1R - 427-319

REPORTS

DATE:

2-1-12

Rice Environmental Consulting & Safety
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

CERTIFIED MAIL
RETURN RECEIPT NO. 7008 1140 0001 3070 6044

February 1st, 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: **CAP Report and Termination Request**
Rice Operating Company – EME SWD System
EME jct. O-30 (1R427-319): UL/O sec. 30 T19S R37E
(formerly EME jct. I-30)

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.

The site was previously referred to as the EME jct. I-30. To reflect the geographical location of the site, the name has been changed to the EME jct. O-30 (Figure 1). All correspondences will reference EME jct. O-30.

Background and Previous Work

The site is located approximately 3 miles northwest of Monument, New Mexico at UL/O sec. 30 T19S R37E as shown on the Site Location Map (Figure 2).

In 2008, ROC initiated work on the former EME O-30 junction box. The site was delineated using a backhoe to form a 30 ft x 30 ft x 12 ft deep excavation and soil samples were screened at regular intervals for both hydrocarbons and chlorides. From the excavation, the four-wall composite, the bottom composite and the backfill were taken to a commercial laboratory for analysis. Laboratory tests of the four-wall composite showed a chloride reading of 160 mg/kg, negligible gasoline range organics (GRO) readings and a diesel range organics (DRO) reading of 160 mg/kg. The bottom composite showed a chloride laboratory reading of 544 mg/kg, negligible GRO and a DRO reading of 70.7 mg/kg. Clean soil was imported into the site and blended with soil from the excavation.

Laboratory analysis of the blended backfill showed a chloride reading of 144 mg/kg, negligible GRO and a DRO reading of 172 mg/kg. The site was backfilled to 5 feet bgs where a 1 foot clay layer was installed across the excavation. A clay density test was performed on February 5th, 2009. The remaining soil was returned to the excavation, contoured to the surrounding landscape, seeded, and an identification plate was placed on the surface of the site to mark its location for future environmental considerations. NMOCD was notified of potential groundwater impact on June 17th, 2009 and a junction box disclosure report was submitted to NMOCD with all the 2009 junction box closures and disclosures.

As part of the Investigation and Characterization Plan approved by NMOCD on May 19th, 2011, one soil bore was advanced through the former junction box site to a depth of 40 ft bgs with samples collected to a depth of 21 ft bgs on May 27th, 2011. ROC personnel field tested the soil for chlorides and screened in the field with a photo-ionization detector (PID) for hydrocarbons. Representative samples from the bore were taken to a commercial laboratory for confirmation of chloride and hydrocarbon field numbers. Laboratory readings showed chloride numbers of 272 mg/kg at 18 ft bgs and 128 mg/kg at 21 ft bgs. Laboratory readings for GRO and DRO showed non-detect in both samples, except for at 18 ft bgs where the DRO reading was 174 mg/kg.

The bore was continued to 40 ft bgs to confirm depth to groundwater. The bore was drilled 22 ft into the clay bed and left open to allow any water at the site to rebound into the bore. On June 7th, 2011, ARC Environmental checked the bore for accumulated water using a Solinist Water Level Meter. The meter indicated no water within the borehole to a depth of 40.03 ft.

An ICP Report and Corrective Action Plan was submitted to NMOCD and approved on August 16th, 2011. The site has an existing 30 ft x 30 ft clay barrier installed from 5-4 ft bgs, which will impede migration of residual chlorides and hydrocarbons. As such, RECS recommended that the site be scraped down approximately 6 inches to 1 foot, backfilled with clean, imported soil and seeded with a native vegetative mix. Vegetation will act as an evapo-transpiration barrier which will 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.

Corrective Action Plan Report

RECS personnel were on site beginning on December 1st, 2011, to scrape the site of all rock and soil down to approximately 6 inches to 1 ft. A total of 192 yards of rock and soil was taken for disposal at a NMOCD approved facility. The site was backfilled with 252 yards of clean, imported soil to ground surface and contoured to the surrounding area. A sample of the clean, imported soil was field tested for hydrocarbons and returned a result of 93 ppm. The sample was then taken to a commercial laboratory for analysis of chlorides with a result of <16 mg/kg. The site was seeded with a blend of native vegetation and is expected to return to a productive capacity at a normal rate. Silt net

fencing was placed around the site to maintain seed integrity. All documentation of the CAP work is provided in Appendix A.

ROC has completed the corrective actions as approved by NMOCD in the CAP and requests 'remediation termination' status of the regulatory file.

RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 393-9174 or me if you have any questions or wish to discuss the site.

Sincerely,

Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

Attachments:

Figure 1 – Geographical Location Map
Figure 2 – Site Location Map
Appendix A – CAP Documentation

Figures

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

Geographical Location Map

RICE ENVIRONMENTAL RECS CONSULTING & SAFETY, LLC

EME jct. O-30

LEGALS: UL/O sec. 30
T19S R37E

NMOCD Case #: 1R427-319

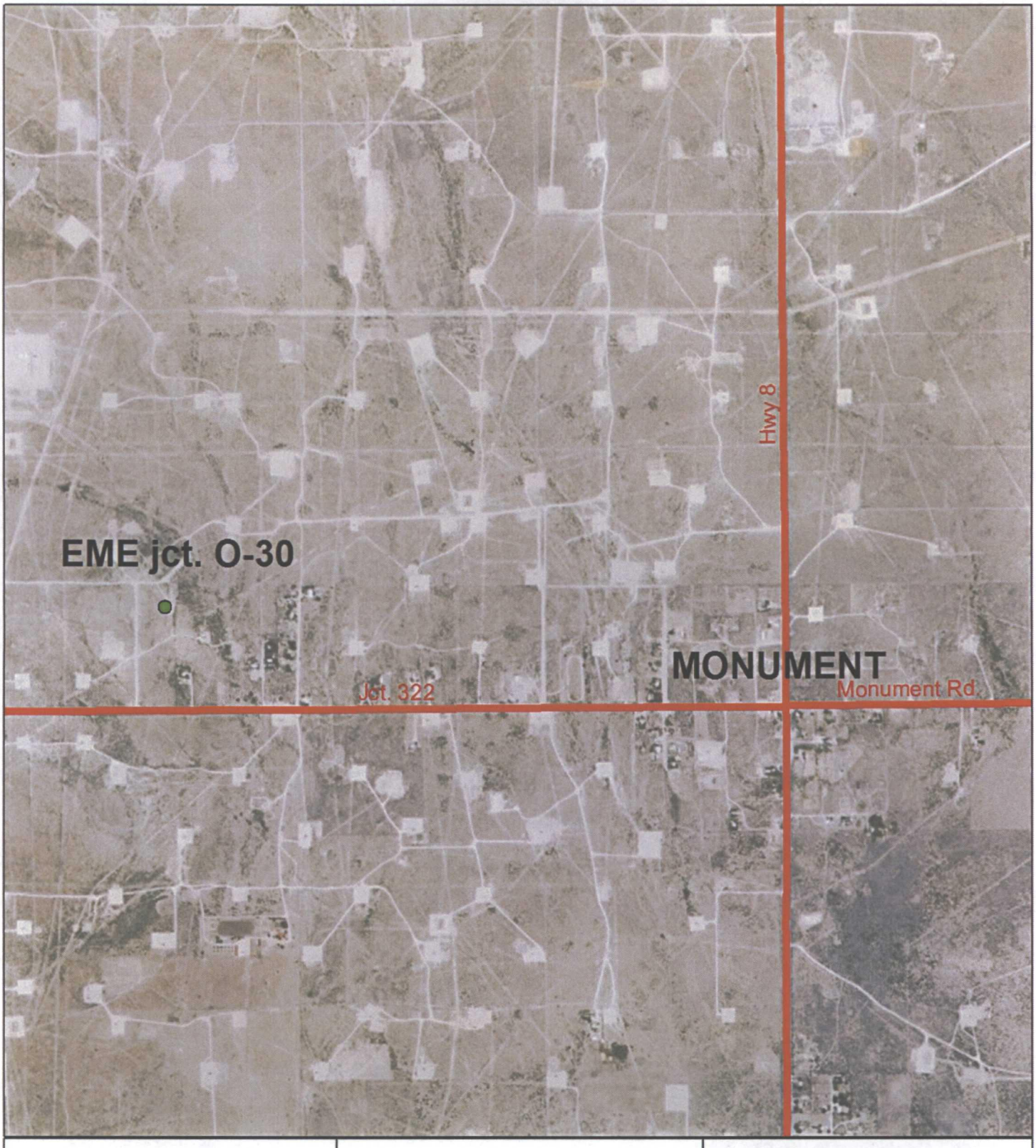
Figure 1

N
W E
S

0 135 270 540
Feet

Drawing date: 7-1-11
Drafted by: L. Weinheimer

Site Location Map



RICE ENVIRONMENTAL RECS CONSULTING & SAFETY, LLC

EME jct. O-30

LEGALS: UL/O sec. 30
T19S R37E

NMOCD Case #: 1R427-319

Figure 2

N
W E
S

0 550 1,100 2,200
Feet

Drawing date: 7-1-11
Drafted by: L. Weinheimer

Appendix A

CAP Documentation

RICE Environmental Consulting and Safety (RECS)
P.O. Box 5630 Hobbs, NM 88241
Phone 575.393.4411 Fax 575.393.0293

