

April 29, 2013

RECEIVED

MAY **09** 2013

NMOCD ARTESIA

AMARILLO 92I North Bivins Amarillo. Texas 79107 Phone 806.467.0607 Mr. Mike Bratcher
NMOCD District 2
1301 West. Grand Avenue
Artesia, NM 88210

Fax 806.467.0622

ARTESIA 408 West Texas Ave. Artesia, New Mexico 88210 Phone 575.746.8768 Fax 575.746.8905 Subject:

Remedial Activities and Closure Report

Lime Rock Resources II-A, L.P. Atoka San Andres Unit No. 100 30-015-00298 2RP-1289

AUSTIN

9lf West Anderson Lane Suite 202 Austin, Texas 78757 Phone 512.989.3428 Fax 512.989.3487

Dear Mr. Bratcher,

Lime Rock Resources II-A L.P. (Lime Rock) contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above referenced Atoka San Andres Unit No. 100. The incident description, soil sampling results, remediation activities and closure request are submitted herein.

HOBBS

MIDLAND

3i8 East Taylor Street Hobbs, New Mexico 88240 Phone 575.393.426i Fax 575.393.4658

Incident Date

The leak was discovered on August 20, 2012 at approximately 3:30 p.m.

290! State Hwy 349 Midland, Texas 79706 Phone 432.522.2!33 Fax 432.522.2!80

Background Information

SAN ANTONIO Il Commercial Place Schertz, Texas 78154 Phone 210.265.8025 Fax 210.568,2191 The Atoka San Andres Unit No. 100 is located approximately nine (9) miles southeast of Artesia, New Mexico. The legal location for the site is Section 2 Township 18S and Range 26E, in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.76704 North and -104.342689 West.

TULSA 525 South Main Street Suite 535 Tulsa, Oklahoma 74103 Phone 918.742.0871 Fax 918.382.0232 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 Reeves loam with a 0 to 1 percent slope. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology consists of Paleozoic age sedimentary deposits, and is comprised of the Guadeloupian Artesia Group, Tansil and Yates formations which include silty soils under lain by weathered gypsum and hard caliches. Drainage courses in this area are normally dry. The New Mexico State Engineer web site indicates the nearest ground water data to be in S1-T18S-R26E. The groundwater in the area is reported to be 8' below ground surface (bgs). The referenced groundwater data is presented in Appendix II.

ENVIRONMENTAL CONSULTING ENGINEERING

DRILLING

SPILL MANAGEMENT
GENERAL CONTRACTING

The ranking for this site is 20 based on the following:

Depth to groundwater <50'
Wellhead Protection Area >1000'
Distance to surface water body >1000

Toll Free: 866.742.0742 www.talonlpe.com

Incident Description

On August 20, 2012 an injection line ruptured causing approximately 95 barrels of produced water to be released. The well was shut in and the line was replaced. No fluids were recovered.

Remedial Actions

September 11, 2012

- Talon personnel were mobilized to carry out soil sampling activities utilizing an air rotary drill rig.
- Using split spoons, grab soil samples were collected at sample location Borehole-1 (BH-1) to a depth of 14-feet bgs (See Appendix III for site map of sample locations.)*
- Background grab soil samples were collected at sample location BH-2, to a depth of 10-feet bgs. (See Appendix III for site map of sample locations.)*
- Samples were sent to Cardinal Laboratories in Hobbs, New Mexico for analysis. A data table summarizing the results is attached. (See Appendix IV for complete laboratory results.)

January 9, 2013

- Talon personnel were mobilized to excavate the impacted area to a depth of 8-feet to 10-feet bgs.
- All contaminated soil was transported to New Mexico Oil Conservation Division (NMOCD) approved solid waste disposal facility Lea Land, LLC.

January 10, 3013 through January 30, 2013

• Soil excavation continued.

January 31, 2013

Soil excavation was completed to a depth of 8-feet to 10-feet bgs.

February 1, 2013

- Confirmation grab soil samples were collected at sample locations S-3, S-4, S-5, and S-6. (See Appendix III for site map of sample locations.)*
- Samples were sent to Cardinal Laboratories in Hobbs, New Mexico for analysis. A data table summarizing the results is attached. (See Appendix IV for complete laboratory results.)

February 4, 2013

 Talon requested permission from NMOCD to backfill the excavation to a depth of 5-feet bgs, place a 20 mil liner and backfill the excavation to grade.

