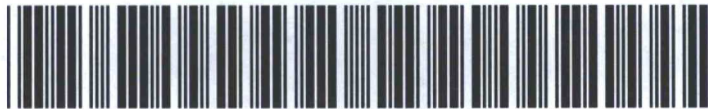




# AE Order Number Banner

## Report Description

This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.



**App Number:** pGRL1134152761

**1RP - 2768**

**CHAPARRAL ENERGY LLC**

2/10/2016

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
400 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: Chaparral Energy Co. LLC	Contact: Derek E. Presley	
Address: 701 Cedar Lake Blvd. Oklahoma City, OK 73114	Telephone No.: (405) 426-4091 X 1491	
Facility Name: WDQSU #96	Facility Type: Oil Well active	
Surface Owner: Willis Family Estate	Mineral Owner: Federal	Lease No.:

LOCATION OF RELEASE

Unit Letter C	Section 31	Township 24S	Range 38E	Feet from the 990	North/South Line NORTH	Feet from the 1700'	East/West Line WEST	County LEA
------------------	---------------	-----------------	--------------	----------------------	---------------------------	------------------------	------------------------	---------------

Latitude: 32.1783468827639

Longitude: 103.102621289441

NATURE OF RELEASE

Type of Release: Produce water and oil	Volume of Release: 7bbbls	Volume Recovered: 0bbbls
Source of Release: well casing surface valve corroded	Date and Hour of Occurrence: 11-29-11	Date and Hour of Discovery: 12:00pm
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES. To Whom?	
By Whom? OCD will be notified when C-141 is turned in, volume of release requires notification within 14 days	Date and Hour:	
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.\*

surface casing connection at 90° corroded allowing water to flow out. Connections replaced with new piping, valve and pressure gauge (zero reading on gauge). Leak area back dragged using backhoe to prevent livestock from drinking water.

Describe Area Affected and Cleanup Action Taken.\*

Affected area remained on location with approx. 1843sqft. WEE / ETOF NM has been contracted to delineate the spill site.

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.

OIL CONSERVATION DIVISION

Signature:	ENV SPECIALIST; Approved by District Supervisor: <i>Jeffrey Selinger</i>	
Printed Name: Derek E. Presley	Approval Date: 12/07/11	Expiration Date: 02/07/12
Title: Safety Specialist	Conditions of Approval: SUBMIT FINAL C-141 BY 02/07/12.	
E-mail Address: derek.presley@chaparralenergy.com	Attached <input type="checkbox"/>	IRP-12-11-2768
Date: 12/5/11	Phone: (405) 426-4091 X 1491	

\* Attach Additional Sheets If Necessary



# Earth Technologies of New Mexico Inc.

(A Whole Environmental Inc. Company)

ETNM PR-5

---

**Remediation and Site Restoration Protocol  
Chaparral Energy Co. LLC.  
WDQSU #96 Leak  
1RP-2768**

---

## 1.0 Purpose

This protocol is to provide a detailed outline of the steps to be employed in the remediation of a produce water & hydrocarbon release impact area on a location owned and operated by Chaparral Energy Co. identified as West Dollarhide Queen Sand Unit #96 (WDQSU #96) located approximately 6.48 miles Northeast of Jal, Lea County, New Mexico.

## 2.0 Scope

This protocol is site specific for the above project.

## 3.0 Preliminary

Prior to any field operations, Earth Technologies of New Mexico / Whole Earth Environmental (ETNM) shall conduct the following activities:

### 3.1 Client Review

3.1.1 ETNM shall meet with appointed personnel within Chaparral Energy Co. LLC. to review this protocol and make any requested modifications or alterations.

3.1.2 Changes to this protocol will be documented and submitted for final review by Chaparral Energy Co. LLC. prior to the initiation of actual fieldwork.

3.1.3 Upon client approval, this protocol and supporting documentation will be submitted to the Hobbs district office of the NMOCD for approval.

## 4.0 Safety

4.1 Prior to work on the site, ETNM / WEE shall obtain the location and phone numbers of the nearest emergency medical treatment facility. We will review all safety related issues with the appropriate Chaparral Energy LLC. personnel, sub-contractors and exchange phone numbers.

4.2 A tailgate safety meeting shall be held and documented each day. All sub-contractors must attend and sign the daily log-in sheet.

