



2350 W Marland Blvd Hobbs, NM 88240

Closure Report

September 13, 2019

RGGVV-190916-C-1410

Re: Cedar Lake Federal CA 737H

API# 30-015-40901

Case # 2RP-4972

To: Robert Hamlet

*New Mexico Oil Conservation Division Energy, Minerals and Natural Resources Department
811 S. 1st Street Artesia, NM 88210*

On 9/16/2018 a release occurred due to a 2 inch tee on the well head failed. An initial C-141 was sent to NMOCD and approved by NMOCD on 9/18/2018. A remediation plan was submitted and approved by NMOCD on May 10, 2019. The Cedar Lake Federal CA 737H is located east of Loco Hills in unit letter A section 7 township 17S range 31E (GPS Coordinates: 32.85432, -103.90390).

On May 31, 2019 final 5 point bottom and wall composite samples were collected in the pasture area of the release in accordance with the NMOCD approved remediation plan and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. Laboratory results indicated that BFC 1 chloride values were above the threshold of 600 mg/kg. BFC 1 was further excavated to a depth of 1.5 feet and a 5 point bottom composite sample was collected on June 11, 2019 and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. The laboratory results were below threshold for releases in a pasture.

On June 11, 2019 final 5 point bottom and wall composite samples were collected on the lease pad in accordance with the NMOCD approved remediation plan and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. Laboratory results indicated that BFC 16, 21, 22, 23, and 26 had TPH levels above table one standards for releases greater than 100 feet to groundwater. Those sample point areas were further excavated to a depth of 1 foot. On June 19, 2019 5 point bottom composite samples were collected and submitted to a commercial laboratory for analysis of TPH and BTEX. All laboratory results were below table one standards for releases greater than 100 feet to groundwater.

On July 7, 2019 final 5 point bottom composite samples were collected in an area that was missed during the sampling event on June 11, 2019 and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. Laboratory results indicated that BFC 27 and 28 were above table one standards chloride and TPH. Those areas were excavated to a depth of 3 inches and final bottom composite samples were collected and submitted to a commercial laboratory for analysis of chloride and TPH. Laboratory results were below table one standards for releases greater than 100 feet to groundwater.

All excavated soil was exported to an NMOCD approved disposal facility. The pad excavation was backfilled with clean imported caliche and contoured to the surrounding area. The pasture

area was backfilled with clean imported top soil and contoured to the surrounding area. The pasture area was reseeded with BLM # 2 seed mixture.

Apache Corporation has completed the remediation in accordance with the NMOCD approved remediation plan and respectfully request that 2RP-4972 be closed.

Enclosed: C-141, maps, data table, laboratory results, field notes, 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	NMAP1826165680
District RP	2RP-4972
Facility ID	N/A
Application ID	pMAP1826165277

Release Notification

Responsible Party

Responsible Party	Apache Corp.	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 32.85432 Longitude -103.90390
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Cedar Lake Federal CA #787H	Site Type	Oil well
Date Release Discovered	9/16/18	API# (if applicable)	30-015-40901

Unit Letter	Section	Township	Range	County
A	7	17S	31E	Eddy

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 checked="" type="checkbox"/> Crude Oil	Volume Released (bbls)	26 barrels	Volume Recovered (bbls)	15 barrels
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls)	52 barrels	Volume Recovered (bbls)	35 barrels
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?		<input type="checkbox"/> Yes <input 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

A 2 inch Tee on the well head failed.

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 was greater than 25 barrels of total fluid
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Immediate notice was provided by Bruce Baker to Jim Griswold, Mike Bratcher via email on 9/17/18 at 7:02 am	
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>Environmental Tech. SR.</u>
Signature: <u>Bruce Baker</u>	Date: <u>9/18/18</u>
email: <u>larry.baker@apachecorp.com</u>	Telephone: <u>432-681-6992</u>
OCD Only	
Received by: <u>[Signature]</u>	Date: <u>09/18/18</u>

Volume Calculation

$$\text{Affected Area} = 480 \text{ ft}^3 \times 7.48 = 3,590 \text{ gallons} / 42 = 85.47 \text{ bbls}$$

$$85.47 \times .33 \text{ soil porosity} = 28.20 + \text{SO recovered} = 78 \text{ barrels}$$

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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>NONE</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 checked="" type="checkbox"/> Yes <input 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

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Printed Name: Bruce BakerTitle: Environmental Tech SRSignature: Bruce BakerDate: 12-14-18email: larry.baker@apachecorp.comTelephone: 432-631-6982**OCD Only**Received by: Robert HamletDate: 5/10/2019

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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 BakerTitle: Environmental Tech. SRSignature: Bruce BakerDate: 12-14-18email: larry.baker@apachecorp.comTelephone: 432-631-6992**OCD Only**Received by: Robert HamletDate: 5/10/2019

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

Signature: [Signature]Date: 5/10/2019

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Bruce Baker Title: Environmental Tech.
Signature: Bruce Baker Date: 9-13-19
email: Larry.baker@apachecorp.com Telephone: 432-631-6982

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

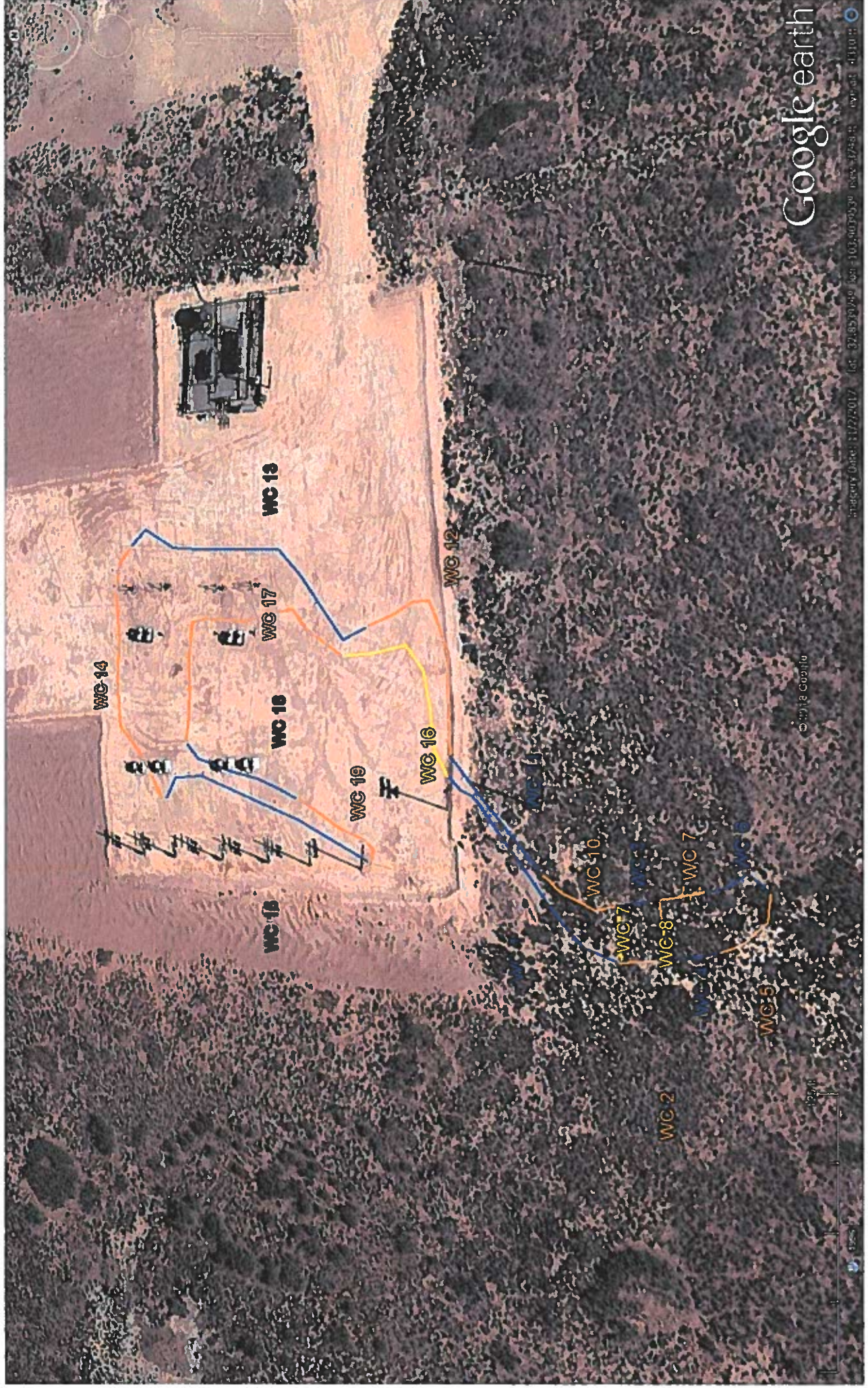
Bottom Samples



Cedar Lake 737H Final Bottom Samples

Comp Pt.	Depth	CL-	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT. DRO	Date	GPS
BFC 1	1'	752	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	17.8	<10.0	5/31/2019	32.8533677 -103.9042480
BFC 1	1.6'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	6/11/2019	
BFC 2	1'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	5/31/2019	328538201 -103.9042944
BFC 3	1'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	5/31/2019	32.853773 -103.9043368
BFC 4	2'	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	13.4	<10.0	5/31/2019	32.8537196 -103.9043412
BFC 5	2'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	5/31/2019	32.8536573 -103.9043720
BFC 6	4'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	5/31/2019	32.8535832 -103.9044351
BFC 7	4'	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	5/31/2019	32.8535218 -103.9043566
BFC 8	4'	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	24.5	<10.0	5/31/2019	32.8534965 -103.9042644
BFC 8	6"	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	759	137	6/11/2019	Pad
BFC 9	6"	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	108	27	6/11/2019	n/a
BFC 10	6"	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	6/11/2019	n/a
BFC 11	6"	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	6/11/2019	n/a
BFC 12	6"	208	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	6/11/2019	n/a
BFC 13	6"	112	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	12.2	<10.0	6/11/2019	n/a
BFC 14	6"	1010	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	581	36.9	6/11/2019	n/a
BFC 15	6"	2240	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	6/11/2019	n/a
BFC 16	6"	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	1120	257	6/11/2019	n/a
BFC 16	1'		<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	6/19/2019	n/a
BFC 17	6"	752	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	724	191	6/11/2019	n/a
BFC 18	6"	736	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	52.5	<10.0	6/11/2019	n/a
BFC 19	6"	1760	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	152	92	6/11/2019	n/a
BFC 20	6"	272	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	52	<10.0	6/11/2019	n/a
BFC 21	6"	4960	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	2480	869	6/11/2019	n/a
BFC 21	1'		<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	6/19/2019	n/a
BFC 22	6"	3440	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	115	50.8	6/11/2019	n/a
BFC 23	6"	64	<0.050	<0.050	0.168	0.603	0.771	19.3	1400	260	6/11/2019	n/a
BFC 23	1'		<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	6/19/2019	n/a
BFC 24	6"	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	43	<10.0	6/11/2019	n/a
BFC 25	6"	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	513	103	6/11/2019	n/a
BFC 26	6"	96	<0.050	<0.050	<0.050	<0.150	<0.300	51	16,400	4520	6/11/2019	n/a
BFC 26	1'		<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	6/19/2019	n/a
BFC 27	Surface	10,000	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	1190	248	7/16/2019	n/a
B27	3"	2,880	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	7/22/2019	n/a
B28	Surface	22000	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	3190	966	7/16/2019	n/a
B28	3"	3000	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	7/22/2019	n/a
B29	Surface	15400	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	775	406	7/16/2019	n/a

