

1R - 427-118

## REPORTS

DATE:

FEB 20/4

## Rice Environmental Consulting & Safety

P.O. Box 2948, Hobbs, NM 88241  
Phone 575.393.2967

CERTIFIED MAIL

RETURN RECEIPT NO. 7007 2560 0000 4569 9019

NOV 12 2013  
11:19 PM

**November 12, 2013**

**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: Termination Request  
EME M-10 (1R427-118): UL/M, Sec. 10, T21S, R36E  
RICE Operating Company – Eunice Monument Eumont (EME) SWD System

Mr. Hansen:

Rice Operating Company (ROC) is the service provider (agent) for the EME Saltwater Disposal (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.

### **Background and Previous Work**

In 2001, ROC initiated work on the former M-10 junction box. The site is located in UL M, Sec. 10, T21S, R36E. An updated survey of NM OSE records, conducted in 2013, indicate that groundwater would likely be encountered at a depth of approximately 196 +/- feet. The site was delineated using a backhoe to form a 10x10x6-ft deep excavation and soil samples were screened at regular intervals for chlorides. Each sample was field titrated for chlorides. Representative composite samples of the sidewalls and bottom were submitted to a commercial laboratory to be analyzed for chloride, TPH, and BTEX. The sidewall composite resulted in a chloride concentration of 198 mg/kg, gasoline range organics (GRO) and BTEX concentration below detectable limits, a diesel range organics (DRO) concentration of 334 mg/kg. The bottom composite sample resulted in a chloride concentration of 1,130 mg/kg, a GRO concentration of 104 mg/kg, a DRO concentration of 3,780 mg/kg and BTEX concentrations below detectable limits. A compacted clay layer was installed and will provide a barrier that will inhibit the downward migration of chlorides to groundwater. A total of 12 cubic yards of excavated soil was properly disposed of at a NMOCD approved facility. The excavation was backfilled to ground surface and contoured to the surrounding area. A new, watertight junction box was installed at the site; therefore, seeding is not necessary.

### **Further investigation**

To further investigate the depth of chloride presence, a soil bore was initiated on February 11, 2013 at 10 ft northeast of the former junction box site. The boring was advanced to a depth of 30 ft below ground surface (bgs) with soil samples collected every 5 ft. Each sample was field titrated for chlorides and field screened using a PID for hydrocarbons, resulting in low

## Rice Environmental Consulting & Safety

P.O. Box 2948, Hobbs, NM 88241

Phone 575.393.2967

concentrations. The 20 ft and 30 ft samples were sent to a commercial laboratory for analysis. The 20 ft sample resulted in a chloride concentration of 912mg/kg. DRO and GRO concentrations were below detectable limits. The 30 ft sample resulted in a chloride concentration of 176 mg/kg. DRO and GRO concentrations were below detectable limits. The entire bore hole was plugged with bentonite to ground surface.

Vegetation has rebounded at this site; vegetation will act as an evapo-transpiration barrier that will also inhibit the downward migration of chlorides and hydrocarbons. Plants capture water through their roots and so reduce the amount of water infiltrating below the root zone.

The junction box site location map, area map, junction box report, soil bore plat, log, laboratory analysis and current documentation are attached.

### **Recommendations**

Site investigation demonstrates that residual chloride and hydrocarbons in the vadose zone will not with reasonable probability contaminate groundwater in excess of NMOCD standards. This site meets the requirements of the NMOCD-approved Revised Junction Box Upgrade Work Plan (July 16, 2003). As such, ROC request termination of the regulatory file, or similar closure status.

Please contact me at (575)393-2967 if you have any questions or wish to discuss this site. Thank you for your time and consideration.

Sincerely,



Laura Flores  
Project Manager  
RECS

Enclosures



## Site Maps

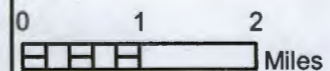
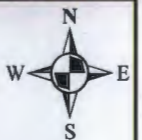
**RICE *Operating Company* (ROC)**  
112 West Taylor Hobbs, NM 88240  
Phone: (575) 393-9174 Fax: (575) 397-1471

# Site Location Map



**EME M-10  
(1R427-118)**

UL/M SECTION 10  
T21S, R36E  
LEA COUNTY, NM



Drawing date: 5/6/13 LS



# Area Map



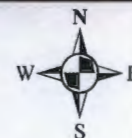
## Legend

- ACTIVE LINE
- ISOLATED-LOCATED
- ... ISOLATED-PROJECTED



## EME M-10

UL/M SECTION 10  
T21S, R36E  
LEA COUNTY, NM



0 250 500  
 Feet

Drawing date: 8/7/13 LS



# Junction Box Report

**RICE *Operating Company* (ROC)**  
112 West Taylor Hobbs, NM 88240  
Phone: (575) 393-9174 Fax: (575) 397-1471

427-118

**RICE OPERATING COMPANY  
JUNCTION BOX FINAL REPORT**

**BOX LOCATION**

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
EME	M-10	M	10	21S	36E	LEA	Length 5'	Width 5'	Depth 5'

