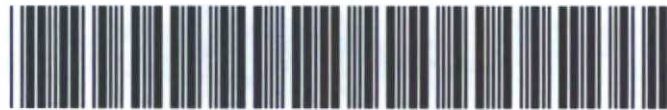




AE Order Number Banner

Report Description

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



App Number: pKJ1603535201

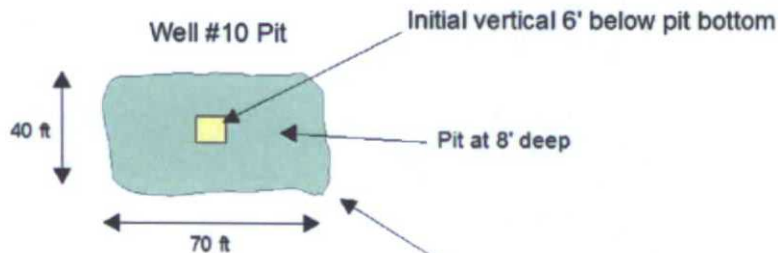
1RP - 2681

BREITBURN OPERATING LP

RECEIVED

FEB 07 2011
HOBBSDUCD

Temporary open
soil bore for
groundwater
verification



Depth	Initial vertical					
	CI-	PID	LAB CI-	GRO	DRO	
1'	83	5.1	<16	<100	3250	
2'	116	3.4	<16	<100	1650	
3'	155	1.3				
4'	121	0.9				
5'	89	1.5				
6'	51	1.1	16	<10	<10	

5 point bottom composite

CI-	TPH 418.1	GRO	DRO	B	T	E	X
16	2770	<50	335	<0.05	<0.05	<0.05	<0.15

Spoil pile from bottom

CI-	TPH 418.1	GRO	DRO	B	T	E	X
16	7700	<50	384	<0.05	<0.05	<0.05	<0.15

Spoil piles from walls

CI-	TPH 418.1	GRO	DRO	B	T	E	X
64	3790	<50	712	<0.05	<0.05	<0.05	<0.15

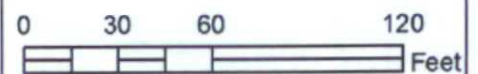
Pit berm spoil piles

CI-	TPH 418.1	GRO	DRO	B	T	E	X
96	<100	<10	16.7	<0.05	<0.05	<0.05	<0.15



Quantum Resources
NE Pearl Queen
Well #10 Pit

Legals: UL/D sec. 24
T19S R35E



Drawing date: 11-1-10
Drafted by: L. Weinheimer

2681

February 21, 2011

HACK CONDER

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

112 W. TAYLOR

HOBBS, NM 88240

RE: N E PEARL QUEEN #10 PIT

Enclosed are the results of analyses for samples received by the laboratory on 02/17/11 8:30.

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 Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 (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:

RICE ENVIRONMENTAL CONSULTING & SAFETY
HACK CONDER
112 W. TAYLOR
HOBBS NM, 88240
Fax To: (575) 397-1471

Received: 02/17/2011
Reported: 02/21/2011
Project Name: N E PEARL QUEEN #10 PIT
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 02/15/2011
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: 5 PT BOTTOM COMP @ 12 FT. (H100314-01)

BTX 80218		mg/kg		Analyzed By: CMS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2011	ND	1.97	98.3	2.00	1.85	
Toluene*	<0.050	0.050	02/17/2011	ND	2.04	102	2.00	10.3	
Ethylbenzene*	<0.050	0.050	02/17/2011	ND	2.09	104	2.00	10.5	
Total Xylenes*	<0.150	0.150	02/17/2011	ND	6.23	104	6.00	10.4	

Surrogate: 4-Bromofluorobenzene (PIL) 92.8 % 70-130

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	02/17/2011	ND	432	108	400	0.00	

TPH 418.1		mg/kg		Analyzed By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	1430	100	02/21/2011	ND	1320	111	1190	2.99	

TPH 8015M		mg/kg		Analyzed By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/17/2011	ND	201	100	200	1.60	
DRO >C10-C28	306	10.0	02/17/2011	ND	206	103	200	1.87	

Surrogate: 1-Chlorooctane 100 % 70-130

Surrogate: 1-Chlorooctadecane 93.2 % 70-130

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
HACK CONDER
112 W. TAYLOR
HOBBS NM, 88240
Fax To: (575) 397-1471

Received: 02/17/2011
Reported: 02/21/2011
Project Name: N E PEARL QUEEN #10 PIT
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 02/15/2011
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: BLENDED BACKFILL (H100314-02)

BTX 8021B			mg/kg		Analyzed By: CMS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/17/2011	ND	1.97	98.3	2.00	1.85	
Toluene*	<0.050	0.050	02/17/2011	ND	2.04	102	2.00	10.3	
Ethylbenzene*	<0.050	0.050	02/17/2011	ND	2.09	104	2.00	10.5	
Total Xylenes*	<0.150	0.150	02/17/2011	ND	6.23	104	6.00	10.4	

Surrogate: 4-Bromofluorobenzene (PIL) 99.8 % 70-130

Chloride, SM4500Cl-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	02/17/2011	ND	432	108	400	0.00	

TPH 418.1			mg/kg		Analyzed By: AB				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	1820	100	02/21/2011	ND	1320	111	1190	2.99	

TPH 8015M			mg/kg		Analyzed By: AB				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/17/2011	ND	201	100	200	1.60	
DRO >C10-C28	211	10.0	02/17/2011	ND	206	103	200	1.87	

Surrogate: 1-Chlorooctane 99.8 % 70-130

Surrogate: 1-Chlorooctadecane 96.6 % 70-130

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*=Accredited Analyte

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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

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Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

Company Name: Quantum Resources		P.O. #:		BILL TO										ANALYSIS REQUEST																			
Project Manager: Rice Environmental Consulting and Safety		Address: 122 West Taylor		Company:		Attn:		Address:		City:		State:		Zip:		Phone #:		Fax #:		Chlorides		TPH 8015 M		BTEX		Texas TPH		Complete Cations/Anions		TPH 8015 M Extended Thru C40		EPA 418.1	
City: Hobbs		State: NM		Zip: 88240		Phone #:		Fax #:		Address:		City:		State:		Zip:		Phone #:		Fax #:													
Project #:		Project Owner:		Project Name: NE Pearl Queen # 10 Pit		Project Location: NE Pearl Queen # 10 Pit		Sampler Name: Jordan Woodfin		Matrix		PRESERV		SAMPLING		DATE		TIME															
FOR LAB USE ONLY		Sample I.D.		GROUNDWATER		WASTEWATER		SOIL		SLUDGE		OTHER:		ACID/BASE:		ICE / COOL		OTHER:															
Lab I.D.		5pt Bottom Comp. @ 12 ft		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓	
Blended Backfill		2		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓	

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Relinquished By: Jordan Woodfin	Date: 2/17/11	Received By: Jodi Anderson	Date: 2/17/11
Relinquished By:	Date:	Received By:	Date:
Delivered By: (Circle One)	Sample Condition	Checked By:	
Sampler - UPS - Bus - Other:	Cool ☐ Intact ☐	Yes ☐ No ☐	

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS: email results
Hcorder@riceswd.com; jwoodfin@riceswd.com;
Lweinheimer@riceswd.com kjonas@riceswd.com

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

NEED SAMPLES BACK, PLEASE