

AP - 84

WORK PLAN

YEAR(S):

12-28-06

AP-84
Work Plan
12-28-06

L. Peter Galusky, Jr. Ph.D., P.G.

Texerra

December 28th, 2006

Mr. Edward Hansen, Hydrologist

New Mexico Energy, Minerals, & Natural Resources 5 PM 1 01
Oil Conservation Division, Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, New Mexico 87504

**RE: Investigation and Characterization Plan
C-16(2) Leak EME Salt Water Disposal System
UL-C, Sec 16 T20S R37E
NMOCD Case Number: 1R0477**

Sent via U.S. Mail w/ Return Receipt No. 7005 0390 0002 9898 2648

Mr. Hansen:

Please find attached printed copies of our previous correspondence sent via e-mail.
Please note that I have added the case number onto the cover of the ICP.

Per our previous correspondence we drilled this site December 12th, and will submit a report to your office in due course.

Please do not hesitate to contact me if you have any questions or need additional information.

Sincerely,



L. Peter (**Pete**) Galusky, Jr. Ph.D., P.G.
Principal

Texerra

505 N. Big Spring, Suite 404
Midland, Texas 70701
Tel: 432-634-9257
E-mail: lpg@texerra.com
Web site: www.texerra.com

Copy: Kristin Pope, Rice Operating Company



Print - Close Window

Subject: RE: Rice Operating Co. submittal - ICP for EME C16(2)
Date: Wed, 29 Nov 2006 17:02:31 -0700
From: "Hansen, Edward J., EMNRD" <edwardj.hansen@state.nm.us>
To: lpg@texerra.com, "Kristin Farris Pope" <kpope@riceswd.com>
CC: "Price, Wayne, EMNRD" <wayne.price@state.nm.us>

Dear Dr. Galusky and Ms. Pope:

The NMOCD has reviewed the submitted ICP for the above referenced site. The NMOCD hereby approves the plan. However, be advised that you will be proceeding at risk and may be required to perform additional investigation and characterization.

Also, please be advised that NMOCD approval of this plan 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, NMOCD 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 questions regarding this matter, please contact me at 505-476-3489.

Edward J. Hansen
Hydrologist
Environmental Bureau

From: L. Peter Galusky, Jr. P.E. [mailto:lpg@texerra.com]
Sent: Friday, November 24, 2006 2:17 PM
To: Price, Wayne, EMNRD
Cc: Kristin Pope
Subject: Rice Operating Co. submittal - ICP for EME C16(2)

Wayne,

Please find attached, in .pdf format, and Investigation and Characterization Plan for EME C16(2). I will follow this with a hard copy in the mail.

We would like to get right on this, to drill the second week of December. Therefore, we would greatly appreciate your timely approval of this ICP.

Please do not hesitate to call me if you have any questions or need additional information.

Thank you greatly.

Sincerely,

Pete Galusky

L. Peter Galusky, Jr. P.E.
Principal Environmental Engineer
Texerra
Energy Square
505 N. Big Spring, Suite 404

Midland, Texas 79701
E-mail: lpg@texerra.com
Web: www.texerra.com
Office Telephone/Fax: 877-534-9001

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L. Peter Galusky, Jr. Ph.D., P.G.

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November 24th, 2006

Mr. Wayne Price

New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, New Mexico 87504

**RE: Investigation and Characterization Plan
C-16(2) Leak EME Salt Water Disposal System
NMOCD Case Number: 1R0477
UL-C, Sec 16 T20S R37E**

Sent via E-mail and U.S. Mail w/ Return Receipt

Mr. Price:

RICE Operating Company (ROC) has retained L. Peter Galusky, Jr. Ph.D. to address potential environmental concerns at the above-referenced 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 System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis. Environmental projects of this magnitude require System Partner AFE approval, and work begins as funds are received. In general, project funding is not forthcoming until NMOCD approves the work plan. Therefore, your timely review of this submission would be greatly appreciated.

For all such environmental projects, ROC will choose a path forward that:

- protects public health,
- provides the greatest net environmental benefit,
- complies with NMOCD Rules, and
- is supported by good science.