LAND TYPE: BLM \_\_\_\_\_ STATE X FEE LANDOWNER \_\_\_\_\_ OTHER \_\_\_\_\_

Depth to Groundwater >100 feet NMOCD SITE ASSESSMENT RANKING SCORE: 0

Date Started 09/24/2001 Date Completed 02/27/2001 OCD Witness NO

Soil Excavated 20 cubic yards Excavation Length 10 Width 10 Depth 6 feet

Soil Disposed 12 cubic yards Offsite Facility SUNDANCE Location EUNICE, NM

**FINAL ANALYTICAL RESULTS:** Sample Date 10/14/2001 Sample Depth 6'

Procure 5-point composite sample of bottom and 4-point composite sample of sidewalls. TPH,  
BTEX and Chloride laboratory test results completed by using an approved lab and testing  
procedures pursuant to NMOCD guidelines.

Sample Location	Benzene mg/kg	Toluene mg/kg	Ethyl Benzene mg/kg	Total Xylenes mg/kg	GRO mg/kg	DRO mg/kg	Chlorides mg/kg
SIDEWALLS	<0.005	<0.005	<0.005	<0.015	<50	334	198
BOTTOM	<0.005	<0.005	<0.005	<0.015	104	3780	1130

General Description of Remedial Action: Delineated vertical and lateral extent to below

NMOCD guidelines. Installed compacted clay liner and water tight junction box and backfilled.

**CHLORIDE FIELD TESTS**

LOCATION	DEPTH	mg/kg
SIDEWALLS	2'	160
BOTTOM	6'	990

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY  
KNOWLEDGE AND BELIEF.

DATE 02/14/2001 PRINTED NAME James Strugill

SIGNATURE James Strugill TITLE Environmental Technician





PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

GOOD • ABILENE, TX 79603  
AND • HOBBS, NM 88240

RECEIVED  
NOV 20 2000  
RICE OPERATING  
HOBBS, NM

Sampling Date: 11/14/00  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: AH  
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO (C <sub>6</sub> -C <sub>10</sub> ) (mg/Kg)	DRO (>C <sub>10</sub> -C <sub>28</sub> ) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		11/14/00	11/14/00	11/15/00
H5341-1	M-10-SIDE	<50	334	198
H5341-2	M-10-BOTTOM	104	3780	1130
Quality Control		787	804	954
True Value QC		800	800	1000
% Recovery		98.3	100	95.4
Relative Percent Difference		7.7	0.9	4.9

\*Analyses performed on 1:4 w:v aqueous extracts.

Date 11/15/02

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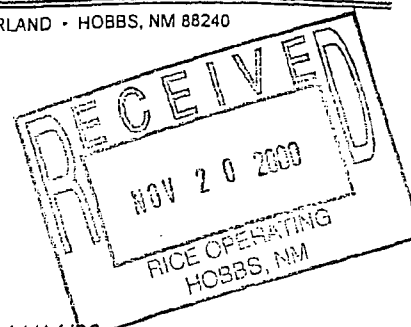


# ARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR  
RICE OPERATING CO.  
ATTN: JAMES STURGILL  
122 W. TAYLOR  
HOBBS, NM 88240  
FAX TO:



Receiving Date: 11/14/00  
Reporting Date: 11/16/00  
Project Number: NOT GIVEN  
Project Name: M-10 SIDES & BOTTOM EME  
Project Location: UM SEC 10-T21S-R36E

Sampling Date: 11/14/00  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: AH  
Analyzed By: BC

LAB NO.	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE		11/15/00	11/15/00	11/15/00	11/15/00
H5341-1	M-10-SIDE	<0.005	<0.005	<0.005	<0.015
H5341-2	M-10-BOTTOM	<0.005	<0.005	<0.005	<0.015
Quality Control		0.094	0.095	0.087	0.266
True Value QC		0.100	0.100	0.100	0.300
% Recovery		93.8	94.7	87.2	88.6
Relative Percent Difference		1.4	3.8	0.5	2.8

METHOD: EPA SW-846 8260

Chemist

*James Sturgill*

Date

11/16/00

H5341B.XLS

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2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240  
(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

Page        of       [illegible]

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**Terms and Conditions:** Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice and all costs of collection, including attorney's fees.

Sampler Relinquished:		Date: 11-14	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Reinquinshed By:		Time: 7:25		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Delivered By: (Circle One)		Date: 11/14/00	Received By: (Lab Staff)	REMARKS:	
<input checked="" type="radio"/> Sampler - UPS - Bus - Other:		Time: 3:10	James Hill	2 - BTE 40 60 = 120 2 - TPH, 8015m, Grod Dao 90 = 180 2 - CULOMPS in soil 22 = 44 STATE TAX 20.64	
		Sample Condition	CHECKED BY:		
		Cool Intact	(Initials)		
		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No			

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.

364.64

# Sundance Services, Inc.

P.O. Box 1737 ★ Eunice, NM 88231  
(505) 394-2511

NC 35382

LEASE OPERATOR/SHIPPER/COMPANY:

LEASE NAME:

TRANSPORTER COMPANY:

TIME:

AM/PM

DATE:

VEHICLE NO.:

DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

☐ Production Water

☐ Drilling Fluids

☐ Completion Fluids

☐ Tank Bottoms

☐ Contaminated soil

☐ C-117 No.:

☐ Other Material:

☐ BS&W Content:

Description:

VOLUME OF MATERIAL ☐ BBLs.