Wall Samples



Cedar Lake 737H Final Wall Samples

Comp Pt.	CL-	Benzene	Toluene	Ethylbenz ene	Total Xylenes	Total BTX	GRO	DRO	EXT. DRO	Date	GPS
WC 1 @ 1'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	5/31/2019	32.8538370 -103.9042812
WC 2 @ 2'	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	5/31/2019	32.8537787 -103.9043601
WC 3 @ 2'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	5/31/2019	32.8536832 -103.9044002
WC 4 @ 4'	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	5/31/2019	32.8535601 -103.9044190
WC 5 @ 4'	160	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	5/31/2019	32.8534945 -103.9043439
WC 6 @ 4'	128	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	10.8	<10.0	5/31/2019	32.8534980 -103.9043134
WC 7 @ 4'	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	5/31/2019	32.8535168 -103.9043130
WC 8 @ 4'	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	5/31/2019	32.8535827 -103.9043221
WC 9 @ 2'	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	5/31/2019	32.8537193 -103.9043338
WC 10 @ 1'	432	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	5/31/2019	32.8537987 -103.9043187
WC 11 @ 1'	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	5/31/2019	32.8538669 -103.9042265
WC 12	800	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	6/13/2019	n/a
WC 13	2200	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	6/13/2019	n/a
WC 14	976	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	63.7	15.1	6/13/2019	n/a
WC 15	176	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	114	45.5	6/13/2019	n/a
WC 16	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	6/13/2019	n/a
WC 17	1180	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	6/13/2019	n/a
WC 18	7120	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	84.6	41.8	6/13/2019	n/a
WC 19	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	6/13/2019	n/a



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

June 06, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: CEDAR LAKE FED CA 737H

Enclosed are the results of analyses for samples received by the laboratory on 05/31/19 16:30.

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/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,

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: 05/31/2019
Reported: 06/06/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 05/31/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BFC # 1 @ 1' (H901924-01)

BTEX 80218			mg/kg		Analyzed By: ms				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	1.81	90.6	2.00	18.1	
Toluene*	<0.050	0.050	06/06/2019	ND	2.00	99.9	2.00	15.4	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.00	100	2.00	22.3	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.08	101	6.00	8.72	
Total BTEX	<0.300	0.300	06/06/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 104 % 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	752	16.0	06/06/2019	ND	400	100	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/04/2019	ND	220	110	200	2.27	
DRO >C10-C28*	17.8	10.0	06/04/2019	ND	184	92.1	200	6.72	
EXT DRO >C28-C36	<10.0	10.0	06/04/2019	ND					

Surrogate: 1-Chlorooctane 85.8 % 41-142

Surrogate: 1-Chlorooctadecane 90.4 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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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: 05/31/2019
Reported: 06/06/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 05/31/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BFC # 2 @ 1' (H901924-02)

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	06/06/2019	ND	1.81	90.6	2.00	18.1	
Toluene*	<0.050	0.050	06/06/2019	ND	2.00	99.9	2.00	15.4	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.00	100	2.00	22.3	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.08	101	6.00	8.72	
Total BTEX	<0.300	0.300	06/06/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 103 % 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	16.0	16.0	06/06/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/04/2019	ND	220	110	200	2.27	
DRO >C10-C28*	<10.0	10.0	06/04/2019	ND	184	92.1	200	6.72	
EXT DRO >C28-C36	<10.0	10.0	06/04/2019	ND					

Surrogate: 1-Chlorooctane 91.7 % 41-142

Surrogate: 1-Chlorooctadecane 92.8 % 37.6-147

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* = Accredited Analyte

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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: 05/31/2019
Reported: 06/06/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 05/31/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BFC # 3 @ 1' (H901924-03)

BTEX 80218		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	1.81	90.6	2.00	18.1	
Toluene*	<0.050	0.050	06/06/2019	ND	2.00	99.9	2.00	15.4	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.00	100	2.00	22.3	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.08	101	6.00	8.72	
Total BTEX	<0.300	0.300	06/06/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 104 % 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	32.0	16.0	06/06/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/04/2019	ND	220	110	200	2.27	
DRO >C10-C28*	<10.0	10.0	06/04/2019	ND	184	92.1	200	6.72	
EXT DRO >C28-C36	<10.0	10.0	06/04/2019	ND					

Surrogate: 1-Chlorooctane 89.6 % 41-142

Surrogate: 1-Chlorooctadecane 88.6 % 37.6-147

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* = 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: 05/31/2019
Reported: 06/06/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 05/31/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BFC # 4 @ 2' (H901924-04)

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	06/06/2019	ND	1.81	90.6	2.00	18.1		
Toluene*	<0.050	0.050	06/06/2019	ND	2.00	99.9	2.00	15.4		
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.00	100	2.00	22.3		
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.08	101	6.00	8.72		
Total BTEX	<0.300	0.300	06/06/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 104 % 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	16.0	16.0	06/06/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/04/2019	ND	220	110	200	2.27	
DRO >C10-C28*	13.4	10.0	06/04/2019	ND	184	92.1	200	6.72	
EXT DRO >C28-C36	<10.0	10.0	06/04/2019	ND					

Surrogate: 1-Chlorooctane 92.3 % 41-142

Surrogate: 1-Chlorooctadecane 98.2 % 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: 05/31/2019
 Reported: 06/06/2019
 Project Name: CEDAR LAKE FED CA 737H
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 05/31/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BFC # 5 @ 2' (H901924-05)

BTEX 80218			mg/kg		Analyzed By: ms				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/05/2019	ND	2.18	109	2.00	0.974	
Toluene*	<0.050	0.050	06/05/2019	ND	2.20	110	2.00	1.07	
Ethylbenzene*	<0.050	0.050	06/05/2019	ND	2.07	103	2.00	0.104	
Total Xylenes*	<0.150	0.150	06/05/2019	ND	6.27	104	6.00	0.655	
Total BTEX	<0.300	0.300	06/05/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 104 % 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	32.0	16.0	06/06/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/04/2019	ND	220	110	200	2.27	
DRO >C10-C28*	<10.0	10.0	06/04/2019	ND	184	92.1	200	6.72	
EXT DRO >C28-C36	<10.0	10.0	06/04/2019	ND					

Surrogate: 1-Chlorooctane 84.7 % 41-142

Surrogate: 1-Chlorooctadecane 83.9 % 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: 05/31/2019
Reported: 06/06/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 05/31/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BFC # 6 @ 4' (H901924-06)

BTEX 80218		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/05/2019	ND	2.18	109	2.00	0.974	
Toluene*	<0.050	0.050	06/05/2019	ND	2.20	110	2.00	1.07	
Ethylbenzene*	<0.050	0.050	06/05/2019	ND	2.07	103	2.00	0.104	
Total Xylenes*	<0.150	0.150	06/05/2019	ND	6.27	104	6.00	0.655	
Total BTEX	<0.300	0.300	06/05/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 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	48.0	16.0	06/06/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/04/2019	ND	220	110	200	2.27	
DRO >C10-C28*	<10.0	10.0	06/04/2019	ND	184	92.1	200	6.72	
EXT DRO >C28-C36	<10.0	10.0	06/04/2019	ND					

Surrogate: 1-Chlorooctane 95.4 % 41-142

Surrogate: 1-Chlorooctadecane 94.5 % 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: 05/31/2019
 Reported: 06/06/2019
 Project Name: CEDAR LAKE FED CA 737H
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 05/31/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BFC # 7 @ 4' (H901924-07)

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	06/05/2019	ND	2.18	109	2.00	0.974		
Toluene*	<0.050	0.050	06/05/2019	ND	2.20	110	2.00	1.07		
Ethylbenzene*	<0.050	0.050	06/05/2019	ND	2.07	103	2.00	0.104		
Total Xylenes*	<0.150	0.150	06/05/2019	ND	6.27	104	6.00	0.655		
Total BTEX	<0.300	0.300	06/05/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 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	80.0	16.0	06/06/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/04/2019	ND	220	110	200	2.27	
DRO >C10-C28*	<10.0	10.0	06/04/2019	ND	184	92.1	200	6.72	
EXT DRO >C28-C36	<10.0	10.0	06/04/2019	ND					

Surrogate: 1-Chlorooctane 91.4 % 41-142

Surrogate: 1-Chlorooctadecane 91.7 % 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: 05/31/2019
Reported: 06/06/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 05/31/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BFC # 8 @ 4' (H901924-08)

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	06/05/2019	ND	2.18	109	2.00	0.974	
Toluene*	<0.050	0.050	06/05/2019	ND	2.20	110	2.00	1.07	
Ethylbenzene*	<0.050	0.050	06/05/2019	ND	2.07	103	2.00	0.104	
Total Xylenes*	<0.150	0.150	06/05/2019	ND	6.27	104	6.00	0.655	
Total BTEX	<0.300	0.300	06/05/2019	ND					

Surrogate 4-Bromofluorobenzene (PID) 102 % 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	64.0	16.0	06/06/2019	ND	416	104	400	0.00	QM-07

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	06/04/2019	ND	220	110	200	2.27	
DRO >C10-C28*	24.5	10.0	06/04/2019	ND	184	92.1	200	6.72	
EXT DRO >C28-C36	<10.0	10.0	06/04/2019	ND					

Surrogate 1-Chlorooctane 109 % 41-142

Surrogate 1-Chlorooctadecane 116 % 37.6-147

Cardinal Laboratories

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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:	05/31/2019	Sampling Date:	05/31/2019
Reported:	06/06/2019	Sampling Type:	Soil
Project Name:	CEDAR LAKE FED CA 737H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: WC # 1 @ 1' (H901924-09)

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	06/05/2019	ND	2.18	109	2.00	0.974	
Toluene*	<0.050	0.050	06/05/2019	ND	2.20	110	2.00	1.07	
Ethylbenzene*	<0.050	0.050	06/05/2019	ND	2.07	103	2.00	0.104	
Total Xylenes*	<0.150	0.150	06/05/2019	ND	6.27	104	6.00	0.655	
Total BTEX	<0.300	0.300	06/05/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 101 % 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	48.0	16.0	06/06/2019	ND	416	104	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	06/04/2019	ND	220	110	200	2.27	
DRO >C10-C28*	<10.0	10.0	06/04/2019	ND	184	92.1	200	6.72	
EXT DRO >C28-C36	<10.0	10.0	06/04/2019	ND					

