



September 9, 2020

Mr. Bradford Billings  
State of New Mexico Oil Conservation Division  
1220 South St Francis Drive  
Santa Fe, NM 87505

RE: 2RP-2071, 2RP-2132, 2RP-2509 Tony Federal Battery

Mr. Billings,

In compliance with 19.15.29.15(B) NMAC and the agreement submitted by Apache Corporation on November 8, 2018, Apache Corporation is submitting information related to closure for the release occurring July 26, 2012. Apache is respectfully submitting the closure report based on remediation and studies occurring in 2018 that demonstrate the site meeting the requirements of the agency. Unless further information is requested by NMOCD, Apache Corporation considers this release closed.

If there are any questions, please feel free to contact me by telephone at 432-631-6982 or by e-mail at larry.baker @apachecorp.com.

Sincerely,

Larry Baker  
Environmental Technician SR.  
Apache Corporation

Attachment: Closure Report Dated September 9, 2020



303 Veterans Airpark Lane Midland, TX 79705

## **Closure Report**

September 9, 2020

Re: Tony Federal Battery

API# 30-015-30244

Case # 2RP-2071

2RP-2132

2RP-2509

### **Background:**

The Tony Federal Battery is located east of Loco Hills, New Mexico in unit letter K section 18 township 17S range 31E (GPS Coordinates: 32.8310056, -103.911913). The release is located in an area of no know ground water. On 10/09/2018 vertical delineation was conducted at SP 1 in one foot intervals to a depth of 8 feet utilizing a hand auger. All samples collected were submitted to a commercial laboratory for analysis of Cl-, TPH, and BTEX. On 10/11/2018 the vertical was advanced and samples were collected from 11 to 14 feet below ground surface. The sampling was stopped due to the hand auger had reached its maximum depth. All samples collected were submitted to a commercial laboratory for analysis of Cl-, TPH, and BTEX. After the vertical was complete the two release areas were sectioned off in 200 square feet areas and 5 point composite samples were collected from the areas totaling 8 composite samples. All composite samples were submitted to a commercial laboratory for analysis of Cl-, TPH, and BTEX. On 10/15/2018 a hand auger was utilized to collect 1 foot composite samples at composite points 6 and 8.

A remediation plan was submitted an approved by OCD. In accordance with the plan SP 1 was excavated to a depth of 2 feet. CP 6 and CP 8 were excavated to a depth of 1 foot. On 11/19/2018 final wall samples were collected at CP 6 and CP 8. All wall samples were submitted to a commercial laboratory for analysis of Cl-, TPH, and BTEX. On 11/26/2018 final wall samples were collected at SP 1 and are referred to on lab analysis as SP7. All samples collected were submitted to a commercial laboratory for analysis of Cl-, TPH, and BTEX. Laboratory analysis for CP 8 west wall were above table one standards for TPH. The wall was further excavated and on 12/4/2018 a final wall sample was collected and submitted to a commercial laboratory for analysis of Cl-, TPH, and BTEX. All excavated soil was hauled to an OCD approved disposal facility. The excavation was backfilled with caliche to ground surface and the entire facility was upgraded with the secondary containment lined.

Apache has completed remediation to below table one standards for releases greater than 100 feet to groundwater and respectfully request closure for events 2RP-2071, 2RP-2132, and 2RP-2509.

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

Submitted by;

*Bruce Baker*

**Environmental Technician**

*larry.baker@apachecorp.com*

**Cell# 432-631-6982**

**Off# 432-818-1000**

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

RECEIVED  
NOV 15 2013  
NMOCD ARTESIA

Form C-141  
Revised August 8, 2011  
This form is to be filed in the appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

*nJMW1332356226*

Name of Company <i>Apache Corporation 873</i>	OPERATOR <input checked="" type="checkbox"/> Initial Report <input type="checkbox"/> Final Report
Contact <i>Bruce Baker</i>	
Address <i>8 Ellison Lane Eunice, NM 88231</i>	Telephone No. <i>432-631-6982</i>
Facility Name <i>Tony Federal Battery</i>	Facility Type <i>Battery</i>
Surface Owner <i>BLM</i>	Mineral Owner
	API No. <i>30-015-30244</i>

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	18	17S	31E	1385'	FSL	1510'	FWL	Eddy

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

NATURE OF RELEASE

Type of Release <i>Produced Water</i>	Volume of Release <i>60 Barrels</i>	Volume Recovered <i>55 Barrels</i>
Source of Release <i>Water transfer pump</i>	Date and Hour of Occurrence <i>11/14/13</i>	Date and Hour of Discovery <i>11/14/13 at 7:15 a.m.</i>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? <i>Mike Bratcher with NMOCD and Jeffery Robertson with BLM</i>	
By Whom? <i>Bruce Baker</i>	Date and Hour <i>11/14/13 at 3:00 p.m.</i>	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* <i>2" tee washed out and 1/2 inch nipple on discharge of water transfer pump. The valve to transfer pump was closed and connections were replaced with new.</i>		
Describe Area Affected and Cleanup Action Taken.* <i>Approximately 1500 square feet release all contained inside the bermed facility and lease pad. A vacuum truck was dispatched and recovered 55 barrels of produce water.</i>		

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

OIL CONSERVATION DIVISION

Signature: <i>Bruce Baker</i>	Approved by Environmental Specialist: <i>[Signature]</i>	
Printed Name: <i>Bruce Baker</i>	Approval Date: <i>NOV 19 2013</i>	Expiration Date:
Title: <i>Environmental Technician</i>	Conditions of Approval: Remediation per OCD Rule & Guidelines, & like approval by BLM. <b>SUBMIT REMEDIATION PROPOSAL NO LATER THAN:</b>	
E-mail Address: <i>larry.baker@apachecorp.com</i>	Attached <input type="checkbox"/>	
Date: <i>11/15/13</i> Phone: <i>432-631-6982</i>	<i>December 19, 2013</i>	

*2RP-2071*

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

RECEIVED  
DEC 20 2013  
NMOCD ARTESIA

Form C-141  
Revised August 8, 2011

Submit Copy to appropriate District Office in accordance with 19.15.29 NMAC.

**Release Notification and Corrective Action**

*njmw* 1400 253460

OPERATOR  Initial Report  Final Report

Name of Company Apache Corporation <b>873</b>	Contact Bruce Baker
Address 8 Ellison Lane Eunice, NM 88231	Telephone No. (432) 631-6982
Facility Name Tony Federal Battery	Facility Type Battery

Surface Owner BLM	Mineral Owner	API No. 30-015-30244
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**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	18	17S	31E	1385'	FSL	1510'	FWL	Eddy

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

**NATURE OF RELEASE**

Type of Release Oil and Produced Water	Volume of Release 25 barrels (20 barrels of water and 5 barrels of oil)	Volume Recovered 20 barrels (17 barrels of water and 3 barrels of oil)
Source of Release Water Tank	Date and Hour of Occurrence 12/15/2013 at 8:00 a.m.	Date and Hour of Discovery 12/15/2013 at 8:00 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher (NMOCD) and Jeffery Robertson (BLM)	
By Whom? Bruce Baker	Date and Hour 12/16/2013	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*  
Transfer pump went down due to a loose coupling causing the water tank to overflow. Pump was repaired and vacuum truck was dispatched to collect fluid from release area.

