1R - 426 - 09

Annual GW Mon. REPORTS

DATE:

loos



RECEIVED

2003 MSR 23 PM 1 35

CERTIFIED MAIL RETURN RECEIPT NO. 7005 1160 0005 3780 6597

March 16, 2009

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

Re: 2008 Annual Groundwater Summary Report & Project Status Report, Rice Operating Company, Blinebry Drinkard (BD) SWD System H-19 Vent, Unit H, Section 19, T-21-S, R-37-E, Lea County, New Mexico, NMOCD CASE #1R0426-09

Mr. Jones:

Tetra Tech Inc. (Tetra Tech) takes this opportunity to submit the 2008 Annual Groundwater Summary Report for the Rice Operating Company (ROC), Blinebry Drinkard (BD) SWD System H-19 Vent. ROC is the service provider (agent) for the BD Salt Water Disposal System and has no ownership of any portion of the pipeline, well or facility. The BD SWD system is owned by a consortium of oil producers, system partners, who provide all operating capital on a percentage ownership/usage basis.

Background

As part of the ROC Junction Box Upgrade Workplan, starting on July 14, 2003, the H-19 was moved 25' to the northwest. The original junction box was investigated vertically and horizontally with a trench utilizing a backhoe. The site was excavated to a depth of 12 feet below ground surface (bgs) whereby the chlorides were 9,570 mg/kg and TPH was 1,550 mg/kg. No water wells were located within Section 19 which contains the site. However, according to the USGS Well Report, one water well is located in adjacent Section 18 with a depth to groundwater of 98 feet bgs.

Upon completion of the excavation, the trench was backfilled and contoured to the surrounding surface. On September 16, 2003, ROC submitted a Junction Box Disclosure Report to the NMOCD. A copy of the Junction Box Disclosure Report is included in Appendix A. On August 3, 2007, ROC submitted the ICP to Mr. Wayne Price of the NMOCD-Santa Fe office for review. Mr. Price granted approval of the ICP in a letter dated August 13, 2007.

On April 4, 2008, Highlander personnel were onsite to oversee the installation of one soil boring (SB-1) within the former junction box location. Soil samples were collected every 5 feet beginning at a depth of 5 feet bgs within the excavated area. Samples were collected utilizing a split spoon sampler and were field screened for TPH utilizing a photoionization detector (PID) and for chlorides with a field sampling kit. Field results indicate the soils were impacted with chlorides to a depth of 90 feet bgs with no PID readings to indicate TPH within the soil. The soil boring location is shown on Figure 3.

In order to determine if groundwater was impacted from the former junction box, one monitor well was installed (MW-1) to the southeast of the excavated junction box to a depth of 133 feet bgs. Upon completion, the monitor well was developed and samples submitted to Cardinal Labs of Hobbs, New Mexico for analysis of chlorides by EPA method 300.0 and BTEX by EPA method 8021B. The results indicated the site has been impacted with chlorides ranging from 516 to 560 mg/L. No BTEX was detected in the groundwater.

On June 3, 2008, ROC submitted a Notification of Groundwater Impact to Mr. Wayne Price of the NMOCD-Santa Fe office.

Monitor Well Sampling

The site monitor well was sampled on April 23, July 8, and October 9, 2008. Prior to sampling, the well was gauged for static water levels. The monitor well cap was opened and the water level measurement was taken from the top of the casing. The measurement was taken to the nearest 0.01 feet.

The well was then purged using a portable submersible pump. Approximately three casing volumes of water were purged from the well prior to sampling. The pump and associated tubing was decontaminated with a laboratory grade detergent and rinsed with deionized water. Cumulative water level measurements and purge volumes for the monitor well are included in the Tables Section of this report.

The well was also inspected for the presence of phase-separated hydrocarbons (PSH). A groundwater sample was collected as soon as possible after the groundwater returned to its static level. The groundwater sample was collected using clean disposable polyethylene bailers and disposable line. The sample was transferred into labeled and preserved containers provided by the laboratory. The sample was delivered under proper chain-of-custody control to Cardinal Labs of Hobbs, New Mexico. The groundwater sample was analyzed for major anions by methods 310.1, 9253 and 375.4, cations by method 6010B, Total Dissolved Solids (TDS) by method 160.1 and Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) by method EPA 8021B. Copies of the laboratory reports are enclosed in Appendix A.



Monitor Well Sample Results

The source area monitor well MW-1, had chloride concentrations ranging from 468 mg/L in October to 560 mg/L in July of 2008. The chloride and TDS concentrations in the monitor well was relatively stable throughout the year. However, the chloride concentrations remained above the 250 mg/L New Mexico Water Quality Control Commission (WQCC) standard and the 1,000 mg/L for TDS in all sampling events. No traces of BTEX were detected in monitor well MW-1 throughout 2008. Cumulative analytical data is summarized in the Table Section of this report.

