

Basin Environmental Service Technologies, LLC

3100 Plains Highway
P. O. Box 301
Lovington, New Mexico 88260
rrunnels@basinenv.com
Office: (575) 396-2378 Fax: (575) 396-1429



REMEDIATION SUMMARY & SITE CLOSURE REQUEST

**APACHE CORPORATION
TONY FEDERAL #10
Eddy County, New Mexico
Unit Letter "N", Section 18, Township 17 South, Range 31 East
Latitude 32.830696 North, Longitude -103.912373 West
NMOCD Reference #2RP-2633**

Prepared For:

Apache Corporation
8 Ellison Lane
Eunice, New Mexico 88231

Prepared By:

Basin Environmental Service Technologies, LLC
3100 Plains Highway
Lovington, New Mexico 88260

March 2016

A handwritten signature in black ink, appearing to read "Robbie Runnels", is written over a horizontal line.

Robbie Runnels
Project Manager



PO Box 2948 | Hobbs, NM 88241 | Phone 575.393.2967

March 1, 2016

Attn: Heather Patterson

New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau – District 2
811 S. First St.
Artesia, NM 88210

**RE: Termination Request Report
Apache – Tony Federal #10
UL/N sec. 18 T17S R31E
API No. 30-015-30244
2RP-2633**

Ms. Patterson:

Apache Corporation (Apache) has retained Basin Environmental Service Technologies (Basin) to address potential environmental concerns at the above-referenced site.

Background and Previous Work

The site is located approximately 5.1 miles northeast of Loco Hills, New Mexico at Unit Letter N of Section 18 in Township 18 South of Range 27 East. This site is located in an area of no known groundwater.

On November 13th, 2014, Apache discovered a release of three (3) barrels (bbls) of crude oil and seven (7) bbls of produced water from a ruptured flow line. Approximately one-thousand five-hundred fifty-three (1,553) square feet (ft²) of pasture was affected by the release. The Bureau of Land Management (BLM) was notified of the release on November 13th, 2014, and an initial Release Notification and Corrective Action form (C-141) was submitted to BLM June 11th, 2015, for approval.

Basin personnel were on site beginning March 20th, 2015, to begin delineation activities. Five sample points were established within the release area. Points 1-4 were field tested for chlorides and organic vapors. Samples for points 1 through 4 were taken at a depth of six (6) inches and submitted to a certified New Mexico Oil Conservation Division (NMOCD) approved commercial laboratory for confirmatory analysis of gasoline range organics (GRO), diesel range organics (DRO) as well as benzene, toluene, ethylbenzene, and xylenes (BTEX).

Corrective Action Plan

On March 30th, 2015, the areas around Point 1, 2, 3, 4, and 5 were hand-excavated down to six (6) inches below ground surface (bgs). Because Point 1 returned chloride and total petroleum hydrocarbon (TPH) concentrations less than the actionable limit as established by the BLM and NMOCD for this depth of groundwater (TPH less than 5,000 mg/kg, chloride less than 1,000 mg/kg), the area around it was not sampled again. Samples were taken from the areas around Point 2 and Point 3 from the floor of the excavation at 6 inches bgs and submitted to a commercial laboratory for chloride, BTEX and TPH concentration analysis.

On July 28th, 2015, samples from Point 4 and Point 5 were retrieved from the floor of the excavation at 6 inches bgs and submitted to a commercial laboratory for chloride, BTEX and TPH concentration analysis. Laboratory analysis shows the impacted areas of the release met the criteria necessary for closure of the release.

Because of the shallowness of the impacted area, the excavated area was not backfilled and vegetative growth has resumed.

Soil samples collected from the Tony Federal #10 release site were analyzed by an NMOCD-approved laboratory, and concentrations of benzene, BTEX, and chloride were below the recommended remediation action level (RRAL) established for the site. Soil exhibiting TPH concentrations above the RRAL were removed and disposed of at a BLM/NMOCD approved facility. Apache via Basin requests site closure to the Tony Federal #10 Poly release site.

Basin appreciates the opportunity to work with you on this project. Please contact me if you have any questions or wish to discuss the site.