# **Earth Technologies of New Mexico Inc.**

(A Whole Environmental Inc. Company)

ETNM PR-5

---

**Remediation and Site Restoration Protocol  
Chaparral Energy Co. LLC.  
WDQSU #96 Leak  
1RP-2768**

---

## **1.0 Purpose**

This protocol is to provide a detailed outline of the steps to be employed in the remediation of a produce water & hydrocarbon release impact area on a location owned and operated by Chaparral Energy Co. identified as West Dollarhide Queen Sand Unit #96 (WDQSU #96) located approximately 6.48 miles Northeast of Jal, Lea County, New Mexico.

## **2.0 Scope**

This protocol is site specific for the above project.

## **3.0 Preliminary**

Prior to any field operations, Earth Technologies of New Mexico / Whole Earth Environmental (ETNM) shall conduct the following activities:

### **3.1 Client Review**

- 3.1.1 ETNM shall meet with appointed personnel within Chaparral Energy Co. LLC. to review this protocol and make any requested modifications or alterations.
- 3.1.2 Changes to this protocol will be documented and submitted for final review by Chaparral Energy Co. LLC. prior to the initiation of actual fieldwork.
- 3.1.3 Upon client approval, this protocol and supporting documentation will be submitted to the Hobbs district office of the NMOCD for approval.

## **4.0 Safety**

- 4.1 Prior to work on the site, ETNM / WEE shall obtain the location and phone numbers of the nearest emergency medical treatment facility. We will review all safety related issues with the appropriate Chaparral Energy LLC. personnel, sub-contractors and exchange phone numbers.
- 4.2 A tailgate safety meeting shall be held and documented each day. All sub-contractors must attend and sign the daily log-in sheet.



4.3 Anyone allowed on to location will be wearing standard PPE, and Fire Retardant Clothing or Coveralls. Each vehicle must be equipped with two way communication capabilities.

#### **5.0 Remediation Procedure**

5.1 The area impacted by the produce water and oil spill will be excavated to depth of 5' below ground surface. A 5pt composite of the excavation bottom will be pulled and sent to Cardinal Labs in Hobbs, NM for confirmation. A Geo-Synthetic Bentonite liner will be placed at the bottom of the excavation and backfilled using fresh clean backfill material from the landowner. The top twelve inches of the excavation will be backfilled using caliche from the landowner in order to maintain the pad location integrity. The excavated material will be transported to Prabo Disposal Facility near Eunice, NM for disposal.

#### **6.0 Site Restoration Procedure**

6.1 The site will backfilled and compacted with fresh clean soil, caliche and re-contoured to match the surrounding elevation.

#### **7.0 Closure Report**

At the conclusion of the project, ETNM shall prepare a closure report which contains the following minimum information:

- Photographs of the location prior to remediation
- Photographs of the excavation at the point of maximum soil removal
- Photographs of the location at time of final closure
- Lab results
- Field CL- titration results
- Disposal record of all manifest ticket numbers, volume amount of load, and date of disposal
- Copies of this protocol and all testing procedures

# EARTH TECHNOLOGIES OF NEW MEXICO

## CL- FIELD TITRATION, PID RESULTS

LOCATION: CHAPARRAL WDQSU #96

Sample pt.	DATE	TIME	DEPTH	SOIL	WATER	CF	AGNO3	CL-	PID	SOIL LITHOLOGY	LAB RESULTS							
											B	T	E	X	CL-	GRO	DRO	
B1 (SOURCE)	2/17/2012	1008	Surface	11	24	2.18	2.65	11560	20.1	7.5YR-4/2 brown lightly rocky sandy sand damp					11800	50.2	2890	
		1018	5'	10.5	25.8	2.46	1.86	9138	4.0	5YR-6/3 light reddish brown sandy sand damp								
		1042	10'	10.6	25.1	2.37	0.72	3409	3.7	5YR-6/2 pinkish gray sandy sand damp								
		1115	15'	10.4	28	2.69	0.84	4522	3.2	5YR-8/1 white rocky sandy sand dry								
		1208	20'	11.1	28.4	2.56	1.15	5883	4.4	5YR-8/1 white rocky sandy sand dry					7200			
	4/4/2012	943	25'	10.2	26.8	2.63	0.15	788	2.1	5YR-7/1 light gray rocky sandy sand damp								
		955	30'	10	27.9	2.79	0.12	669	1.9	5YR-7/1 light gray rocky sandy sand dry								
		1009	35'	10.1	27.2	2.69	0.14	754	1.9	5YR-7/2 pinkish gray sandy sand dry								
		1020	40'	10.2	27	2.65	0.04	212	1.8	5YR-5/4 reddish brown sandy sand damp								
		1031	45'	10	28.5	2.85	0.03	171	2.2	5YR-5/4 reddish brown sandy sand damp	<0.50	<0.50	<0.50	<0.150	112	<10.0	<10.0	