Conclusions

- 1. In 2008, there were no BTEX constituents detected at or above reporting limits for monitor well MW-1.
- 2. Chloride and total dissolved solid (TDS) concentrations from monitor well MW-1 currently exceeds the New Mexico Water Quality Control Commission (WQCC) standards of 250 mg/L for chloride and 1,000 mg/L for TDS in all sampling events.



Respectfully Submitted, Tetra Tech, Inc.

Jeffrey Kindley, P.G. Senior Environmental Geologist

cc: Hack Conder – ROC, Edward Hansen – NMOCD Enclosures: Figures, Tables, Laboratory Analysis

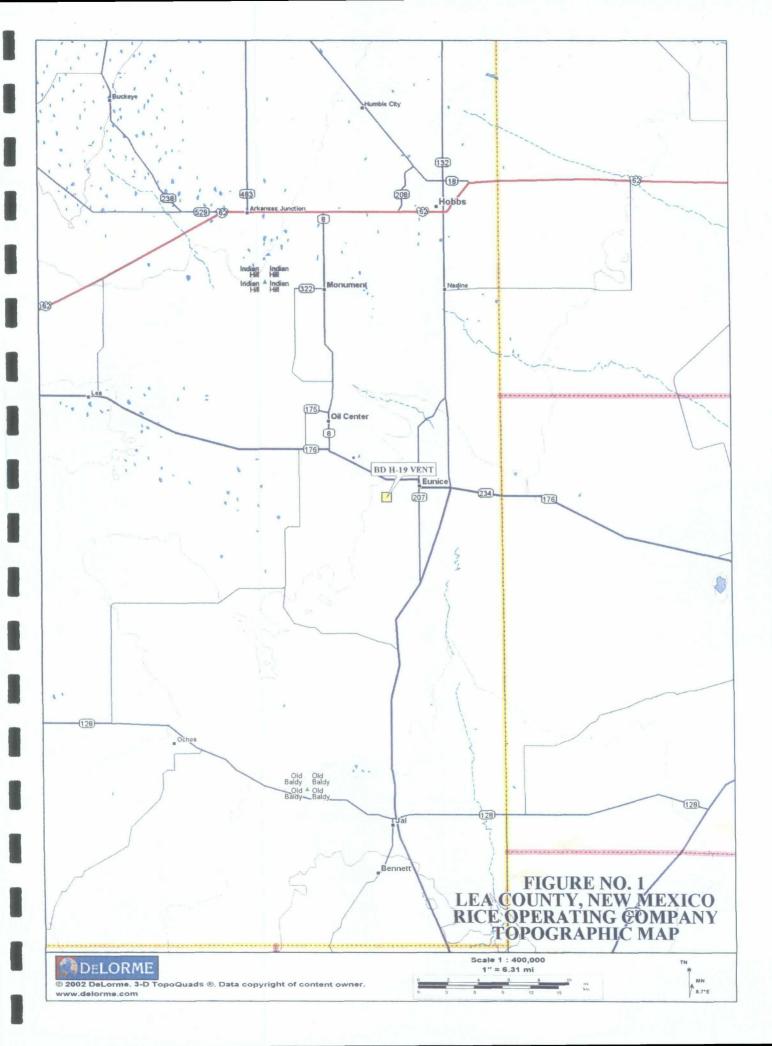
:

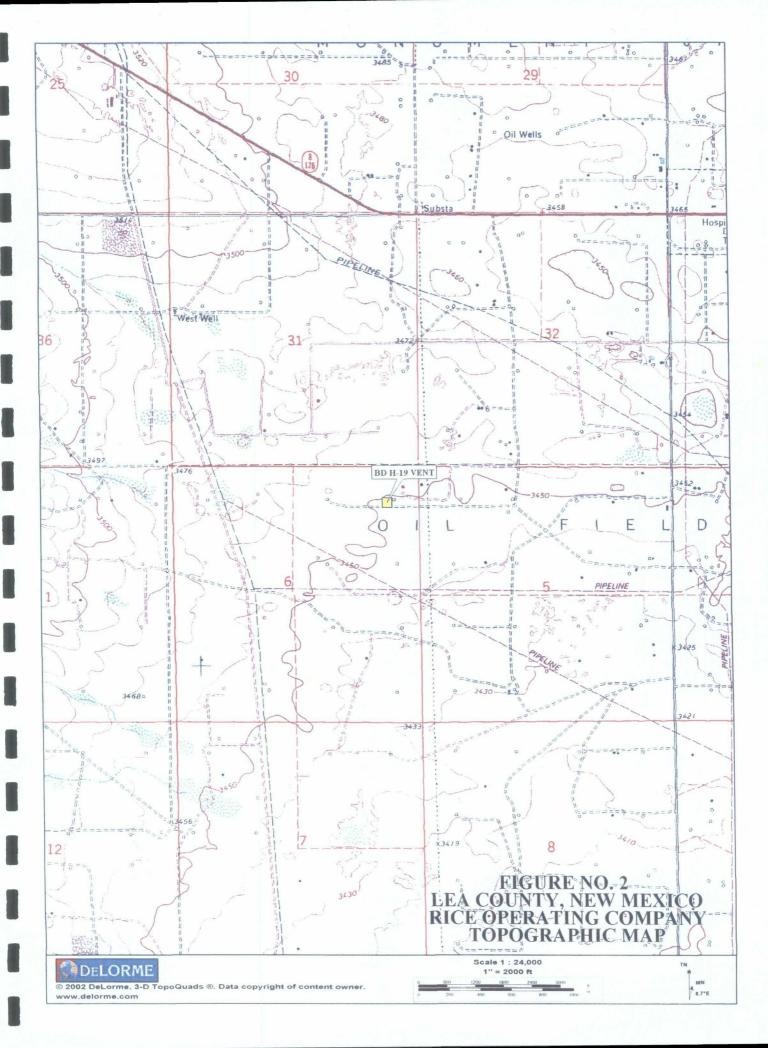
.

