

September 12, 2012

SEP 1 2 2012

NMOCD ARTESIA

AMARILLO 92I North Bivins Amarillo, Texas 79107 Phone 806,467,0607 Fax 806,467,0622

Mr. Mike Bratcher NMOCD District 2 1301 West Grand Avenue Artesia, NM 88210

ARTESIA

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

Subject:

Soil Assessment and Remediation Work Plan

Cimarex Energy

Red lake Disposal Line

AUSTIN

9II West Anderson Lane Suite 202 Austin, Texas 78757 Phone 512.989.3428 Fax 512.989.3487 Dear Mr. Bratcher,

Cimarex Energy has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the referenced Red lake Disposal Line (pipeline) release. Our soil sampling results and proposed remediation activities consist of the following:

HOBBS

318 East Taylor Street Hobbs, New Mexico 88240 Phone 575.393.4261 Fax 575.393.4658

Incident Date

July 22, 2012

MIDLAND

290I State Hwy 349 Midland, Texas 79706 Phone 432.522.2133 Fax 432.522.2180

Background Information

The Red lake Disposal Line (pipeline) is located approximately fifteen (15) miles east of Artesia, New Mexico. The legal location for the site is Section 22, Township 17 South and Range 28 East in Eddy County, New Mexico. More Specifically the latitude and longitude for the release are 32.815055 North and -104.167486 West.

SAN ANTONIO II Commercial Place Schertz, Texas 78!54 Phone 2IO.265.8025 Fax 2IO.568.219I

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 National Resources Conservation Services, the soil in this area is made up of Largo-Stony land complex soils with 0 to 25 percent slopes. The local surface and shallow geology, Quaternary Age sedimentary deposits, is comprised of older alluvial deposits of upland plains and piedmont areas which include calcareous alluvium and silty loamy soils under lain by 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 7,784 meters away in S23-T17-R27E. The ground water in Section 23 is reported to be at depth of 40' below ground surface (bgs). Ground water in the project vicinity is approximately 125-feet below land surface according to the Texaco/Chevron Eddy County Water Trend Data Map (2005). The referenced groundwater data is presented in Appendix I.

ENVIRONMENTAL CONSULTING ENGINEERING

DRILLING CONSTRUCTION SPILL MANAGEMENT GENERAL CONTRACTING

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

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

Toll Free: 866.742.0742 www.talonipe.com

Incident Description

On July 22, 2012 the Red Lake Disposal Line was found to be leaking. A release of 80 to 100 barrels of produced water is estimated. The line was shut-in, repaired and brought back into service. A vacuum truck was called to pick up standing fluids; approximately 5 barrels of fluids were recovered. The release traveled 300-feet east of the disposal line and 75-feet south of the line.

Actions Taken

On July 27, 2012 Talon mobilized personnel to begin the assessment and soil sampling for the construction of a work plan. The soil samples were collected from the impacted area using a backhoe.

On August 8, 2011 Talon returned to the release site to collect additional soil samples utilizing a split spoon auger rig to obtain soil samples for vertical delineation for chlorides. Grab samples were collected from a depth of 15 to 55 feet below land surface.

The soil samples were collected by Talon personnel wearing clean nitrile gloves. The samples were placed in laboratory provided sample containers, iced and transported to Cardinal Laboratories in Hobbs, New Mexico for analysis. The samples were tested for TPH (Total Petroleum Hydrocarbons) using EPA Method 8015M, and volatile organics (BTEX) using EPA Method 8021B. The chlorides were analyzed per method SM4500Cl-B. The complete laboratory report is attached as Appendix II.

Analytical Results

Analytical results received from Cardinal Laboratories are summarized below:

August 11, 2012

Sample	<u>Depth</u>	<u>BTEX</u>	Chlorides	TPH (mg/kg)
S-1,	0,	0.576	31,200	2401.6
	2'	< 0.050	16,000	<10
	4'		13,200	
	6'		15,600	
	8'		14,800	
	10'		19,400	
	12'		22,000	
S-2,	0,	< 0.050	20,000	<10
	2'	< 0.050	15,000	<10
	4'		11,800	
	6'		14,800	
	8'		15,400	
	12'		15,200	
S-3	0'		32	

August 28, 2012

<u>Sample</u>	<u>Depth</u>	Chlorides (mg/kg)
B-1	15' 20' 25' 30' 35' 40' 45' 50' 55'	11,400 9,200 2,680 5,840 3,840 5,120 64 96
B-2	15' 20' 25'	16 16 <16

Summary

- Ground water in the project vicinity is approximately 125-feet below land surface according to the Texaco/Chevron Eddy County Water Trend Data Map (2005).
- Per the New Mexico State Engineers Database, groundwater is identified at 40-feet below land surface 7,784 meters west of the project location.
- Based on the depth to groundwater, it is unlikely that the impacts identified from this release will pose a threat to groundwater after proposed remediation activities are complete.

