

1R - 427-53

# APPROVALS

YEAR(S):

20 ~~13~~ 14

## **Lowe, Leonard, EMNRD**

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**From:** Lowe, Leonard, EMNRD  
**Sent:** Friday, February 14, 2014 10:30 AM  
**To:** 'Hack Conder (hconder@riceswd.com)'  
**Cc:** Leking, Geoffrey R, EMNRD  
**Subject:** Approved Termination Request (1R-427-53) - EME G - 9

**Termination Request Approved  
for the EME G-9 (1R427-53)  
Unit Letter G Section 9, T21S, R36E, NMPM, Lea County, New Mexico**

Dear Mr. Conder:

The New Mexico Oil Conservation Division (OCD) has received RICE Environmental 's Request to terminate the above-referenced site, dated November 12, 2013. The termination request is acceptable to the OCD.

The above-referenced report, submitted in accordance with 19.15.29 NMAC (Rule 29; formally, Rule 116), indicates that Apache Corporation has met the requirements of 19.15.29 NMAC; therefore, the OCD approves the report and hereby notifies you that the remediation plan (1R-427-188) 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 505-476-3492.

**Leonard Lowe**

Environmental Engineer

[Environmental Bureau]

**Oil Conservation Division/Energy Minerals and Natural Resources Department**

1220 South St. Frances

Santa Fe, New Mexico 87004

Office: 505-476-3492

E-mail: [leonard.lowe@state.nm.us](mailto:leonard.lowe@state.nm.us)

## Rice Environmental Consulting & Safety

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

RECEIVED  
NOV 13 2013

CERTIFIED MAIL  
RETURN RECEIPT NO. 7007 2560 0000 4569 9109

**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 G-9 (1R427-53): UL/G, Sec. 9, T21S, R36E  
RICE Operating Company – Eunice Monument Eumont (EME) SWD System

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 EME Salt Water Disposal (SWD) system. ROC is the service provider (agent) for the EME 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 2003, ROC initiated work on the former EME G-9 junction box. The site is located in UL G, Sec. 9, T21S, R36E. NM OSE records indicate that groundwater would likely be encountered at a depth of approximately 157 +/- feet. The site was delineated using a backhoe to form a 25x30x14-ft deep excavation and soil samples were screened at regular intervals for both hydrocarbons and chlorides. The excavated soil was blended on site and representative samples of the sidewalls, bottom and remediated backfill were sent to a commercial laboratory for analysis, resulting in a sidewalls chloride concentration of 640 mg/kg, a gasoline range organics (GRO) concentration below detectable limit and a diesel range organics (DRO) concentration of 14.2 mg/kg. The bottom resulted in a chloride concentration of 512 mg/kg, a GRO concentration below detectable limits and a DRO concentration of 33 mg/kg. The remediated backfill resulted in a chloride concentration of 672 mg/kg and concentrations of GRO and DRO below detectable limit. The excavation was backfilled with the excavated soil to ground surface and contoured to the surrounding area. On 12/12/2003, the site was seeded with a blend of native vegetation. A junction box is no longer needed at this site.

To further investigate the depth of chloride presence, a soil bore was initiated on September 23, 2013 at 9 ft south of the former junction box site. The boring was advanced to a depth of 25 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 concentrations. The 15 ft, 20 ft and 25 ft samples were sent to a commercial laboratory for analysis. The 15 ft

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samples resulted in a chloride concentration of 384 mg/kg and concentrations of GRO and DRO below detectable limits. The 20 ft sample resulted in a chloride concentration of 432 mg/kg, a GRO concentration below detectable limits and a DRO concentration of 29.8 mg/kg. The 25 ft sample resulted in a chloride concentration of 112 mg/kg and concentrations of GRO and DRO below detectable limit. 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, final report, photodocumentation, chloride graph, vertical delineation laboratory analysis, delineation notes, soil bore plat, log, soil bore installation 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.

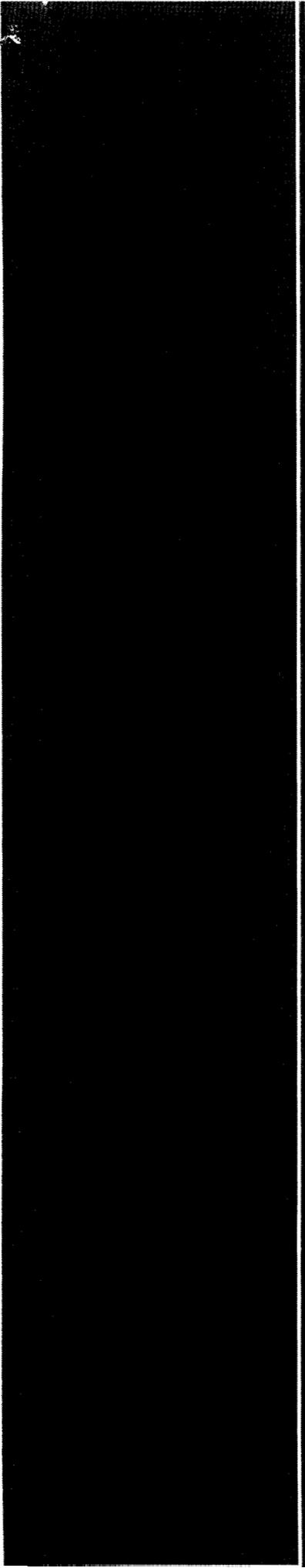
Please contact me at (575)393-2967 if you have any questions or wish to discuss this site. Thank you for your time and consideration.

Sincerely,



Laura Flores  
Project Manager  
RECS

Enclosures

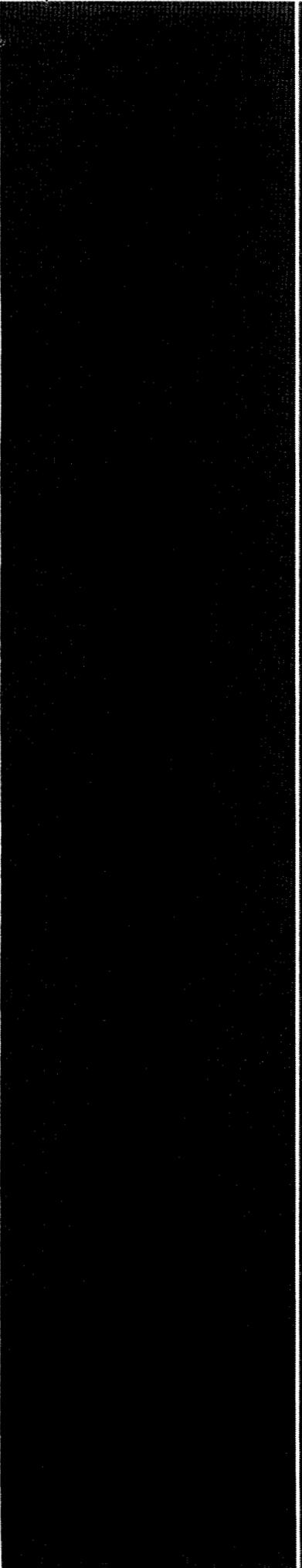


# Site and Area Maps

**RICE Environmental Consulting and Safety (RECS)**  
P.O. Box 2948, Hobbs, NM 88241  
Phone 575.393.2967







# Junction Box Report

**RICE Environmental Consulting and Safety (RECS)**  
P.O. Box 2948, Hobbs, NM 88241  
Phone 575.393.2967

**RICE OPERATING COMPANY  
JUNCTION BOX FINAL REPORT**

**BOX LOCATION**

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
							Length	Width	Depth
EME	G-9	G	9	21S	36E	Lea	No Box (eliminated)		

LAND TYPE: BLM \_\_\_\_\_ STATE \_\_\_\_\_ FEE LANDOWNER Millard Deck Estate OTHER \_\_\_\_\_

Depth to Groundwater 157 feet NMOCD SITE ASSESSMENT RANKING SCORE: 20

Date Started 9/4/2003 Date Completed 9/30/2003 OCD Witness No

Soil Excavated 389 cubic yards Excavation Length 25 Width 30 Depth 14 feet

Soil Disposed 0 cubic yards Offsite Facility n/a Location n/a

**FINAL ANALYTICAL RESULTS:** Sample Date 9/19/2003 Sample Depth 14 ft bgs

Sample Location	PID ppm	GRO mg/kg	DRO mg/kg	Chloride mg/kg
SIDEWALLS	24.1	<10.0	14.2	640
BOTTOM	22.6	<10.0	33	512
REMIATED	31.1	<10.0	<10.0	672

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

**General Description of Remedial Action:** This junction box site was excavated and delineated for chloride and TPH impact to 25 x 30 x 14 ft deep. Chloride concentrations decreased vertically and laterally. TPH concentrations were well below NMOCD guidelines. The excavated soil was blended and then backfilled into the hole, the surface was contoured to the surrounding landscape. The surface has been re-seeding with a blend of native vegetation and will be monitored for growth. This junction has been eliminated so a new box is not required at this site.

**CHLORIDE FIELD TESTS**

LOCATION	DEPTH (ft)	ppm	
Vertical	6	4193	
	7	1349	
	8	1281	
	9	1209	
	10	1106	
	11	834	
	12	1010	
	13	612	
	14	481	
	Bottom Comp.	14	524
	4-wall comp.	n/a	706
Remed. Comp.	n/a	733	

**A WATER WELL IS LOCATED 400 FT NORTH OF THIS JUNCTION.**

enclosures: lab results, chloride graph, PID, photos

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

DATE 12/15/2003 PRINTED NAME Kristin Farris  
SIGNATURE *Kristin Farris* TITLE Project Scientist

**EME jct. G-9**



Undisturbed junction box

6/26/2003



Excavation Sept. 2003



Excavation Sept. 2003



Seeding disturbed area of backfilled site

12/12/2003

**CHLORIDE CONCENTRATION CURVE**

**RICE Operating Company**

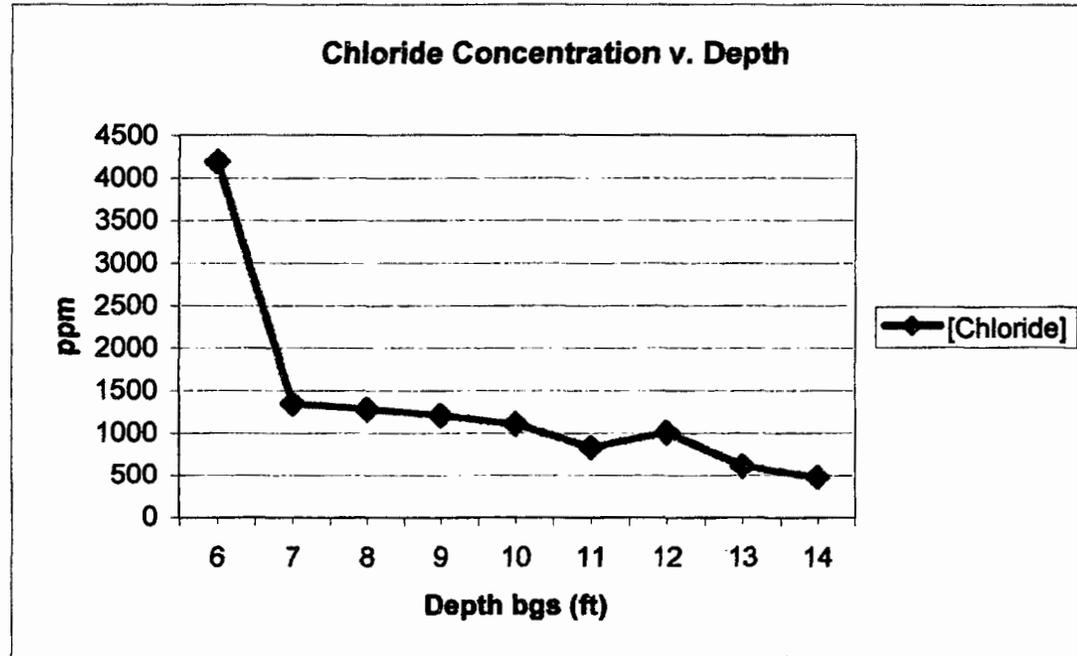
**EME jct. G-9**

T21S, R36E

Center of Junction

Depth bgs (ft)	[Cl <sup>-</sup> ] ppm
6	4193
7	1349
8	1281
9	1209
10	1106
11	834
12	1010
13	612
14	481

Groundwater = 157 ft

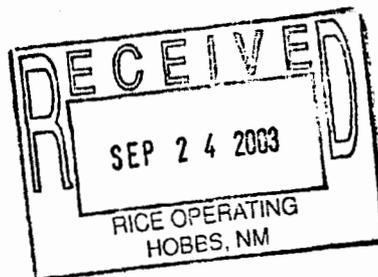




**ARDINAL  
LABORATORIES**

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

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



ANALYTICAL RESULTS FOR  
RICE OPERATING CO.  
ATTN: KRISTIN FARRIS  
122 W. TAYLOR  
HOBBS, NM 88240  
FAX TO: (505) 397-1471

Receiving Date: 09/19/03  
Reporting Date: 09/22/03  
Project Number: NOT GIVEN  
Project Name: EME G-9  
Project Location: LEA CO., NM

Sampling Date: 09/19/03  
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)	CI* (mg/Kg)
ANALYSIS DATE		09/19/03	09/19/03	09/22/03
H8023-1	BOTTOM COMP. 14'	<10.0	33.0	512
H8023-2	4 WALL COMPOSITE	<10.0	14.2	640
H8023-3	STOCKPILE COMP.	<10.0	<10.0	672
Quality Control		734	838	980
True Value QC		800	800	1000
% Recovery		91.8	105	98.0
Relative Percent Difference		0.6	7.5	2.0

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

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

*Burgess Jh. Cook*  
Chemist

*9/22/03*  
Date

**H8023.XLS**

PLEASE NOTE: **Liability and Damages.** Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



276E

T / IV T L

Final Junction box report Bottom Hole well / 5 foot pipe composite

SITE EXCAVATION INFORMATION

EME G-9

DATE	DEPTH	CL	PID	TONY SOLIS RETPH	LAB	SOIL COMPOSITION
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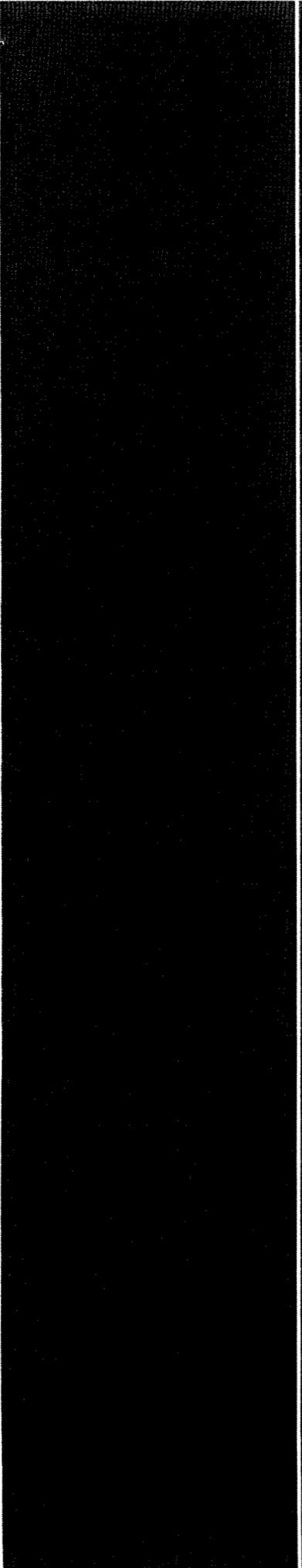
26 C.	9-19-03	Bottom 14'	524512	22.6	18	22.6
26 C.		W. wall	206640	24.1	18	14.2
26 C.		5 foot pipe	233672	31.1	23	31.1
		N. wall 16'	587	20.2	22	
		S. wall 15'	551	19.6	14	
		W. wall 15'	530	19.5	11	
		E. wall 15'	526	18.7	19	

205 x 30 x 14' deep

Excavated soil was mixed on location and then backfilled into the hole. Surface was contoured.

