

1R - 427-288

APPROVALS

YEAR(S):

2013

Hansen, Edward J., EMNRD

From: Hansen, Edward J., EMNRD
Sent: Tuesday, January 22, 2013 12:40 PM
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); Jeff.Kindley@tetrattech.com
Subject: Remediation Plan (1R427-288) Termination - ROC EME C-8 Vent Site

**RE: CAP Report and Termination Request
for the Rice Operating Company's
EME C-8 Vent Site
Unit Letter C, Section 8, T20S, R37E, NMPM, Lea County, New Mexico
Remediation Plan (1R427-288) 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 January 14, 2013 (received January 17, 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 (1R427-288) 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



TETRA TECH

RECEIVED

CERTIFIED MAIL
RETURN RECEIPT NO. 7006 0100 0001 2434 3795

JAN 17 2013

January 14, 2013

Mr. Ed Hansen
New Mexico Energy, Minerals, & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

RE: **CAP REPORT AND TERMINATION REQUEST
EME C-8 VENT (1R427-288)
UNIT "C", SEC. 8, T20S, R37E
LEA COUNTY, NEW MEXICO**

Mr. Hansen:

On behalf of Rice Operating Company (ROC), Tetra Tech Inc. (Tetra Tech) submits the following CAP Report and Termination Request for the Eunice Monument Eumont (EME) SWD System C-8 Vent site. 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 EME SWD system is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis. See Figures 1 and 2 for site location maps.

BACKGROUND & PREVIOUS WORK

As part of the ROC Junction Box Upgrade Workplan, starting on August 17, 2006, the junction box was removed and a new, watertight junction box was installed 50 feet north of the former junction box. The former junction box site was excavated to dimensions of 30 feet by 30 feet by 12 feet deep with a backhoe. Photo-ionization detector (PID) readings and chloride field tests were conducted at regular intervals. PID readings exceeded 100 parts per million (ppm) at the source and to within 10 feet of the source with depths ranging from 6 to 12 feet bgs. A vertical delineation trench was installed approximately 15 feet south of the source. Chloride levels within the trench were relatively stable from the surface to 11 feet bgs ranging from 336 mg/kg to 566 mg/kg. At 12 feet bgs, the chlorides increased to 800 mg/kg. A four wall composite sample from the excavation was collected and submitted for analysis of TPH (GRO/DRO) and chlorides. The total TPH for the composite was 21.9 mg/kg, while the chlorides were 64 mg/kg. A composite was also collected from the bottom of the excavation and submitted for analysis of BTEX, TPH, and chlorides. Analytical results show concentrations of <0.015 mg/kg total BTEX, 325 mg/kg TPH, and 576 mg/kg chlorides. In addition, a composite backfill sample was also collected and submitted for analysis of TPH and chlorides. Analytical results for the backfill were 269 mg/kg TPH and 352 mg/kg chlorides.

Tetra Tech

1910 North Big Spring, Midland, TX 79705

Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com



Upon completion of the excavation, the soils were blended on site and then back-filled within the excavation to surface grade. Clean, imported soil was utilized to cap the location. On October 25, 2008, the site was reseeded with a blend of native vegetation. The NMOCD was notified of a potential groundwater impact on July 31, 2008. In March 2009, ROC submitted a Junction Box Disclosure Report to the NMOCD with all the 2008 junction box closure and disclosure reports. In addition, on October 1, 2009, ROC submitted an Investigation & Characterization Plan (ICP) for the site to the NMOCD. The NMOCD granted approval of the ICP via an email dated January 28, 2010.