Proposed Remedial Actions

- The impacted soil will be excavated to a depth of 4-feet and transported to an NMOCD approved solid waste disposal facility.
- Confirmation samples will be collected from the sidewalls of the excavation and presented to the OCD for permission to complete excavation activities.
- Upon completion of excavation activities, a 20 mil. liner will be placed into the bottom of excavated area. The excavated area will be backfilled back to grade using new material transported from a local borrow pit and will be contoured to match the surrounding location.
- A final report documenting all field activities and lab reports will be provided to the NMOCD Artesia Office, including Form C-141.

If we can provide additional information or be of further assistance please contact our office at 575.746.8768.

Respectfully submitted,

TALON/LPE

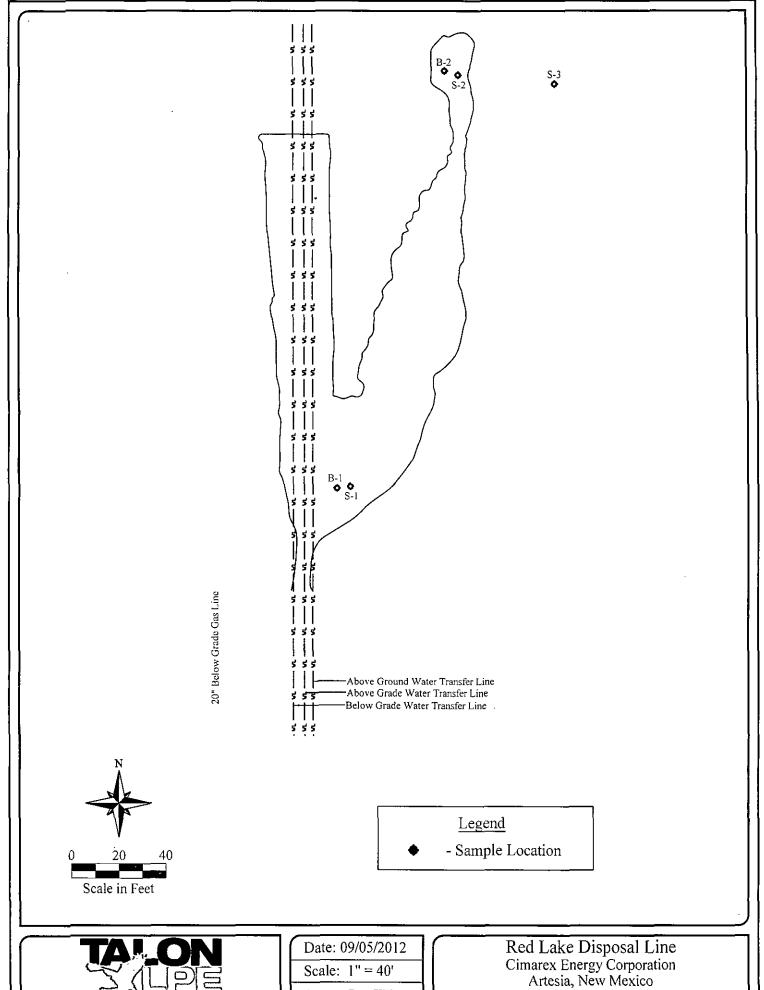
Mike Stubblefield

mient stillefield

Project Manager

David J. Adkins District Manager

SITE MAP





Drawn By: TJS

Red Lake Disposal Line Cimarex Energy Corporation Artesia, New Mexico Figure 1 - Site Plan

APPENDIX I 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,

closed)

C=the file is (quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number Code Subbasin County 64 16 4 Sec Tws Rng X Y Depth Depth Vater Dep	
L LE 2 4 15 18S 28E 578921 3623453* 7600 80 RA 04554 ED 1 23 17S 27E 569859 3631947* 7784 220 40 Average Depth to Water: 40 f	
RA 04554 ED 1 23 178 27E 569859 3631947* 7784 220 40 Average Depth to Water: 40 f	
Average Depth to Water: 40 f	
	180
Minimum Depth: 40 f	et
	eet
Maximum Depth: 40 f	eet