HT  
10-22-03

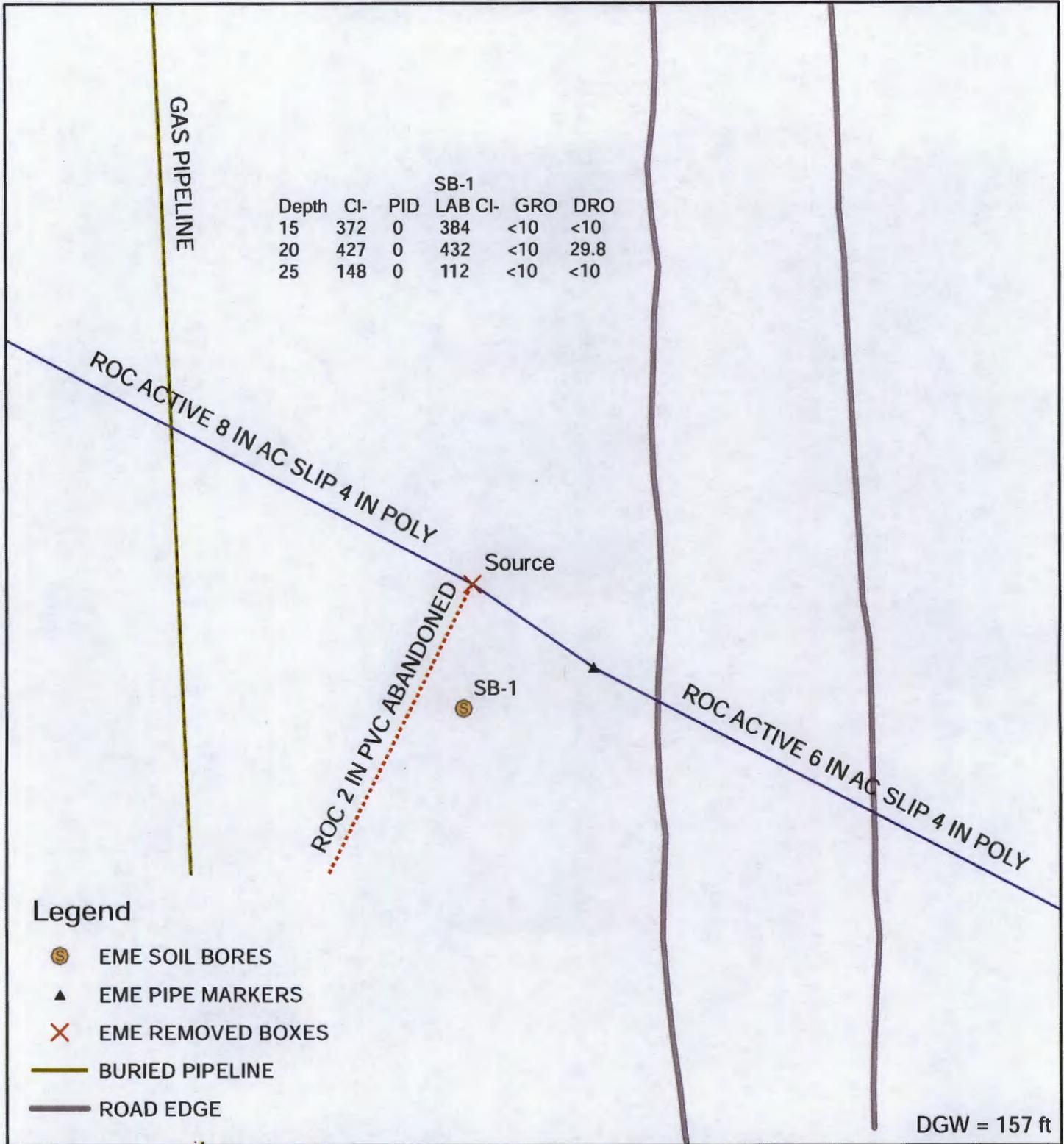
Gary Stark



# Soil Bore Installation Documentation

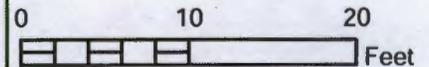
**RICE Environmental Consulting and Safety (RECS)**  
P.O. Box 2948, Hobbs, NM 88241  
Phone 575.393.2967

# Soil Bore Installation



**EME G-9  
(1R427-53)**

UL G SECTION 9  
T-21-S R-36-E  
LEA COUNTY, NM



GPS date: 9/27/13 TG  
 Drawing date: 9/30/13  
 Drafted by: L. Weinheimer





September 26, 2013

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: EME JUNCTION G-9

Enclosed are the results of analyses for samples received by the laboratory on 09/23/13 16:30.

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/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/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 style with a large, prominent initial "C".

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 Rice Operating Company  
 KATIE JONES  
 112 W. Taylor  
 Hobbs NM, 88240  
 Fax To: (575) 397-1471

Received:	09/23/2013	Sampling Date:	09/23/2013
Reported:	09/26/2013	Sampling Type:	Soil
Project Name:	EME JUNCTION G-9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S R36E		

**Sample ID: SB #1 15' (H302312-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>384</b>	16.0	09/25/2013	ND	416	104	400	3.92		
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	09/24/2013	ND	197	98.5	200	4.00		
DRO >C10-C28	<10.0	10.0	09/24/2013	ND	193	96.3	200	6.98		
Surrogate: 1-Chlorooctane	98.8 %	65.2-140								
Surrogate: 1-Chlorooctadecane	99.4 %	63.6-154								

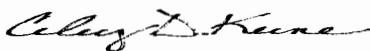
**Sample ID: SB #1 20' (H302312-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>432</b>	16.0	09/25/2013	ND	416	104	400	3.92		
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	09/24/2013	ND	197	98.5	200	4.00		
<b>DRO &gt;C10-C28</b>	<b>29.8</b>	10.0	09/24/2013	ND	193	96.3	200	6.98		
Surrogate: 1-Chlorooctane	109 %	65.2-140								
Surrogate: 1-Chlorooctadecane	115 %	63.6-154								

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 Rice Operating Company  
 KATIE JONES  
 112 W. Taylor  
 Hobbs NM, 88240  
 Fax To: (575) 397-1471

Received:	09/23/2013	Sampling Date:	09/23/2013
Reported:	09/26/2013	Sampling Type:	Soil
Project Name:	EME JUNCTION G-9	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T21S R36E		

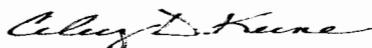
**Sample ID: SB #1 25' (H302312-03)**

Chloride, SM4500Cl-B	mg/kg	Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>112</b>	16.0	09/25/2013	ND	416	104	400	3.92	

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	09/24/2013	ND	197	98.5	200	4.00	
DRO >C10-C28	<10.0	10.0	09/24/2013	ND	193	96.3	200	6.98	

Surrogate: 1-Chlorooctane      102 %      65.2-140

Surrogate: 1-Chlorooctadecane      96.8 %      63.6-154



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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Cardinal Laboratories

\*=Accredited Analyte

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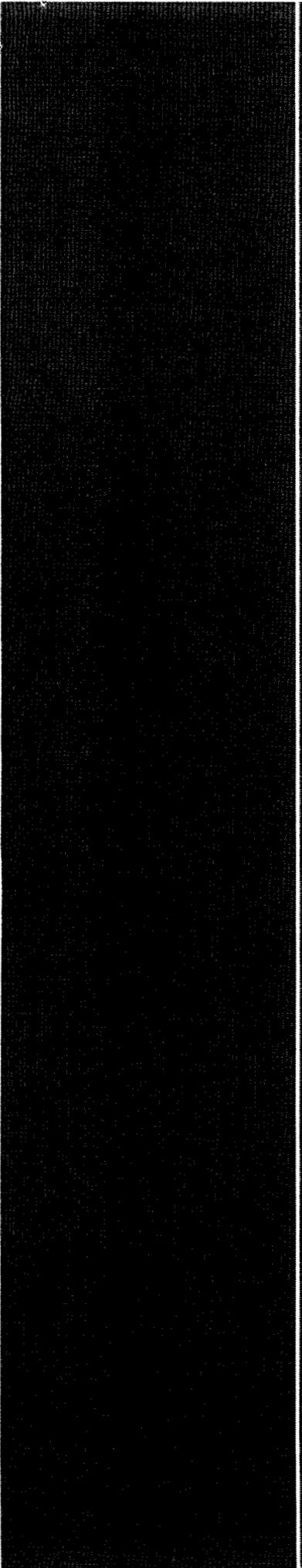


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Celey D. Keene, Lab Director/Quality Manager







# Current Photodocumentation

**RICE Environmental Consulting and Safety (RECS)**  
P.O. Box 2948, Hobbs, NM 88241  
Phone 575.393.2967

**EME G-9 (1R427-53)**  
Unit Letter G, Section 9, T21S, R36E



Facing north

10/15/2013



Facing west

10/15/2013