



NRM2004831561

2350 W Marland Blvd Hobbs, NM 88240

Deferment Request

February 11, 2020

Re: EW Walden Battery
Case # Pending

On November 12, 2019 a release occurred due to a tank bottom deteriorated resulting in the loss of fluid. An initial C-141 was submitted and rejected by NMOCD due to legal description was incorrect. The release (GPS Coordinates: 32,38856, -103.15570) is located south of Eunice, New Mexico in unit letter L section 15 township 22S range 37E. A groundwater survey was conducted utilizing NMOSE wells of record and there are three wells within a 1,000 feet of the release with the shallowest well at 87 feet below ground surface.

After the tank was removed Apache Corporation excavated approximately 6 inches beneath the tank utilizing a hydro-vac. A bottom sample was collected and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. The laboratory results showed TPH levels above table one standards. On December 18, 2019 a vertical was conducted utilizing a backhoe in a depth of 7 feet below ground surface. All samples collected from the vertical were submitted to a commercial laboratory for analysis of TPH, and BTEX. The laboratory results were above table one standards for GRO and DRO. On December 27, 2019 the vertical was advanced an additional 1.5 feet to a depth of 8.5 feet. The 8.5 foot sample was taken to a commercial laboratory for analysis of TPH and BTEX. Laboratory results were below table one standards for TPH and BTEX.

Due to the release being beneath the middle tank inside the battery further excavation could not be conducted. All excavated material (12 cubic yards) was exported to an NMOCD approved disposal facility. The excavation was backfilled with clean imported caliche and a new tank was installed.

Apache Corporation has fully delineated the depth of contamination and respectfully request that the remaining contamination be deferred until system abandonment.

Enclosed: Corrected C-141, Groundwater data, Maps, Sample Data, 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	NRM2004831561
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: 32.38856 Longitude: -103.15570

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: EW Walden Battery	Site Type: Battery
Date Release Discovered: November 12, 2019	API #

Unit Letter	Section	Township	Range	County
L	15	22S	37E	LEA

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (Name: Not Applicable)

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (30 Barrels)	Volume Recovered (4 Barrels)
<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 type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Tank bottom deteriorated.

State of New Mexico
Oil Conservation Division

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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. Release was contained to the containment area.
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 on 10/30/2019 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

<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>Bruce Baker</u>	Title: <u>Senior Environmental Technician</u>
Signature: <u>Bruce Baker</u>	Date: <u>2/11/2020</u>
Email: <u>Larry.Baker@apachecorp.com</u>	Telephone: <u>(432) 631-6982</u>
<u>OCD Only</u> Received by: <u>Ramona Marcus</u> Date: <u>2/17/2020</u>	

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Received by OGD: 2/11/2020 4:09:47 PM

Incident ID	NRM2004831561
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?

37 (ft bgs)

Did this release impact groundwater or surface water?

☐ Yes ☒ No

Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?

☐ Yes ☒ No

Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?

☐ Yes ☒ No

Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?

☐ Yes ☒ No

Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?

☐ Yes ☒ No

Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?

☒ Yes ☐ No

Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?

☐ Yes ☒ No

Are the lateral extents of the release within 300 feet of a wetland?

☐ Yes ☒ No

Are the lateral extents of the release overlying a subsurface mine?

☐ Yes ☒ No

Are the lateral extents of the release overlying an unstable area such as karst geology?

☐ Yes ☒ No

Are the lateral extents of the release within a 100-year floodplain?

☐ Yes ☒ No

Did the release impact areas **not** on an exploration, development, production, or storage site?

☐ Yes ☒ No

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

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

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

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

State of New Mexico
Oil Conservation Division

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Printed Name: Bruce Baker

Title: Senior Environmental Technician

Signature: *Bruce Baker* Date: 02/11/2020

Email: Larry.Baker@apachecorp.com

Telephone: (432) 631-6982

OCD Only

Received by: Ramona Marcus Date: 2/17/2020

State of New Mexico
Oil Conservation Division

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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: Senior Environmental Technician