As part of the ICP, ROC was onsite June 8, 2010 to install five soil borings (SB-1 through SB-5) in the vicinity of the former junction box. See Figure 3 detailing the soil boring locations. The soil borings were extended to a maximum depth of 25 feet below ground surface (bgs) with samples collected every five feet and analyzed in the field for chlorides using a field test kit and volatile organic compounds utilizing a PID meter. Select samples were submitted to Cardinal Labs of Hobbs, New Mexico for analysis of chlorides utilizing EPA method 4500-Cl⁻B, TPH utilizing EPA method 8015M, and BTEX utilizing EPA method 8021B. Laboratory results indicate the chlorides ranged from 48 mg/kg in SB-2 at 15 feet bgs to 752 mg/kg at SB-4 at 15 feet bgs. Of the analysis performed, TPH was detected in all soil borings (with the exception of SB-2 and SB-3) and ranged from 21.3 mg/kg in SB-5 at 5 feet bgs to 1,917 mg/kg in SB-1 at 25 feet bgs. Soil boring SB-1 at 15 and 25 feet bgs were further analyzed for BTEX. Benzene was not detected in the two samples collected and analyzed. In addition, soil concentrations for the remaining BTEX constituents are below both NMOCD guidelines and receptive groundwater protection values for these constituents. Upon completion of the sampling, each of the borings was backfilled with bentonite and brought up to surface grade.

During drilling activities, groundwater was encountered at a depth of approximately 30 feet bgs in soil boring SB-1. Immediately upon completion, the soil boring was grouted to the surface with bentonite. No other soil borings were extended beyond a depth of 25 feet bgs.

On October 11, 2011, ROC submitted a report entitled, *ICP Report and CAP*, to the NMOCD. The report, which was approved by the NMOCD on October 17, 2011, proposed the installation of a polyethylene liner in order to impede further vertical migration of remaining hydrocarbons and chlorides within the soils.

CAP IMPLEMENTATION

As per the approved *ICP Report and CAP*, ROC was onsite between September 25 and October 12, 2012 to oversee the excavation and installation of a 20-mil reinforced polyethylene liner at a depth of 5 feet bgs (See attached Photographs). The excavation and liner dimensions measured 45 feet by 40 feet and covered the initial junction box and all soil borings. Approximately 420 yds³, of excavated soils from the site were removed and transported offsite for disposal at Sundance Services of Eunice, New Mexico. Approximately 520 yds³, of blow sand was brought in from offsite to backfill the location and bring it up to surface grade. Prior to backfilling, a sample of the blow sand was collected and submitted to Cardinal Labs of Hobbs, New Mexico for analysis of chlorides using EPA Method 4500-CL B and TPH using 8015M. Laboratory analysis in-

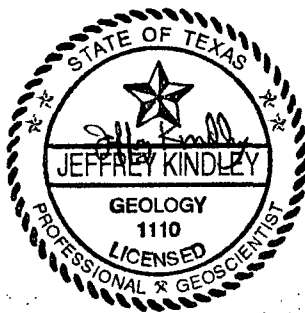


TETRA TECH

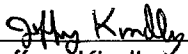
icates results of <16.0 mg/kg chlorides, TPH DRO/GRO of <10.0 mg/kg, with a PID reading of 3.2 ppm (See attached Laboratory Analysis). Upon completion of the liner and backfilling, the site was reseeded with 10 lbs. of BLM #2 seed.

Based on the completion activities performed at the site, ROC acknowledges they have met the requirements of 19.15.29 NMAC and respectfully requests termination of this regulatory file.

If you have any questions or comments regarding the above Termination Request, please do not hesitate to contact us at (432) 682-4559 or Hack Conder of ROC at (575) 393-9174.



Tetra Tech, Inc.