Describe Area Affected and Cleanup Action Taken.\*  
The release area was contained inside the bermed area. A vacuum truck was dispatched and recovered 20 barrels of total fluid.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: <i>Bruce Baker</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Bruce Baker	Approved by Environmental Specialist:	Signed By <i>Mike Bratcher</i>
Title: Environmental Technician	Approval Date: <b>AN 02 2014</b>	Expiration Date:
E-mail Address: larry.baker@apnchecorp.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 12/20/2013 Phone: (432) 631-6982	Remediation per OCD Rule & Guidelines, & like approval by BLM. <b>SUBMIT REMEDIATION PROPOSAL NO LATER THAN:</b>	

**February 2, 2014** **2RP-2132**

NM OIL CONSERVATION  
ARTESIA DISTRICT

SEP 22 2014

Form C-141  
Revised August 8, 2011

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
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1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

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

Submit **RECEIVED** appropriate District Office in  
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

*NAB14362923*

Name of Company Apache Corporation <i>873</i>		OPERATOR	<input checked="" type="checkbox"/> Initial Report	<input type="checkbox"/> Final Report
Address 2350 W Marland Blvd Hobbs NM 88240		Contact Bruce Baker		
Facility Name Tony Federal Battery		Telephone No. (432) 631-6982		
Facility Type Battery				
Surface Owner BLM	Mineral Owner	API No. 30-015-30244		

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	18	17S	31E	1385'	FSL	1510'	FWL	Eddy

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

NATURE OF RELEASE

Type of Release Oil and Produced Water	Volume of Release 150 barrels of water and 40 barrels of oil	Volume Recovered 140 barrels of water and 35 barrels of oil
Source of Release Water and Oil Tank	Date and Hour of Occurrence 9/19/2014 at 4:00 a.m.	Date and Hour of Discovery 9/19/2014 at 4:00 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher (NMOCD) and Jim Anos (BLM)	
By Whom? Bruce Baker	Date and Hour 9/19/2014 at 11:30 a.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*  
A short in the electrical panel caused a power outage at facility. The power outage caused all the transfer pumps and Lact unit to fail resulting in the tanks to overflow. The power was restored.

Describe Area Affected and Cleanup Action Taken.\*  
The release area was contained inside the bermed area and lease pad. A vacuum truck was dispatched to pick-up standing fluid.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: <i>Bruce Baker</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Bruce Baker	Signed By <i>Mike Bratcher</i> Approved by Environmental Specialist:	
Title: Environmental Technician	Approval Date: <i>9/23/14</i>	Expiration Date:
E-mail Address: larry.baker@apachecorp.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 9/22/2014 Phone: (432) 631-6982	Remediation per O.C.D. Rules & Guidelines	

Attach Additional Sheets If Necessary  
SUBMIT REMEDIATION PROPOSAL NO  
LATER THAN: *10/23/14* *2RP-2509*

Incident ID	
District RP	
Facility ID	
Application ID	

## Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	none (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 <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

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

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

State of New Mexico  
Oil Conservation Division

Page 4

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: Larry Baker Title: Environmental Tech SR.  
 Signature: *Larry Baker* Date: 9/9/2020  
 email: larry.baker@apachecorp.com Telephone: 432-631-6982

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

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: Larry Baker Title: Environmental Tech SR.  
 Signature: *Larry Baker* Date: 9/9/2020  
 email: larry.baker@apachecorp.com Telephone: 432-631-6982

**OCD Only**

Received by: OCD Date: 9/20/2020

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: *Ashley Maxwell* Date: 1/25/2023  
 Printed Name: Ashley Maxwell Title: Environmental Specialist





## Tony Federal Battery

SP 1	Depth	Lab CL	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO
	0-6"	352	<0.050	<0.050	<0.050	<0.150	<0.300	<50	3850	1030
	1'	3720	<0.050	<0.050	<0.050	0.195	<0.300	<50	3150	613
	2'	624	<0.050	<0.050	<0.050	<0.150	<0.300	<10	48.4	12.2
	3'	1260	<0.050	<0.050	<0.050	<0.150	<0.300	<10	184	37.2
	4'	816	<0.050	<0.050	<0.050	<0.150	<0.300	<10	79.3	<10
	5'	816	<0.050	<0.050	<0.050	<0.150	<0.300	<10	147	32.2
	6'	1170	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10
	7'	1140	<0.050	<0.050	<0.050	<0.150	<0.300	<10	22.8	<10
	8'	1150	<0.050	<0.050	<0.050	<0.150	<0.300	<10	1920	474
	11'	1180	<0.050	<0.050	<0.050	<0.150	<0.300	<10	386	120
	12'	896	<0.050	<0.050	<0.050	<0.150	<0.300	<10	269	68.3
	13'	864	<0.050	<0.050	<0.050	<0.150	<0.300	<10	366	95
	14'	736	<0.050	<0.050	<0.050	<0.150	<0.300	<10	90.4	14.7
Composite Samples										
CP 1	0-6"	672	<0.050	<0.050	<0.050	<0.150	<0.300	<10	83.4	22.1
CP 2	0-6"	160	<0.050	<0.050	<0.050	<0.150	<0.300	<10	850	195
CP 3	0-6"	176	<0.050	<0.050	<0.050	<0.150	<0.300	<10	233	76
CP 4	0-6"	128	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10
CP 5	0-6"	1460	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10
CP 6	0-6"	1400	<0.050	<0.050	<0.050	<0.150	<0.300	<10	1400	315
	1'	2680	<0.050	<0.050	0.126	<0.150	<0.300	<10	405	89
CP 7	0-6"	2320	<0.050	<0.050	<0.050	<0.150	<0.300	<10	118	38.4
CP 8	0-6"	352	<0.050	<0.050	<0.050	<0.150	<0.300	<50	2000	411
	1'	304	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	297	65.5

## Final Wall Samples

Date	SP 6 (CP 6)	Lab CL	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO
11/19/2019	N Wall	368	0.091	<0.182	<0.025	<0.075	0.273	<50	456	173
11/19/2019	S Wall	288	<0.025	<0.025	<0.025	<0.075	<0.150	<10	11.6	<10
11/19/2019	W Wall	1470	<0.025	<0.025	<0.025	<0.075	<0.150	<10	<10	<10
11/19/2019	E Wall	1760	<0.025	<0.025	<0.025	<0.075	<0.150	<10	<10	<10

Date	SP 7 (SP 1)	Lab CL	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO
11/26/2019	S Wall	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10	126	63.9
11/26/2019	N Wall	112	<0.050	<0.050	<0.050	<0.150	<0.300	<10	10.2	<10
11/26/2019	W Wall	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10
11/26/2019	E Wall	272	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10

Date	SP 8 (CP 8)	Lab CL	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO
11/19/2019	N Wall	480	<0.025	<0.025	<0.025	<0.075	<0.150	<10	39.9	11.8
11/19/2019	S Wall	1380	<0.025	<0.025	<0.025	<0.075	<0.150	<10	666	138
11/19/2019	W Wall	1480	<0.025	<0.025	<0.025	<0.075	<0.150	<50.0	3190	658
12/4/2019	W Wall	960	<0.050	<0.050	<0.050	<0.150	<0.300	<10	77.7	22
11/19/2019	E Wall	1170	<0.025	<0.025	<0.025	<0.075	<0.150	<10	991	272



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

October 10, 2018

BRUCE BAKER  
APACHE CORP - HOBBS  
2350 W. MARLAND BLVD.  
HOBBS, NM 88240

RE: TONY FEDERAL TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 10/09/18 16:15.

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](http://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: 10/09/2018 Sampling Date: 10/09/2018
Reported: 10/10/2018 Sampling Type: Soil
Project Name: TONY FEDERAL TANK BATTERY Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Tamara Oldaker
Project Location: NOT GIVEN

Sample ID: SP 1 @ 6" (H802877-01)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene\*, Toluene\*, Ethylbenzene\*, Total Xylenes\*, Total BTEX.