Signature: Bruce Baker

Date: 02/11/2020

email: Larry.Baker@apachecorp.com

Telephone: (432) 631-6982

OCD Only

Received by: Ramona Marcus

Date: 2/17/2020

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

Signature: _____

Date: _____



NRM2004831561

NRM2004831561



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		
	CP 00709	1 3 15 22S 37E	673331 3585163*		
<hr/>					
Driller License:	657	Driller Company:	OLDAKER & SONS		
Driller Name:	OLDAKER, GEORGE D (DECEASED)				
Drill Start Date:	04/28/1987	Drill Finish Date:	04/29/1987	Plug Date:	
Log File Date:	08/31/1988	PCW Rcv Date:		Source:	Shallow
Pump Type:		Pipe Discharge Size:		Estimated Yield:	25 GPM
Casing Size:	6.00	Depth Well:	200 feet	Depth Water:	87 feet
<hr/>					
Water Bearing Stratifications:		Top	Bottom	Description	
		60	87	Sandstone/Gravel/Conglomerate	
<hr/>					
Casing Perforations:		Top	Bottom		
		117	147		
<hr/>					

*UTM location was derived from PLSS - see Help

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

2/11/20 12:15 PM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer
Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)						(NAD83 UTM in meters)	
		(quarters are smallest to largest)						X	Y
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng		
2247E	CP 01806 POD1	1	3	3	15	22S	37E	673260	3584788

Driller License:	1477	Driller Company:	M & W WATERWELL SERVICE						
Driller Name:	ROBERT MAUCK								
Drill Start Date:	10/20/2019	Drill Finish Date:	10/21/2019	Plug Date:					
Log File Date:	10/28/2019	PCW Rev Date:			Source:	Shallow			
Pump Type:			Pipe Discharge Size:			Estimated Yield:	10 GPM		
Casing Size:	5.00	Depth Well:	162 feet		Depth Water:	95 feet			

Water Bearing Stratifications:	Top	Bottom	Description
	107	162	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	142	162

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2/11/20 12:16 PM POINT OF DIVERSION SUMMARY

NRM2004831561



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)				(NAD83 UTM in meters)	
		(quarters are smallest to largest)					
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng
	CP 00679	3	3	15	22S	37E	
							X Y 673338 3584760* •

Driller License: 982	Driller Company: EADES, GENE	
Driller Name: EADES, GENE		
Drill Start Date: 05/20/1985	Drill Finish Date: 05/20/1985	Plug Date:
Log File Date: 06/27/1985	PCW Rev Date:	Source: Shallow
Pump Type:	Pipe Discharge Size:	Estimated Yield: 5 GPM
Casing Size: 5.75	Depth Well: 164 feet	Depth Water: 98 feet

Water Bearing Stratifications:	Top	Bottom	Description
	98	100	Sandstone/Gravel/Conglomerate
	105	164	Sandstone/Gravel/Conglomerate

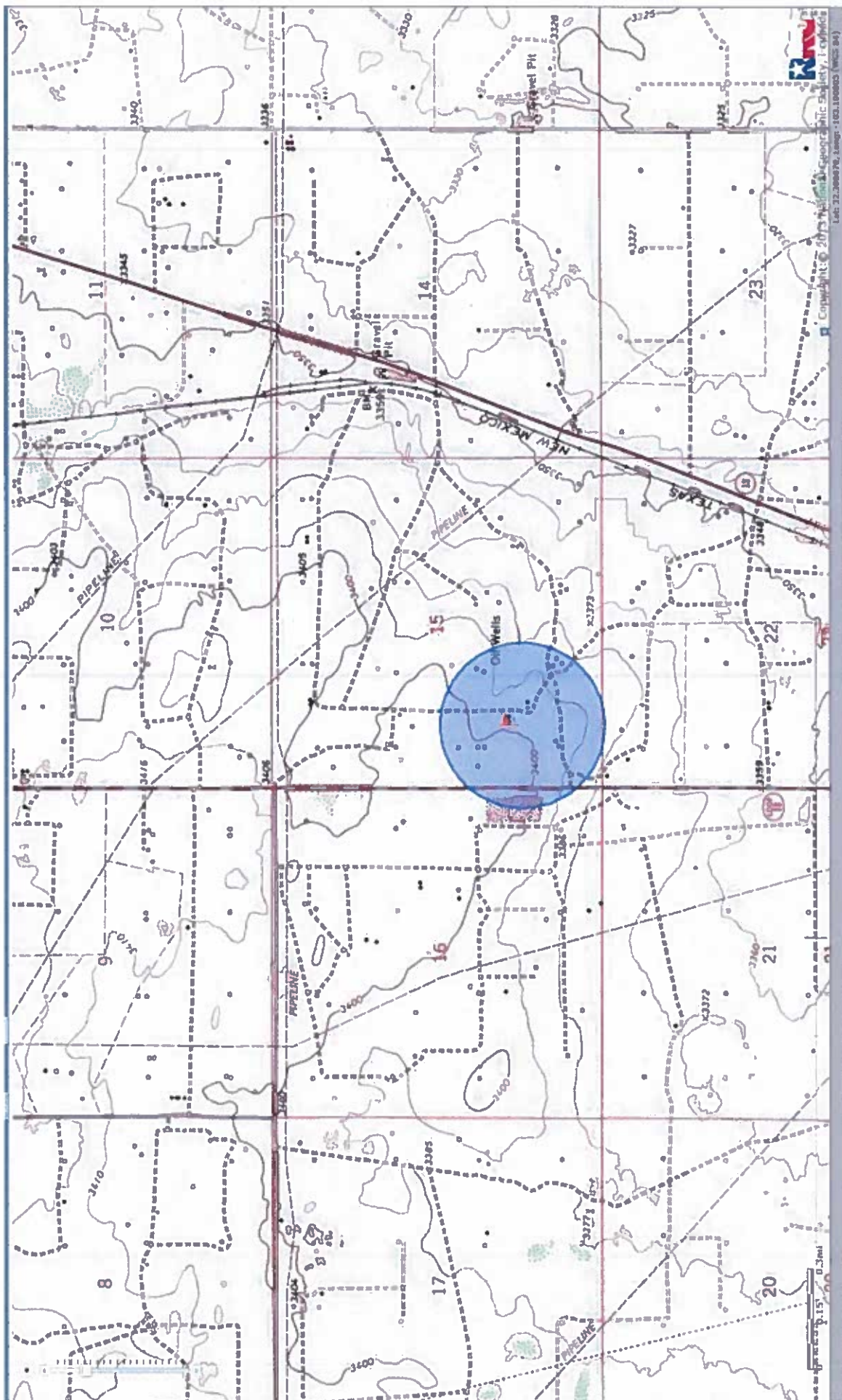
Casing Perforations:	Top	Bottom	
	124	164	

*UTM location was derived from PLSS - see Help

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POINT OF DIVERSION SUMMARY



NRM2004831561



Google earth

Imagery date: 2/26/2019

EW WALDEN

Map ID	Sample Date	Sample ID	Depth	Chloride	Benzene	Toulene	Ethybenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO	GPS Coordinates
SP1	12/5/2019	SP1 @ 6"	6"	416	3.24	18.3	18.2	29.5	69.2	922	13800	4130	32.3886649 -103.1560357
SP1	12/18/2019	SP1 @ 2'	2'	N/A	22.2	16.8	119	151	309	5490	12600	2880	
SP1	12/18/2019	SP1 @ 4'	4'	N/A	17	126	87.1	183	413	6290	19400	3760	
SP1	12/18/2019	SP1 @ 6'	6'	N/A	0.071	0.352	0.529	0.948	1.9	28.9	457	173	
SP1	12/18/2019	SP1 @ 7'	7'	N/A	<0.050	<0.050	0.115	<0.150	<0.300	<10.0	109	24.2	
SP1	12/27/2019	SP1 @ 8.5'	8.5'	N/A	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	44.8	<10.0	

A surface sample was not taken due to a Hydrovac being used to excavate the surface area prior to delineation to expose underground electric, gas, and oil lines.

NRM2004831561

NRM2004831561

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

December 06, 2019

JEFFREY BROOM

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: EW WALDEN

Enclosed are the results of analyses for samples received by the laboratory on 12/05/19 13:09.

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".

Celey D. Keene

Lab Director/Quality Manager

NRM2004831561



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

Analytical Results For:

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

Received: 12/05/2019
Reported: 12/06/2019
Project Name: EW WALDEN
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 12/05/2019
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 6" (H904074-01)

BTEX 8021B	mg/kg		Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	3.24	0.200	12/05/2019	ND	1.94	97.1	2.00	2.46	
Toluene*	18.3	0.200	12/05/2019	ND	1.87	93.5	2.00	3.50	
Ethylbenzene*	18.2	0.200	12/05/2019	ND	1.90	95.2	2.00	3.13	
Total Xylenes*	29.5	0.600	12/05/2019	ND	5.76	95.9	6.00	2.75	
Total BTEX	69.2	1.20	12/05/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 136 % 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	416	16.0	12/05/2019	ND	416	104	400	3.92	

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*	922	50.0	12/05/2019	ND	200	99.8	200	0.430	
DRO >C10-C28*	13800	50.0	12/05/2019	ND	197	98.4	200	1.30	
EXT DRO >C28-C36	4130	50.0	12/05/2019	ND					

Surrogate: 1-Chlorooctane 148 % 41-142

Surrogate: 1-Chlorooctadecane 489 % 37.6-147

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

NRM2004831561



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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.
- 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

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



CARDINAL
Laboratories

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

+ Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



NRM2004831561

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

December 19, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: EW WALDEN

Enclosed are the results of analyses for samples received by the laboratory on 12/18/19 12:02.

