1R - 427-143

APPROVALS

YEAR(S):

2013

Hansen, Edward J., EMNRD

From:	Hansen, Edward J., EMNRD
Sent:	Thursday, July 18, 2013 8:30 AM
To:	Hack Conder (hconder@riceswd.com)
Cc:	Leking, Geoffrey R, EMNRD; Laura Pena (lpena@riceswd.com); Katie Jones <kjones@riceswd.com> (kjones@riceswd.com); Scott Curtis (scurtis@riceswd.com)
Subject:	Remediation Plan (1R427-143) Termination - ROC EME Phillips St. A EOL Site

RE: Termination Request
for the Rice Operating Company's
EME Phillips St. A EOL Site
Unit Letter N, Section 31, T19S, R37E, NMPM, Lea County, New Mexico
Remediation Plan (1R427-143) 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 June 27, 2013 (received July 1, 2013). The report is 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 (1R427-143) 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*
122 West Taylor • Hobbs, New Mexico 88240
Phone: (575) 393-9174 • Fax: (575) 397-1471

CERTIFIED MAIL
RETURN RECEIPT NO. 7007 2560 0000 4569 8890

June 27, 2012

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 Phillips St. A EOL (1R427-143): UL/N, Sec. 31, 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 and Previous Work
In 2004, ROC initiated work on the former EME Phillips St. A EOL junction box. The site is located in UL N, Sec. 31, T19S, 37E. Based on soil bore installation, soil moisture was encountered at 16 ft below ground surface (BGS); however, full saturation was never encountered and red bed clay was found at 29 ft bgs. This indicates there is no groundwater located beneath this site.

The site was delineated using a backhoe to form a 30x30x12-ft deep excavation and soil samples were screened at regular intervals for both hydrocarbons and chlorides. Each sample was field titrated for chlorides and field screened using a PID for hydrocarbons, resulting in chloride concentrations that decreased laterally but increased with depth. The excavated soil was blended on site and representative composite samples of the excavation walls, bottom and remediated backfill were sent to a commercial for analysis of chloride and TPH, resulting in a 4-wall chloride concentration of 208 mg/kg and concentrations of gasoline range organics (GRO) concentration and diesel range organics (DRO) below detectable limits. The bottom composite resulted in a chloride concentration of 784 mg/kg and concentrations of GRO and DRO below detectable

limits. The remediated backfill resulted in a chloride concentration of 224 mg/kg and concentrations of GRO and DRO below detectable limits. The excavation was backfilled with the excavated soil to 6 ft BGS. From 6 – 5 ft BGS, a one foot thick clay layer was installed. The clay layer will provide a barrier that will inhibit the downward migration of chlorides to groundwater. The remaining excavation was backfilled with the remediated backfill to ground surface and contoured to the surrounding area. A new watertight junction box was built on the site.

To further investigate the depth of the chloride and TPH presence, a soil boring was initiated on 6/1/2004 at 15 ft southeast of the former junction box. Each sample was field titrated for chlorides and field screened using a PID for hydrocarbons, resulting in low concentrations of both. The 30 ft sample was taken to a commercial laboratory for analysis of chloride and TPH, resulting in a chloride concentration of 304 mg/kg and concentrations of GRO and DRO below detectable limits. The entire bore hole was plugged with bentonite to ground surface.

The site is located next to a lease pad and a new watertight junction box was installed; therefore, reseeding of the site is not necessary.

The junction box site location map, area map, final report, photodocumentation, cross-section diagram, chloride graph, soil bore log, laboratory analysis 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

