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Soil Assessment and Remediation Work Plan

Red Lake 28 K State #1 * 30-015-33740 * 2RP-3961 & 2RP-3960

Talon Project No. 700745.071.01

Prepared For:

Apache Corporation
2350 W Marland Blvd.
Hobbs, NM 88240

Prepared By:

Kimberly M. Wilson
Talon/LPE
408 West Texas
Artesia, New Mexico 88210

April 24, 2017

Mr. Mike Bratcher
NMOCD District 2
811 S. 1st Street
Artesia, NM 88210

Subject: **Soil Assessment and Remediation Work Plan**
Red Lake 28 K State #1
API # 30-015-323996 * 2RP-3379

Dear Mr. Bratcher,

Apache Corporation (Apache) has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above referenced location. The results of our soil assessment and proposed remediation activities consist of the following.

Incident Date

October 4 & 10, 2016

Site Information

The Red Lake 28 K State #1 is located approximately twenty (20) miles east of Artesia, New Mexico. The legal location for this site is Unit Letter K of Section 28, Township 17 South, and Range 28 East in Eddy County, New Mexico. More specifically the latitude and longitude for the location are 32.8027039 North and -104.1840439 West. See site plan in [Appendix I](#).

According to the soil survey provided by the United States Department of Agriculture Natural Resources Conservation Service (NRCS), the soil in this area is made up of the Kimbrough-Stegall loams with 0 to 3 percent slopes. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology is comprised of Holocene to upper Pleistocene alluvium. Drainage courses in this area are normally dry.

Ground Water and Site Ranking

The New Mexico State Engineer web site indicates the nearest ground water data to be in S5-T18S-R26E. The ground water in Section 5 is reported to be at depth of 95' below ground surface (BGS). See [Appendix II](#). Therefore the ranking for this site is a **10** based on the following:

Depth to ground water	50-100'
Wellhead Protection Area	>1000'
Distance to surface water body	>1000'

Based upon the site ranking of **10**, NMOCD Recommended Remedial Action Levels (RRAL) are 50 mg/kg for BTEX, 10 mg/kg for Benzene, 1,000 mg/kg for TPH and 1,000 mg/kg for total chlorides.

Incident Description

On October 4, 2016 a nipple between the oil tank and the circulation line corroded causing a release of 200 barrels of oil. All fluids were contained within the secondary containment. The tank was isolated and repaired. A vac truck was called to the location and recovered 170 barrels of oil.

On October 10, 2016 the steel circulating tank line developed a pin hole which resulted in a release of 45 barrels of oil. The line was replaced. A vac truck was called to the location and recovered 42 barrels of free standing oil. The rest flowed off pad south of battery. A site plan is presented in [Appendix I](#) which illustrates the impacted area.

On September 27, 2016 Talon mobilized personnel to begin the site assessment and soil sampling activities for the construction of a work plan. Grab soil samples were collected utilizing a hand auger where refusal was encountered. Laboratory results are presented below in [Table 1](#).

On March 20, 2017 Talon returned to the site to collect further samples required by the NMOCD.

Laboratory Results

See [Appendix III](#) for complete report of laboratory results.

Table 1

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	0'	220	--	1680	7470
	1'	127	--	353	1010
	2'	176	--	646	1490
S-2	0'	190	--	1520	8420
Refusal	0.5'	409	--	3110	8740
S-3	0'	1990	--	19400	32300
	1'	481	--	1810	3870
S-4	0'	4.5	--	10.4	109
	1'	<0.300	--	<10	<10
	14-inches	<0.300	--	<10	<10
S-5	0'	2.48	--	<10	<10
Refusal	1'	0.649	--	<10	<10
S-6	0'	2.95	--	11.0	173
	1'	<0.300	--	<10	<10
	14-inches	<0.300	--	<10	<10
S-7	0'	263	--	3680	29300
Refusal	0.5'	194	--	1290	5710

--Analyte Not Tested


Proposed Remedial Actions

- The impacted areas will be treated with a bioremediation agent. Confirmation samples will be collected after 60 to 90 days to verify effectiveness of treatment. Multiple applications may be needed depending on the analytical results.
- Upon NMOCD approval of the confirmation samples Apache Corporation proposes that the area be reseeded with BLM #2 and monitored to ensure natural vegetation can be sustained.
- A final closure report documenting all remedial actions will be provided to the NMOCD Artesia Office along with a Final C-141 Form.