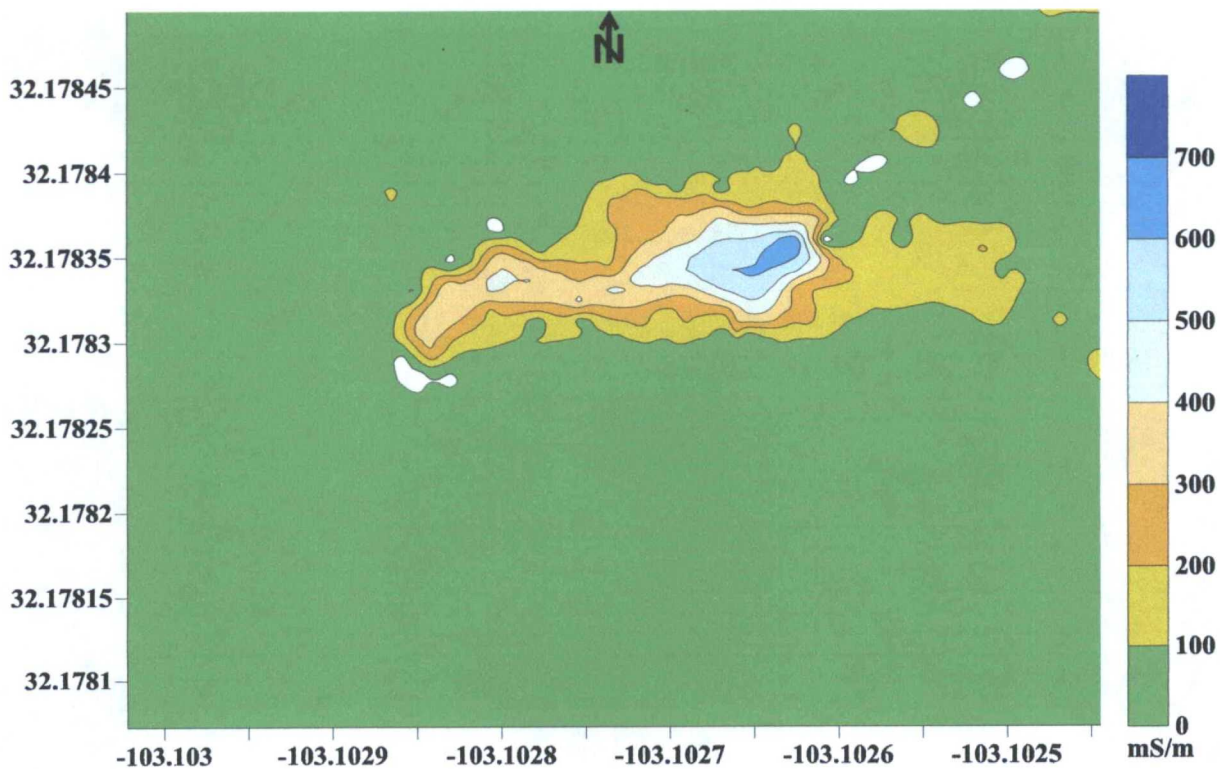


Sample pt.	DATE	TIME	DEPTH	SOIL	WATER	CF	AGNO3	CL-	PID	SOIL LITHOLOGY	LAB RESULTS						
											B	T	E	X	CL-	GRO	DRO
BORE #2	2/17/2012	1223	Surface	10.7	26.7	2.50	1.57	7833	65.7	5YR-5/3 reddish brown rocky sandy sand damp					9060		
		1233	5'	10.2	25.7	2.52	1.98	9975	3.0	5YR-6/3 light reddish brown sandy sand damp							
		1242	10'	10.9	25.5	2.34	0.7	3274	4.4	5YR-6/3 light reddish brown sandy sand damp							
		1254	15'	10.2	22.2	2.18		0	3.3	5YR-8/2 pinkish white sandy sand damp SAMPLE DIDN'T SETTLE OUT							
		114	20'	10.3	27.9	2.71	0.1	542	3.0	10YR-8/1 white sandy sand damp							
		146	23'	10.4	27.2	2.62	0.7	3660	2.8	5YR-8/2 pinkish white sandy sand damp					4480		
	4/4/2012	1117	25'	10.1	25.6	2.53	0.32	1622	2.2	5YR-8/1 white sandy sand dry							
		1128	30'	10.2	28.9	2.83	0.29	1643	2.4	5YR-8/1 white sandy sand dry							
		1140	35'	10.1	21.8	2.16	0.41	1769	2.2	5YR-5/4 reddish brown sandy sand damp							
		1154	40'	10.3	27.4	2.66	0.24	1276	2.2	5YR-5/4 reddish brown sandy sand damp							
		1202	45'	10.2	26.3	2.58	0.18	928	2.3	5YR-5/4 reddish brown sandy sand damp							
		1222	50'	10.3	29.8	2.89	0.08	463	2.2	2.5YR-7/6 light red sandy sand damp							
	4/5/2012	1237	55'	10.4	28.4	2.73	0.09	491	3.2	5YR-6/3 light reddish brown sandy sand damp							
		1255	60'	10.1	30.6	3.03	0.09	545	2.2	5YR-7/1 light gray sandy sand damp							
		109	65'	10.6	26.4	2.49	0.05	249	2.2	5YR-6/6 light red sandy sand damp							
		128	70'	10	28.5	2.85	0.08	456	2.1	5YR-6/6 light red sandy sand damp							
		727	75'	10.4	28	2.69	0.17	915	0.9	2.5YR-8/2 pinkish white sandy sand damp							
		744	80'	10.1	28.8	2.85	0.04	228	1.4	2.5YR-8/4 pink sandy sand dry							
		827	85'	10	28	2.8	0.03	168	1.7	2.5YR-8/4 pink sandy sand dry	<0.50	<0.50	<0.50	<0.150	160	<10.0	<10.0