February 5, 2013

• Mike Bratcher of NMOCD granted permission for Talon to proceed with the backfill operations described on February 4th.

February 6, 2013

• Talon began backfilling the excavation using soil purchased from the land owner (Gary Fanning).

February 14, 2013

- Talon completed backfill of the excavation.
- A stockpile of extra top soil was left at the site upon request of the land owner.

*All soil samples were collected by Talon personnel wearing clean nitrile gloves. The soil samples were placed in laboratory provided sample containers and transported to Cardinal Laboratories in Hobbs, New Mexico for analysis. The samples were tested for TPH (Total Petroleum Hydrocarbons) using EPA Method 8015M, volatile organics (BTEX) using EPA Method 8021B, and total Chloride concentration using Method SM4500CL-B. The complete laboratory reports are attached.

Analytical Results

Analytical results detailed on the attached laboratory report are summarized below:

Results from sampling activities on September 11, 2012:

Sample ID	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
BH-1 (0')	ND	832	ND	ND
BH-1 (2')	ND	12300	ND	ND
BH-1 (4')		16200		
BH-1 (6')		1200		
BH-1 (8')		12400		· • • • · · · · · · · · · · · · · · · ·
BH-1 (10')		4080		Be da
BH-1 (14')		528		
BH-2 (5')	**************************************	96		
BH-2 (10')		240		

(ND) Analyte Not Detected

(--) Analyte Not Tested

Results from sampling activities on February 1, 2013:

Sample ID	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-3	ND	64	ND	ND
S-4	ND	112	ND	ND
S-5	ND	416	ND	ND
S-6	ND	96	ND	ND

(ND) Analyte Not Detected

Based upon the site ranking of 20, NMOCD Recommended Remedial Action Levels (RRAL) are 50 mg/kg for BTEX, 10 mg/kg for Benzene, 100 mg/kg for TPH and 1000 mg/kg for Chlorides.

Summary and Conclusions

- Ground water in the project vicinity is 8-feet bgs according to the New Mexico State Engineers Database. However groundwater was not encountered in this excavation.
- The impacted soil from this release was excavated to a depth of 8-feet to 10-feet bgs.
- Top soil from the same general area was used to backfill the excavation to a depth of 5-feet bgs.
- A 20 Mil liner was placed inside the excavation area, at a depth of 5-feet bgs.
- The excavation was backfilled to grade using top soil from the same general area.
- The land owner plans to return the area to alfalfa production.

Closure

On behalf of Lime Rock Resources, we respectfully request that no further actions be required and that closure with regard to this release be granted.

If we can provide additional information or be of further assistance, please contact our office at (575)-746-8768.