Surrogate: 4-Bromofluorobenzene (PIE) 115 % 69.8-142

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10\*, DRO >C10-C28\*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 243 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene

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:	10/09/2018	Sampling Date:	10/09/2018
Reported:	10/10/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: SP 1 @ 1' (H802877-02)**

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	10/10/2018	ND	1.94	96.9	2.00	2.63	
Toluene*	<0.050	0.050	10/10/2018	ND	1.83	91.5	2.00	3.13	
Ethylbenzene*	<0.050	0.050	10/10/2018	ND	1.82	91.2	2.00	1.59	
<b>Total Xylenes*</b>	<b>0.195</b>	0.150	10/10/2018	ND	5.49	91.5	6.00	1.96	
Total BTEX	<0.300	0.300	10/10/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 101 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>3720</b>	16.0	10/10/2018	ND	464	116	400	3.51	

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*	<50.0	50.0	10/09/2018	ND	196	97.9	200	2.16		
<b>DRO &gt;C10-C28*</b>	<b>3150</b>	50.0	10/09/2018	ND	216	108	200	7.67		
<b>EXT DRO &gt;C28-C36</b>	<b>613</b>	50.0	10/09/2018	ND						

Surrogate: 1-Chlorooctane 113 % 41-142

Surrogate: 1-Chlorooctadecane 151 % 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: 10/09/2018
Reported: 10/10/2018
Project Name: TONY FEDERAL TANK BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN
Sampling Date: 10/09/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 2' (H802877-03)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene\*, Toluene\*, Ethylbenzene\*, Total Xylenes\*, Total BTEX.

Surrogate: 4-Bromofluorobenzene (PIE) 95.5% 69.8-142

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10\*, DRO >C10-C28\*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 103% 41-142

Surrogate: 1-Chlorooctadecane 104% 37.6-147

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Signature of Celey D. Keene

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: 10/09/2018
Reported: 10/10/2018
Project Name: TONY FEDERAL TANK BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN
Sampling Date: 10/09/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 3' (H802877-04)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene\*, Toluene\*, Ethylbenzene\*, Total Xylenes\*, Total BTEX.

Surrogate: 4-Bromofluorobenzene (PIE) 97.2% 69.8-142

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10\*, DRO >C10-C28\*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 118% 41-142

Surrogate: 1-Chlorooctadecane 126% 37.6-147

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Celestine

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: 10/09/2018
Reported: 10/10/2018
Project Name: TONY FEDERAL TANK BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN
Sampling Date: 10/09/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 4' (H802877-05)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene\*, Toluene\*, Ethylbenzene\*, Total Xylenes\*, Total BTEX.

Surrogate: 4-Bromofluorobenzene (PIE) 95.7% 69.8-142

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10\*, DRO >C10-C28\*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 100% 41-142

Surrogate: 1-Chlorooctadecane 103% 37.6-147

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Signature of Celey D. Keene

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: 10/09/2018
Reported: 10/10/2018
Project Name: TONY FEDERAL TANK BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN
Sampling Date: 10/09/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 5' (H802877-06)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene\*, Toluene\*, Ethylbenzene\*, Total Xylenes\*, Total BTEX.

Surrogate 4-Bromofluorobenzene (PIE) 98.7% 69.8-142

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10\*, DRO >C10-C28\*, EXT DRO >C28-C36.

Surrogate 1-Chlorooctane 96.3% 41-142

Surrogate 1-Chlorooctadecane 102% 37.6-147

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Celestine

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: 10/09/2018
Reported: 10/10/2018
Project Name: TONY FEDERAL TANK BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN
Sampling Date: 10/09/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 6' (H802877-07)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene\*, Toluene\*, Ethylbenzene\*, Total Xylenes\*, Total BTEX.

Surrogate: 4-Bromofluorobenzene (PIE) 94.7% 69.8-142

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10\*, DRO >C10-C28\*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 97.5% 41-142

Surrogate: 1-Chlorooctadecane 94.5% 37.6-147

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Celestine

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: 10/09/2018
Reported: 10/10/2018
Project Name: TONY FEDERAL TANK BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN
Sampling Date: 10/09/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 7' (H802877-08)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene\*, Toluene\*, Ethylbenzene\*, Total Xylenes\*, Total BTEX.

Surrogate: 4-Bromofluorobenzene (PIE) 96.0% 69.8-142

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10\*, DRO >C10-C28\*, EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 97.4% 41-142

Surrogate: 1-Chlorooctadecane 95.5% 37.6-147

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Signature of Celey D. Keene

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: 10/09/2018
Reported: 10/10/2018
Project Name: TONY FEDERAL TANK BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN
Sampling Date: 10/09/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 8' (H802877-09)

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene\*, Toluene\*, Ethylbenzene\*, Total Xylenes\*, Total BTEX.

Surrogate 4-Bromofluorobenzene (PIE) 107% 69.8-142

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10\*, DRO >C10-C28\*, EXT DRO >C28-C36.

Surrogate 1-Chlorooctane 95.3% 41-142

Surrogate 1-Chlorooctadecane 148% 37.6-147

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Celestine

Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
- 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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*Signature*

Celey D. Keene, Lab Director/Quality Manager





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

October 12, 2018

BRUCE BAKER  
APACHE CORP - HOBBS  
2350 W. MARLAND BLVD.  
HOBBS, NM 88240

RE: TONY FEDERAL TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 10/11/18 13:33.

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](http://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:	10/11/2018	Sampling Date:	10/11/2018
Reported:	10/12/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SP 1 @ 11' (H802911-01)**

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	10/11/2018	ND	2.14	107	2.00	0.672	
Toluene*	<0.050	0.050	10/11/2018	ND	2.03	102	2.00	0.830	
Ethylbenzene*	<0.050	0.050	10/11/2018	ND	2.01	101	2.00	0.688	
Total Xylenes*	<0.150	0.150	10/11/2018	ND	6.00	100	6.00	0.256	
Total BTEX	<0.300	0.300	10/11/2018	ND					

Surrogate: 4-Bromofluorobenzene (PFC) 95.6% 69.8-142

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	10/12/2018	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	10/12/2018	ND	194	97.1	200	2.97	
DRO >C10-C28*	386	10.0	10/12/2018	ND	191	95.3	200	0.689	
EXT DRO >C28-C36	120	10.0	10/12/2018	ND					

Surrogate: 1-Chlorooctane 92.2% 41-142

Surrogate: 1-Chlorooctadecane 108% 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:	10/11/2018	Sampling Date:	10/11/2018
Reported:	10/12/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SP 1 @ 12' (H802911-02)**

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	10/11/2018	ND	2.14	107	2.00	0.672	
Toluene*	<0.050	0.050	10/11/2018	ND	2.03	102	2.00	0.830	
Ethylbenzene*	<0.050	0.050	10/11/2018	ND	2.01	101	2.00	0.688	
Total Xylenes*	<0.150	0.150	10/11/2018	ND	6.00	100	6.00	0.256	
Total BTEX	<0.300	0.300	10/11/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 95.3 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	896	16.0	10/12/2018	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	10/12/2018	ND	194	97.1	200	2.97	
DRO >C10-C28*	269	10.0	10/12/2018	ND	191	95.3	200	0.689	
EXT DRO >C28-C36	68.3	10.0	10/12/2018	ND					

Surrogate: 1-Chlorooctane 92.2 % 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  
BRUCE BAKER  
2350 W. MARLAND BLVD.  
HOBBS NM, 88240  
Fax To: (575) 393-2432

Received:	10/11/2018	Sampling Date:	10/11/2018
Reported:	10/12/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SP 1 @ 13' (H802911-03)**

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	10/12/2018	ND	2.14	107	2.00	0.672	
Toluene*	<0.050	0.050	10/12/2018	ND	2.03	102	2.00	0.830	
Ethylbenzene*	<0.050	0.050	10/12/2018	ND	2.01	101	2.00	0.688	
Total Xylenes*	<0.150	0.150	10/12/2018	ND	6.00	100	6.00	0.256	
Total BTEX	<0.300	0.300	10/12/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 96.7 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	864	16.0	10/12/2018	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	10/12/2018	ND	194	97.1	200	2.97	
DRO >C10-C28*	366	10.0	10/12/2018	ND	191	95.3	200	0.689	
EXT DRO >C28-C36	95.0	10.0	10/12/2018	ND					

Surrogate: 1-Chlorooctane 92.6 % 41-142

Surrogate: 1-Chlorooctadecane 109 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	10/11/2018	Sampling Date:	10/11/2018
Reported:	10/12/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SP 1 @ 14' (H802911-04)**

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	10/12/2018	ND	2.14	107	2.00	0.672	
Toluene*	<0.050	0.050	10/12/2018	ND	2.03	102	2.00	0.830	
Ethylbenzene*	<0.050	0.050	10/12/2018	ND	2.01	101	2.00	0.688	
Total Xylenes*	<0.150	0.150	10/12/2018	ND	6.00	100	6.00	0.256	
Total BTEX	<0.300	0.300	10/12/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 95.4 % 69.8-142

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	10/12/2018	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	10/12/2018	ND	190	95.0	200	0.209	
DRO >C10-C28*	90.4	10.0	10/12/2018	ND	195	97.7	200	1.78	
EXT DRO >C28-C36	14.7	10.0	10/12/2018	ND					

Surrogate: 1-Chlorooctane 91.5 % 41-142

Surrogate: 1-Chlorooctadecane 90.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
- 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*

Celey D. Keene, Lab Director/Quality Manager





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

October 12, 2018

BRUCE BAKER  
APACHE CORP - HOBBS  
2350 W. MARLAND BLVD.  
HOBBS, NM 88240

RE: TONY FEDERAL TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 10/11/18 13:30.

