TALON

April 5, 2011

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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	TPH (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

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Sub basin	Use	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
L 07643		DOM	LE	4	4	2	34	17S	28E	578979	3628574*	6888	120	53	67

Average Depth to Water: **53 feet**

Minimum Depth: **53 feet**

Maximum Depth: **53 feet**

Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 585855 **Northing (Y):** 3628993 **Radius:** 10000

***UTM location was derived from PLSS - see Help**

LABORATORY REPORTS

CARDINAL Laboratories

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

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,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

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 Analyzed 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 Analyzed 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 Analyzed By: CK

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 %* *70-130*

Surrogate: 1-Chlorooctadecane *97.5 %* *70-130*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240
(505) 393-2326 FAX (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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		BILL TO	
Company Name:	Talon LPE	P.O. #:	
Project Manager:	Mike Stubblefield	Company:	Talon/LPE
Address:	408 W. Texas Ave.	Attn:	
City: Artesia	State: NM Zip: 88210	Address:	
Phone #: 575-441-7254	Fax #: 575-746-8905	City:	
Project #: 701407.004.01	Project Owner: Quantum	State:	Zip:
Project Name:	Leonard B #4	Phone #:	
Project Location:	sec. 33-T17S-R29E	Fax #:	
Sampler Name:	Mike Stubblefield		

ANALYSIS REQUEST

Lab I.D. (FOR LAB USE ONLY)	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	TPH 8015M	BTEX 8060	Total Chlorides
H22439-1	S-1 0' Location comp.	C				✓					✓		3/4/2011	9:40A	✓	✓	✓

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 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 services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: / Time:	Received By:
Mike Stubblefield	Date: 3/7/2011 Time: 1:00 pm	Jodi Henson
Relinquished By:	Date: Time:	Received By:

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: 6°c

Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials) JH

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

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