

1R - 426-107

**GENERAL  
CORRESPONDENCE**

**YEAR(S):  
2007**

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# **RICE** *Operating Company*

122 West Taylor • Hobbs, NM 88240  
Phone: (505) 393-9174 • Fax: (505) 397-1471

**CERTIFIED MAIL**  
**RETURN RECEIPT NO. 7005 1820 0001 6804 4936**

February 25, 2008

Mr. Wayne Price  
New Mexico Energy, Minerals, & Natural Resources  
Oil Conservation Division, Environmental Bureau  
1220 S. St. Francis Drive  
Santa Fe, New Mexico 87505

**RE: NOTIFICATION OF GROUNDWATER IMPACT**  
**BD jet. P-26-2, #1R0426-107**  
**Unit P, Sec. 26, T21S, R37E**

Mr. Price:

Rice Operating Company (ROC) notifies the Director of the New Mexico Oil Conservation Division (OCD), Environmental Bureau of groundwater impact at the above-referenced site in accordance with NM Rule 116. The remediation of this site may be subject to NM Rule 19 procedures.

The following work was performed in accordance with the OCD-approved (verbal 7/18/2007) Investigation and Characterization Plan (ICP) submitted by the consulting company, Trident Environmental (Trident), to investigate potential groundwater concerns at this junction box site near Eunice. A soil boring for vertical delineation of chloride and a 2-inch monitoring well were installed on October 30, 2007 under the supervision of Gilbert Van Deventer of Trident. Groundwater was encountered at approximately 47 feet. The well was developed and sampled pursuant to OCD guidelines by Arc Environmental (Arc) of Lovington. Laboratory analyses of two sampling events confirm the Water Quality Control Commission standards for chloride and Total Dissolved Solids are exceeded at the monitoring well. Arc will continue to sample the well on a quarterly basis. Trident will be evaluating this groundwater data for the submission of a Corrective Action Plan.

ROC is the service provider (agent) for the BD Salt Water Disposal System and has no ownership of any portion of the pipelines, wells, or facilities. The BD System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis. Environmental remediation projects of this magnitude require System Partner AFE approval and work begins as funds are received.

Please accept this notification for the above-referenced site. Should you have any questions or concerns regarding this site, please do not hesitate to contact me.

RICE OPERATING COMPANY

A handwritten signature in black ink that reads "Kristin Farris Pope". The signature is written in a cursive, flowing style.

Kristin Farris Pope  
Project Scientist

enclosures: 2 water analyses, soil boring log, well log, 2 maps

cc: SC, Trident, file, Mr. Chris Williams  
NMOCD, District 1 Office  
1625 N. French Drive  
Hobbs, NM 88240

### SOIL BORING LITHOLOGIC LOG



BOREHOLE NO.: <u>B-1</u>	TOTAL DEPTH: <u>40 Feet</u>
SITE ID: <u>BD Jct. P-26-2</u>	CLIENT: <u>RICE Operating Company</u>
CONTRACTOR: <u>Harrison &amp; Cooper, Inc.</u>	COUNTY: <u>Lea</u>
DRILLING METHOD: <u>Air Rotary</u>	STATE: <u>New Mexico</u>
START DATE: <u>10/30/07</u>	LOCATION: <u>T21S-R37E-Sec 26-Unit P</u>
COMPLETION DATE: <u>10/30/07</u>	FIELD REP.: <u>G. Van Deventer</u>
COMMENTS: <u>Boring located 8 feet west of former junction box (plate marker).</u>	
<u>Photo at left shows drilling of B-1 (facing west) with marker plate in foreground.</u>	

