

1R - 428-69

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

2012 APR -3 A 11: 26

CERTIFIED MAIL

RETURN RECEIPT NO. 7008 1140 0001 3070 6150

March 30th, 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 O-5 vent (1R428-69): UL/O sec. 5 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.

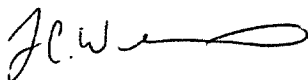
This 2011 Annual Groundwater Monitoring Report contains:

1. A table presenting all laboratory results and depths to groundwater for each well at the site.
2. Graphs showing the concentrations of chloride and TDS in groundwater over time.
3. A map showing the well locations.
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

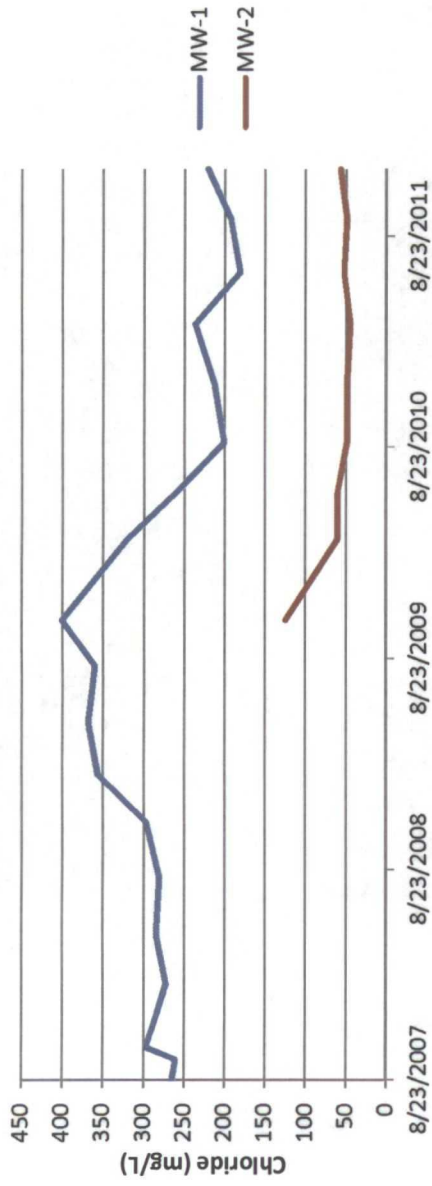
(575) 441-0431

Hobbs O-5 vent (1R428-69)

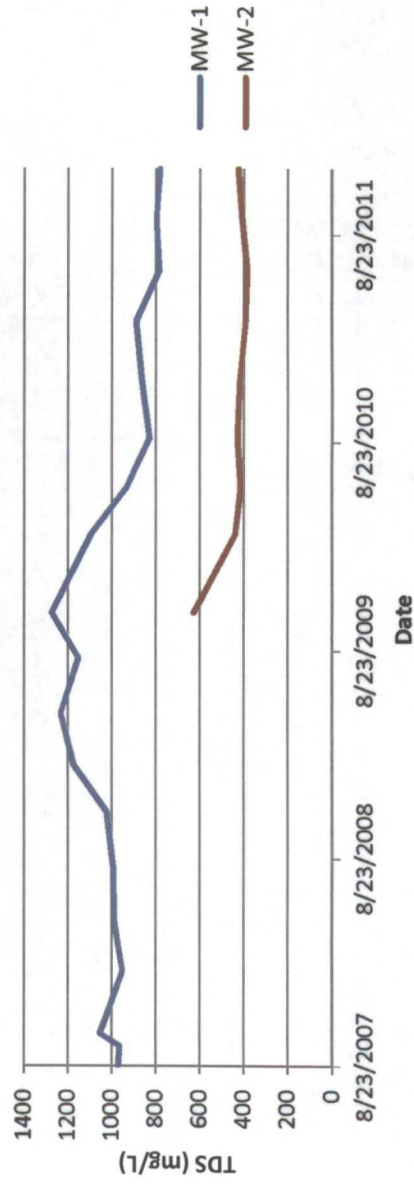
MW	Depth to Water	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate
						(mg/L)			
1	31.62	8/23/2007	264	968	<0.002	<0.002	<0.002	<0.006	62.4
1	31.61	9/27/2007	260	963	0.002	<0.001	<0.001	<0.003	57.6
1	31.58	10/19/2007	296	1052	0.003	0.001	<0.001	<0.003	59.3
1	31.63	2/7/2008	272	949	0.003	0.001	<0.001	<0.003	67.8
1	31.81	5/2/2008	284	985	<0.002	<0.002	<0.002	<0.006	75.2
1	32.16	8/8/2008	280	992	<0.001	<0.001	<0.001	<0.003	69
1	32.38	11/12/2008	296	1020	<0.001	<0.001	<0.001	<0.003	61.3
1	32.54	2/2/2009	356	1170	<0.001	<0.001	<0.001	<0.003	45
1	32.78	5/5/2009	368	1230	<0.001	<0.001	<0.001	<0.003	41.8
1	33.07	8/10/2009	360	1150	<0.001	<0.001	<0.001	<0.003	34.5
1	33.29	10/27/2009	400	1270	0.002	<0.001	<0.001	<0.003	34.5
1	33.57	3/15/2010	320	1090	<0.001	<0.001	<0.001	<0.003	47.2
1	33.74	6/4/2010	260	931	<0.001	<0.001	<0.001	<0.003	50.3
1	33.54	8/30/2010	200	825	<0.001	<0.001	<0.001	<0.003	57
1	33.6	12/10/2010	212	861	<0.001	<0.001	<0.001	<0.003	61.7
1	33.89	3/24/2011	236	887	<0.001	<0.001	<0.001	<0.003	48.3
1	34.05	6/21/2011	180	782	<0.001	<0.001	<0.001	<0.003	66
1	34.37	9/20/2011	192	796	<0.001	<0.001	<0.001	<0.003	66.6
1	34.59	12/15/2011	220	779	<0.001	<0.001	<0.001	<0.003	159