Sincerely,



Robbie Runnels
Project Manager
Basin Environmental Service Technologies
(575) 393-2967

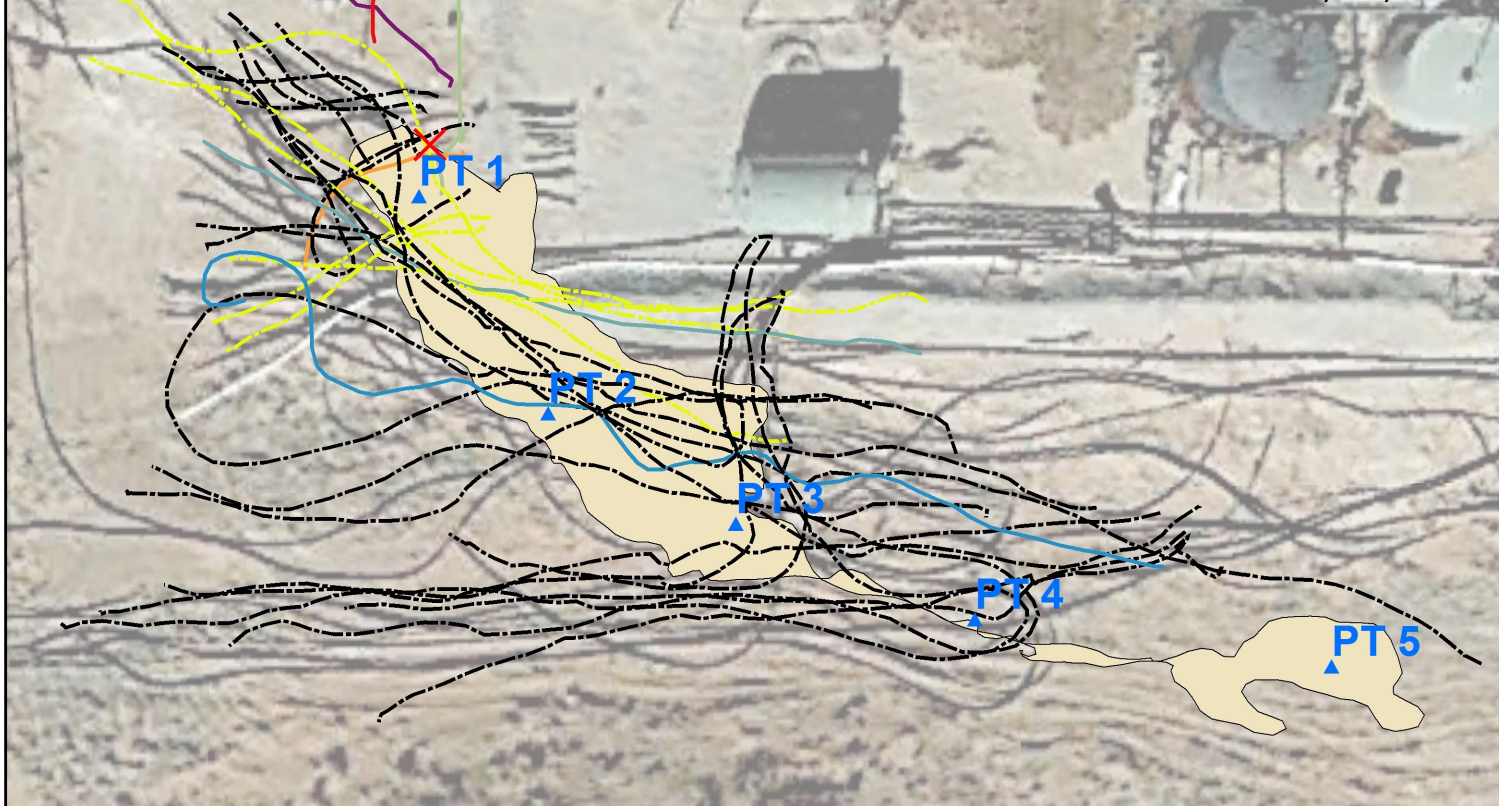
Attachments:

Figure 1- Initial sampling Data
Appendix A – Initial C-141
Appendix B – Laboratory Analysis
Appendix C – Photo Documentation