Each site shall generally have three submissions, as described below:

1. An Investigation and Characterization Plan (ICP) is proposed for data gathering and site characterization and assessment.
2. Upon evaluating the data and results from the ICP, a recommended remedy will be submitted in a Corrective Action Plan (CAP) if this is warranted.
3. Finally, after implementing the remedy, a Closure Report with final documentation will be submitted.

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Background and Previous Work

Rice Operating Company (ROC) discovered an accidental discharge of produced water at the referenced location on January 23rd, 2006; (see attached road map). The source of the release was an asbestos-cement pipeline segment which failed, releasing an estimated 60 bbls of produced water of which an estimated 30 bbls were recovered. The 4-inch diameter pipeline was replaced with a 5-foot segment of PVC pipe, thus minimizing the threat of future releases and compounded impact.

The surface area affected by this release was approximately 2,142 sq ft (less than 1/20th of an acre). Regional groundwater information indicates that the depth to groundwater is approximately 17 to 20 ft below ground surface at this location.

Soil sampling was subsequently undertaken by ROC with the aid of a backhoe. Soils were sampled at three locations, as indicated by surface conditions, to depths of 10 to 12 ft below ground surface. Samples were analyzed in the field for chlorides and organics using field titration and a portable PID, respectively. A subset of samples was sent to a commercial laboratory for verification of field results.

In order to protect groundwater approximately 60 cu yds of chloride-contaminated soil material from the upper 6 inches was subsequently removed. This material was taken to the Sundance Disposal facility in Eunice, NM in March, 2006. The site was regraded to original contours, using clean soil material as backfill.

The following scope of work is proposed to provide definitive and sufficient information for the development of a Corrective Action Plan and/or Closure Request.

Proposed Work Elements

1. Summarize information and data collected by ROC to date.
2. Summarize additional, publicly available regional and local hydrological information.
3. Complete the vertical and lateral delineation of soil chloride concentrations, and prepare three-dimensional graphics to illustrate the horizontal and vertical extent of contamination.
4. If warranted, install monitor wells sufficient to determine up-gradient, zone-of-release and down-gradient groundwater chloride concentrations. [All monitoring wells will be constructed (with the annular space sealed with a cement/bentonite mix) per NM Dept. Environment standards].
5. Evaluate the risk of groundwater impact in light of the information obtained.

If the evaluation demonstrates that residual constituents pose no threat to ground water quality, then only a surface restoration plan will be proposed to OCD. If, as a result of this work, it is believed that this produced water leak does pose a present or future risk of impacting groundwater quality, then a corrective action plan (CAP) will be developed and proposed to OCD.

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It should be noted that since this release is approximately 400 feet east of an earlier release (C-16-1) on the same pipeline, that the field investigation will be conducted in conjunction with that for C-16-1, to optimize the locations of any monitor wells which may be installed.

I appreciate the opportunity to work with you and your staff on this project. Please call either myself, at the number below, or Kristin Farris Pope (ROC) at 505-393-9174, if you have any questions or wish to discuss these matters.

Thank you for your consideration.