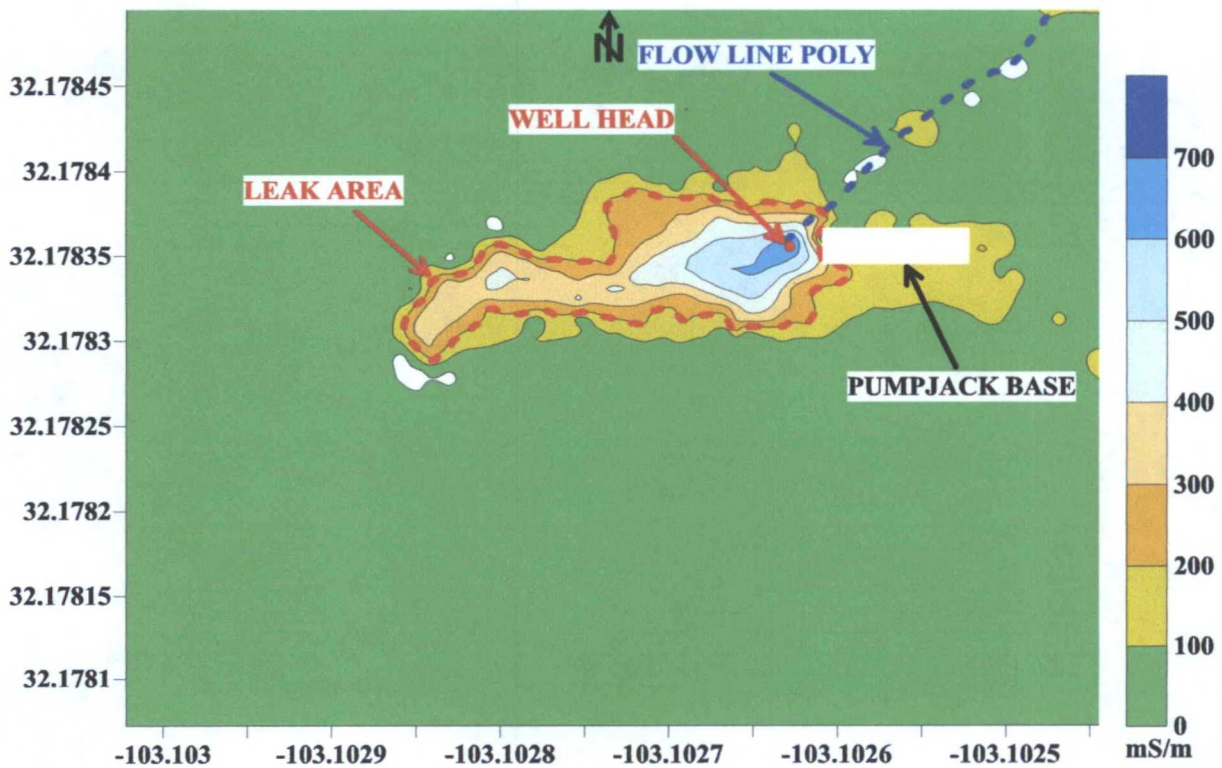
Sample pt.	DATE	TIME	DEPTH	SOIL	WATER	CF	AGNO3	CL-	PID	SOIL LITHOLOGY	LAB RESULTS						
											B	T	E	X	CL-	GRO	DRO
BORE #3	4/5/2012	913	Surface	10.3	25.8	2.50	2.8	14023	17.1	5YR-6/3 light reddish brown sandy sand damp							
		921	5'	10.2	23.6	2.31	0.04	185	3.3	5YR-6/3 light reddish brown sandy sand damp					32		
		931	10'	10.4	26.6	2.56	0.02	102	2.8	5YR-8/1 white lightly rocky sandy sand dry	<0.50	<0.50	<0.50	<0.150	32	<10.0	<10.0
		957	Surface	10.2	25.2	2.47	0.05	247	2.4	5YR-6/3 light reddish brown sandy sand dry							
BORE #4	4/5/2012	1000	5'	10.5	24.7	2.35	0.06	282	2.5	5YR-6/3 light reddish brown sandy sand damp					352		
		1005	10'	10.4	27.3	2.63	0.14	735	2.5	5YR-7/2 pinkish gray sandy sand damp							
		1025	15'	10.1	22.5	2.23	0.38	1693	2.6	5YR-8/1 white sandy sand damp							
		1035	20'	10.1	28.1	2.78	0.34	1891	2.7	5YR-8/2 pinkish white sandy sand damp							
		1043	25'	10.5	28.9	2.75	0.92	5063	2.6	5YR-8/1 white sandy sand dry							
		1058	30'	10	25.6	2.56	0.59	3020	2.4	5YR-8/1 white sandy sand dry							
		1109	35'	10	26.9	2.69	0.36	1936	2.9	5YR-6/4 light reddish brown sandy sand damp							
