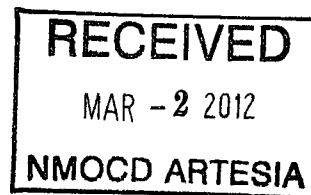




February 29, 2012



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

AMARILLO  
921 North Bivins  
Amarillo, Texas 79107  
Phone 806.467.0607  
Fax 806.467.0622

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

AUSTIN  
911 West Anderson Lane  
Suite 202  
Austin, Texas 78757  
Phone 512.989.3428  
Fax 512.989.3487

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

MIDLAND  
2901 State Hwy 349  
Midland, Texas 79706  
Phone 432.522.2133  
Fax 432.522.2180

SAN ANTONIO  
11 Commercial Place  
Schertz, Texas 78154  
Phone 210.265.8025  
Fax 210.568.2191

TULSA  
525 South Main Street  
Suite 535  
Tulsa, Oklahoma 74103  
Phone 918.742.0871  
Fax 918.382.0232

ENVIRONMENTAL CONSULTING  
ENGINEERING  
DRILLING  
CONSTRUCTION  
SPILL MANAGEMENT  
GENERAL CONTRACTING

Subject: **Remediation and Closure Report**  
Quantum Resources Management, LLC  
Artesia Battery 1 to Battery 3 Transfer Line Release  
Artesia Unit No. 88  
API # 30-015-31488 – 2RP-839

Dear Mr. Bratcher,

Quantum Resources Management, LLC has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the referenced Artesia Unit No. 88. The results of our soil assessment, completed remediation activities and closure request are submitted herein.

#### Incident Date

July 11, 2011

#### Background Information

The Artesia Unit No. 88 is located approximately sixteen (16) miles southeast of Artesia, New Mexico. The legal location for the site is Section 35, Township 17 South and Range 28 East in Eddy County, New Mexico. More Specifically the latitude and longitude for the release are 32.78976 North and -104.15330 West.

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 Kimbrough-Stegall loams complex soils with 0 to 3 percent slopes. The local surface and shallow geology, Quaternary Age sedimentary deposits, is comprised of alluvium and eolian sands underlain by sand stone and hard caliches. The New Mexico State Engineer web site indicates the nearest ground water data to be in S26-T17S-R27E. The ground water in Section 26 is reported to be at an average depth of 250' below ground surface (bgs). The referenced groundwater data is presented in Appendix I.

The ranking for this site is 0 based on the as following:

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

## **Incident Description**

On July 11, 2011 the water transfer line coming from the Artesia Battery No. 1 to the Artesia Battery No. 3 had developed a leak. The line was shut-in, repaired and placed back into service. Nineteen to twenty-two (19-22) barrels of produced water were released with no fluids recovered. The release is located on the transfer line 200-yards north of the Artesia Unit No. 88 well location. The impacted area measured approximately 92-feet long by 18-feet to 61-feet wide in some areas. The impacted area on the lease road measured approximately 43-feet long by 1-2 feet wide. The visually impacted soil was immediately excavated and transported to a NMOCD approved disposal facility.

## **Remedial Actions**

On January 2, 2012 Talon personnel mobilized to the site to begin excavation of the chloride impacted area. The impacted soil within the area of the release was removed to an average depth of 10-feet deep and transported to a NMOCD approved solid waste disposal facility, Lea Land, LLC pursuant to the work plan. The excavated area was left open until approval for installation of a 20 Mil liner was obtained from NMOCD.

Multiple sampling and field testing events for chlorides using field titration methods were conducted during the excavation process. The excavation was expanded and then re-sampled several times based on the field testing results and NMOCD requirements.

On January 16, 2012 Talon personnel mobilized to the site to begin closure soil sampling activities on the bottom and sidewalls of the excavation per NMOCD requirements. Grab soil samples were collected and submitted for laboratory analysis.

On January 24, 2012 Talon personnel met with NMOCD Representative Mike Bratcher to review the analytical results dated January 19, 2012. Mr. Bratcher requested additional samples to be collected from the south sidewall of the excavation and from the area south of the lease road. Talon personnel returned again to the site for the additional closure soil samples the same day. Grab soil samples were collected and submitted for laboratory analysis.

