



# 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: pGRL1231442260**

**1RP - 2864**

**CHEVRON U S A INC**



October 24, 2012

Daniel Dominguez  
Environmental Plus, Inc.  
P.O. Box 1558  
Eunice, NM 88231

30-025-26348

RE: QUAIL QUEEN #10

Enclosed are the results of analyses for samples received by the laboratory on 10/18/12 15:26.

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

approved for backfill  
  
Environmental Specialist  
NMCLD - DIST 1  
10/29/12

**Analytical Results For:**

 Environmental Plus, Inc.  
 Daniel Dominguez  
 P.O. Box 1558  
 Eunice NM, 88231  
 Fax To: (505) 394-2601

 Received: 10/18/2012  
 Reported: 10/24/2012  
 Project Name: QUAIL QUEEN #10  
 Project Number: 161304  
 Project Location: UL-H, SECT. 11, T19S, R34E

 Sampling Date: 10/17/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Celey D. Keene

**Sample ID: ST1 (SURFACE) (H202552-01)**

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	0.577	0.500	10/24/2012	ND	1.76	88.1	2.00	0.795		
Toluene*	1.39	0.500	10/24/2012	ND	1.93	96.6	2.00	1.35		
Ethylbenzene*	1.60	0.500	10/24/2012	ND	1.93	96.7	2.00	1.60		
Total Xylenes*	5.16	1.50	10/24/2012	ND	5.85	97.6	6.00	2.00		

Surrogate: 4-Bromofluorobenzene (PIC) 123 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	36000	16.0	10/22/2012	ND	416	104	400	3.92		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	

GRO C6-C10	1340	200	10/23/2012	ND	192	95.9	200	1.87	
DRO >C10-C28	18600	200	10/23/2012	ND	210	105	200	1.62	

Surrogate: 1-Chlorooctane 181 % 65.2-140

Surrogate: 1-Chlorooctadecane 401 % 63.6-154

*Excavated*

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 Environmental Plus, Inc.  
 Daniel Dominguez  
 P.O. Box 1558  
 Eunice NM, 88231  
 Fax To: (505) 394-2601

 Received: 10/18/2012  
 Reported: 10/24/2012  
 Project Name: QUAIL QUEEN #10  
 Project Number: 161304  
 Project Location: UL-H, SECT. 11, T19S, R34E

 Sampling Date: 10/17/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Celey D. Keene

**Sample ID: ST1 (4.5') (H202552-02)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/24/2012	ND	1.76	88.1	2.00	0.795	
Toluene*	<0.050	0.050	10/24/2012	ND	1.93	96.6	2.00	1.35	
Ethylbenzene*	<0.050	0.050	10/24/2012	ND	1.93	96.7	2.00	1.60	
Total Xylenes*	<0.150	0.150	10/24/2012	ND	5.85	97.6	6.00	2.00	

Surrogate: 4-Bromofluorobenzene (PIE) 103 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>144</b>	16.0	10/22/2012	ND	416	104	400	3.92	

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	10/23/2012	ND	192	95.9	200	1.87	
<b>DRO &gt;C10-C28</b>	<b>27.7</b>	10.0	10/23/2012	ND	210	105	200	1.62	

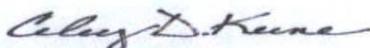
Surrogate: 1-Chlorooctane 89.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 98.7 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 Environmental Plus, Inc.  
 Daniel Dominguez  
 P.O. Box 1558  
 Eunice NM, 88231  
 Fax To: (505) 394-2601

 Received: 10/18/2012  
 Reported: 10/24/2012  
 Project Name: QUAIL QUEEN #10  
 Project Number: 161304  
 Project Location: UL-H, SECT. 11, T19S, R34E

 Sampling Date: 10/17/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Celey D. Keene

**Sample ID: ST2 (1.5') (H202552-03)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/24/2012	ND	1.76	88.1	2.00	0.795	
Toluene*	<0.050	0.050	10/24/2012	ND	1.93	96.6	2.00	1.35	
Ethylbenzene*	<0.050	0.050	10/24/2012	ND	1.93	96.7	2.00	1.60	
Total Xylenes*	<0.150	0.150	10/24/2012	ND	5.85	97.6	6.00	2.00	

Surrogate: 4-Bromofluorobenzene (PIC) 102 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>64.0</b>	16.0	10/22/2012	ND	416	104	400	3.92	

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	10/23/2012	ND	192	95.9	200	1.87	
<b>DRO &gt;C10-C28</b>	<b>37.4</b>	10.0	10/23/2012	ND	210	105	200	1.62	

Surrogate: 1-Chlorooctane 87.3 % 65.2-140

Surrogate: 1-Chlorooctadecane 94.8 % 63.6-154

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 Environmental Plus, Inc.  
 Daniel Dominguez  
 P.O. Box 1558  
 Eunice NM, 88231  
 Fax To: (505) 394-2601