Respectfully submitted,

TALON/LPE

Mike Stubblefield

Project Manager

David J. Adkins

District Manager

Appendix I

Final C-141

District 1
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

Form C-141 Revised August 8, 2011

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

			Rele	ease Notific	ation	and Co	rrective A	ction			
						OPERA:	ror .	☐ Initia	l Report	X	Final Report
Name of Co	mpany LII	ME ROCK RI	ESOURCE	ES II-A, LP			hael Barrett				
Addressill							No. 575-623-842				
Facility Nar	ne Atoka S	San Andres I	Jnit #100	<u> </u>		Facility Typ	e Injection Line	: 			
Surface Ow	ner Fannin	ng Farms		Mineral O	wner U	Inknown		API No.	30-015-0	0298 2	RP-1289
				LOCA	OIT	OF RE	LEASE				
Unit Letter	Section	Township	Range	Feet from the		South Line	Feet from the	East/West Line		Count	•
D	12	18S	26E	990,		FNL	330'	FWL		Eddy	<u>'</u>
			La	titude_ <u>32,7670</u>	48	_ Longitud	le_104.342689				
				NAT	URE	OF REL					
Type of Rele							Release 95 bbls		ecovered 0		
Source of Re	iease inject	ion Line		÷		Unknown	lour of Occurrenc		Hour of Dis @ 3:30 p.r		
Was Immedia	ate Notice (If YES, To					
			Yes L	No Not Re	quired	<u> </u>	ther, NMOCD				
By Whom? N Was a Water					· · · · · · · · · · · · · · · · · · ·		lour 8/21/2012 @ blume Impacting t				
was a water	Jourse Reac		Yes 🗵	No		N/A	nume impacing t	ne watercourse.			
If a Watercou	rse was Im	pacted, Descr	ibe Fully.	<u> </u>	·····	<u> </u>					
			•								
N/A											
Describe Cau	se of Probl	em and Reme	dial Action	n Taken.*							
Injection line	leak, line v	vas isolated ar	nd taken o	ut of service.							
Describe Are	a Affected	and Cleanup	Action Tal	ken.*							
Taland DE 6	P-1		•	. It tout a m							
8-feet below	ground surf	contracted to the face. All of the	conduct re	mediai actions. Ta nated soil was tran	aion con isported	to NMOCD	ampling, and subs	equently excavated facility Lea Land,	the impact	ed area n persor	to a depth of
collected con	firmation s	oil samples an	d backfill	ed the excavation	to a dep	th of 5-feet b	elow ground surfa	ce. A 20 Mil liner	was place i	n the ex	cavation and
the excavatio	n was back	filled to grade	. All back	fill material was to	op soil t	rom the same	area as the releas	se.			
I hereby certi	fy that the i	information gi	iven above	is true and comp	lete to tl	he best of my	knowledge and u	nderstand that purs tive actions for rele	uant to NM	OCD r	ules and
public health	or the envi	ronment. The	acceptane	ce of a C-141 repo	ort by the	e NMOCD m	arked as "Final R	eport" does not reli	eve the one	rator of	fliability
should their of	perations h	nave failed to	adequately	investigate and r	emediate	e contaminati	on that pose a thre	eat to ground water	, surface w	ater, hu	man health
federal, state	or local la	ws and/or regi	olations.	nance of a C-141	report a	oes not rehev	e the operator of i	responsibility for co	ompliance v	vith any	/ other
		1 1	7				OIL CON	SERVATION	DIVISIO	ON	
Signature:	\mathcal{N}		1 >								
Printed Name	: Michael	Barrett				Approved by	Environmental S	pecialist:			
Title: Produc	tion Superv	isor				Approval Da	te:	Expiration I	Date:		
E-mail Addre	ess: mbarre	tt@limerockre	sources.c	om		Conditions o	f Approval:		Attached		· · · · · · · · · · · · · · · · · · ·
Date:			Phone	: 575-628-8424	ļ						
* Attach Addi	tional She	ets If Necess			L						

Appendix II Groundwater Data



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		Q	Q	Q							Depth	Depth	Water
POD Number	Code	Subbasin	County	64	16	4	Sec	Tws	Rng	X	Υ	Distance	Well	Water	Column
RA 02432			ED	2	3	1	12	18S	26E	561764	3625443*	452	100		
RA 02043			ED				02	188	26E	560654	3626749*	1280			
RA 03634			ED	3	1	4	11	18\$	26E	560757	3624835*	1296	1797		
RA 05989			ED	3	2	4	01	18\$	26E	562774	3626466*	1357	72	8	64
RA 00012	0		ED		3	4	11	18S	26E	560858	3624531*	1495	600		
RA 03596			ED		3	4	11	18S	26E	560858	3624531*	1495	1736		
RA 01288			ED	3	3	3	02	185	26E	559950	3626045*	1626	186	50	136
RA 01288 CLW319630	0		ED	3	3	3	02	18S	26E	559950	3626045*	1626	200		
RA 00012 A			ED	3	3	4	11	18S	26E	560757	3624430*	1632	600		
RA 03639			ΕD	4	4	3	11	185	26E	560555	3624429*	1742	1710		
RA 02808			ED		4	4	03	18\$	26E	559648	3626145*	1939			
											A	ra Manth ta	MACATA	20	foot

Average Depth to Water:

29 feet

Minimum Depth:

8 feet

Maximum Depth:

50 feet

Record Count: 11

UTMNAD83 Radius Search (in meters):