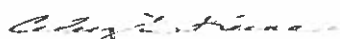
Surrogate: 1-Chlorooctane 98.0 % 41-142

Surrogate: 1-Chlorooctadecane 99.4 % 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: 05/31/2019
Reported: 06/06/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 05/31/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: WC # 2 @ 1' (H901924-10)

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	06/05/2019	ND	2.18	109	2.00	0.974	
Toluene*	<0.050	0.050	06/05/2019	ND	2.20	110	2.00	1.07	
Ethylbenzene*	<0.050	0.050	06/05/2019	ND	2.07	103	2.00	0.104	
Total Xylenes*	<0.150	0.150	06/05/2019	ND	6.27	104	6.00	0.655	
Total BTEX	<0.300	0.300	06/05/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 102 % 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	80.0	16.0	06/06/2019	ND	416	104	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	06/04/2019	ND	220	110	200	2.27	
DRO >C10-C28*	<10.0	10.0	06/04/2019	ND	184	92.1	200	6.72	
EXT DRO >C28-C36	<10.0	10.0	06/04/2019	ND					

Surrogate: 1-Chlorooctane 72.1 % 41-142

Surrogate: 1-Chlorooctadecane 71.7 % 37.6-147

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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: 05/31/2019
Reported: 06/06/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 05/31/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: WC # 3 @ 2' (H901924-11)

BTEX 80218		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/05/2019	ND	2.18	109	2.00	0.974	
Toluene*	<0.050	0.050	06/05/2019	ND	2.20	110	2.00	1.07	
Ethylbenzene*	<0.050	0.050	06/05/2019	ND	2.07	103	2.00	0.104	
Total Xylenes*	<0.150	0.150	06/05/2019	ND	6.27	104	6.00	0.655	
Total BTEX	<0.300	0.300	06/05/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 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	48.0	16.0	06/06/2019	ND	416	104	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	06/04/2019	ND	220	110	200	2.27	
DRO >C10-C28*	<10.0	10.0	06/04/2019	ND	184	92.1	200	6.72	
EXT DRO >C28-C36	<10.0	10.0	06/04/2019	ND					

Surrogate: 1-Chlorooctane 93.8 % 41-142

Surrogate: 1-Chlorooctadecane 95.8 % 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: 05/31/2019
Reported: 06/06/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 05/31/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: WC # 4 @ 4' (H901924-12)

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	06/05/2019	ND	2.18	109	2.00	0.974	
Toluene*	<0.050	0.050	06/05/2019	ND	2.20	110	2.00	1.07	
Ethylbenzene*	<0.050	0.050	06/05/2019	ND	2.07	103	2.00	0.104	
Total Xylenes*	<0.150	0.150	06/05/2019	ND	6.27	104	6.00	0.655	
Total BTEX	<0.300	0.300	06/05/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 103 % 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	80.0	16.0	06/06/2019	ND	416	104	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	06/04/2019	ND	220	110	200	2.27	
DRO >C10-C28*	<10.0	10.0	06/04/2019	ND	184	92.1	200	6.72	
EXT DRO >C28-C36	<10.0	10.0	06/04/2019	ND					

Surrogate: 1-Chlorooctane 96.1 % 41-142

Surrogate: 1-Chlorooctadecane 95.8 % 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:	05/31/2019	Sampling Date:	05/31/2019
Reported:	06/06/2019	Sampling Type:	Soil
Project Name:	CEDAR LAKE FED CA 737H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: WC # 5 @ 4' (H901924-13)

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	06/05/2019	ND	2.18	109	2.00	0.974		
Toluene*	<0.050	0.050	06/05/2019	ND	2.20	110	2.00	1.07		
Ethylbenzene*	<0.050	0.050	06/05/2019	ND	2.07	103	2.00	0.104		
Total Xylenes*	<0.150	0.150	06/05/2019	ND	6.27	104	6.00	0.655		
Total BTEX	<0.300	0.300	06/05/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIL) 102 % 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	160	16.0	06/06/2019	ND	416	104	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	06/04/2019	ND	220	110	200	2.27	
DRO >C10-C28*	<10.0	10.0	06/04/2019	ND	184	92.1	200	6.72	
EXT DRO >C28-C36	<10.0	10.0	06/04/2019	ND					

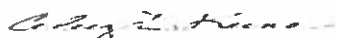
Surrogate: 1-Chlorooctane 90.4 % 41-142

Surrogate: 1-Chlorooctadecane 91.4 % 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:	05/31/2019	Sampling Date:	05/31/2019
Reported:	06/06/2019	Sampling Type:	Soil
Project Name:	CEDAR LAKE FED CA 737H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: WC # 6 @ 4' (H901924-14)

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	06/05/2019	ND	2.18	109	2.00	0.974		
Toluene*	<0.050	0.050	06/05/2019	ND	2.20	110	2.00	1.07		
Ethylbenzene*	<0.050	0.050	06/05/2019	ND	2.07	103	2.00	0.104		
Total Xylenes*	<0.150	0.150	06/05/2019	ND	6.27	104	6.00	0.655		
Total BTEX	<0.300	0.300	06/05/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 103 % 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	128	16.0	06/06/2019	ND	416	104	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	06/04/2019	ND	220	110	200	2.27	
DRO >C10-C28*	10.8	10.0	06/04/2019	ND	184	92.1	200	6.72	
EXT DRO >C28-C36	<10.0	10.0	06/04/2019	ND					

Surrogate: 1-Chlorooctane 93.1 % 41-142

Surrogate: 1-Chlorooctadecane 94.5 % 37.6-147

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Celestine Keene

Celestine 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: 05/31/2019
Reported: 06/06/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 05/31/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: WC # 7 @ 4' (H901924-15)

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	06/05/2019	ND	2.18	109	2.00	0.974	
Toluene*	<0.050	0.050	06/05/2019	ND	2.20	110	2.00	1.07	
Ethylbenzene*	<0.050	0.050	06/05/2019	ND	2.07	103	2.00	0.104	
Total Xylenes*	<0.150	0.150	06/05/2019	ND	6.27	104	6.00	0.655	
Total BTEX	<0.300	0.300	06/05/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 106 % 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	80.0	16.0	06/06/2019	ND	416	104	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	06/04/2019	ND	220	110	200	2.27	
DRO >C10-C28*	<10.0	10.0	06/04/2019	ND	184	92.1	200	6.72	
EXT DRO >C28-C36	<10.0	10.0	06/04/2019	ND					

Surrogate: 1-Chlorooctane 94.3 % 41-142

Surrogate: 1-Chlorooctadecane 96.0 % 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: 05/31/2019
Reported: 06/06/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 05/31/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: WC # 8 @ 4' (H901924-16)

BTEX 80218		mg/kg	Analyzed By: ms							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/06/2019	ND	2.18	109	2.00	0.974		
Toluene*	<0.050	0.050	06/06/2019	ND	2.20	110	2.00	1.07		
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.07	103	2.00	0.104		
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.27	104	6.00	0.655		
Total BTEX	<0.300	0.300	06/06/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 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	80.0	16.0	06/06/2019	ND	416	104	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	06/04/2019	ND	220	110	200	2.27	
DRO >C10-C28*	<10.0	10.0	06/04/2019	ND	184	92.1	200	6.72	
EXT DRO >C28-C36	<10.0	10.0	06/04/2019	ND					


Surrogate: 1-Chlorooctane 91.7 % 41-142

Surrogate: 1-Chlorooctadecane 95.4 % 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: 05/31/2019
 Reported: 06/06/2019
 Project Name: CEDAR LAKE FED CA 737H
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 05/31/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: WC # 9 @ 2' (H901924-17)

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	06/06/2019	ND	2.18	109	2.00	0.974	
Toluene*	<0.050	0.050	06/06/2019	ND	2.20	110	2.00	1.07	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.07	103	2.00	0.104	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.27	104	6.00	0.655	
Total BTEX	<0.300	0.300	06/06/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 104 % 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	64.0	16.0	06/06/2019	ND	416	104	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	06/04/2019	ND	220	110	200	2.27	
DRO >C10-C28*	<10.0	10.0	06/04/2019	ND	184	92.1	200	6.72	
EXT DRO >C28-C36	<10.0	10.0	06/04/2019	ND					

Surrogate: 1-Chlorooctane 86.7 % 41-142

Surrogate: 1-Chlorooctadecane 85.9 % 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: 05/31/2019
 Reported: 06/06/2019
 Project Name: CEDAR LAKE FED CA 737H
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 05/31/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: WC # 10 @ 1' (H901924-18)

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	06/06/2019	ND	2.18	109	2.00	0.974	
Toluene*	<0.050	0.050	06/06/2019	ND	2.20	110	2.00	1.07	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.07	103	2.00	0.104	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.27	104	6.00	0.655	
Total BTEX	<0.300	0.300	06/06/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 104 % 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	432	16.0	06/06/2019	ND	416	104	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	06/04/2019	ND	220	110	200	2.27	
DRO >C10-C28*	<10.0	10.0	06/04/2019	ND	184	92.1	200	6.72	
EXT DRO >C28-C36	<10.0	10.0	06/04/2019	ND					

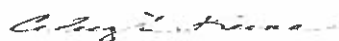
Surrogate: 1-Chlorooctane 89.1 % 41-142

Surrogate: 1-Chlorooctadecane 86.5 % 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: 05/31/2019
Reported: 06/06/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 05/31/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: WC # 11 @ 1' (H901924-19)

BTEX 80218		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.18	109	2.00	0.974	
Toluene*	<0.050	0.050	06/06/2019	ND	2.20	110	2.00	1.07	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.07	103	2.00	0.104	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.27	104	6.00	0.655	
Total BTEX	<0.300	0.300	06/06/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 104 % 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	64.0	16.0	06/06/2019	ND	416	104	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	06/04/2019	ND	220	110	200	2.27	
DRO >C10-C28*	<10.0	10.0	06/04/2019	ND	184	92.1	200	6.72	
EXT DRO >C28-C36	<10.0	10.0	06/04/2019	ND					

Surrogate: 1-Chlorooctane 90.1 % 41-142

Surrogate: 1-Chlorooctadecane 88.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

QR-04	The RPD for the BS/BSD was outside of historical limits.
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: <u>Apache</u>		BILL TO		ANALYSIS REQUEST									
Project Manager: <u>Barbara Scherer</u>		P.O. #:											
Address:		Company:											
City: <u>Hobbs</u>		Attn:											
State: <u>NM</u> Zip: <u>88240</u>		Address:											
Phone #:		City:											
Fax #:		State:											
Project #:		Zip:											
Project Name:		Phone #:											
Project Location: <u>Lodges Lake Ford Co 78714</u>		Fax #:											
Sampler Name: <u>Mr. Cusack</u>													