Jeffrey Kindley, P.G.
Senior Environmental Geologist

cc: ROC-Hack Conder

enclosures: figures, laboratory analysis

RECEIVED

JAN 17 2013

Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

FIGURES

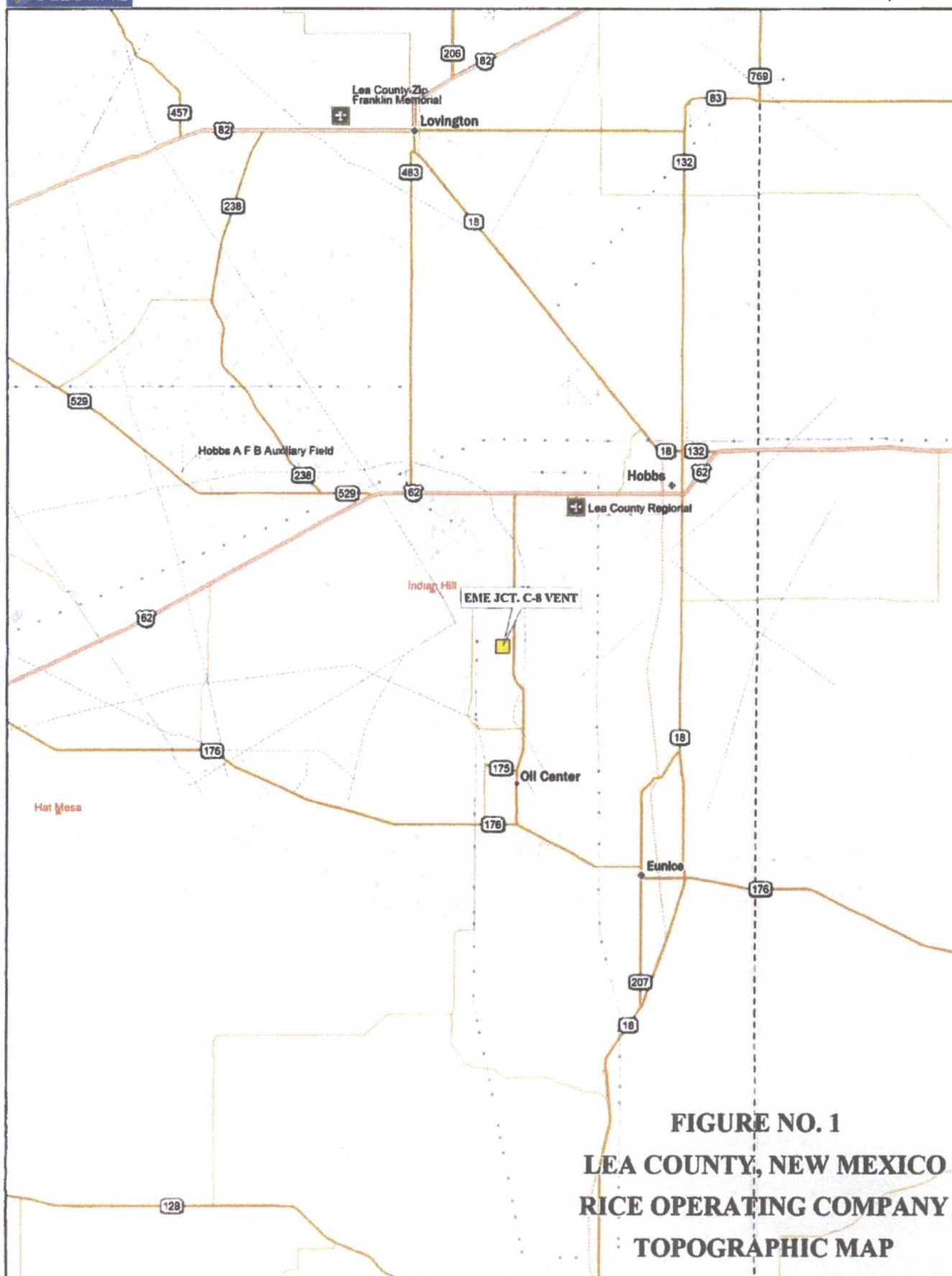
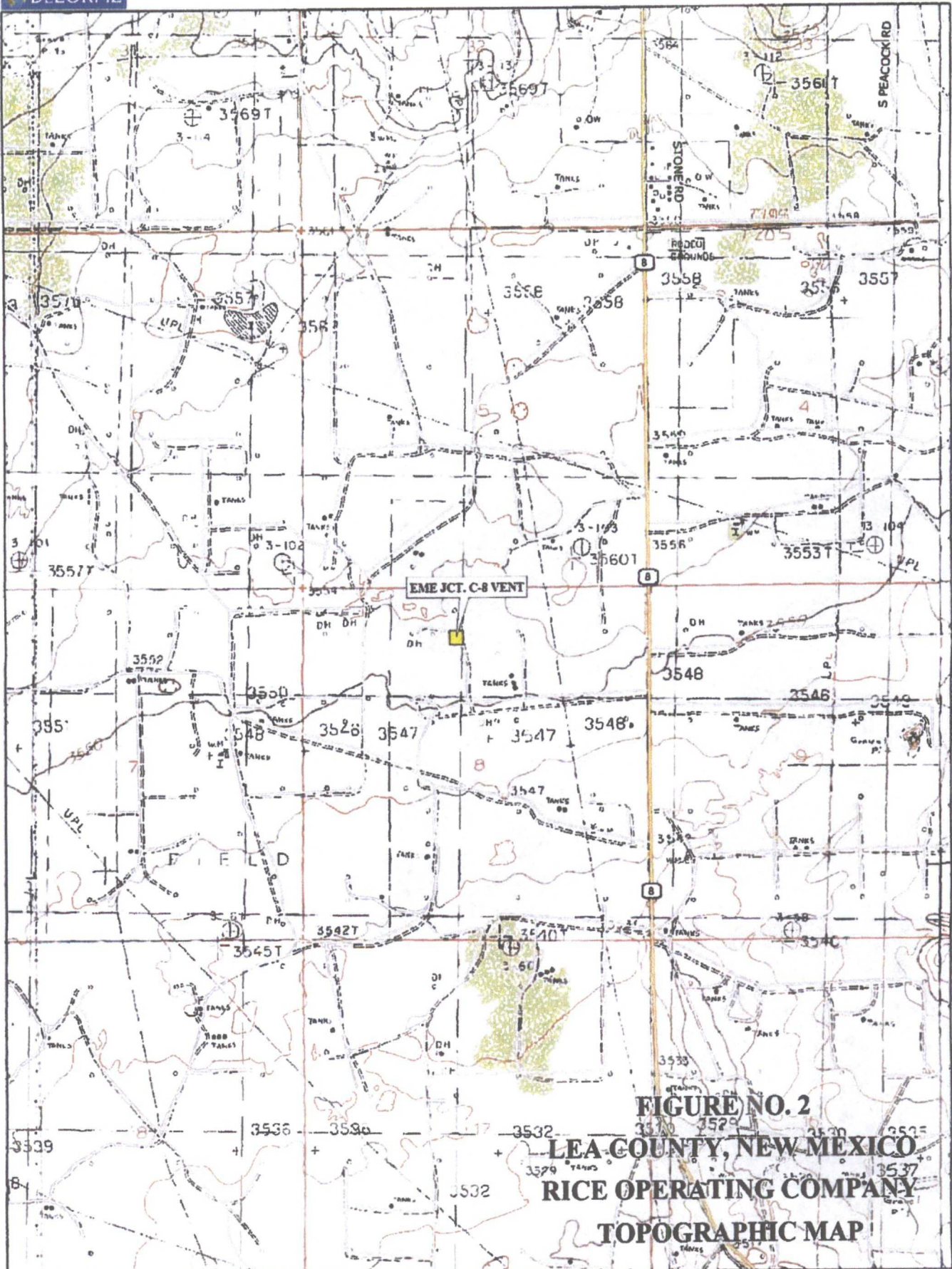