All soil samples were collected by Talon personnel wearing clean nitrile gloves. The soil 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 Chlorides using method SM4500Cl-B, TPH (Total Petroleum Hydrocarbons) using EPA Method 8015M, and volatile organics (BTEX) using EPA Method 8021B. The complete laboratory report is attached as Appendix II.

## **Analytical Results**

Analytical results received from Cardinal Laboratories are summarized below:

January 16, 2012

<u>Sample</u>	<u>Chlorides</u>	<u>BTEX</u>	<u>TPH</u>
S-1, North side wall	160 mg/kg	<0.150 mg/kg	112 mg/kg
S-2, North side wall	736	<0.150	<10
S-3, East side wall	288	<0.150	<10
S-4, South side wall	256	<0.150	<10
S-5, South side wall	6400	<0.150	<10
S-6, West side wall	<16	<0.150	<10
S-7, Bottom excavation 10'	2,320	<0.150	<10

January 24, 2012

<u>Sample</u>	<u>Chlorides</u>
S-8, South sidewall 10'	64
S-9, South of Lease Road 0'	336
S-10, South of Lease Road 1'	800

For this site's ranking, New Mexico Oil Conservation District action level criterion for BTEX is 50 mg/kg, Benzene is 10 mg/kg and TPH is 100 mg/kg.

On February 1, 2012 the NMOCD granted approval for backfilling the excavated area to 4-feet deep using new material backhauled from Lea Land, LLC then install a 20 Mil liner into the bottom of the excavation. The excavated area was subsequently backfilled to grade and contoured to match the surrounding location.

## **Summary and Conclusion**

- Groundwater in the project vicinity is greater than 250-feet below land surface per the New Mexico State Engineer Database.
- The impacted soil was excavated to approximately 10-feet deep. The excavated soil was transported to Lea Land, LLC disposal facility.
- The excavated area was backfilled to 4-feet deep, a 20 Mil liner was installed into the bottom of the excavated area at 4-feet and backfilled to grade using new material from Lea Land, LLC.
- Based on the depth to groundwater and the remedial actions carried out, it is unlikely that the impacts identified from this release will pose a threat to groundwater.

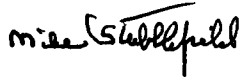
## Closure

Therefore, on behalf of Quantum Resources Management, LLC, we respectfully request that no further actions be required and that closure with respect 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

A handwritten signature in black ink, appearing to read "Mike Stubblefield".

Mike Stubblefield  
Project Manager

A handwritten signature in black ink, appearing to read "David J. Adkins".

David J. Adkins  
District Manager

**APPENDIX I**  
**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 Q Q 64 16 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RA 04561	PRO	ED		4 2 26	17S	27E		570871	3630142*	8588	250		
RA 09588	DOM	ED		1 2 33	18S	28E		576976	3619384*	8889	300		
RA 04048	OBS	LE		1 4 4	14	18S	27E	570841	3623030*	9710	2096		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 3

UTMNAD83 Radius Search (in meters):

Easting (X): 579187

Northing (Y): 3627994

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.

8/30/11 2:04 PM

Page 1 of 1

WATER COLUMN/ AVERAGE  
DEPTH TO WATER

**APPENDIX II**  
**LABORATORY RESULTS**



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

---

January 19, 2012

MIKE STUBBLEFIELD

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: ARTESIA UNIT #88

Enclosed are the results of analyses for samples received by the laboratory on 01/16/12 12:15.

