



April 5, 2011

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ENVIRONMENTAL CONSULTING ENGINEERING DRILLING CONSTRUCTION SPILL MANAGEMENT GENERAL CONTRACTING Mr. Mike Bratcher NMOCD District 2 1301 West Grand Avenue Artesia, NM 88210

Subject: Remediation Work Plan and Closure request Quantum Resources Management, LLC Leonard B Federal No. 4 LOV No. 02-09-083

Dear Mr. Bratcher,

Quantum Resources Management, LLC has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the referenced Leonard B Federal No. 4. Talon's proposed work plan to perform soil assessment and remediation activities consists of the following:

# **Incident Date**

Unknown

# **Background Information**

The Leonard B Federal No. 4 is located approximately twenty (20) miles southeast of Artesia, New Mexico. The legal location for the site is Section 33, Township 17 South and Range 29 East in Eddy County, New Mexico. More Specifically the latitude and longitude for the release are 32.7928 North and -104.07766 West.

This site lies on undulating plains and low hills consisting of wind worked sandy deposits. Drainage courses in this area are normally dry. The local surface and shallow geology includes silty soils under lain by sand stone and hard caliches, providing and impermeable barrier to the migration of fluids in the area of the release. The New Mexico State Engineer web site indicates the nearest ground water data to be in S34-T17S-R28E. The ground water in Section 34 is reported to be at an average depth of 53' below ground surface (bgs).

The ranking for this site is 10 based on the as following:

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

# **Incident Description**

On September 28, 2009 a LOV was opened on the Leonard B Federal No. 4 by an NMOCD field inspector identifying a new hydrocarbon release at the wellhead area.

# **Actions Taken**

On February 22, 2011 Talon/LPE mobilized personnel were on the site to begin the assessment and soil sampling for the construction of a work plan. Upon arriving at the location a new hydrocarbon release was found at the wellhead. The new release was minor in volume and non reportable, being less than five barrels in volume. Corrective actions were immediately started. The impacted soil was excavated to 0.5-feet deep and transported to a solid waste disposal facility (Lea Land, LLC). On March 4, 2011 Talon collected a composite soil sample (S-1) utilizing a hand auger from the excavated area located near the wellhead.

The composite soil sample was collected by Talon personnel wearing clean nitrile gloves. The soil sample was placed in laboratory provided sample containers, iced and transported to Cardinal Laboratories in Hobbs, New Mexico for analysis. The sample were tested for volatile organics (BTEX) per EPA Method 8021B; Total Petroleum Hydrocarbons (TPH) per EPA Method 8015M; and total chlorides via Method SM 4500CL-B. All analytical testing was performed on a standard turn-around basis. The complete laboratory report is attached as Appendix II.

# **Analytical Results**

Analytical results received from Cardinal Laboratories are summarized below:

Sample, Depth*	Chlorides	BTEX	<u>TPH</u> (mg/kg)
S-1 0'	384	<50	1655.8

\*Below excavation.

# **Summary and Conclusions**

- Ground water in the project vicinity is greater than 50-feet below land surface per the New Mexico State Engineer Database.
- Based upon the results of the laboratory data obtained for this investigation, the vertical impacts of the chloride release have been defined to be 384 mg/kg within the excavated area on the location. Total Petroleum Hydrocarbons (TPH) was reported to be under the Recommended Remediation Action Level (RRAL) for the area. BTEX was also reported to be under the closure levels as stipulated by RRAL.

• Based on the depth to groundwater and the chloride levels detected in the soil in the excavated area, it is unlikely that the chloride impacts identified from this release will pose a threat to groundwater.

# **Closure Request**

On March 15, 2011 Quantum Resources Management, LLC Field Supervisor Garrett Newton and Talon/LPE Project Manager Mike Stubblefield met with Mr. Mike Bratcher at the NMOCD Artesia field office. After reviewing laboratory reports, Mr. Bratcher requested a final report to be submitted to the NMOCD requesting closure for the LOV attached to the Leonard B No. 4.

Based upon the remedial actions completed and the results of the analytical testing performed, on behalf of Quantum Resources Management we are requesting closure for the LOV attached to the Leonard B No. 4.

If we can be of further assistance or if additional information is required, please contact our office at 575.746.8768 or at mstubblefield@talonlpe.com.