MW	Depth to Water	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate
						(mg/L)			
2	32.83	11/3/2009	124	625	<0.001	<0.001	<0.001	<0.003	70
2	33.1	3/15/2010	60	437	<0.001	<0.001	<0.001	<0.003	59
2	33.22	6/4/2010	60	413	<0.001	<0.001	<0.001	<0.003	32.1
2	33.01	8/30/2010	48	426	<0.001	<0.001	<0.001	<0.003	44.5
2	33.14	12/10/2010	48	417	<0.001	<0.001	<0.001	<0.003	48.9
2	33.42	3/24/2011	44	390	<0.001	<0.001	<0.001	<0.003	55.4
2	33.61	6/21/2011	52	383	<0.001	<0.001	<0.001	<0.003	59.8
2	33.88	9/20/2011	48	407	<0.001	<0.001	<0.001	<0.003	65.7
2	34.11	12/15/2011	56	424	<0.001	<0.001	<0.001	<0.003	72.3

Hobbs O-5 vent, Chloride in Groundwater



Hobbs O-5 vent, TDS in Groundwater



Monitor Well Locations



Hobbs O-5 vent

LEGALS: UL/O sec. 5
T-19-S R-38-E

NMOCD CASE#: 1R428-69



0 150 300 600
Feet

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

December 29, 2011

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

RE: HOBBS O-5 SITE

Enclosed are the results of analyses for samples received by the laboratory on 12/19/11 15:46.

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.

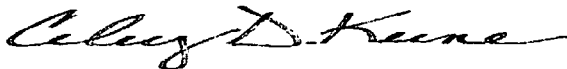
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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: 12/19/2011
Reported: 12/29/2011
Project Name: HOBBS O-5 SITE
Project Number: NONE GIVEN
Project Location: T19S-R38E-SEC5 O-LEA CTY., NM

Sampling Date: 12/15/2011
Sampling Type: Water
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: MONITOR WELL #1 (H102733-01)

BTEX 8021B		mg/L		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.001	0.001	12/28/2011	ND	0.049	98.2	0.0500	5.02		
Toluene*	<0.001	0.001	12/28/2011	ND	0.047	94.0	0.0500	5.76		
Ethylbenzene*	<0.001	0.001	12/28/2011	ND	0.055	110	0.0500	5.21		
Total Xylenes*	<0.003	0.003	12/28/2011	ND	0.158	105	0.150	4.74		

