on 11/30/20 15:49.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

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: 11/30/2020
 Reported: 12/02/2020
 Project Name: LM LAMBERT
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 11/30/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Yvonne Muniz

Sample ID: SP 1 @ 8' (H003130-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/01/2020	ND	2.10	105	2.00	3.68	
Toluene*	<0.050	0.050	12/01/2020	ND	2.02	101	2.00	3.56	
Ethylbenzene*	<0.050	0.050	12/01/2020	ND	2.09	104	2.00	3.60	
Total Xylenes*	<0.150	0.150	12/01/2020	ND	5.96	99.4	6.00	3.43	
Total BTEX	<0.300	0.300	12/01/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/02/2020	ND	211	105	200	4.03	
DRO >C10-C28*	202	10.0	12/02/2020	ND	211	106	200	1.88	
EXT DRO >C28-C36	159	10.0	12/02/2020	ND					

Surrogate: 1-Chlorooctane 82.3 % 44.3-144

Surrogate: 1-Chlorooctadecane 89.3 % 42.2-156

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



ANALYSIS REQUEST

FORNIV-000 P.S.0.



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

December 04, 2020

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: LM LAMBERT

Enclosed are the results of analyses for samples received by the laboratory on 12/03/20 9:25.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	12/03/2020	Sampling Date:	12/03/2020
Reported:	12/04/2020	Sampling Type:	Soil
Project Name:	LM LAMBERT	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: SP 1 @ 9' (H003167-01)

BTEX 8021B		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	12/03/2020	ND	2.09	104	2.00	1.50	
Toluene*	0.407	0.100	12/03/2020	ND	2.00	100	2.00	1.69	GC-NC1
Ethylbenzene*	5.94	0.100	12/03/2020	ND	2.06	103	2.00	1.21	
Total Xylenes*	10.1	0.300	12/03/2020	ND	5.88	98.1	6.00	1.08	
Total BTEX	16.5	0.600	12/03/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 327 % 73.3-129

TPH 8015M		mg/kg	Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	940	50.0	12/03/2020	ND	215	108	200	2.24	
DRO >C10-C28*	6170	50.0	12/03/2020	ND	219	110	200	1.27	
EXT DRO >C28-C36	1020	50.0	12/03/2020	ND					

Surrogate: 1-Chlorooctane 211 % 44.3-144

Surrogate: 1-Chlorooctadecane 170 % 42.2-156

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 12/03/2020
 Reported: 12/04/2020
 Project Name: LM LAMBERT
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 12/03/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 10' (H003167-02)

BTX 8021B		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/04/2020	ND	2.09	104	2.00	1.50	
Toluene*	0.583	0.050	12/04/2020	ND	2.00	100	2.00	1.69	GC-NC1
Ethylbenzene*	5.64	0.050	12/04/2020	ND	2.06	103	2.00	1.21	
Total Xylenes*	5.72	0.150	12/04/2020	ND	5.88	98.1	6.00	1.08	
Total BTX	11.9	0.300	12/04/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 395 % 73.3-129

TPH 8015M		mg/kg	Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	535	50.0	12/03/2020	ND	215	108	200	2.24	
DRO >C10-C28*	3780	50.0	12/03/2020	ND	219	110	200	1.27	
EXT DRO >C28-C36	778	50.0	12/03/2020	ND					

Surrogate: 1-Chlorooctane 159 % 44.3-144

Surrogate: 1-Chlorooctadecane 136 % 42.2-156

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 12/03/2020
 Reported: 12/04/2020
 Project Name: LM LAMBERT
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 12/03/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 11' (H003167-03)

BTX 8021B		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	12/04/2020	ND	2.09	104	2.00	1.50	
Toluene*	0.979	0.100	12/04/2020	ND	2.00	100	2.00	1.69	GC-NC1
Ethylbenzene*	9.36	0.100	12/04/2020	ND	2.06	103	2.00	1.21	
Total Xylenes*	12.2	0.300	12/04/2020	ND	5.88	98.1	6.00	1.08	
Total BTX	22.5	0.600	12/04/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 292 % 73.3-129

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	564	50.0	12/03/2020	ND	215	108	200	2.24	
DRO >C10-C28*	3190	50.0	12/03/2020	ND	219	110	200	1.27	
EXT DRO >C28-C36	664	50.0	12/03/2020	ND					

Surrogate: 1-Chlorooctane 138 % 44.3-144

Surrogate: 1-Chlorooctadecane 124 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 12/03/2020
 Reported: 12/04/2020
 Project Name: LM LAMBERT
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 12/03/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 12' (H003167-04)

BTX 8021B		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/04/2020	ND	2.09	104	2.00	1.50	
Toluene*	0.126	0.050	12/04/2020	ND	2.00	100	2.00	1.69	GC-NC1
Ethylbenzene*	1.41	0.050	12/04/2020	ND	2.06	103	2.00	1.21	
Total Xylenes*	1.12	0.150	12/04/2020	ND	5.88	98.1	6.00	1.08	
Total BTX	2.65	0.300	12/04/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 232 % 73.3-129

TPH 8015M		mg/kg	Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	144	50.0	12/03/2020	ND	215	108	200	2.24	
DRO >C10-C28*	1830	50.0	12/03/2020	ND	219	110	200	1.27	
EXT DRO >C28-C36	449	50.0	12/03/2020	ND					

Surrogate: 1-Chlorooctane 118 % 44.3-144

Surrogate: 1-Chlorooctadecane 170 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 12/03/2020
 Reported: 12/04/2020
 Project Name: LM LAMBERT
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 12/03/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 13' (H003167-05)

BTEX 8021B		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	12/04/2020	ND	2.09	104	2.00	1.50	
Toluene*	1.68	0.100	12/04/2020	ND	2.00	100	2.00	1.69	GC-NC1
Ethylbenzene*	11.5	0.100	12/04/2020	ND	2.06	103	2.00	1.21	
Total Xylenes*	13.9	0.300	12/04/2020	ND	5.88	98.1	6.00	1.08	
Total BTEX	27.1	0.600	12/04/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 343 % 73.3-129

TPH 8015M		mg/kg	Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	1080	50.0	12/03/2020	ND	215	108	200	2.24	
DRO >C10-C28*	5250	50.0	12/03/2020	ND	219	110	200	1.27	
EXT DRO >C28-C36	937	50.0	12/03/2020	ND					

Surrogate: 1-Chlorooctane 189 % 44.3-144

Surrogate: 1-Chlorooctadecane 213 % 42.2-156

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

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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.
GC-NC1	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Apache Corporation Project Manager: Paula Baker Address: _____ City: _____ State: _____ Zip: _____ Phone #: _____ Fax #: _____ Project #: _____ Project Name: LM CAMPBELL Project Location: LM CAMPBELL Sampler Name: Jeff Brown FOR LAB USE ONLY				BILL TO P.O. #: _____ Company: _____ Attn: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone #: _____ Fax #: _____				ANALYSIS REQUEST			
Lab I.D. HC03167 Sample I.D. _____		(G)RAB OR (C)OMP. # CONTAINERS _____ GROUNDWATER _____ WASTEWATER _____ SOIL _____ OIL _____ SLUDGE _____ OTHER : _____ ACID/BASE: _____ ICE / COOL _____ OTHER : _____		MATRIX PRESERV _____ SAMPLING _____		DATE TIME		BTEX EXT. TPH			
1	SP10 9'	6		0830	✓						
2	SP10 10'	6		0832	✓						
3	SP10 11'	6		0834	✓						
4	SP10 12'	4		0836	✓						
5	SP10 13'	6		0838	✓						

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Relinquished By: Jeff Brown Date: 01/3/00 Time: _____	Received By: Paula Baker Date: 01/3/00 Time: _____	Relinquished By: _____ Date: _____ Time: _____	Received By: _____ Date: _____ Time: _____
---	--	--	--

Delivered By: (Circle One) Sampler - UPS - Bus - Other: 4.2c #1/3	Sample Condition Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CHECKED BY: (Initials) VB
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REMARKS: **1256 Samples Placed.**



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

December 16, 2020

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: LM LAMBERT

Enclosed are the results of analyses for samples received by the laboratory on 12/15/20 14:40.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	12/15/2020	Sampling Date:	12/15/2020
Reported:	12/16/2020	Sampling Type:	Soil
Project Name:	LM LAMBERT	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: SP 1 @ 15' (H003265-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/16/2020	ND	2.09	105	2.00	0.600	
Toluene*	<0.050	0.050	12/16/2020	ND	1.97	98.5	2.00	1.57	
Ethylbenzene*	0.189	0.050	12/16/2020	ND	2.08	104	2.00	1.09	
Total Xylenes*	0.232	0.150	12/16/2020	ND	5.94	99.0	6.00	0.719	
Total BTX	0.444	0.300	12/16/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 118 % 73.3-129

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/16/2020	ND	194	97.1	200	2.46	
DRO >C10-C28*	204	10.0	12/16/2020	ND	204	102	200	2.34	
EXT DRO >C28-C36	22.6	10.0	12/16/2020	ND					

Surrogate: 1-Chlorooctane 95.9 % 44.3-144

Surrogate: 1-Chlorooctadecane 97.8 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 12/15/2020
 Reported: 12/16/2020
 Project Name: LM LAMBERT
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 12/15/2020
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 20' (H003265-02)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/16/2020	ND	2.09	105	2.00	0.600	
Toluene*	<0.050	0.050	12/16/2020	ND	1.97	98.5	2.00	1.57	
Ethylbenzene*	<0.050	0.050	12/16/2020	ND	2.08	104	2.00	1.09	
Total Xylenes*	<0.150	0.150	12/16/2020	ND	5.94	99.0	6.00	0.719	
Total BTX	<0.300	0.300	12/16/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/16/2020	ND	194	97.1	200	2.46	
DRO >C10-C28*	<10.0	10.0	12/16/2020	ND	204	102	200	2.34	
EXT DRO >C28-C36	<10.0	10.0	12/16/2020	ND					

