

1R - 428-76

# Annual GW Mon. Report

Year:  
2011

**Rice Environmental Consulting & Safety**

P.O. Box 5630 Hobbs, NM 88241

Phone 575.393.4411 Fax 575.393.0293

RECEIVED OCD

CERTIFIED MAIL

RETURN RECEIPT NO. 7008 1140 0001 3070 6167

2012 APR -3 A 11: 27

**March 30<sup>th</sup>, 2012**

**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: 2011 Annual Groundwater Monitoring Report  
Rice Operating Company – Hobbs SWD System  
Hobbs M-4 vent (1R428-76): UL/M sec. 4 T19S R38E**

Mr. Hansen:

RICE Operating Company (ROC) has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the above-referenced site in the abandoned Hobbs Salt Water Disposal (SWD) system. ROC is the service provider (agent) for the Hobbs 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.

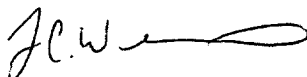
This 2011 Annual Groundwater Monitoring Report contains:

1. A table presenting all laboratory results with the depths to groundwater for the well at the site.
2. Graphs showing the concentrations of chloride and TDS in groundwater over time.
3. A map showing the well location.
4. The laboratory analytical results for the most recent sampling event.

Quarterly groundwater sampling will continue in 2012.

RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 393-9174 or me if you have any questions or wish to discuss the site.

Sincerely,



Lara Weinheimer

Project Scientist

RECS

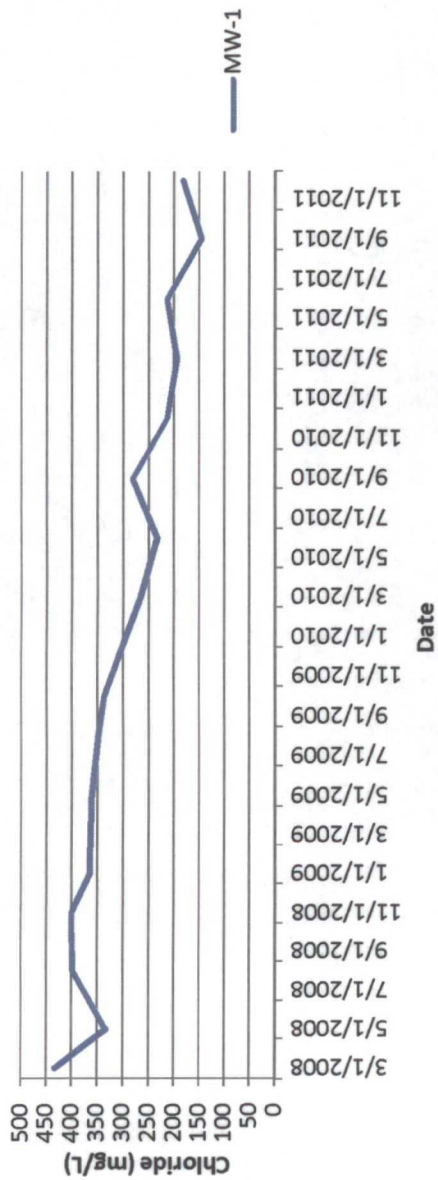
(575) 441-0431

Hobbs M-4 vent (1R428-76)

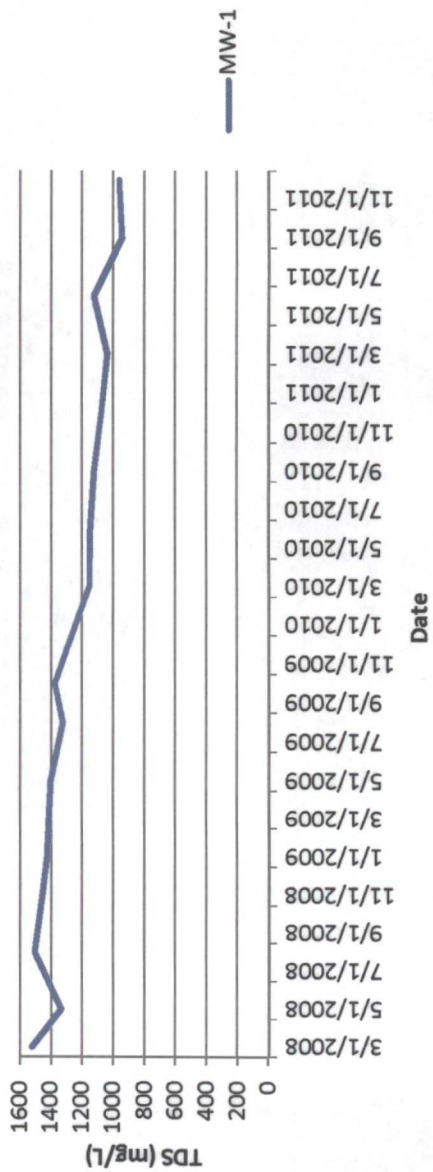
MW	Depth to Water	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate
(mg/L)									
1	27.02	5/2/2008	332	1330	<0.002	<0.002	<0.002	<0.006	240
1	26.78	3/7/2008	432	1520	<0.001	<0.001	<0.001	<0.003	262
1	27.64	8/8/2008	396	1500	<0.001	<0.001	<0.001	<0.003	286
1	27.83	11/12/2008	400	1450	<0.001	<0.001	<0.001	<0.003	297
1	28.01	1/30/2009	364	1420	XXX	XXX	XXX	XXX	264
1	28.39	5/5/2009	360	1400	XXX	XXX	XXX	XXX	258
1	28.85	8/12/2009	348	1320	XXX	XXX	XXX	XXX	240
1	28.92	10/28/2009	336	1370	XXX	XXX	XXX	XXX	242
1	29.33	3/16/2010	264	1150	XXX	XXX	XXX	XXX	288
1	29.53	6/11/2010	232	1140	XXX	XXX	XXX	XXX	238
1	28.85	9/7/2010	280	1120	XXX	XXX	XXX	XXX	196
1	28.79	12/7/2010	212	1070	XXX	XXX	XXX	XXX	266
1	29.4	3/14/2011	192	1030	XXX	XXX	XXX	XXX	235
1	29.85	6/24/2011	212	1120	XXX	XXX	XXX	XXX	248
1	30.28	9/23/2011	144	935	XXX	XXX	XXX	XXX	251
1	30.74	12/14/2011	180	955	XXX	XXX	XXX	XXX	266

XXX: Not Analyzed with NMOC D Permission

### Hobbs M-4 vent, Chloride in Groundwater



### Hobbs M-4 vent, TDS in Groundwater





# Monitor Well Location



## *Hobbs M-4 vent*

LEGALS: UL/M sec. 4  
T-19-S R-38-E

NMOCD CASE#: 1R428-76



0 150 300 600  
Feet

Drawing date: 12/29/11  
Drafted by: L. Weinheimer

December 22, 2011

Hack Conder  
Rice Operating Company  
112 W. Taylor  
Hobbs, NM 88240

RE: HOBBS M-4 VENT

Enclosed are the results of analyses for samples received by the laboratory on 12/16/11 13:50.

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).

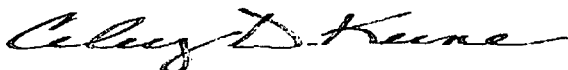
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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

**Analytical Results For:**

 Rice Operating Company  
 Hack Conder  
 112 W. Taylor  
 Hobbs NM, 88240  
 Fax To: (575) 397-1471

 Received: 12/16/2011  
 Reported: 12/22/2011  
 Project Name: HOBBS M-4 VENT  
 Project Number: NONE GIVEN  
 Project Location: T19S-R38E-SEC4 M-LEA CTY., NM

 Sampling Date: 12/14/2011  
 Sampling Type: Water  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

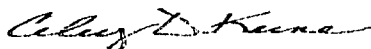
**Sample ID: MONITOR WELL #1 (H102714-01)**

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	180	4.00	12/21/2011	ND	108	108	100	3.77		
Sulfate 375.4		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	266	10.0	12/20/2011	ND	21.2	106	20.0	5.93		
TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	955	5.00	12/19/2011	ND	223	92.9	240	0.837		

Cardinal Laboratories

\*=Accredited Analyte

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 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 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 the 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.



Celest D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

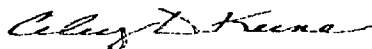
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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 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 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 the 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.



---

Celey D. Keene, Lab Director/Quality Manager



<b>Cardinal Laboratories, Inc.</b> 101 East Marland - Hobbs, New Mexico 88240 Tel (575) 393-2336 Fax (575) 393-2476		<b>CHAIN-OF-CUSTODY AND ANALYSIS REQUEST</b> LAB Order ID # _____	
Company Name: <b>RICE Operating Company</b> Project Manager: <b>Hack Conder</b> Address: (Street, City, Zip) <b>122 W Taylor Street - Hobbs, New Mexico 88240</b> Phone #: <b>(575) 393-9174</b> Fax #: <b>(575) 397-1471</b>		ANALYSIS REQUEST (Circle or Specify Method No.)	
Project Name: <b>Hobbs M-4 Vent</b> Project #: <b>(575) 397-1471</b>		ANALYSIS REQUEST (Circle or Specify Method No.)	
Project Location: <b>T19S-R38E-Sec4 M ~ Lea County - New Mexico</b> Sampler Signature: <i>Rozanne Johnson</i> (575) 631-9310 Email: <a href="mailto:rozanne@valornet.com">rozanne@valornet.com</a>		ANALYSIS REQUEST (Circle or Specify Method No.)	
LAB # (LAB USE ONLY) <b>H102714</b>	FIELD CODE Monitor Well #1	PRESERVATIVE METHOD HCL (2.40ml/VOA) HNO <sub>3</sub> NaHSO <sub>4</sub> H <sub>2</sub> SO <sub>4</sub> NONE DATE (2011) 12-14 9:35	MATRIX WATER SOIL AIR SLUDGE HCL (2.40ml/VOA) HNO <sub>3</sub> NaHSO <sub>4</sub> H <sub>2</sub> SO <sub>4</sub> NONE DATE (2011) 12-14 9:35
# CONTAINERS (G)rab or (C)omp G 1		TIME 12-14 9:35	
Relinquished by: <i>Rozanne Johnson</i> Date: 12-16-2011 Time: 13:50		Received by: <i>Rozanne Johnson</i> Date: 12/16/11 Time: 13:50	
Relinquished by: _____ Date: _____ Time: _____		Received By: (Laboratory Staff) Date: _____ Time: _____	
Delivered By: (Circle One) (Sampler) UPS - Bus - Other:		Sample Condition Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Infect <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Checked By: <i>[Signature]</i> (Initials)		REMARKS: Email Results: <a href="mailto:hconder@riceswd.com">hconder@riceswd.com</a> <a href="mailto:valornet@rice-sos.com">valornet@rice-sos.com</a> <a href="mailto:kjones@riceswd.com">kjones@riceswd.com</a> <a href="mailto:rozanne@valornet.com">rozanne@valornet.com</a>	

#26