

1R - 427-172

# Annual GW Mon. REPORTS

DATE:

2009



Infrastructure, buildings, environment, communications

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Mr. Edward Hansen  
New Mexico Oil Conservation Division  
1220 So. Saint Francis Drive  
Santa Fe, New Mexico 87505

Certified Mail Receipt No. 7002 2410 0001 5813 0233

Subject:

**2009 MONITOR WELL REPORT/SAMPLING SUMMARY**

**NMOCD Case # 1R427-172**

**Eunice Monument Eumont (EME) SWD Gaither Boot**

**T19S, R36E, Section 34, Unit I, Eunice, Lea County, New Mexico**

Date:  
April 12, 2010

Mr. Hansen,

Contact:  
Sharon Hall

On behalf of Rice Operating Company (ROC), ARCADIS respectfully submits the 2009 Monitor Well Report for the EME Gaither Boot site located in the Eunice Monument Eumont (EME) Salt Water Disposal (SWD) System.

Phone:  
432 687-5400

One monitoring well (MW-1) was installed at the site and sampled on April 17, 2008 following approval of the Investigation and Characterization Plan approved by NMOCD on August 13, 2007.

Email:  
[shall@arcadis-us.com](mailto:shall@arcadis-us.com)

An Additional Site Investigation plan was submitted to NMOCD on August 20, 2008 and approved by NMOCD on September 4, 2008.

An upgradient monitor well (MW-2) was drilled on October 6, 2008, approximately 30 feet northwest of the former junction box location. The purpose of drilling this well was to identify if upgradient chloride impacts are present since elevated chloride concentrations have been reported in this area as early as the 1950's.

An Additional Site Investigation report was submitted to NMOCD on November 4, 2008. As upgradient chloride concentrations were elevated similar to concentrations in MW-1, ROC will submit a work plan that includes and estimation of chloride mass that may have impacted this site and a plan for removal of the estimated chloride mass.

All wells were samples quarterly per NMOCD guidelines. The attached tables summarize the analytical results from groundwater samples collected from the monitor wells at the site.

Part of a bigger picture

# ARCADIS

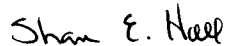
Mr. Edward Hansen  
April 12, 2010

ROC is the service provider (agent) for the EME Salt Water Disposal System and has no ownership of any portion of the pipelines, wells or facilities. The EME System is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis.

Thank you for your consideration concerning this annual summary of groundwater monitoring information. If you have any questions please do not hesitate to contact me.

Best Regards,

ARCADIS U.S, Inc.

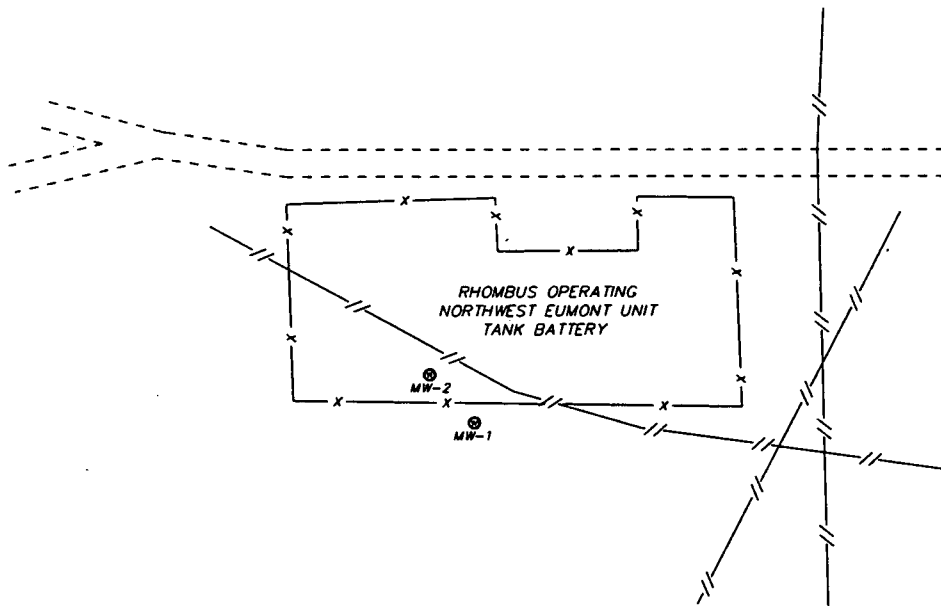


Sharon E. Hall  
Associate Vice President

Copies: Hack Conder- ROC

Attachments:  
Monitor Well Summary Tables  
Monitor Well Location Figure

SECTION 34, TOWNSHIP 19 SOUTH, RANGE 36 EAST, N.M.P.M.,  
LEA COUNTY, NEW MEXICO.