		1120	40'	10.1	27.3	2.70	0.1	540	2.6	5YR-5/4 reddish brown sandy sand damp							
		1132	45'	10.2	29.1	2.85	0.1	570	2.9	5YR-5/4 reddish brown sandy sand damp							
		1150	50'	10.3	27.7	2.69	0.1	538	3.3	5YR-5/4 reddish brown sandy sand damp							
		1207	55'	10.4	27.7	2.66	0.13	692	4.1	5YR-8/2 pinkish white sandy sand dry							
		1222	60'	10.1	28	2.77	0.15	831	2.2	5YR-8/2 pinkish white sandy sand dry							
		1234	65'	10.2	28	2.75	0.03	165	2.4	2.5YR-5/6 red sandy sand damp							
		1250	70'	10.3	28.3	2.75	0.04	220	2.6	2.5YR-7/6 light red sandy sand damp	<0.50	<0.50	<0.50	<0.150	272	<10.0	<10.0
		BORE #5	4/5/2012	142	Surface	10.2	26.1	2.56	0.01	51	1.7	5YR-7/2 pinkish gray sandy sand dry					
144	5'			10.5	28.5	2.71	0.06	326	2	5YR-8/2 pinkish white sandy sand dry							
150	10'			10.2	27.7	2.72	0.02	109	2.1	5YR-8/2 pinkish white sandy sand dry							
155	15'			10.6	27.6	2.60	0.03	156	2	5YR-8/2 pinkish white sandy sand dry					16		



Chaparral Energy LLC.  
WDQSU #96  
API #30-025-30166  
UL/C - SEC31 - T24S - R38E  
990'FNL & 1700'FWL  
GPS LAT & LON WGS84  
N32.1783468827639 / W103.102621289441  
12-1-11 EM38 SURVEY