Record Count: 3

UTMNAD83 Radius Search (in meters):

Easting (X): 577577

Northing (Y): 3630934

Radius: 8000

i /

District I 1625 N, French Dr., Hohbs, NM 88340 District II 1301 W, Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S, St. Francis Dr., Santa Fc, 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 October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

	OPERATOR		l Report Final Repor				
Name of Company-Cimarcx Energy	Contact- James Tinney						
Address-600 N Marienfeld Stc 600, Midland Tx 79701		Telephone No. 575 706 0095					
Facility Name-Red Lake Disposal Line (pipeline)	Facility Type- Disposal Line						
Surface Owner Mineral Ov	/ner	Lease N	0.				
LOCA	TION OF RELEASE						
		ast/West Line	County - Eddy				
22 17S 28E							
Latitude32-48'-5"	Longitude- 104-4'-34"						
NATU	IRE OF RELEASE						
Type of Release- Produce Water	Volume of Release- 80-100 bbl	s Volume R	ccovered-5 bbls				
N. 1 P. N. 2 O. 2	(C)/DG 77 117 117 117 117 117 117 117 117 117	1					
Was Immediate Notice Given? ⊠ Yes □ No □ Not Reg	If YES, To Whom? Message wi	as ion for Mike	Bratener (a) NMOCD				
		~					
Was a Watercourse Reached?	If YES, Volume Impacting the	Watercourse.					
☐ Yes 🛛 No		, .					
If a Watercourse was Impacted, Describe Fully.*			CEIVED				
		!					
		JU	JL 23 2012				
Describe Cause of Problem and Remedial Action Take: Disposal lin	ne leaked locked out pumps at battery. V	, बटताम्य प्रभागा भित्र	MANUFACTURE PART OF bad				
line. Cut and repaired disposal line.	·						
Page 11 - A - A 02 - 1 - 1 / 21 A - 4 - 1 - 1 / 21 A - 4 - 1 - 1 / 21 A - 4 / 21	700	1) (
Describe Area Affected and Cleanup Action Take; impacted area is Notified Talon to sample and start clean up plan	300° to the east and 75° to the south. Ca	illed out vac true	ok to pick up standing water.				
Troubled Children to State of							
I hereby certify that the information given above is true and comple regulations all operators are required to report and/or file certain rel	te to the best of my knowledge and undo	erstand that purst	uant to NMOCD rules and				
public health or the environment. The acceptance of a C-141 report	by the NMOCD marked as "Final Repo	ort" does not relie	eve the operator of liability				
should their operations have failed to adequately investigate and rer	nediate contamination that pose a threat	to ground water,	, surface water, human health				
or the environment. In addition, NMOCD acceptance of a C-141 re- federal, state, or local laws and/or regulations.	port does not relieve the operator of resp	ponsibility for co	empliance with any other				
rederal, since, or local laws multor regulations.	OIL CONSE	RVATION	DIVISION				
land was	OIL_CONSE	ACVALION	DIVISION				
Signature: filme (
Printed Name: James Tinney	Approved by District Supervisor:-	•					
Times (Miles (Miles)							
Title: Production Foreman	Approval Date:	≝xpiration I	Date:				
E-mail Address: jtinney@cimarex.com	Conditions of Approval:		Attached				
E-man Address, Junio yazemarex.com	Companions of Approval.						
Date: 7-22-12 Phone: 575-706-0095							
Attach Additional Sheets If Necessary							

APPENDIX II LABORATORY RESULTS



August 11, 2012

MIKE STUBBLEFIELD TALON LPE 408 W. TEXAS AVE. ARTESIA, NM 88210

RE: RED LAKE DISPOSAL LINE

Enclosed are the results of analyses for samples received by the laboratory on 07/27/12 14:30.