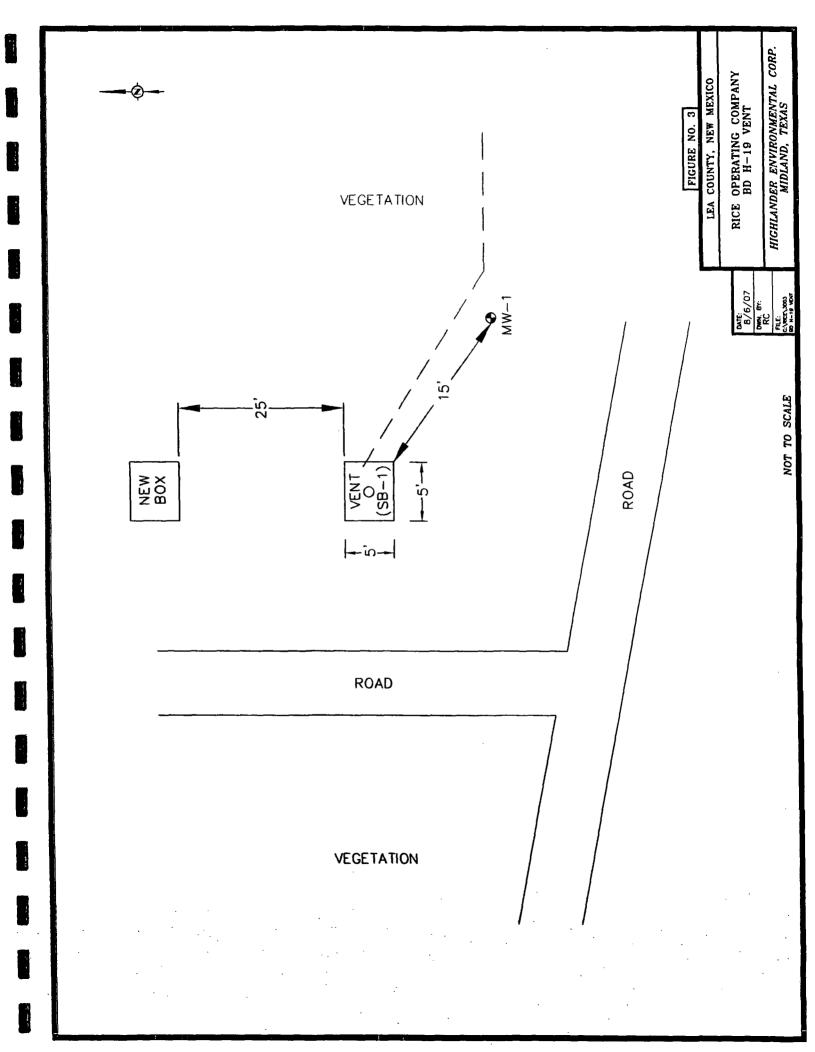
1 - F FIGURES

·

.



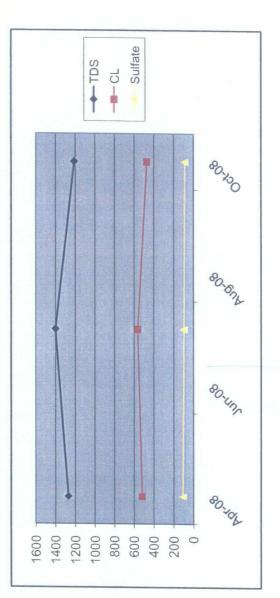




TABLES

ļ

		Comments		106 Clear no odor	95.5 Clear no odor	Clear no odor				
		Sulfate		106	95.5	86				
		Total Xylenes		<0.003	<0.006	<0.003				
		CI TDS Benzene Toluene Ethyl Benzene Total Xylenes Sulfate Comments		<0.001	<0.001	<0.001				
		Toluene		<0.001	<0.001	<0.001				
Rice Operating Company H-19 Vent	Lea County, New Mexico	Senzene		04/23/08 516 1270 <0.001	<0.001	468 1210 <0.001				
perating Co H-19 Vent	nty, Nev	TDS		1270	560 1400	1210				
ce Ope	a Cour	Ū		516	560	468				
Ric	Le	Sample	Date	04/23/08	07/08/08	10/09/08				
		Volume	Purged	10	10	10				
		Well	Volume	2.60	2.60	2.60				
		Total	Depth	137.25	137.25	137.25				
		Depth to	Water	120.78	120.96	120.92				
		MM		-	1	1	1	1	1	-