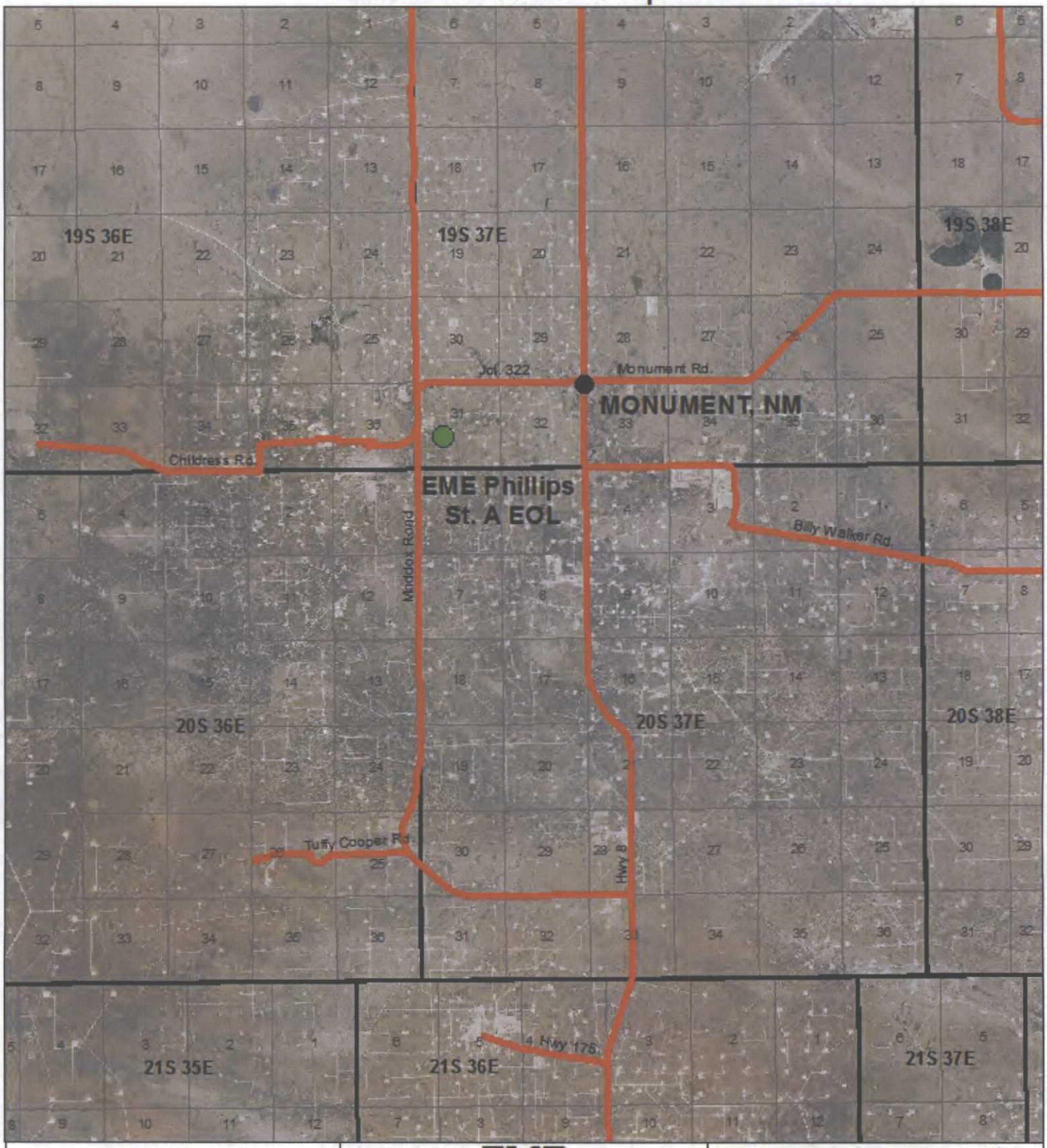
Hack Conder
Environmental Manager

enclosures

Site Maps

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

Site Location Map



RICE ENVIRONMENTAL RECS CONSULTING & SAFETY, LLC

EME Phillips St.A EOL (1R427-143)