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:

07/27/2012

Sampling Date:

07/27/2012

Reported:

08/11/2012

Sampling Type:

Soil

Project Name:

RED LAKE DISPOSAL LINE

Sampling Condition:

Cool & Intact

Project Number:

701162.050.01

Sample Received By:

Jodi Henson

Project Location:

32.81501-104.16747

Sample ID: S - 1 0' (H201752-01)

BTEX 8021B	mg/kg		Analyze	Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.069	0.050	08/03/2012	ND	1.71	85.7	2.00	0.0615	
Toluene*	0.074	0.050	08/03/2012	ИD	1.75	87.7	2.00	3.22	
Ethylbenzene*	0.113	0.050	08/03/2012	ND	1.76	88.1	2.00	5.06	
Total Xylenes*	0.320	0.150	08/03/2012	ND	5.24	87.4	6.00	6.20	
Surrogate: 4-Bromofluorobenzene (PIL	103 9	 89.4-12	6						
Chloride, SM4500CI-B	mg/	kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	31200	16.0	07/30/2012	ND	416	104	400	0.00	
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	51.6	50.0	07/30/2012	ND	183	91.6	200	0.268	
DRO >C10-C28	2350	50.0	07/30/2012	ND	208	104	200	7.17	
Surrogate: 1-Chlorooctane	91.8	% 65.2-14	0			-			
Surrogate: 1-Chlorooctadecane	137	% 63.6-15	4						

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keine



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

Received:

07/27/2012

Reported:

08/11/2012

Project Name: Project Number: RED LAKE DISPOSAL LINE

701162.050.01

Project Location:

32.81501-104.16747

Sampling Date:

07/27/2012 Soil

Sampling Type: Sampling Condition:

Cool & Intact

Sample Received By:

COOL & IIILAC

Jodi Henson

Sample ID: S - 1 2' BGS (H201752-02)

BTEX 8021B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/03/2012	ND	1.71	85.7	2.00	0.0615	
Toluene*	<0.050	0.050	08/03/2012	ND	1.75	87.7	2.00	3.22	
Ethylbenzene*	<0.050	0.050	08/03/2012	ND	1.76	88.1	2.00	5.06	
Total Xylenes*	<0.150	0.150	08/03/2012	ND	5.24	87.4	6.00	6.20	
Surrogate: 4-Bromofluorobenzene (PIE	101% 89.4-126		б						
Chloride, SM4500Cl-B	mg/kg		Analyze	Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16000	16.0	07/30/2012	ND	416	104	400	0.00	
TPH 8015M	mg/l	kg .	Analyze	Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/30/2012	ND	183	91.6	200	0.268	
DRO >C10-C28	<10.0	10.0	07/30/2012	ND	208	104	200	7.17	
Surrogate: 1-Chlorooctane	85.6 %	6 65.2-14	0						,
Surrogate: 1-Chlorooctadecane	96.3 %	63.6-15	4						

Sample ID: S - 1 4' BGS (H201752-03)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	13200	16.0	07/30/2012	ND	416	104	400	0.00	

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*=Accredited Analyte

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Celey D. Keene



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

Received: 07/27/2012 08/11/2012 Reported:

Project Name: RED LAKE DISPOSAL LINE

Project Number: 701162.050.01

Project Location: 32.81501-104.16747 Sampling Date:

07/27/2012

Sampling Type: Soil

% Recovery

Cool & Intact

Sampling Condition: Sample Received By:

BS

Jodi Henson

Qualifier

True Value QC

Sample ID: S - 1 6' BGS (H201752-04)

Analyte

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Result

Reporting Limit

Analyzed Chloride 15600 16.0 07/30/2012 416 104 400 0.00

Sample ID: S - 1 8' BGS (H201752-05)

Chloride, SM4500Cl-B Analyzed By: HM Qualifier Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Chloride 14800 07/30/2012 400 0.00 16.0 ND 416 104

Method Blank

Sample ID: S - 1 10' BGS (H201752-06)

Chloride, SM4500CI-B Analyzed By: AP Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualifier Chloride 19400 16.0 08/08/2012 384 400 0.00 ND 96.0

Sample ID: S - 1 12' BGS (H201752-07)

Chloride, SM4500CI-B mg/kg Analyzed By: AP Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualifier Chloride 22000 16.0 08/10/2012 ND 416 104 400 0.00

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Celey D. Keine



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

Received:

07/27/2012

Reported:

08/11/2012

Project Name:

RED LAKE DISPOSAL LINE

Project Number: Project Location:

701162.050.01

32.81501-104.16747

Sampling Date:

07/27/2012

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S - 2 0' (H201752-08)