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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

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

Received: 01/16/2012  
Reported: 01/19/2012  
Project Name: ARTESIA UNIT #88  
Project Number: 701407.012.01  
Project Location: SEC. 26 - T17S-R27E

Sampling Date: 01/16/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-1 NORTHSIDE WALL (H200094-01)**

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	01/17/2012	ND	1.93	96.5	2.00	3.48		
Toluene*	<0.050	0.050	01/17/2012	ND	2.05	102	2.00	2.56		
Ethylbenzene*	<0.050	0.050	01/17/2012	ND	2.05	103	2.00	2.92		
Total Xylenes*	<0.150	0.150	01/17/2012	ND	6.38	106	6.00	2.08		

Surrogate 4-Bromofluorobenzene (PIL) 106 % 64.4-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	01/17/2012	ND	432	108	400	3.64	
TPH 8015M		mg/kg		Analyzed By: MS					

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/17/2012	ND	216	108	200	4.06	
DRO >C10-C28	112	10.0	01/17/2012	ND	188	94.0	200	8.99	

Surrogate: 1-Chlorooctane 126 % 55.5-154

Surrogate: 1-Chlorooctadecane 143 % 57.6-158

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 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 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 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 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, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 01/16/2012  
Reported: 01/19/2012  
Project Name: ARTESIA UNIT #88  
Project Number: 701407.012.01  
Project Location: SEC. 26 - T17S-R27E

Sampling Date: 01/16/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-2 NORTHSIDE WALL (H200094-02)**
**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	01/17/2012	ND	1.93	96.5	2.00	3.48	
Toluene*	<0.050	0.050	01/17/2012	ND	2.05	102	2.00	2.56	
Ethylbenzene*	<0.050	0.050	01/17/2012	ND	2.05	103	2.00	2.92	
Total Xylenes*	<0.150	0.150	01/17/2012	ND	6.38	106	6.00	2.08	

Surrogate. 4-Bromofluorobenzene (PIL) 105 % 64.4-134

**Chloride, SM4500Cl-B**

mg/kg

Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	01/17/2012	ND	432	108	400	3.64	

**TPH 8015M**

mg/kg

Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/17/2012	ND	216	108	200	4.06	
DRO >C10-C28	<10.0	10.0	01/17/2012	ND	188	94.0	200	8.99	

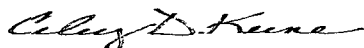
Surrogate 1-Chlorooctane 134 % 55.5-154

Surrogate. 1-Chlorooctadecane 156 % 57.6-158

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 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 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 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 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, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 01/16/2012  
Reported: 01/19/2012  
Project Name: ARTESIA UNIT #88  
Project Number: 701407.012.01  
Project Location: SEC. 26 - T17S-R27E

Sampling Date: 01/16/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-3 EASTSIDE WALL (H200094-03)**

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	01/17/2012	ND	1.93	96.5	2.00	3.48		
Toluene*	<0.050	0.050	01/17/2012	ND	2.05	102	2.00	2.56		
Ethylbenzene*	<0.050	0.050	01/17/2012	ND	2.05	103	2.00	2.92		
Total Xylenes*	<0.150	0.150	01/17/2012	ND	6.38	106	6.00	2.08		

Surrogate: 4-Bromofluorobenzene (PIL) 105 % 64 4-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	01/17/2012	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/17/2012	ND	216	108	200	4.06		
DRO >C10-C28	<10.0	10.0	01/17/2012	ND	188	94.0	200	8.99		

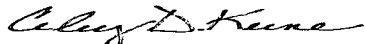
Surrogate: 1-Chlorooctane 121 % 55 5-154

Surrogate: 1-Chlorooctadecane 142 % 57.6-158

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 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 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 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 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, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 01/16/2012  
 Reported: 01/19/2012  
 Project Name: ARTESIA UNIT #88  
 Project Number: 701407.012.01  
 Project Location: SEC. 26 - T17S-R27E

 Sampling Date: 01/16/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: S-4 SOUTHSIDE WALL (H200094-04)**

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	01/17/2012	ND	1.93	96.5	2.00	3.48		
Toluene*	<0.050	0.050	01/17/2012	ND	2.05	102	2.00	2.56		
Ethylbenzene*	<0.050	0.050	01/17/2012	ND	2.05	103	2.00	2.92		
Total Xylenes*	<0.150	0.150	01/17/2012	ND	6.38	106	6.00	2.08		

Surrogate: 4-Bromofluorobenzene (PIL) 105 % 64 4-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	01/17/2012	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/17/2012	ND	216	108	200	4.06	.	
DRO >C10-C28	<10.0	10.0	01/17/2012	ND	188	94.0	200	8.99		

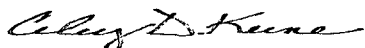
Surrogate: 1-Chlorooctane 139 % 55 5-154

Surrogate: 1-Chlorooctadecane 152 % 57 6-158

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 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 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 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 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, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 01/16/2012  
Reported: 01/19/2012  
Project Name: ARTESIA UNIT #88  
Project Number: 701407.012.01  
Project Location: SEC. 26 - T17S-R27E

Sampling Date: 01/16/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-5 SOUTHSIDE WALL (H200094-05)**

BTX 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	01/17/2012	ND	1.93	96.5	2.00	3.48		
Toluene*	<0.050	0.050	01/17/2012	ND	2.05	102	2.00	2.56		
Ethylbenzene*	<0.050	0.050	01/17/2012	ND	2.05	103	2.00	2.92		
Total Xylenes*	<0.150	0.150	01/17/2012	ND	6.38	106	6.00	2.08		

Surrogate: 4-Bromofluorobenzene (PII) 106 % 64.4-134

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6400	16.0	01/17/2012	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/17/2012	ND	216	108	200	4.06		
DRO >C10-C28	<10.0	10.0	01/17/2012	ND	188	94.0	200	8.99		


Surrogate: 1-Chlorooctane 126 % 55.5-154

Surrogate: 1-Chlorooctadecane 143 % 57.6-158

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 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 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 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 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, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 01/16/2012  
 Reported: 01/19/2012  
 Project Name: ARTESIA UNIT #88  
 Project Number: 701407.012.01  
 Project Location: SEC. 26 - T17S-R27E

 Sampling Date: 01/16/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: S-6 WESTSIDE WALL (H200094-06)**

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	01/17/2012	ND	1.93	96.5	2.00	3.48		
Toluene*	<0.050	0.050	01/17/2012	ND	2.05	102	2.00	2.56		
Ethylbenzene*	<0.050	0.050	01/17/2012	ND	2.05	103	2.00	2.92		
Total Xylenes*	<0.150	0.150	01/17/2012	ND	6.38	106	6.00	2.08		

Surrogate 4-Bromofluorobenzene (PIL) 107 % 64 4-134

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/17/2012	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/17/2012	ND	216	108	200	4.06		
DRO >C10-C28	<10.0	10.0	01/17/2012	ND	188	94.0	200	8.99		

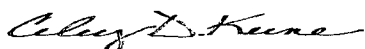
Surrogate: 1-Chlorooctane 127 % 55 5-154

Surrogate: 1-Chlorooctadecane 151 % 57.6-158

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 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 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 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 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, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 01/16/2012  
Reported: 01/19/2012  
Project Name: ARTESIA UNIT #88  
Project Number: 701407.012.01  
Project Location: SEC. 26 - T17S-R27E

Sampling Date: 01/16/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-7 BOTTOM 10' BGS (H200094-07)**

BTEX 80218		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/17/2012	ND	1.93	96.5	2.00	3.48		
Toluene*	<0.050	0.050	01/17/2012	ND	2.05	102	2.00	2.56		
Ethylbenzene*	<0.050	0.050	01/17/2012	ND	2.05	103	2.00	2.92		
Total Xylenes*	<0.150	0.150	01/17/2012	ND	6.38	106	6.00	2.08		

Surrogate: 4-Bromofluorobenzene (PIL) 106 % 64 4-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2320	16.0	01/17/2012	ND	432	108	400	3.64	
TPH 8015M		mg/kg		Analyzed By: MS					

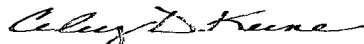
Surrogate: 1-Chlorooctane 130 % 55.5-154

Surrogate: 1-Chlorooctadecane 150 % 57 6-158

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 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 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 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 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, Lab Director/Quality Manager

**Notes and Definitions**

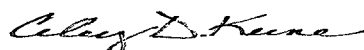
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received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

---

Cardinal Laboratories

\* = Accredited Analyte

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 client for 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 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 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, Lab Director/Quality Manager





## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <u>Talon / LPE</u>				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>											
Project Manager: <u>Mike Stubbfield</u>				P.O. #:															
Address: <u>408 West Texas Ave.</u>				Company: <u>Talon / LPE</u>															
City: <u>Artesia</u> State: <u>NM</u> Zip: <u>88210</u>				Attn:															
Phone #: <u>575-441-2254</u> Fax #:				Address:															
Project #: <u>701407.012.01</u> Project Owner: <u>Quanta Resources</u>				City:															
Project Name: <u>Resign Unit No 88</u>				State: Zip:															
Project Location: <u>Sec. 26 T17S R22E</u>				Phone #:															
Sampler Name: <u>Mike Stubbfield</u>				Fax #:															
FOR LAB USE ONLY																			
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV.	SAMPLING													
				GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER	ACID/BASE ICE / COOL OTHER	DATE TIME	8015 M TPH	8021 B BTX	Total chlorides										
<u>H200094</u>																			
1	S-1 Northside wall	G		/	/	1/16/12 10:20A	/	/	/										
2	S-2 Northside wall	G		/	/	1/16/12 10:32A	/	/	/										
3	S-3 Eastside wall	G		/	/	1/16/12 10:42A	/	/	/										
4	S-4 Southside wall	G		/	/	1/16/12 10:53A	/	/	/										
5	S-5 Southside wall	G		/	/	1/16/12 10:55A	/	/	/										
6	S-6 Westside wall	G		/	/	1/16/12 10:58A	/	/	/										
7	S-7 bottom 10' bgs	G		/	/	1/16/12 11:04A	/	/	/										

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: <u>1/16/2012</u>	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
<u>Mike Stubbfield</u>	Time: <u>11:58 AM</u>	<u>Kimberly M. Wilson</u>	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date: <u>1/16/12</u>	Received By:	REMARKS:	
<u>Kimberly M. Wilson</u>	Time: <u>12:15</u>	<u>Mike Stubbfield</u>		
Delivered By: (Circle One)	Sample Condition	CHECKED BY:		
Sampler - UPS - Bus - Other:	Cool Intact	(Initials)		
	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>MS</u>		

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

#26



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

---

January 26, 2012

MIKE STUBBLEFIELD

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: ARTESIA UNIT #88

Enclosed are the results of analyses for samples received by the laboratory on 01/25/12 11:32.

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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 01/25/2012  
Reported: 01/26/2012  
Project Name: ARTESIA UNIT #88  
Project Number: 701407.012.01  
Project Location: SEC. 26 - T17S-R27E

Sampling Date: 01/24/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: S-8 SOUTHSIDE WALL 10' BGS (H200182-01)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	01/26/2012	ND	448	112	400	3.64	

**Sample ID: S-9 SOUTH OF LEASE ROAD 0' (H200182-02)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	01/26/2012	ND	448	112	400	3.64	

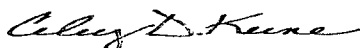
**Sample ID: S-9 SOUTH OF LEASE ROAD 1' BGS (H200182-03)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	800	16.0	01/26/2012	ND	448	112	400	3.64	

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 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 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 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 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, Lab Director/Quality Manager

### Notes and Definitions

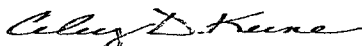
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received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

---

Cardinal Laboratories

\*=Accredited Analyte

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 client for 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 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 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, Lab Director/Quality Manager