☐ YARD

☐

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO SUNDANCE SERVICES, INC.'S FACILITY FOR DISPOSAL.

*THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.*

DRIVER:

(SIGNATURE)

FACILITY REPRESENTATIVE:

(SIGNATURE)

White-Sundance Canary-Sundance Acct#1 Pink-Sundance Acct#2 Gold-Transporter  
Revised 12/27/95



# Soil Bore Installation Documentation

**RICE *Operating Company* (ROC)**  
419 West Cain Hobbs, NM 88240  
Phone: (575) 393-2967 Fax: (575) 393-0293



Logger:	Kyle Norman					
Driller:	Harrison & Cooper, Inc.					
Drilling Method:	Air rotary		Project Name:	Well ID:		
Start Date:	2/11/2013		EME M-10	SB-1		
End Date:	2/11/2013	Comments: SB -1 is located 10 ft northeast of the center of the current junction box. All samples were from cuttings. DRAFTED BY: Lara Weinheimer TD = 30 ft                      GW = 100 ft		Location: UL/M sec. 10 T21S R36E Lat: 32°29'19.81"N                      County: Lea Long: 103°15'29.226"W                      State: NM		
Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
				Red Sand		
SS	198		0.9			
				Tan/Red Sand		
5 ft	150		1.6			
10 ft	240		5.1			
15 ft	776		1.1			
20 ft	897	Cl- 912	2.4	Red Sand		
		GRO <10				
		DRO <10				
25 ft	269		7.9			
30 ft	171	Cl- 176	1.3			
		GRO <10				
		DRO <10				

bentonite  
seal



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

February 15, 2013

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: EME M-10

Enclosed are the results of analyses for samples received by the laboratory on 02/11/13 16:20.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

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: 02/11/2013  
Reported: 02/15/2013  
Project Name: EME M-10  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 02/11/2013  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SB-1 @ 20' (H300386-01)**

Chloride, SM4500Cl-B

mg/kg

Analyzed By: DW

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>912</b>	16.0	02/14/2013	ND	416	104	400	3.77	

TPH 8015M

mg/kg

Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/14/2013	ND	210	105	200	2.24	
DRO >C10-C28	<10.0	10.0	02/14/2013	ND	194	96.8	200	5.26	

Surrogate: 1-Chlorooctane 86.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 96.3 % 63.6-154

**Sample ID: SB-1 @ 30' (H300386-02)**

Chloride, SM4500Cl-B

mg/kg

Analyzed By: DW

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>176</b>	16.0	02/14/2013	ND	416	104	400	3.77	

TPH 8015M

mg/kg

Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/14/2013	ND	210	105	200	2.24	
DRO >C10-C28	<10.0	10.0	02/14/2013	ND	194	96.8	200	5.26	

Surrogate: 1-Chlorooctane 86.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 96.7 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

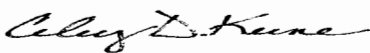
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received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

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager





# RICE ENVIRONMENTAL CONSULTING & SAFETY

122 West Taylor Hobbs, NM 88240  
PHONE: (505) 393-9174 FAX: (505) 397-1471  
PID METER CALIBRATION & FIELD REPORT FORM

CK.		MODEL: PGM 7300	SERIAL NO: 590-000508
MODEL	x	MODEL: PGM 7300	SERIAL NO: 590-000504
NO.		MODEL: PGM 7320	SERIAL NO: 592-903318
		MODEL: PGM 7300	SERIAL NO: 590-000183

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

LOT NO : HAL-248-100-1	EXPIRATION DATE: 7/01/2015
METER READING ACCURACY: 99.9 PPM	

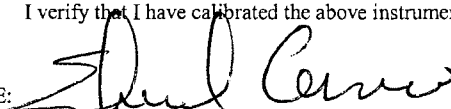
ACCURACY : +/- 2%

COMPANY
RICE

SITE	UNIT	SECTION	TOWN SHIP	RANGE
EME M-10	M	10	T-21-S	R-36-E

SAMPLE ID	PID	SAMPLE ID	PID
Soil Bore #1 @ Surface	0.9		
Soil Bore #1 @ 5'	1.6		
Soil Bore #1 @ 10'	5.1		
Soil Bore #1 @ 15'	1.1		
Soil Bore #1 @ 20'	2.4		
Soil Bore #1 @ 25'	7.9		
Soil Bore #1 @ 30'	1.3		

I verify that I have calibrated the above instrument in accordance to the manufacture operation manual.

SIGNATURE: 

DATE: 2-11-2013



# Current Photodocumentation

**RICE *Operating Company* (ROC)**  
112 West Taylor Hobbs, NM 88240  
Phone: (575) 393-9174 Fax: (575) 397-1471

**EME M-10 (1R427-118)**  
UL/M, Section 10, T21S, R36E



Facing north

7/3/2013



Facing east

7/3/2013