APPENDIX A LABORATORY ANALYTICAL

•



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

Receiving Date: 04/24/08 Reporting Date: 04/28/08 Project Owner: NOT GIVEN Project Name: BD H-19 VENT Project Location: T21S R37E SEC19 H ~ LEA CO., NM Sampling Date: 04/23/08 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	04/25/08	04/25/08	04/25/08	04/25/08
H14710-1 MONITOR WELL #1	<0.001	<0.001	<0.001	<0.003
Quality Control	0.097	0.097	0.095	0.296
True Value QC	0.100	0.100	0.100	0.300
% Recovery	97.0	96.8	95.4	98.6
Relative Percent Difference	0.5	1.4	0.8	0.7

METHOD: EPA SW-846 8021B

/ 1.1.<u>rC</u> Chemist

129/17

PLEASE NOTE: Llability 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. If start of an 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. If start of an 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. If start of 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. If start of any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal, to service so of uses 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. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



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

Receiving Date: 04/24/08 Reporting Date: 04/28/08 Project Number: NOT GIVEN Project Name: BD H-19 VENT Project Location: T21S R37E SEC19 H~LEA COUNTY, NM Sampling Date: 04/23/08 Sample Type: WATER Sample Condition: COOL & INTACT Sample Received By: ML Analyzed By: HM/KS

	Na	Ca	Mg	к	Conductivity	T-Alkalinity
LAB NUMBER SAMPLE ID	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(<i>u</i> S/cm)	(mgCaCO ₃ /L)
ANALYSIS DATE:	04/28/08	04/28/08	04/28/08	04/28/08	04/25/08	04/25/08
H14710-1 MONITOR WELL #1	356	78	25	4.57	2,120	240
Quality Control	NR	51.3	52.5	4.56	1.411	NR
True Value QC	NR	50.0	50.0	4.00		NR
% Recovery	NR	103	105	114	99.8	NR
Relative Percent Difference	NR	1.4	4.9	13.1	1.4	NR
METHODS:	SM	3500-Ca-D	3500-Mg E	8049	120.1	310.1

	CI	SO₄	CO3	HCO ₃	pН	TDS
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(s.u.)	(mg/L)
ANALYSIS DATE:	04/25/08	04/28/08	04/25/08	04/25/08	04/25/08	04/25/08
H14710-1 MONITOR WELL #1	516	106	0	293	7.07	1,270
Quality Control	490	26.0	NR	976	6.98	NR
True Value QC	500	25.0	NR	1000	7.00	NR
% Recovery	98.0	104	NR	97.6	99.7	NR
Relative Percent Difference	2.0	13.6	NR	2.4	1.0	NR
METHODS:	SM4500-CI-B	375.4	310.1	310.1	150.1	160.1

Chemist

04124108 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 (n_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 the two states are also and the state of the services hereunder by Cardinal, 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. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