FIGURES

Initial Sampling Map

	CL-	PID	GRO	DRO	B	T	E	X	BTEX	Date
1 @ 6 in	112	22.6	23.5	447	<0.05	0.078	0.357	0.927	1.36	3/20/2015
2 @ 6 in	432	77.8	466	11000	<0.2	<0.2	0.278	0.726	<1.2	3/30/2015
2 @ 6 in			<50	2640						3/30/2015
3 @ 6 in	800	1666	2230	11800	4.2	54	30.2	55.6	144	3/30/2015
3 @ 6 in			<50	1220	<0.05	0.053	<0.05	<0.15	<0.3	3/30/2015
4 @ 6 in	288	170	581	9330	<0.2	0.283	0.629	11.9	12.9	3/20/2015
4 @ 6 in	<16	1.4	<10	12.7	<0.05	<0.05	<0.05	<0.15	<0.3	7/28/2015
5 @ 6 in	<16	2.6	<10	722	<0.05	<0.05	<0.05	<0.15	<0.3	7/28/2015



Legend

- ▲ POINT
- ▲ SAMPLING POINTS
- ELECTRICAL BOX
- PUMP
- ✗ SOURCE
- 2 IN, POLY,
- 2.5 IN, POLY,
- 2.5 IN, STEEL, ABANDONED
- 3 IN, POLY,
- 3 IN, POLY, ABANDONED
- 3 IN, POLY, UNKNOWN
- 4 IN, POLY,
- 4 IN, STEEL,
- STAIN (1,553 sq ft)

CL- FIELD DATA

CL- LAB DATA

DGW: NONE

LANDOWNER: BLM

SOURCE GPS: 32.830696, -103.912373



**APACHE TONY
FEDERAL #10**

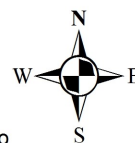
2RP-2633

UL/N SECTION 18
T-17-S R-31-E
EDDY COUNTY, NM

Underground facilities are
spatially projected
and need to be field verified.

0 10 20
Feet

GPS date: 11/13/14
Drawing date: 3/1/16
Drafted by: I. Weinheimer, T. Grieco



APPENDICES

APPENDIX – A

C-141

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

NAB1433539845

Name of Company Apache Corporation 873		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 # 10 *		Telephone No. 432-631-6982	
		Facility Type Oil Well	

Surface Owner Federal	Mineral Owner	API No. 30-015-3015-30224
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LOCATION OF RELEASE

Unit Letter K	Section 18	Township 17S	Range 31E	Feet from the 1385'	North/South Line FSL	Feet from the 1410'	East/West Line FWL	County Eddy
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Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release Oil and Produced Water	Volume of Release 3 barrels of oil 7 barrels of water	Volume Recovered 0 barrels
Source of Release Flow Line	Date and Hour of Occurrence 11/13/2014	Date and Hour of Discovery 11/13/2014
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Jeffery Robertson (BLM)	
By Whom? Bruce Baker	Date 11/14/2014	
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.*

The flow line was being hot oiled and pressured up resulting in a rupture in flow line. The well was shut in and the flow line was repaired.

Describe Area Affected and Cleanup Action Taken.

The release affected 1500 square feet of pasture off the southwest corner of pad.

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>	OIL CONSERVATION DIVISION	
Printed Name: Bruce Baker	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Environmental Technician	Approval Date: <i>12/1/14</i>	Expiration Date: <i>NA</i>
E-mail Address: larry.baker@apachecorp.com	Conditions of Approval:	
Date: 11/26/2014 Phone: (432) 631-6982	Attached <input type="checkbox"/>	

* Attach Additional Sheets If Necessary

Remediation per O.C.D. Rules & Guidelines
SUBMIT REMEDIATION PROPOSAL NO
LATER THAN: *12/1/15*

2RP-2633

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	Apache Corporation	Contact	Bruce Baker
Address	2350 W. Marland Blvd, Hobbs, NM 88240	Telephone No.	(432) 631-6982
Facility Name	Tony Federal #10	Facility Type	Flow line
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
N	18	17S	31E	1,242	FSL	1,396	FWL	Eddy

Latitude 32.830697 Longitude -103.912371

NATURE OF RELEASE

Type of Release	Oil	Volume of Release	bbls	Volume Recovered	bbls
Source of Release	flow line	Date and Hour of Occurrence		Date and Hour of Discovery	
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Jeffery Robertson - BLM		
By Whom?	Bruce Baker	Date and Hour	4/10/15		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

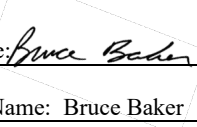
If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* A flow line broke releasing fluid over the pasture. The well was shut in and line repaired.

Describe Area Affected and Cleanup Action Taken.*

The release area covered 1,553 sq ft of the pasture area and lease pad. The impacted area was excavated down 6" and contaminated soils were removed and disposed of at an approved facility. Floor samples were retrieved at 6" bgs and analyzed at an approved and certified laboratory confirming all contaminants within the impacted area were removed.