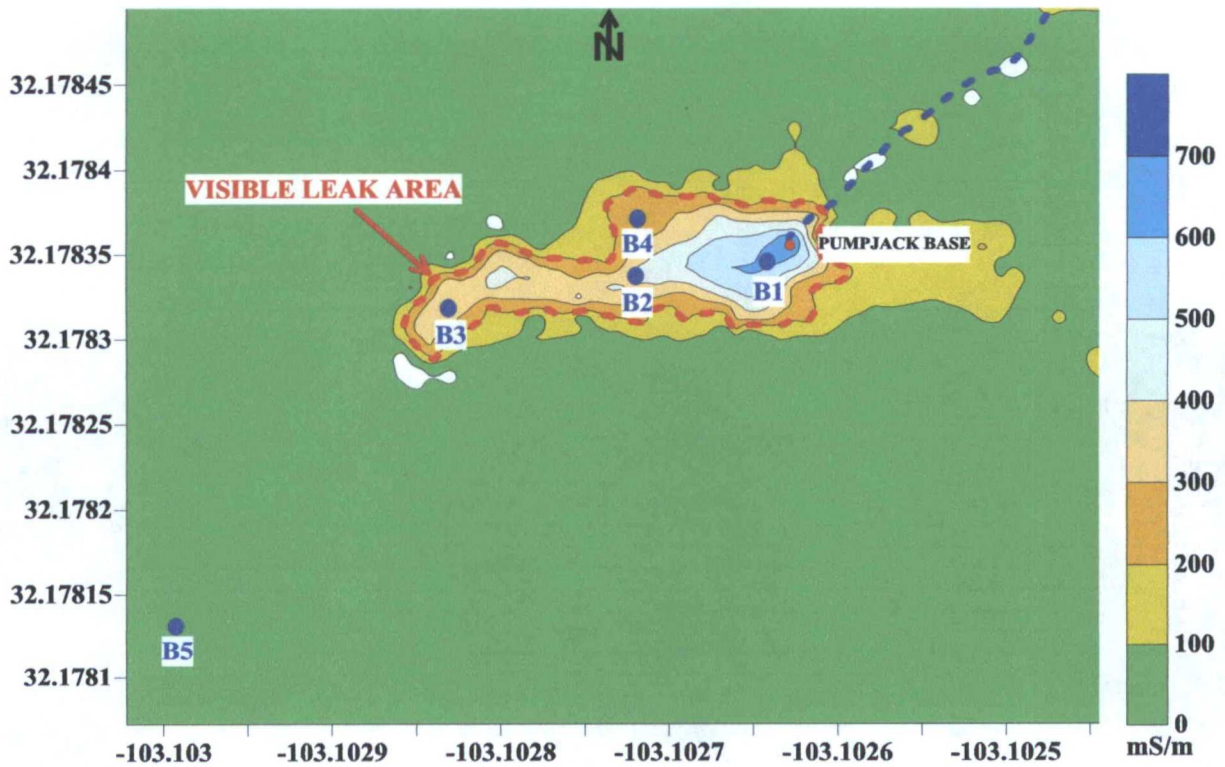


Chaparral Energy LLC.  
WDQSU #96  
API #30-025-30166  
UL/C - SEC31 - T24S - R38E  
990'FNL & 1700'FWL  
GPS LAT & LON WGS84  
N32.1783468827639 / W103.102621289441  
12-1-11 EM38 SURVEY SITE MAP