	Sample			Chloride (ppm)	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION: LITHOLOGY, COLOR, GRAIN SIZE, SORTING, ROUNDING, CONSOLIDATION, DISTINGUISHING FEATURES	
	Depth	Time	Type					
3/8 Bentonite Hole Plug			Surface			BF	Compacted backfill material consisting of fine-grained silty sand with calcium carbonate in matrix, pale yellowish brown (10YR 6/2), loose, unconsolidated, dry.	
	5					CL	Compacted clay layer, dusky red (5R 3/4).	
	10					BF	Compacted backfill material consisting of fine-grained silty sand with calcium carbonate in matrix, pale yellowish brown (10YR 6/2), loose, unconsolidated, dry.	
		1405		Split Spoon	209	0		
	15						SW/CAL	Fine-grained sand with calcium carbonate in matrix, pale yellowish brown (10YR 6/2), unconsolidated, dry.
		1408		Split Spoon	294	4		Fine-grained sand with calcium carbonate in matrix, pale yellowish brown (10YR 6/2), unconsolidated, dry.
	20						SW/CAL	Fine-grained sand with calcium carbonate in matrix, pale yellowish brown (10YR 6/2), unconsolidated, dry.
		1422		Split Spoon	2658	0		Fine-grained sand, grayish orange (5YR 7/4) with some very pale orange (10YR 8/2) calcium carbonate in matrix, moderately hard. Sand grains are medium-sorted, subrounded, unconsolidated, dry.
	25						SM/CAL	Very fine-grained sand with calcium carbonate in matrix and intermittent hard (indurated) caliche, very pale orange (10YR 8/2). Sand grains are medium-sorted, subrounded, unconsolidated, dry. Sample submitted for laboratory analysis with results as follows: Chloride = 4670 mg/kg.
		1435		Split Spoon	5025	0		
	30						SM/CAL	Very fine-grained sand with calcium carbonate in matrix and intermittent hard (indurated) caliche, very pale orange (10YR 8/2). Sand grains are medium-sorted, subrounded, unconsolidated, dry.
		1445		Split Spoon	2555	0		
	35						SM/CAL	Very fine-grained sand with calcium carbonate in matrix and intermittent hard (indurated) caliche, very pale orange (10YR 8/2). Sand grains are medium-sorted, subrounded, unconsolidated, dry.
		1449		Split Spoon	2309	0		
	40	1505		Cuttings	2100			Very fine and fine-grained sand with calcium carbonate in matrix and intermittent hard (indurated) caliche, pale yellowish brown (10YR 6/2). Sand grains are medium-sorted, subrounded, unconsolidated, dry.
							Bottom of boring at 40 feet below ground surface.	
45								
50								

← 5" →





6th Street

Eunice

176

Avenue I

Avenue G

East Avenue F

1st Street

Avenue D

Railroad tracks

BD Jct. P-26-2

BD P-26-1 Vent

Texas Avenue

209

HWY 18

© 2008 Tele Atlas  
© 2008 Europa Technologies

Image © 2008 DigitalGlobe

Pointler 32°26'30.93" N 103°08'11.10" W elev 3379 ft Streaming 100%

Google  
Eye alt 11675 ft



Point P-20-1 Vent  
Q B-1  
MW-1

Point P-20-1  
MW-1

Google

© 2007 TerraMetrics  
Imagery © 2007 DigitalGlobe  
Satellite Imagery 2007

200 ft

Point P-20-1 Vent  
Q B-1  
MW-1

Eye Alt 690 ft



ANALYTICAL RESULTS FOR  
 RICE OPERATING COMPANY  
 ATTN: KRISTIN FARRIS-POPE  
 122 W. TAYLOR STREET  
 HOBBS, NM 88240  
 FAX TO: (575) 397-1471

Receiving Date: 01/15/08  
 Reporting Date: 01/22/08  
 Project Number: NOT GIVEN  
 Project Name: BD P-26-2  
 Project Location: T21S R37E SEC26 P-LEA COUNTY, NM

Sampling Date: 01/14/08  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT  
 Sample Received By: ML  
 Analyzed By: HM/KS

LAB NUMBER SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (uS/cm)	T-Alkalinity (mgCaCO <sub>3</sub> /L)
ANALYSIS DATE:	01/21/08	01/21/08	01/21/08	01/21/08	01/16/08	01/16/08
H14087-1 MONITOR WELL #1	3,245	163	113	69.5	16,110	344
Quality Control	NR	49.2	52.4	2.93	1,433	NR
True Value QC	NR	50.0	50.0	3.00	1,413	NR
% Recovery	NR	98.5	105	97.8	101	NR
Relative Percent Difference	NR	< 0.1	3.0	8.5	1.4	NR