Easting (X): 561565

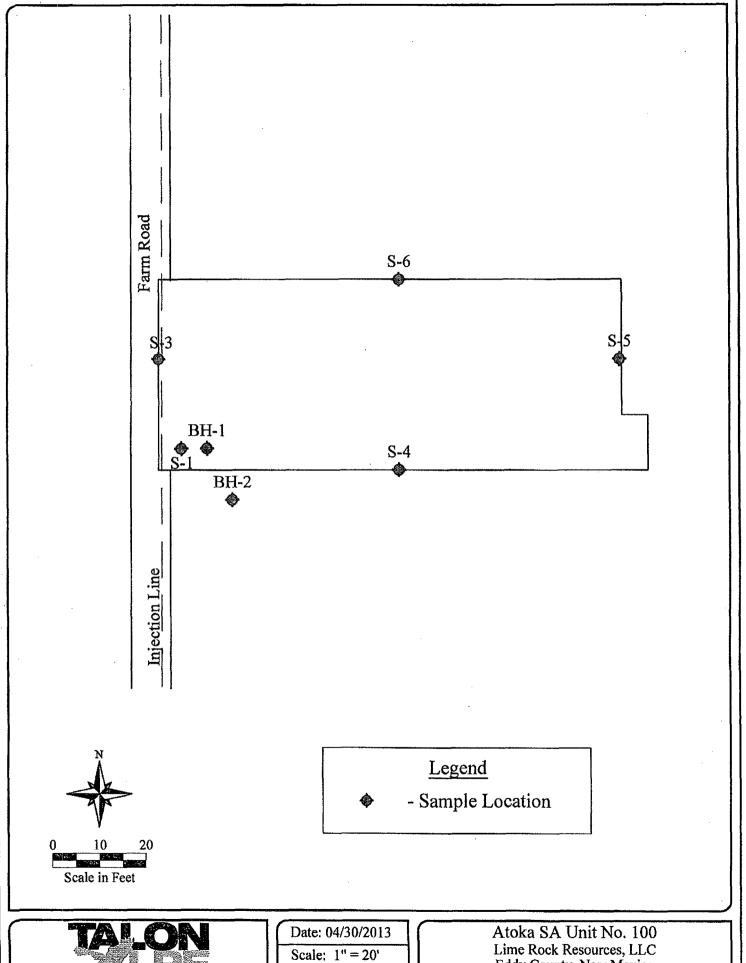
Northing (Y): 3625849

Radius: 2000

*UTM location was derived from PLSS - see Help

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

Appendix III Site Map



Drawn By: TJS

Lime Rock Resources, LLC Eddy County, New Mexico Figure 1 - Site Plan

Appendix IV Laboratory Results



September 21, 2012

MIKE STUBBLEFIELD

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: ATOKA SAN ANDRES UNIT NO. 100

Enclosed are the results of analyses for samples received by the laboratory on 09/14/12 14:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accred certif.html.

Cardinal Laboratories is accreditated 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.

Celey D. Keene

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



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

Received:

09/14/2012

Sampling Date:

09/11/2012

Reported:

09/21/2012

Sampling Type:

Soil

Project Name:

ATOKA SAN ANDRES UNIT NO. 100

63.6-154

80.1 %

Sampling Condition:

Cool & Intact

Project Number:

701307.040.01

Sample Received By:

Jodi Henson

Project Location:

SEC. 12 - T18S - R26E

Sample ID: BH - 1 0' (H202234-01)

BTEX 8021B	mg/	kg	Analyze	I By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2012	ND	1.84	92.0	2.00	13.8	
Toluene*	<0.050	0.050	09/20/2012	ND	2.07	103	2.00	11.4	
Ethylbenzene*	<0.050	0.050	09/20/2012	ND	2.04	102	2.00	11.1	
Total Xylenes*	<0.150	0,150	09/20/2012	ND	6,32	105	6.00	9.78	
Surrogate: 4-Bromofluorobenzene (PIL	98.5	% 89.4-12	6						*****
Chloride, SM4S00Cl-B	mg/	kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	832	16.0	09/20/2012	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/19/2012	ND	177	88.4	200	8.27	
	<10.0	10.0	09/19/2012	NO	172	86.1	200	12.5	

Cardinal Laboratories

Surrogate: I-Chlorooctadecane

*=Accredited Analyte

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Celecy E. Keine



TALON LPE MIKE STUBBLEFIELD 408 W. TEXAS AVE. ARTESIA NM, 88210 (575) 745-8905

Fax To:

Received:

09/14/2012

Reported: Project Name:

BTEX 8021B

09/21/2012

ATOKA SAN ANDRES UNIT NO. 100

Project Number: Project Location: 701307.040.01

mg/kg

SEC. 12 - T18S - R26E

Sampling Date:

Sampling Type:

Soil

200

12.5

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

09/11/2012

Sample ID: BH - 1 2' (H202234-02)

DICK OVERD	*****	~9	76,61720						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier .
Benzene*	<0.050	0.050	09/20/2012	ND	1.84	. 92.0	2.00	13.8	
Toluene*	<0.050	0.050	09/20/2012	ND	2.07	103	2.00	11.4	
Ethylbenzene*	<0.050	0,050	09/20/2012	ND	2.04	102	2.00	11.1	
Total Xylenes*	<0.150	0.150	09/20/2012	ND	6,32	105	6.00	9.78	
Surrogate: 4-Bromofluorobenzene (PIC	99.5	% 89.4-12	6						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Umit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	12300	16.0	09/20/2012	ND	400	100	400	3.92	
TPH 8015M	mg.	/kg	Analyze	d By: MS	<u></u>				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/19/2012	ND	177	88.4	200	8.27	

