



2350 W Marland Blvd Hobbs, NM 88240

Remediation Plan

October 14, 2019

Re: Ghost Rider 22-15 Fed Com 202H

API# 30-025-06556

Case # 1RP-5635

Background:

On July 14, 2019 a release occurred due to hatch cover on a frac tank holding brine water did not seal correctly. An initial C-141 was submitted to NMOCD and approved on July 26, 2019. The release is located west of Jal, New Mexico (GPS: 32.196918, -103.6563568) in unit letter P, section 22, township 24S range 32E. Groundwater data was collected utilizing NMOSE wells of record. There is only one well of record for township 24S range 32E in section 5. The depth of that well is 380 feet to groundwater. The release area is located in an area of low karst and no significant water courses are in the area of the release. The entire release was contained to the lease pad. On September 13, 2019 surface and 1 foot samples were collected and submitted to a commercial laboratory for analysis of Chloride, TPH, and BTEX.

Remediation Plan:

Due to the lack of groundwater data in the area Apache Corporation proposes to conduct one soil bore to determine the depth of groundwater. Once the depth to groundwater has been determined Apache Corporation will remediate the release to table one standards. Once the excavation is complete Apache Corporation will conduct final five point bottom composite samples not to exceed 1,000 square feet and five point wall composite samples not to exceed 200 square feet. All excavated material will be hauled to an NMOCD approved facility and the release area will be backfilled with clean imported caliche. The remediation will be completed within 90 days of NMOCD and BLM approval of the plan.

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

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	NDHR1922134717
District RP	IRP-5635
Facility ID	
Application ID	pDHR1922133109

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: W 32.196918 Longitude: N -103.6563568

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Ghost Rider 22-15 Fed Com 202H	Site Type: Water Injection Well
Date Release Discovered: July 14, 2019	API # 3002506556

Unit Letter	Section	Township	Range	County
P	22	24S	32E	LEA

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

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 (N/A)	Volume Recovered (N/A)
<input type="checkbox"/> Produced Water	Volume Released (N/A)	Volume Recovered (N/A)
	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 checked="" type="checkbox"/> Other (Brine)	Volume/Weight Released (12 bbls)	Volume/Weight Recovered (0 bbls)

Cause of Release

Hatch cover did not seal correctly.

State of New Mexico
Oil Conservation Division

Incident ID	NDHR1922134717
District RP	IRP-5635
Facility ID	
Application ID	pDHR1922133109

Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Via email given to NM OCD by Bruce Baker, Senior Environmental Technician, Apache Corporation	

Initial Response

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

- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not 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: Jeff Broom

Title: Environmental Technician

Signature: 

Date: 07/24/2019

Email: Jeffrey.Broom@apachecorp.com

Telephone: (432) 664-4677

OCD Only

Received by: Dylan Rose-Coss

Date: 07/26/2019

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?	<u>380</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 I of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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Printed Name: Bruce Baker Title: Environmental Tech SR.Signature: Bruce Baker Date: 10-14-19email: larry.baker@apachecorp.com Telephone: 432-631-6982OCD 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: 10-14-19email: 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: _____



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

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

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

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

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

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 01932		C	ED	3	1	12	24S	32E		628633	3567188*	492		
C 02350		CUB	ED	4	3	10	24S	32E		625826	3566333*	60		
C 03527 POD1		C	LE	1	2	3	03	24S	32E	625770	3568487	500		
C 03528 POD1		C	LE	1	1	2	15	24S	32E	626040	3566129	541		
C 03530 POD1		C	LE	3	4	3	07	24S	32E	620886	3566156	550		
C 03555 POD1		C	LE	2	2	1	05	24S	32E	622709	3569231	600	380	220

Average Depth to Water: **380 feet**

Minimum Depth: **380 feet**

Maximum Depth: **380 feet**

Record Count: 6

PLSS Search:

Township: 24S

Range: 32E

*UTM location was derived from PLSS - see Help

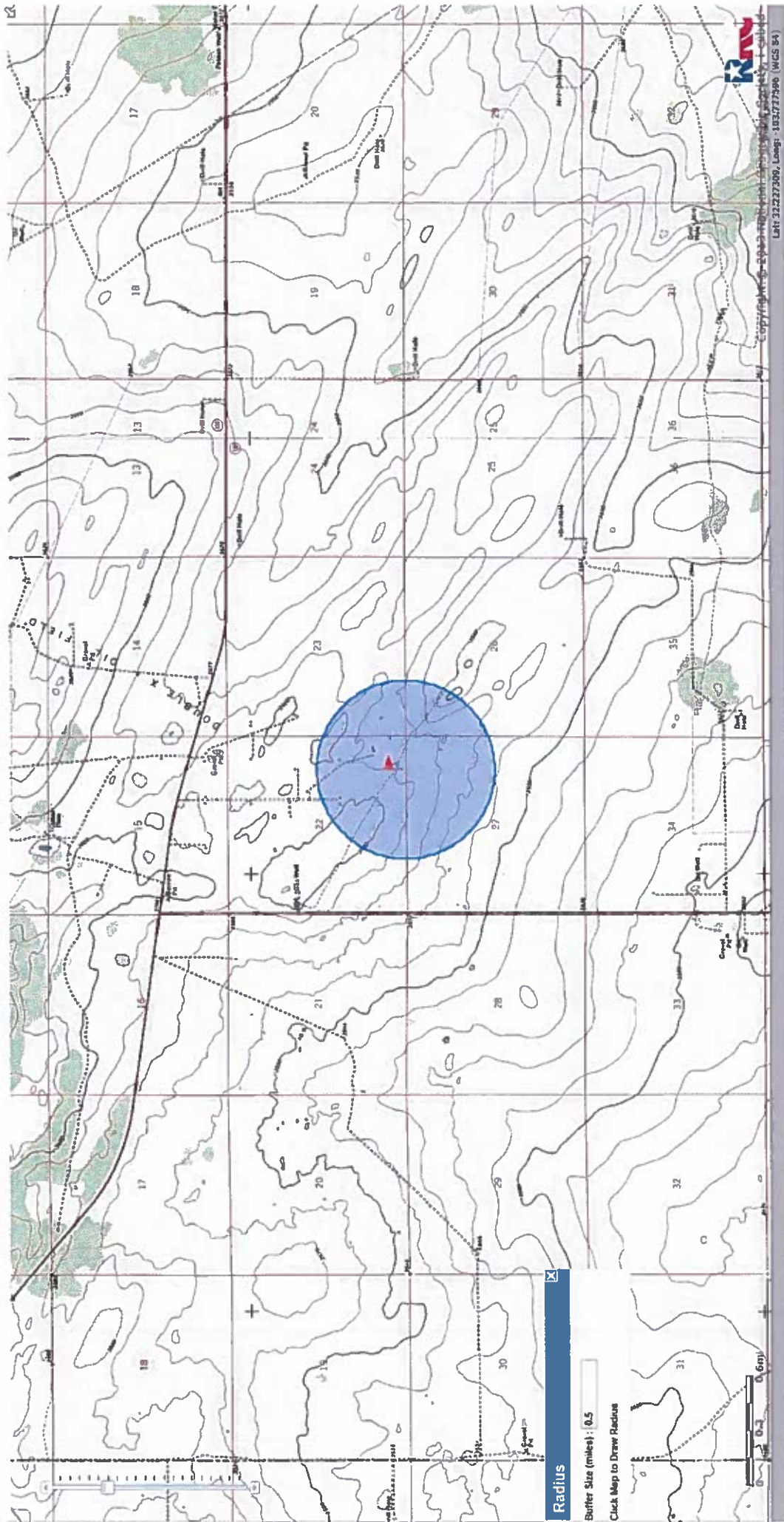
The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