METHODS:	SM3500-Ca-D	3500-Mg E	8049	120.1	310.1
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	Cl <sup>-</sup> (mg/L)	SO <sub>4</sub> (mg/L)	CO <sub>3</sub> (mg/L)	HCO <sub>3</sub> (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:	01/16/08	01/17/08	01/16/08	01/16/08	01/16/08	01/18/08
H14087-1 MONITOR WELL #1	5,100	469	0	420	7.33	9,453
Quality Control	500	26.8	NR	1000	7.04	NR
True Value QC	500	25.0	NR	1000	7.00	NR
% Recovery	100	107	NR	100	100	NR
Relative Percent Difference	2.0	2.0	NR	< 0.1	0.3	NR

METHODS:	SM4500-Cl-B	375.4	310.1	310.1	150.1	160.1
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*Kristin Farris-Pope*  
 Chemist

01/22/08  
 Date



ANALYTICAL RESULTS FOR  
 RICE OPERATING CO.  
 ATTN: KRISTIN FARRIS-POPE  
 122 W. TAYLOR ST.  
 HOBBS, NM 88240  
 FAX TO: (575) 397-1471

Receiving Date: 01/15/08  
 Reporting Date: 01/16/08  
 Project Number: NOT GIVEN  
 Project Name: BD P-26-2  
 Project Location: T21S-R37E-SEC26 P ~ LEA CO., NM

Sampling Date: 01/14/08  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT  
 Sample Received By: ML  
 Analyzed By: AB

LAB NUMBER	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE		01/15/08	01/15/08	01/15/08	01/15/08
H14087-1	MONITOR WELL #1	<0.001	<0.001	<0.001	<0.003
Quality Control		0.097	0.087	0.093	0.270
True Value QC		0.100	0.100	0.100	0.300
% Recovery		96.5	87.4	92.9	89.9
Relative Percent Difference		6.2	5.8	5.2	5.0

METHOD: EPA SW-846 8021B

Alyssa Keene  
 Chemist

01/22/08  
 Date

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 of 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 services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.





ANALYTICAL RESULTS FOR  
 RICE OPERATING COMPANY  
 ATTN: KRISTIN FARRIS-POPE  
 122 W. TAYLOR DTREET  
 HOBBS, NM 88240  
 FAX TO: (575) 397-1471

Receiving Date: 11/15/07  
 Reporting Date: 11/16/07  
 Project Number: NOT GIVEN  
 Project Name: BD P-26-2  
 Project Location: T22S R37E SEC26 P ~ LEA COUNTY, NM

Sampling Date: 11/12/07  
 Sample Type: GROUNDWATER  
 Sample Condition: COOL & INTACT  
 Sample Received By: SB  
 Analyzed By: BC

LAB NO.	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
	ANALYSIS DATE	11/15/07	11/15/07	11/15/07	11/15/07
H13716-1	MONITOR WELL #1	<0.002	<0.002	<0.002	<0.006
	Quality Control	0.101	0.096	0.099	0.298
	True Value QC	0.100	0.100	0.100	0.300
	% Recovery	101	95.9	98.6	99.2
	Relative Percent Difference	8.6	2.9	2.3	2.4

METHOD: EPA SW-846 8260

*Kristin Farris-Pope*  
 \_\_\_\_\_  
 Chemist

11/16/07  
 \_\_\_\_\_  
 Date

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 FAX TO: (575) 397-1471

Receiving Date: 11/15/07  
 Reporting Date: 11/26/07  
 Project Number: NOT GIVEN  
 Project Name: BD P-26-2  
 Project Location: T22S R37E SEC26 P~LEA COUNTY, NM

Sampling Date: 11/12/07  
 Sample Type: WATER  
 Sample Condition: COOL & INTACT  
 Sample Received By: SB  
 Analyzed By: HM/KS