Should you have any questions or if further information is required, please do not hesitate to contact our office at (575)-746-8768

Respectfully submitted,

TALON/LPE


Kimberly M. Wilson
Project Manager

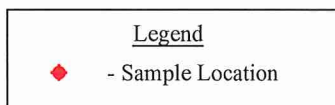
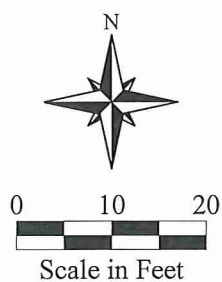
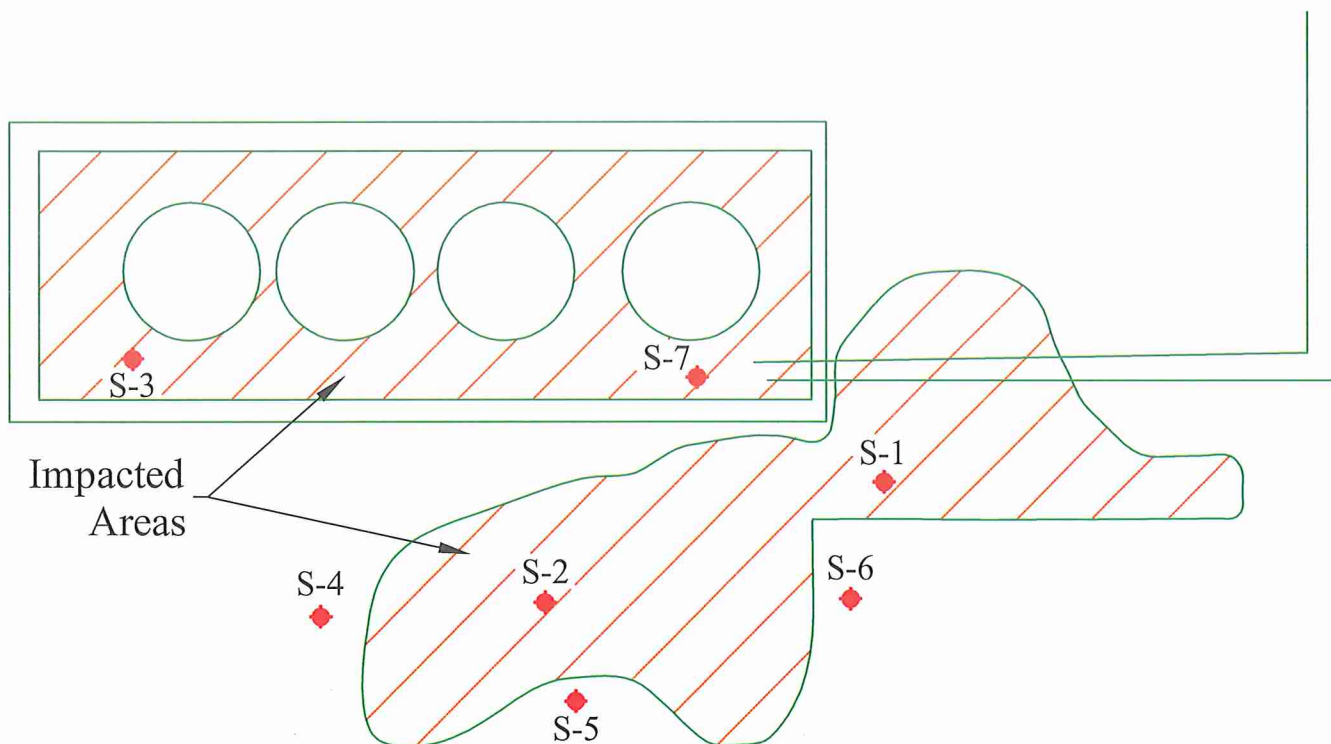
David J. Adkins
District Manager

Attachments:

Appendix I Site Plan
Appendix II Groundwater Data & Initial C-141
Appendix III Laboratory Results

APPENDIX I

SITE MAP



Date: 04/26/2017

Scale: 1" = 20'

Drawn By: TJS

Red Lake 28K State #1
Apache Corporation
Eddy County, New Mexico
Figure 1 - Site Plan

APPENDIX II
GROUNDWATER DATA
INITIAL C-141



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RA 11857 POD1			ED	1	1	2	05	18S	26E	577784	3625988	3850	235	95	140
RA 12456 POD1			ED	1	4	4	24	17S	27E	572348	3630969	4114	220	92	128

Average Depth to Water: 93 feet

Minimum Depth: 92 feet

Maximum Depth: 95 feet

Record Count: 2

UTMNAD83 Radius Search (in meters):

Easting (X): 576188

Northing (Y): 3629492

Radius: 5000

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

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rjo 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

NM OIL CONSERVATION

ARTESIA DISTRICT

OCT 24 2016

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

RECEIVED

Form C-141
Revised August 8, 2011

Release Notification and Corrective Action

NAB1629941525

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Apache Corporation
Address: 2350 W Marland Blvd Hobbs, NM 88240
Facility Name: Red Lake K State # 1 Battery
Facility Type: Battery

Surface Owner State: ☐ Mineral Owner: ☐ API No. 30-015-33740

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	28	17S	28E	1650	FSL	1650	PWL	Eddy

Latitude N32.8027039 Longitude W104.1840439

NATURE OF RELEASE

Type of Release: Oil	Volume of Release: 200 barrels of Oil	Volume Recovered: 170 barrels of Oil
Source of Release: Oil Tank	Date and Hour of Occurrence: 10/4/2015	Date and Hour of Discovery: 10/4/2015 at 1:00 p.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)	
By Whom? Bruce Baker	Date and Hour 10/4/2016 via phone and email at 2:37 p.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 release occurred due to a 4"X2" swedge nipple connection between the oil tank and drain/circulating line corroded. The tank was isolated and trucks were dispatched to pick-up standing oil.

Describe Area Affected and Cleanup Action Taken.* The entire release was contained to the secondary containment berm and the swedge nipple was replaced.

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 poses 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: 10/25/16	Expiration Date: N/A
E-mail Address: larry.baker@apachecorp.com	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines Attached <input type="checkbox"/>	
Date: 10/24/2016 Phone: (432) 631-6982	SUBMIT REMEDIATION PROPOSAL NO	

* Attach Additional Sheets If Necessary

LATER THAN: 11/25/16

2RP-396

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

NM OIL CONSERVATION

ARTESIA DISTRICT

OCT 24 2016

Form C-141
Revised August 8, 2011

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

RECEIVED

Release Notification and Corrective Action

NAB1629936433

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Apache Corporation 873	Contact: Bruce Baker
Address: 2350 W Marland Blvd Hobbs, NM 88240	Telephone No. (432) 631-6982
Facility Name: Red Lake K State # 1 Battery	Facility Type: Battery

Surface Owner State	Mineral Owner	API No. 30-015-33740
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LOCATION OF RELEASE

Unit Letter K	Section 28	Township 17S	Range 28E	Feet from the 1650	North/South Line FSL	Feet from the 1650	East/West Line FWL	County Eddy
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Latitude N32.8027039 Longitude W104.1840439

NATURE OF RELEASE

Type of Release: Oil	Volume of Release: 45 barrels of Oil	Volume Recovered: 42 barrels of Oil
Source of Release: Circulating line	Date and Hour of Occurrence: 10/10/2016	Date and Hour of Discovery: 10/10/2016
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)	
By Whom? Bruce Baker	Date and Hour: 10/11/2016 via phone and email at 3:09 p.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 release occurred due to pin hole developed in the steel circulating tank. The oil tank was isolated and vacuum truck was dispatched to pick-up standing oil. The line was replaced.

Describe Area Affected and Cleanup Action Taken.* The majority of the release affected the pasture south of the battery.