ND

172

86.1

Analyzed By: AP

Surrogate: I	-Chloroactane
--------------	---------------

DRO >C10-C28

76.3 %

<10.0

65.2-140

09/19/2012

10.0

Surrogate: 1-Chlorooctadecane

77.1 %

63.6-154

Sample ID: BH - 1 4' (H202234-03)

Chloride, SM4500CI-B	mg	kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16200	16.0	09/20/2012	ND	400	100	400	3.92	

Cardinal Laboratories

*=Accredited Analyte

REASE NOTE: Liability and Derroges. Confract tability and dearth and other remains for any other actions, whether tested in contract or test, this is limited to the contract paid by dear for analyses. All dains, including these for neglegative and any other cause whethere shall be deared which drives make in which and which they (30) days after completion of the approaches service. In no next shall contract be lattle for indicated or consequently descriped, company, including network inhaltent, bushess interception, bushess interception of contract in the contract of the services transmitted on the contract of the services transmitted on the contract of the contract of the services transmitted on the contract of the contra

Celeg D. Keene



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

Received:

09/14/2012

Sampling Date:

09/11/2012

Reported:

Sampling Type:

09/21/2012

Soil

Project Name:

ATOKA SAN ANDRES UNIT NO. 100

Sampling Condition:

Cool & Intact

Project Number:

701307.040.01

Project Location:

Sample Received By:

Jodi Henson

Analyte

Analyte

SEC. 12 - T185 - R26E

Sample ID: BH - 1 6' (H202234-04)

Chloride, SM4500CI-B

mg/kg

Analyzed By: HM

BS

400

% Recovery True Value QC RPD

3.92

RPD

3.92

Qualifier

Chloride

Result 12000 Reporting Limit 16.0

Analyzed 09/20/2012 Method Blank ND

100

400

Sample ID: BH - 1 8' (H202234-05)

Chioride, SM4500Cl-B

mg/kg

Analyzed By: HM

Method Blank

% Recovery

Chloride

Result

12400

Reporting Limit Analyzed 09/20/2012 16.0

ND

BS 400

100

True Value QC 400

Qualifier

Sample ID: BH - 1 10' (H202234-06) Chloride, St44500CI-B

Analyzed By: HM

Analyte

Result

mg/kg

Reporting Limit Analyzed 09/20/2012 Method Blank

% Recovery

True Value QC

RPD

Qualifier

Chloride

4080

16.0

Analyte

Analyte

Cardinal Laboratories

NO

BS 400

100

400

3.92

Sample ID: BH - 1 12' (H202234-07)

Chloride, SM4500CI-B

mg/kg Resuit

432

Reporting Limit

16.0

16.0

Analyzed

09/20/2012

Analyzed By: HM Method Blank

BS

BS

400

% Recovery

True Value QC

RPD

Qualifier

Qualifier

Chloride

Chloride

Chloride, SM4500CI-B

Analyzed By: HM

09/20/2012

ND

400

100

100

400

3.92

Sample ID: BH - 1 14' (H202234-08)

mg/kg

Result

528

Reporting Limit

Analyzed

Method Blank ND

% Recovery

True Value OC

400

RPD

3,92

*=Accredited Analyte PLEASE NOTE: Libbilly and Demayes. Contrains behild and demise contains contract for any data along whether beaut in contract or test, shall be limited to the amount paid by direct for analyses. All dalms, including these for registerize and The country of the country of the country of the country test of the country of t

Celeny & Kreene

Celey D. Keene, Lab Director/Quality Manager

Page 4 of 7

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

Received:

09/14/2012

Reported:

09/21/2012

Project Name:

ATOKA SAN ANDRES UNIT NO. 100

Project Number:

701307.040.01

Project Location:

SEC. 12 - T18S - R26E

Sampling Date:

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

09/11/2012

Sample Received By:

Jodi Henson

Sample ID; BH - 2 5' BACKGROUND (H202234-09)

