

AP - 42

STAGE 1 & 2 REPORTS

DATE:

8-9-10



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1004 North Big Spring Street
Suite 300
Midland
Texas 79701
Tel 432 687 5400
Fax 432 687 5401
www.arcadis-us.com

Sent Certified Mail
Return Receipt No. 7002 2410 0001 5813 3692

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

Environmental

Subject:

**TERMINATION REQUEST
Jct. M-16-1, EME SWD SYSTEM
UNIT 'M', SEC. 16, T20S, R37E
NMOCD CASE # AP-42**

Date:
August 9, 2010

Contact:
Sharon E. Hall

Phone:
432 687-5400

Email:
sharon.hall@arcadis-us.com

Our ref:
MT000857.0001

Mr. Hansen:

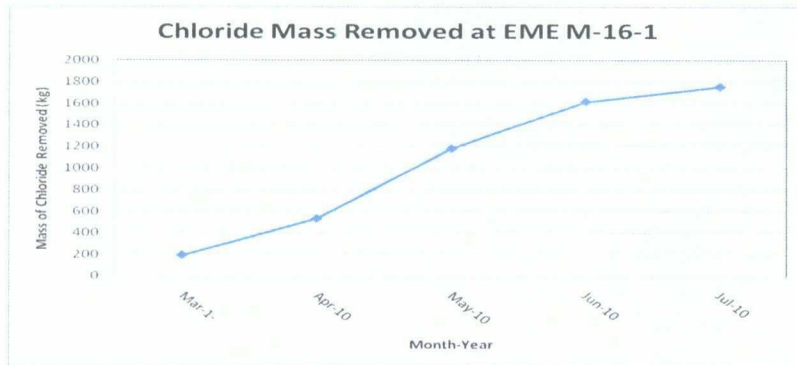
On behalf of Rice Operating Company (ROC), ARCADIS U.S., Inc. (ARCADIS) respectfully submits this Termination Request for the above-referenced site.

NMOCD approved ROC's Stage 2 Abatement Plan on May 12, 2009. The Stage 2 Abatement Plan called for revegetation of the site and proposed an estimation of the chloride mass that has contaminated the groundwater at the former junction box locations and a plan for the removal of that chloride mass. The approved chloride mass estimation and plan for removal is as follows:

ROC proposed, and NMOCD approved, the installation of a groundwater recovery system at the former M-16-1 junction box location to recover an estimated 1,444.15 kilograms (kg) of chloride mass. A solar-driven pump was placed in well RW-1, a 4-inch recovery well. The pump generally operated 8-10 hours per day and the groundwater recovered from the well was pumped into a tank.

As of July 14, 2010, a total of 181,818 gallons of groundwater has been recovered from the recovery well, RW-1. This equates to a total recovered chloride mass of 1,755.05 kg. The following graph depicts the cumulative chloride mass removed at the site since recovery began in March 2010. The chloride mass removal estimate is based on a chloride concentration of 2,550 milligrams per liter (see attached laboratory report.)

Ed Hansen
August 9, 2010



The recovery system was dismantled, the bermed area was removed, and clean imported soil blended with hay was used to contour the site to the surrounding area. Additional amendments, organic compost and peat moss, were added to the soil and the site was seeded on July 23, 2010. Seeding documentation is attached.

Upon NMOCD approval of this Termination Request, monitoring wells MW-1, MW-2, MW-3, MW-4 and recovery well RW-1 will be plugged using a cement grout with 1 to 3% bentonite. MW-5 will continue to be periodically sampled to monitor regional groundwater impacts.

ROC has met all abatement requirements in accordance with 19.15.30 NMAC, and respectfully requests termination of the regulatory file for this site.

ROC is the service provider (agent) for the EME Salt Water Disposal System and has no ownership of any portion of 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.

Thank you for your consideration concerning this request for site termination. If you have any questions please contact Hack Conder at (575) 393-9174.

Sincerely,
ARCADIS.

Sharon E. Hall

Sharon E. Hall
Associate Vice President

Copies:
Hack Conder, ROC

Attachments:
Site Photographs
Revegetation Form
Laboratory Report

EME Jct. M-16-1 (AP-42)
Unit M, Sec. 16, T20S, R37E



groundwater recovery system



spreading top soil blended with hay



adding amendments



seeding the site



tilling in seed and amendments



site complete



112 West Taylor
Hobbs, NM 88240
Phone: (575) 393-9174
Fax: (575) 393-0293

REVEGETATION FORM

1. General Information

Site name: EME M-16-1						
U/L M	Section 16	Township 20S	Range 37E	County LEA	Latitude N 32° 34, 114'	Longitude W103° 15, 739'
Contact Name: BRUCE BAKER						
Email: bbaker@riceswd.com						
Site size: 5,727			square feet		Map detail of site attached <input type="checkbox"/>	
Additional information:						

2. Soils

**Do not rip caliche 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 checked="" type="checkbox"/>	Depth (in):
Texture:		Describe soil & subsoil:		
Soil prep methods:	Rip <input type="checkbox"/>	Depth(in):	Disc <input checked="" type="checkbox"/>	Depth (in):
Date completed: 7 /23 /2010				

3. Bioremediation

Fertilizer <input checked="" type="checkbox"/>	Hay <input checked="" type="checkbox"/>	Other <input checked="" type="checkbox"/>
Type: 13-13-13	Describe: 100LBS OF PEAT MOSS 100LBS OF ORGANIC COMPOST	
Lbs/acre: 50LBS.		

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: 5lbs.PECOS MIX AND 5lbs.BLUE GRAMA	Seeding date: 7 /23 /2010
Broadcast <input checked="" type="checkbox"/>			
Method: HAND			
Soil conditions during seeding:	Dry <input checked="" type="checkbox"/>	Damp <input type="checkbox"/>	Wet <input type="checkbox"/>
Photos attached <input checked="" 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: Robert Egans	Title: Environmental Tech.	Date: 8-4-2008
Signature: <i>Robert Egans</i>		



CARDINAL LABORATORIES

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

July 13, 2010

Hack Conder
Rice Operating Company
112 West Taylor
Hobbs, NM 88240

Re: EME M-16-1

Enclosed are the results of analyses for sample number H20280, received by the laboratory on 07/07/10 at 8:15 am.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 524.2	Regulated VOCs (V2, V3)

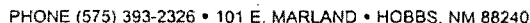
Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 3 (includes Chain of Custody)

Sincerely,

Celey D. Keene
Laboratory Director

This report conforms with NELAP requirements.



Analysis Date: 07/07/10
Sampling Date: 07/06/10
Sample Type: GROUNDWATER
Sample Condition: INTACT
Sample Received By: JH
Analyzed By: HM

METHOD: Standard Methods 4500-CIB

Alfred S. Kneave
Chemist

07/13/10
Date

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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

BILL TO										ANALYSIS REQUEST									
Company Name: Rice Operating Company Project Manager: Hack Conder Address: 122 West Taylor City: Hobbs State: NM Zip: 88240 Phone #: 393-9174 Fax #: 397-1471 Project #: Project Owner: Project Name: EME M-16-1 Project Location: EME M-16-1 Sampler Name: Jordan Woodfin										P.O. #: Company: Attn: Address: City: State: Zip: Phone #: Fax #:									
FOR LAB USE ONLY <div style="display: flex; justify-content: space-between;"> <div> Lab I.D. H20280-1 </div> <div> Sample I.D. Water from RW-1 </div> </div>										<div style="display: flex; justify-content: space-between;"> <div> MATRIX <input checked="" type="checkbox"/> GROUNDWATER <input type="checkbox"/> WASTEWATER <input type="checkbox"/> SOIL <input type="checkbox"/> OIL <input type="checkbox"/> SLUDGE <input type="checkbox"/> OTHER: </div> <div> PRESERV. <input type="checkbox"/> ACID/BASE <input type="checkbox"/> ICE / COOL <input type="checkbox"/> OTHER: </div> <div> SAMPLING <div style="display: flex; justify-content: space-between;"> <div> DATE 7/6/10 </div> <div> TIME 02:00 </div> </div> </div> </div>									
<div style="display: flex; justify-content: space-between;"> <div> (G) RAB OR (C) OMP. 1 </div> <div> # CONTAINERS 1 </div> </div>										<div style="display: flex; justify-content: space-between;"> <div> Chlorides <input checked="" type="checkbox"/> </div> <div> TPH 8015 M <input type="checkbox"/> </div> <div> BTEX <input type="checkbox"/> </div> <div> Texas TPH <input type="checkbox"/> </div> <div> Complete Cations/Anions <input type="checkbox"/> </div> </div>									
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: <i>[Signature]</i> Received By: <i>[Signature]</i> Date: 7/14/10 Date: 7/15/10 Time: Time:									
Relinquished By: Jordan Woodfin										Relinquished By: Jordan Woodfin									
Delivered By: (Circle One) Sampler - UPS - Bus - Other:										Delivered By: (Circle One) email results Hconder@riceswd.com; jwoodfin@riceswd.com; Lweinheimer@riceswd.com									
REMARKS:										REMARKS:									

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

NEED SAMPLES BACK, PLEASE