

1R - 487

# REPORTS

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Mr. Edward Hansen  
New Mexico Energy, Minerals, & Natural Resources Dept.  
Oil Conservation Division, Environmental Bureau  
1220 S. St. Francis Drive  
Santa Fe, New Mexico 87504

RE: INITIAL CORRECTIVE ACTION PLAN REPORT  
N-6 PIPELINE LEAK, WEST COUNTY ROAD SITE (1R-487)  
HOBBS SWD SYSTEM  
Unit N SEC. 5 & 6, T19S, R38E, LEA COUNTY, NEW MEXICO

Mr. Hansen:

On behalf of Rice Operating Company (ROC), ARCADIS is submitting this Initial Corrective Action Plan Report for the Hobbs Salt Water Disposal (SWD) System N-6 Release Site. The site is located immediately south of the intersection of Highway 62-180 and the South Loop of the Hobbs West County Road Bypass.

ROC was the service provider (agent) for the Hobbs SWD System and has no ownership of any portion of the pipeline, well or facility. The Hobbs SWD System was owned by a consortium of oil producers, System Parties, who provide operating capital on a percentage ownership/usage basis. The Hobbs SWD System has been abandoned.

### Groundwater Sampling

Monitoring and biosparge wells were sampled quarterly in accordance with NMOCD guidelines. An annual report, to be submitted to NMOCD by April 1, 2013, will summarize the analytical results from groundwater samples collected from the monitor wells in 2012 and depth to water, total depth of the well, volume of water in the wellbore and volume of water purged from the well.

### Free Product Removal

In 1994, a leak was discovered in a buried SWD pipeline. An assessment program was completed and a free product recovery program initiated. The free product has

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ENVIRONMENTAL

Date:  
October 2, 2012

Contact:  
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Our ref:  
MT000821.0001

Imagine the result

historically been collected from monitor well 1 (MW-1), initially in 1996 in conjunction with groundwater recovery, and then beginning in 2000 with product recovery only.

A biosparge well designed to maximize in-situ biodegradation and minimize volatilization of hydrocarbons was installed at the site and became operational in August 2005. Four borings were drilled on November 8 and 9, 2006 in order to evaluate hydrocarbon occurrence in the vadose zone. Based on drilling observations a second biosparge well was installed approximately 30 feet east of the original biosparge well. The second biosparge well became operational in March 2007. In November of 2007, an additional eight soil borings (piezometers) were drilled and a third biosparge well was installed southeast of the pump house. These soil borings were located in areas between previous sampling points, outside of the previously identified core source area, and as close as possible to previous (2006) soil borings from which samples had been collected and tested for total petroleum hydrocarbons (TPH) and total organic compounds (TOC).

In November of 2010, the air sparge system at the site was tested by collection of soil gas samples during a cycled shut down. A similar test protocol was previously performed in May/June and September/October 2007, August/September 2008 and November 2009. The soil gas samples from these testing events were analyzed for methane, carbon dioxide, oxygen and benzene, toluene, ethylbenzene and xylenes (BTEX).

During 2011, phase separated hydrocarbon recovery was conducted through biweekly replacement of an absorbent sock placed in the well.

#### **2012 Corrective Action Plan Activities**

In accordance with the NMOCD approved CAP and subsequent Addendum, pumping of free product from Biosparge Well #1 (BS1) began on April 7, 2012. Free product was pumped from this well on weekly basis from April 7, 2012 through September 19, 2012. Based on reduced product thickness and recovery volumes the pump was removed from the well and a product recovery absorbent sock has been placed in the well. A total of 1,597 gallons of free product has been removed from the well since April 7, 2012.

Monitor Well #1 (MW1) has had a product recovery absorbent sock in the well continually to remove free product from the well. The sock is changed weekly. A

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Mr. Edward Hansen  
October 2, 2012

total of 22 gallons of product has been removed from this well since April 7, 2012. Product thickness and recovery volumes are shown on the attached Field Measurement/ Observation Log. Removed fluids were properly disposed of at a permitted SWD well.