Surrogate: 4-Bromofluorobenzene (PIE) 111 % 70.7-118

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	220	4.00	12/27/2011	ND	108	108	100	0.00	

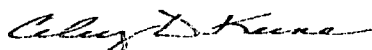
Sulfate 375.4		mg/L		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	159	10.0	12/27/2011	ND	18.6	93.0	20.0	0.539	

TDS 160.1		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	779	5.00	12/21/2011	ND	232	96.7	240	4.31		

Cardinal Laboratories

*=Accredited Analyte

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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: 12/19/2011
 Reported: 12/29/2011
 Project Name: HOBBS O-5 SITE
 Project Number: NONE GIVEN
 Project Location: T19S-R38E-SEC5 O-LEA CTY., NM

 Sampling Date: 12/15/2011
 Sampling Type: Water
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: MONITOR WELL #2 (H102733-02)

BTEX 8021B		mg/L		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	12/28/2011	ND	0.049	98.2	0.0500	5.02	
Toluene*	<0.001	0.001	12/28/2011	ND	0.047	94.0	0.0500	5.76	
Ethylbenzene*	<0.001	0.001	12/28/2011	ND	0.055	110	0.0500	5.21	
Total Xylenes*	<0.003	0.003	12/28/2011	ND	0.158	105	0.150	4.74	

Surrogate: 4-Bromofluorobenzene (PIE) 113 % 70.7-118

Chloride, SM4500Cl-B		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	56.0	4.00	12/27/2011	ND	108	108	100	0.00		

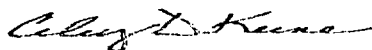
Sulfate 375.4		mg/L		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Sulfate*	72.3	10.0	12/27/2011	ND	18.6	93.0	20.0	0.539		

TDS 160.1		mg/L		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	424	5.00	12/21/2011	ND	232	96.7	240	4.31	

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

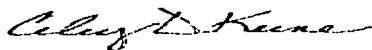
Notes and Definitions

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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*=Accredited Analyte

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Celest D. Keene, Lab Director/Quality Manager

Cardinal Laboratories, Inc. 101 East Merland - Hobbs, New Mexico 88240 Tel (575) 393-2326 Fax (575) 393-2476		CHAIN-OF-CUSTODY AND ANALYSIS REQUEST LAB Order ID # _____	
Company Name: RICE Operating Company Project Manager: Hack Conder Address: (Street, City, Zip) 122 W Taylor Street - Hobbs, New Mexico 88240 Phone #: (575) 393-9174 Fax #: (575) 397-1471		ANALYSIS REQUEST (Circle or Specify Method No.)	
Project Name: Hobbs O-5 Site Project Location: T19S-R38E-Sec5 O - Lea County - New Mexico Sampler Signature: <i>[Signature]</i>		PCB's 8082/608 GC/MS Semi. Vol. 8270C/625 GC/MS Vol. 8260B/624 RCI TCLP Pesticides TCLP Semi Volatiles TCLP Volatiles TCLP Metals Ag As Ba Cd Cr Pb Se Hg Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7 PAH 8270C TPH 418/1TX1005/1TX1005 Extended (C35) BTEX 8021B/602 MTBE 8021B/602	
FIELD CODE: LAB # 1 Monitor Well #1 LAB # 2 Monitor Well #2		PRESERVATIVE METHOD HCL (2.40ml VOA) HNO ₃ NaHSO ₄ H ₂ SO ₄ ICE (1-Liter HDPE) NONE	
# CONTAINERS WATER SOIL AIR SLUDGE		DATE (2011) 12-15 16:40 12-15 14:45	
(G)rab or (C)omp G G		TIME 12-15 16:40 12-15 14:45	
Relinquished by: <i>[Signature]</i> Date: 12-19-2011 Time: 15:45 Relinquished by: <i>[Signature]</i> Date: 12-19-2011 Time: 15:45		Relinquished by: <i>[Signature]</i> Date: 12-19-2011 Time: 15:45 Relinquished by: <i>[Signature]</i> Date: 12-19-2011 Time: 15:45	
Delivered By: (Circle One) Sampler ☒ UPS ☐ Bus ☐ Other:		REMARKS: Email Results to: hconder@riceswd.com weinheimer@rice-ecs.com kiones@riceswd.com rozanne@valornet.com	