



2350 W Marland Blvd Hobbs, NM 88240

Remediation Plan

May 22, 2020

Re: Monument ABO Battery
Case # NRM2005941614

Background:

On 2/24/2020 a release occurred due to a small hole developed in the fire tube on a heater treater resulting in the loss of fluid. The release (GPS: 32.61128, -103.332806) is located west of Monument NM in unit letter M section 35 township 19S range 36E. A groundwater survey was conducted utilizing the NMOSE wells of record. The nearest well suggest that groundwater beneath the release is 50 feet.

On 3/2/2020 vertical delineation was conducted utilizing a backhoe. Samples were collected in one foot intervals. SP 1 was advanced to a depth of 1 foot. All samples collected were submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. On 5/5/2020 surface horizontal 5 point composite samples not to exceed 200 square feet were collected and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX.

Remediation Plan:

Apache Corporation proposes that the release area be excavated to a depth of 1 foot. All excavated material (180 yards) will be hauled to an NMOCD approved facility. After the excavation is complete final 5 point bottom and wall composite samples will be collected not to exceed 200 square feet and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. Once analytical data confirms that the excavation meet table 1 standards for releases less than 50 feet to groundwater the excavation will be backfilled with clean imported caliche and the pad restored. The remediation will be completed within 90 days of NMOCD approval of the plan.

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

Submitted by;

Bruce Baker

Environmental Technician

larry.baker@apachecorp.com

Cell# 432-631-6982

Off# 575-393-7106

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural
Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NCE200839139
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: Apache Corporation	OGRID 873
Contact Name: Bruce Baker	Contact Telephone: (432) 631-6982
Contact email: Larry.Baker@apachecorp.com	Incident # (assigned by OCD)
Contact Mailing Address: 2350 W. Marland Blvd, Hobbs, NM 88240	

Location of Release Source

Latitude: 32.61128 Longitude: -103.332806

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Monument CTB	Site Type: Battery
Date Release Discovered: 02/24/2020	API #

Unit Letter	Section	Township	Range	County
M	35	19S	36E	LEA

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name: DLD Corporation)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input type="checkbox"/> Crude Oil	Volume Released ()	Volume Recovered ()
<input checked="" type="checkbox"/> Produced Water	Volume Released (<u>110 Barrels</u>)	Volume Recovered (<u>80 Barrels</u>)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Small hole in a fire tube located on a heater treater.


State of New Mexico
Oil Conservation Division

Incident ID	
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Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? Release is greater than 25 barrels.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? NMOCD was notified via (emnrd-cod-district1spills@state.nm.us) email by Bruce Baker, Senior Environmental Technician, Apache Corporation on 02/25/2020.	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

<input checked="" type="checkbox"/> The source of the release has been stopped.	
<input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.	
<input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
<input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Jeff Broom</u>	Title: <u>Environmental Technician</u>
Signature: <u></u>	Date: <u>02/28/2020</u>
Email: <u>Jeffrey.Broom@apachecorp.com</u>	Telephone: <u>(432) 664-4677</u>
<u>OCD Only</u>	
Received by: _____	Date: _____

Volume Calculation

1,870 cubic feet of soil contamination X 7.48 gallons per cubic foot = 13,987 gallons/42 gallons to a barrel=333 barrels X .33 soil porosity= 110 barrels fluid in soil + 80 barrels recovered = 190 barrels total loss.

Incident ID	
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Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>50</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 checked="" type="checkbox"/> Yes <input 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.

Incident ID	
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Application ID	

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Printed Name: Bruce Baker Title: Environmental Tech SR.
Signature: Bruce Baker Date: 5/22/20
email: larry.baker@apachecorp.com Telephone: 432-631-6982

OCD Only

Received by: _____ Date: _____

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: Bruce Baker Title: Environmental Tech SR.
Signature: Bruce Baker Date: 5/22/20
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: _____

Show search results for 32.611...