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: Bruce Baker	Approved by Environmental Specialist: <i>[Signature]</i>	
Printed Name: Bruce Baker	Approval Date: 10/25/16	Expiration Date: N/A
Title: Environmental Technician	Conditions of Approval:	
E-mail Address: larry.baker@apachecorp.com	Remediation per O.C.D. Rules & Guidelines <input type="checkbox"/>	
Date: 10/24/2016 Phone: (432) 631-6982	SUBMIT REMEDIATION PROPOSAL NO	

* Attach Additional Sheets If Necessary

LATER THAN: 11/26/16

2RP-39600

APPENDIX III

LABORATORY RESULTS



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

March 27, 2017

KIMBERLY WILSON

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: RED LAKE 28 K BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 03/23/17 10:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

TALON LPE
KIMBERLY WILSON
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:	03/23/2017	Sampling Date:	03/20/2017
Reported:	03/27/2017	Sampling Type:	Soil
Project Name:	RED LAKE 28 K BATTERY	Sampling Condition:	Cool & Intact
Project Number:	700745.071.01	Sample Received By:	Celey D. Keene
Project Location:	EDDY COUNTY, NM		

Sample ID: S-4 0' (H700760-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.116	0.050	03/24/2017	ND	1.83	91.4	2.00	0.535	
Toluene*	1.27	0.050	03/24/2017	ND	1.75	87.6	2.00	0.779	
Ethylbenzene*	1.06	0.050	03/24/2017	ND	1.77	88.6	2.00	0.396	
Total Xylenes*	2.05	0.150	03/24/2017	ND	5.08	84.6	6.00	0.267	
Total BTX	4.50	0.300	03/24/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 72-148

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	10.4	10.0	03/24/2017	ND	188	94.2	200	2.64	
DRO >C10-C28	109	10.0	03/24/2017	ND	199	99.6	200	0.0216	

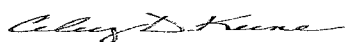
Surrogate: 1-Chlorooctane 100 % 25.1-158

Surrogate: 1-Chlorooctadecane 105 % 26.8-170

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TALON LPE
KIMBERLY WILSON
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:	03/23/2017	Sampling Date:	03/20/2017
Reported:	03/27/2017	Sampling Type:	Soil
Project Name:	RED LAKE 28 K BATTERY	Sampling Condition:	Cool & Intact
Project Number:	700745.071.01	Sample Received By:	Celey D. Keene
Project Location:	EDDY COUNTY, NM		

Sample ID: S-4 1' (H700760-02)

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	03/24/2017	ND	1.83	91.4	2.00	0.535	
Toluene*	0.052	0.050	03/24/2017	ND	1.75	87.6	2.00	0.779	
Ethylbenzene*	<0.050	0.050	03/24/2017	ND	1.77	88.6	2.00	0.396	
Total Xylenes*	<0.150	0.150	03/24/2017	ND	5.08	84.6	6.00	0.267	
Total BTEX	<0.300	0.300	03/24/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 72-148

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	03/24/2017	ND	188	94.2	200	2.64	
DRO >C10-C28	<10.0	10.0	03/24/2017	ND	199	99.6	200	0.0216	

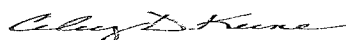
Surrogate: 1-Chlorooctane 82.3 % 25.1-158

Surrogate: 1-Chlorooctadecane 85.6 % 26.8-170

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TALON LPE
KIMBERLY WILSON
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:	03/23/2017	Sampling Date:	03/20/2017
Reported:	03/27/2017	Sampling Type:	Soil
Project Name:	RED LAKE 28 K BATTERY	Sampling Condition:	Cool & Intact
Project Number:	700745.071.01	Sample Received By:	Celey D. Keene
Project Location:	EDDY COUNTY, NM		

Sample ID: S-4 14" (H700760-03)

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	03/24/2017	ND	1.83	91.4	2.00	0.535		
Toluene*	<0.050	0.050	03/24/2017	ND	1.75	87.6	2.00	0.779		
Ethylbenzene*	<0.050	0.050	03/24/2017	ND	1.77	88.6	2.00	0.396		
Total Xylenes*	<0.150	0.150	03/24/2017	ND	5.08	84.6	6.00	0.267		
Total BTEX	<0.300	0.300	03/24/2017	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 72-148