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](http://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:	10/11/2018	Sampling Date:	10/11/2018
Reported:	10/12/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: CP 1 @ 6" (H802910-01)**

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	10/11/2018	ND	2.14	107	2.00	0.672	
Toluene*	<0.050	0.050	10/11/2018	ND	2.03	102	2.00	0.830	
Ethylbenzene*	<0.050	0.050	10/11/2018	ND	2.01	101	2.00	0.688	
Total Xylenes*	<0.150	0.150	10/11/2018	ND	6.00	100	6.00	0.256	
Total BTEX	<0.300	0.300	10/11/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 95.8 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	672	16.0	10/12/2018	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	10/11/2018	ND	194	97.1	200	2.97	
DRO >C10-C28*	83.4	10.0	10/11/2018	ND	191	95.3	200	0.689	
EXT DRO >C28-C36	22.1	10.0	10/11/2018	ND					

Surrogate: 1-Chlorooctane 91.5 % 41-142

Surrogate: 1-Chlorooctadecane 96.4 % 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:	10/11/2018	Sampling Date:	10/11/2018
Reported:	10/12/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: CP 2 @ 6" (H802910-02)**

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	10/11/2018	ND	2.14	107	2.00	0.672		
Toluene*	<0.050	0.050	10/11/2018	ND	2.03	102	2.00	0.830		
Ethylbenzene*	<0.050	0.050	10/11/2018	ND	2.01	101	2.00	0.688		
Total Xylenes*	<0.150	0.150	10/11/2018	ND	6.00	100	6.00	0.256		
Total BTEX	<0.300	0.300	10/11/2018	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 96.6 % 69.8-142

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	10/12/2018	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	10/11/2018	ND	194	97.1	200	2.97		
DRO >C10-C28*	850	10.0	10/11/2018	ND	191	95.3	200	0.689		
EXT DRO >C28-C36	195	10.0	10/11/2018	ND						

Surrogate: 1-Chlorooctane 86.8 % 41-142

Surrogate: 1-Chlorooctadecane 125 % 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:	10/11/2018	Sampling Date:	10/11/2018
Reported:	10/12/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: CP 3 @ 6" (H802910-03)**

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	10/11/2018	ND	2.14	107	2.00	0.672	
Toluene*	<0.050	0.050	10/11/2018	ND	2.03	102	2.00	0.830	
Ethylbenzene*	<0.050	0.050	10/11/2018	ND	2.01	101	2.00	0.688	
Total Xylenes*	<0.150	0.150	10/11/2018	ND	6.00	100	6.00	0.256	
Total BTEX	<0.300	0.300	10/11/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 95.4 % 69.8-142

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	10/12/2018	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	10/12/2018	ND	194	97.1	200	2.97	
DRO >C10-C28*	233	10.0	10/12/2018	ND	191	95.3	200	0.689	
EXT DRO >C28-C36	76.0	10.0	10/12/2018	ND					

Surrogate: 1-Chlorooctane 89.9 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 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:	10/11/2018	Sampling Date:	10/11/2018
Reported:	10/12/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: CP 4 @ 6" (H802910-04)**

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	10/11/2018	ND	2.14	107	2.00	0.672	
Toluene*	<0.050	0.050	10/11/2018	ND	2.03	102	2.00	0.830	
Ethylbenzene*	<0.050	0.050	10/11/2018	ND	2.01	101	2.00	0.688	
Total Xylenes*	<0.150	0.150	10/11/2018	ND	6.00	100	6.00	0.256	
Total BTEX	<0.300	0.300	10/11/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 96.0 % 69.8-142

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	10/12/2018	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	10/12/2018	ND	194	97.1	200	2.97	
DRO >C10-C28*	<10.0	10.0	10/12/2018	ND	191	95.3	200	0.689	
EXT DRO >C28-C36	<10.0	10.0	10/12/2018	ND					

Surrogate: 1-Chlorooctane 88.9 % 41-142

Surrogate: 1-Chlorooctadecane 90.7 % 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:	10/11/2018	Sampling Date:	10/11/2018
Reported:	10/12/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: CP 5 @ 6" (H802910-05)**

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	10/11/2018	ND	2.14	107	2.00	0.672	
Toluene*	<0.050	0.050	10/11/2018	ND	2.03	102	2.00	0.830	
Ethylbenzene*	<0.050	0.050	10/11/2018	ND	2.01	101	2.00	0.688	
Total Xylenes*	<0.150	0.150	10/11/2018	ND	6.00	100	6.00	0.256	
Total BTEX	<0.300	0.300	10/11/2018	ND					

Surrogate: 4-Bromofluorobenzene (PII) 95.3 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1460	16.0	10/12/2018	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	10/12/2018	ND	194	97.1	200	2.97	
DRO >C10-C28*	<10.0	10.0	10/12/2018	ND	191	95.3	200	0.689	
EXT DRO >C28-C36	<10.0	10.0	10/12/2018	ND					

Surrogate: 1-Chlorooctane 85.1 % 41-142

Surrogate: 1-Chlorooctadecane 86.0 % 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:	10/11/2018	Sampling Date:	10/11/2018
Reported:	10/12/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: CP 6 @ 6" (H802910-06)**

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	10/11/2018	ND	2.14	107	2.00	0.672		
Toluene*	<0.050	0.050	10/11/2018	ND	2.03	102	2.00	0.830		
Ethylbenzene*	<0.050	0.050	10/11/2018	ND	2.01	101	2.00	0.688		
Total Xylenes*	<0.150	0.150	10/11/2018	ND	6.00	100	6.00	0.256		
Total BTEX	<0.300	0.300	10/11/2018	ND						

Surrogate: 4-Bromofluorobenzene (PII) 96.5 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1400	16.0	10/12/2018	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*	<50.0	50.0	10/12/2018	ND	194	97.1	200	2.97		
DRO >C10-C28*	1400	50.0	10/12/2018	ND	191	95.3	200	0.689		
EXT DRO >C28-C36	315	50.0	10/12/2018	ND						

Surrogate: 1-Chlorooctane 87.3 % 41-142

Surrogate: 1-Chlorooctadecane 133 % 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:	10/11/2018	Sampling Date:	10/11/2018
Reported:	10/12/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: CP 7 @ 6" (H802910-07)**

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	10/11/2018	ND	2.14	107	2.00	0.672		
Toluene*	<0.050	0.050	10/11/2018	ND	2.03	102	2.00	0.830		
Ethylbenzene*	<0.050	0.050	10/11/2018	ND	2.01	101	2.00	0.688		
Total Xylenes*	<0.150	0.150	10/11/2018	ND	6.00	100	6.00	0.256		
Total BTEX	<0.300	0.300	10/11/2018	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 95.4 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2320	16.0	10/12/2018	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	10/12/2018	ND	194	97.1	200	2.97		
DRO >C10-C28*	118	10.0	10/12/2018	ND	191	95.3	200	0.689		
EXT DRO >C28-C36	38.4	10.0	10/12/2018	ND						