BTEX 8021B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/03/2012	ND	1.71	85.7	2.00	0.0615	
Toluene*	<0.050	0.050	08/03/2012	ND	1.75	87.7	2.00	3.22	
Ethylbenzene*	<0.050	0.050	08/03/2012	ND	1.76	88.1	2.00	5.06	
Total Xylenes*	<0.150	0.150	08/03/2012	ND	5.24	87.4	6.00	6.20	
Surrogate: 4-Bromofluorobenzene (PIL	100 9	% 89.4-12	б						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	20000	16.0	07/30/2012	ND	416	104	400	0.00	
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	07/30/2012	ND	183	91.6	200	0.268	
DRO >C10-C28	<10.0	10.0	07/30/2012	ND	208	104	200	7.17	
Surrogate: 1-Chlorooctane	87.8	% 65.2-14	10						
Surrogate: 1-Chlorooctadecane	98.0	% 63.6-15	14						

Cardinal Laboratories

*=Accredited Analyte

any other cause whatsoever stall be deemed walved unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such

Celey D. Keine



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

Received:

07/27/2012

Sampling Date:.

07/27/2012

Reported:

08/11/2012

Sampling Type:

Soil

Project Name:

RED LAKE DISPOSAL LINE

Sampling Condition:

Cool & Intact

Project Number:

701162.050.01

Sample Received By:

Jodi Henson

Project Location:

32.81501-104.16747

Sample ID: S - 2 2' BGS (H201752-09)

BTEX 8021B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/03/2012	ND	1.71	85.7	2.00	0.0615	
Toluene*	<0.050	0.050	08/03/2012	ND	1.75	87.7	2.00	3.22	
Ethylbenzene*	<0.050	0.050	08/03/2012	ND	1.76	88.1	2.00	5.06	
Total Xylenes*	<0.150	0.150	08/03/2012	ND	5 .2 4	87.4	6.00	6.20	
Surrogate: 4-Bromofluorobenzene (PIE	101 9	% 89.4-12	6						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: HM					<u> </u>	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	15000	16.0	07/30/2012	ND	416	104	400	0.00	
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	07/30/2012	ND	183	91.6	200	0.268	
DRO >C10-C28	<10.0	10.0	07/30/2012	ND	208	104	200	7.17	
Surrogate: 1-Chlorooctane	92.4	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	101	% 63.6-15	4						

Sample ID: S - 2 4' BGS (H201752-10)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11800	16.0	07/30/2012	ND	416	104	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keine



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

Received:

07/27/2012

Reported:

08/11/2012

Project Name:

RED LAKE DISPOSAL LINE

Project Number: Project Location:

Analyte

701162.050.01

32.81501-104.16747

Sampling Date:

07/27/2012

Sampling Type:

Sampling Condition:

Soil Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S - 2 6' BGS (H201752-11)

Chloride, SM4500CI-B

mg/kg

Analyzed By: HM Analyzed

Method Blank

BS

% Recovery

True Value OC

RPD

0.00

Chloride

Chloride

Chloride

Result 14800

15400

16.0

Reporting Limit

Reporting Limit

16.0

Reporting Limit

16.0

07/30/2012

Analyzed

07/30/2012

ND

416

104

400

Qualifier

Sample ID: S - 2 8' BGS (H201752-12)

Ch.	lori	de,	5M	450)00	:1-B	
		_	_				

Analyte Result Analyzed By: HM

Method Blank

ND

BS 416 % Recovery 104

% Recovery

96.0

True Value QC 400

RPD Qualifier

Sample ID: S - 2 12' BGS (H201752-14)

Chloride,	SM4500CI-B
-----------	------------

Analyzed By: AP

Reporting Limit Analyte Result 15200 16.0

Analyzed 08/08/2012 Method Blank ND

BS 384 True Value QC

400

RPD 0.00

0.00

Qualifier

Sample ID: S - 3 0' BACKGROUND (H201752-15)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: HM

Result Analyte Chloride 32.0

Analyzed

07/30/2012

Method Blank ND

BS 416 % Recovery 104

True Value QC 400

RPD

Qualifier 0.00

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed walked unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. including, without limitation, business interruptions, icss of use, or loss of profits incurred by client, its subsidiaries, efficiency or successors anxing out of or related to the performance of the services here claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