Respectfully submitted,

TALON/LPE

Mike Stubblefield Project Manager

David J. Adkins District Manager

# **GROUNDWATER DATA**



# New Mexico Office of the State Engineer Water Column/Average Depth to Water

			(qua	artei	rs ai	re '	1=NW	/ 2=NE	E 3=SW	4=SE)					
			(qua	artei	rs ai	re s	smalle	est to l	argest)	(NAD8	3 UTM in me	eters)	(In	feet)	
POD Number	Sub basin	Use	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	l Distance	Depth D Well W	epth Wa /aterCol	ater lumn
L 07643		DOM	LE	4	4	2	34	17S	28E	578979	3628574* Avera	6888 ge Depth to	120 Water:	53 <b>53 fee</b>	67 t
												Minimum Maximum	Depth: Depth:	53 fee 53 fee	t t
Record Count: 1															
UTMNAD83 Radiu	is Search (ir	n mete	ers):												

Easting (X): 585855

Northing (Y): 3628993

Radius: 10000

\*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.

# LABORATORY REPORTS



March 11, 2011

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

RE: LEONARD B #4

Enclosed are the results of analyses for samples received by the laboratory on 03/07/11 13:00.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (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,

Celeg D. Keine

Celey D. Keene Lab Director/Quality Manager



# Analytical Results For:

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

Received:	03/07/2011	Sampling Date:	03/04/2011
Reported:	03/11/2011	Sampling Type:	Soil
Project Name:	LEONARD B #4	Sampling Condition:	Cool & Intact
Project Number:	701407.004.01	Sample Received By:	Jodi Henson
Project Location:	SEC.33-T17S-R29E		

# Sample ID: S - 1 0' LOCATION COMP (H100439-01)

BTEX 8021B	mg/	'kg	Analyze	ed By: CMS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/09/2011	ND	1.86	92.8	2.00	7.67	
Toluene*	<0.050	0.050	03/09/2011	ND	2.02	101	2.00	4.11	
Ethylbenzene*	0.095	0.050	03/09/2011	ND	2.28	114	2.00	0.196	
Total Xylenes*	0.310	0.150	03/09/2011	ND	6.75	113	6.00	0.0111	
Surrogate: 4-Bromofluorobenzene (PIL	92.7	% 70-130							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	03/07/2011	ND	416	104	400	0.00	
TPH 8015M	mg/	kg	Anaiyze	d By: CK	<u> </u>				·
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	25.8	10.0	03/09/2011	ND	170	85.2	200	0.285	
DRO >C10-C28	1630	10.0	03/09/2011	ND	173	86.4	200	3.27	
Surrogate: 1-Chlorooctane	110%	6 70-130							
Surrogate: I-Chlorooctadecane	97.5 %	6 70-130							

### **Cardinal Laboratories**

\*=Accredited Analyte

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

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



## **Notes and Definitions**

- ND
   Analyte NOT DETECTED at or above the reporting limit

   RPD
   Relative Percent Difference
- \*\* Samples not received at proper tempera
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
  - Chloride by SM4500CI-B does not require samples be received at or below 6°C
    - Samples reported on an as received basis (wet) unless otherwise noted on report

**Cardinal Laboratories** 

\*=Accredited Analyte

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager

ARDINAL LABORATORIES

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

)	(505) 393-2326 FAX (50	DS, NM 00240 35) 393-2476						2	r1
Company Name:	Talon BLPE		派指の北京日日日は新聞法律	過調整		ANALYSI	S REQUEST		
Project Manager	" mike (STUBLEF	دذادا	P.O. #:						
Address:	408 N. TEKAS A	۲. ۱	Company: Taloo/LPE						
City:	Artesia	State: NM Zip: 82210	Attn:						
Phone #:	525.441.7254 Fa	x#:575-746-8405	Address:						
Project #: *	701407.004.01 Pr	roject Owner: Oven jum	City:						
Project Name:	Leonard B #4	-	State: Zip:						
Project Location	1 - 201 33- TI75 - F	የኋዓይ	Phone #:						
Sampler Name:	mertsallelel		Fax #:						******
FOR LAB USE ONLY		MATI	RIX PRESERVI SAMPLING		T.				-
Lab I.D.	Sample I.D.	G)RAB OR (C)OMP. CONTAINERS CONTAINERS SROUNDWATER VASTEWATER	ערטספנ ערטספנ ערטספנ: ערטספנ ערטספנ ערטספנ ער ער ער	WSIOS HUL	0908 X3LO				
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PLEASE NOTE: Liability an analyses, All cluims includin	id Damages. Cardina's fisbility and chart's a 10 those for neptigence and any other cause	uctusive remady for any daim arbidry thathar based in whatevers shall be deemed whether based in	n contract or ton, shall be limited to the amount paid by	the client for the					
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	<u> </u>	ime:							
Delivered By:	: (Circle One)	Sample C	Condition CHECKED BY:						<u></u>
Sampler - UPS	- Bus - Other:	6 C DYes	No Children						
† Cardinal (	cannot accept verbal cha	nges. Please fax written change	es to 505-393-2476						1

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