Surrogate: 1-Chlorooctane 91.1 % 41-142

Surrogate: 1-Chlorooctadecane 98.2 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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:	10/11/2018	Sampling Date:	10/11/2018
Reported:	10/12/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: CP 8 @ 6" (H802910-08)**

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	10/11/2018	ND	2.14	107	2.00	0.672		
Toluene*	<0.050	0.050	10/11/2018	ND	2.03	102	2.00	0.830		
Ethylbenzene*	<0.050	0.050	10/11/2018	ND	2.01	101	2.00	0.688		
Total Xylenes*	<0.150	0.150	10/11/2018	ND	6.00	100	6.00	0.256		
Total BTEX	<0.300	0.300	10/11/2018	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 91.2 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	352	16.0	10/12/2018	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS							S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
GRO C6-C10*	<50.0	50.0	10/12/2018	ND	194	97.1	200	2.97			
DRO >C10-C28*	2000	50.0	10/12/2018	ND	191	95.3	200	0.689			
EXT DRO >C28-C36	411	50.0	10/12/2018	ND							

Surrogate: 1-Chlorooctane 91.1 % 41-142

Surrogate: 1-Chlorooctadecane 169 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

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*C. Keene*

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: <b>Apache</b>		<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																		
Project Manager: <b>Bruce Barber</b>		P.O. #:																						
Address:		Company:																						
City: <b>Hobbs</b> State: <b>NM</b> Zip: <b>88240</b>		Attn:																						
Phone #: Fax #:		Address:																						
Project #: Project Owner:		City:																						
Project Name:		State: Zip:																						
Project Location: <b>Tony Ford Tank Battery</b>		Phone #:																						
Sampler Name: <b>Don Chesler</b>		Fax #:																						
FOR LAB USE ONLY				MATRIX		PRESERV		SAMPLING																
Lab I.D.	Sample I.D.	(G)RAB OR (C)OM	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE COOL	OTHER	DATE	TIME										
<b>H802910</b>																								
1	CP 1 @ 6"	C	1	/	/	/	/	/	/	/	/	/	10/11/18	9:57 AM	U Ext-TPH BTEX									
2	CP 2 @ 6"	C	1	/	/	/	/	/	/	/	/	/	10/11/18	10:02 AM										
3	CP 3 @ 6"	C	1	/	/	/	/	/	/	/	/	/	10/11/18	10:07 AM										
4	CP 4 @ 6"	C	1	/	/	/	/	/	/	/	/	/	10/11/18	10:22 AM										
5	CP 5 @ 6"	C	1	/	/	/	/	/	/	/	/	/	10/11/18	10:18 AM										
6	CP 6 @ 6"	C	1	/	/	/	/	/	/	/	/	/	10/11/18	10:24 PM										
7	CP 7 @ 6"	C	1	/	/	/	/	/	/	/	/	/	10/11/18	10:31 AM										
8	CP 8 @ 6"	C	1	/	/	/	/	/	/	/	/	/	10/11/18	10:37 AM										

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

Relinquished By: <i>Don Chesler</i>	Date: <b>10/11/18</b>	Received By: <b>Bruce Barber</b>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: <b>12:05 PM</b>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By: <b>Bruce Barber</b>	Date: <b>10/11/18</b>	Received By: <i>Jodi Henson</i>	REMARKS: <b>Email Results</b>	
	Time: <b>1:30 PM</b>		<b>Rush</b>	
Delivered By: (Circle One) <b>Other</b>	Temp: <b>3.4°C</b>	Sample Condition: <b>#97</b>	CHECKED BY: <i>[Signature]</i>	
Sampler - UPS - Bus - <b>Other</b>		Cool Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		



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

October 16, 2018

BRUCE BAKER  
APACHE CORP - HOBBS  
2350 W. MARLAND BLVD.  
HOBBS, NM 88240

RE: TONY FEDERAL TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 10/15/18 16:20.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene  
Lab Director/Quality Manager



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: 10/15/2018 Sampling Date: 10/15/2018
Reported: 10/16/2018 Sampling Type: Soil
Project Name: TONY FEDERAL TANK BATTERY Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Tamara Oldaker
Project Location: NOT GIVEN

Sample ID: COM POINT 6 @ 1' (H802956-01)

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include Benzene\*, Toluene\*, Ethylbenzene\*, Total Xylenes\*, and Total BTEX.

Surrogate: 4-Bromofluorobenzene (PIC) 109 % 69.8-142

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row includes Chloride.

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Rows include GRO C6-C10\*, DRO >C10-C28\*, and EXT DRO >C28-C36.

Surrogate: 1-Chlorooctane 89.2 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses.

Celestine Keene

Celestine 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:	10/15/2018	Sampling Date:	10/15/2018
Reported:	10/16/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: COM POINT 8 @ 1' (H802956-02)**

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	10/16/2018	ND	2.27	114	2.00	0.142	
Toluene*	<0.050	0.050	10/16/2018	ND	2.14	107	2.00	0.735	
Ethylbenzene*	<0.050	0.050	10/16/2018	ND	2.11	106	2.00	0.142	
Total Xylenes*	<0.150	0.150	10/16/2018	ND	6.33	106	6.00	0.151	
Total BTEX	<0.300	0.300	10/16/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 98.9% 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	10/16/2018	ND	432	108	400	3.64	

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	10/16/2018	ND	200	100	200	3.41	
DRO >C10-C28*	297	10.0	10/16/2018	ND	192	96.0	200	1.32	
EXT DRO >C28-C36	65.5	10.0	10/16/2018	ND					

Surrogate: 1-Chlorooctane 92.6% 41-142

Surrogate: 1-Chlorooctadecane 104% 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

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

Cardinal Laboratories

\*=Accredited Analyte

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*Celey D. Keene*

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: <i>Apache</i>		<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																							
Project Manager: <i>Bruce Baker</i>		P.O. #:																											
Address:		Company:																											
City: <i>Hobbs</i> State: <i>NM</i> Zip: <i>88240</i>		Attn:																											
Phone #: Fax #:		Address:																											
Project #: Project Owner:		City:																											
Project Name:		State: Zip:																											
Project Location: <i>Tony Earl Frank Buttery</i>		Phone #:																											
Sampler Name: <i>Joe Puentes</i>		Fax #:																											
FOR LAB USE ONLY																													
Lab I.D.	Sample I.D.	(GRAB OR (COMP.))	# CONTAINERS	MATRIX														PRESERV.	SAMPLING										
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE	ICE COOL	OTHER:	DATE	TIME															
<i>H802956</i>	<i>1 Can Paint 6 @ 1'</i>	<i>C</i>	<i>1</i>										<i>10-15-18</i>	<i>2:50 pm</i>	<i>11</i>	<i>11</i>	<i>11</i>												
	<i>2 Can Paint 8 @ 1'</i>	<i>C</i>	<i>1</i>										<i>10-15-18</i>	<i>2:50</i>															

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

Relinquished By: <i>Jose Puentes</i>	Date: <i>10-15-18</i>	Received By: <i>Sumera Akbar</i>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: <i>16:20</i>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: <i>Error of Results (Rushed)</i>	
	Time:			
Delivered By: (Circle One)	Sample Condition	CHECKED BY: (Initials)		
Sampler - UPS - Bus - Other: <i>2.7° #97</i>	Cool Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<i>TO.</i>		



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

---

November 29, 2018

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: TONY FEDERAL TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 11/20/18 16:05.