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L-10804

CR-11A

1:2256


200ft

-103.336 32.612 Degrees



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)						(NAD83 UTM in meters)	
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	L 10804		4	4	34	19S	36E	656159	3609422* 
Driller License:	1044	Driller Company:				EADES WELL DRILLING & PUMP SERVICE			
Driller Name:	ALAN G. EADES								
Drill Start Date:	09/16/1997	Drill Finish Date:				09/16/1997		Plug Date:	
Log File Date:	05/14/1998	PCW Rcv Date:						Source:	Shallow
Pump Type:		Pipe Discharge Size:						Estimated Yield:	
Casing Size:	6.00	Depth Well:				66 feet		Depth Water:	50 feet
Water Bearing Stratifications:					Top	Bottom	Description		
					52	66	Shallow Alluvium/Basin Fill		
Casing Perforations:					Top	Bottom			
					36	66			

*UTM location was derived from PLSS - see Help

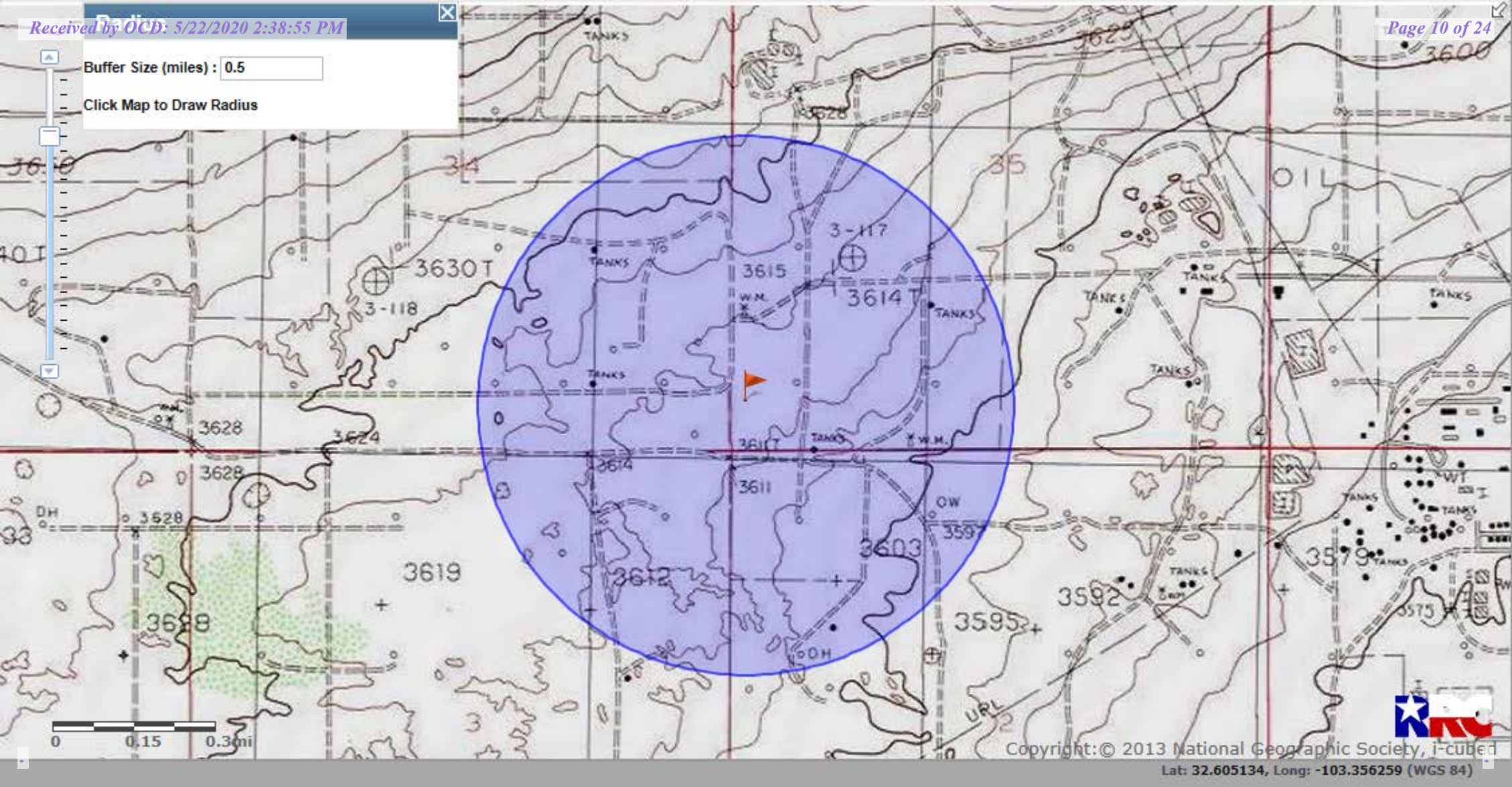
The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

5/22/20 10:13 AM

POINT OF DIVERSION SUMMARY

Buffer Size (miles) : 0.5

Click Map to Draw Radius



0 0.15 0.3mi



HC3
HC4
SP1
HC2
HC1

Monument Abo



NEDU Injection Line

Complete List

Map ID	Sample Date	Sample ID	Depth	Chloride	Benzene	Toulene	Ethybenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO	GPS Coordinates
Wall Samples													
HC1	5/5/2020	HC1	S	192	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.611743 -103.332744
HC2	5/5/2020	HC2	S	160	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.611801 -103.332849
HC3	5/5/2020	HC3	S	480	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.611931 -103.332766
HC4	5/5/2020	HC4	S	464	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.611840 -103.332660
Bottom Samples													
SP1	3/2/2020	SP1	S	10400	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.611827 -103.332738
		SP1	1'	304	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	



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

March 03, 2020

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: MONUMENT ABO CTB

Enclosed are the results of analyses for samples received by the laboratory on 03/02/20 10:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/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:	03/02/2020	Sampling Date:	03/02/2020
Reported:	03/03/2020	Sampling Type:	Soil
Project Name:	MONUMENT ABO CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ SURFACE (H000656-01)

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	03/03/2020	ND	1.89	94.6	2.00	3.00		
Toluene*	<0.050	0.050	03/03/2020	ND	1.90	94.9	2.00	2.81		
Ethylbenzene*	<0.050	0.050	03/03/2020	ND	1.91	95.4	2.00	2.84		
Total Xylenes*	<0.150	0.150	03/03/2020	ND	5.52	92.0	6.00	2.81		
Total BTEx	<0.300	0.300	03/03/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 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	10400	16.0	03/02/2020	ND	400	100	400	3.92	

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	03/03/2020	ND	190	94.8	200	1.02	
DRO >C10-C28*	<10.0	10.0	03/03/2020	ND	187	93.3	200	1.93	
EXT DRO >C28-C36	<10.0	10.0	03/03/2020	ND					

Surrogate: 1-Chlorooctane 84.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 87.6 % 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: 03/02/2020
 Reported: 03/03/2020
 Project Name: MONUMENT ABO CTB
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 03/02/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 1' (H000656-02)

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	03/03/2020	ND	1.89	94.6	2.00	3.00		
Toluene*	<0.050	0.050	03/03/2020	ND	1.90	94.9	2.00	2.81		
Ethylbenzene*	<0.050	0.050	03/03/2020	ND	1.91	95.4	2.00	2.84		
Total Xylenes*	<0.150	0.150	03/03/2020	ND	5.52	92.0	6.00	2.81		
Total BTEx	<0.300	0.300	03/03/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 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	304	16.0	03/02/2020	ND	400	100	400	3.92	

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	03/03/2020	ND	190	94.8	200	1.02	
DRO >C10-C28*	<10.0	10.0	03/03/2020	ND	187	93.3	200	1.93	
EXT DRO >C28-C36	<10.0	10.0	03/03/2020	ND					

Surrogate: 1-Chlorooctane 90.9 % 44.3-144

Surrogate: 1-Chlorooctadecane 93.7 % 42.2-156

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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

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*=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: Space Corporation				P.O. #:		BILL TO										ANALYSIS REQUEST											
Project Manager: Grace Baker				Company:																							
Address:				Attn:		City:		State:		Zip:		Phone #:		Fax #:		Project Name: Monument ABB CTS		Project Location: Monument ABB CTS		Sampler Name: Jeff Brown		FOR LAB USE ONLY					
City:				State:		Zip:		Address:		City:		State:		Zip:		Phone #:		Fax #:		Project Name: Monument ABB CTS		Project Location: Monument ABB CTS		Sampler Name: Jeff Brown		FOR LAB USE ONLY	
Phone #:				Fax #:		Project Owner:		City:		State:		Zip:		Phone #:		Fax #:		Project Name: Monument ABB CTS		Project Location: Monument ABB CTS		Sampler Name: Jeff Brown		FOR LAB USE ONLY			
Project #:				Project Owner:		City:		State:		Zip:		Phone #:		Fax #:		Project Name: Monument ABB CTS		Project Location: Monument ABB CTS		Sampler Name: Jeff Brown		FOR LAB USE ONLY		Lab I.D.:		Sample I.D.:	
Project Name: Monument ABB CTS				Project Location: Monument ABB CTS		Sampler Name: Jeff Brown		FOR LAB USE ONLY		Lab I.D.:		Sample I.D.:		H000000		2 SP1 @ Surface		2 SP1 @ 1'									
FOR LAB USE ONLY				Lab I.D.:		Sample I.D.:		H000000		2 SP1 @ Surface		2 SP1 @ 1'															
FOR LAB USE ONLY				Lab I.D.:		Sample I.D.:		H000000		2 SP1 @ Surface		2 SP1 @ 1'															
FOR LAB USE ONLY				Lab I.D.:		Sample I.D.:		H000000		2 SP1 @ Surface		2 SP1 @ 1'															
FOR LAB USE ONLY				Lab I.D.:		Sample I.D.:		H000000		2 SP1 @ Surface		2 SP1 @ 1'															
FOR LAB USE ONLY				Lab I.D.:		Sample I.D.:		H000000		2 SP1 @ Surface		2 SP1 @ 1'															
FOR LAB USE ONLY				Lab I.D.:		Sample I.D.:		H000000		2 SP1 @ Surface		2 SP1 @ 1'															
FOR LAB USE ONLY				Lab I.D.:		Sample I.D.:		H000000		2 SP1 @ Surface		2 SP1 @ 1'															
FOR LAB USE ONLY				Lab I.D.:		Sample I.D.:		H000000		2 SP1 @ Surface		2 SP1 @ 1'															
FOR LAB USE ONLY				Lab I.D.:		Sample I.D.:		H000000		2 SP1 @ Surface		2 SP1 @ 1'															
FOR LAB USE ONLY				Lab I.D.:		Sample I.D.:		H000000		2 SP1 @ Surface		2 SP1 @ 1'															
FOR LAB USE ONLY				Lab I.D.:		Sample I.D.:		H000000		2 SP1 @ Surface		2 SP1 @ 1'															
FOR LAB USE ONLY				Lab I.D.:		Sample I.D.:		H000000		2 SP1 @ Surface		2 SP1 @ 1'															
FOR LAB USE ONLY				Lab I.D.:		Sample I.D.:		H000000		2 SP1 @ Surface		2 SP1 @ 1'															
FOR LAB USE ONLY				Lab I.D.:		Sample I.D.:		H000000		2 SP1 @ Surface		2 SP1 @ 1'															
FOR LAB USE ONLY				Lab I.D.:		Sample I.D.:		H000000		2 SP1 @ Surface		2 SP1 @ 1'															
FOR LAB USE ONLY				Lab I.D.:		Sample I.D.:		H000000		2 SP1 @ Surface		2 SP1 @ 1'															
FOR LAB USE ONLY				Lab I.D.:		Sample I.D.:		H000000		2 SP1 @ Surface		2 SP1 @ 1'															
FOR LAB USE ONLY				Lab I.D.:		Sample I.D.:		H000000		2 SP1 @ Surface		2 SP1 @ 1'															
FOR LAB USE ONLY				Lab I.D.:		Sample I.D.:		H000000		2 SP1 @ Surface		2 SP1 @ 1'															
FOR LAB USE ONLY				Lab I.D.:		Sample I.D.:		H000000		2 SP1 @ Surface		2 SP1 @ 1'															
FOR LAB USE ONLY				Lab I.D.:		Sample I.D.:		H000000		2 SP1 @ Surface		2 SP1 @ 1'															

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



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

May 08, 2020

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: MONUMENT ABO

Enclosed are the results of analyses for samples received by the laboratory on 05/05/20 14:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/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:	05/05/2020	Sampling Date:	05/05/2020
Reported:	05/08/2020	Sampling Type:	Soil
Project Name:	MONUMENT ABO	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Kelly Jacobson
Project Location:	NONE GIVEN		

Sample ID: HC 1 (H001244-01)