								······	8.	noi	- 54 -	emíT br	ມດາA muT	Τ				ŀ				T	Τ	T			
													Chlorides														
S1			-						10				esig letoT	×	-					-	-						
ANALYSIS REQUESI			-						(E	.00			C) anoiteOO) anoinA	×	╇			+	┨───	┝─╉		-					
Щ Ш			-												+	-†-	+	+	<u> </u>		╈			ber.			
ន្ល			-										D enuisioM											5		E	
Ľ		. ~											BOD, TSS,	-+	\rightarrow	+		+-	–	\square		4		Fax	-	a B B C	
AN N		ANALYSIS REQUEST	-								80		Pesticides	\rightarrow	-+-	+			┼╌	┝╌┤	\rightarrow	-		Additional Fax Number.	kpope@riceswd.com	<u>Iweinheimer@riceswd.com</u> rozanne@valornet.com	
		D D	- 1							929	/2022		ecwa 26	-+		-+		┿	┼──	┼─┤	+	-		Inddi	wd.	Oric	
A		Ш М М М М	- -										BC/W2 A9	\uparrow	+	╉		+	┢╴	$\left - \right $	-+				ces	<u>pval</u>	
ğ		SIS	5 - 2			_							BCI	1	+	\uparrow	-	1	\uparrow				2	ĝ	0	<u>neir</u>	
STC	LAB Order ID #	ANALYSIS REQUEST	5 - 5 _									cides	TCLP Pest	·									T		obe	eint	
NO I	rder	NNA Incle	5										TCLP Sem		_	_						_	Yes	Yes	<u>A</u>	<u>š</u> ĝ	
Ч Ч	8	- 0	2.					6н (PS Q	<u>cri</u>	P.) P.		TCLP Meta	\rightarrow	+	+	\rightarrow	╋	+	$\left - \right $	-+	-+	1	۲	ö		
- N	2		-		τ.	00Z	\8010						Total Metal						-			╈	╋	-	t stir		
CHAIN-OF-CUSTODY AND						_							PAH 82700		Ţ	\square		T		\square				s I	AARKS: Email Results to:		
•			-				(98))) pəp	nətx	9 90	OIXL		1.814 H9T		_	4		+	+				Yes	esult	RKS nail		
								<u> </u>					MTBE 802	×	-	\dashv			+-		-		Phone Results	Fax Results	REMARKS Email F		
			–			T		T	T		U	202/81		25	-+	\dashv	\rightarrow	+-	+	+	\vdash	╡	<u>1</u>	ш I	<u>م</u>	<u> </u>	-
					ļ	47			9310	E		L	TIME	14:25										-	\sim		
(с;					(575)397-1471			Rozanne Johnson (505)631-9310	rozanne@valornet.com	SAMPLING	(8	00S) <u>3</u> TAG	4-23										9	7:20		Ou
	atories, Inc.	#0d	V. ZID.		Fex#:	15)			<u>on (5</u>	valo	ЧШ Ч		NONE				_		+	+	\square		Time:	Ľ	Time: 5]	1
	6	ď	(Street, City, Zip)	240	R.	5			Johns	e@	PRESERVATIVE METHOD	HDPED	וכב (י-יונית H ^z SO₄	-			-+	╋	╋	+	┝┼				· .		
	S		Stree	50 88					euu	ann	ESERVAT METHOD	<u> </u>	*OSHPN				-+	╋	╈	+	┞╌┨	\dashv	ē	30-75-	ie: 4///8	D BY	-
•	Ē	<u>></u>		Mexi					Roze	LOZ	RES M		^{\$} ONH						+	1-			Date:	$\tilde{\gamma}$	Date: //24/	CHECKED BY	(8)8
	0	pan		New					. Ν		Ľ	(AOV	HCL (2 40ml	2							\square			7	1	ŝ	(Initials)
	at	Company		obbs,				~		-	₽	 	700070					_	+-	+	$ \downarrow \downarrow$				fin t		
	Ļ			Ť- Ť	*	4		$\left \right $	<u> </u>	3	Ĩ	 	SLUDGE AIR					+	+-	+	┝╌┤		、 ·	2	S C	ផ្លូវ	È
	Ő	BILL TO Company: RICE Operating	Address:	122 W Taylor Street ~ Hobbs, New Mexico 88240	Phone#:	(575) 393-9174			Spimple/Sig	$\hat{\frown}$	MATRIX	 						+	+-	┿		-	$\overline{}$	allino	orato	Ĭ	L'as Ves
-		o o	ľ	aylor	٩	393	171	:	Ś	1	\mathbb{N}		MATER	×				-	+-	┿	┝┤			2	A [a	1 8	Ĺ
		BILL TO RICE (ΜŢ		75)	7-14	:	ł		T	<u></u>		1			-+	┽	+-	+-	$\left - \right $		' ج	2	ر بر		
		Щ Х́	Ļ	12		(2)	39	3		_	Ľ	2930	# CONTAI	Ľ					4	\bot	\square		vedt	K	vedu	N.	Yea
	Cardinal Labor:						Fax#: (575) 397-1 4 71	2		Sec19 H \sim I ea County New Mexico		dwo((G)ເສຍ or (C	U									Received by:	1/atta	Received	Sample Condition	
,	ip.									lew M								T					,	Ŋ	те: 16550		
				tist		ê		·	z	t Z										ł				50: +1	2		
1	Ü	Į		Sien		, 8824		ie I	×	uno		Ц											Time:		Time:		
			1	it Sc		exico		^b roject Name	BD H-19 Vent	Ŭ a						Į							F	San	Date: Tim o 4,2,4,0%	2	
		anv		ojec	1	ew M		rojec		- -	S I			Ē									<u></u>	5-2	n i		
				٦	(dIZ	bs, N		ſ	ш	í	:	ū	•	Vella									Date:	202-2-2-6	Date:	le)	
s, New				obe	(Street, City, Zip)	doH ,				c19				Monitor Well #1									$\ $	Ī		Effcie One)	
Hobb	240 1-2328 1-2478	atinc 1		s-P(reet, (reet ~		5						Aont										٢			
- pue	Mexico 88240 Tel (505) 393-2326 Fax (505) 393-2476	ne: Dera		arri	(Str	or Str		+	ļ	37F						┝━	┝╌┥	+	┿	╈	+(Å	属	ع م	3	
st Marl	Mexi el (50. BX (50.	Nan U		μ		Tayl		~	ocatic	È à		** M	USE LY	1-011								N	Å	J.	shed	Ŕ	
101 East Martand - Hobbs, New	} ⊢œ ;	Company Name: RICF Operating Company	Project Manager	Kristin Farris-Pope, Project Scientist	Address:	122 W Taylor Street ~ Hobbs, New Mexico 88240	Phone #:	Project #:	Dmiact Ocation	TOIS RATE	4	LAB #	LAB USE ONLY	5-11-1]							$ \rangle$	Relifiquished by:	Rozanne, Johnson	Relinquished by	Delivered By:	
4 -	•	15	- 19	· -	18	-	12 5	- [Ē	1	2 -	-		-		1	1	1				1	1	1 2	18	100	19	