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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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:	11/20/2018	Sampling Date:	11/19/2018
Reported:	11/29/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SP6 N WALL 1' (H803405-01)**

BTEX 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>0.091</b>	0.025	11/28/2018	ND	2.12	106	2.00	0.901	
<b>Toluene*</b>	<b>0.182</b>	0.025	11/28/2018	ND	2.31	116	2.00	2.16	
Ethylbenzene*	<0.025	0.025	11/28/2018	ND	2.19	110	2.00	1.36	
Total Xylenes*	<0.075	0.075	11/28/2018	ND	7.42	124	6.00	2.17	
<b>Total BTEX</b>	<b>0.273</b>	0.150	11/28/2018	ND					

Surrogate: Dibromofluoromethane 105 % 90.4-111  
 Surrogate: Toluene-d8 105 % 85.3-114  
 Surrogate: 4-Bromofluorobenzene 87.8 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>368</b>	16.0	11/28/2018	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*	<50.0	50.0	11/27/2018	ND	200	100	200	13.2	
<b>DRO &gt;C10-C28*</b>	<b>456</b>	50.0	11/27/2018	ND	221	111	200	10.5	
<b>EXT DRO &gt;C28-C36</b>	<b>173</b>	50.0	11/27/2018	ND					

Surrogate: 1-Chlorooctane 79.1 % 41-142  
 Surrogate: 1-Chlorooctadecane 111 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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:	11/20/2018	Sampling Date:	11/19/2018
Reported:	11/29/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SP6 S WALL 1' (H803405-02)**

BTEX 8260B		mg/kg		Analyzed By: ms				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/28/2018	ND	2.12	106	2.00	0.901	
Toluene*	<0.025	0.025	11/28/2018	ND	2.31	116	2.00	2.16	
Ethylbenzene*	<0.025	0.025	11/28/2018	ND	2.19	110	2.00	1.36	
Total Xylenes*	<0.075	0.075	11/28/2018	ND	7.42	124	6.00	2.17	
Total BTEX	<0.150	0.150	11/28/2018	ND					

Surrogate: Dibromofluoromethane 106 % 90.4-111  
 Surrogate: Toluene-d8 97.1 % 85.3-114  
 Surrogate: 4-Bromofluorobenzene 79.6 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>3160</b>	16.0	11/28/2018	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	11/27/2018	ND	200	100	200	13.2	
<b>DRO &gt;C10-C28*</b>	<b>11.6</b>	10.0	11/27/2018	ND	221	111	200	10.5	
EXT DRO >C28-C36	<10.0	10.0	11/27/2018	ND					

Surrogate: 1-Chlorooctane 81.7 % 41-142  
 Surrogate: 1-Chlorooctadecane 88.7 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	11/20/2018	Sampling Date:	11/19/2018
Reported:	11/29/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SP6 W WALL 1' (H803405-03)**

BTEX 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/28/2018	ND	2.12	106	2.00	0.901	
Toluene*	<0.025	0.025	11/28/2018	ND	2.31	116	2.00	2.16	
Ethylbenzene*	<0.025	0.025	11/28/2018	ND	2.19	110	2.00	1.36	
Total Xylenes*	<0.075	0.075	11/28/2018	ND	7.42	124	6.00	2.17	
Total BTEX	<0.150	0.150	11/28/2018	ND					

Surrogate: Dibromofluoromethane 104 % 90.4-111  
 Surrogate: Toluene-d8 103 % 85.3-114  
 Surrogate: 4-Bromofluorobenzene 85.6 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>1470</b>	16.0	11/28/2018	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	11/27/2018	ND	200	100	200	13.2	
DRO >C10-C28*	<10.0	10.0	11/27/2018	ND	221	111	200	10.5	
EXT DRO >C28-C36	<10.0	10.0	11/27/2018	ND					

Surrogate: 1-Chlorooctane 89.1 % 41-142  
 Surrogate: 1-Chlorooctadecane 96.5 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	11/20/2018	Sampling Date:	11/19/2018
Reported:	11/29/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SP6 E WALL 1' (H803405-04)**

BTEX 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/28/2018	ND	2.12	106	2.00	0.901	
Toluene*	<0.025	0.025	11/28/2018	ND	2.31	116	2.00	2.16	
Ethylbenzene*	<0.025	0.025	11/28/2018	ND	2.19	110	2.00	1.36	
Total Xylenes*	<0.075	0.075	11/28/2018	ND	7.42	124	6.00	2.17	
Total BTEX	<0.150	0.150	11/28/2018	ND					

Surrogate: Dibromofluoromethane 106 % 90.4-111  
 Surrogate: Toluene-d8 99.6 % 85.3-114  
 Surrogate: 4-Bromofluorobenzene 82.5 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>1760</b>	16.0	11/28/2018	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	11/27/2018	ND	200	100	200	13.2	
DRO >C10-C28*	<10.0	10.0	11/27/2018	ND	221	111	200	10.5	
EXT DRO >C28-C36	<10.0	10.0	11/27/2018	ND					

Surrogate: 1-Chlorooctane 90.8 % 41-142  
 Surrogate: 1-Chlorooctadecane 98.7 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	11/20/2018	Sampling Date:	11/19/2018
Reported:	11/29/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SP8 N WALL 1' (H803405-05)**

BTEX 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/28/2018	ND	2.12	106	2.00	0.901	
Toluene*	<0.025	0.025	11/28/2018	ND	2.31	116	2.00	2.16	
Ethylbenzene*	<0.025	0.025	11/28/2018	ND	2.19	110	2.00	1.36	
Total Xylenes*	<0.075	0.075	11/28/2018	ND	7.42	124	6.00	2.17	
Total BTEX	<0.150	0.150	11/28/2018	ND					

Surrogate: Dibromofluoromethane 108 % 90.4-111  
 Surrogate: Toluene-d8 99.7 % 85.3-114  
 Surrogate: 4-Bromofluorobenzene 81.1 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>480</b>	16.0	11/28/2018	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	11/27/2018	ND	200	100	200	13.2	
<b>DRO &gt;C10-C28*</b>	<b>39.9</b>	10.0	11/27/2018	ND	221	111	200	10.5	
<b>EXT DRO &gt;C28-C36</b>	<b>11.8</b>	10.0	11/27/2018	ND					

Surrogate: 1-Chlorooctane 87.7 % 41-142  
 Surrogate: 1-Chlorooctadecane 95.4 % 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  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	11/20/2018	Sampling Date:	11/19/2018
Reported:	11/29/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SP8 S WALL 1' (H803405-06)**

BTEX 8260B		mg/kg		Analyzed By: ms				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/28/2018	ND	2.12	106	2.00	0.901	
Toluene*	<0.025	0.025	11/28/2018	ND	2.31	116	2.00	2.16	
Ethylbenzene*	<0.025	0.025	11/28/2018	ND	2.19	110	2.00	1.36	
Total Xylenes*	<0.075	0.075	11/28/2018	ND	7.42	124	6.00	2.17	
Total BTEX	<0.150	0.150	11/28/2018	ND					

Surrogate: Dibromofluoromethane 109 % 90.4-111  
 Surrogate: Toluene-d8 96.9 % 85.3-114  
 Surrogate: 4-Bromofluorobenzene 131 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>1310</b>	16.0	11/28/2018	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	11/27/2018	ND	200	100	200	13.2	
<b>DRO &gt;C10-C28*</b>	<b>666</b>	10.0	11/27/2018	ND	221	111	200	10.5	
<b>EXT DRO &gt;C28-C36</b>	<b>138</b>	10.0	11/27/2018	ND					

Surrogate: 1-Chlorooctane 89.9 % 41-142  
 Surrogate: 1-Chlorooctadecane 126 % 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  
 BRUCE BAKER  
 2350 W. MARLAND BLVD.  
 HOBBS NM, 88240  
 Fax To: (575) 393-2432

Received:	11/20/2018	Sampling Date:	11/19/2018
Reported:	11/29/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SP8 W WALL 1' (H803405-07)**

BTEX 8260B		mg/kg		Analyzed By: ms				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/28/2018	ND	2.12	106	2.00	0.901	
Toluene*	<0.025	0.025	11/28/2018	ND	2.31	116	2.00	2.16	
Ethylbenzene*	<0.025	0.025	11/28/2018	ND	2.19	110	2.00	1.36	
Total Xylenes*	<0.075	0.075	11/28/2018	ND	7.42	124	6.00	2.17	
Total BTEX	<0.150	0.150	11/28/2018	ND					