 Received: 10/18/2012  
 Reported: 10/24/2012  
 Project Name: QUAIL QUEEN #10  
 Project Number: 161304  
 Project Location: UL-H, SECT. 11, T19S, R34E

 Sampling Date: 10/17/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Celey D. Keene

**Sample ID: ST3 (2') (H202552-04)**

BTEX 8021B		mg/kg		Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/24/2012	ND	1.76	88.1	2.00	0.795		
Toluene*	<0.050	0.050	10/24/2012	ND	1.93	96.6	2.00	1.35		
Ethylbenzene*	<b>0.072</b>	0.050	10/24/2012	ND	1.93	96.7	2.00	1.60		
Total Xylenes*	<b>0.253</b>	0.150	10/24/2012	ND	5.85	97.6	6.00	2.00		

Surrogate: 4-Bromofluorobenzene (PII) 134 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>16.0</b>	16.0	10/22/2012	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<50.0	50.0	10/23/2012	ND	192	95.9	200	1.87		
<b>DRO &gt;C10-C28</b>	<b>514</b>	50.0	10/23/2012	ND	210	105	200	1.62		

Surrogate: 1-Chlorooctane 97.0 % 65.2-140

Surrogate: 1-Chlorooctadecane 108 % 63.6-154

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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 Environmental Plus, Inc.  
 Daniel Dominguez  
 P.O. Box 1558  
 Eunice NM, 88231  
 Fax To: (505) 394-2601

 Received: 10/18/2012  
 Reported: 10/24/2012  
 Project Name: QUAIL QUEEN #10  
 Project Number: 161304  
 Project Location: UL-H, SECT. 11, T19S, R34E

 Sampling Date: 10/17/2012  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Celey D. Keene

**Sample ID: ST3 (3') (H202552-05)**

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/24/2012	ND	1.76	88.1	2.00	0.795		
Toluene*	<0.050	0.050	10/24/2012	ND	1.93	96.6	2.00	1.35		
Ethylbenzene*	<0.050	0.050	10/24/2012	ND	1.93	96.7	2.00	1.60		
Total Xylenes*	<0.150	0.150	10/24/2012	ND	5.85	97.6	6.00	2.00		

Surrogate: 4-Bromofluorobenzene (PIE) 103 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	10/22/2012	ND	416	104	400	3.92		

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	10/23/2012	ND	192	95.9	200	1.87		
DRO >C10-C28	50.6	10.0	10/23/2012	ND	210	105	200	1.62		

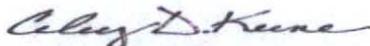
Surrogate: 1-Chlorooctane 91.2 % 65.2-140

Surrogate: 1-Chlorooctadecane 99.6 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- 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. Keene, Lab Director/Quality Manager

# Environmental Plus, Inc.

P.O. Box 1558, 2100 Avenue "O", Eunice, NM 88231  
 (575) 394-3481 FAX: (575) 394-2601

## Chain of Custody Form

LAB: Cardinal

Page 8 of 8

Company Name	Environmental Plus, Inc.	Remit Invoice To:	
EPI Project Manager	Daniel Dominguez	Attn: Daniel Dominguez PO Box 1558 Eunice, NM 88231	
Mailing Address	P.O. BOX 1558		
City, State, Zip	Eunice New Mexico 88231		
EPI Phone#/Fax#	575-394-3481 / 575-394-2601		
Client Company	Chesapeake		
Facility Name	Quail Queen #10		
Location	UL-H, Sect. 11. T 19 S, R 34 E		
Project Reference	161304		
EPI Sampler Name	David Robinson	<b>ANALYSIS REQUEST</b>	

LAB I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV.		SAMPLING		BTEX 8021B	TPH 8015M	CHLORIDES (Cl <sup>-</sup> )	SULFATES (SO <sub>4</sub> <sup>2-</sup> )	PH	TCLP	OTHER >>>	PAH
			GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE	ICE/COOL	OTHER								
H202552-01	1	1		X					X		17-Oct-12	9:10	X	X	X				
02	2	1		X					X		17-Oct-12	9:30	X	X	X				
03	3	1		X					X		17-Oct-12	10:36	X	X	X				
04	4	1		X					X		17-Oct-12	11:58	X	X	X				
05	5	1		X					X		17-Oct-12	14:00	X	X	X				
6																			
7																			
8																			
9																			
10																			

Sampler Relinquished by:	10/17/12	Received By:	E-mail results to: ddominguezepi@gmail.com and bradley.blevins@chk.com
<i>David Robinson</i>	3:00 PM	<i>Daniel Dominguez</i>	
Relinquished by:	10/18/12	Received by: (lab staff)	
<i>Daniel Dominguez</i>	3:26 PM	<i>Cathy Keene</i>	
Delivered by:	0.5°C	Sample Cool & Intact	Checked By:
		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<i>CHK</i>

#26