Page 7 of 10



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

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Celey D. Keine

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476	, NM 88240 393-2476	3		j-2
Company Name: Talon 12PE		### N.L. 170 F. 10	ANALYSIS REQUEST	
Project Manager: nike STubile field		P.O. #:		
Address: 408 phet Teral Aux		Company: Tolon / LPE		
City: A. Pcy, a Stat	State: NM Zip: 80210	Attn:		
Phone #: 595-441-7254 Fax #:	44	Address:		
Project #: 901167,050.01 Proje	Project Owner: Cimace trecay	clty:		
Project Name: Red Lake Disposal Line		State: Zip:		
Project Location: 32,8 501 - 104, 16747	1h19	#		
n. sen Stall		Fax #:	*	
<u>L</u>	MATRIX	PRESERV SAMPLING)2]	
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sentice. In no event shall Cordinal be lattle for incidental or censequential other affairs or successors around out of certained to the performance of services.	rages, including without hindspon, bear hereunder by Cardinal regardlers of v	mets friternuthorm, losa of use, or kosa of godisa enzarted by chert, its <u>unbandahne.</u> Arether sucit claim, is based upon any of the abone stated ressorm or otherwise		
Dat	20/202	Phone Result:	☐ Yes ☐ No iAdd'l Phone #: ☐ Yes ☐ No Add'l Fax#:)
Relinquished By: Date:	Referred By:	UMON REMARKS:	The rides doled as per with	2. 8/7/12 Ch
Time:				
Delivered By: (Circle One)	Sample Condition	on CHECKED BY:		•
Sampler - UPS - Bus - Other				
† Cardinal cannot accept verbal changes. Please fax written c	ss. Please fax written changes to	hanges to 505-393-2476		



101 East Marland, Hobbs, NM 88240

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

	io I	9.						7.	
Company Name:	0: Taloo/LPE					ANALYSIS	REQUEST		<u> </u>
Project Manager:	- 1	THE PARTY OF THE P	P.O. #;						
Address:	402 was Tekar Aur.		Company: 74607/186						
City:	Artegia State: N.A.	Zip: 88210	Attn:						
Phone #:	5-25-44/-7-254 Fax#:		Address:						in a
- Project #:90	Project #:90-1-1-6205001Project Owner:		City:	1 1	1	1	;		
Project Name:	Red Core Disposal line		State: Zip:					1	
Project Location:	m: 32.81501 - 104.16949		Phone #:						**
Sampler Name:	m'a Su		Fax #:	,					,
FOR LAB USE ONLY		MATRIX	PRESERV. SAMPLING		7	_			
Lab I.D.	Sample I.D.	G)RAB OR (C)OMP. CONTAINERS ROUNDWATER NASTEWATER SOIL JIC	отнея : отнея : Отнея : Отнея :	10010 [el(011	Chilorid	A			····
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Relinguished B	Ξŧ	synder by Cardwal regardless of whether such claim.	III is beset upon any of the ebove stated resigns or otherway	<u>ا</u>		Add'i Phone			Γ
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Relinquished By:	y: V Date:	Received By:							
Delivered By Sampler - UPS	Delivered By: (Circle One) Sampier - UPS - Bus - Other:	Sample Condition	Jon CHECKED BY:						
+ Cardinal	Seeld sometheight of Please	fax written changes to	EUE 303 3506 1						1
		מי אינוננון כוושוולגט בס	20th						



August 28, 2012

MIKE STUBBLEFIELD

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: RED LAKE DISPOSAL LINE

Enclosed are the results of analyses for samples received by the laboratory on 08/23/12 17:07.

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.

Celeg 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:

08/23/2012

08/28/2012

Sampling Date: Sampling Type: 08/22/2012

Reported:

Soil

Project Name:

RED LAKE DISPOSAL LINE

Sampling Condition:

** (See Notes)

Project Number:

701162.021.01

Sample Received By:

Jodi Henson

Project Location:

SEC 22-T17S-R28E

Sample ID: B - 1 15' BGS (H202029-01)

Chloride

Chloride

Chloride

Chloride

mg/kg

Analyzed By: HM

Analyte

Result

11400

Result

9200

Reporting Limit Analyzed 16.0 08/27/2012

ND

Method Blank

BS 400

BS

400

% Recovery 100

400

True Value QC

RPD

0.00

Sample ID: B - 1 20' (H202029-02)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: HM

Method Blank

% Recovery

100

100

True Value QC

400

RPD

Qualifier

Qualifier

Qualifier

Sample ID: B - 1 25' (H202029-03)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: HM