LAB NUMBER	SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (uS/cm)	T-Alkalinity (mgCaCO <sub>3</sub> /L)
ANALYSIS DATE:		11/21/07	11/21/07	11/21/07	11/21/07	11/20/07	11/20/07
H13716-1	MONITOR WELL #1	2,481	459	266	64.9	15,150	228
Quality Control		NR	49.2	51.6	2.95	1,409	NR
True Value QC		NR	50.0	50.0	3.00	1,413	NR
% Recovery		NR	98.5	103	98.3	99.7	NR
Relative Percent Difference		NR	< 0.1	1.5	5.0	0.4	NR

METHODS:	SM3500-Ca-D	3500-Mg E	8049	120.1	310.1
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LAB NUMBER	SAMPLE ID	Cl <sup>-</sup> (mg/L)	SO <sub>4</sub> (mg/L)	CO <sub>3</sub> (mg/L)	HCO <sub>3</sub> (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:		11/20/07	11/21/07	11/20/07	11/20/07	11/20/07	11/19/07
H13716-1	MONITOR WELL #1	5,000	430	0	278	7.34	9,415
Quality Control		500	22.8	NR	988	7.06	NR
True Value QC		500	25.0	NR	1000	7.00	NR
% Recovery		100	91.1	NR	98.8	101	NR
Relative Percent Difference		< 0.1	6.3	NR	1.2	0.1	NR

METHODS:	SM4500-Cl-B	375.4	310.1	310.1	150.1	160.1
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*Kristin Pope*  
 Chemist

11/26/07  
 Date

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# Cardinal Laboratories, Inc.

11 East Marland - Hobbs, New Mexico 88240  
 Tel: (505) 393-2326  
 Fax: (505) 393-2476

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # \_\_\_\_\_

**Company Name:** RICE Operating Company  
**Project Name:** BD P-26-2

**Company Address:** 122 W Taylor Street ~ Hobbs, New Mexico 88240  
**Project Location:** 22S R37E Sec26 P ~ Lea County New Mexico

**Phone #:** (505) 393-9174  
**Sampler Signature:** Rozanne Johnson (505) 631-9310  
**Fax #:** (505) 397-1471  
**Sampler Email:** rozanne@valornet.com

**Company Name:** RICE Operating Company  
**Project Name:** BD P-26-2

**Company Address:** 122 W Taylor Street ~ Hobbs, New Mexico 88240  
**Project Location:** 22S R37E Sec26 P ~ Lea County New Mexico

**Phone #:** (505) 393-9174  
**Sampler Signature:** Rozanne Johnson (505) 631-9310  
**Fax #:** (505) 397-1471  
**Sampler Email:** rozanne@valornet.com

LAB #	LAB USE ONLY	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX	PRESERVATIVE METHOD	SAMPLING DATE (2007)	TIME
1137161		Monitor Well #1	G	3	WATER	HCL (2.40ml VOA)	11-12	15:20
					AIR	HNO <sub>3</sub>		
					SOIL	NAHSO <sub>4</sub>		
					SLUDGE	H <sub>2</sub> SO <sub>4</sub>		
						ICE (1-Liter HDPE)		
						NONE		

**ANALYSIS REQUEST**  
 (Circle or Specify Method No.)

PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg 60108/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC/MS Vol. 8260B/624	
GC/MS Semi. Vol. 8270C/625	
PCBs 8082/608	
Pesticides 8081A/608	
BOD, TSS, pH	
Moisture Content	
Cations (Ca, Mg, Na, K)	X
Anions (Cl, SO <sub>4</sub> , CO <sub>3</sub> , HCO <sub>3</sub> )	X
Total Dissolved Solids	X
Chlorides	
Turn Around Time ~ 24 Hours	

**REMARKS:**

Phone Results: Yes No  
 Fax Results: Yes No  
 Additional Fax Number: \_\_\_\_\_

**EMail Results to:**  
 kpope@riceswd.com  
 lweinheimer@riceswd.com  
 rozanne@valornet.com

**Received by:** \_\_\_\_\_ Date: 11-15-07 Time: 10:35  
**Received By:** (Laboratory Staff) \_\_\_\_\_ Date: 11-15-07 Time: 10:35

**Sample Condition:**  
 Cool: Yes  No   
 Intact: Yes  No

**CHECKED BY:** \_\_\_\_\_ (Initials) SP

**Delivered By:** (Circle One)  
 UPS -  Bus -  Other: