

1R - 427-340

**APPROVALS**

**YEAR(S):**

2013

**Hansen, Edward J., EMNRD**

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**From:** Hansen, Edward J., EMNRD  
**Sent:** Tuesday, March 19, 2013 11:09 AM  
**To:** Hack Conder (hconder@riceswd.com)  
**Cc:** Leking, Geoffrey R, EMNRD; Laura Pena (lpna@riceswd.com); Katie Jones <kjones@riceswd.com> (kjones@riceswd.com); Scott Curtis (scurtis@riceswd.com)  
**Subject:** Remediation Plan (1R427-340) Termination - ROC EME Jct L-21 Site

**RE: Termination Request  
for the Rice Operating Company's  
EME Jct L-21 Site  
Unit Letter L, Section 21, T19S, R37E, NMPM, Lea County, New Mexico  
Remediation Plan (1R427-340) Termination**

Dear Mr. Conder:

The New Mexico Oil Conservation Division (OCD) has received Rice Operating Company's report and request to close the above-referenced site, dated March 1, 2013 (received March 4, 2013). The reports are acceptable to the OCD.

The above-referenced report, submitted in accordance with 19.15.29 NMAC (Rule 29; formally, Rule 116), indicates that Rice Operating Company has met the requirements of 19.15.29 NMAC; therefore, the OCD approves the report and hereby notifies you that the remediation plan (1R427-340) is terminated in accordance with 19.15.29 NMAC.

Please be advised that OCD approval of this report does not relieve the owner/operator of responsibility should operations pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the owner/operator of responsibility for compliance with any OCD, federal, state, or local laws and/or regulations.

If you have any questions regarding this matter, please contact me at 505-476-3489.

Edward J. Hansen  
Hydrologist  
Environmental Bureau

# **RICE** *Operating Company*

112 West Taylor • Hobbs, New Mexico 88240

Phone: (575) 393-9174 • Fax: (575) 397-1471

CERTIFIED MAIL

RETURN RECEIPT NO. 7007 2560 0000 4569 9262

**March 1, 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 Jct. L-21 (1R427-340): UL/L, Sec. 21, T19S, R37E  
RICE Operating Company – Eunice Monument Eumont 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**

In 2010, ROC initiated work on the former L-21 junction box. The site is located in UL/L, Sec. 21, T21S, R37E. NM OSE records indicate that groundwater would likely be encountered at a depth of approximately 47 +/- feet. The site was delineated using a backhoe to collect soil samples at regular intervals, creating a 30x25x12 ft deep excavation. Each sample was field titrated for chlorides and field screened using a PID for hydrocarbons, resulting in chloride concentrations that did not relent with depth. The excavated soil was blended on site and representative samples were collected from the excavation 4-wall, excavation bottom, and blended backfill and sent to a commercial laboratory for analysis of chloride and TPH, resulting in a 4-wall chloride concentration of 800 mg/kg, a concentration of gasoline range organics (GRO) below detectable limits and a diesel range organics (DRO) concentration of 72.6 mg/kg. The bottom composite resulted in a chloride concentration of 576 mg/kg and concentrations of GRO and DRO below detectable limits. The blended backfill resulted in a chloride concentration of 400 mg/kg, a GRO concentration below detectable limits, and a DRO concentration of 16.6 mg/kg. At 12 ft below ground surface (BGS), a 20-mil liner was installed with a six inch pad of clean imported blow sand below and above the liner. The blended backfill was

RECEIVED OGD  
2013 MAR -11 P 12:51

returned to the excavation to 1 ft BGS. The remaining excavation was backfilled with clean imported soil to ground surface and contoured to the surrounding area.

To further investigate the depth of chloride presence, a soil bore was initiated on June 11, 2010 at 10 ft south of the former junction box. The boring was advanced to 45 ft BGS with soil samples collected every 3 ft. The 18 ft and 45 ft samples were taken to a commercial laboratory for analysis, resulting in a SB-1 at 18 ft chloride concentration of 496 mg/kg and concentrations of GRO and DRO below detectable limits. SB-1 at 45 ft resulted in a chloride concentration of 224 mg/kg and concentrations of GRO and DRO below detectable limits. The entire bore hole was plugged with bentonite to ground surface.

On June 1, 2010, the site was seeded and reseeded on November 30, 2010, with a blend of native vegetation. A junction box is no longer needed at the site. Vegetation has rebounded at the site, so no re-vegetation efforts are needed.

The junction box site location map, final report, photodocumentation, soil bore log, laboratory analysis, PID sheet, cross-section, chloride graph and current photodocumentation 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)393-9174 if you have any questions or wish to discuss this site. Thank you for your time and consideration.

Sincerely,  
RICE Operating Company

A handwritten signature in black ink, appearing to read 'H. Conder', with a stylized flourish at the end.

Hack Conder  
Environmental Manager

enclosures

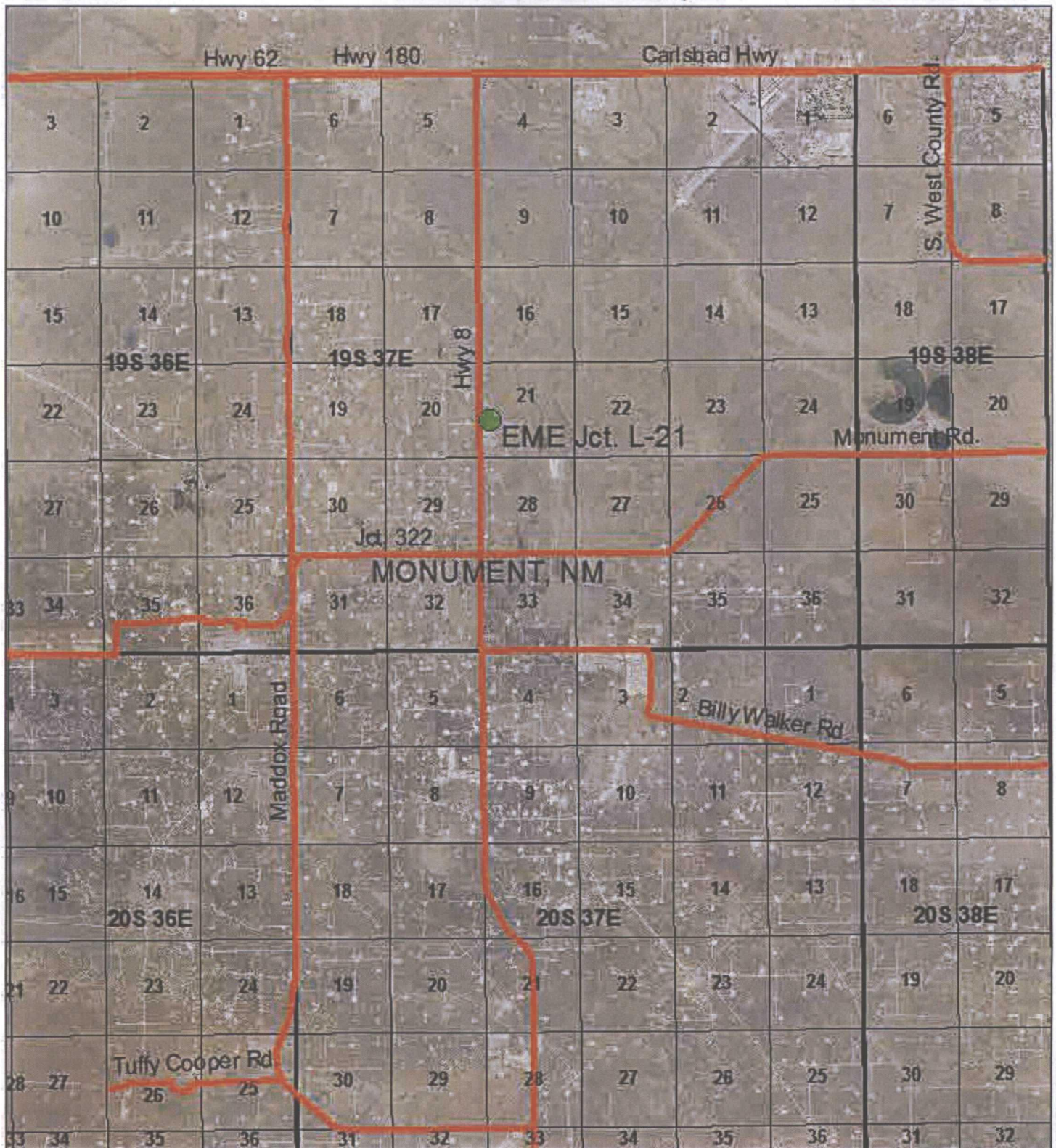


## Site Location Map

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

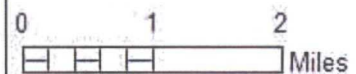


# Site Location Map



**EME Jct. L-21**  
**(1R427-340)**

UL L, SECTION 21,  
T-19-S, R-37-E  
IEA COUNTY, NM



Drawing date: 2/25/13



# Junction Box Report

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



### BOX LOCATION

LAND TYPE:   BLM           STATE x   FEE LANDOWNER   OTHER

Date Started	4/22/2010	Date Completed	5/27/2010	OCD Witness	no
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Soil Disposed	108	cubic yards	Offsite Facility	Sundance Services	Location	Eunice, NM
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### CHLORIDE FIELD TESTS

LOCATION	DEPTH	mg/kg
4-wall comp.	n/a	572
bottom comp.	12'	469
backfill comp.	n/a	360
SB # 1 at 10' south of the former junction (source)	15'	526
	18'	635
	21'	492
	24'	426
	27'	422
	30'	530
	33'	346
	36'	302
	39'	305
	42'	309
	45'	321

enclosures: photos, boring log, lab results, PID (field) screenings, cross-section, chloride curve

SITE SUPERVISOR Robert Egans SIGNATURE *Robert Egans* COMPANY RICE OPERATING COMPANY

PROJECT LEADER Larry Bruce Baker Jr. SIGNATURE *Larry Bruce Baker Jr.* DATE 3-23-11



## EME JCT. L-21

Unit L, Section 21, T19S, R37E



Site before excavation

4/22/2010



6" blow sand pad below plastic liner

5/26/2010





Plastic liner installed

5/26/2010



6" blow sand pad above plastic liner

5/26/2010



Seeding site

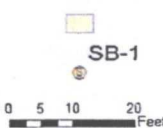

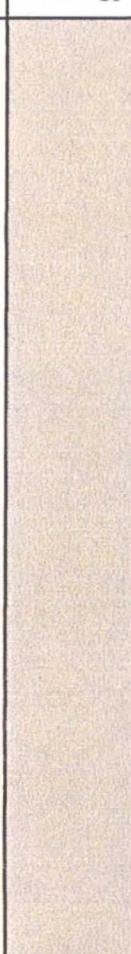

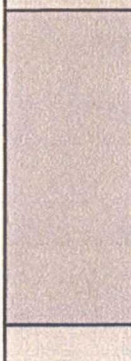
6/01/2010



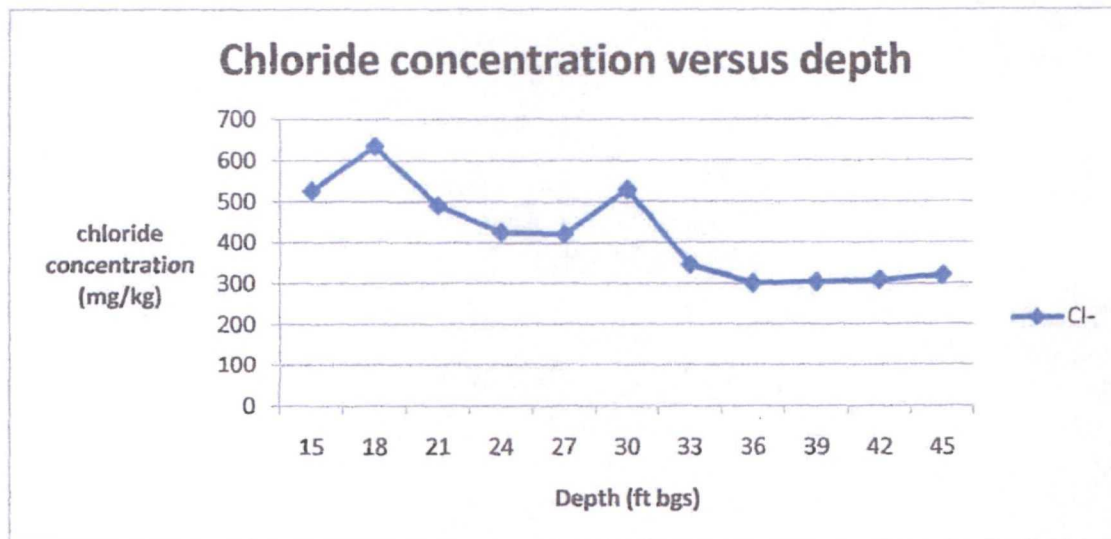
Drilling soil bore

06/11/2010 10:55  
6/11/2010



Logger:	Jordan Woodfin	Former jct. box 				
Driller:	Harrison & Cooper					
Consultant:	Junction box upgrade					
Drilling Method	Air Rotary					
Start Date:	6/11/2010					
End Date:	6/11/2010			Project Name: EME jct. L-21 Well ID: SB-1		
Comments: All samples from cuttings. Located 10 ft south of the former junction box site. Drafted by: Lara Weinheimer TD = 45 ft      DGW = 47 ft			Location: UL/L sec. 21 T19S R37E Lat: 32°38'40.475"N      County: Lea Long: 103°15'49.343"      State: NM			
Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
15 ft	526		0.9	12 - 30 ft SAND tan to red		
18 ft	635	Cl- 496 GRO <10 DRO <10	0.6			
21ft	492		0.4			
24 ft	426		0.6			
27 ft	422		0.2			
30 ft	530		0.3	30 - 36 ft SAND AND CALICHE RUBBLE tan to red		bentonite seal
33 ft	346		0.2			
36 ft	302		0.1			

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
39 ft	305		0	36 - 45 ft SAND tan to red		
42 ft	309		0			
45 ft	321	Cl- 224	0			
		GRO <10				
		DRO <10				



COPY



ANALYTICAL RESULTS FOR  
RICE OPERATING COMPANY  
ATTN: HACK CONDER  
112 W. TAYLOR  
HOBBS, NM 88240

Sampling Date: 06/11/10  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: JH  
Analyzed By: AB

ANALYSIS DATE		06/12/10	06/12/10	06/11/10
H20100-1	SB #1 @ 18'	<10.0	<10.0	496
H20100-2	SB #1 @ 45'	<10.0	<10.0	224
Quality Control		461	423	500
True Value QC		500	500	500
% Recovery		92.2	84.6	100
Relative Percent Difference		1.7	0.4	3.9

Reported on wet weight.

Date \_\_\_\_\_

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(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

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Relinquished By: <u>Jordan Woodfin</u> Date: <u>6-11-10</u> Time: <u>2:30</u>		Received By: <u>[Signature]</u>		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #: _____ Add'l Fax #: _____	
Relinquished By: <u>[Signature]</u> Date: <u>6-11-10</u> Time: <u>3:23</u>		Received By: <u>[Signature]</u>		REMARKS: email results Hconder@riceswd.com; jwoodfin@riceswd.com; Lweinheimer@riceswd.com	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Sample Condition Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>		CHECKED BY: (Initials) <u>[Signature]</u>	

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

NEED SAMPLES BACK, PLEASE



# RICE OPERATING COMPANY

122 West Taylor Hobbs, NM 88240

PHONE: (575) 393-9174 FAX: (575) 397-1471

PID METER CALIBRATION & FIELD REPORT FORM

Check Model Number:

✓

Model: PGM 7300

Serial No: 590-000183

Model: PGM 7300

Serial No: 590-000508

Model: PGM 7300

Serial No: 590-000504


Model: PGM 7600

Serial No: 110-023920

Model: PGM 7600

Serial No: 110-013744

Model: PGM 7600

Serial No: 110-013676

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

LOT NO: 927041	EXPIRATION DATE: 11-16-12
FILL DATE: 11-17-09	METER READING ACCURACY: 100

ACCURACY : +/- 2%

SYSTEM	JUNCTION	UNIT	SECTION	TOWN SHIP	RANGE
EME	L-21	L	21	19 S	37 E

SAMPLE ID	PID	SAMPLE ID	PID
SB #1			
15'	0.9		
18'	0.6		
21'	0.4		
24'	0.6		
27'	0.2		
30'	0.3		
33'	0.2		
36'	0.1		
39'	0		
42'	0		
45'	0		

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

SIGNATURE:

*Jordan Woolf*

DATE:

10-11-10



# CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR  
RICE OPERATING COMPANY  
ATTN: BRUCE BAKER  
112 W. TAYLOR  
HOBBS, NM 88240

Receiving Date: 05/18/10  
Reporting Date: 05/20/10  
Project Number: NOT GIVEN  
Project Name: EME JCT. L-21 (19/37)  
Project Location: EME JCT. L-21 (19/37)

Sampling Date: 05/17/10  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: JH  
Analyzed By: AB/HM

LAB NUMBER	SAMPLE ID	GRO	DRO	CI*
		(C <sub>6</sub> -C <sub>10</sub> ) (mg/kg)	(>C <sub>10</sub> -C <sub>28</sub> ) (mg/kg)	(mg/kg)

ANALYSIS DATE	05/19/10	05/19/10	05/18/10
H19915-1 5PT. BOTTOM COMP @ 12'	<10.0	<10.0	576
H19915-2 4-WALL COMP.	<10.0	72.6	800
H19915-3 BLENDED BACKFILL	<10.0	16.6	400
Quality Control	499	489	500
True Value QC	500	500	500
% Recovery	99.8	97.8	100
Relative Percent Difference	0.3	1.1	<0.1

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; CI: Std. Methods 4500-CIB

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

Reported on wet weight.

Chemist

Date

H19915 TCL RICE

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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603

(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

[illegible]

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Relinquished By:	Date:	Received By:	Phone Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Phone #:
<b>Robert</b>	Time:		Fax Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:			
	5/18/10		E-Mail Results To:			
	Time:		KJones @ RiceSund .COM			
	8:05	Yodi Nenson	Baker " " "			
Delivered By: (Circle One)		Sample Condition	Regan " " "			
<b>Sample</b> - UPS - Bus - Other:		Cool / Intact				
		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
		<input type="checkbox"/> Yes <input type="checkbox"/> No				
		CHECKED BY:				
		(Initials)				
		<b>Y</b>				

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

26

# RICE OPERATING COMPANY

122 West Taylor Hobbs, NM 88240

PHONE: (575) 393-9174 FAX: (575) 397-1471

PID METER CALIBRATION & FIELD REPORT FORM

Check Model Number:

✓

Model: PGM 7300 Serial No: 590-000183  
Model: PGM 7300 Serial No: 590-000508  
Model: PGM 7300 Serial No: 590-000504


Model: PGM 7600 Serial No: 110-023920  
Model: PGM 7600 Serial No: 110-013744  
Model: PGM 7600 Serial No: 110-013676

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

LOT NO: <b>928547</b>	EXPIRATION DATE: <b>2-4-2013</b>
FILL DATE:	METER READING ACCURACY: <b>99.8 PPM</b>

ACCURACY : +/- 2%

SYSTEM	JUNCTION	UNIT	SECTION	TOWN SHIP	RANGE
<b>EME</b>	<b>L-21</b>	<b>L</b>	<b>21</b>	<b>T195</b>	<b>R37E</b>

SAMPLE ID		PID	SAMPLE ID		PID
<b>20' South</b>	<b>2</b>	<b>720.1</b>	<b>5 FT Bottom</b>		<b>2.9</b>
	<b>4</b>	<b>169.3</b>	<b>4 Well comp.</b>		<b>3.5</b>
	<b>6</b>	<b>66.6</b>	<b>Blended Backfill</b>		<b>2.3</b>
	<b>8</b>	<b>50.9</b>			
	<b>10</b>	<b>99.1</b>			
	<b>12</b>	<b>87.2</b>			
<b>20' East</b>	<b>2</b>	<b>0.4</b>			
	<b>4</b>	<b>0.4</b>			
	<b>6</b>	<b>0.5</b>			
	<b>8</b>	<b>0.6</b>			
	<b>10</b>	<b>0.5</b>			
	<b>12</b>	<b>0.5</b>			

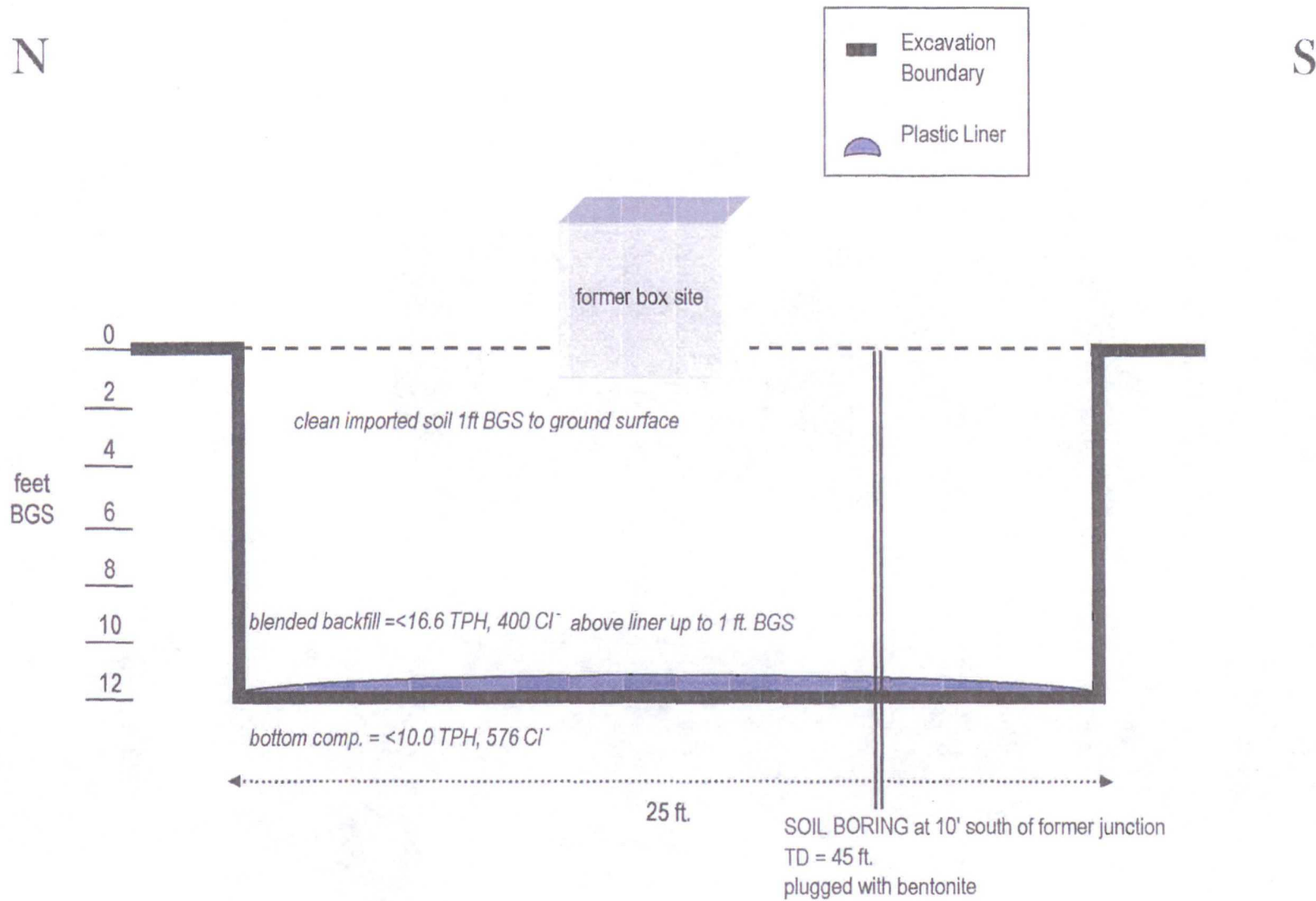
I verify that I have calibrated the above instrument in accordance to the manufacture operation manual.