The wells will be monitored over the next few weeks to observe whether or not the recovery socks continue to capture free product. If product thickness in BS1 increases enough to warrant pumping, a continuous skimmer pump will be placed in BS1. Product recovery activities and volumes will be reported in the 2012 Annual Groundwater Report.

Thank you for consideration concerning this information. Should you have any questions regarding this submission, please do not hesitate to contact Hack Conder (575 393-9174) or me.

Very truly yours,

ARCADIS

*Sharon E. Hall*

Sharon E. Hall  
Associate Vice President

cc: Hack Conder - ROC

Attachement :

Field Measurement/ Observation Log

Arc Environmental						FIELD MEASUREMENT/OBSERVATION LOG								
P. O. Box 1772 ~ Lovington, NM 88260 (575) 631-9310						PROJECT NAME: RICE - Hobbs N-6			PROJECT LOCATION: Hobbs, New Mexico			DATE: As Listed		
						PROJECT: RICE Operating						FIELD TECHNICIAN: Rozanne Johnson		
WELL # SAMPLE LOCATION	TOTAL WELL DEPTH (feet)	DEPTH TO PRODUCT (feet)	DEPTH TO WATER (feet)	HEIGHT WATER COLUMN (feet)	WELL FACTOR 2"=.16 4"=.65 6"=1.5	WELL VOLUME IN GALLONS	Purge Removed (gallons)	WELL VOLUMES REMOVED	PSH THICKNESS (feet)	PSH REMOVED (gallons)	WATER REMOVED (gallons)	DATE: As Listed	Comments	
BS1	63.74	45.56	47.62	16.1	0.65	10.5	125	12	2.1	90	35	7/2/2012	Heavy Product Present	
BS1	63.74				0.65		125	12		85	40	7/10/2012	Heavy Product Present	
BS1	63.74				0.65		125	12		40	85	7/17/2012	Product Present	
BS1	63.74				0.65		125	12		40	85	7/25/2012	Product Present	
BS1	63.74	45.51	46.11	17.6	0.65	11.5	125	12	0.6	25	100	8/3/2012	Product Present	
BS1	63.74	45.55	46.28	17.5	0.65	11.3	125	11	0.7	20	105	8/10/2012	Product Present	
BS1	63.74				0.65		125	11		15	110	8/16/2012	Product Present	
BS1	63.74				0.65		125	11		10	115	8/22/2012	Product Present	
BS1	63.74	45.56	46.48	17.3	0.65	11.2	125	11	0.9	10	115	8/29/2012	Product Present	
BS1	63.74				0.65		125	11		5	120	9/4/2012	Product Present	
BS1	63.74	45.54	46.03	17.7	0.65	11.5	125	11	0.5	5	120	9/12/2012	Product Present	
BS1	63.74				0.65		2	11		2		9/19/2012	Product Present Pump Pulled Bailed With Product Bailer PSH Sock Placed in Well	
						Total Removed	1377	137		347	1030			

Arc Environmental						FIELD MEASUREMENT/OBSERVATION LOG							
P. O. Box 1772 ~ Lovington, NM 88260 631-9310 (575)						PROJECT NAME: RICE - Hobbs N-6			PROJECT LOCATION: Hobbs, New Mexico			DATE: As Listed	
PROJECT: RICE Operating						FIELD TECHNICIAN: Rozanne Johnson						Notes: Water disposed of at an approved water disposal facility.	
WELL # SAMPLE LOCATION	TOTAL WELL DEPTH (feet)	DEPTH TO PRODUCT (feet)	DEPTH TO WATER (feet)	HEIGHT WATER COLUMN (feet)	WELL FACTOR 2"=.16 4"=.65 6"=1.5	WELL VOLUME IN GALLONS	Purge Removed (gallons)	WELL VOLUMES REMOVED	PSH THICKNESS (feet)	PSH REMOVED (gallons)	WATER REMOVED (gallons)	DATE: As Listed	Comments
BS1	63.74				0.65		125	13		125	0	4/7/2012	Heavy Product Present
BS1	63.74				0.65		125	13		125	0	4/21/2012	Heavy Product Present
BS1	63.74	45.11	48.72	15.0	0.65	9.8	125	13	3.6	125	0	5/8/2012	Heavy Product Present
BS1	63.74				0.65		125	13		125	0	5/15/2012	Heavy Product Present
BS1	63.74				0.65		125	13		125	0	5/24/2012	Heavy Product Present
BS1	63.74				0.65		125	13		125	0	6/7/2012	Heavy Product Present
BS1	63.74				0.65		125	13		125	0	6/12/2012	Heavy Product Present
BS1	63.74	45.62	48.96	14.8	0.65	9.6	125	13	3.3	125	0	6/14/2012	Heavy Product Present
BS1	63.74				0.65		125	13		125	0	6/21/2012	Heavy Product Present
BS1	63.74				0.65		125	13		125	0	6/26/2012	Heavy Product Present
						Total Removed	1250	130		1250	0		