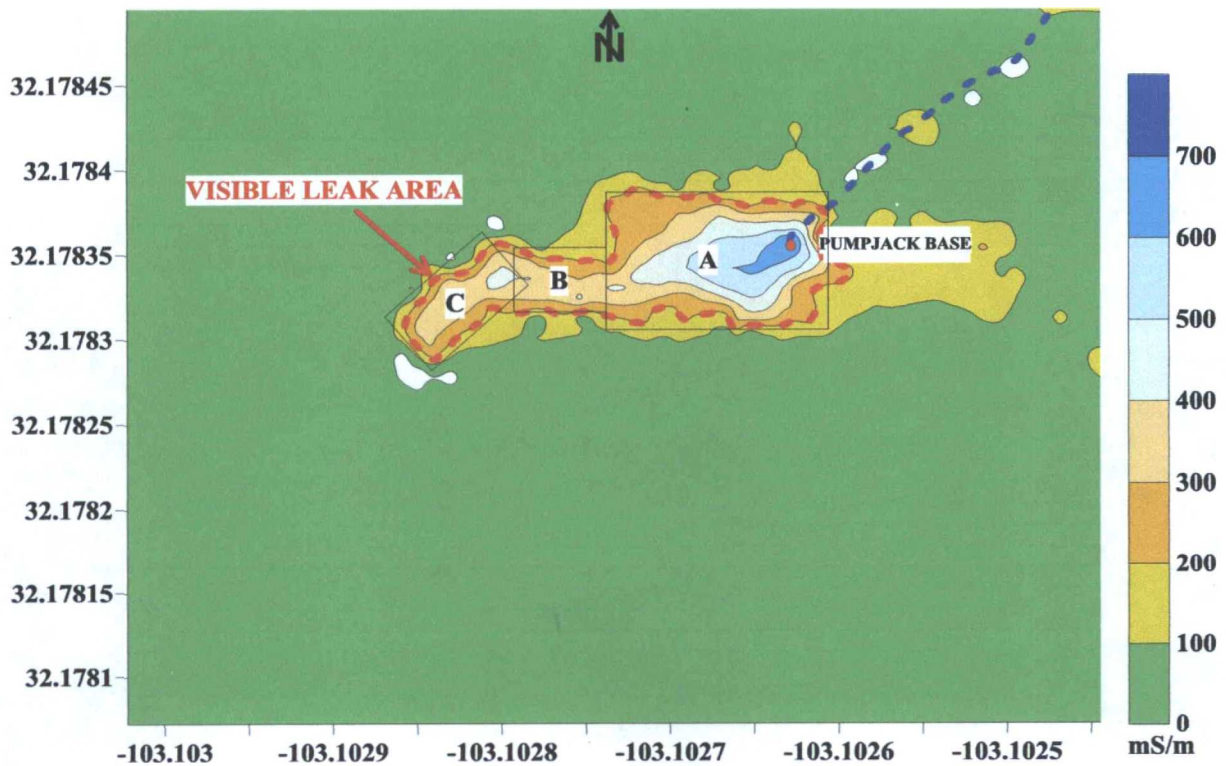




Chaparral Energy LLC.  
WDQSU #96  
API #30-025-30166  
UL/C - SEC31 - T24S - R38E  
990'FNL & 1700'FWL  
GPS LAT & LON WGS84  
N32.1783468827639 / W103.102621289441  
BORE LOCATION



Chaparral Energy LLC.  
WDQSU #96  
API #30-025-30166  
UL/C - SEC31 - T24S - R38E  
990'FNL & 1700'FWL  
GPS LAT & LON WGS84  
N32.1783468827639 / W103.102621289441  
EXCAVATION AREAS  
AREA A = 41'L X 30'W = 228cyds  
AREA B = 17'L X 14'W = 44cyds  
AREA C = 26'L X 14'W = 67cyds  
TOTAL CYDS = 339cyds















April 16, 2012

ROY RASCON

EARTH TECHNOLOGIES OF NEW MEXICO

904 WEST HUMBLE

HOBBS, NM 88240

RE: CWDQSU #96

Enclosed are the results of analyses for samples received by the laboratory on 04/13/12 14:17.

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:**

EARTH TECHNOLOGIES OF NEW MEXICO  
ROY RASCON  
904 WEST HUMBLE  
HOBBS NM, 88240  
Fax To: NONE

Received: 04/13/2012  
Reported: 04/16/2012  
Project Name: CWDQSU #96  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 04/04/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: B 1 @ 45' (H200860-01)**

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	04/16/2012	ND	2.08	104	2.00	2.80		
Toluene*	<0.050	0.050	04/16/2012	ND	2.15	108	2.00	2.84		
Ethylbenzene*	<0.050	0.050	04/16/2012	ND	2.14	107	2.00	2.99		
Total Xylenes*	<0.150	0.150	04/16/2012	ND	6.61	110	6.00	2.53		

Surrogate: 4-Bromofluorobenzene (PIL) 101 % 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	112	16.0	04/16/2012	ND	416	104	400	0.00	
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	04/14/2012	ND	190	95.0	200	2.55	
DRO >C10-C28	<10.0	10.0	04/14/2012	ND	211	105	200	11.8	

Surrogate: 1-Chlorooctane 88.9 % 55.5-154

Surrogate: 1-Chlorooctadecane 84.0 % 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:**

EARTH TECHNOLOGIES OF NEW MEXICO  
ROY RASCON  
904 WEST HUMBLE  
HOBBS NM, 88240  
Fax To: NONE

Received: 04/13/2012  
Reported: 04/16/2012  
Project Name: CWDQSU #96  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 04/05/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: B 2 @ 85' (H200860-02)**

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	04/16/2012	ND	2.08	104	2.00	2.80		
Toluene*	<0.050	0.050	04/16/2012	ND	2.15	108	2.00	2.84		
Ethylbenzene*	<0.050	0.050	04/16/2012	ND	2.14	107	2.00	2.99		
Total Xylenes*	<0.150	0.150	04/16/2012	ND	6.61	110	6.00	2.53		

Surrogate: 4-Bromofluorobenzene (PII) 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	160	16.0	04/16/2012	ND	416	104	400	0.00	

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	04/14/2012	ND	190	95.0	200	2.55	
DRO >C10-C28	<10.0	10.0	04/14/2012	ND	211	105	200	11.8	

Surrogate: 1-Chlorooctane 98.9 % 55.5-154

Surrogate: 1-Chlorooctadecane 103 % 57.6-158

**Sample ID: B 3 @ 5' (H200860-03)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/16/2012	ND	416	104	400	0.00	

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.