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: 		<u>OIL CONSERVATION DIVISION</u>	
Printed Name: Bruce Baker		Approved by Environmental Specialist:	
Title: Environmental Technician		Approval Date:	Expiration Date:
E-mail Address: larry.baker@apachecorp.com		Conditions of Approval:	
Date: 3/3/16 Phone: (432) 631-6982		Attached <input type="checkbox"/>	

* Attach Additional Sheets If Necessary

APPENDIX – B

Analytical Reports



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

March 25, 2015

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: TONY FEDERAL #10

Enclosed are the results of analyses for samples received by the laboratory on 03/20/15 16:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received: 03/20/2015
Reported: 03/25/2015
Project Name: TONY FEDERAL #10
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 03/20/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: PT 1 @ 6 IN (H500766-01)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/24/2015	ND	1.93	96.3	2.00	11.0	
Toluene*	0.078	0.050	03/24/2015	ND	1.78	88.9	2.00	10.5	
Ethylbenzene*	0.357	0.050	03/24/2015	ND	1.70	84.9	2.00	13.0	
Total Xylenes*	0.927	0.150	03/24/2015	ND	5.10	84.9	6.00	13.9	
Total BTX	1.36	0.300	03/24/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 124 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	03/24/2015	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	23.5	10.0	03/24/2015	ND	206	103	200	1.02	
DRO >C10-C28	447	10.0	03/24/2015	ND	224	112	200	2.38	

Surrogate: 1-Chlorooctane 97.1 % 47.2-157

Surrogate: 1-Chlorooctadecane 114 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 03/20/2015
Reported: 03/25/2015
Project Name: TONY FEDERAL #10
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 03/20/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: PT 2 @ 6 IN (H500766-02)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	03/24/2015	ND	1.93	96.3	2.00	11.0	
Toluene*	<0.200	0.200	03/24/2015	ND	1.78	88.9	2.00	10.5	
Ethylbenzene*	0.278	0.200	03/24/2015	ND	1.70	84.9	2.00	13.0	
Total Xylenes*	0.726	0.600	03/24/2015	ND	5.10	84.9	6.00	13.9	
Total BTX	<1.20	1.20	03/24/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	03/24/2015	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	466	50.0	03/24/2015	ND	206	103	200	1.02	
DRO >C10-C28	11000	50.0	03/24/2015	ND	224	112	200	2.38	

Surrogate: 1-Chlorooctane 208 % 47.2-157

Surrogate: 1-Chlorooctadecane 223 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 03/20/2015
Reported: 03/25/2015
Project Name: TONY FEDERAL #10
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 03/20/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: PT 3 @ 6 IN (H500766-03)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	4.20	2.00	03/24/2015	ND	1.93	96.3	2.00	11.0	
Toluene*	54.0	2.00	03/24/2015	ND	1.78	88.9	2.00	10.5	
Ethylbenzene*	30.2	2.00	03/24/2015	ND	1.70	84.9	2.00	13.0	
Total Xylenes*	55.6	6.00	03/24/2015	ND	5.10	84.9	6.00	13.9	
Total BTX	144	12.0	03/24/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	800	16.0	03/24/2015	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	2230	50.0	03/24/2015	ND	206	103	200	1.02		
DRO >C10-C28	11800	50.0	03/24/2015	ND	224	112	200	2.38		

Surrogate: 1-Chlorooctane 254 % 47.2-157

Surrogate: 1-Chlorooctadecane 242 % 52.1-176

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 03/20/2015
Reported: 03/25/2015
Project Name: TONY FEDERAL #10
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 03/20/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: PT 4 @ 6 IN (H500766-04)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	03/24/2015	ND	1.93	96.3	2.00	11.0	
Toluene*	0.283	0.200	03/24/2015	ND	1.78	88.9	2.00	10.5	
Ethylbenzene*	0.629	0.200	03/24/2015	ND	1.70	84.9	2.00	13.0	
Total Xylenes*	11.9	0.600	03/24/2015	ND	5.10	84.9	6.00	13.9	
Total BTX	12.9	1.20	03/24/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	03/24/2015	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	581	100	03/24/2015	ND	206	103	200	1.02		
DRO >C10-C28	9330	100	03/24/2015	ND	224	112	200	2.38		

Surrogate: 1-Chlorooctane 192 % 47.2-157

Surrogate: 1-Chlorooctadecane 209 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

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

April 02, 2015

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: TONY FEDERAL #10

Enclosed are the results of analyses for samples received by the laboratory on 03/31/15 13:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received: 03/31/2015
Reported: 04/02/2015
Project Name: TONY FEDERAL #10
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 03/30/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: PT. 2 @ 6" (H500848-01)

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	03/31/2015	ND	195	97.6	200	1.27	
DRO >C10-C28	2640	50.0	03/31/2015	ND	198	99.2	200	4.70	

Surrogate: 1-Chlorooctane 89.8 % 47.2-157

Surrogate: 1-Chlorooctadecane 147 % 52.1-176

Sample ID: PT. 3 @ 6" (H500848-02)

BTX 8021B		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/02/2015	ND	1.83	91.5	2.00	13.1	
Toluene*	0.053	0.050	04/02/2015	ND	1.67	83.4	2.00	13.0	
Ethylbenzene*	<0.050	0.050	04/02/2015	ND	1.65	82.4	2.00	13.7	
Total Xylenes*	<0.150	0.150	04/02/2015	ND	5.04	84.0	6.00	14.1	
Total BTX	<0.300	0.300	04/02/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 61-154

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	03/31/2015	ND	195	97.6	200	1.27	
DRO >C10-C28	1220	50.0	03/31/2015	ND	198	99.2	200	4.70	

Surrogate: 1-Chlorooctane 88.9 % 47.2-157

Surrogate: 1-Chlorooctadecane 136 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

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

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

August 03, 2015

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: TONY FEDERAL #10

Enclosed are the results of analyses for samples received by the laboratory on 07/28/15 16:01.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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Method EPA 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 with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received: 07/28/2015
Reported: 08/03/2015
Project Name: TONY FEDERAL #10
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 07/28/2015
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Judy Garcia

Sample ID: PT. 4 BOTTOM @ 6" (H501965-01)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/31/2015	ND	2.03	101	2.00	1.88	
Toluene*	<0.050	0.050	07/31/2015	ND	2.03	101	2.00	2.19	
Ethylbenzene*	<0.050	0.050	07/31/2015	ND	2.20	110	2.00	0.823	
Total Xylenes*	<0.150	0.150	07/31/2015	ND	5.74	95.6	6.00	0.852	
Total BTEX	<0.300	0.300	07/31/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 119 % 85.6-137

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/02/2015	ND	416	104	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/30/2015	ND	199	99.3	200	1.26	
DRO >C10-C28	12.7	10.0	07/30/2015	ND	176	88.2	200	7.78	

Surrogate: 1-Chlorooctane 110 % 47.2-157

Surrogate: 1-Chlorooctadecane 134 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 07/28/2015
Reported: 08/03/2015
Project Name: TONY FEDERAL #10
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 07/28/2015
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Judy Garcia

Sample ID: PT.5 BOTTOM @ 6" (H501965-02)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/31/2015	ND	2.03	101	2.00	1.88	
Toluene*	<0.050	0.050	07/31/2015	ND	2.03	101	2.00	2.19	
Ethylbenzene*	<0.050	0.050	07/31/2015	ND	2.20	110	2.00	0.823	
Total Xylenes*	<0.150	0.150	07/31/2015	ND	5.74	95.6	6.00	0.852	
Total BTEX	<0.300	0.300	07/31/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 85.6-137

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/02/2015	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/30/2015	ND	199	99.3	200	1.26	
DRO >C10-C28	722	10.0	07/30/2015	ND	176	88.2	200	7.78	

Surrogate: 1-Chlorooctane 116 % 47.2-157

Surrogate: 1-Chlorooctadecane 141 % 52.1-176

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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APPENDIX – C

Photo Documentation

Apache Tony Federal #10

Unit Letter N, Section 18, T17S, R31E



Release area, facing northwest

11/13/14



Release area, facing southeast

11/13/14



Release area, facing northwest

11/13/14



Release area, facing southeast

11/13/14



Hand-excavated area, 6" bgs, facing southeast, 7/28/15



Hand-excavated area, 6" bgs, facing east 7/28/15



Hand-excavated area, 6" bgs, facing northwest, 7/28/15



Site complete, facing southeast 2/24/2016



Site complete, facing east

2/28/2016



Site complete, facing northwest

2/28/16



Site complete, facing northwest

2/28/16



Site complete, facing north

2/28/16