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	03/24/2017	ND	188	94.2	200	2.64	
DRO >C10-C28	<10.0	10.0	03/24/2017	ND	199	99.6	200	0.0216	

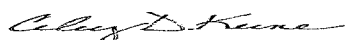
Surrogate: 1-Chlorooctane 85.4 % 25.1-158

Surrogate: 1-Chlorooctadecane 91.5 % 26.8-170

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TALON LPE
 KIMBERLY WILSON
 408 W. TEXAS AVE.
 ARTESIA NM, 88210
 Fax To: (575) 745-8905

Received:	03/23/2017	Sampling Date:	03/20/2017
Reported:	03/27/2017	Sampling Type:	Soil
Project Name:	RED LAKE 28 K BATTERY	Sampling Condition:	Cool & Intact
Project Number:	700745.071.01	Sample Received By:	Celey D. Keene
Project Location:	EDDY COUNTY, NM		

Sample ID: S-5 0' (H700760-04)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.103	0.050	03/24/2017	ND	1.83	91.4	2.00	0.535	
Toluene*	0.851	0.050	03/24/2017	ND	1.75	87.6	2.00	0.779	
Ethylbenzene*	0.536	0.050	03/24/2017	ND	1.77	88.6	2.00	0.396	
Total Xylenes*	0.992	0.150	03/24/2017	ND	5.08	84.6	6.00	0.267	
Total BTX	2.48	0.300	03/24/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 72-148

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	03/24/2017	ND	188	94.2	200	2.64	
DRO >C10-C28	<10.0	10.0	03/24/2017	ND	199	99.6	200	0.0216	

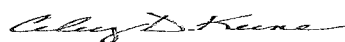
Surrogate: 1-Chlorooctane 88.7 % 25.1-158

Surrogate: 1-Chlorooctadecane 91.3 % 26.8-170

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TALON LPE
KIMBERLY WILSON
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:	03/23/2017	Sampling Date:	03/20/2017
Reported:	03/27/2017	Sampling Type:	Soil
Project Name:	RED LAKE 28 K BATTERY	Sampling Condition:	Cool & Intact
Project Number:	700745.071.01	Sample Received By:	Celey D. Keene
Project Location:	EDDY COUNTY, NM		

Sample ID: S-5 1' REFUSAL (H700760-05)

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	03/24/2017	ND	1.83	91.4	2.00	0.535	
Toluene*	0.167	0.050	03/24/2017	ND	1.75	87.6	2.00	0.779	
Ethylbenzene*	0.153	0.050	03/24/2017	ND	1.77	88.6	2.00	0.396	
Total Xylenes*	0.329	0.150	03/24/2017	ND	5.08	84.6	6.00	0.267	
Total BTX	0.649	0.300	03/24/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 72-148

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	03/24/2017	ND	188	94.2	200	2.64	
DRO >C10-C28	<10.0	10.0	03/24/2017	ND	199	99.6	200	0.0216	

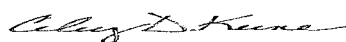
Surrogate: 1-Chlorooctane 87.7 % 25.1-158

Surrogate: 1-Chlorooctadecane 92.9 % 26.8-170

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TALON LPE
 KIMBERLY WILSON
 408 W. TEXAS AVE.
 ARTESIA NM, 88210
 Fax To: (575) 745-8905

 Received: 03/23/2017
 Reported: 03/27/2017
 Project Name: RED LAKE 28 K BATTERY
 Project Number: 700745.071.01
 Project Location: EDDY COUNTY, NM

 Sampling Date: 03/20/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: S-6 0' (H700760-06)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.066	0.050	03/24/2017	ND	1.83	91.4	2.00	0.535	
Toluene*	0.750	0.050	03/24/2017	ND	1.75	87.6	2.00	0.779	
Ethylbenzene*	0.691	0.050	03/24/2017	ND	1.77	88.6	2.00	0.396	
Total Xylenes*	1.45	0.150	03/24/2017	ND	5.08	84.6	6.00	0.267	
Total BTX	2.95	0.300	03/24/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 104 % 72-148