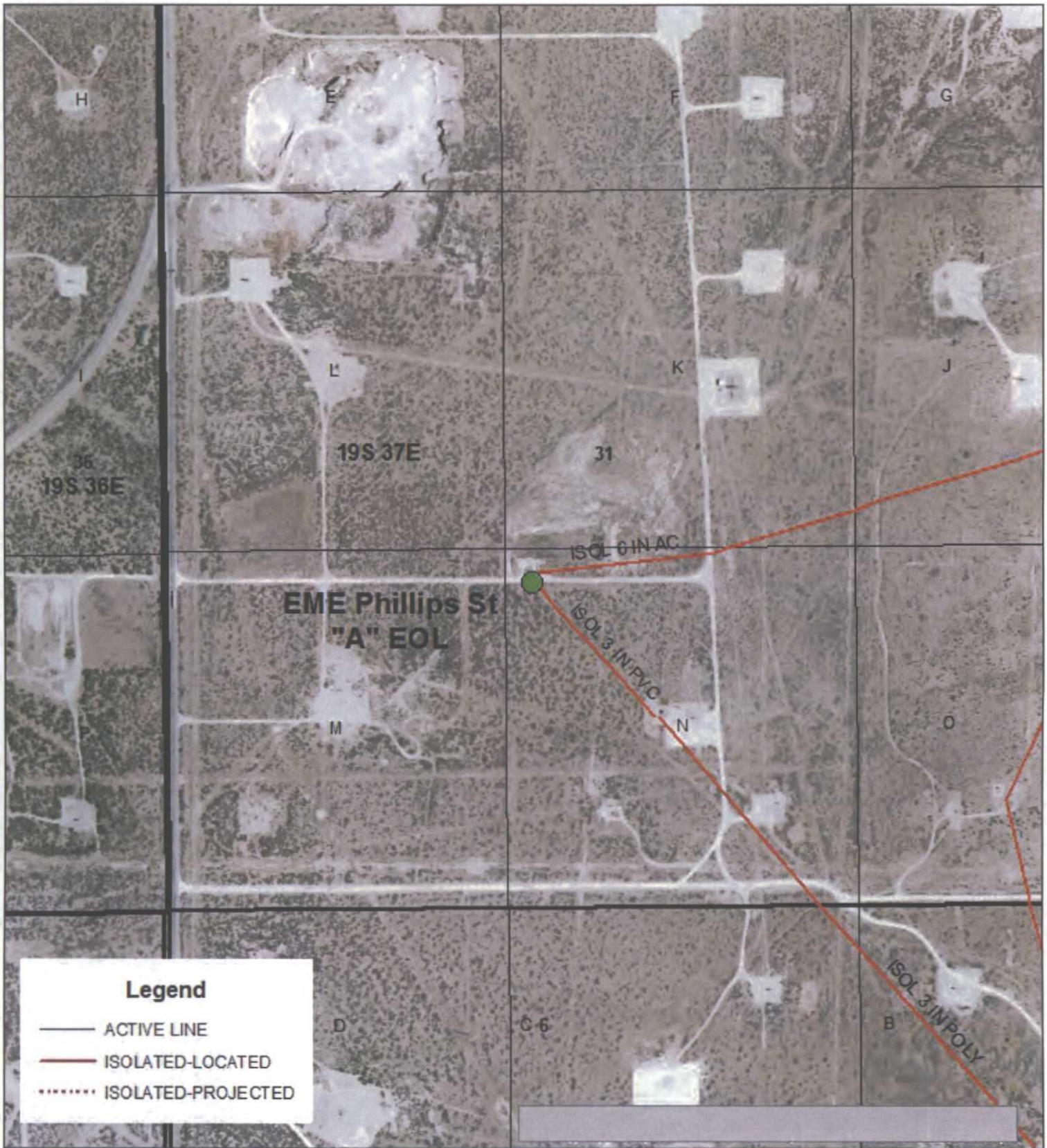
UL/N SECTION 31
T19S, R37E
LEA COUNTY, NM

N
W E
S

0 1 2 Miles

Drawing date: 5/15/13 LS

Area Map



RICE ENVIRONMENTAL RECS CONSULTING & SAFETY, LLC

EME Phillips St "A" EOL (1R0427-143)

UL/N SECTION 31
T19S, R37E
LEA COUNTY, NM

N
W E
S

0 500 1,000 Feet

Drawing date: 6/18/13 LS

Junction Box Report

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

RICE OPERATING COMPANY
JUNCTION BOX FINAL REPORT

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
							Length	Width	Depth
EME	Phillips St. 'A' EOL	N	31	19S	37E	Lea	6	5	5

LAND TYPE: BLM _____ STATE _____ FEE LANDOWNER Charlcie Bird OTHER _____

Depth to Groundwater NONE feet NMOCD SITE ASSESSMENT RANKING SCORE: 0

Date Started 3/10/2004 Date Completed 6/1/2004 OCD Witness No

Soil Excavated 400 cubic yards Excavation Length 30 Width 30 Depth 12 feet

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

FINAL ANALYTICAL RESULTS: Sample Date 3/16/2004, 6/1/2004 Sample Depth 12, 30 ft

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

Sample Location	PID ppm	GRO mg/kg	DRO mg/kg	Chloride mg/kg
4-WALL COMP.	0.0	<10.0	<10.0	208
BOTTOM COMP.	0.0	<10.0	<10.0	784
REMED. BACKFILL	0.0	<10.0	<10.0	224
SOIL BORE @ 30 ft	0.7	<10.0	<10.0	304

CHLORIDE FIELD TESTS

LOCATION	DEPTH (ft)	ppm
vertical at junction box	5	105
	6	164
	7	141
	8	260
	9	258
	10	587
	11	1280
	12	1558
	13	1322
	14	1962
soil bore approx. 15 ft southeast of junction	15	541
	20	248
	21	317
	22	438
	23	363
	24	315
	29	264
	30	216
4-wall comp.	2-10	236
bottom comp.	12	715
remed. backfill	n/a	216

General Description of Remedial Action: This end-of-line (EOL) box is located just west of the fence line of an active production facility. The junction box was removed and the pipeline was replaced. The site was delineated using a backhoe while PID field screenings and chloride field tests were conducted at regular intervals, producing a 30 x 30 x 12-ft-deep excavation. Although chloride concentrations exhibited a horizontal decline, chloride increased with depth to 12 ft BGS. The excavated soil was backfilled into the excavation up to 6 ft BGS where a 1-ft-thick compacted clay barrier was installed to impede further downward chloride migration. The remainder of the spoils were backfilled on top of the clay and contoured to the surrounding surface. A new watertight junction box was built at this location. To further investigate chloride concerns, a soil bore was initiated on 6/1/2004. The bore was advanced to a depth of 30 ft BGS where a conclusive trend of decline was established (see graph). Although soil moisture was observed at 16 ft, saturation was never encountered and red clay was met at 29 ft. The borehole was plugged at the top and bottom with bentonite. The disturbed surface will be seeded with a blend of native vegetation and is expected to return to productive capacity at a normal rate. An identification plate has been placed on the surface to mark the clay liner below at 6 ft BGS.

enclosures: chloride graph, photos, lab results, PID field screenings, clay test, bore log, diagram

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

SITE SUPERVISOR Joe Gats SIGNATURE Joe Gatt COMPANY RICE Operating Company

REPORT ASSEMBLED BY Kristin Farris Pope SIGNATURE Kristin Farris Pope

DATE 11/10/2004 TITLE Project Scientist

EME Phillips St. 'A' EOL

unit 'N', sec. 31, T19S, R37E

undisturbed junction box 11/10/2003

delineation & excavation 3/11/2004

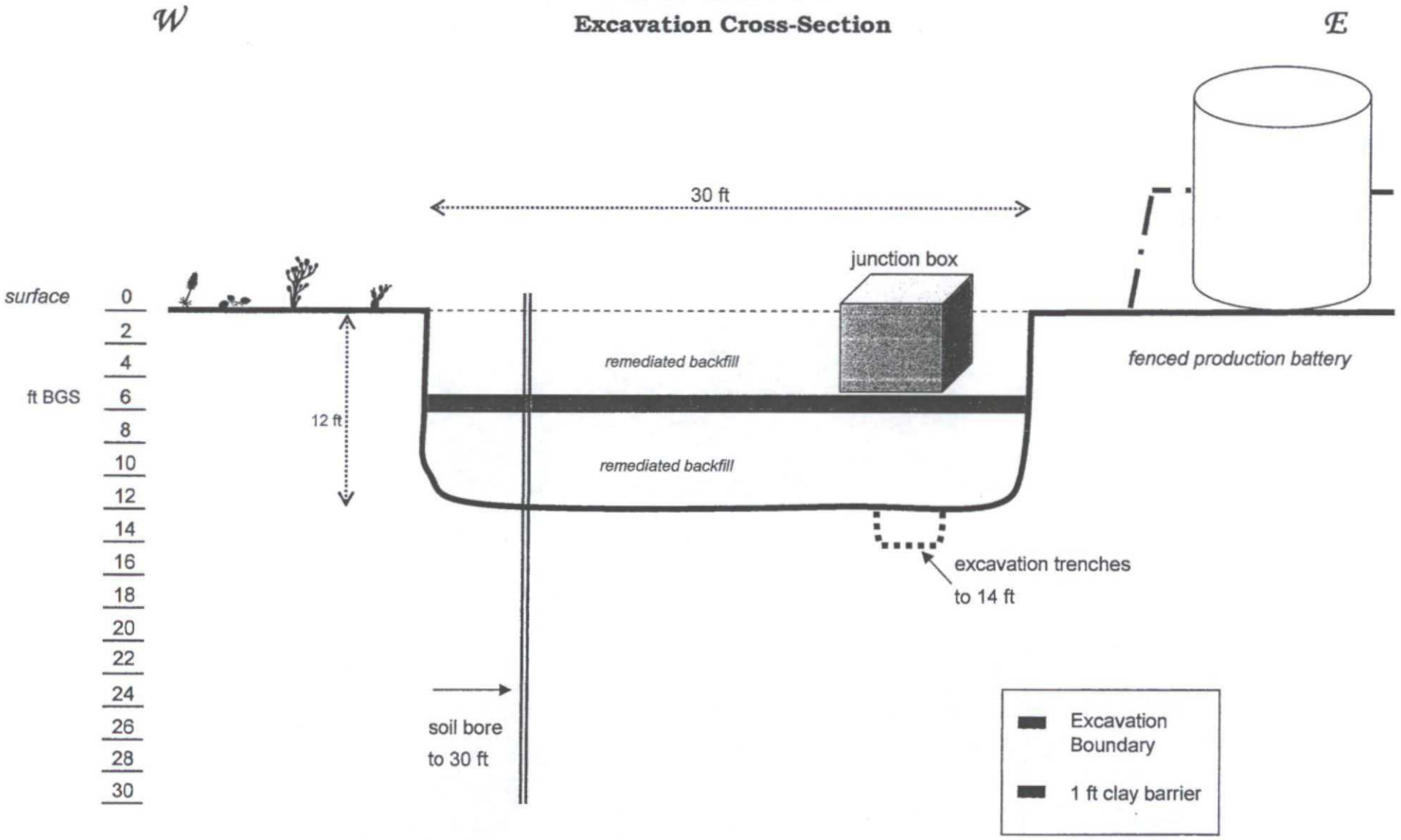
testing clay barrier at 6 ft BGS 5/14/2004

soil bore delineation drilling at backfilled site 6/1/2004

EME Phillips St. 'A' EOL

30 x 30 x 12 ft

Excavation Cross-Section

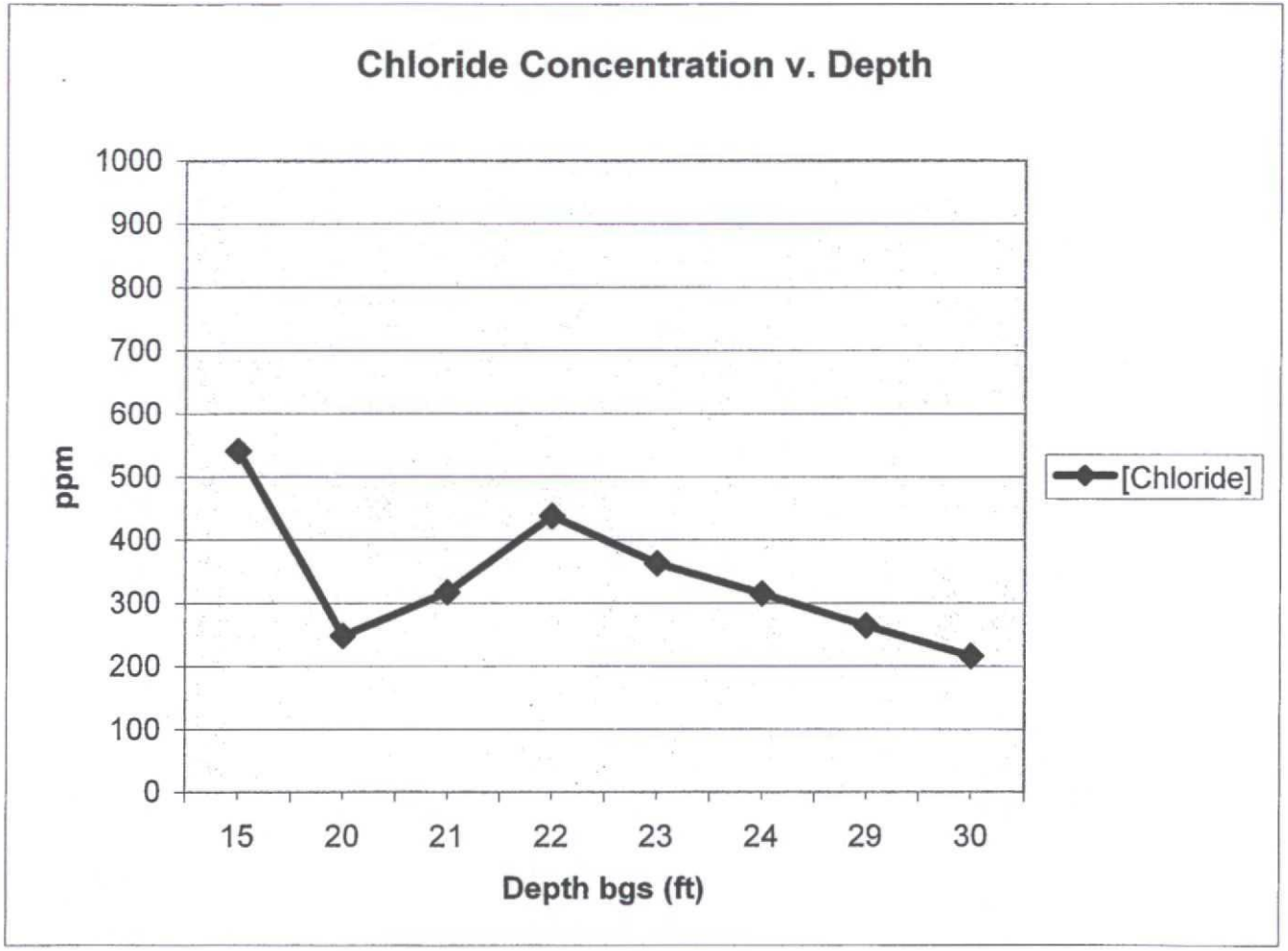


EME Phillips St. 'A' EOL

unit 'N', Sec. 31, T19S, R37E

SOIL BORE delineation
15 ft southeast of junction

Depth bgs (ft)	[Cl⁻] ppm
15	541
20	248
21	317
22	438
23	363
24	315
29	264
30	216



LOG OF BORING
K. Farris Pope
RICE Operating Company

Logger:	Drew Parker; Mort Bates	**Client:**	**Well ID:**
Driller:	Atkins Engineering Associates, Inc.	RICE Operating Company	SB-1
Drilling Method:	Hollow Stem Auger	**Project Name:**	
Start Date:	6/1/2004	Phillips St. 'A' EOL	
End Date:	6/1/2004	**Location:**	
Notes:	Approx. 15 ft southeast of junction box TD = 30 ft *groundwater was expected to be at 23 ft,* *moisture at 16 ft but no saturation*	EME SWD System unit 'N', sec. 31, T19S, R37E Lea County, NM	

Depth (feet)	Split Spoon chloride	Split Spoon PID	Description	Lithology	bore hole	Additional Notes
0.0			0 - 15 ft CLAYEY SAND with CALICHE loose, pink & tan, dry		remainder of borehole backfilled with drill cuttings	bentonite seal ←
1.0						
2.0						
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						
11.0						
12.0						
13.0						
14.0						
15.0	541	1.8				