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX						PRESERV	SAMPLING	DATE	TIME	ANALYSIS	REMARKS
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER						
1	BFC #1 @ 1'	C	1								5/31	12:00			
2	BFC #2 @ 1'	C	1									12:02			
3	BFC #3 @ 1'	C	1									12:04			
4	BFC #4 @ 2'	C	1									12:06			
5	BFC #5 @ 2'	C	1									12:08			
6	BFC #6 @ 4'	C	1									12:10			
7	BFC #7 @ 4'	C	1									12:12			
8	BFC #8 @ 4'	C	1									12:14			
9	WC 1 @ 1'	C	1									12:16			
10	WC 2 @ 1'	C	1									12:18			

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Relinquished By: <u>[Signature]</u> Date: <u>5-31-19</u> Time: <u>16:30</u>	Received By: <u>Jawara Slatky</u> Date: <u>5-31-19</u> Time:
Relinquished By: <u>[Signature]</u> Date:	Received By:

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Pres <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/>	CHECKED BY: (Initials) <u>7.0</u>
--	--	--------------------------------------

4.3c #97

Enon/Reckts

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Aquatic</u>				P.O. #:	BILL TO				ANALYSIS REQUEST		
Project Manager: <u>Rene Baker</u>				Company:							
Address:				Attn:							
City: <u>Holds</u>				State: <u>WA</u>	Zip: <u>98920</u>						
Phone #:				Fax #:	Address:						
Project #:				City:	State:	Zip:					
Project Name:				Phone #:							
Sample Location: <u>Reddy Valley Field CA 737H</u>				Fax #:							
FOR LAB USE ONLY											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	MATRIX	PRESERV.	SAMPLING					
				GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER :	ACID/BASE ICEY/COL OTHER :	DATE	TIME				
<u>H01924</u>								C	EXTTPH		
	<u>11 W.C. 3 @ 2'</u>	/	1	/		<u>5/31</u>	<u>2:20</u>	/	BTEX		
	<u>12 W.C. 4 @ 4'</u>	/	1	/			<u>2:22</u>	/			
	<u>13 W.C. 5 @ 4'</u>	/	1	/			<u>2:24</u>	/			
	<u>14 W.C. 6 @ 4'</u>	/	1	/			<u>2:26</u>	/			
	<u>15 W.C. 7 @ 4'</u>	/	1	/			<u>2:28</u>	/			
	<u>16 W.C. 8 @ 4'</u>	/	1	/			<u>2:30</u>	/			
	<u>17 W.C. 9 @ 2'</u>	/	1	/			<u>2:32</u>	/			
	<u>18 W.C. 10 @ 1'</u>	/	1	/			<u>2:34</u>	/			
	<u>19 W.C. 11 @ 1'</u>	/	1	/			<u>2:36</u>	/			

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Relinquished By:	Date: <u>5-31-19</u>	Received By:	
Relinquished By:	Time: <u>16:30</u>	Received By:	
Delivered By: (Circle One)	Sample Condition	CHECKED BY:	
<u>UPS</u>	<input checked="" type="checkbox"/> Cool <input type="checkbox"/> Intact	(Initials)	
<u>Bus</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
<u>Other:</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
REMARKS:		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #: _____
		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #: _____

Email Results



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

June 17, 2019

JEFFREY BROOM

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: CEDAR LAKE FED CA 737H

Enclosed are the results of analyses for samples received by the laboratory on 06/11/19 16:10.

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/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 "Caley D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Caley D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

 Received: 06/11/2019
 Reported: 06/17/2019
 Project Name: CEDAR LAKE FED CA 737H
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 06/11/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BFC # 1 @ 1.6" (H902025-01)

BTEX 8021B		mg/kg	Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/14/2019	ND	1.94	97.2	2.00	1.12	
Toluene*	<0.050	0.050	06/14/2019	ND	1.91	95.7	2.00	0.282	
Ethylbenzene*	<0.050	0.050	06/14/2019	ND	1.86	92.8	2.00	1.71	
Total Xylenes*	<0.150	0.150	06/14/2019	ND	5.67	94.5	6.00	0.151	
Total BTEX	<0.300	0.300	06/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 103 % 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	32.0	16.0	06/13/2019	ND	384	96.0	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	06/12/2019	ND	194	96.8	200	0.811	
DRO >C10-C28*	<10.0	10.0	06/12/2019	ND	186	93.2	200	1.81	
EXT DRO >C28-C36	<10.0	10.0	06/12/2019	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 06/11/2019
 Reported: 06/17/2019
 Project Name: CEDAR LAKE FED CA 737H
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 06/11/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BFC # 8 (H902025-02)

BTEX 8021B		mg/kg	Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/14/2019	ND	1.94	97.2	2.00	1.12	
Toluene*	<0.050	0.050	06/14/2019	ND	1.91	95.7	2.00	0.282	
Ethylbenzene*	<0.050	0.050	06/14/2019	ND	1.86	92.8	2.00	1.71	
Total Xylenes*	<0.150	0.150	06/14/2019	ND	5.67	94.5	6.00	0.151	
Total BTEX	<0.300	0.300	06/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 106 % 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	48.0	16.0	06/13/2019	ND	384	96.0	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	06/12/2019	ND	194	96.8	200	0.811	
DRO >C10-C28*	759	10.0	06/12/2019	ND	186	93.2	200	1.81	
EXT DRO >C28-C36	137	10.0	06/12/2019	ND					

Surrogate: 1-Chlorooctane 100 % 41-142

Surrogate: 1-Chlorooctadecane 128 % 37.6-147

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

Received:	06/11/2019	Sampling Date:	06/11/2019
Reported:	06/17/2019	Sampling Type:	Soil
Project Name:	CEDAR LAKE FED CA 737H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: BFC # 9 (H902025-03)

BTEX 80218		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/14/2019	ND	1.94	97.2	2.00	1.12	
Toluene*	<0.050	0.050	06/14/2019	ND	1.91	95.7	2.00	0.282	
Ethylbenzene*	<0.050	0.050	06/14/2019	ND	1.86	92.8	2.00	1.71	
Total Xylenes*	<0.150	0.150	06/14/2019	ND	5.67	94.5	6.00	0.151	
Total BTEX	<0.300	0.300	06/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 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	32.0	16.0	06/13/2019	ND	384	96.0	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	06/12/2019	ND	194	96.8	200	0.811	
DRO >C10-C28*	108	10.0	06/12/2019	ND	186	93.2	200	1.81	
EXT DRO >C28-C36	27.0	10.0	06/12/2019	ND					

Surrogate: 1-Chlorooctane 93.3 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 06/11/2019
Reported: 06/17/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/11/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BFC # 10 (H902025-04)

BTX 80218			mg/kg		Analyzed By: BF				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/14/2019	ND	1.94	97.2	2.00	1.12	
Toluene*	<0.050	0.050	06/14/2019	ND	1.91	95.7	2.00	0.282	
Ethylbenzene*	<0.050	0.050	06/14/2019	ND	1.86	92.8	2.00	1.71	
Total Xylenes*	<0.150	0.150	06/14/2019	ND	5.67	94.5	6.00	0.151	
Total BTX	<0.300	0.300	06/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 102 % 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	32.0	16.0	06/13/2019	ND	384	96.0	400	0.00	

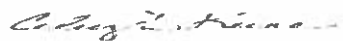
TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/12/2019	ND	194	96.8	200	0.811	
DRO >C10-C28*	<10.0	10.0	06/12/2019	ND	186	93.2	200	1.81	
EXT DRO >C28-C36	<10.0	10.0	06/12/2019	ND					

Surrogate: 1-Chlorooctane 98.6 % 41-142

Surrogate: 1-Chlorooctadecane 100 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 06/11/2019
Reported: 06/17/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/11/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BFC # 11 (H902025-05)

BTEX 80218		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/14/2019	ND	1.94	97.2	2.00	1.12	
Toluene*	<0.050	0.050	06/14/2019	ND	1.91	95.7	2.00	0.282	
Ethylbenzene*	<0.050	0.050	06/14/2019	ND	1.86	92.8	2.00	1.71	
Total Xylenes*	<0.150	0.150	06/14/2019	ND	5.67	94.5	6.00	0.151	
Total BTEX	<0.300	0.300	06/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 103 % 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	80.0	16.0	06/13/2019	ND	384	96.0	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	06/12/2019	ND	194	96.8	200	0.811	
DRO >C10-C28*	<10.0	10.0	06/12/2019	ND	186	93.2	200	1.81	
EXT DRO >C28-C36	<10.0	10.0	06/12/2019	ND					

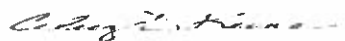
Surrogate: 1-Chlorooctane 90.4 % 41-142

Surrogate: 1-Chlorooctadecane 91.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 06/11/2019
Reported: 06/17/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/11/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BFC # 12 (H902025-06)

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/14/2019	ND	1.94	97.2	2.00	1.12	
Toluene*	<0.050	0.050	06/14/2019	ND	1.91	95.7	2.00	0.282	
Ethylbenzene*	<0.050	0.050	06/14/2019	ND	1.86	92.8	2.00	1.71	
Total Xylenes*	<0.150	0.150	06/14/2019	ND	5.67	94.5	6.00	0.151	
Total BTX	<0.300	0.300	06/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 103 % 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	208	16.0	06/13/2019	ND	384	96.0	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	06/12/2019	ND	194	96.8	200	0.811	
DRO >C10-C28*	<10.0	10.0	06/12/2019	ND	186	93.2	200	1.81	
EXT DRO >C28-C36	<10.0	10.0	06/12/2019	ND					

Surrogate: 1-Chlorooctane 97.2 % 41-142

Surrogate: 1-Chlorooctadecane 99.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 06/11/2019
Reported: 06/17/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/11/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BFC # 13 (H902025-07)

BTEX 80218			mg/kg		Analyzed By: BF				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/14/2019	ND	1.94	97.2	2.00	1.12	
Toluene*	<0.050	0.050	06/14/2019	ND	1.91	95.7	2.00	0.282	
Ethylbenzene*	<0.050	0.050	06/14/2019	ND	1.86	92.8	2.00	1.71	
Total Xylenes*	<0.150	0.150	06/14/2019	ND	5.67	94.5	6.00	0.151	
Total BTEX	<0.300	0.300	06/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 102 % 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	112	16.0	06/13/2019	ND	400	100	400	0.00	QR-03

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	06/13/2019	ND	226	113	200	2.62	
DRO >C10-C28*	12.2	10.0	06/13/2019	ND	197	98.6	200	2.45	
EXT DRO >C28-C36	<10.0	10.0	06/13/2019	ND					


Surrogate: 1-Chlorooctane 91.5 % 41-142

Surrogate: 1-Chlorooctadecane 96.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 06/11/2019
Reported: 06/17/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/11/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BFC # 14 (H902025-08)

BTEX 80218		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/14/2019	ND	2.37	119	2.00	2.69	
Toluene*	<0.050	0.050	06/14/2019	ND	2.38	119	2.00	1.04	
Ethylbenzene*	<0.050	0.050	06/14/2019	ND	2.22	111	2.00	2.28	
Total Xylenes*	<0.150	0.150	06/14/2019	ND	6.66	111	6.00	1.85	
Total BTEX	<0.300	0.300	06/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 104 % 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	1010	16.0	06/13/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/13/2019	ND	226	113	200	2.62	
DRO >C10-C28*	581	10.0	06/13/2019	ND	197	98.6	200	2.45	
EXT DRO >C28-C36	36.9	10.0	06/13/2019	ND					