Chioride, SM4500Cl-B

Analyzed By: HM

Analyte

Result

Reporting Limit

Analyzed Method Blank 85

% Recovery 100

True Value QC

Qualifier

Chloride

96.0

16.0

09/20/2012

ND

400

400

RPD 3.92

Sample ID: BH - 2 10' BACKGROUND (H202234-10)

Chloride, SM4500Cl-B	mg/kg	Analyzed	Ву: НМ				
Analyte	Result Reportin	Limit Analyzed	Method Blank BS	% Recovery	True Value QC	RPD Qu	alifier
Chloride	240 16.	0 09/20/2012	ND 400	100	400	3.92	

Cardinal Laboratories

*=Accredited Analyte

HERSE NOTE: Untilly and Demails. Cartirals leading and distric exclusive namely for any Olem acting, whether based in contract or tast, shall be limited to the amount paid by other the uniques. All claims, including those for negligence and TABLE THE STATE OF THE PARTY OF data to bessel upon any of the above stated resears or otherwise. Results relate only to the samples benefied above. This report shall not be reproduced except in full mich mich regions of Cardinal Laboratories.

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

Q14-4X

The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance

limits.

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-8 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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Celeg D. Keena



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

(575) 393-2326 FAX (575) 393-247	8		
ompany Name: Talon/LPE		BILL TO	ANALYSIS REQUEST
oject Manager: macrosto3 blefield		P.O. #:	
idress: 40% West Tokas Aux.		Company: Talon/LPE	
	Zip: 88-2/0	Attn:	
ione#: 575-441-7254 Fax#:		Address:	
	Lime Rod Res 240	City:	
oject Name: Atoka Sen Andres Unit No. 1		State: Zip:	
oject Location: sec. 12 - Ties-R26E	Y	Phone #:	
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e. At no event shall Condinal be liable for incidental or consequental damages, lisckeling to a numeronante original out of or reliable in the performance of corriging between the condition of	rithaut limitotion, business interceptions, i adina), reportions of Vilminer such cinian is	als of use, or loss of profits insurred by effect, its stillbaildies t board upon any of the above stated reasons or aftertyis	so
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† Cardinal cannot accept verbal changes, Please	fax written changes to (575) <u>39</u> 3-2326	Page
		#26	



February 04, 2013

MIKE STUBBLEFIELD

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: ATOXA SAN ANDRES UNIT NO. 100

Enclosed are the results of analyses for samples received by the laboratory on 02/01/13 17:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. 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 accreditated 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.

Celey D. Keine

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



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

Received:

02/01/2013

Reported: Project Name:

02/04/2013

ATOKA SAN ANDRES UNIT NO. 100

Project Number: Project Location:

701307.040.01

SEC. 12 - T185 - R26E

Sampling Date: Sampling Type: 02/01/2013

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

Sample ID: S - 3 (H300306-01)

BTEX 8021B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/03/2013	ND ·	2.14	107	2.00	15.7	
Toluene*	<0.050	0.050	02/03/2013	ND	2.13	106	2.00	15.8	
Ethylbenzene*	<0.050	0.050	02/03/2013	ND	2.10	105	2.00	15.4	
Total Xylenes*	<0.150	0.150	02/03/2013	ND	6.38	106	6.00	15.2	
Total BTEX	<0.300	0.300	02/03/2013	ND					
Surrogate: 4-Bromofluorobenzene (PIL	104 9	6 89.4-12	6		-				
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: DW					
Analyte	Result	Reporting Umit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	02/04/2013	ND	416	104	400	3.77	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/04/2013	ND	218	109	200	2.45	
DRO >C10-C28	<10.0	10.0	02/04/2013	ND	183	91.6	200	6.21	
Surrogate: 1-Chlorooctane	85.9	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	89.4	% 63.6-15	4						

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Likeling and Derroges. Control's failing and death exclusive remoty for any definition, whether based in contract or text, abid be included to the amount paid by death for exclusions. All dates, including these for replicative and any other causes withhouse shall be failed whitein including these for replicative and any other causes withhouse shall be failed whitein in the count shall be failed by the including or consequented datagoes, including, without britishin, business interruptions, loss of use, or loss of upon from the failed and the supplicative and the performance of the services become by Cantral, regarders of whether such data is based upon any of the above stated from states only to the samples described above the services.