Analyte

Analyte

Analyte

Result Reporting Limit

16.0

Reporting Limit

16.0

Analyzed 08/27/2012

Analyzed

08/27/2012

Method Blank

ND

ND

400

% Recovery True Value QC RPD

0.00

Qualifier

0.00

Sample ID: B - 1 30' (H202029-04)

Chloride, SM4500CI-B

mg/kg

Analyzed By: HM

Result Reporting Limit 5840 16.0

2680

Analyzed 08/27/2012 Method Blank ND

B\$ 400 % Recovery 100

True Value QC 400

400

RPD 0.00

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Cardinal's liability and client's exclusive remedy for any claim ansing, whether based in contract or tort, shall be limited to the amount paid by client for analyses. any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after com including, without limitation, business interruptions, loss of use, or loss of profits incorred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, respectices of whether

Celecy D. Keine



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

Received:

08/23/2012

Sampling Date:

08/22/2012

Reported:

Sampling Type:

Soil

08/28/2012

Sampling Condition:

** (See Notes)

Project Name: Project Number:

701162.021.01

RED LAKE DISPOSAL LINE

Sample Received By:

Jodi Henson

Project Location:

SEC 22-T17S-R28E

Sample ID: B - 1 35' (H202029-05)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3840	16.0	08/27/2012	ND	400	100	400	0.00	

Sample ID: B - 1 40' (H202029-06)

Chloride, SM4500Cl-B	mg/	kg .	Analyze	i By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5120	16.0	08/27/2012	ND	400	100	400	0.00	

Sample ID: B - 1 45' (H202029-07)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BŞ	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/27/2012	ND	400	100	400	0.00	

Sample ID: B - 1 50' (H202029-08)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96. 0	16.0	08/27/2012	ND	400	100	400	0.00	

Sample ID: B - 1 55' (H202029-09)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: HM					·
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/27/2012	ND	400	100	400	0.00	

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Celecy D. Keine



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

Received:

08/23/2012

Sampling Date:

08/22/2012

Reported:

08/28/2012

Sampling Type:

Soi!

Project Name:

RED LAKE DISPOSAL LINE

Sampling Condition:

** (See Notes)

Project Number:

701162.021.01

Sample Received By:

Jodi Henson

Project Location:

Analyte

Analyte

SEC 22-T17S-R28E

Sample ID: B - 2 15' (H202029-10)

Chloride, SM4500CI-B

mg/kg

Reporting Limit

Analyzed By: HM

% Recovery True Value QC Qualifier

Chloride

Result 16.0

16.0 08/27/2012

Analyzed

Method Blank ND

400

BS

100

400

Sample ID: B - 2 20' (H202029-11)

Chloride, SM4500CI-B

Analyzed By: HM

RPD

0.00

0.00

Chloride

Result 16.0

Reporting Limit Analyzed Method Blank

Method Blank

BS

% Recovery

True Value QC RPD

Qualifier

Chloride

16.0 08/27/2012

400

100

400

Sample ID: B - 2 25' (H202029-12)

Chloride, SM4500CI-B

mg/kg

mg/kg

Analyzed By: HM

Analyte Result Reporting Limit Analyzed <16.0 16.0 08/27/2012

BS 416 % Recovery 104

True Value QC 400

RPD

Qualifier 0.00

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keine Celey D. Keene, Lab Director/Quality Manager

Page 4 of 7

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Sompany Name	Company Name: Talon / LPE	:	· }				.e*12		B	BILL TO	2						AN	ANALYSIS		REQUEST	EST					
Project Manage	Project Manager: mike Stubble hill		Í		:		۵	P.O. #;						-			_			\vdash	\vdash	-		_		
Address:	408 Vest Texas Ave.		i		ļ		Ü	omp	any:	Company: Talen/LP	14.0	\.														
Sity:	Acteria State: N. P. Zi	r.co. Zip	٥٥	D: 88210			<u>ا که</u>	Attn:	}				<u>-</u>													
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motyce. All chares orditating those for neptgence and any other rouse wholenever shall is served. In ore evaluable Contain be fished by incidental or consequential characters, much enthance or increases within our of related to the performance of serverse between the Refunduished By:

Sample Condition |
Cool Intact
Tyes 12 Yes 20 Time: Delivered By: (Circle One) Sampler - UPS - Bus - Other) Relinquished By:

† Cardinal cannot accept verbal changes, Please fax written changes to (\$75) 393-3826

Page 6 of 7



DrawnBy

