1R - 426-99

REPORTS

DATE:

9-13-10

L. Peter Galusky, Jr. Ph.D., P.G.
Texerra
75 Wuthering Hts Drive Colorado Springs, CO 80921
Tel: 917-339-6791 E-mail: lpg@texerra.com

September 13th, 2010

Mr. Edward Hansen
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**
Rice Operating Company – BD SWD System
BD O-23 Junction Box (Vent) UL O, Sect 23, Township 21S, Range 37E
NMOCD Case Number IR426-99

Sent via E-mail and U.S. Mail, Return Receipt No. 7007 2560 0001 9712

Mr. Hansen:

Please be advised that groundwater samples taken as prescribed in the Investigation and Characterization Plan (ICP) for Rice Operating Company's BD O-23 Vent project (Figure 1) indicate elevated levels of chlorides. Groundwater samples taken from a near-source down-gradient monitor well tested 6,900 ppm and 7,700 ppm Cl- on April 20th and July 26th, respectively (see attached laboratory data). Dissolved hydrocarbons (as BTEX) were not detected in either sampling event.

ROC will install a monitor well up-gradient of the site and to sample this for chlorides to determine if the elevated levels observed are due to historical, up-gradient impacts or if they have been caused or exacerbated by past operation of this junction box. Once we have this data we will compile groundwater and soil bore analysis data and prepare and submit an ICP report. A Corrective Action Plan will also be submitted if our findings warrant this.

ROC is the service provider (agent) for the BD SWD System and has no ownership of any portion of the pipeline, well, or facility. The System is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis.
Please call either myself or Hack Conder of Rice Operating Company if you have any questions or wish to discuss this matter.

Thank you for your consideration.

Sincerely,

L. Peter Galusky, Jr. Ph.D., P.G.

Copy: Rice Operating Company

Copy: Rice Operating Company

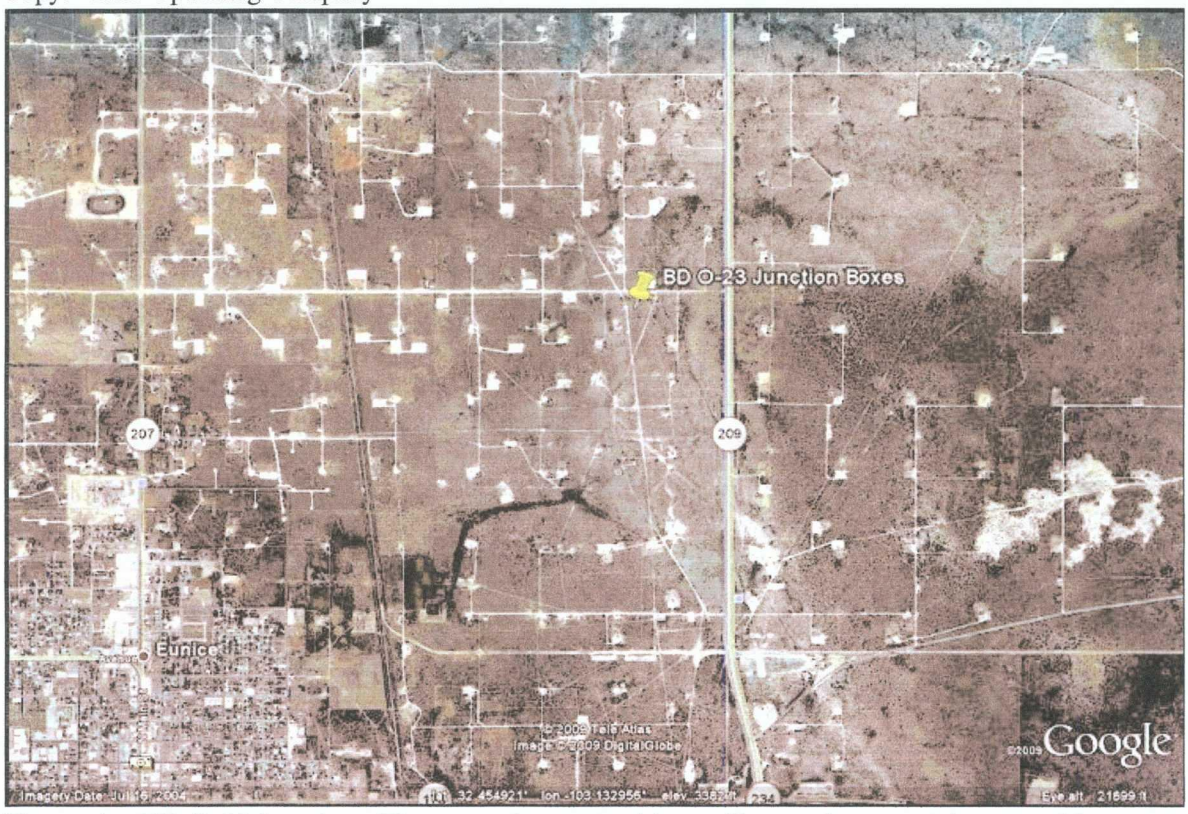

Figure 1 – BD O-23 location. The general topographic gradient and presumed water table