Surrogate: 1-Chlorooctane 94.6 % 41-142

Surrogate: 1-Chlorooctadecane 108 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	06/11/2019	Sampling Date:	06/11/2019
Reported:	06/17/2019	Sampling Type:	Soil
Project Name:	CEDAR LAKE FED CA 737H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: BFC # 15 (H902025-09)

BTEX 80218		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/15/2019	ND	2.37	119	2.00	2.69	
Toluene*	<0.050	0.050	06/15/2019	ND	2.38	119	2.00	1.04	
Ethylbenzene*	<0.050	0.050	06/15/2019	ND	2.22	111	2.00	2.28	
Total Xylenes*	<0.150	0.150	06/15/2019	ND	6.66	111	6.00	1.85	
Total BTEX	<0.300	0.300	06/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (P1C) 105 % 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	2240	16.0	06/13/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/13/2019	ND	226	113	200	2.62	
DRO >C10-C28*	<10.0	10.0	06/13/2019	ND	197	98.6	200	2.45	
EXT DRO >C28-C36	<10.0	10.0	06/13/2019	ND					

Surrogate: 1-Chlorooctane 91.0 % 41-142

Surrogate: 1-Chlorooctadecane 92.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 06/11/2019
 Reported: 06/17/2019
 Project Name: CEDAR LAKE FED CA 737H
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 06/11/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BFC # 16 (H902025-10)

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	06/15/2019	ND	2.37	119	2.00	2.69		
Toluene*	<0.050	0.050	06/15/2019	ND	2.38	119	2.00	1.04		
Ethylbenzene*	<0.050	0.050	06/15/2019	ND	2.22	111	2.00	2.28		
Total Xylenes*	<0.150	0.150	06/15/2019	ND	6.66	111	6.00	1.85		
Total BTEX	<0.300	0.300	06/15/2019	ND						

Surrogate 4-Bromofluorobenzene (PIC) 103 % 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	64.0	16.0	06/13/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/12/2019	ND	194	96.8	200	0.317	
DRO >C10-C28*	1120	10.0	06/12/2019	ND	185	92.6	200	8.38	QM-07
EXT DRO >C28-C36	257	10.0	06/12/2019	ND					


Surrogate 1-Chlorooctane 90.7 % 41-142

Surrogate 1-Chlorooctadecane 143 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 06/11/2019
Reported: 06/17/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/11/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BFC # 17 (H902025-11)

BTEX 80218		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/15/2019	ND	2.37	119	2.00	2.69		
Toluene*	<0.050	0.050	06/15/2019	ND	2.38	119	2.00	1.04		
Ethylbenzene*	<0.050	0.050	06/15/2019	ND	2.22	111	2.00	2.28		
Total Xylenes*	<0.150	0.150	06/15/2019	ND	6.66	111	6.00	1.85		
Total BTEX	<0.300	0.300	06/15/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 103 % 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	752	16.0	06/13/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/12/2019	ND	194	96.8	200	0.317	
DRO >C10-C28*	724	10.0	06/12/2019	ND	185	92.6	200	8.38	
EXT DRO >C28-C36	191	10.0	06/12/2019	ND					

Surrogate: 1-Chlorooctane 89.1 % 41-142

Surrogate: 1-Chlorooctadecane 126 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	06/11/2019	Sampling Date:	06/11/2019
Reported:	06/17/2019	Sampling Type:	Soil
Project Name:	CEDAR LAKE FED CA 737H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: BFC # 18 (H902025-12)

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	06/15/2019	ND	2.37	119	2.00	2.69		
Toluene*	<0.050	0.050	06/15/2019	ND	2.38	119	2.00	1.04		
Ethylbenzene*	<0.050	0.050	06/15/2019	ND	2.22	111	2.00	2.28		
Total Xylenes*	<0.150	0.150	06/15/2019	ND	6.66	111	6.00	1.85		
Total BTEX	<0.300	0.300	06/15/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 104 % 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	736	16.0	06/13/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/12/2019	ND	194	96.8	200	0.317	
DRO >C10-C28*	52.5	10.0	06/12/2019	ND	185	92.6	200	8.38	
EXT DRO >C28-C36	<10.0	10.0	06/12/2019	ND					

Surrogate: 1-Chlorooctane 84.6 % 41-142

Surrogate: 1-Chlorooctadecane 90.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	06/11/2019	Sampling Date:	06/11/2019
Reported:	06/17/2019	Sampling Type:	Soil
Project Name:	CEDAR LAKE FED CA 737H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: BFC # 19 (H902025-13)

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	06/15/2019	ND	2.37	119	2.00	2.69		
Toluene*	<0.050	0.050	06/15/2019	ND	2.38	119	2.00	1.04		
Ethylbenzene*	<0.050	0.050	06/15/2019	ND	2.22	111	2.00	2.28		
Total Xylenes*	<0.150	0.150	06/15/2019	ND	6.66	111	6.00	1.85		
Total BTEX	<0.300	0.300	06/15/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 102 % 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	1760	16.0	06/13/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/12/2019	ND	194	96.8	200	0.317	
DRO >C10-C28*	152	10.0	06/12/2019	ND	185	92.6	200	8.38	
EXT DRO >C28-C36	92.0	10.0	06/12/2019	ND					

Surrogate: 1-Chlorooctane 92.3 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	06/11/2019	Sampling Date:	06/11/2019
Reported:	06/17/2019	Sampling Type:	Soil
Project Name:	CEDAR LAKE FED CA 737H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: BFC # 20 (H902025-14)

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	06/15/2019	ND	2.37	119	2.00	2.69	
Toluene*	<0.050	0.050	06/15/2019	ND	2.38	119	2.00	1.04	
Ethylbenzene*	<0.050	0.050	06/15/2019	ND	2.22	111	2.00	2.28	
Total Xylenes*	<0.150	0.150	06/15/2019	ND	6.66	111	6.00	1.85	
Total BTEX	<0.300	0.300	06/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 107 % 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	272	16.0	06/13/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/12/2019	ND	194	96.8	200	0.317	
DRO >C10-C28*	52.0	10.0	06/12/2019	ND	185	92.6	200	8.38	
EXT DRO >C28-C36	<10.0	10.0	06/12/2019	ND					


Surrogate: 1-Chlorooctane 94.4 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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

Received:	06/11/2019	Sampling Date:	06/11/2019
Reported:	06/17/2019	Sampling Type:	Soil
Project Name:	CEDAR LAKE FED CA 737H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: BFC # 21 (H902025-15)

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	06/15/2019	ND	2.37	119	2.00	2.69	
Toluene*	<0.050	0.050	06/15/2019	ND	2.38	119	2.00	1.04	
Ethylbenzene*	<0.050	0.050	06/15/2019	ND	2.22	111	2.00	2.28	
Total Xylenes*	<0.150	0.150	06/15/2019	ND	6.66	111	6.00	1.85	
Total BTEX	<0.300	0.300	06/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 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	4960	16.0	06/13/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/12/2019	ND	194	96.8	200	0.317	
DRO >C10-C28*	2480	10.0	06/12/2019	ND	185	92.6	200	8.38	
EXT DRO >C28-C36	869	10.0	06/12/2019	ND					

Surrogate: 1-Chlorooctane 90.8 % 41-142

Surrogate: 1-Chlorooctadecane 188 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 06/11/2019
 Reported: 06/17/2019
 Project Name: CEDAR LAKE FED CA 737H
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 06/11/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BFC # 22 (H902025-16)

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	06/15/2019	ND	2.37	119	2.00	2.69	
Toluene*	<0.050	0.050	06/15/2019	ND	2.38	119	2.00	1.04	
Ethylbenzene*	<0.050	0.050	06/15/2019	ND	2.22	111	2.00	2.28	
Total Xylenes*	<0.150	0.150	06/15/2019	ND	6.66	111	6.00	1.85	
Total BTEX	<0.300	0.300	06/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 105 % 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	3440	16.0	06/13/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/12/2019	ND	194	96.8	200	0.317	
DRO >C10-C28*	115	10.0	06/12/2019	ND	185	92.6	200	8.38	
EXT DRO >C28-C36	50.8	10.0	06/12/2019	ND					

Surrogate: 1-Chlorooctane 97.5 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 06/11/2019
 Reported: 06/17/2019
 Project Name: CEDAR LAKE FED CA 737H
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 06/11/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BFC # 23 (H902025-17)

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	06/15/2019	ND	2.37	119	2.00	2.69	
Toluene*	<0.050	0.050	06/15/2019	ND	2.38	119	2.00	1.04	
Ethylbenzene*	0.168	0.050	06/15/2019	ND	2.22	111	2.00	2.28	
Total Xylenes*	0.603	0.150	06/15/2019	ND	6.66	111	6.00	1.85	
Total BTEX	0.771	0.300	06/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 119 % 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	64.0	16.0	06/13/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	19.3	10.0	06/13/2019	ND	194	96.8	200	0.317	
DRO >C10-C28*	1400	10.0	06/13/2019	ND	185	92.6	200	8.38	
EXT DRO >C28-C36	260	10.0	06/13/2019	ND					

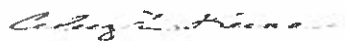
Surrogate: 1-Chlorooctane 109 % 41-142

Surrogate: 1-Chlorooctadecane 161 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	06/11/2019	Sampling Date:	06/11/2019
Reported:	06/17/2019	Sampling Type:	Soil
Project Name:	CEDAR LAKE FED CA 737H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: BFC # 24 (H902025-18)

BTEX 80218		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/15/2019	ND	2.37	119	2.00	2.69	
Toluene*	<0.050	0.050	06/15/2019	ND	2.38	119	2.00	1.04	
Ethylbenzene*	<0.050	0.050	06/15/2019	ND	2.22	111	2.00	2.28	
Total Xylenes*	<0.150	0.150	06/15/2019	ND	6.66	111	6.00	1.85	
Total BTEX	<0.300	0.300	06/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 102 % 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	64.0	16.0	06/13/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/13/2019	ND	194	96.8	200	0.317	
DRO >C10-C28*	43.0	10.0	06/13/2019	ND	185	92.6	200	8.38	
EXT DRO >C28-C36	<10.0	10.0	06/13/2019	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 106 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	06/11/2019	Sampling Date:	06/11/2019
Reported:	06/17/2019	Sampling Type:	Soil
Project Name:	CEDAR LAKE FED CA 737H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: BFC # 25 (H902025-19)