FIGURE NO. 1
LEA COUNTY, NEW MEXICO
RICE OPERATING COMPANY
TOPOGRAPHIC MAP

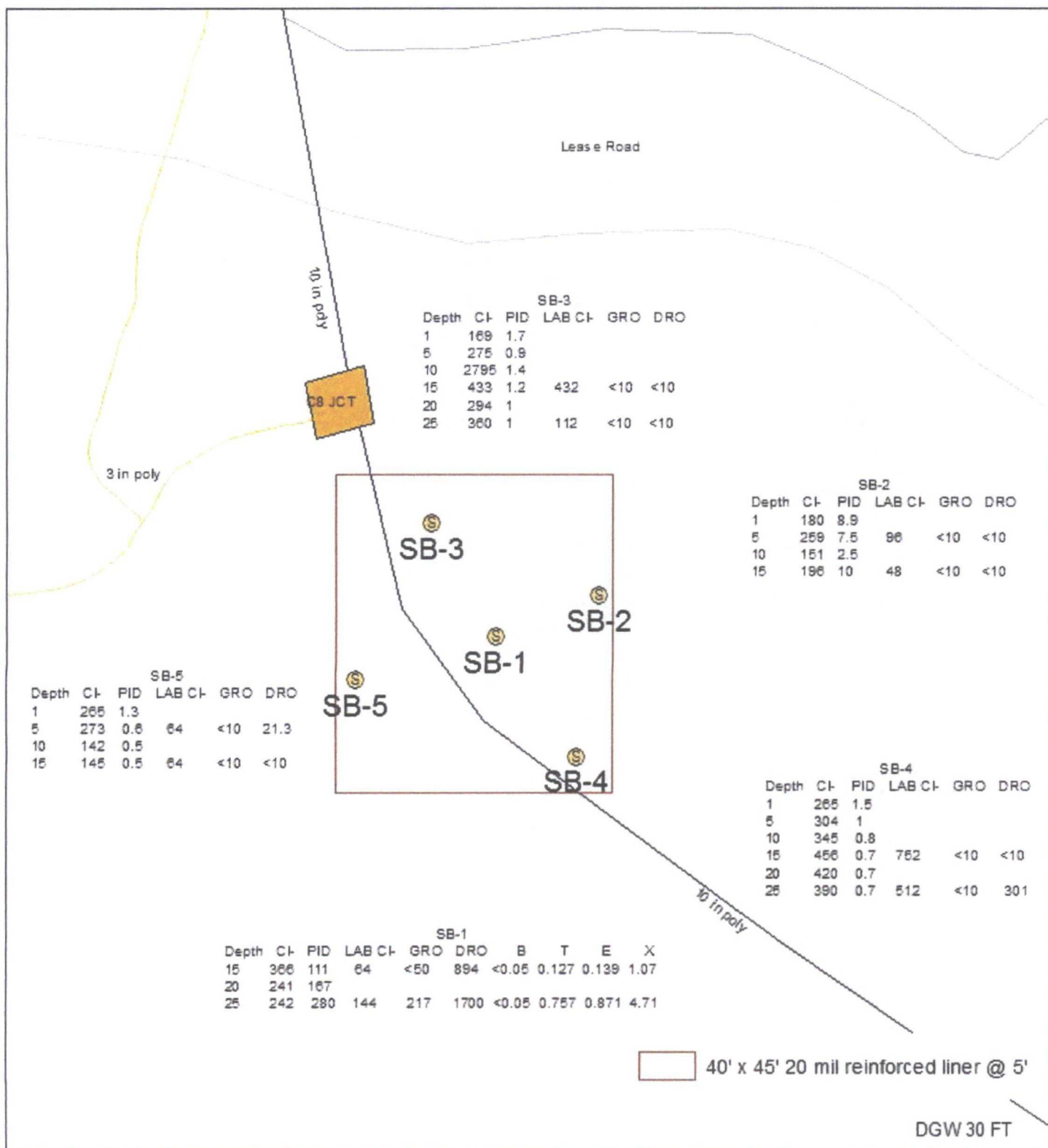


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www.delorme.com





EME C-8 vent

Legals: UL/C sec. 8
T20S R37E

Case #: 1R427-288

Figure 3



0 5 10 20
Feet

Drawing date: 1-5-11
Drafted by: L. Weinheimer

Photos

**EME C-8 vent (1R427-288)
Unit C, Section 8, T20S, R37E**



site prior to excavation, facing east
9/19/2012



excavating the site, facing northeast
9/27/2012



exporting excavated soil, facing east
10/3/2012



excavation complete, with a 20-mil, reinforced
liner installed, facing southwest 10/9/2012