Surrogate: Dibromofluoromethane 107 % 90.4-111  
 Surrogate: Toluene-d8 82.8 % 85.3-114  
 Surrogate: 4-Bromofluorobenzene 155 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>1490</b>	16.0	11/28/2018	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*	<50.0	50.0	11/27/2018	ND	200	100	200	13.2	
<b>DRO &gt;C10-C28*</b>	<b>3190</b>	50.0	11/27/2018	ND	221	111	200	10.5	
<b>EXT DRO &gt;C28-C36</b>	<b>658</b>	50.0	11/27/2018	ND					

Surrogate: 1-Chlorooctane 85.4 % 41-142  
 Surrogate: 1-Chlorooctadecane 139 % 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:	11/20/2018	Sampling Date:	11/19/2018
Reported:	11/29/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SP8 E WALL 1' (H803405-08)**

BTEX 8260B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.025	0.025	11/28/2018	ND	2.12	106	2.00	0.901		
Toluene*	<0.025	0.025	11/28/2018	ND	2.31	116	2.00	2.16		
Ethylbenzene*	<0.025	0.025	11/28/2018	ND	2.19	110	2.00	1.36		
Total Xylenes*	<0.075	0.075	11/28/2018	ND	7.42	124	6.00	2.17		
Total BTEX	<0.150	0.150	11/28/2018	ND						

Surrogate: Dibromofluoromethane 101 % 90.4-111  
 Surrogate: Toluene-d8 101 % 85.3-114  
 Surrogate: 4-Bromofluorobenzene 120 % 80.1-121

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>1170</b>	16.0	11/28/2018	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	11/27/2018	ND	200	100	200	13.2		
<b>DRO &gt;C10-C28*</b>	<b>991</b>	10.0	11/27/2018	ND	221	111	200	10.5		
<b>EXT DRO &gt;C28-C36</b>	<b>272</b>	10.0	11/27/2018	ND						

Surrogate: 1-Chlorooctane 88.4 % 41-142  
 Surrogate: 1-Chlorooctadecane 132 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
BS1 Blank spike recovery above laboratory acceptance criteria. Results for analyte potentially biased high.
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

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: <i>Hochs</i>		<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																			
Project Manager: <i>Bruce Bedner</i>		P.O. #:																							
Address:		Company:																							
City: <i>Hobbs</i> State: <i>NM</i> Zip: <i>88240</i>		Attn:																							
Phone #: Fax #:		Address:																							
Project #: Project Owner:		City:																							
Project Name:		State: Zip:																							
Project Location: <i>Tony Lee Truck Entry</i>		Phone #:																							
Sampler Name:		Fax #:																							
FOR LAB USE ONLY																									
Lab I.D. <i>H803405</i>		Sample I.D.		# CONTAINERS	MATRIX					PRESERV.		SAMPLING													
				(G/RAB)OR (C)OMP.	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE/COOL	OTHER:	DATE	TIME										
<i>1</i>		<i>SP6 S wall 1'</i>		<i>1</i>										<i>11-19</i>	<i>2:10pm</i>										
<i>2</i>		<i>SP6 S wall 1'</i>		<i>1</i>										<i>11-19</i>	<i>2:15pm</i>										
<i>3</i>		<i>SP6 W wall 1'</i>		<i>1</i>										<i>11-19</i>	<i>2:20pm</i>										
<i>4</i>		<i>SP6 E wall 1'</i>		<i>1</i>										<i>11-19</i>	<i>2:24pm</i>										
<i>5</i>		<i>SP8 N wall 1'</i>		<i>1</i>										<i>11-19</i>	<i>2:29pm</i>										
<i>6</i>		<i>SP8 S wall 1'</i>		<i>1</i>										<i>11-19</i>	<i>2:34pm</i>										
<i>7</i>		<i>SP8 W wall 1'</i>		<i>1</i>										<i>11-19</i>	<i>2:37pm</i>										
<i>8</i>		<i>SP8 E wall 1'</i>		<i>1</i>										<i>11-19</i>	<i>2:41pm</i>										

*U.*  
*Ext TPH*  
*Btex*

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Relinquished By: <i>[Signature]</i>		Date: <i>11/20/18</i>		Received By: <i>[Signature]</i>		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:	
Time: <i>10:05</i>						Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:	
Relinquished By:		Date:		Received By:		<i>Email Results</i>			
Time:									
Delivered By: (Circle One)			Sample Condition			CHECKED BY: <i>[Signature]</i>			
Sampler - UPS - Bus - Other: <i>4.20c / # 97</i>			Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						

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



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

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December 03, 2018

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: TONY FEDERAL TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 11/26/18 16:25.

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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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:	11/26/2018	Sampling Date:	11/26/2018
Reported:	12/03/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: S WALL SP7 @ 2' (H803449-01)**

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	11/30/2018	ND	1.84	92.0	2.00	1.42	
Toluene*	<0.050	0.050	11/30/2018	ND	1.81	90.6	2.00	0.406	
Ethylbenzene*	<0.050	0.050	11/30/2018	ND	1.74	87.1	2.00	0.831	
Total Xylenes*	<0.150	0.150	11/30/2018	ND	5.56	92.6	6.00	1.59	
Total BTEX	<0.300	0.300	11/30/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 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
<b>Chloride</b>	<b>32.0</b>	16.0	11/29/2018	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	11/30/2018	ND	206	103	200	7.28	
<b>DRO &gt;C10-C28*</b>	<b>126</b>	10.0	11/30/2018	ND	215	107	200	10.2	
<b>EXT DRO &gt;C28-C36</b>	<b>63.9</b>	10.0	11/30/2018	ND					

Surrogate: 1-Chlorooctane 88.5 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	11/26/2018	Sampling Date:	11/26/2018
Reported:	12/03/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: N WALL SP7 @ 2' (H803449-02)**

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	11/30/2018	ND	1.84	92.0	2.00	1.42	
Toluene*	<0.050	0.050	11/30/2018	ND	1.81	90.6	2.00	0.406	
Ethylbenzene*	<0.050	0.050	11/30/2018	ND	1.74	87.1	2.00	0.831	
Total Xylenes*	<0.150	0.150	11/30/2018	ND	5.56	92.6	6.00	1.59	
Total BTEX	<0.300	0.300	11/30/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 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
<b>Chloride</b>	<b>112</b>	16.0	11/29/2018	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	11/30/2018	ND	206	103	200	7.28	
<b>DRO &gt;C10-C28*</b>	<b>10.2</b>	10.0	11/30/2018	ND	215	107	200	10.2	
EXT DRO >C28-C36	<10.0	10.0	11/30/2018	ND					

Surrogate: 1-Chlorooctane 88.4 % 41-142

Surrogate: 1-Chlorooctadecane 98.3 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	11/26/2018	Sampling Date:	11/26/2018
Reported:	12/03/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: W WALL SP7 @ 2' (H803449-03)**

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	11/30/2018	ND	1.84	92.0	2.00	1.42	
Toluene*	<0.050	0.050	11/30/2018	ND	1.81	90.6	2.00	0.406	
Ethylbenzene*	<0.050	0.050	11/30/2018	ND	1.74	87.1	2.00	0.831	
Total Xylenes*	<0.150	0.150	11/30/2018	ND	5.56	92.6	6.00	1.59	
Total BTEX	<0.300	0.300	11/30/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500CI-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	11/29/2018	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	11/30/2018	ND	218	109	200	2.03	
DRO >C10-C28*	<10.0	10.0	11/30/2018	ND	222	111	200	0.654	
EXT DRO >C28-C36	<10.0	10.0	11/30/2018	ND					

Surrogate: 1-Chlorooctane 91.3 % 41-142

Surrogate: 1-Chlorooctadecane 96.1 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	11/26/2018	Sampling Date:	11/26/2018
Reported:	12/03/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: E WALL SP7 @ 2' (H803449-04)**