16.0			15 - 21 ft CLAYEY SAND with CALICHE loose, pink & tan, damp			
17.0						
18.0						
19.0						
20.0	248	1.6				
21.0	317	1.5				
22.0	438	1.7	21 - 29 ft CLAYEY SAND with CALICHE loose, pink & tan, moist			
23.0	363	2.3				
24.0	315	2.0				
25.0						
26.0						
27.0						
28.0						bentonite seal ←
29.0	264	3.4				
30.0	216	0.7	29 - 30 ft CLAY stiff, red, moist			lab = 304 ppm Cl

CARDINAL 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: 06/03/04
Reporting Date: 06/03/04
Project Number: NOT GIVEN
Project Name: EME BP ARCO PHILLIPS "A" @ 30'
Project Location: NOT GIVEN

Sampling Date: 06/01/04
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC/AH

LAB NO. SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE	06/03/04	06/03/04	06/03/04
H8781-1 EME BP ARCO PHILLIPS "A" @ 30'	<10.0	<10.0	304
Quality Control	790	785	950
True Value QC	800	800	1000
% Recovery	98.8	98.2	95.0
Relative Percent Difference	0.9	7.2	6.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl: Std. Methods 4500-Cl B
*Analysis performed on a 1:4 w:v aqueous extract.

Burgess J. R. Cooke
Chemist

6/3/04
Date

H8781.XLS

Current Photodocumentation

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

EME Phillips St 'A' EOL (1R427-143)

UL/N, Section 31, T19S, R37E

Facing north 4/23/2013

Facing south 4/23/2013