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.

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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



NRM2004831561

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: 12/18/2019
 Reported: 12/19/2019
 Project Name: EW WALDEN
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 12/18/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 2' 32.3886649-103.1560357 (H904212-01)

BTEX 8021B	mg/kg	Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	22.2	2.00	12/19/2019	ND	1.91	95.3	2.00	12.1	
Toluene*	16.8	2.00	12/19/2019	ND	1.89	94.4	2.00	12.8	
Ethylbenzene*	119	2.00	12/19/2019	ND	1.83	91.5	2.00	12.4	
Total Xylenes*	151	6.00	12/19/2019	ND	5.83	97.2	6.00	12.6	
Total BTEX	309	12.0	12/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 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*	5490	100	12/18/2019	ND	217	109	200	1.40	QM-07	
DRO >C10-C28*	12600	100	12/18/2019	ND	224	112	200	3.01	QM-07	
EXT DRO >C28-C36	2880	100	12/18/2019	ND						

Surrogate: 1-Chlorooctane 240 % 41-142

Surrogate: 1-Chlorooctadecane 244 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



NRM2004831561

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: 12/18/2019
 Reported: 12/19/2019
 Project Name: EW WALDEN
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 12/18/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 4' (H904212-02)

BTEX 8021B	mg/kg	Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	17.0	2.00	12/19/2019	ND	1.91	95.3	2.00	12.1	
Toluene*	126	2.00	12/19/2019	ND	1.89	94.4	2.00	12.8	
Ethylbenzene*	87.1	2.00	12/19/2019	ND	1.83	91.5	2.00	12.4	
Total Xylenes*	183	6.00	12/19/2019	ND	5.83	97.2	6.00	12.6	
Total BTEX	413	12.0	12/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 105 % 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*	6290	50.0	12/18/2019	ND	217	109	200	1.40		
DRO >C10-C28*	19400	50.0	12/18/2019	ND	224	112	200	3.01		
EXT DRO >C28-C36	3760	50.0	12/18/2019	ND						

Surrogate: 1-Chlorooctane 326 % 41-142

Surrogate: 1-Chlorooctadecane 453 % 37.6-147

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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: 12/18/2019
 Reported: 12/19/2019
 Project Name: EW WALDEN
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 12/18/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 6' (H904212-03)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.071	0.050	12/19/2019	ND	1.91	95.3	2.00	12.1	
Toluene*	0.352	0.050	12/19/2019	ND	1.89	94.4	2.00	12.8	
Ethylbenzene*	0.529	0.050	12/19/2019	ND	1.83	91.5	2.00	12.4	
Total Xylenes*	0.948	0.150	12/19/2019	ND	5.83	97.2	6.00	12.6	
Total BTEX	1.90	0.300	12/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 104 % 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*	28.9	10.0	12/18/2019	ND	217	109	200	1.40	
DRO >C10-C28*	457	10.0	12/18/2019	ND	224	112	200	3.01	
EXT DRO >C28-C36	173	10.0	12/18/2019	ND					

Surrogate: 1-Chlorooctane 80.5 % 41-142

Surrogate: 1-Chlorooctadecane 92.9 % 37.6-147

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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: 12/18/2019
 Reported: 12/19/2019
 Project Name: EW WALDEN
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 12/18/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 7' (H904212-04)

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	12/19/2019	ND	1.91	95.3	2.00	12.1	
Toluene*	<0.050	0.050	12/19/2019	ND	1.89	94.4	2.00	12.8	
Ethylbenzene*	0.115	0.050	12/19/2019	ND	1.83	91.5	2.00	12.4	
Total Xylenes*	<0.150	0.150	12/19/2019	ND	5.83	97.2	6.00	12.6	
Total BTEX	<0.300	0.300	12/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 96.7 % 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	12/18/2019	ND	217	109	200	1.40	
DRO >C10-C28*	109	10.0	12/18/2019	ND	224	112	200	3.01	
EXT DRO >C28-C36	24.2	10.0	12/18/2019	ND					

Surrogate: 1-Chlorooctane 76.0 % 41-142

Surrogate: 1-Chlorooctadecane 81.4 % 37.6-147

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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