importing blow sand, facing south
10/9/2012



backfilling the excavation with blow sand,
facing south 10/9/2012



backfilling the excavation, facing south
10/10/2012



contouring the site, facing east
10/11/2012



seeding the backfilled site, facing east
10/24/2012



site complete, facing east
10/24/2012

APPENDIX A

October 15, 2012

Hack Conder
Rice Operating Company
112 W. Taylor
Hobbs, NM 88240

RE: EME C-8 VENT

Enclosed are the results of analyses for samples received by the laboratory on 10/10/12 8:00.

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.

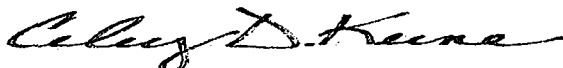
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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,



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: 10/10/2012
 Reported: 10/15/2012
 Project Name: EME C-8 VENT
 Project Number: NONE GIVEN
 Project Location: EME C-8 VENT

 Sampling Date: 10/09/2012
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

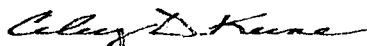
Sample ID: BLOW SAND (H202470-01)

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	10/10/2012	ND	400	100	400	4.08	
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	10/11/2012	ND	184	91.8	200	1.63	
DRO >C10-C28	<10.0	10.0	10/11/2012	ND	186	93.0	200	4.59	
Surrogate: 1-Chlorooctane	88.3 %	65.2-140							
Surrogate: 1-Chlorooctadecane	89.0 %	63.6-154							

Cardinal Laboratories

*=Accredited Analyte

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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

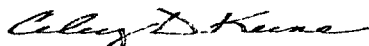
Notes and Definitions

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



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

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 ☒
NO. ☐

MODEL: PGM 7300 SERIAL NO: 590-000508
MODEL: PGM 7300 SERIAL NO: 590-000504
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

SITE	UNIT	SECTION	TOWN SHIP	RANGE
EME C-8 Vent	C	8	20S	37E

SAMPLE ID	PID	SAMPLE ID	PID
Coopers Pit Blow Sand	3.2		

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

SIGNATURE:



DATE: 10/9/2012



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

REVEGETATION FORM

1. General Information

Site name: EME C-8 vent						
U/L C	Section 8	Township T20S	Range R37E	County LEA	Latitude 32° 35' .571"	Longitude 103° 16.469"
Contact Name: ZACHARY CONDER						
Email: zconder@rice-ecs.com						
Site size: 135x96 Square feet: 12,900			Map detail of site attached <input type="checkbox"/>			
Additional information:						

2. Soils

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

Salvaged from site <input type="checkbox"/>	Bioremediated <input type="checkbox"/>	Imported <input checked="" type="checkbox"/>	Blended <input type="checkbox"/>	Depth (in):	
Texture:		Describe soil & subsoil:			
Soil prep methods:	Rip <input type="checkbox"/>	Depth(in):	Disc <input checked="" type="checkbox"/>	Depth (in): 5 in	Roller pack <input type="checkbox"/>
Date completed: 10-11-2012					

3. Bioremediation

Fertilizer <input type="checkbox"/>	Hay <input type="checkbox"/>	Other <input type="checkbox"/>
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 <input checked="" type="checkbox"/>	Prescribed mix <input type="checkbox"/>	Seed mix name: 10 lbs. BLM # 2 Seeding date: 10-24-2012
Broadcast <input type="checkbox"/>		
Method: drop seeder		
Soil conditions during seeding: Dry <input checked="" type="checkbox"/> Damp <input type="checkbox"/> Wet <input type="checkbox"/>		
Photos attached <input type="checkbox"/>	Observations:	
Number of photos:		

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: Eduardo Garcia	Title: Environmental Tech	Date: 1/4/2013
Signature: <i>Eduardo Garcia</i>		