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

Receiving Date: 07/10/08 Reporting Date: 07/17/08 Project Number: NOT GIVEN Project Name: BD H-19 VENT Project Location: T21S R37E SEC19 H~LEA COUNTY, NM Sampling Date: 07/08/08 Sample Type: WATER Sample Condition: COOL & INTACT Sample Received By: ML Analyzed By: HM/KS

	Na	Ca	Mg	К	Conductivity	T-Alkalinity
LAB NUMBE SAMPLE ID	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(<i>u</i> S/cm)	(mgCaCO ₃ /L)
ANALYSIS DATE:	07/16/08	07/15/08	07/15/08	07/16/08	07/11/08	07/11/08
H15143-1 MONITOR WELL #1	368	78	30	4.42	2,140	236
Quality Control	NR	52.1	51.0	1.95	1,419	NR
True Value QC	NR	50.0	50.0	2.00	1,413	NR
% Recovery	NR	104	102	97.7	100	NR
Relative Percent Difference	NR	< 0.1	< 0.1	2.5	0.8	NR
METHODS:	SM	3500-Ca-D	3500-Mg E	8049	120.1	310.1

	Cl	SO4	CO_3	HCO ₃	pН	TDS
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(s.u.)	(mg/L)
ANALYSIS DATE:	07/11/08	07/15/08	07/11/08	07/11/08	07/11/08	07/14/08
H15143-1 MONITOR WELL #1	560	95.5	0	288	7.36	1,400
Quality Control	500	42.8	NR	1010	7.03	NR
True Value QC	500	40.0	NR	1000	7.00	NR
% Recovery	100	107	NR	101	100	NR
Relative Percent Difference	2.0	0.9	NR	2.5	< 0.1	NR
METHODS:	SM4500-CI-B	375.4	310.1	310.1	150.1	160.1

Histe Superto

07/17/08 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 these for negligence and any other cause whatsoever shall be deemed viaived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. The he draw strate declinal be liable tor 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. Results relate only to the samples identified above. This report shall not be reproduced except in full with writen approval of Cardinal Laboratories.



ANALYTICAL RESULTS FOR RICE OPERATING COMPANY ATTN: HACK CONDER 122 W. TAYLOR ST. HOBBS, NM 88240 FAX TO: (575) 397-1471

Receiving Date: 07/10/08 Reporting Date: 07/15/08 Project Number: NOT GIVEN Project Name: BD H-19 VENT Project Location: T21S R37E SEC19 H ~ LEA CO., NM Sampling Date: 07/08/08 Sample Type: WATER Sample Condition: COOL & INTACT Sample Received By: ML Analyzed By: AB

				ETHYL	TOTAL
		BENZENE	TOLUENE	BENZENE	XYLENES
LAB NUMBER	SAMPLE ID	(mg/L)	(mg/L)	(mg/L)	(mg/L)
ANALYSIS DA	TE:	07/14/08	07/14/08	07/14/08	07/14/08
H15143-1	MONITOR WELL #1	<0.001	<0.001	<0.001	< 0.006
Quality Contro)	0.080	0.102	0.104	0.309
True Value Q	5	0.100	0.100	0.100	0.300
% Recovery		80.0	102	104	103
Relative Perce	ent Difference	4.5	3.6	2.2	2.9