NRM2004831561

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.
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

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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 Project Manager: Bruce Baker Address: City: Hobbs State: NM Zip: 88240 Phone #: Fax #: Project #: Project Owner: Project Name: Project Location: E.W. Walbran Sample Name: Jose Aguas FOR LAB USE ONLY		P.O. #: Company: Attn: Address: City: State: Zip: Phone #: Fax #:	
Lab I.D. H904a12	Sample I.D. 1 SP1 02 32.308 6049 -103.156 0357 2 SP1 02 41 3 SP1 06 1 4 SP1 07 1	(G)RABOR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER:	MATRIX ACID/BASE ICB / COOL OTHER:
		DATE 12/18 9:51 12/18 9:55 12/18 11:06	TIME 9:51 9:55 11:06
PLEASE NOTE: Liability and claims are limited to the amount paid by the client for the service. All claims including those for negligence and any other claims whatsoever shall be deemed waived unless made in writing and received by Central within 30 days after completion of the applicable service. No events shall be liable for materials or consequential damages, including without limitation, business interruption, 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 Central, regardless of whether such claim is based upon any of the above stated reasons or otherwise.		Relinquished By: Date: 12/18 Received By: Time: 12:02 Received By: Date: 12/18 Received By: Time: Relinquished By: Date: Time:	
Delivered By: (Circle One) Sample - UPS - Bus - Other:	Observed Temp. °C 5.0 Corrected Temp. °C 5.4	Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CHECKED BY: (Initials) Turnaround Time: Thermometer ID #97 Correction Factor +0.4 °C
Remarks: Bacteria (only) Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Observed Temp. °C Corrected Temp. °C		Verbal Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #: Remarks: All Results are emailed. Please provide Email address: E-mail Results	



NRM2004831561

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

December 30, 2019

JEFFREY BROOM

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: EW WALDEN

Enclosed are the results of analyses for samples received by the laboratory on 12/27/19 9:45.

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/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,

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

Celey D. Keene

Lab Director/Quality Manager



NRM2004831561

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

Analytical Results For:

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

Received: 12/27/2019
Reported: 12/30/2019
Project Name: EW WALDEN
Project Number: E.W. WALDEN BATTERY
Project Location: NOT GIVEN

Sampling Date: 12/27/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 8' 5" (H904294-01)

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	12/28/2019	ND	1.67	83.6	2.00	13.4	
Toluene*	<0.050	0.050	12/28/2019	ND	1.66	82.9	2.00	13.1	
Ethylbenzene*	<0.050	0.050	12/28/2019	ND	1.70	84.8	2.00	12.9	
Total Xylenes*	<0.150	0.150	12/28/2019	ND	4.93	82.2	6.00	13.0	
Total BTEX	<0.300	0.300	12/28/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 98.4 % 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	12/27/2019	ND	201	100	200	3.26	
DRO >C10-C28*	44.8	10.0	12/27/2019	ND	210	105	200	7.68	
EXT DRO >C28-C36	<10.0	10.0	12/27/2019	ND					

Surrogate: 1-Chlorooctane 95.8 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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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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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: <i>Hobbs</i> Project Manager: <i>Sepp Brown</i> Address: City: <i>Hobbs</i> State: <i>NM</i> Zip: <i>88240</i> Phone #: Fax #: Project #: Project Owner: Project Name: Project Location: <i>E.W. Walden Battery</i> Sampler Name: <i>Jose Quezada</i> <small>FOR LAB USE ONLY</small>		P.O. #: Company: Attn: Address: City: State: Zip: Phone #: Fax #:	
Lab I.D. Sample I.D.		BILL TO	
Matrix: (G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER ACID/BASE ICE / COOL OTHER		ANALYSIS REQUEST	
DATE TIME <i>12/27</i> <i>8:44am</i>		BT EX EXT TPH	
Relinquished By: <i>Jose Quezada</i> Date: <i>12-27-19</i> Time: <i>0945</i> Received By: <i>Janora Schaefer</i>		Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #: Remarks: <i>E-Mail Results</i>	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Observed Temp. °C: <i>1.9</i> Corrected Temp. °C: <i>2.3</i> Sample Condition: Cool <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Checked BY: (Initials) <i>JP</i>	
Turnaround Time: <input type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush Bacteria (only) <input type="checkbox"/> Sample Condition Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Corrected Temp. °C		Thermometer ID #97 Correction Factor -0.4 °C	

NRM2004831561

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



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