Arc Environmental							FIELD MEASUREMENT/OBSERVATION LOG									
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MW1	55.20	45.62	46.25	9.0	0.65	5.8	0	0	0.6	1				7/2/2012	19 inch stained to 19 inches~Sock Replaced	
MW1	55.20				0.65					1				7/10/2012	19 inch stained to 19 inches~Sock Replaced	
MW1	55.20				0.65					1				7/17/2012	19 inch stained to 19 inches~Sock Replaced	
MW1	55.20				0.65					1				7/25/2012	19 inch stained to 19 inches~Sock Replaced	
MW1	55.20	45.33	46.06	9.1	0.65	5.9	0	0	0.7	1				8/3/2012	19 inch stained to 19 inches~Sock Replaced	
MW1	55.20				0.65					1				8/10/2012	19 inch stained to 19 inches~Sock Replaced	
MW1	55.20				0.65					1				8/16/2012	19 inch stained to 19 inches~Sock Replaced	
MW1	55.20				0.65					1				8/22/2012	19 inch stained to 19 inches~Sock Replaced	
MW1	55.20	45.69	46.10	9.1	0.65	5.9	0	0	0.4	1				8/29/2012	19 inch stained to 19 inches~Sock Replaced	
MW1	55.20	45.96	46.12	9.1	0.65	5.9	0	0	0.2	1				9/4/2012	19 inch stained to 19 inches~Sock Replaced	
MW1	55.20	45.83	46.12	9.1	0.65	5.9	0	0	0.3	1				9/12/2012	19 inch stained to 19 inches~Sock Replaced	
MW1	55.20									1				9/19/2012	19 inch stained to 19 inches~Sock Replaced	
						Total Removed	0	0		12						

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MW1	55.20	45.62	46.25	9.0	0.65	5.8	0	0	0.6	1				4/7/2012	19 inch stained to 19 inches~Sock Replaced	
MW1	55.20				0.65					1				4/21/2012	19 inch stained to 19 inches~Sock Replaced	
MW1	55.20	45.72	46.31	8.9	0.65	5.8	0	0	0.6	1				5/8/2012	19 inch stained to 19 inches~Sock Replaced	
MW1	55.20				0.65					1				5/15/2012	19 inch stained to 19 inches~Sock Replaced	
MW1	55.20				0.65					1				5/24/2012	19 inch stained to 19 inches~Sock Replaced	
MW1	55.20				0.65					1				6/7/2012	19 inch stained to 19 inches~Sock Replaced	
MW1	55.20				0.65					1				6/12/2012	19 inch stained to 19 inches~Sock Replaced	
MW1	55.20	45.91	46.52	8.7	0.65	5.6	0	0	0.6	1				6/14/2012	19 inch stained to 19 inches~Sock Replaced	
MW1	55.20						0	0		1				6/21/2012	19 inch stained to 19 inches~Sock Replaced	
MW1	55.20						0	0		1				6/26/2012	19 inch stained to 19 inches~Sock Replaced	
						Total Removed	0	0		10						