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	06/15/2019	ND	2.37	119	2.00	2.69	
Toluene*	<0.050	0.050	06/15/2019	ND	2.38	119	2.00	1.04	
Ethylbenzene*	<0.050	0.050	06/15/2019	ND	2.22	111	2.00	2.28	
Total Xylenes*	<0.150	0.150	06/15/2019	ND	6.66	111	6.00	1.85	
Total BTEX	<0.300	0.300	06/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 103 % 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	32.0	16.0	06/13/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/13/2019	ND	194	96.8	200	0.317	
DRO >C10-C28*	513	10.0	06/13/2019	ND	185	92.6	200	8.38	
EXT DRO >C28-C36	103	10.0	06/13/2019	ND					

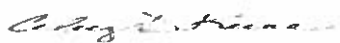
Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 126 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 06/11/2019
Reported: 06/17/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/11/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BFC # 26 (H902025-20)

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	06/15/2019	ND	2.37	119	2.00	2.69	
Toluene*	<0.050	0.050	06/15/2019	ND	2.38	119	2.00	1.04	
Ethylbenzene*	<0.050	0.050	06/15/2019	ND	2.22	111	2.00	2.28	
Total Xylenes*	<0.150	0.150	06/15/2019	ND	6.66	111	6.00	1.85	
Total BTEX	<0.300	0.300	06/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 109 % 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	96.0	16.0	06/13/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS							S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	51.0	50.0	06/13/2019	ND	194	96.8	200	0.317		
DRO >C10-C28*	16400	50.0	06/13/2019	ND	185	92.6	200	8.38		
EXT DRO >C28-C36	4520	50.0	06/13/2019	ND						

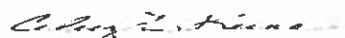
Surrogate: 1-Chlorooctane 524 % 41-142

Surrogate: 1-Chlorooctadecane 1170 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
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 SM4500C-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

Phone Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Phone #
Fax Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Fax #:
REMARKS:			

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Hobbs</u>						BILL TO								ANALYSIS REQUEST									
Project Manager: <u>Joe AP Rioser</u>						P.O. #:																	
Address:						Company:																	
City: <u>Hobbs</u>						State: <u>NM</u> Zip: <u>88246</u>						Attn:											
Phone #:						Fax #:						Address:											
Project #:						City:						State:						Zip:					
Project Location: <u>Cedar Lake D.D CH #2347</u>						Phone #:																	
Sample Name: <u>Sediment</u>						Fax #:																	
FOR LAB USE ONLY						MATRIX						PRESERV.						SAMPLING					
Lab I.D.						(G)RAB OR (C)OMP						# CONTAINERS						GROUNDWATER					
Sample I.D.						WASTEWATER						SOIL						OIL					
H902625						SLUDGE						OTHER :						ACID/BASE:					
1 BFC#17						ICE / COOL						OTHER :						DATE					
2 BFC#18						TIME						1						2:46					
3 REC#19						1						1						2:42					
4 BFC#20						1						1						2:44					
5 BFC#21						1						1						2:46					
6 BFC#22						1						1						2:48					
7 BFC#23						1						1						2:50					
8 BFC#24						1						1						2:52					
9 BFC#25						1						1						2:54					
10 BFC#26						1						1						2:56					
11 BFC#27						1						1						2:58					
12 BFC#28						1						1											
13 BFC#29						1						1											
14 BFC#30						1						1											
15 BFC#31						1						1											
16 BFC#32						1						1											
17 BFC#33						1						1											
18 BFC#34						1						1											
19 BFC#35						1						1											
20 BFC#36						1						1											
21 BFC#37						1						1											
22 BFC#38						1						1											
23 BFC#39						1						1											
24 BFC#40						1						1											
25 BFC#41						1						1											
26 BFC#42						1						1											
27 BFC#43						1						1											
28 BFC#44						1						1											
29 BFC#45						1						1											
30 BFC#46						1						1											
31 BFC#47						1						1											
32 BFC#48						1						1											
33 BFC#49						1						1											
34 BFC#50						1						1											
35 BFC#51						1						1											
36 BFC#52						1						1											
37 BFC#53						1						1											
38 BFC#54						1						1											
39 BFC#55						1						1											
40 BFC#56						1						1											
41 BFC#57						1						1											
42 BFC#58						1						1											
43 BFC#59						1						1											
44 BFC#60						1						1											
45 BFC#61						1						1											
46 BFC#62						1						1											
47 BFC#63						1						1											
48 BFC#64						1						1											
49 BFC#65						1						1											
50 BFC#66						1						1											
51 BFC#67						1						1											
52 BFC#68						1						1											
53 BFC#69						1						1											
54 BFC#70						1						1											
55 BFC#71						1						1											
56 BFC#72						1						1											
57 BFC#73						1						1											
58 BFC#74						1						1											
59 BFC#75						1						1											
60 BFC#76						1						1											
61 BFC#77						1						1											
62 BFC#78						1						1											
63 BFC#79						1						1											
64 BFC#80						1						1											
65 BFC#81						1						1											
66 BFC#82						1						1											
67 BFC#83						1						1											
68 BFC#84						1						1											
69 BFC#85						1						1											
70 BFC#86						1						1											
71 BFC#87						1						1											
72 BFC#88						1						1											
73 BFC#89						1						1											
74 BFC#90						1						1											
75 BFC#91						1						1											
76 BFC#92						1						1											
77 BFC#93						1						1											
78 BFC#94						1						1											
79 BFC#95						1						1											



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

June 20, 2019

JEFFREY BROOM

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: CEDAR LAKE FED CA 737H

Enclosed are the results of analyses for samples received by the laboratory on 06/13/19 10:10.

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/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 fluid and cursive, with the first name "Celey" being more prominent.

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received: 06/13/2019
Reported: 06/20/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/13/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: WC # 12 (H902055-01)

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	06/15/2019	ND	2.21	111	2.00	1.65		
Toluene*	<0.050	0.050	06/15/2019	ND	2.24	112	2.00	0.599		
Ethylbenzene*	<0.050	0.050	06/15/2019	ND	2.08	104	2.00	1.59		
Total Xylenes*	<0.150	0.150	06/15/2019	ND	6.26	104	6.00	1.43		
Total BTEX	<0.300	0.300	06/15/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 102 % 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	800	16.0	06/17/2019	ND	416	104	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	06/14/2019	ND	185	92.3	200	3.85	
DRO >C10-C28*	<10.0	10.0	06/14/2019	ND	183	91.4	200	6.10	
EXT DRO >C28-C36	<10.0	10.0	06/14/2019	ND					

Surrogate: 1-Chlorooctane 82.2 % 41-142

Surrogate: 1-Chlorooctadecane 81.9 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 06/13/2019
 Reported: 06/20/2019
 Project Name: CEDAR LAKE FED CA 737H
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 06/13/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: WC # 13 (H902055-02)

BTEX 80218		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/15/2019	ND	2.21	111	2.00	1.65	
Toluene*	<0.050	0.050	06/15/2019	ND	2.24	112	2.00	0.599	
Ethylbenzene*	<0.050	0.050	06/15/2019	ND	2.08	104	2.00	1.59	
Total Xylenes*	<0.150	0.150	06/15/2019	ND	6.26	104	6.00	1.43	
Total BTEX	<0.300	0.300	06/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 103 % 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	2200	16.0	06/17/2019	ND	416	104	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	06/14/2019	ND	185	92.3	200	3.85	
DRO >C10-C28*	<10.0	10.0	06/14/2019	ND	183	91.4	200	6.10	
EXT DRO >C28-C36	<10.0	10.0	06/14/2019	ND					

Surrogate: 1-Chlorooctane 87.6 % 41-142

Surrogate: 1-Chlorooctadecane 90.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 06/13/2019
Reported: 06/20/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/13/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: WC # 14 (H902055-03)

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/15/2019	ND	2.21	111	2.00	1.65	
Toluene*	<0.050	0.050	06/15/2019	ND	2.24	112	2.00	0.599	
Ethylbenzene*	<0.050	0.050	06/15/2019	ND	2.08	104	2.00	1.59	
Total Xylenes*	<0.150	0.150	06/15/2019	ND	6.26	104	6.00	1.43	
Total BTEX	<0.300	0.300	06/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 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	976	16.0	06/17/2019	ND	416	104	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	06/14/2019	ND	185	92.3	200	3.85	
DRO >C10-C28*	63.7	10.0	06/14/2019	ND	183	91.4	200	6.10	
EXT DRO >C28-C36	15.1	10.0	06/14/2019	ND					

Surrogate: 1-Chlorooctane 95.4 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 06/13/2019
Reported: 06/20/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/13/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: WC # 15 (H902055-04)

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	06/19/2019	ND	2.21	111	2.00	1.65	
Toluene*	<0.050	0.050	06/19/2019	ND	2.24	112	2.00	0.599	
Ethylbenzene*	<0.050	0.050	06/19/2019	ND	2.08	104	2.00	1.59	
Total Xylenes*	<0.150	0.150	06/19/2019	ND	6.26	104	6.00	1.43	
Total BTEX	<0.300	0.300	06/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 106 % 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	176	16.0	06/17/2019	ND	416	104	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	06/14/2019	ND	185	92.3	200	3.85	
DRO >C10-C28*	114	10.0	06/14/2019	ND	183	91.4	200	6.10	
EXT DRO >C28-C36	45.5	10.0	06/14/2019	ND					

Surrogate: 1-Chlorooctane 89.3 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 06/13/2019
Reported: 06/20/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/13/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: WC # 16 (H902055-05)

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/19/2019	ND	2.21	111	2.00	1.65	
Toluene*	<0.050	0.050	06/19/2019	ND	2.24	112	2.00	0.599	
Ethylbenzene*	<0.050	0.050	06/19/2019	ND	2.08	104	2.00	1.59	
Total Xylenes*	<0.150	0.150	06/19/2019	ND	6.26	104	6.00	1.43	
Total BTEX	<0.300	0.300	06/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 106 % 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	48.0	16.0	06/17/2019	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					10	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	06/14/2019	ND	185	92.3	200	3.85		
DRO >C10-C28*	<10.0	10.0	06/14/2019	ND	183	91.4	200	6.10		
EXT DRO >C28-C36	<10.0	10.0	06/14/2019	ND						

Surrogate: 1-Chlorooctane 85.0 % 41-142

Surrogate: 1-Chlorooctadecane 86.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	06/13/2019	Sampling Date:	06/13/2019
Reported:	06/20/2019	Sampling Type:	Soil
Project Name:	CEDAR LAKE FED CA 737H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: WC # 17 (H902055-06)

BTEX 80218		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/19/2019	ND	2.21	111	2.00	1.65		
Toluene*	<0.050	0.050	06/19/2019	ND	2.24	112	2.00	0.599		
Ethylbenzene*	<0.050	0.050	06/19/2019	ND	2.08	104	2.00	1.59		
Total Xylenes*	<0.150	0.150	06/19/2019	ND	6.26	104	6.00	1.43		
Total BTEX	<0.300	0.300	06/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 105 % 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	1180	16.0	06/17/2019	ND	416	104	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	06/14/2019	ND	185	92.3	200	3.85	
DRO >C10-C28*	<10.0	10.0	06/14/2019	ND	183	91.4	200	6.10	
EXT DRO >C28-C36	<10.0	10.0	06/14/2019	ND					