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	05/06/2020	ND	1.85	92.7	2.00	9.59	
Toluene*	<0.050	0.050	05/06/2020	ND	1.89	94.5	2.00	9.75	
Ethylbenzene*	<0.050	0.050	05/06/2020	ND	1.95	97.5	2.00	9.53	
Total Xylenes*	<0.150	0.150	05/06/2020	ND	5.69	94.8	6.00	9.76	
Total BTX	<0.300	0.300	05/06/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	192	16.0	05/06/2020	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	05/06/2020	ND	186	92.9	200	1.22	
DRO >C10-C28*	<10.0	10.0	05/06/2020	ND	184	91.8	200	0.949	
EXT DRO >C28-C36	<10.0	10.0	05/06/2020	ND					

Surrogate: 1-Chlorooctane 109 % 44.3-144

Surrogate: 1-Chlorooctadecane 112 % 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:	05/05/2020	Sampling Date:	05/05/2020
Reported:	05/08/2020	Sampling Type:	Soil
Project Name:	MONUMENT ABO	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Kelly Jacobson
Project Location:	NONE GIVEN		

Sample ID: HC 2 (H001244-02)

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	05/06/2020	ND	1.85	92.7	2.00	9.59		
Toluene*	<0.050	0.050	05/06/2020	ND	1.89	94.5	2.00	9.75		
Ethylbenzene*	<0.050	0.050	05/06/2020	ND	1.95	97.5	2.00	9.53		
Total Xylenes*	<0.150	0.150	05/06/2020	ND	5.69	94.8	6.00	9.76		
Total BTX	<0.300	0.300	05/06/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	160	16.0	05/06/2020	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	05/06/2020	ND	186	92.9	200	1.22	
DRO >C10-C28*	<10.0	10.0	05/06/2020	ND	184	91.8	200	0.949	
EXT DRO >C28-C36	<10.0	10.0	05/06/2020	ND					

Surrogate: 1-Chlorooctane 101 % 44.3-144

Surrogate: 1-Chlorooctadecane 102 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	05/05/2020	Sampling Date:	05/05/2020
Reported:	05/08/2020	Sampling Type:	Soil
Project Name:	MONUMENT ABO	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Kelly Jacobson
Project Location:	NONE GIVEN		

Sample ID: HC 3 (H001244-03)

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	05/06/2020	ND	1.85	92.7	2.00	9.59		
Toluene*	<0.050	0.050	05/06/2020	ND	1.89	94.5	2.00	9.75		
Ethylbenzene*	<0.050	0.050	05/06/2020	ND	1.95	97.5	2.00	9.53		
Total Xylenes*	<0.150	0.150	05/06/2020	ND	5.69	94.8	6.00	9.76		
Total BTX	<0.300	0.300	05/06/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	480	16.0	05/06/2020	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	05/06/2020	ND	186	92.9	200	1.22	
DRO >C10-C28*	<10.0	10.0	05/06/2020	ND	184	91.8	200	0.949	
EXT DRO >C28-C36	<10.0	10.0	05/06/2020	ND					

Surrogate: 1-Chlorooctane 103 % 44.3-144

Surrogate: 1-Chlorooctadecane 104 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	05/05/2020	Sampling Date:	05/05/2020
Reported:	05/08/2020	Sampling Type:	Soil
Project Name:	MONUMENT ABO	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Kelly Jacobson
Project Location:	NONE GIVEN		

Sample ID: HC 4 (H001244-04)

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	05/06/2020	ND	1.85	92.7	2.00	9.59		
Toluene*	<0.050	0.050	05/06/2020	ND	1.89	94.5	2.00	9.75		
Ethylbenzene*	<0.050	0.050	05/06/2020	ND	1.95	97.5	2.00	9.53		
Total Xylenes*	<0.150	0.150	05/06/2020	ND	5.69	94.8	6.00	9.76		
Total BTX	<0.300	0.300	05/06/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	464	16.0	05/06/2020	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	05/06/2020	ND	186	92.9	200	1.22	
DRO >C10-C28*	<10.0	10.0	05/06/2020	ND	184	91.8	200	0.949	
EXT DRO >C28-C36	<10.0	10.0	05/06/2020	ND					

Surrogate: 1-Chlorooctane 89.9 % 44.3-144

Surrogate: 1-Chlorooctadecane 90.9 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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

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A handwritten signature in cursive script, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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