Sincerely,



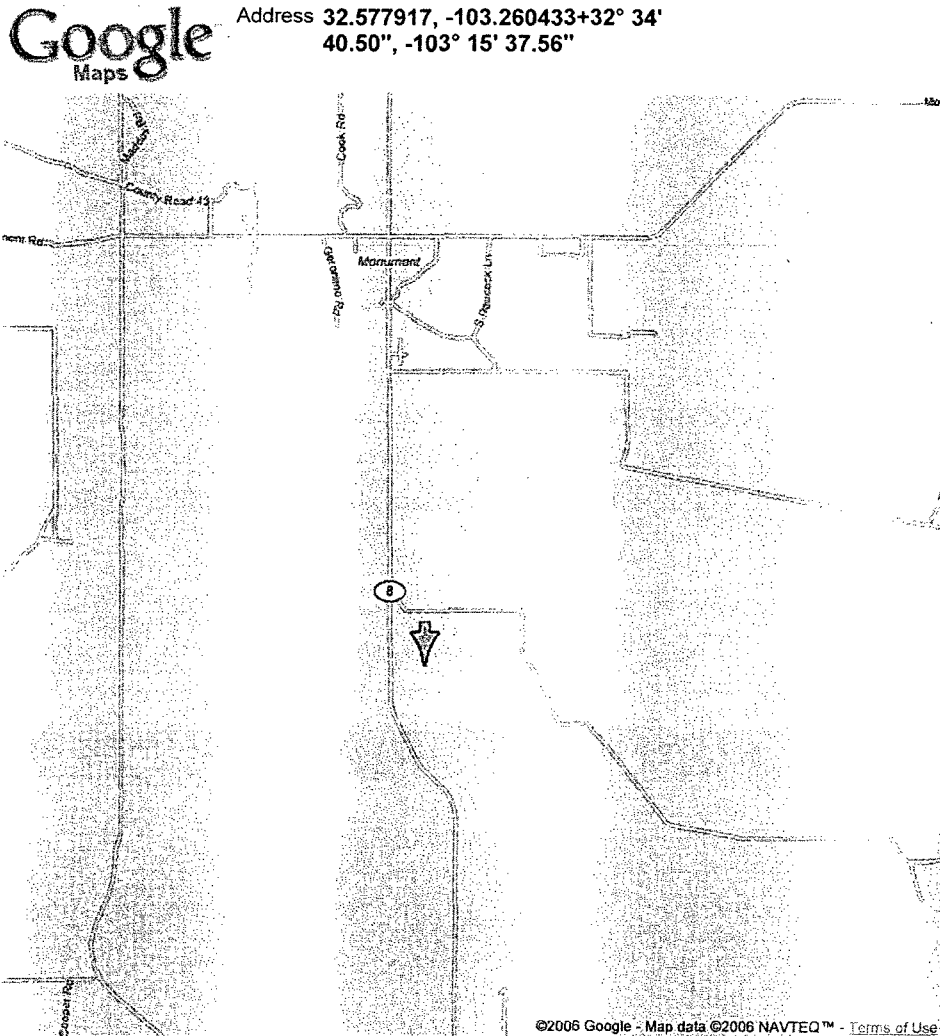
L. Peter (**Pete**) Galusky, Jr. Ph.D., P.G.
Principal

Texerra

505 N. Big Spring, Suite 404
Midland, Texas 79701
Tel: 432-634-9257
E-mail: lpjg@texerra.com
Web site: www.texerra.com

cc: CDH, KFP, file

attachments: site location map, C-141



Directions:

- Starting in Monument at the intersection of Hwys 8 and 322, travel south on Hwy 8 for 2.9 miles.
- Turn east on dirt road, going through a cattle guard.
- Take east (left) fork. Take 2nd lease road past drilling location, turning south for 1,500 ft.
- Release location is on west side of road, approx. 400 ft east of C-16(1) release.

GPS Coordinates:

Lat: 32 deg 34.671 minutes
Long: -103 deg 15.537 minutes

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Rice Operating Company	Contact:
Address: 122 West Taylor	Telephone No.: 505-393-9174
Facility Name: EME	Facility Type: Salt Water Gathering System

Surface Owner: State leased to SW Cattle Co.	Mineral Owner:	Lease No.:
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LOCATION OF RELEASE

Unit Letter C	Section 16	Township 20S	Range 37E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
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Latitude: 32*34.671N **Longitude:** 103*15.537W

NATURE OF RELEASE

Type of Release: Produced Water with Oil	Volume of Release: 60 bbls	Volume Recovered: 30 bbls
Source of Release: Pipeline	Date and Hour of Occurrence: 1/23/06	Date and Hour of Discovery: 1/23/06 1:00 pm
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Left Paul Sheeley a message.	
By Whom? Jennifer Johnson	Date and Hour: 1/24/06 7:17 am	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse:	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* Coupling separated, replaced with two couplings and 5 ft of 4 inch PVC pipe.		
Describe Area Affected and Cleanup Action Taken.* Approximately 2142 sq ft affected. Delineation results and work plan to follow. Groundwater is approximately 17 ft bgs.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Signature:		OIL CONSERVATION DIVISION
Printed Name: Jennifer Johnson		Approved by District Supervisor:
Title: Environmental and Field Technician	Approval Date:	Expiration Date:
E-mail Address: jjriceswd@valornet.com	Conditions of Approval:	
Date: 1/24/06 Phone: 505-393-9174	Attached <input type="checkbox"/>	

* Attach Additional Sheets If Necessary