Surrogate: 1-Chlorooctane 84.7 % 41-142

Surrogate: 1-Chlorooctadecane 85.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 06/13/2019
Reported: 06/20/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/13/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: WC # 18 (H902055-07)

BTEX 80218		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/19/2019	ND	2.21	111	2.00	1.65	
Toluene*	<0.050	0.050	06/19/2019	ND	2.24	112	2.00	0.599	
Ethylbenzene*	<0.050	0.050	06/19/2019	ND	2.08	104	2.00	1.59	
Total Xylenes*	<0.150	0.150	06/19/2019	ND	6.26	104	6.00	1.43	
Total BTEX	<0.300	0.300	06/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 104 % 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	7120	16.0	06/17/2019	ND	416	104	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	06/14/2019	ND	185	92.3	200	3.85	
DRO >C10-C28*	84.6	10.0	06/14/2019	ND	183	91.4	200	6.10	
EXT DRO >C28-C36	41.8	10.0	06/14/2019	ND					

Surrogate: 1-Chlorooctane 87.2 % 41-142

Surrogate: 1-Chlorooctadecane 92.5 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	06/13/2019	Sampling Date:	06/13/2019
Reported:	06/20/2019	Sampling Type:	Soil
Project Name:	CEDAR LAKE FED CA 737H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: WC # 19 (H902055-08)

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	06/19/2019	ND	2.21	111	2.00	1.65	
Toluene*	<0.050	0.050	06/19/2019	ND	2.24	112	2.00	0.599	
Ethylbenzene*	<0.050	0.050	06/19/2019	ND	2.08	104	2.00	1.59	
Total Xylenes*	<0.150	0.150	06/19/2019	ND	6.26	104	6.00	1.43	
Total BTEX	<0.300	0.300	06/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 107 % 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	80.0	16.0	06/17/2019	ND	416	104	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	06/14/2019	ND	185	92.3	200	3.85	
DRO >C10-C28*	<10.0	10.0	06/14/2019	ND	183	91.4	200	6.10	
EXT DRO >C28-C36	<10.0	10.0	06/14/2019	ND					

Surrogate: 1-Chlorooctane 90.9 % 41-142

Surrogate: 1-Chlorooctadecane 91.8 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
*	Chloride by SM4500C-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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Pacific		P.O. #:	BILL TO		ANALYSIS REQUEST	
Project Manager: Bruce Baker / Jeffery Brown		Company:				
Address:		Attn:				
City: Hobbs		State: NM	Zip: 88040			
Phone #:		Fax #:	Address:			
Project #:		Project Owner:	City:	State:	Zip:	
Project Name:		Phone #:				
Project Location: Cedar Lake East Ck		Fax #:				
Sample Name: JAC Canada		SAMPLE I.D.				
FOR LAB USE ONLY		Lab I.D.				
		Sample I.D.				
		(G)RAB OR (C)OMP	# CONTAINERS	MATRIX	PRESERV.	SAMPLING
		GROUNDWATER				
		WASTEWATER				
		SOIL				
		OIL				
		SLUDGE				
		OTHER :				
		ACID/BASE:				
		ICE / COOL				
		OTHER :				
		DATE	TIME			
		1	6/13 8:48	N	Ext TPH	BTEX
		2	WC # 13	C		
		3	WC # 14	C		
		4	WC # 15	C		
		5	WC # 10	C		
		6	WC # 17	C		
		7	WC # 18	C		
		8	WC # 19	C		

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Relinquished By: [Signature]	Date: 6-13-19	Received By: [Signature]
Time: 10:10		
Retained By:	Date:	Received By:
Time:		

Delivered By: (Circle One)	Sample Condition	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	Cool <input type="checkbox"/> Intact <input checked="" type="checkbox"/>	
5.0°C	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	TB
499	No <input type="checkbox"/> Yes <input checked="" type="checkbox"/>	

REMARKS:

Phone Result: ☐ Yes ☐ No Add'l Phone #: _____
Fax Result: ☐ Yes ☐ No Add'l Fax #: _____

Email Results



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

June 25, 2019

JEFFREY BROOM

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: CEDAR LAKE FED CA 737H

Enclosed are the results of analyses for samples received by the laboratory on 06/19/19 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/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 "Coley D. Keene". The signature is fluid and cursive, with the first name "Coley" and last name "Keene" clearly distinguishable.

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

 Received: 06/19/2019
 Reported: 06/25/2019
 Project Name: CEDAR LAKE FED CA 737H
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 06/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BFC # 16 (H902123-01)

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/20/2019	ND	1.78	89.2	2.00	2.66	
Toluene*	<0.050	0.050	06/20/2019	ND	1.76	87.9	2.00	2.19	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.70	85.1	2.00	2.34	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	5.20	86.6	6.00	1.41	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 106 % 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	06/21/2019	ND	206	103	200	1.41	
DRO >C10-C28*	<10.0	10.0	06/21/2019	ND	176	88.2	200	6.16	
EXT DRO >C28-C36	<10.0	10.0	06/21/2019	ND					

Surrogate: 1-Chlorooctane 94.3 % 41-142

Surrogate: 1-Chlorooctadecane 95.9 % 37.6-147

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 06/19/2019
Reported: 06/25/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/19/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BFC # 26 (H902123-02)

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/20/2019	ND	1.78	89.2	2.00	2.66	
Toluene*	<0.050	0.050	06/20/2019	ND	1.76	87.9	2.00	2.19	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.70	85.1	2.00	2.34	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	5.20	86.6	6.00	1.41	
Total BTX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 106 % 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	06/21/2019	ND	206	103	200	1.41	
DRO >C10-C28*	<10.0	10.0	06/21/2019	ND	176	88.2	200	6.16	
EXT DRO >C28-C36	<10.0	10.0	06/21/2019	ND					

Surrogate: 1-Chlorooctane 95.9 % 41-142

Surrogate: 1-Chlorooctadecane 97.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 06/19/2019
 Reported: 06/25/2019
 Project Name: CEDAR LAKE FED CA 737H
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 06/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BFC # 23 (H902123-03)

BTEX 80218		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/20/2019	ND	1.78	89.2	2.00	2.66	
Toluene*	<0.050	0.050	06/20/2019	ND	1.76	87.9	2.00	2.19	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.70	85.1	2.00	2.34	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	5.20	86.6	6.00	1.41	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	06/21/2019	ND	206	103	200	1.41	
DRO >C10-C28*	<10.0	10.0	06/21/2019	ND	176	88.2	200	6.16	
EXT DRO >C28-C36	<10.0	10.0	06/21/2019	ND					


Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 06/19/2019
Reported: 06/25/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/19/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BFC # 21 (H902123-04)

BTEX 8021B		mg/kg	Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/20/2019	ND	1.78	89.2	2.00	2.66	
Toluene*	<0.050	0.050	06/20/2019	ND	1.76	87.9	2.00	2.19	
Ethylbenzene*	<0.050	0.050	06/20/2019	ND	1.70	85.1	2.00	2.34	
Total Xylenes*	<0.150	0.150	06/20/2019	ND	5.20	86.6	6.00	1.41	
Total BTEX	<0.300	0.300	06/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIB) 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*	<10.0	10.0	06/21/2019	ND	206	103	200	1.41	
DRO >C10-C28*	<10.0	10.0	06/21/2019	ND	176	88.2	200	6.16	
EXT DRO >C28-C36	<10.0	10.0	06/21/2019	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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

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Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

Analytical Results For:

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

 Received: 07/16/2019
 Reported: 07/18/2019
 Project Name: CEDAR LAKE FED CA 737H
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 07/16/2019
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: B 27 (H902440-01)

BTEX 80218			mg/kg		Analyzed By: ms				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/17/2019	ND	2.07	104	2.00	0.586	
Toluene*	<0.050	0.050	07/17/2019	ND	2.08	104	2.00	0.242	
Ethylbenzene*	<0.050	0.050	07/17/2019	ND	1.96	98.2	2.00	0.230	
Total Xylenes*	<0.150	0.150	07/17/2019	ND	5.95	99.1	6.00	0.0747	
Total BTEX	<0.300	0.300	07/17/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 97.8 % 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	07/17/2019	ND	416	104	400	7.41	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/16/2019	ND	190	95.1	200	0.351	
DRO >C10-C28*	1190	10.0	07/16/2019	ND	189	94.6	200	4.27	
EXT DRO >C28-C36	248	10.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 76.2 % 41-142

Surrogate: 1-Chlorooctadecane 113 % 37.6-147

Cardinal Laboratories

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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:	07/16/2019	Sampling Date:	07/16/2019
Reported:	07/18/2019	Sampling Type:	Soil
Project Name:	CEDAR LAKE FED CA 737H	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: B 28 (H902440-02)

BTEX 80218		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/17/2019	ND	2.07	104	2.00	0.586	
Toluene*	<0.050	0.050	07/17/2019	ND	2.08	104	2.00	0.242	
Ethylbenzene*	<0.050	0.050	07/17/2019	ND	1.96	98.2	2.00	0.230	
Total Xylenes*	<0.150	0.150	07/17/2019	ND	5.95	99.1	6.00	0.0747	
Total BTEX	<0.300	0.300	07/17/2019	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	22000	16.0	07/17/2019	ND	416	104	400	7.41	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<50.0	50.0	07/16/2019	ND	190	95.1	200	0.351	
DRO >C10-C28*	3190	50.0	07/16/2019	ND	189	94.6	200	4.27	
EXT DRO >C28-C36	966	50.0	07/16/2019	ND					

Surrogate: 1-Chlorooctane 97.8 % 41-142

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<50.0	50.0	07/16/2019	ND	190	95.1	200	0.351	
DRO >C10-C28*	3190	50.0	07/16/2019	ND	189	94.6	200	4.27	
EXT DRO >C28-C36	966	50.0	07/16/2019	ND					

Surrogate: 1-Chlorooctadecane 208 % 37.6-147

Surrogate: 1-Chlorooctadecane 208 % 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:	07/16/2019	Sampling Date:	07/16/2019
Reported:	07/18/2019	Sampling Type:	Soil
Project Name:	CEDAR LAKE FED CA 737H	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: B 29 (H902440-03)

BTEX 80218		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/17/2019	ND	2.07	104	2.00	0.586	
Toluene*	<0.050	0.050	07/17/2019	ND	2.08	104	2.00	0.242	
Ethylbenzene*	<0.050	0.050	07/17/2019	ND	1.96	98.2	2.00	0.230	
Total Xylenes*	<0.150	0.150	07/17/2019	ND	5.95	99.1	6.00	0.0747	
Total BTEX	<0.300	0.300	07/17/2019	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	15400	16.0	07/17/2019	ND	416	104	400	7.41	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/17/2019	ND	190	94.8	200	1.40	
DRO >C10-C28*	775	10.0	07/17/2019	ND	191	95.4	200	2.82	
EXT DRO >C28-C36	406	10.0	07/17/2019	ND					

Surrogate: 1-Chlorooctane 78.0 % 41-142

Surrogate: 1-Chlorooctadecane 108 % 37.6-147

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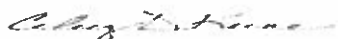
Celey D. Keene, Lab Director/Quality Manager

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.
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

CARDINAL
Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

[illegible]



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

July 23, 2019

JEFFREY BROOM

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: CEDAR LAKE FED CA 737H

Enclosed are the results of analyses for samples received by the laboratory on 07/22/19 16:55.