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

Received:

02/01/2013

02/04/2013

Sampling Date:

02/01/2013

Reported:

Sampling Type:

Soil

Project Name:

ATOKA SAN ANDRES UNIT NO. 100

Sampling Condition:

Cool & Intact

Project Number:

701307.040.01

Sample Received By:

Jodi Henson

Project Location:

SEC. 12 - T185 - R26E

Sample ID: S - 4 (H300306-02)

BTEX 8021B	mg/	'kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/03/2013	ND	2.14	107	2.00	15.7	
Toluene*	<0.050	0,050	02/03/2013	ND	2.13	106	2.00	15.8	
Ethylbenzene*	<0.050	0.050	02/03/2013	ND ·	2.10	105	2.00	15.4	
Total Xylenes*	<0.150	0.150	02/03/2013	ND	6.38	106	6.00	15.2	
Total BTEX	<0,300	0.300	02/03/2013	ND					
Surrogate: 4-Bromofluorobensene (PIL	104 9	% 89. <i>4-</i> 12	б					V. · · · · · · · · · · · · · · · · · · ·	
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	02/04/2013	ND	416	104	400	3.77	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/04/2013	ND	218	109	200	2.45	
DRO >C10-C28	<10.0	10,0	02/04/2013	ND	183	91.6	200	6.21	
Surrogate: 1-Chlorooctane	92.6	% 65.2-14	0			· · · · · · · · · · · · · · · · · · ·			
Surrogate: 1-Chlorooctadecane	99.5	% 63.6-15	4						

Cardinal Laboratories

*=Accredited Analyte

PIESE NOTE: Libbity and Datages. Contrain libbity and clearly endurine rementy for any clear acting, whether bessed in contract or time, shall be limited to the amount point by clear for analysis. All dates, including those for regignate and any other cases whencever shall be destruct whited crises made in writing and received by Contrain by Original datages, including, without Inflation, business interruptions, loss of use, or less of prefit becaused by Contrain a publications, and in a contrained by Contrained and the contrained by Contrained and the contrained by Contrained and the contrained and the contrained by Contrained and the contrained and

Celeg D. Keine



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

Received: Reported: 02/01/2013

Sampling Date:

02/01/2013

02/04/2013

Sampling Type:

Soil

Project Name:

ATOKA SAN ANDRES UNIT NO. 100

Sampling Condition:

Cool & Intact

Project Number:

701307,040,01

Sample Received By:

Jodi Henson

Project Location:

SEC. 12 - T18S - R26E

Sample ID: S - 5 (H300306-03)

BTEX 8021B	mg/	kg	Analyze	d By: AP	BS				
Analyte	Result	Reporting Umit	Analyzed	Method Blank		% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/03/2013	ND	2,14	107	2.00	15.7	
Toluene*	<0.050	0.050	02/03/2013	ND	2.13	106	2,00	15,8	
Ethylbenzene*	<0.050	0.050	02/03/2013	ND	2.10	105	2.00	15.4	
Total Xylenes*	<0.150 0.150		02/03/2013	ND	6.38	106	6,00	15.2	
Total BTEX	<0,300	0.300	02/03/2013	ND					
Surrogate: 4-Bromofluorobenzene (PIL	105	% 89.4-12	б			**************************************			
Chloride, SM4500CI-B	mg/kg		Analyze	d By: DW					
Analyte	Result	Reporting Limit	- Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	02/04/2013	ND	416.	104	400	3.77	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result Reporting Umit		Analyzed	Method Blank	BS	% Recovery	ecovery True Value QC		Qualifier
GRO C6-C10	<10.0	10.0	02/04/2013	ND	218	109	200	2.45	
DRO >C10-C28	<10.0	10.0	02/04/2013	ND	183	91.6	200	6.21	
Surrogate: 1-Chlorooctane	83.5	% 65.2-14	0			to the second se		, , , , , , , , , , , , , , , , , , ,	
Surrogate: 1-Chlorooctadecane	89.8	% 63.6-15	4						

Cardinal Laboratories

*=Accredited Analyte

PRESE NOTE. Lithing and Danages. Contrain inhity and dent's extrain for any claim arising, whether based in contract or ton, shall be lettered to the amount paid by client for enabless. All datum, including these for negligibles and any other clause when the contract is writing and received by Contral within thirty (30) days after completion of the appropriate service. In no event shall Central the lattle for indicated or consequential contracts, which contracts the contracts are strengthess, that of use, or less of profits broaded by Central, as a contracts or strengthess. It is not contracted by Central, as a contract or whether such definits bessel upon any of the above structures or otherwise. Results refer to be the contract of whether such definits bessel upon any of the above structures or otherwise. Results refer to be the contract of the contract or otherwise. Results refer to be the contract of the contract or otherwise. Results refer to be the contract of the contract or otherwise. Results refer to be the contract of the contract of the contract of the contract of the contract or otherwise. Results refer to be the contract of the contrac