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	11.0	10.0	03/24/2017	ND	188	94.2	200	2.64	
DRO >C10-C28	173	10.0	03/24/2017	ND	199	99.6	200	0.0216	

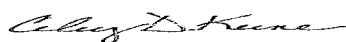
Surrogate: 1-Chlorooctane 89.6 % 25.1-158

Surrogate: 1-Chlorooctadecane 94.0 % 26.8-170

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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TALON LPE
KIMBERLY WILSON
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:	03/23/2017	Sampling Date:	03/20/2017
Reported:	03/27/2017	Sampling Type:	Soil
Project Name:	RED LAKE 28 K BATTERY	Sampling Condition:	Cool & Intact
Project Number:	700745.071.01	Sample Received By:	Celey D. Keene
Project Location:	EDDY COUNTY, NM		

Sample ID: S-6 1' (H700760-07)

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	03/24/2017	ND	1.83	91.4	2.00	0.535	
Toluene*	0.065	0.050	03/24/2017	ND	1.75	87.6	2.00	0.779	
Ethylbenzene*	<0.050	0.050	03/24/2017	ND	1.77	88.6	2.00	0.396	
Total Xylenes*	<0.150	0.150	03/24/2017	ND	5.08	84.6	6.00	0.267	
Total BTEX	<0.300	0.300	03/24/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 72-148

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	03/24/2017	ND	188	94.2	200	2.64	
DRO >C10-C28	<10.0	10.0	03/24/2017	ND	199	99.6	200	0.0216	

Surrogate: 1-Chlorooctane 84.8 % 25.1-158

Surrogate: 1-Chlorooctadecane 91.4 % 26.8-170

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TALON LPE
 KIMBERLY WILSON
 408 W. TEXAS AVE.
 ARTESIA NM, 88210
 Fax To: (575) 745-8905

Received:	03/23/2017	Sampling Date:	03/20/2017
Reported:	03/27/2017	Sampling Type:	Soil
Project Name:	RED LAKE 28 K BATTERY	Sampling Condition:	Cool & Intact
Project Number:	700745.071.01	Sample Received By:	Celey D. Keene
Project Location:	EDDY COUNTY, NM		

Sample ID: S-6 14" (H700760-08)

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	03/24/2017	ND	1.83	91.4	2.00	0.535	
Toluene*	<0.050	0.050	03/24/2017	ND	1.75	87.6	2.00	0.779	
Ethylbenzene*	<0.050	0.050	03/24/2017	ND	1.77	88.6	2.00	0.396	
Total Xylenes*	<0.150	0.150	03/24/2017	ND	5.08	84.6	6.00	0.267	
Total BTX	<0.300	0.300	03/24/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 72-148

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	03/24/2017	ND	188	94.2	200	2.64	
DRO >C10-C28	<10.0	10.0	03/24/2017	ND	199	99.6	200	0.0216	

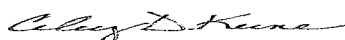
Surrogate: 1-Chlorooctane 85.5 % 25.1-158

Surrogate: 1-Chlorooctadecane 90.0 % 26.8-170

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TALON LPE
 KIMBERLY WILSON
 408 W. TEXAS AVE.
 ARTESIA NM, 88210
 Fax To: (575) 745-8905

Received:	03/23/2017	Sampling Date:	03/20/2017
Reported:	03/27/2017	Sampling Type:	Soil
Project Name:	RED LAKE 28 K BATTERY	Sampling Condition:	Cool & Intact
Project Number:	700745.071.01	Sample Received By:	Celey D. Keene
Project Location:	EDDY COUNTY, NM		

Sample ID: S-7 0' (H700760-09)

BTEX 8021B		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	7.09	5.00	03/24/2017	ND	1.83	91.4	2.00	0.535	
Toluene*	45.9	5.00	03/24/2017	ND	1.75	87.6	2.00	0.779	
Ethylbenzene*	70.7	5.00	03/24/2017	ND	1.77	88.6	2.00	0.396	
Total Xylenes*	139	15.0	03/24/2017	ND	5.08	84.6	6.00	0.267	
Total BTEX	263	30.0	03/24/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 106 % 72-148