METHOD: EPA SW-846 8021B

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

" Moveni Chernist

07-16-28 Date

																						D. B	Page	-	ð		.[
101 East Marland · Hobbs, New		'	ŀ	•				.	╏╹					Ъ.	AIN	CHAIN-OF-CUSTODY	cus	TOD		A ND A	NAL	YSI	ANALYSIS REQUEST	IJ Ŭ	ST		
Mexico 88240 Tel (505) 393-2326 Fax (505) 393-2476	8240 84240 84240 Cardinal Labor	nal		ab	0ľ	at	0ľ	les	[- (atories, inc.	•	I				LAB Order ID #	der IC	#									
Company Name: RICF ODE	mpany Name: RICE Oberating Company		BILL TO RICE (ី	BILL TO Company: RICE Operating	Cor	Company		#04	Ŧ						٩ġ	NAL role o	YSI:	ANALYSIS REQUEST	QUE ethod	ST No.)						
Project Manager:				Ad	Address:			I -	(Street, City, Zip)	(diZ '			-		-	<u> </u>		; ; ; ;	-) -	_	_	-			
Hack Conder	der	÷.	22 W T	aylor S	122 W Taylor Street ~ Hobbs, New Mexico 88240	Hobbs,	New N	exico 8	8240					<u>.</u>						••							
Address: ((Street, City, Zip)		í	đ	Phone#:				iai u u	Fax#: / E 7 E \ 2 O	58X#: /575/307 4474				2.0												
122 W Taylor	.122 W Taylor Street ~ Hobbs, New Mexico 88240		(2/2)	393-91/4	4/16				9	acic /	- 141 - 1	Т			07/				<u>.</u>								
Phone #: (575) 393-		Fax#: (575) 3	397-1471	471										(c32)	80109											-	
	Project Name: RD H-10 Vant					$\left(\right)$		U						pəpu	6H9	6H 96	·•	<u> </u>				_,					
Project Location:				Sa Sa	Sampler Si	Intered		ozanne	Johns	on (505)	Rozanne Johnson (505)631-9310			ətxə ö	s qd i	5 9 4 4				52				03)	(00		sin
121S K3/E	E Sect9 H ~ Lea County New Mexico		ľ	$\langle \rangle$	K	Ŧ		UL AI III	VATIN		PRESERVATIVE 1	T		001)	2 PC	D PO				9/ጋር							DH P
				Ţ	MATRIX	\ \ \		METHOD	<u>0</u>	s I	SAMPLING	9		X1/) 68	Ba (s			0728	809						~ 77
LAB#	FIELD CODE	duio(;	NERS				(AOV		ноье)		(8)	18/602	209/81		sA gA a	sA gA sl s9li	Volatile	nuce	80928	2/608	9/A1808	PH bH	10300	, SO4, C	olved So	<u>_</u>	əmiT bn
) סד (C				JOE	(m04 S)	°OS		E	(200		805	1.81 1 0728		bielov ^c		ijeseq o				,287.,	0.2101			səbir	NotA
ONLY		dຮາ(ອ)		TAW JIO2	AIA	าการ		onh	H ³ SC	NON	atad amit		втех		<u> </u>			BCI					SIGINI			ощо	muT
1- 2012/1	Monitor Well #1	U	e	×			3		-		7-8 13:50	60	×		_									× ×	×		
																	_										Τ
												_								_			-	-	_		
				╞	 									_										-			
					 	ŀ														_					_		
														-	_						_	-	-	-+			
				_		_					-			+		+		_		+	1			-			
				-+														_		-				+			
\				_							_	4			-	┢	┢	_		4]	-		-			Т
Relipduished by	: Date: Time:	Received by:	d by:		NN/	`		Date:	F	Time:		f	one F	Phone Results		Yes	<u>ه</u>	ž					ļ				Τ
Rezanne Jennson	6n 17-10-2018 4:00	J J J	Ath	Ð	He	LND		7-10-208	Ŕ	4:01		Fax	Fax Results	ults		Yes	<u>ہ</u>	° Z	~	vdditic	nal F	ax Nu	Additional Fax Number:				Τ
Relinquished by:) Date: Time:	Received By	Y.Ya	Laborator		Staff)	-	Date:	F	Time:		ц Ш	REMARKS	KS:													
	12 1 1/10/17 CAN TO	Z	a the	~ ۲ 、		Jun	4	7-10-08	R	5	QО,		Ema	Email Results to:	sults	ö	hcol	<u>Ider</u>	hconder@riceswd.com	eswc	.con						
Delivered By		Sampté Condition Co	oldiblo		- Intect		CHEC	снескер ву				_					<u>Ivei</u>	nne(<u>Iweinheimer@riceswd.com</u> rozanne@valornet.com	<u>Ørice</u> orne	swd t.cor		-				
Campler -	LIPS - Bus	≻z	×es Sa ∠es	و مح الم		\	(Initials)	e L	L'	J.	00											1					
1	2222			┨	1	$\left\{ \right.$															ļ						

.

4 - V

. .