Caley D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

EARTH TECHNOLOGIES OF NEW MEXICO  
ROY RASCON  
904 WEST HUMBLE  
HOBBS NM, 88240  
Fax To: NONE

Received: 04/13/2012  
Reported: 04/16/2012  
Project Name: CWDQSU #96  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 04/05/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: B 3 @ 10' (H200860-04)**

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	04/16/2012	ND	2.08	104	2.00	2.80	
Toluene*	<0.050	0.050	04/16/2012	ND	2.15	108	2.00	2.84	
Ethylbenzene*	<0.050	0.050	04/16/2012	ND	2.14	107	2.00	2.99	
Total Xylenes*	<0.150	0.150	04/16/2012	ND	6.61	110	6.00	2.53	

Surrogate: 4-Bromofluorobenzene (PII) 100 % 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	32.0	16.0	04/16/2012	ND	416	104	400	0.00	

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	04/14/2012	ND	190	95.0	200	2.55	
DRO >C10-C28	<10.0	10.0	04/14/2012	ND	211	105	200	11.8	

Surrogate: 1-Chlorooctane 87.9 % 55.5-154

Surrogate: 1-Chlorooctadecane 85.9 % 57.6-158

**Sample ID: B 4 @ 5' (H200860-05)**

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	04/16/2012	ND	416	104	400	0.00	

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.



Caley D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

EARTH TECHNOLOGIES OF NEW MEXICO  
ROY RASCON  
904 WEST HUMBLE  
HOBBS NM, 88240  
Fax To: NONE

Received: 04/13/2012  
Reported: 04/16/2012  
Project Name: CWDQSU #96  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 04/05/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: B 4 @ 70' (H200860-06)**

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	04/16/2012	ND	2.08	104	2.00	2.80		
Toluene*	<0.050	0.050	04/16/2012	ND	2.15	108	2.00	2.84		
Ethylbenzene*	<0.050	0.050	04/16/2012	ND	2.14	107	2.00	2.99		
Total Xylenes*	<0.150	0.150	04/16/2012	ND	6.61	110	6.00	2.53		

Surrogate: 4-Bromofluorobenzene (PIL) 104 % 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	272	16.0	04/16/2012	ND	416	104	400	0.00	

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	04/14/2012	ND	190	95.0	200	2.55		
DRO >C10-C28	<10.0	10.0	04/14/2012	ND	211	105	200	11.8		

Surrogate: 1-Chlorooctane 108 % 55.5-154

Surrogate: 1-Chlorooctadecane 112 % 57.6-158

**Sample ID: B 5 @ SURFACE (H200860-07)**

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	04/16/2012	ND	416	104	400	0.00	

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:**

EARTH TECHNOLOGIES OF NEW MEXICO  
ROY RASCON  
904 WEST HUMBLE  
HOBBS NM, 88240  
Fax To: NONE

Received: 04/13/2012  
Reported: 04/16/2012  
Project Name: CWDQSU #96  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 04/05/2012  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: B 5 @ 15' (H200860-08)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/16/2012	ND	2.08	104	2.00	2.80		
Toluene*	<0.050	0.050	04/16/2012	ND	2.15	108	2.00	2.84		
Ethylbenzene*	<0.050	0.050	04/16/2012	ND	2.14	107	2.00	2.99		
Total Xylenes*	<0.150	0.150	04/16/2012	ND	6.61	110	6.00	2.53		

Surrogate: 4-Bromofluorobenzene (PII) 103 % 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	128	16.0	04/16/2012	ND	416	104	400	0.00	
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	04/14/2012	ND	190	95.0	200	2.55	
DRO >C10-C28	<10.0	10.0	04/14/2012	ND	211	105	200	11.8	

Surrogate: 1-Chlorooctane 101 % 55.5-154

Surrogate: 1-Chlorooctadecane 102 % 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

**Company Name:**

**Project Manager:**

**Address:**

City:

Phone #:

Project #:

Project Na

**Project Location:**

**Sampler Name:** E. Rios-Lora

FOR LAB USE ONLY

**Lab I.D.**

**Sample I.D.**

H20086-i

21.8.2017

07-2018

57-75

५३३

4830, 10.

240

23

0100

MC 6.87

25.15

---

---

liability and Damages, Cardinals in

...including those for negligence an...  
...of staff. Confidential to liability for incidents...

losses arising out of or related to the

By: \_\_\_\_\_

1

1850

led By:

100

d By: (Circle One)

UPS - Bus - Other

100

dinal cannot accept

100

† Cardinal cannot accept verbal changes. Please fax written changes to 505.393.2476

11

---

Page 8 of 8

25th 14th