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

August 2, 2010

Hack Conder
Rice Operating Company
112 West Taylor
Hobbs, NM 88240

Re: BD O-23 Vent

Enclosed are the results of analyses for sample number H20414, received by the laboratory on 07/26/10 at 1:50 pm.

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 though 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 524.2	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 4 (includes Chain of Custody)

Sincerely,

Celey D. Keene
Laboratory Director

This report conforms with NELAP requirements.

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: HACK CONDER
112 W. TAYLOR
HOBBS, NM 88240
FAX TO: (575) 397-1471

Receiving Date: 07/26/10
Reporting Date: 07/28/10
Project Number: NOT GIVEN
Project Name: BD O-23 VENT
Project Location: T21S-R37E-SEC23 O~ LEA CO., NM

Sampling Date: 07/26/10
Sample Type: WATER
Sample Condition: COOL & INTACT
Sample Received By: JH
Analyzed By: ZL

LAB NUMBE SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE	07/28/10	07/28/10	07/28/10	07/28/10
H20414-1 MONITOR WELL #1	<0.001	<0.001	<0.001	<0.003
Quality Control	0.010	0.009	0.009	0.027
True Value QC	0.010	0.010	0.010	0.030
% Recovery	100	90.0	90.0	90.0
Relative Percent Difference	3.6	9.5	9.5	5.6

METHOD: EPA SW-846 8021B

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE, AND TOTAL XYLENES.

Chemist

07/28/10
Date

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: HACK CONDER
112 WEST TAYLOR
HOBBS, NM 88240
FAX TO: (575) 397-1471

Receiving Date: 07/26/10
Reporting Date: 07/29/10
Project Number: NOT GIVEN
Project Name: BD O-23 VENT
Project Location: T21S R37E SEC23 O ~ LEA COUNTY, NM

Sampling Date: 07/26/10
Sample Type: WATER
Sample Condition: COOL & INTACT
Sample Received By: JH
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl^- (mg/L)	SO_4 (mg/L)	TDS (mg/L)
Analysis Date:		07/27/10	07/29/10	07/27/10
H20414-1	MONITOR WELL #1	7,700	394	12,500
Quality Control		510	39.6	NR
True Value QC		500	40.0	NR
% Recovery		102	99.1	NR
Relative Percent Difference		3.8	2.5	0.9
METHOD: Standard Methods, EPA		4500-Cl B	375.4	160.1

Not accredited for Chloride, Sulfate and TDS.

Chemist

08/29/10
Date

H20414 RICE

101 East Marland - Hobbs, New Mexico 88240
Tel (575) 393-2326
Fax (575) 393-2476

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # _____

Company Name: RICE Operating Company	BILL TO Company: RICE Operating Company — PO#
Project Manager: Hack Conder	Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240
Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240	Phone#: (575) 393-9174 — Fax#: (575)397-1471
Phone #: (575) 393-9174	Fax #: (575) 397-1471
Project #	Project Name: BD O-23 Vent
Project Location: T21S R37E Sec23 O ~ Lea County New Mexico	Sampler Signature: Rozanne Johnson (575)631-9310 rozanne@valornet.com

LAB # (LAB USE ONLY)	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL (2 40ml VOA)	HNO_3	$NaHSO_4$	H_2SO_4	ICE (1-Liter HDPE)	NONE	SAMPLING: DATE (2010)	TIME
H20414-1	Monitor Well #1	G	3	X				2				1		7-26	8:40

ANALYSIS REQUEST
(Circle or Specify Method No.)

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005 / TX1005 Extended (C35)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/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	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Moisture Content	Anions (Cl, SO4, CO3, HCO3)	Cations (Ca, Mg, Na, K)	Sulfates (SO4)	Total Dissolved Solids	Chlorides	Turn Around Time ~ 24 Hours
	X																	X	X	X	

Relinquished by: Rozanne Johnson	Date: 7-26-10	Time: 13:49	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff) Cindi Denson	Date: 7/26/10	Time: 1:50

Phone Results	☐ Yes	☐ No
Fax Results	☐ Yes	☐ No Additional Fax Number:

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

Sample Condition: Cool: Yes ☑ / No ☐ — Intact: Yes ☑ / No ☐

CHECKED BY: (Initials)

REMARKS:

Em Email Results to hconder@riceswd.com
lweinheimer@riceswd.com
Rjones@riceswd.com
rozanne@valornet.com

#126

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

April 29, 2010

Hack Conder
Rice Operating Company
112 West Taylor
Hobbs, NM 88240

Re: BD O-23 Vent

Enclosed are the results of analyses for sample number H19746, received by the laboratory on 04/23/10 at 2:00 pm.

