August 3, 2020

NMOCD District 1

1625 N. French Dr.

Hobbs, NM 88240

Re: Remediation Plan
Apache Corporation
WP Byrd Battery

RXSoil, Inc. is pleased to submit the remediation plan for the on-site remediation of impacted soil for the above release in Lea County, New Mexico.

Sincerely,

Jace Caraway
Chief Operating Officer
RXSoil, Inc.
(940) 210-2051

Zach Robbins
Technical and Engineering Analyst
RXSoil, Inc.
(210) 400-7645

Table of Contents

Figures

Appendix

I. Introduction

On behalf of Apache Corporation ("Apache"), RXSoil, Inc. ("RXSoil") has prepared this work plan that describes remediation of the release of crude oil at the WP Byrd battery.

The release was discovered on 4/8/2020 in Unit Letter B&G, Section 12, Township 20S, Range 36E (see *Figure 1* for Vicinity Map) at approximate coordinates 32.59134, -103.30740. It was reported that 20 barrels of crude oil were released, and 10 barrels of crude oil were recovered during the initial response.

II. Site Assessment/Characterization

1. **Site Map** – See *Figure 2*
2. **Depth to ground water** – Remediation standards for <50 feet will be used on this remediation project.
3. **Wellhead protection area** – Known active water sources are shown in *Figure 3*.
4. **Distance to nearest significant watercourse** – There is no significant watercourse within a half-mile of any horizontal boundary of the release (see *Figure 4*).
5. **Soil/waste characteristics** – Samples were collected inside of the battery at the surface and depths of 1', 2', 3' and 4'. This sample location (32.591293°, -103.307384°) is shown in *Figure 2* with results summarized in *Appendix A*. This delineation shows contamination to 3' BGS and clean soil at 4' BGS.

III. Remediation Plan

RXSoil's will utilize an in-situ application of RXBiotics, RXSoil's naturally occurring, non-genetically modified bioremediation agent. This product, along with physical agitation will lead to the degradation of hydrocarbons. Treatment will continue throughout the battery until all soils test below the remediation standards set forth in Table 1 of 19.15.29 NMAC (total TPH <100 mg/kg).

Samples will be taken using a stainless-steel hand shovel while remediation samples will be taken using a stainless-steel bucket auger. All tools are to be decontaminated before each sample, as specified in *Field Equipment Cleaning and Decontamination* (EPA, 2015). This includes wiping the equipment clean, water-rinsing the equipment, washing the equipment in detergent and water, and rinsing the equipment in water.

Samples will temporarily be transferred to a new plastic bag in the field. Once in a location safer for handling glass, the samples will be transferred to glass jars, supplied by an approved laboratory. The threads on all jars will be wiped clean to allow an air-tight seal. Samples will be transferred on ice to a third-party laboratory to ensure tests are completed within an appropriate timeline

Remediation efforts will commence following the approval of this remediation plan and are estimated to take approximately 90 days. It is estimated that 100 cubic yards will need remediated.

IV. Restoration, Reclamation and Re-Vegetation

Following remediation, RXSoil will ensure the battery has been restored to its initial state.

Figure 1 - Vicinity Map

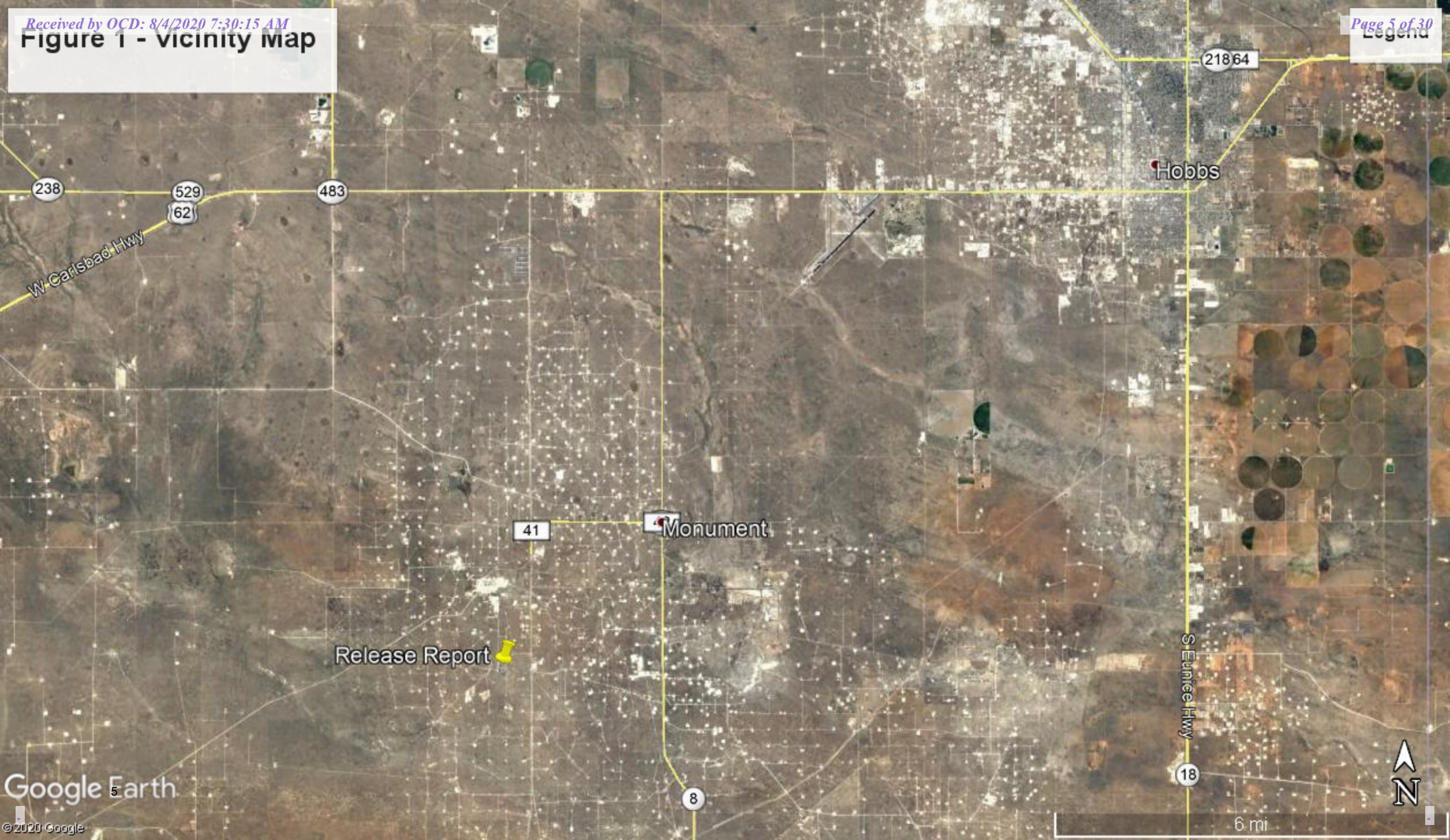
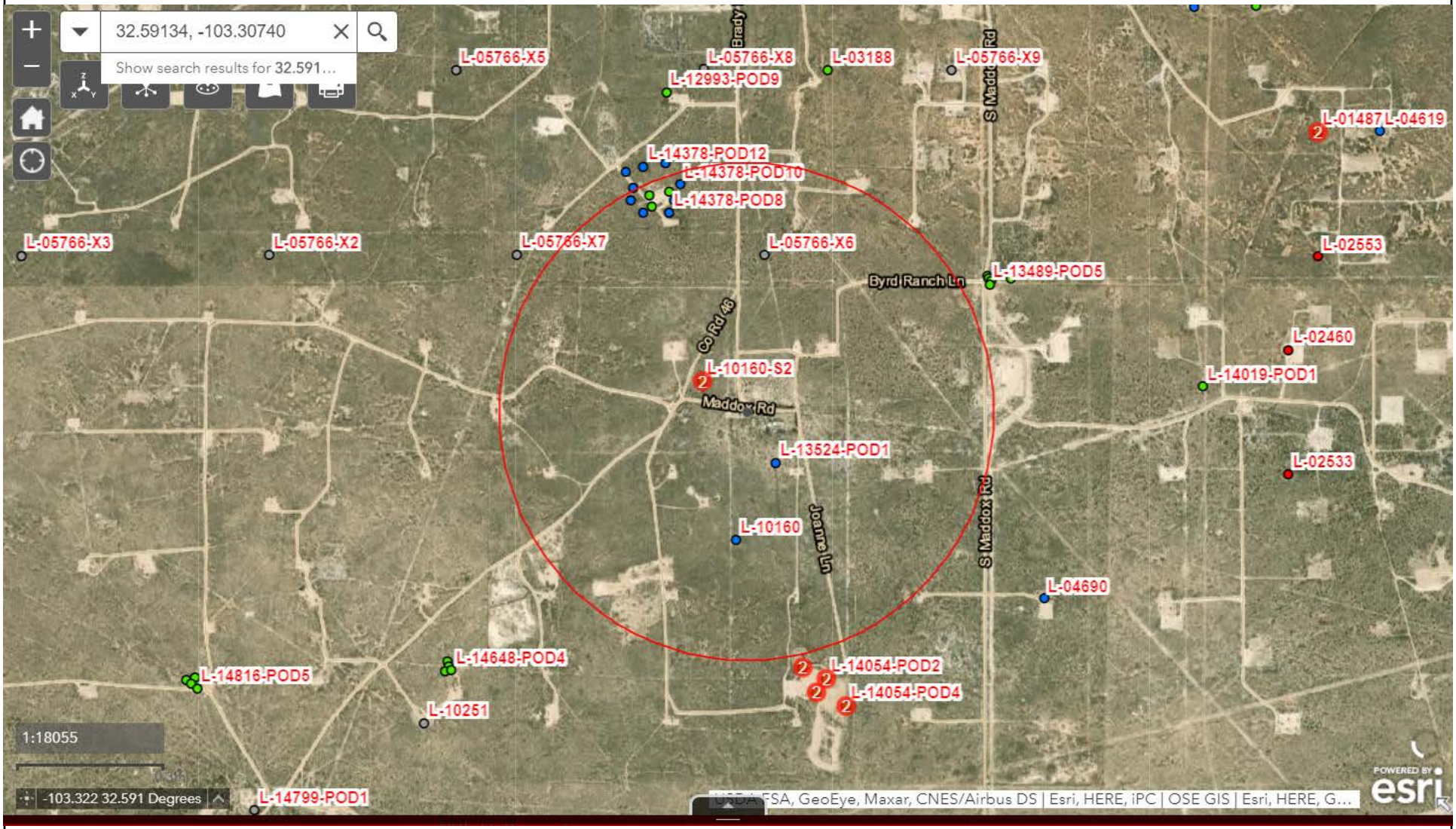