NOTE:  
ELEVATIONS ARE ON BLACK MARK  
ON NORTH SIDE OF PVC CASING.

NEW MEXICO STATE PLANE COORDINATES (NAD83)

WELL	NORTHING	EASTING	LATITUDE	LONGITUDE	ELEV. PVC	ELEV. GRND	ELEV. CONC.
MW-1	588826.182	847772.407	N 32°36'53.27"	W 103°20'17.30"	3624.72'	3622.45'	3622.57'
MW-2	588853.23	847747.61	N 32°36'53.52"	W 103°20'17.51"	3625.37'	3622.99'	3623.23'

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED  
FROM FIELD NOTES OF AN ACTUAL SURVEY AND  
MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND  
SURVEYS AS SPECIFIED BY THIS STATE.

GARY L. JONES, N.M.P.S. No. 7977  
LEA COUNTY, N.M. No. 5074

100 0 100 200 FEET  
SCALE: 1" = 100'

**RICE OPERATING COMPANY**

REF: EME GAITHER BOOT

MONITOR WELL LOCATED IN  
SECTION 34, TOWNSHIP 19 SOUTH, RANGE 36 EAST,  
N.M.P.M., LEA COUNTY, NEW MEXICO.

**BASIN SURVEYS** P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 20656 Drawn By: J M SMALL

Date: 11-17-2008 Disk: 20656MW

Survey Date: 11-14-2008 Sheet 2 of 2 Sheets

ROC EME Gaither boot

MW	Depth to Water (feet)	Total Depth (feet)	Well Volume (gallons)	Volume Purged (gallons)	Sample Date	Cl (mg/L)	TDS (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	Sulfate (mg/L)
1	46.71	64.00	2.8	10	4/17/2008	3280	6740	<0.001	<0.001	<0.001	<0.003	306
1	47.27	64.50	2.8	10	6/3/2009	2900	5840	<0.001	<0.001	<0.001	<0.003	304
1	46.80	64.00	2.8	10	7/23/2008	3700	6870	<0.002	<0.002	<0.002	<0.006	278
1	47.01	64.00	2.7	10	10/20/2008	3500	6890	<0.001	<0.001	<0.001	<0.003	293
1	47.15	64.50	2.8	10	2/23/2009	3350	6560	<0.001	<0.001	<0.001	<0.003	313
1	47.34	64.50	2.7	10	9/1/2009	2750	5660	<0.001	<0.001	<0.001	<0.003	315
1	47.49	64.50	2.7	10	11/13/2009	2650	4690	<0.001	<0.001	<0.001	<0.003	290

mg/L=milligrams per liter

ROC EME Gaither boot

MW	Depth to Water (feet)	Total Depth (feet)	Well Volume (gallons)	Volume Purged (gallons)	Sample Date	Cl (mg/L)	TDS (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	Sulfate (mg/L)
2	47.54	65.28	2.8	10	6/3/2009	1700	3270	<0.001	<0.001	<0.001	<0.003	246
2	47.30	65.28	2.9	10	10/20/2008	2000	4440	<0.001	<0.001	<0.001	<0.003	207
2	47.44	65.28	2.9	10	2/23/2009	2250	4000	<0.001	<0.001	<0.001	<0.003	142
2	47.60	65.28	2.8	10	9/1/2009	2250	5390	<0.001	<0.001	<0.001	<0.003	127
2	47.74	65.28	2.8	10	11/13/2009	1480	2810	<0.001	<0.001	<0.001	<0.003	199

mg/L=milligrams per liter