SIGNATURE: **Gerardo Hernandez**

DATE: **5-17-10**

BD Jct. L-21  
Unit 'L', Sec. 21, T19S, R37E

### Excavation Cross-Section



## CHLORIDE CONCENTRATION CURVE

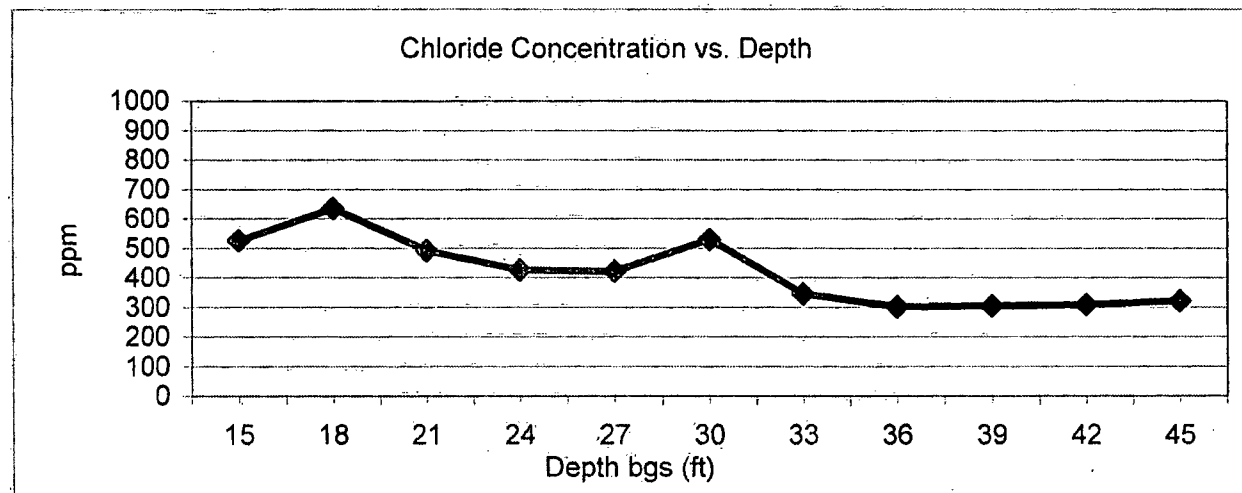
RICE Operating Company

### EME Jct. L-21

Unit 'L', Sec. 21, T19S, R37E

Soil bore 10 ft. south of former junction box (source)

Depth bgs (ft)	[Cl <sup>-</sup> ] ppm
15	526
18	635
21	492
24	426
27	422
30	530
33	346
36	302
39	305
42	309
45	321



Groundwater = 47 ft.





# Current Photodocumentation

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

**EME Jct. L-21**  
UL/L, Section 21, T19S, R37E



Facing south

2/13/2013



Facing east

2/13/2013