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	11/30/2018	ND	1.84	92.0	2.00	1.42	
Toluene*	<0.050	0.050	11/30/2018	ND	1.81	90.6	2.00	0.406	
Ethylbenzene*	<0.050	0.050	11/30/2018	ND	1.74	87.1	2.00	0.831	
Total Xylenes*	<0.150	0.150	11/30/2018	ND	5.56	92.6	6.00	1.59	
Total BTEX	<0.300	0.300	11/30/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	11/29/2018	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	11/30/2018	ND	218	109	200	2.03	
DRO >C10-C28*	<10.0	10.0	11/30/2018	ND	222	111	200	0.654	
EXT DRO >C28-C36	<10.0	10.0	11/30/2018	ND					

Surrogate: 1-Chlorooctane 95.1 % 41-142

Surrogate: 1-Chlorooctadecane 99.4 % 37.6-147

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

Cardinal Laboratories

\*=Accredited Analyte

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*Celey D. Keene*

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: <i>Aracida</i>		<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																			
Project Manager: <i>Bruce Baker</i>		P.O. #:																							
Address:		Company:																							
City: <i>Hobbs</i> State: <i>NM</i> Zip: <i>88240</i>		Attn:																							
Phone #: Fax #:		Address:																							
Project #: Project Owner:		City:																							
Project Name:		State: Zip:																							
Project Location: <i>Tony Fuel Tank Battery</i>		Phone #:																							
Sampler Name: <i>Joe Quisenberry</i>		Fax #:																							
FOR LAB USE ONLY																									
Lab I.D. <i>H803449</i>		Sample I.D.		# CONTAINERS	MATRIX				PRESERV.		SAMPLING														
				(G) RABOR (C) OMP.	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE/COOL	OTHER:	DATE	TIME										
<i>1</i>		<i>S well SP7 @ 2'</i>		<i>6</i>										<i>11-26</i>	<i>1:30pm</i>										
<i>2</i>		<i>N well SP7 @ 2'</i>		<i>6</i>										<i>11-26</i>	<i>1:36pm</i>										
<i>3</i>		<i>W well SP7 @ 2'</i>		<i>6</i>										<i>11-26</i>	<i>1:42pm</i>										
<i>4</i>		<i>C well SP7 @ 2'</i>		<i>6</i>										<i>11-26</i>	<i>1:49pm</i>										

*CI*  
*EXT 1P4*  
*BTEX*

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

Relinquished By: <i>[Signature]</i>		Date: <i>11-26-18</i>		Received By: <i>[Signature]</i>		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:	
		Time: <i>16:25</i>				Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:	
Relinquished By:		Date:		Received By:		REMARKS:  <i>E-mail</i>			
		Time:							
Delivered By: (Circle One)				Sample Condition		CHECKED BY:			
Sampler - UPS - Bus - Other: <i>2.6c #97</i>				Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		(Initials) <i>TO.</i>			

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



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

---

December 07, 2018

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: TONY FEDERAL TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 12/04/18 14:40.

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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	12/04/2018	Sampling Date:	12/04/2018
Reported:	12/07/2018	Sampling Type:	Soil
Project Name:	TONY FEDERAL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SP 8 WEST WALL (H803560-01)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/05/2018	ND	2.01	101	2.00	8.83	
Toluene*	<0.050	0.050	12/05/2018	ND	1.96	97.9	2.00	8.15	
Ethylbenzene*	<0.050	0.050	12/05/2018	ND	1.90	94.9	2.00	7.64	
Total Xylenes*	<0.150	0.150	12/05/2018	ND	6.07	101	6.00	7.53	
Total BTEX	<0.300	0.300	12/05/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 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	<b>960</b>	16.0	12/05/2018	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/06/2018	ND	200	99.9	200	8.02	
<b>DRO &gt;C10-C28*</b>	<b>77.7</b>	10.0	12/06/2018	ND	211	106	200	8.47	
<b>EXT DRO &gt;C28-C36</b>	<b>22.0</b>	10.0	12/06/2018	ND					

Surrogate: 1-Chlorooctane 97.5 % 41-142

Surrogate: 1-Chlorooctadecane 111 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

\*=Accredited Analyte

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*Celey D. Keene*

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: <u>Apache</u>		<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																							
Project Manager: <u>Bruce Baker</u>		P.O. #:																											
Address:		Company:																											
City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88240</u>		Attn:																											
Phone #: Fax #:		Address:																											
Project #: Project Owner:		City:																											
Project Name:		State: Zip:																											
Project Location: <u>Tony Feel Tank Battery</u>		Phone #:																											
Sampler Name: <u>Joe Quessada</u>		Fax #:																											
FOR LAB USE ONLY																													
Lab I.D.	Sample I.D.	(GRAB OR COMP)	# CONTAINERS	MATRIX														PRESERV.		SAMPLING									
<u>H90356d</u>	<u>SP8 westwall</u>	<u>1</u>	<u>1</u>	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE/COOL	OTHER:	DATE	TIME	<u>EX+TPH</u> <u>BTEX</u>														
													<u>12/04</u>	<u>10:21Am</u>															

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Relinquished By: <u>[Signature]</u>	Date: <u>12/4/18</u>	Received By: <u>[Signature]</u>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: <u>14:40</u>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:	
	Time:			
Delivered By: (Circle One)	Sample Condition	CHECKED BY: <u>[Signature]</u>		
Sampler - UPS - Bus - Other: <u>2.8c/#97</u>	Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(Initials)	<u>Email Results</u>	

Photos



**From:** [Pruett, Maria, EMNRD](#)  
**To:** [Baker, Larry; "stucker@blm.gov"](#)  
**Cc:** [Bratcher, Michael, EMNRD](#)  
**Subject:** [EXTERNAL] Closure Approved RE: [EXT] FW: Tony Federal Battery corrective action plan 2RP 2071, 2132,2509  
**Date:** Saturday, November 3, 2018 6:57:13 PM

---

Hello Mr. Baker,  
The closure for 2RP 2071, 2132 and 2509 has been approved.  
Best Regards,

*Maria Pruett*

Environmental Specialist  
N.M. Oil Conservation Division  
District 2  
811 S. 1<sup>st</sup> Street  
Artesia, NM 88210  
Desk: 575 748-1283 X 101  
Cell: 575 840-5963  
Fax: 575748-9720

*OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.*

---

**From:** Baker, Larry <Larry.Baker@apachecorp.com>  
**Sent:** Tuesday, October 30, 2018 2:54 PM  
**To:** Pruett, Maria, EMNRD <Maria.Pruett@state.nm.us>; 'stucker@blm.gov' <stucker@blm.gov>  
**Subject:** [EXT] FW: Tony Federal Battery corrective action plan 2RP 2071, 2132,2502

Ms. Pruett,

Attached is the page 5 of the new C-141 that we discuss on Friday. Apache Corporation appreciates all your help in resolving this issue. Please let me know if you need anything else or wish to discuss. Thanks and have a good day.

## BRUCE BAKER

ENVIRONMENTAL TECHNICIAN SR

direct 575-393-7106 ext 1523 | Cell 432-631-6982

APACHE CORPORATION

2350 W. MARLAND BLVD  
HOBBS, NM 88240

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---

**From:** Baker, Larry  
**Sent:** Tuesday, October 16, 2018 4:34 PM  
**To:** 'Pruett, Maria, EMNRD' <Maria.Pruett@state.nm.us>; 'stucker@blm.gov' <stucker@blm.gov>  
**Subject:** Tony Federal Battery corrective action plan 2RP 2071,2132,2502

All,

Attached is the corrective action plan for your review and approval. Please let me know if you have any questions or wish to discuss. Thanks and have a good day.

## BRUCE BAKER

ENVIRONMENTAL TECHNICIAN SR

direct 575-393-7106 ext 1523 | Cell 432-631-6982

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**District IV**  
 1220 S. St Francis Dr., Santa Fe, NM 87505  
 Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS  
 Action 10092

**CONDITIONS**

Operator: APACHE CORPORATION 303 Veterans Airpark Ln Midland, TX 79705	OGRID: 873
	Action Number: 10092
	Action Type: [C-141] Release Corrective Action (C-141)

**CONDITIONS**

Created By	Condition	Condition Date
amaxwell	None	1/25/2023