Figure 2 - Site Map

Figure 3. Water Source Map

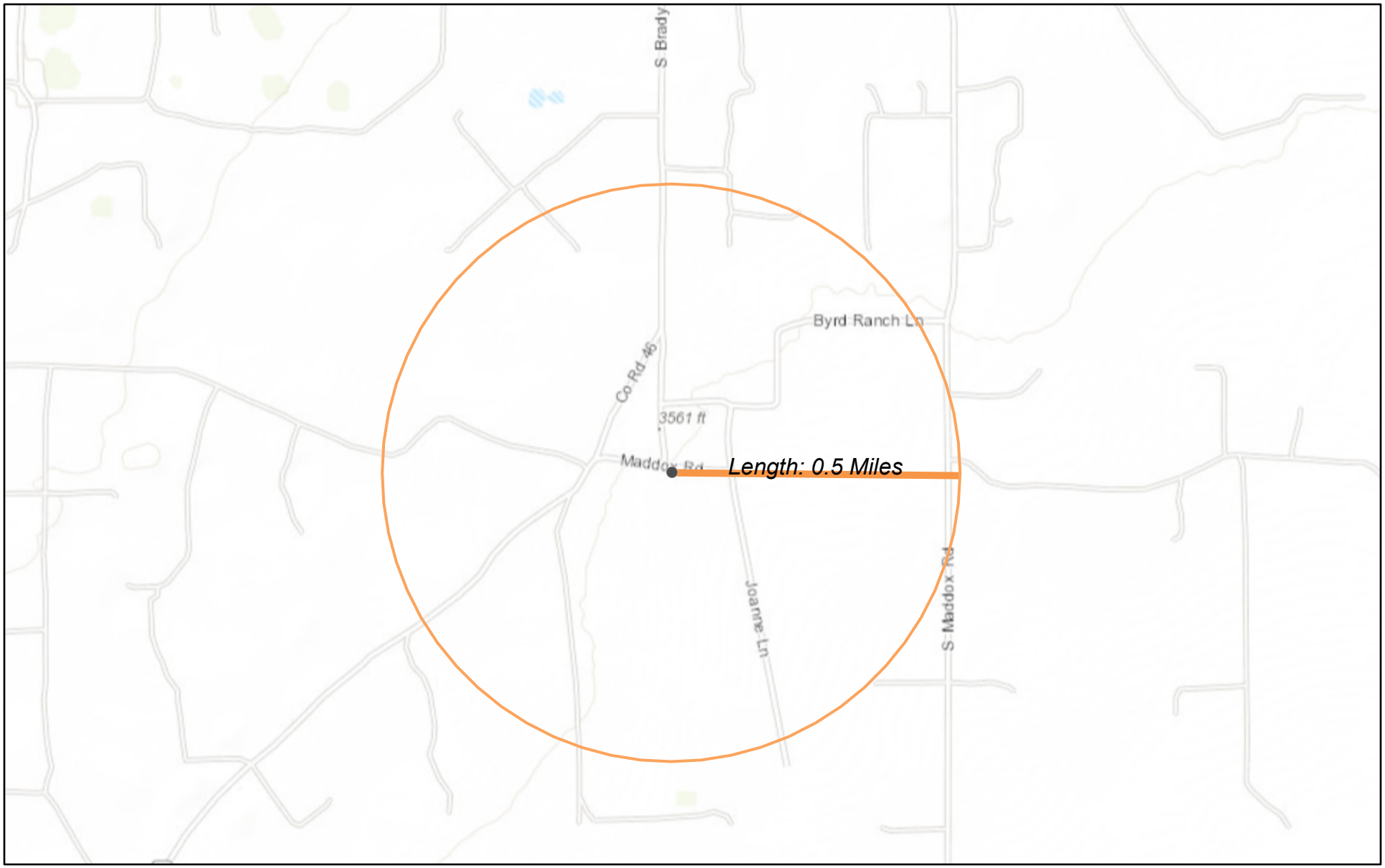


8/3/2020, 8:43:47 PM

0.5 mile radius

**Water Rights Lookup print function would not export data for review.

Figure 4 - Hydrology Map



8/3/2020, 8:43:47 PM

Override 1

OCD District Offices

Override 1

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS,

New Mexico Oil Conservation Division

NM OCD Oil and Gas Map. http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=4d017f2306164de29fd2fb9f8f35ca75: New Mexico Oil Conservation Division

APPENDIX A

DELINEATION SUMMARY TABLE

Appendix A. Delineation Data												
Sample Point	Depth (ft)	Sample Date	Chloride	BTEX (8021B)					TPH (8015M)			
			Lab Test	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO	C6-C35
SP1	S	7/10/2020	<16.0	<0.200	0.573	<0.200	8.17	8.74	**707**	**24,600**	**5,340**	**30,647.0**
SP1	1'	7/10/2020	-	<0.050	2.29	<0.500	14.7	17	**717**	**1,910**	**105**	**2,732.0**
SP1	2'	7/10/2020	-	<0.200	0.301	<0.200	2.99	3.29	97	**616**	53	**766.0**
SP1	3'	7/16/2020	-	<0.050	<0.050	<0.050	0.381	0.4	42	**791**	143	**975.5**
SP1	4'	7/16/2020	-	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<30
NMOCD Thresholds				**10**				**50**				**100**

BOLD results indicate results above threshold

- indicates tests were not ran

All units in mg/kg unless otherwise noted

APPENDIX B

C141

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?	<50 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☒ Yes ☐ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: Larry Baker Title: Environmental Tech SR.

Signature: Larry Baker Date: 8/4/2020

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

☐ Extents of contamination must be fully delineated.

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

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

Printed Name: Larry Baker Title: Environmental Tech SR.

Signature: Larry Baker Date: 8/4/2020

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

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

APPENDIX C

PHOTO PAGE

Location

Backside of Battery

Backside of Battery

Front of Battery

Front of Battery

CARDINAL Laboratories

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

July 15, 2020

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: WP BYRD

Enclosed are the results of analyses for samples received by the laboratory on 07/10/20 16:48.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	07/10/2020	Sampling Date:	07/10/2020
Reported:	07/15/2020	Sampling Type:	Soil
Project Name:	WP BYRD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ SURFACE (H001822-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	07/13/2020	ND	1.90	95.0	2.00	2.84	
Toluene*	**0.573**	0.200	07/13/2020	ND	1.90	94.8	2.00	3.05	
Ethylbenzene*	<0.200	0.200	07/13/2020	ND	1.93	96.6	2.00	2.86	
Total Xylenes*	**8.17**	0.600	07/13/2020	ND	5.58	93.0	6.00	2.82	
Total BTEX	**8.74**	1.20	07/13/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *174 %* *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	07/13/2020	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**707**	50.0	07/13/2020	ND	206	103	200	4.26	
DRO >C10-C28*	**24600**	50.0	07/13/2020	ND	191	95.3	200	8.73	
EXT DRO >C28-C36	**5340**	50.0	07/13/2020	ND					

Surrogate: 1-Chlorooctane *229 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *463 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	07/10/2020	Sampling Date:	07/10/2020
Reported:	07/15/2020	Sampling Type:	Soil
Project Name:	WP BYRD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ 1' (H001822-02)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	07/14/2020	ND	1.86	92.9	2.00	6.35	
Toluene*	**2.29**	0.500	07/14/2020	ND	1.87	93.3	2.00	6.58	
Ethylbenzene*	<0.500	0.500	07/14/2020	ND	1.88	93.9	2.00	6.65	
Total Xylenes*	**14.7**	1.50	07/14/2020	ND	5.41	90.2	6.00	6.73	
Total BTEX	**17.0**	3.00	07/14/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID	*132 %*	*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*	**717**	50.0	07/14/2020	ND	198	98.9	200	1.72	
DRO >C10-C28*	**1910**	50.0	07/14/2020	ND	182	90.8	200	1.56	
EXT DRO >C28-C36	**105**	50.0	07/14/2020	ND					

Surrogate: 1-Chlorooctane	*131 %*	*44.3-144*
Surrogate: 1-Chlorooctadecane	*118 %*	*42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	07/10/2020	Sampling Date:	07/10/2020
Reported:	07/15/2020	Sampling Type:	Soil
Project Name:	WP BYRD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ 2' (H001822-03)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	07/14/2020	ND	1.86	92.9	2.00	6.35	
Toluene*	**0.301**	0.200	07/14/2020	ND	1.87	93.3	2.00	6.58	
Ethylbenzene*	<0.200	0.200	07/14/2020	ND	1.88	93.9	2.00	6.65	
Total Xylenes*	**2.99**	0.600	07/14/2020	ND	5.41	90.2	6.00	6.73	
Total BTEX	**3.29**	1.20	07/14/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *119 %* *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*	**96.9**	10.0	07/14/2020	ND	198	98.9	200	1.72	
DRO >C10-C28*	**616**	10.0	07/14/2020	ND	182	90.8	200	1.56	
EXT DRO >C28-C36	**53.1**	10.0	07/14/2020	ND					

Surrogate: 1-Chlorooctane *105 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *107 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by 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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	CL	BTEX	EXT. TPH
H001822																	
1	SP 1 @ Surface		1										7/10/20	0848	✓	✓	✓
2	SP 1 @ 1'		1										1	0925		✓	✓
3	SP 1 @ 2'		1										7/10/20	0927		✓	✓

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

Relinquished By: Jeff Broom	Date: 7/10/20 Time: 1648	Received By: Tamara Oldaker	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address:
			REMARKS:

Delivered By: (Circle One)	Observed Temp. °C 38	Sample Condition	CHECKED BY:	Turnaround Time:	Bacteria (only) Sample Condition
Sampler - UPS - Bus - Other:	Corrected Temp. °C	Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	(Initials) T.O.	Standard ☑ Rush ☐	Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C
				Thermometer ID #113 Correction Factor None	

FORM-006 R 3.1 06/04/20

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

CARDINAL Laboratories

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

July 21, 2020

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: WP BYRD

Enclosed are the results of analyses for samples received by the laboratory on 07/16/20 12:45.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	07/16/2020	Sampling Date:	07/16/2020
Reported:	07/21/2020	Sampling Type:	Soil
Project Name:	WP BYRD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ 3' (H001857-01)

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	07/17/2020	ND	1.96	98.2	2.00	0.0226	
Toluene*	<0.050	0.050	07/17/2020	ND	1.97	98.6	2.00	0.434	
Ethylbenzene*	<0.050	0.050	07/17/2020	ND	1.99	99.4	2.00	0.215	
Total Xylenes*	**0.381**	0.150	07/17/2020	ND	5.73	95.5	6.00	0.266	
Total BTEX	**0.381**	0.300	07/17/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *115 %* *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*	**41.5**	10.0	07/17/2020	ND	218	109	200	0.595	
DRO >C10-C28*	**791**	10.0	07/17/2020	ND	209	105	200	1.72	
EXT DRO >C28-C36	**143**	10.0	07/17/2020	ND					

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

Surrogate: 1-Chlorooctadecane *112 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	07/16/2020	Sampling Date:	07/16/2020
Reported:	07/21/2020	Sampling Type:	Soil
Project Name:	WP BYRD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ 4' (H001857-02)

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	07/17/2020	ND	1.92	96.2	2.00	3.21	
Toluene*	<0.050	0.050	07/17/2020	ND	1.92	95.9	2.00	3.86	
Ethylbenzene*	<0.050	0.050	07/17/2020	ND	1.94	96.9	2.00	3.43	
Total Xylenes*	<0.150	0.150	07/17/2020	ND	5.57	92.9	6.00	3.84	
Total BTEX	<0.300	0.300	07/17/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.6 %* *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	07/17/2020	ND	197	98.4	200	5.32	
DRO >C10-C28*	<10.0	10.0	07/17/2020	ND	218	109	200	5.43	QM-07
EXT DRO >C28-C36	<10.0	10.0	07/17/2020	ND					

Surrogate: 1-Chlorooctane *89.9 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *94.3 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

BILL TO

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

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	BTEX	EXT. TPH
H061857 1	SP1 @ 3'												7/16/20	0844	✓	✓
2	SP1 @ 4'												7/16/20	0846	✓	✓

Relinquished By: Jeff Brown	Date: 7/16/20 Time: 1245	Received By: Tamara Oldaker	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address:
			REMARKS:

Delivered By: (Circle One)	Observed Temp. °C 4.8	Sample Condition Cool Intact	CHECKED BY: (Initials)	Turnaround Time: Standard ☑ Rush ☐
Sampler - UPS - Bus - Other:	Corrected Temp. °C	☑ Yes ☑ Yes ☐ No ☐ No	TO	Thermometer ID #113 Correction Factor None

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

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

END OF REPORT