Celey D. Keine



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

Received:

02/01/2013

Sampling Date:

02/01/2013

Reported:

02/04/2013

Sampling Type:

Soil

Project Name:

ATOKA SAN ANDRES UNIT NO. 100

Sampling Condition:

Cool & Intact

Project Number:

701307.040.01

Sample Received By:

Jodi Henson

Project Location:

SEC, 12 - T185 - R26E

Sample ID: S - 6 (H300306-04)

BTEX 8021B	mg/	kg	Analyze	d By: AP			·		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/03/2013	ND	2.14	107	2.00	15.7	
Toluene*	<0.050	0.050	02/03/2013	ND	2.13	106	2.00	15,8	
Ethylbenzene*	<0.050	0.050	02/03/2013	ND	2.10	105	2.00	15.4	
Total Xylenes*	<0.150	0.150	02/03/2013	ND	6.38	106	6.00	15.2	
Total BTEX	<0.300	0.300	02/03/2013	ND			•		
Surrogate: 4-Bromofluorobenzene (PIL	105 9	% 89.4-12	16						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: DW		····	·		Management
Analyte	Result Reporting Limit		Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	02/04/2013	ND	416	104	400	3.77	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result Reporting Limit		Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0 10.0		02/04/2013	ND	218	109	200	2.45	
DRO >C10-C28	<10.0 10.0		02/04/2013	ND	183	91.6	200	6.21	
Surrogate: 1-Chlorooctane	92.9 % 65.2-1-		10						-
Surrogate: 1-Chlorooctadecane	104 % 63.6-1		54						

Cardinal Laboratories

*=Accredited Analyte

RESS NOTE LENGT and Demagns. Contrain leighty and death and after normally for any dates entiting, whether based in contract or but, shall be lotted to the amount paid by date for antiques. All dates, including these for negligence and ery other cause whethere shall be destined watered whether water to whose make in writing and received by Cardhall within thing (30) days after completion of the applicable service. In no event shall Cardhall be followed or consequential developes, without bitterion, business transplorat, less of use, or less of year, or substant and or received to the performance of the services have not or reservices the performance of the services have not or reservices the performance of the services have not or reservices the performance of the services have not or reservices have not or received to the performance of the services have not or received to the performance of the services have not or received to the performance of the services have not or received to the performance of the services have not or received to the performance of the services have not or received to the performance of the services have not or received to the performance of the services have not or received to the performance of the services have not or received to the performance of the services have not or received to the performance of the services have not or received to the performance of the services have not or received to the performance of the services have not or received to the performance of the services have not or received to the performance of the services have not or received to t data is based upon any of the above stand deators or otherwise. Results relate only to the samples identified above, This report shall not be reproduced except in All with written approved of Continual Laboratories.



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-8 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 Laboratorles

*=Accredited Analyte

PLESSE NOTE: Upday and Danages. Cardrafts febbly and decits contains remain for any data arising whether based in content of the implicit service. In no event was a few to independ or consequented demands any other cause whether whether whether whether in the content of the implicit service. In no event was Cardraft to labe for independent of consequented demands, without inflation, business interruptions, has of use, or less of perfor from the foreign of the implicit of or mixture of the services interruptions, has of use, or less of performed by Great in a substitution of second and or mixture of the services interruption of the services interruption. The services interruption of the services interruption.

Celey & Keena



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name	(575) 393-2326 FA) : Talon [LPE	· (010) 000-241				1,5	#4.44 ¥ B 1	LLTO		V				ΔΝΔΙ	YSIS	. PF	OUF	ST			
Project Manager: mike <7 white-idd					· · · ·	P.O. #:			1	<u> </u>	· ·		7,12,	-1010	175	GOL	<u> </u>	ı —			
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City:							Attn:			1								ļ.			
Phono #: \$75-441-775\$ Fax #:							Address:			1											. [
Project #: 201302.040.01 Project Owner: Line Real Rec. 111. Project Name: Atoka SA Unit No. 100						၂၂	City: State: Zip:														1
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Project Location		-				PI	hone #:														i
Sampler Name:	mile Stelley	II.				1 '	ax #:			1											
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† Cardinal d	annot accept verbal o	hanges. Please	fax w				5) 393-232	ę ,							···		·				Page 7 of
						•	5) 393-232	6													