10/14/19 2:31 PM

WATER COLUMN/ AVERAGE
DEPTH TO WATER

Karst Map



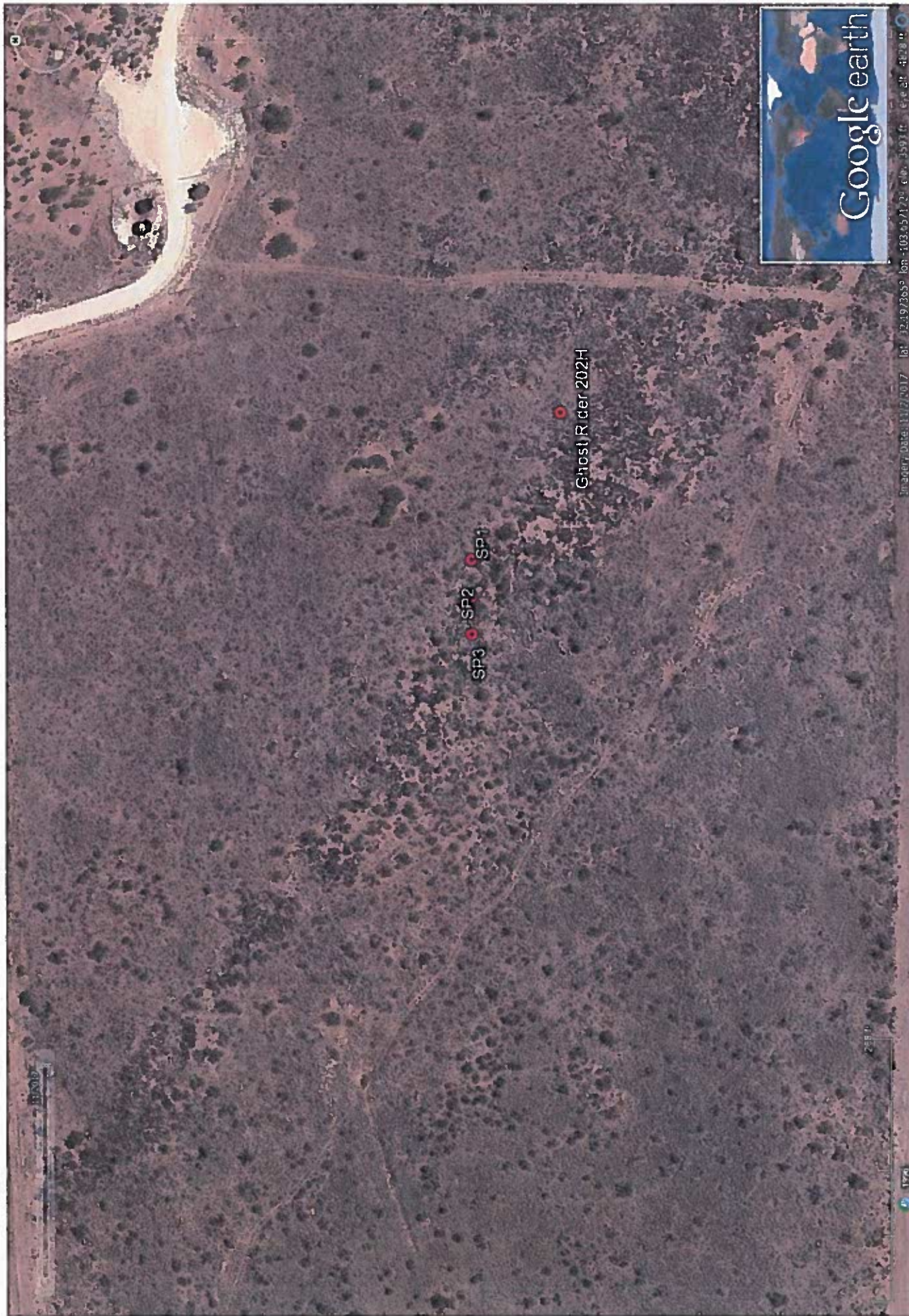


Radius

Buffer Size (miles): 0.5

Click Map to Draw Radius





GHOSH RIDER #202H

Delineation Samples- Surface

Map ID	Sample ID	Depth	Chloride	Benzene	Toulene	Ethybenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO	GPS Coordinates
9/13/2019	SP1 @ Surface	S	7,920.00	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	254	<10.0	32.197323, -103.656809
9/13/2019	SP2 @ Surface	S	14,400.00	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.197323, -103.656943
9/13/2019	SP3 @ Surface	S	31,200.00	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.197321, -103.657075

Delineation Samples- 1'

Sample Date	Sample ID	Depth	Chloride	Benzene	Toulene	Ethybenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO	GPS Coordinates
9/13/2019	SP1 @ 1'	1'	2,360.00	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	217	<10.0	"
9/13/2019	SP2 @ 1'	1'	8,480.00	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	"
9/13/2019	SP3 @ 1'	1'	10,000.00	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	"

September 16, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: GHOST RIDER #202 H

Enclosed are the results of analyses for samples received by the laboratory on 09/13/19 16:40.

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

Cardinal Laboratories is 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,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

 Received: 09/13/2019
 Reported: 09/16/2019
 Project Name: GHOST RIDER #202 H
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

 Sampling Date: 09/13/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Angela Cabrera

Sample ID: SP 1 @ SURFACE (H903173-01)

BTEX 8021B			mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/16/2019	ND	2.14	107	2.00	2.36		
Toluene*	<0.050	0.050	09/16/2019	ND	1.96	98.0	2.00	4.79		
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	2.42	121	2.00	17.2		
Total Xylenes*	<0.150	0.150	09/16/2019	ND	6.01	100	6.00	1.48		
Total BTEX	<0.300	0.300	09/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 97.1 % 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	7920	16.0	09/16/2019	ND	432	108	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	09/14/2019	ND	198	98.8	200	5.98	
DRO >C10-C28*	254	10.0	09/14/2019	ND	201	100	200	7.76	
EXT DRO >C28-C36	<10.0	10.0	09/14/2019	ND					

Surrogate: 1-Chlorooctane 82.3 % 41-142

Surrogate: 1-Chlorooctadecane 98.9 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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 Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 09/13/2019
 Reported: 09/16/2019
 Project Name: GHOST RIDER #202 H
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

 Sampling Date: 09/13/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Angela Cabrera

Sample ID: SP 1 @ 1' (H903173-02)

BTEX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/16/2019	ND	2.14	107	2.00	2.36		
Toluene*	<0.050	0.050	09/16/2019	ND	1.96	98.0	2.00	4.79		
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	2.42	121	2.00	17.2		
Total Xylenes*	<0.150	0.150	09/16/2019	ND	6.01	100	6.00	1.48		
Total BTEX	<0.300	0.300	09/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 96.2 % 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	2360	16.0	09/16/2019	ND	432	108	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	09/14/2019	ND	198	98.8	200	5.98	
DRO >C10-C28*	217	10.0	09/14/2019	ND	201	100	200	7.76	
EXT DRO >C28-C36	<10.0	10.0	09/14/2019	ND					

Surrogate: 1-Chlorooctane 84.3 % 41-142

Surrogate: 1-Chlorooctadecane 96.7 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 09/13/2019
Reported: 09/16/2019
Project Name: GHOST RIDER #202 H
Project Number: NONE GIVEN
Project Location: NONE GIVEN

Sampling Date: 09/13/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Angela Cabrera

Sample ID: SP 2 @ SURFACE (H903173-03)

BTEX 8021B			mg/kg		Analyzed By: CK				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	2.14	107	2.00	2.36	
Toluene*	<0.050	0.050	09/16/2019	ND	1.96	98.0	2.00	4.79	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	2.42	121	2.00	17.2	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	6.01	100	6.00	1.48	
Total BTEX	<0.300	0.300	09/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.3 % 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	14400	16.0	09/16/2019	ND	432	108	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					

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	09/14/2019	ND	198	98.8	200	5.98	
DRO >C10-C28*	<10.0	10.0	09/14/2019	ND	201	100	200	7.76	
EXT DRO >C28-C36	<10.0	10.0	09/14/2019	ND					

Surrogate: 1-Chlorooctane 76.7 % 41-142

Surrogate: 1-Chlorooctadecane 83.3 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 09/13/2019
Reported: 09/16/2019
Project Name: GHOST RIDER #202 H
Project Number: NONE GIVEN
Project Location: NONE GIVEN

Sampling Date: 09/13/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Angela Cabrera

Sample ID: SP 2 @ 1' (H903173-04)

BTEX 80218		mg/kg	Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	2.14	107	2.00	2.36	
Toluene*	<0.050	0.050	09/16/2019	ND	1.96	98.0	2.00	4.79	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	2.42	121	2.00	17.2	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	6.01	100	6.00	1.48	
Total BTEX	<0.300	0.300	09/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 97.4 % 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	8480	16.0	09/16/2019	ND	432	108	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	09/15/2019	ND	198	98.8	200	5.98	
DRO >C10-C28*	<10.0	10.0	09/15/2019	ND	201	100	200	7.76	
EXT DRO >C28-C36	<10.0	10.0	09/15/2019	ND					

Surrogate: 1-Chlorooctane 83.5 % 41-142

Surrogate: 1-Chlorooctadecane 91.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 09/13/2019
Reported: 09/16/2019
Project Name: GHOST RIDER #202 H
Project Number: NONE GIVEN
Project Location: NONE GIVEN

Sampling Date: 09/13/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Angela Cabrera

Sample ID: SP 3 @ SURFACE (H903173-05)

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	2.14	107	2.00	2.36	
Toluene*	<0.050	0.050	09/16/2019	ND	1.96	98.0	2.00	4.79	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	2.42	121	2.00	17.2	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	6.01	100	6.00	1.48	
Total BTEX	<0.300	0.300	09/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 96.2 % 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	31200	16.0	09/16/2019	ND	432	108	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	09/15/2019	ND	198	98.8	200	5.98	
DRO >C10-C28*	<10.0	10.0	09/15/2019	ND	201	100	200	7.76	
EXT DRO >C28-C36	<10.0	10.0	09/15/2019	ND					

Surrogate: 1-Chlorooctane 86.5 % 41-142

Surrogate: 1-Chlorooctadecane 93.5 % 37.6-147

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Coley D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 09/13/2019
 Reported: 09/16/2019
 Project Name: GHOST RIDER #202 H
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

 Sampling Date: 09/13/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Angela Cabrera

Sample ID: SP 3 @ 1' (H903173-06)

BTEX 8021B		mg/kg	Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2019	ND	2.14	107	2.00	2.36	
Toluene*	<0.050	0.050	09/16/2019	ND	1.96	98.0	2.00	4.79	
Ethylbenzene*	<0.050	0.050	09/16/2019	ND	2.42	121	2.00	17.2	
Total Xylenes*	<0.150	0.150	09/16/2019	ND	6.01	100	6.00	1.48	
Total BTEX	<0.300	0.300	09/16/2019	ND					

Surrogate 4-Bromofluorobenzene (PIC) 96.3 % 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	10000	16.0	09/16/2019	ND	432	108	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	09/15/2019	ND	198	98.8	200	5.98	
DRO >C10-C28*	<10.0	10.0	09/15/2019	ND	201	100	200	7.76	
EXT DRO >C28-C36	<10.0	10.0	09/15/2019	ND					

Surrogate 1-Chlorooctane 84.1 % 41-142

Surrogate 1-Chlorooctadecane 92.0 % 37.6-147

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 Celey D. Keene, Lab Director/Quality Manager

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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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: Apple Corporation Project Manager: Bruce Baker Address: City: State: Zip: Phone #: Fax #:		P.O. #: Company: Attn: Address: City: State: Zip: Phone #: Fax #:	
Project #: Project Name: GHOS River 2004 Project Location: Gates River 2004 Sample Name: Lett River		Project Owner: City: State: Zip: Phone #: Fax #:	
FOR LAB USE ONLY			
Lab I.D. Sample I.D.	Lab I.D. H10873 -1 SP1 @ Surface -2 SP1 @ 1' -3 SP2 @ Surface -4 SP2 @ 1' -5 SP3 @ Surface -6 SP3 @ 1'	(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: ACID/BASE ICE / COOL OTHER:	MATRIX PRESERV SAMPLING
		DATE 5/15/15 5/15/15 5/15/15 5/15/15 5/15/15 5/15/15	TIME 12:35 12:46 12:36 12:47 12:37 12:48
		CL BTEX EXT. TPH	

PLEASE NOTE: Labeled and Dated. Containers labeled and dated are subject to return for any claim against whether found in contact or not, shall be printed in the amount paid by the client for the service. All claims including those for replacement and any other claims whatsoever shall be deemed waived unless made in writing and received by Client within 30 days after completion of the applicable service. In no event shall Client be held for inclusion or non-inclusion of containers, including without limitation, business subscriptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors, and/or its or their employees, agents, representatives or other persons with whom it has entered into any of the above stated agreements or arrangements.

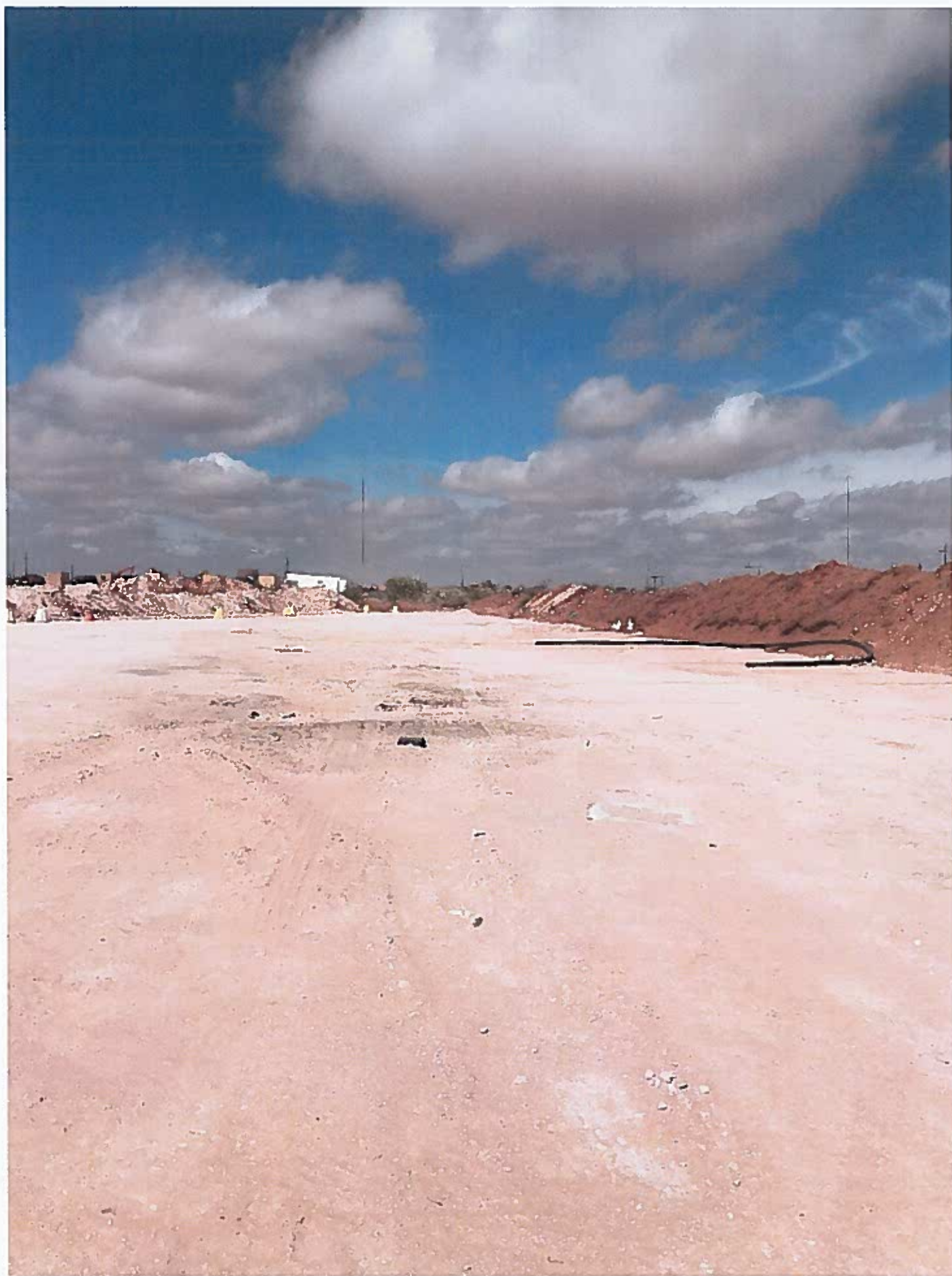
Relinquished By: [Signature] **Date:** 5/13/15 **Received By:** [Signature] **Date:** 5/13/15

Relinquished By: [Signature] **Date:** [] **Received By:** [Signature] **Date:** []

Delivered By: (Circle One) **Sample Condition:** Cool ☐ Intact ☒ Yes ☐ No ☒ Yes ☐ No

Sampler - UPS - Bus - Other: 3.4c 3.8c **Checked By:** [Signature] **Initials:** [Signature]

REMARKS: PLEASE Rush. Thank you, Lett



WGS84 32.19727, -103.65689 Δ ft 3575 Δ ft ± 33 ft Δ ft ± 15 NW327



13Sep19 12:33 Ghost Rider 202H Ghost Rider 202H
Eunice, NM © 13-Sep-19 11:28:59

WGS84 32.19727, -103.65684 Δ ft 3600 Δ ft ± 39 ft Δ ft ± 15 NE63



13Sep19 11:28 Ghost Rider 202H Ghost Rider 202H
Lea County, NM © 13-Sep-19 11:28:22

WGS84 32.19733, -103.65682 Δ ft 3563 Δ ft ± 26 ft Δ ft ± 15 NW310



13Sep19 11:23 Ghost Rider 202H Ghost Rider 202H
Lea County, NM © 13-Sep-19 11:23:16