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/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Snyder", with a stylized flourish at the end.

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received:	07/22/2019	Sampling Date:	07/22/2019
Reported:	07/23/2019	Sampling Type:	Soil
Project Name:	CEDAR LAKE FED CA 737H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: B #28 @ 3" (H902516-01)

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/23/2019	ND	2.10	105	2.00	1.96		
Toluene*	<0.050	0.050	07/23/2019	ND	2.18	109	2.00	3.34		
Ethylbenzene*	<0.050	0.050	07/23/2019	ND	2.04	102	2.00	2.70		
Total Xylenes*	<0.150	0.150	07/23/2019	ND	6.20	103	6.00	3.03		
Total BTEX	<0.300	0.300	07/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 102 % 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	3000	16.0	07/23/2019	ND	432	108	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	07/23/2019	ND	190	95.2	200	1.01	
DRO >C10-C28*	<10.0	10.0	07/23/2019	ND	182	91.2	200	2.94	
EXT DRO >C28-C36	<10.0	10.0	07/23/2019	ND					

Surrogate: 1-Chlorooctane 88.6 % 41-142

Surrogate: 1-Chlorooctadecane 91.0 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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

Analytical Results For:

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

Received: 07/22/2019
Reported: 07/23/2019
Project Name: CEDAR LAKE FED CA 737H
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 07/22/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: B #27 @ 3" (H902516-02)

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/23/2019	ND	2.10	105	2.00	1.96	
Toluene*	<0.050	0.050	07/23/2019	ND	2.18	109	2.00	3.34	
Ethylbenzene*	<0.050	0.050	07/23/2019	ND	2.04	102	2.00	2.70	
Total Xylenes*	<0.150	0.150	07/23/2019	ND	6.20	103	6.00	3.03	
Total BTEX	<0.300	0.300	07/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 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	2880	16.0	07/23/2019	ND	416	104	400	3.77	QM-07

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/23/2019	ND	190	95.2	200	1.01	
DRO >C10-C28*	<10.0	10.0	07/23/2019	ND	182	91.2	200	2.94	
EXT DRO >C28-C36	<10.0	10.0	07/23/2019	ND					

Surrogate: 1-Chlorooctane 96.3 % 41-142

Surrogate: 1-Chlorooctadecane 98.0 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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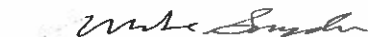
Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
*	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Mike Snyder For 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

BILL TO

ANALYSIS REQUEST

Company Name: <u>H Pecher</u>		P.O. #:														
Project Manager: <u>Jeffrey Brown</u>		Company:														
Address:		Attn:														
City: <u>Hobbs</u>	State: <u>NM</u> Zip: <u>88240</u>	Address:														
Phone #:	Fax #:	City:														
Project #:	Project Owner:	State:														
Project Name:		Zip:														
Project Location: <u>Cedar Lake S&L C# 7334</u>	Phone #:															
Sample Name: <u>Joe Chuska</u>	Fax #:															
FOR LAB USE ONLY																
Lab I.D.	EPA Sample I.D.	(G) GRAB OR (C) COMP	# CONTAINERS	MATRIX				PRESERV	SAMPLING	DATE	TIME	C/	Ext	IPM	Dtex	
				GROUNDWATER	WASTEWATER	SOIL	OIL									SLUDGE
H90254										7/22	13:46					
1 B# 28 @ 3"		C 1	1													
2 B# 27 @ 3"		C 1	1							7/22	15:44					

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Relinquished By: [Signature] Date: 7/22 Received By: [Signature]

Refiniquished By: [Signature] Date: 7/22 Received By: [Signature]

Delivered By: (Circle One) 4.6 # 97 Sample Condition: ☒ Cool ☒ Intact ☐ Yes ☐ No ☐ Yes ☐ No

Sampler - UPS - Bus - Other: Connected 5.0 CHECKED BY: [Signature] (Initials) DTG

Phone Result: ☐ Yes ☐ No Add'l Phone #: [Blank]

Fax Result: ☐ Yes ☐ No Add'l Fax #: [Blank]

REMARKS: Email Results.

Final
sample

Mar 31 2019 Apache Cedar Lake # 737 H pasture

1 ✓ BFC #1 @ 1' 32.8533677, -103.9042480

$$11.1/30.0 = 2.70 \times 0.21 = 566 \checkmark \text{ clean}$$

2 ✓ BFC #2 @ 1' 32.8538201, -103.9042444

$$11.3/30.3 = 2.68 \times 0.06 = 160 \checkmark \text{ clean}$$

3 ✓ BFC #3 @ 1' 32.853773 -103.9043368

$$11.1/30.3 = 2.72 \times 0.05 = 135 \checkmark \text{ clean}$$

4 ✓ BFC #4 @ 2' 32.8537196 -103.9043412

$$11.3/30.0 = 2.65 \times 0.08 = 132 \checkmark \text{ clean}$$

5 ✓ BFC #5 @ 2' 32.8536573 -103.9043720

$$11.3/30.2 = 2.67 \times 0.04 = 106 \checkmark \text{ clean}$$

6 ✓ BFC #6 @ 4' 32.8535832 -102.9044351

$$11.0/30.2 = 2.74 \times 0.08 = 219 \checkmark \text{ clean}$$

7 ✓ BFC #7 @ 4' 32.8535218 -103.9043566

$$11.2/30.2 = 2.69 \times 0.06 = 161 \checkmark \text{ clean}$$

8 ✓ BFC #8 @ 4' 32.8534968 -103.9042644.

$$11.2/30.2 = 2.69 \times 0.05 = 215 \checkmark \text{ clean}$$

Final sample

Posture

May 31, 2019 Cedar Lake Field CA #737H Wall sample

9/ WC1 @ 1' 32.8538370 -103.9042812

$$11.1/30.2 = 2.72 \times .06 = 163 \checkmark$$

10/ WC2 @ 1' 32.8537787 -103.9043606

$$11.1/30.1 = 2.71 \times .08 = 216 \checkmark$$

11/ WC3 @ 2' 32.8536832 -103.9044002

$$11.1/30.0 = 2.71 \times .09 = 243 \checkmark$$

12/ WC4 @ 4' 32.8535601 -103.9044190

$$11.3/30.1 = 2.66 \times .07 = 186 \checkmark$$

13/ WC5 @ 4' 32.8534845 -103.9043439

$$11.3/30.2 = 2.67 \times 0.15 = 400 \checkmark$$

14/ WC6 @ 4' 32.8534180 -103.9043134

$$11.2/30.2 = 2.69 \times .05 = 134 \checkmark$$

15/ WC7 @ 4' 32.8535168 -103.9043130

$$11.2/30.2 = 2.69 \times .08 = 215 \checkmark$$

16/ WC8 @ 4' 32.8535827 -103.9043221

$$11.3/30.3 = 2.68 \times .07 = 187 \checkmark$$

17/ WC9 @ 2' 32.8537193 -103.9043338

$$11.3/30.4 = 2.69 \times .05 = 134 \checkmark$$

18/ WC10 @ 1' 32.8537987 -103.9043187

$$11.3/30.1 = 2.66 \times 0.20 = 531 \checkmark$$

19/ WC11 @ 1' 32.8538669 -103.9042265

$$11.1/30.3 = 2.72 \times 0.07 = 190 \checkmark$$

Cedar Lake Federal CA 737H Photos



Photo of Pasture Excavation



Photo of Pasture Excavation

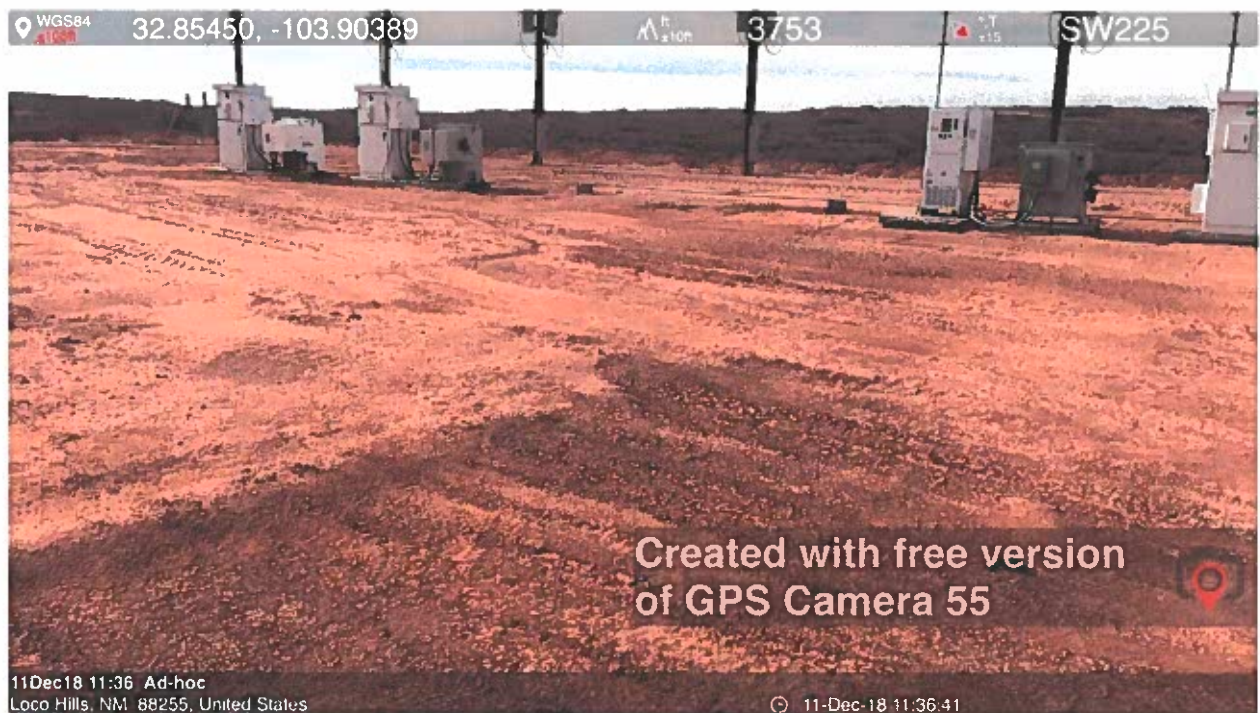


Photo of Pad Scrape



Photo of Pad Scrape

CEDAR LAKE PHOTO PAGE



CEDAR LAKE PHOTO PAGE



CEDAR LAKE PHOTO PAGE



CEDAR LAKE PHOTO PAGE



CEDAR LAKE PHOTO PAGE



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