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <u>Talon/LPE</u>				<b>BILL TO</b>												<b>ANALYSIS REQUEST</b>											
Project Manager: <u>Mike Stubblefield</u>				P.O. #:																							
Address: <u>408 West Texas Ave.</u>				Company: <u>Talon/LPE</u>																							
City: <u>Artesia</u> State: <u>NM</u> Zip: <u>88210</u>				Attn:																							
Phone #: <u>505-441-7234</u> Fax #:				Address:																							
Project #: <u>701407.012.01</u> Project Owner: <u>Quantum Res. Man.</u>				City:																							
Project Name: <u>Artesia Unit No 88</u>				State: Zip:																							
Project Location: <u>sec. 26-T17S-R27E</u>				Phone #:																							
Sampler Name: <u>Mike Stubblefield</u>				Fax #:																							
FOR LAB USE ONLY																											
Lab I.D.		Sample I.D.		GRAB OR (COMP. # CONTAINERS)		MATRIX		PRESERV.		SAMPLING		Total chlorides															
						GROUNDWATER WASTEWATER SOIL SLUDGE OTHER		ACID/BASE ICE / COOL OTHER		DATE TIME																	
<u>H2DD182</u>																											
<u>1</u>		<u>S-8 South side wall 10' bgs</u>		<u>5</u>		<u>/</u>		<u>/</u>		<u>1/24/2012 1:44 PM</u>																	
<u>2</u>		<u>S-9 South of lease road 0'</u>		<u>6</u>		<u>/</u>		<u>/</u>		<u>1/24/2012 1:54 PM</u>		<u>/</u>															
<u>3</u>		<u>S-9 South of lease road 1' bgs</u>		<u>6</u>		<u>/</u>		<u>/</u>		<u>1/24/2012 1:58 PM</u>		<u>/</u>															

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: <u>Mike Stubblefield</u>		Date: <u>1/24/2012</u>		Received By: <u>Kimberly M. Wilson</u>		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #:	
Relinquished By: <u>Kimberly M. Wilson</u>		Time: <u>10:00 AM</u>		Received By: <u>Plaza 11 in for</u>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Fax #:	
Delivered By: (Circle One)		Date: <u>1/25/12</u>		Time: <u>11:32 AM</u>		REMARKS: <u>BUSH!!</u>	
Sampler - UPS - Bus - Other:		Sample Condition		CHECKED BY: (Initials)			
		Cool Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		<u>152</u>			

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

**FINAL C-141**

District I  
1625 N. French Dr., Hobbs, NM 88240  
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 Fe, 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**

☐ Initial Report ☒ Final Report

Name of Company : Quantum Resources Management, LLC	Contact : Garrett Newton
Address : 1905 West Sears Ave., Artesia, New Mexico 88210	Telephone No. : 575-513-0230
Facility Name : Artesia Battery 1 to Artesia Battery 3 Water Transfer Line	Facility Type: Water Transfer Line

Surface Owner : State	Mineral Owner	Lease No. : API #30-015-31488 2RP-839
-----------------------	---------------	--

**LOCATION OF RELEASE**

Unit Letter K	Section 35	Township 17S	Range 28E	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy
------------------	---------------	-----------------	--------------	---------------	------------------	---------------	----------------	-------------

Latitude 32.78850 Longitude -104.14735

**NATURE OF RELEASE**

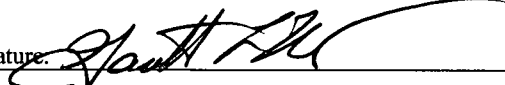
Type of Release : Produced Water	Volume of Release : 19-22 bbls	Volume Recovered: -0-
Source of Release : Pipeline	Date and Hour of Occurrence: 7/12/11 9:30 am	Date and Hour of Discovery: 7/12/11 9:30am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Voicemail NMOCD/Mike Bratcher	
By Whom? Mike Stubblefield	Date and Hour : 7/12/11 2:30 pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* The hammer union on the pipeline parted causing release. The line was shut in, repaired, analytical testing was completed and the impacted soil was transported to Lea Land, LLC for disposal.

Describe Area Affected and Cleanup Action Taken.\* Talon/LPE was contracted for the correction of this release. The impacted area from this release was excavated to a depth of 10-feet deep. A 20 mil liner was installed into the bottom of the excavation. The excavation was backfilled using new material from Lea Land, LLC to grade and contoured to match the surrounding location.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 		<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Garrett Newton		Approved by District Supervisor:	
Title: Field Supervisor	Approval Date:	Expiration Date:	
E-mail Address: gnewton@pvtnetworks.net	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 2/20/2012	Phone: 575-513-0230		

\* Attach Additional Sheets If Necessary