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

Receiving Date: 10/10/08 Reporting Date: 10/14/08 Project Number: NOT GIVEN Project Name: BD H-19 VENT Project Location: T21S-R37E-SEC19 H ~ LEA CO., NM Sampling Date: 10/09/08 Sample Type: WATER Sample Condition: COOL & INTACT Sample Received By: ML Analyzed By: HM/TR

	Na	Ca	Mg	К	Conductivity	T-Alkalinity
LAB NUMBE SAMPLE ID	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(<i>u</i> S/cm)	(mgCaCO ₃ /L)
ANALYSIS DATE:	10/13/08	10/13/08	10/13/08	10/13/08	10/10/08	10/10/08
H16091-1 MONITOR WELL #1	296	75.4	29.2	4.2	1,800	208
Quality Control	NR	48.1	48.6	2.92	1,416	NR
True Value QC	NR	50.0	50.0	3.00	1,413	NR
% Recovery	NR	96.2	97.2	97.3	100	NR
Relative Percent Difference	NR	<0.1	4.8	3.0	0.2	NR
METHODS:	SM	3500-Ca-D	3500-Mg E	8049	120.1	310.1

SM3500-Ca-D 3500-Mg E

310.1	

	CI	SO₄	CO3	HCO3	pН	TDS
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(s.u.)	(mg/L)
ANALYSIS DATE:	10/10/08	10/13/08	10/10/08	10/10/08	10/10/08	10/10/08
H16091-1 MONITOR WELL #1	468	86	0	254	7.15	1,210
	· · · · · · · · · · · · · · · · ·	• • • • • • • • • • • • • • • • • • • •				
Quality Control	490	44.4	NR	988	7.09	NR
True Value QC	500	40.0	NR	1000	7.00	NR
% Recovery	98.0	111	NR	98.8	101	NR
Relative Percent Difference	2.0	1.1	NR	<0.1	1.3	NR
METHODS:	SM4500-CI-B	375.4	310.1	310.1	150.1	160.1

M) Jong

10-16-0 Date

Chemist

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim ansing, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including these 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 how with a base 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. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories



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

Receiving Date: 10/10/08 Reporting Date: 10/13/08 Project Number: NOT GIVEN Project Name: BD H-19 VENT Project Location: T21S-R37E-SEC19 H ~ LEA CO., NM Sampling Date: 10/09/08 Sample Type: WATER Sample Condition: COOL & INTACT Sample Received By: ML Analyzed By: ZL

				ETHYL	TOTAL
		BENZENE	TOLUENE	BENZENE	XYLENES
LAB NUMBER	R SAMPLE ID	(mg/L)	(mg/L)	(mg/L)	(mg/L)
ANALYSIS D	ATE	10/10/08	10/10/08	10/10/08	10/10/08
H16091-1	MONITOR WELL #1	<0.001	<0.001	<0.001	< 0.003
		_			
				1	
Quality Contr	ol	0.051	0.053	0.050	0.158
True Value C	C	0.050	0.050	0.050	0.150
% Recovery		102	106	100	105
Relative Percent	cent Difference	0.8	0.4	1.6	1.3

METHOD: EPA SW-846 8021B

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

Chemist

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim ansing, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims in Outract or tort, shall be limited to the amount paid by client for analyses, and clients in outract or tort, shall be limited to the amount paid by client for analyses. All claims in Outract or 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, toss 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. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Page 1 of 1	CHAIN-OF-CUSTODY AND ANALYSIS REQUEST	LAB Order ID #	ANALYSIS REQUEST (Circle or Specify Method No.)				002		109	6н	() () () () () () () () () () () () () (123' H 133' H 13	4 9 2011 4 1 7 20 4 1 7 20 9 1 7 20 9 2 2 9 2 2 2 9 2 2 2 9 2 2 2 9 2 2 2 2	21 B/66 22 B/66 22 B/66 25, MH 26 MB 26 MB	МТВЕ 803 ВТЕХ 802 Года! Мейа Тода! Мейа Пода! Пода! Мейа Пода! Пода! Мейа Пода! Пода! Мейа Пода! Пода! Пода! Мейа Пода! Пода! Пода! Мейа П						Phone Results Yes No	F	nconder@ric	rozanne@valornet.com			
		Cardinal Laboratories, Inc.	r. g Company				122 W Taylor Street ~ Hobbs, New Mexico 88240	122 W Taylor Street - Hobbs, New Mexico 88240		(575) 393-9174 (575) 397-1471	Fax #:	(575) 397-1471		Samplar/Signatyte: Rozanne Johnson (505)631-9310	A I A	a N Markey /			ТІМЕ ВРТЕ (2011) МАТЕЯ МАТЕЯ Манбо Ианбо Ианбо Ианбо Иоие ВРТЕ (2040) ВРТЕ (2040) ВР	3 X					Paraived hv: 1 1 / / , Date: Time:	1, MINIAN 10/10/11	1 N	Sample Condition CHECKED BY: Cool Intert (Initials)
	New	Tel (Scis) 393-2228 Fax (Scis) 393-2278 Fax (Scis) 393-2478	Company Name: RICE Operating Company	Project Manager.	Hack Conder	Address: (Street, City, Zip)	New Mexico 88240				BU H-19 Vent	T21S R37F Sec19 H ~ Lea County New Mexico			LAB# FIELD CODE		[]] 1 a() 9/ - 1 Monitor Weil #1					Proton Times	A Potida X 7.46	Time: Д. 0, 2, 11, 26	Delivered By/ (Circlé One) Samolor 1 IDS Rue Other			