

June 21, 2011

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

JUN 21 2011
NMOCD ARTESIA

Fax 806.467.0622

921 North Bivins

Amarillo, Texas 79107

Phone 806.467.0607

Subject:

Remediation and Closure Report

Quantum Resources Management, LLC, New Mexico State 647 AC 711 Water Flood Station Release

30-015-02056 -- **2RP-501** 

ARTESIA

**AMARILLO** 

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

AUSTIN

9II West Anderson Lane Suite 202 Austin, Texas 78757 Phone 5I2.989.3428 Fax 5I2.989.3487

HOBBS

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

MIDLAND

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

#### SAN ANTONIO

II 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 Dear Mr. Bratcher,

Quantum Resources Management, LLC has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above referenced State 647 AC 711 Water Flood Station release. The incident description, soil assessment, remediation activities and closure request are submitted herein.

#### **Incident Date**

December 6, 2010

### **Background Information**

The State 647 AC 711 Water Flood Station is located approximately nineteen (19) miles southeast of Artesia, New Mexico. The legal location for the site is Unit Letter M, Section 27, Township 18 South and Range 28 East in Eddy County, New Mexico. More Specifically the latitude and longitude for the release are 32.71420 North and -104.17128 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, limestone and caliche layers. The New Mexico State Engineer's web site indicates the nearest ground water data to be in S35-T18S-R28E. The ground water in Section 35 is reported to be at an average depth of 65' below ground surface (bgs).

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

ENVIRONMENTAL CONSULTING

ENGINEERING

DRILLING

CONSTRUCTION

SPILL MANAGEMENT
GENERAL CONTRACTING

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

Toll Free: 866.742.0742 www.talonlpe.com

#### **Incident Description**

On December 6, 2010 the flow line located at the State 647 AC 711 Water Flood Station ruptured. The flow line was subsequently taken out of service, repaired and placed back into service. Approximately twenty-five to thirty (25-30) barrels of produced water were released. A vacuum truck was brought to the location and twenty (20) barrels of produced water were recovered. The impacted area is located on the flow line right of way approximately fifty-four feet (54') south of the water flood station. The impacted area is estimated to be one hundred and eleven feet (111') long by one hundred fifty-five feet (155') wide. The impacted area was excavated to a depth of 1-foot (1') deep and the excavated soil was placed on a liner.

#### **Actions Taken**

On January 11, 2011 Talon personnel mobilized to the site to begin soil sampling and site assessment activities. Grab soil samples were collected utilizing a split spoon auger drill rig. Soil samples were collected from one foot (1') below ground surface (bgs) to a depth of fourteen feet (14') bgs. A hard rock barrier was encountered at two feet (2') bgs and no sample return was available at that depth.

The grab soil samples were collected by Talon personnel wearing clean nitrile gloves. The samples were placed in laboratory provided glassware, iced and transported to Cardinal Laboratories in Hobbs, New Mexico for analysis chlorides using a Method SM4500CL-B.

#### **Analytical Results**

Analytical results received from Cardinal Laboratories on January 25, 2011 are summarized below.

Samp	le, Depth	Chlorides (mg/kg)
S-1,	1-foot	8800 ppm
S-1,	4'	224
S-1,	6'	128
S-1,	8'	144
S-1,	14'	96

Analytical results received from Cardinal Laboratories on April 14, 2011, which are composite samples after excavation, are summarized below.

Sample, Depth	Chlorides	<u>BTEX</u>	<u>TPH</u>
S-1, Bottom Excavation	800 mg/kg	ND* mg/kg	ND mg/kg
S-2, S. Side Wall	288	ND	ND
S-3, N. Side Wall	1770**	ND	ND
S-4, W. Side Wall	432	ND	ND
S-5, E. Side Wall	2960***	ND	55.8

<sup>\*</sup>Not Detected within lab method detection limits

For this site's ranking, New Mexico Oil Conservation District action level criteria for BTEX is 50 mg/kg, Benzene is 10 mg/kg and TPH is 1,000 mg/kg. The chloride remediation standard is considered to be 1,000 mg/kg.

#### **Remedial Actions**

On March 23, 2011 Talon personnel mobilized to the site to begin excavation of the impacted soil located south of the Water Flood Station. A total of 942.24 cubic yards of impacted soil was excavated to the depth of 4' and transported to Lea Land, LLC, an NMOCD approved solid waste disposal facility for disposal. The excavated area was left open until an approval for backfilling of the site was obtained from NMOCD. On April 19, 2011 NMOCD Environmental Specialist Mike Bratcher reviewed the analytical results from the open excavation. Mr. Bratcher granted approval to backfill the excavated area. He will note that at time of closure the contaminants were not fully defined to the North due to historical impacts in the area.

On April 26, 2011 Talon personnel returned to the site to begin backfilling the excavated area. The excavated area was backfilled back to grade with 917.61 cubic yards of new material transported from a local borrow pit. The backfill material was contoured to match the surrounding terrain and the area will be seeded with an approved seed mixture.

<sup>\*\*</sup>Historical impacted area

<sup>\*\*\*</sup>Flowline/utility line location

#### **Conclusions and Recommendations**

- Ground water in the project vicinity is 65-feet below land surface per the New Mexico State Engineer Database.
- The impacted area has been excavated to a depth of 4-feet bgs.
- Based upon the results of the field and laboratory data obtained for this investigation, the vertical impacts for the chloride release have been defined above background levels to less than 4' bgs, as shown by the lab data on January 25, 2011, collected with the drill rig.
- Based on the depth to groundwater and the remaining chloride levels in the soil at this location, it is unlikely that the chloride impacts identified from this release will pose a threat to groundwater.
- 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.

Should you have any questions or if further information is required, please do not hesitate to contact us at 575.746.8768.

Respectfully submitted,

TALON/LPE

Mike Stubblefield

Project Manager

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) Q Q Q Depth Depth: Water basin Use County 64 16 4 Sec Tws Rng X Y Well WaterColumn 65 40 DOM LE 35 **18S** 28E 580236 3618135\* DOM 18S 28E 3619384\* 300 ED 1 2 33 576976

Average Depth to Water: 65 feet

Minimum Depth: 65 feet

Maximum Depth: 65 feet

Record Count: 2

L 03348 APPRO

RA 09588

**PLSS Search:** 

Township: 18S Range: 28E



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

(quarters are 1=NW 2=N	NE 3=SW 4=SE)
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Sub POD Number basi	200 在农村的人的		Q	Q	Q			argest) Rng		3 UTM in mete Y Di	Ď	epth D	n feet) Pepth: W VaterCo	DENGAR AND A STATE OF THE PERSON OF THE PERS
RA 09588	DOM	ED		1	2	33	18S	28E	576976	3619384*	757	300		
L 03348 APPRO	DOM	LE	4	3	4	35	18S	28E	580236	3618135*	3012	105	65	40
CP 00361	PRO	ED		1	3	09	198	28E	576195	3615347*	4595	365	265	100
CP 00361 EXPL	EXP	ED	3	1	3	09	198	28E	576094	3615246*	4724	365	265	100

Average Depth to Water:

198 feet

Minimum Depth:

65 feet

Maximum Depth:

265 feet

#### **Record Count: 4**

**UTMNAD83** Radius Search (in meters):

Easting (X): 577663

Northing (Y): 3619702

Radius: 5000

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

# APPENDIX II LABORATORY REPORTS



January 25, 2011

MIKE STUBBLEFIELD

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: STATE 647 AC 711 WATERFLOOD STATION

Enclosed are the results of analyses for samples received by the laboratory on 01/21/11 11:05.

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

Lab Director/Quality Manager

Celey D. Keine



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

Received: Reported: 01/21/2011

01/25/2011

STATE 647 AC 711 WATERFLOOD STATE

Project Number: Project Location:

Project Name:

701395.002.01

NOT GIVEN

Sampling Date:

01/11/2011

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S.1 1' (H100154-01)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: LR				p = 17 1 / min w/m dww	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8800	16.0	01/24/2011	ND	432	108	400	0.00	
Sample ID: S.1 4' (H100	•								
Chloride, SM4500CI-B	mg.	/kg	Analyze	d By: LR					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	01/24/2011	ND	432	108	400	0.00	
Sample ID: S.1 6' (H100	154-03)								
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: LR				<del>yaanaan ahaan ahaan</del>	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	01/24/2011	ND	432	108	400	0.00	
Sample ID: S.1 8' (H100	154-04)								
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: LR		white		-All-sommer and area	E-710-0-0-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	01/24/ <b>2</b> 011	ND	432	108	400	0.00	
Sample ID: S.1 14' (H10	0154-05)					•			
Chloride, SM4590Cl-B	mg,	/kg	Analyze	d By: LR					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	01/24/2011	ND	432	108	400	0.00	

#### Cardinal Laboratories

\*=Accredited Analyte

PLEASE HOTEL Mishing and Demogram. Consisted Making and distants exclusive research for any claim actions, minister leased in constant or but, shall be framed to the amount paid by claim for analysis. All claims, including those for negativener and any other career withstroomer stand to determine which any claims of any contract of the constant within the part of the applicable services. In one event stand to find the first contract to the contract of the co



#### **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 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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### ARDINAL LABORATORIES 101 East Marland, Hobbs, NM 88240

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<sup>†</sup> Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476



April 14, 2011

MIKE STUBBLEFIELD

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: STATE 647 AC 711 WATERFLOOD STATION RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 04/11/11 8:53.

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.

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:

04/11/2011

Sampling Date:

04/06/2011

Reported:

04/14/2011

Sampling Type:

Soil

Project Name:

STATE 647 AC 711 WATERFLOOD STATI

Sampling Condition:

Cool & Intact

Project Number:

701407.007.01

Sample Received By:

Jodi Henson

Project Location:

SEC. 27 - T18S - R28E

#### Sample ID: S - 1 BOTTOM EXC AREA (H100719-01)

BTEX 8260B	mg/	kg	Analyze	d By: CMS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS .	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/12/2011	ND	1.82	91.1	2.00	1.20	
Toluene*	<0.050	0.050	04/12/2011	ND	1.90	95.1	2.00	1.70	
Ethylbenzene*	<0.050	0.050	04/12/2011	ND	1.85	92.3	2.00	1.89	
Total Xylenes*	<0.150	0.150	04/12/2011	ND	5.72	95.4	6.00	1.96	
Surrogate: Dibromofluoromethane	75.2	% 80-120							
Surrogate: Toluene-d8	95.7	% 80-120							
Surrogate: 4-Bromofluorobenzene	78.9	% 80-120							
Chloride, SM4500CI-B	mg,	'kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	880	16.0	04/11/2011	ND	416	104	400	0.00	
TPH 8015M	mg,	kg	Analyze	d By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/12/2011	ND	223	111	200	3.99	
DRO >C10-C28	<10.0	10.0	04/12/2011	ND	227	113	200	8.14	
Surrogate: 1-Chlorooctane	113	% 70-130				, , , , , , , , , , , , , , , , , , , ,			
Surrogate: 1-Chlorooctadeçane	124	% 70-130						•	,

#### Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any dairn 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 valved 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 you or loss of profits incurred by Cardinal, regardless of whether such claims to assed upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This profounded except in full with written approval of Cardinal Laboratories.

Celey D. Keine



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

Received:

04/11/2011

Sampling Date:

04/06/2011

Reported:

Sampling Type:

Soil

RTFY 8260B

04/14/2011

Sampling Condition:

Cool & Intact

Project Name: Project Number:

701407.007.01

Project Location:

ma/ka

SEC. 27 - T18S - R28E

STATE 647 AC 711 WATERFLOOD STATI

Sample Received By:

Jodi Henson

#### Sample ID: S - 2 S SIDE WALL EXC (H100719-02)

B1EX 8260B	mg/	кд	Analyze	d By: CMS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050 .	04/12/2011	ND	1.82	91.1	2.00	1.20	
Toluene*	<0.050	0.050	04/12/2011	ND	1.90	95.1	2.00	1.70	
Ethylbenzene*	<0.050	0.050	04/12/2011	ND	1.85	92.3	2.00	1.89	
Total Xylenes*	<0.150	0.150	04/12/2011	ND	5.72	95.4	6.00	1.96	
Surrogate: Dibromofluoromethane	74.0	% 80-120							
Surrogate: Toluene-d8	93.1	% 80-120							
Surrogate: 4-Bromofluorobenzene	97.0	% 80-120							
Chloride, SM4500CI-B	mg/	'kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	04/11/2011	ND	416	104	400	0.00	
TPH 8015M	mg/	'kg	Analyze	d By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/12/2011	ND	223	111	200	3.99	
DRO >C10-C28	<10.0	10.0	04/12/2011	ND	227	113	200	8.14	
Surrogate: 1-Chlorooctane	. 125	% 70-130							
Surrogate: 1-Chlorooctadecane	141 9	% 70-130							

Analyzed Rv: CMS

#### Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for an allyses. 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 innerruptions, 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



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

Received:

04/11/2011

Sampling Date:

04/06/2011

Reported:

Sampling Type:

Soil

04/14/2011

Sampling Condition:

Cool & Intact

Project Name:

STATE 647 AC 711 WATERFLOOD STATI

Sample Received By:

Jodi Henson

Project Number: Project Location: 701407.007.01

SEC. 27 - T18S - R28E

Sample ID: S - 3 N SIDE WALL EXC (H100719-03)

BTEX 8260B	mg/	kg	Analyze	d By: CMS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/13/2011	ND	1.82	91.1	2.00	1.20	
Toluene*	<0.050	0.050	04/13/2011	ND	1.90	95.1	2.00	1.70	
Ethylbenzene*	<0.050	0.050	04/13/2011	ND	1.85	92.3	2.00	1.89	
Total Xylenes*	<0.150	0.150	04/13/2011	ND	5.72	95.4	6.00	1.96	
Surrogate: Dibromofluoromethane	76.5	% 80-120							
Surrogate: Toluene-d8	93.2	% 80-120			•				
Surrogate: 4-Bromofluorobenzene	83.6	% 80-120							
Chloride, SM4500CI-B	mg,	kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1770	16.0	04/11/2011	ND	416	104	400	0.00	
TPH 8015M	mg,	'kg	Analyze	ed By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/12/2011	ND	223	111	200	3.99	
DRO >C10-C28	<10.0	10.0	04/12/2011	ND	227	113	200	8.14	
Surrogate: 1-Chlorooctane	105	% 70-130	)						
Surrogate: 1-Chlorooctadecane	110	% 70-130	)						

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\*=Accredited Analyte

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Celen D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

Received:

04/11/2011

Sampling Date:

04/06/2011

Reported:

Soil

04/14/2011

Sampling Type:

Project Name:

STATE 647 AC 711 WATERFLOOD STATI

Sampling Condition:

Cool & Intact

Project Number: Project Location:

701407.007.01

SEC. 27 - T18S - R28E

Sample Received By:

Jodi Henson

#### Sample ID: S - 4 W SIDE WALL EXC (H100719-04)

BTEX 8260B	mg/	kg	Analyze	d By: CMS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/12/2011	ND	1.82	91.1	2.00	1.20	
Toluene*	<0.050	0.050	04/12/2011	ND	1.90	95.1	2.00	1.70	
Ethylbenzene*	<0.050	0.050	04/12/2011	ND	1.85	92.3	2.00	1.89	
Total Xylenes*	<0.150	0.150	04/12/2011	ND	5.72	95.4	6.00	1.96	
Surrogate: Dibromofluoromethane	74.7	% 80-120						,	
Surrogate: Toluene-d8	94.2	% 80-120	ı						
Surrogate: 4-Bromofluorobenzene	89.7	% 80-120						1	
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	04/11/2011	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/12/2011	ND	223	111	200	3.99	
DRO >C10-C28	<10.0	10.0	04/12/2011	ND	227	113	200	8.14	
Surrogate: 1-Chlorooctane	131	% 70-130							
Surrogate: 1-Chlorooctadecane	131	% 70-130	٠						

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\*=Accredited Analyte

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Celeg D. Keena

Celey D. Keene, Lab Director/Quality Manager



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

Received:

04/11/2011

Sampling Date:

04/06/2011

Reported:

04/14/2011

Sampling Type:

Soil

Project Name:

STATE 647 AC 711 WATERFLOOD STATI

Sampling Condition:

Cool & Intact

Project Number:

701407.007.01

Project Location:

SEC. 27 - T18S - R28E

Sample Received By:

Jodi Henson

#### Sample ID: S - 5 E SIDE WALL EXC (H100719-05)

BTEX 8260B	mg,	kg	Analyze	d By: CMS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/12/2011	ND	1.82	91.1	2.00	1.20	
Toluene*	<0.050	0.050	04/12/2011	ND	1.90	95.1	2.00	1.70	
Ethylbenzene*	<0.050	0.050	04/12/2011	ND	1.85	92.3	2.00	1.89	
Total Xylenes*	<0.150	0.150	04/12/2011	ND	5.72	95.4	6.00	1.96	
Surrogate: Dibromofluoromethane	73.4	% 80-120			1				
Surrogate: Toluene-d8	93.3	% 80-120			i				
Surrogate: 4-Bromofluorobenzene	80.6	% 80-120			•				
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2960	16.0	04/11/2011	ND	416	104	400	0.00	
TPH 8015M	mg	/kg	Analyze	ed By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/12/2011	ND	223	111	200	3.99	
DRO >C10-C28	55.8	10.0	04/12/2011	ND	227	113	200	8.14	
Surrogate: 1-Chlorooctane	115	% 70-130	1						
Surrogate: 1-Chlorooctadecane	113	% 70-130	1						

Analysis of Day CMC

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



#### **Notes and Definitions**

Z-01 One or more surrogates above historical limits.

ND Analyte NOT DETECTED at or above the reporting limit

RPD . Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

Chloride by SM4500Cl-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



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# APPENDIX III C-141 FINAL

<u>District I</u> 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

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

Form C-141

Revised October 10, 2003

side of form

### **Release Notification and Corrective Action**

	TOR		■ Init	ial Report	X	Final Repor							
Name of Co	mpany Q	uantum Reso	ources M	anagement, LL	C	Contact Gar	rett Newton						
Address 19	05 West S	ears Ave., A	w Mexico 882	Telephone No. 575-513-0230									
Facility Na	me State 6	47 AC 711 V	od Station #86	Facility Type WIW									
Surface Owner Mineral Owner						Lease No.API # 30-015-02056						)2056	
		T		,		N OF REI				1			
Unit Letter M	Section 27	Township 18S	Range 28E	Feet from the 990'			/South Line Feet from the 330'		East/West Line West		County EDDY		
IVI	21	103	2015	990	Sout	11	330	West		EDD1		•	
	.1	l	Lat	itude <u>32.71420</u>	)	Longitude	-104.17128						
				NAT	ΓURI	E OF REL	EASE						
Type of Release Produced Waters						Volume of Release 25-30 bbls Volume Recovered 20							
	Source of Release Flow line						Date and Hour of Occurrence			Date and Hour of Discovery			
						12/06/2010 AM			12/06/2010 AM				
Was Immedi	ate Notice (	Given?				If YES, To	Whom?		<del></del>				
X Yes No Not Required						NMOCD/Mike Bratcher							
By Whom?						Date and Hour 12/06/2010 am							
Was a Watercourse Reached?						If YES, Volume Impacting the Watercourse.							
☐ Yes X No						·							
If a Waterco	urse was Im	pacted, Descr	ibe Fully.	*		<u> </u>							
					1								
					!								
		lem and Reme					-						
The flow line	e at the Stat	e 647 AC 711	Water Flo	ood Station ruptur	red. Th	e flow line was	taken out of serv	rice and th	hen repair	ed. A vacuun	n truck	was	
brought to th	e site and 2	o obis of prod	uced wate	r was recovered.									
		and Cleanup			. h	Ca., C., C.	et (155') wide. T	-1/L DE		441	a :1 .	C 41	
impacted are	area was o	ne nunarea ere n of four feet (4	ven reet ( 4') and tra	nsported to and N	e nunar VMOCI	D approved So	lid Waste disposa	aion/LPE I facility.	excavate Talon/LF	ed the saturate PE backfilled	the are	rom the	
				eded with an appr									
1 114	.c. 414 41	:	1		.1-4-4-	1 . 1 C	1 1 1 1	1 .	1.1.		) CD	<del>, , , , , , , , , , , , , , , , , , , </del>	
regulations a	ITY that the	information gi are required t	iven above o renort ai	e is true and comp nd/or file certain	olete to release	notifications a	knowledge and und perform correct	inderstand	d that pur	suant to NM( eases which i	)CD ru may en	iles and	
public health	or the envi	ironment. The	acceptan	ce of a C-141 rep	ort by t	the NMOCD m	arked as "Final R	leport" do	oes not rel	ieve the opera	ator of	liability	
should their	operations l	have failed to	adequately	investigate and	remedia	ate contaminati	ion that pose a thr	eat to gro	ound wate	r, surface wat	er, hur	nan health	
				otance of a C-141	report	does not reliev	e the operator of	responsib	oility for c	ompliance w	ith any	other	
reuerar, state	, or local la	ws and/or regi		OIL CONSERVATION DIVISION									
of A. om						OIL CONSERVATION DIVISION							
Signature.	of Cla	TO 1-1	115										
Printed Name: Garrett Newton						Approved by District Supervisor:							
Title: Field S	Title: Field Supervisor						Approval Date:			Expiration Date:			
	E-mail Address: gnewton@pvtnetworks.net						Conditions of Approval:						
E-mail Addr										Attached .			
Date: 5/18/2	011			Phone: 575-513-	0230	,					1		
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