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

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

LOT NO : 930360	EXPIRATION DATE: 5/24/2013
METER READING ACCURACY: 100 ppm	

ACCURACY : +/- 2%

COMPANY
Rice Operating Company

SYSTEM	JUNCTION	UNIT	SECTION	TOWN SHIP	RANGE
EME	O-30 JCT	O	30	19S	37E

SAMPLE ID	PID	SAMPLE ID	PID
Imported Soil	93		

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

SIGNATURE:

DATE: 1/18/2012

CARDINAL Laboratories

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

January 25, 2012

HACK CONDER

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

112 W. TAYLOR

HOBBS, NM 88240

RE: EME 0-30

Enclosed are the results of analyses for samples received by the laboratory on 01/18/12 9:00.

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.

Cardinal Laboratories is accreditated 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,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
HACK CONDER
112 W. TAYLOR
HOBBS NM, 88240
Fax To: (575) 397-1471

Received:	01/18/2012	Sampling Date:	01/18/2012
Reported:	01/25/2012	Sampling Type:	Soil
Project Name:	EME 0-30	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	IMPORTED SOIL		

Sample ID: IMPORTED SOIL (H200116-01)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/18/2012	ND	448	112	400	3.64	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: RECS	**BILL TO**
Project Manager:	P.O. #:
Address:	Company:
City: State: Zip:	Attn:
Phone #: Fax #:	Address:
Project #: Project Owner:	City:
Project Name: EmE 0-30	State: Zip:
Project Location: ~~Coopers Pit~~ Imported Soil *	Phone #:
Sampler Name: ~~Coopers Pit~~ Imported Sand	Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME
H200116 -1	~~Coopers Pit~~ * Imported Soil	G				X							1/18/12	8:11 am

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 the client for the 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 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.

Relinquished By:	Date: 1/18/12	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 9:60	Jodi Henson	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: Zach * Changed as per Lara. ch 1/25/12
	Time:		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: 4°c

Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials)

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

#96

RICE ENVIRONMENTAL
RECS
CONSULTING & SAFETY, LLC

PO Box 5630
Hobbs, NM 88241
Phone: (575) 393-4411
Fax: (575) 393-0293

VEGETATION FORM

1. General Information

Site name: EME-JCT-O-30						
U/L O	Section 30	Township 19S	Range 37E	County Lea	Latitude 32*37'37.734''N	Longitude 103*17'12.426''W
Contact Name: Bruce Baker						
Email: bbaker@rice-ecs.com						
Site size: 10,286 SQFT square feet			Map detail of site attached ☐			
Additional information:						

2. Soils **Do not rip caliche subsoils; caliche rocks brought to the surface by ripping shall be removed.*

Salvaged from site ☐	Bioremediated ☐	Imported ☒	Blended ☐	Depth (in):
Texture: Sandy	Describe soil & subsoil: Blow sand and subsoil caliche			
Soil prep methods: Rip ☐ Depth(in):		Disc ☐ Depth (in):		Rollerpack ☐
Date completed: 1-20-12				

3. Bioremediation

Fertilizer ☐	Hay ☐	Other ☐
Type:		Describe:
Lbs/acre:		

4. Seeding **Attach seed bag tags to this form. Seed bag tags shall contain the site name and S-T-R.*

Custom seed mix ☒	Prescribed mix ☐	Seed mix name: 11 LBS WINTER WHEAT 8 LBS SIDE OATS GRAMA 3 LBS BLACK GRAMA	Seeding date: 1-24-12
Broadcast ☒ Method: Portable seeder			
Soil conditions during seeding: Dry ☒ Damp ☐ Wet ☐			
Photos attached ☒ Number of photos:	Observations:		

5. Certification I hereby certify that the information in this form and attachments is true and complete to the best of my knowledge and belief.

Name: ROBERTO PARRA	Title: Environmental Tech.	Date: 1-24-12
Signature: Roberto Parra		

EME Jct. O-30 (1R427-319)
Unit O, Section 30, T-19-S, R-37-E

site prior to excavation, facing south
11/1/2011

scraping the site, facing southeast
11/2/2011

exporting scraped soil, facing north
1/16/2012

backfilling the scraped site, facing north
1/18/2012

seeding the backfilled site, facing south
1/24/2012

site complete, facing south
1/24/2012