Surrogate: 1-Chlorooctane 94.9 % 44.3-144

Surrogate: 1-Chlorooctadecane 94.6 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 12/15/2020
 Reported: 12/16/2020
 Project Name: LM LAMBERT
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 12/15/2020
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 25' (H003265-03)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/16/2020	ND	2.09	105	2.00	0.600	
Toluene*	<0.050	0.050	12/16/2020	ND	1.97	98.5	2.00	1.57	
Ethylbenzene*	<0.050	0.050	12/16/2020	ND	2.08	104	2.00	1.09	
Total Xylenes*	<0.150	0.150	12/16/2020	ND	5.94	99.0	6.00	0.719	
Total BTX	<0.300	0.300	12/16/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/16/2020	ND	194	97.1	200	2.46	
DRO >C10-C28*	<10.0	10.0	12/16/2020	ND	204	102	200	2.34	
EXT DRO >C28-C36	<10.0	10.0	12/16/2020	ND					

Surrogate: 1-Chlorooctane 88.6 % 44.3-144

Surrogate: 1-Chlorooctadecane 88.9 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 12/15/2020
 Reported: 12/16/2020
 Project Name: LM LAMBERT
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 12/15/2020
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 30' (H003265-04)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/16/2020	ND	2.09	105	2.00	0.600	
Toluene*	<0.050	0.050	12/16/2020	ND	1.97	98.5	2.00	1.57	
Ethylbenzene*	<0.050	0.050	12/16/2020	ND	2.08	104	2.00	1.09	
Total Xylenes*	<0.150	0.150	12/16/2020	ND	5.94	99.0	6.00	0.719	
Total BTX	<0.300	0.300	12/16/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/16/2020	ND	194	97.1	200	2.46	
DRO >C10-C28*	<10.0	10.0	12/16/2020	ND	204	102	200	2.34	
EXT DRO >C28-C36	<10.0	10.0	12/16/2020	ND					

Surrogate: 1-Chlorooctane 94.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 94.3 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 12/15/2020
 Reported: 12/16/2020
 Project Name: LM LAMBERT
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 12/15/2020
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 35' (H003265-05)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/16/2020	ND	2.09	105	2.00	0.600		
Toluene*	<0.050	0.050	12/16/2020	ND	1.97	98.5	2.00	1.57		
Ethylbenzene*	<0.050	0.050	12/16/2020	ND	2.08	104	2.00	1.09		
Total Xylenes*	<0.150	0.150	12/16/2020	ND	5.94	99.0	6.00	0.719		
Total BTEx	<0.300	0.300	12/16/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/16/2020	ND	194	97.1	200	2.46	
DRO >C10-C28*	<10.0	10.0	12/16/2020	ND	204	102	200	2.34	
EXT DRO >C28-C36	<10.0	10.0	12/16/2020	ND					

Surrogate: 1-Chlorooctane 102 % 44.3-144

Surrogate: 1-Chlorooctadecane 102 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager

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

Notes and Definitions

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

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Apache Corp Project Manager: Bruce Baker Address: City: State: Zip: Phone #: Fax #: Project #: Project Name: LM Lambert Project Location: LM Lambert Sampler Name: Terry Jenkins		BILL TO P.O. #: Company: Attn: Address: City: State: Zip: Phone #: Fax #: Project #:		ANALYSIS REQUEST	
FOR LAB USE ONLY Lab I.D. H003365 Sample I.D. 1 SP 1 GP 15-1 2 SP 1 GP 20-1 3 SP 1 GP 25-1 4 SP 1 GP 30 5 SP 1 GP 35		(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER :		MATRIX PRESERV SAMPLING DATE TIME 12:15 12:15 12:15 12:30 12:15 12:35 12:15 12:30 12:15 12:35	
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.		Relinquished By: Terry Jenkins Date: 12-15-20 Time: 1440 Received By: Lawrence Delaney Date: 12-15-20 Time: 1440		REMARKS: Brought straight to lab from field.	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Observed Temp. °C 15.3 Corrected Temp. °C		Sample Condition Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes CHECKED BY: (Initials) Turnaround Time: Standard <input type="checkbox"/> Rush <input checked="" type="checkbox"/> Thermometer ID #113 Correction Factor None Bacteria (only) Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Observed Temp. °C Corrected Temp. °C	

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

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

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

CONDITIONS

Action 12857

CONDITIONS OF APPROVAL

Operator: #1000 APACHE CORPORATION Midland, TX79705		303 Veterans Airpark Ln	OGRID: 873	Action Number: 12857	Action Type: C-141
OCD Reviewer	Condition				
ceads	Additional sample points to vertically delineate the BTEX and TPH within the release area are required. All constituents will need to be sampled for.				
ceads	Unless the contamination is immediately above or next to production equipment, remediation is required to be completed.				
ceads	The volume of the spill may need to be recalculated.				