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 though 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 524.2	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 4 (includes Chain of Custody)

Sincerely,

Celey D. Keene
Laboratory Director

This report conforms with NELAP requirements.

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: HACK CONDER
112 W. TAYLOR
HOBBS, NM 88240
FAX TO: (575) 397-1471

Receiving Date: 04/23/10
Reporting Date: 04/27/10
Project Number: NOT GIVEN
Project Name: BD O-23 VENT
Project Location: T21S-R37E-SEC23 O~ LEA CO., NM

Sampling Date: 04/20/10
Sample Type: WATER
Sample Condition: COOL & INTACT
Sample Received By: JH
Analyzed By: ZL

LAB NUMBE SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE	04/26/10	04/26/10	04/26/10	04/26/10
H19746-1 MONITOR WELL #1	<0.001	<0.001	<0.001	<0.003
Quality Control	0.050	0.051	0.051	0.152
True Value QC	0.050	0.050	0.050	0.150
% Recovery	100	102	102	101
Relative Percent Difference	12.5	12.8	13.0	14.4

METHOD: EPA SW-846 8021B

TEXAS NELAP CERTIFICATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE, AND TOTAL XYLENES.

Chemist

04-27-10
Date

H19746 BD O-23

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: HACK CONDER
112 WEST TAYLOR
HOBBS, NM 88240
FAX TO: (575) 397-1471

Receiving Date: 04/23/10
Reporting Date: 04/28/10
Project Number: NOT GIVEN
Project Name: BD O-23 VENT
Project Location: T21S R37E SEC23 O ~ LEA COUNTY, NM

Sampling Date: 04/20/10
Sample Type: WATER
Sample Condition: COOL & INTACT
Sample Received By: JH
Analyzed By: SJ/HM

LAB NO.	SAMPLE ID	Cl^- (mg/L)	SO_4 (mg/L)	TDS (mg/L)
Analysis Date:		04/28/10	04/28/10	04/27/10
H19746-1	MONITOR WELL #1	6,900	505	12,500
Quality Control		500	44.6	NR
True Value QC		500	40.0	NR
% Recovery		100	112	NR
Relative Percent Difference		2.0	2.0	3.7
METHOD: Standard Methods, EPA		4500-Cl B	375.4	160.1

Not accredited for Chloride, Sulfate and TDS.

Chemist

Date 04/29/10

H19746 RICE

101 East Marland - Hobbs, New Mexico 88240
Tel (575) 393-2326
Fax (575) 393-2476

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # _____

Company Name: RICE Operating Company	BILL TO Company: RICE Operating Company — PO#
Project Manager: Hack Conder	Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240
Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240	Phone#: (575) 393-9174 — Fax#: (575)397-1471
Phone #: (575) 393-9174	Fax #: (575) 397-1471
Project #:	Project Name: BD O-23 Vent
Project Location: T21S R37E Sec23 O ~ Lea County New Mexico	Sampler Signature: Rozanne Johnson (575)631-9310 rozanne@valornet.com

LAB # (LAB USE ONLY)	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL (2 40ml VOA)	HNO_3	NaHSO4	H_2SO_4	ICE (1-1Liter HDPE)	NONE	SAMPLING: DATE (2010)	TIME
H19746-1	Monitor Well #1	G	3	X				2				1		4-20	8:30

M8TBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005 / TX1005 Extended (C35)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/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	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Moisture Content	Anions (Cl, SO4, CO3, HCO3)	Cations (Ca, Mg, Na, K)	Sulfates (SO4)	Total Dissolved Solids	Chlorides	Turn Around Time ~ 24 Hours
	X																	X	X	X	

ANALYSIS REQUEST
(Circle or Specify Method No.)

Relinquished by: Rozanne Johnson	Date: 4-23-10	Time: 13:59	Received by:
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff) Jodi Henson 4/23/10 2:00
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition: Cool Yes / No; Intact Yes / No	CHECKED BY: (Initials)	

Phone Results: Yes / No
Fax Results: Yes / No Additional Fax Number:

REMARKS:

Em Email Results to hconder@riceswd.com
lweinheimer@riceswd.com
kjones@riceswd.com
rozanne@valornet.com

#26