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	3680	100	03/24/2017	ND	195	97.3	200	0.509	QM-07	
DRO >C10-C28	29300	100	03/24/2017	ND	204	102	200	0.226	QM-07	

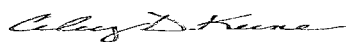
Surrogate: 1-Chlorooctane 276 % 25.1-158

Surrogate: 1-Chlorooctadecane 292 % 26.8-170

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TALON LPE
KIMBERLY WILSON
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:	03/23/2017	Sampling Date:	03/20/2017
Reported:	03/27/2017	Sampling Type:	Soil
Project Name:	RED LAKE 28 K BATTERY	Sampling Condition:	Cool & Intact
Project Number:	700745.071.01	Sample Received By:	Celey D. Keene
Project Location:	EDDY COUNTY, NM		

Sample ID: S-7 0.5' REFUSAL (H700760-10)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	7.55	1.00	03/25/2017	ND	1.83	91.4	2.00	0.535	
Toluene*	53.4	1.00	03/25/2017	ND	1.75	87.6	2.00	0.779	
Ethylbenzene*	28.3	1.00	03/25/2017	ND	1.77	88.6	2.00	0.396	
Total Xylenes*	105	3.00	03/25/2017	ND	5.08	84.6	6.00	0.267	
Total BTEX	194	6.00	03/25/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 110 % 72-148

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	1290	50.0	03/24/2017	ND	195	97.3	200	0.509		
DRO >C10-C28	5710	50.0	03/24/2017	ND	204	102	200	0.226		

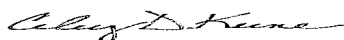
Surrogate: 1-Chlorooctane 176 % 25.1-158

Surrogate: 1-Chlorooctadecane 162 % 26.8-170

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Celey D. Keene, Lab Director/Quality Manager

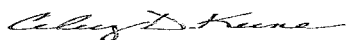
Notes and Definitions

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

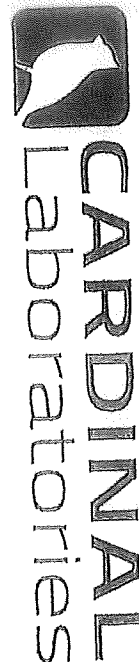
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Celey D. Keene, Lab Director/Quality Manager



Page 1 of 1
CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

ANALYSIS REQUEST

Company Name: Talon/PE		P.O. #:														
Project Manager: Kimberly Wilson		Company:	Anche													
Address: 408 W. Texas Ave.		Attn:														
City: Artesia	State: NM zip: 88210	Address:														
Phone #: 575-746-8768	Fax #: 575-746-8905	City:														
Project #: 700745.0710	Project Owner: Apple	State:	Zip:													
Project Name: Red Lake 28 St #1		Phone #:														
Project Location: Eddy City		Fax #:														
Sample Name: Kim Wilson																
FOR LAB USE ONLY		MATRIX		PRESERV	SAMPLING											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	TPH	BTEX
H700760	5-4 0'												3/24/17	1:17		
01	5-4 0'													1:20		
02	8-4 14-inches													1:23		
03	5-4 14-inches													1:29		
04	5-5 0'	Refusal												1:34		
05	5-5 1'	Refusal												1:40		
06	5-6 0'													1:44		
07	5-6 1'													1:48		
08	5-6 14-inches													2:01		
09	5-7 0'													2:05		
10	8-7 0.5' Refusal															
<small>FOR STATE NOTICE: Liability and Damages. Cardinal's liability and clients exclusive remedy for any claim arising whether based in contract or tort shall be limited to the amount paid by the client for the analysis. All claims including those for negligence and any other causes whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In the event that Cardinal is liable for incidental or consequential damages, including without limitation, business interruption, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of service hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.</small>																
Reinquished By: Kim Wilson		Received By: Joe Mays		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #: _____										
Reinquished By: Joe Mays		Received By: Joe Mays		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #: _____										
Delivered By: (Circle One) Joe Mays		Sample Condition: <input checked="" type="checkbox"/> Intact <input type="checkbox"/> No		CHECKED BY: (Initials) Joe Mays												
Sampler - UPS - Bus - Other: 2.2°C				COK #75												