1R - 427-211

WORKPLANS

DATE:

Aug. 24, 2009

Gmail by Google

L Peter Galusky <lpg.texerra@gmail.com>

Rice Operating Company - EME K-6 - Submittal of Investigation and Characterization Plan

1 message

L Peter Galusky, Jr Ph.D. <lpg.texerra@gmail.com> **Mon, Aug 24, 2009 at 2:13 PM**
Reply-To: lpg@texerra.com
To: "Edward J. Hansen" <edwardj.hansen@state.nm.us>
Cc: Katie Jones <kjones@riceswd.com>, Hack Conder <hconder@riceswd.com>

Dear Edward,

Please find attached an ICP for the above-referenced site.

We would be grateful for your review of this at your earliest convenience so that we may schedule field work.

Thank you.

Sincerely,

Pete G.

L Peter Galusky, Jr. Ph.D.
Texerra
Cell: 432-634-9257
E-mail: lpg.texerra@gmail.com

EME K-6 EOL ICP 08.24.09b lpg.pdf
651K

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

August 24th, 2009

Mr. Edward Hansen
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**
Rice Operating Company – EME SWD System
EME K-6 EOL UL K Sect 6 Township 20S Range 37E

Sent via E-mail & U.S. Certified Mail w/ Return Receipt 7006 0100 0001 2438 4118

Dear Mr. Hansen:

RICE Operating Company (ROC) has retained Texerra to address potential environmental concerns at the above-referenced site located in the EME 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. 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. This 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 Termination Request with final documentation will be submitted.

Background and Previous Work

The site is located approximately 2.5 miles southwest of Monument, New Mexico (Figure 1). The topography is gently sloping toward the southeast. Soils on the location are characterized in the Lea County Soil Survey as moderately deep to deep sandy soils that are underlain by hard caliche. NM OSE records indicate that groundwater is likely to be encountered at a depth of approximately 30+/- feet in unconsolidated Tertiary alluvium of the Ogallala Formation.

The following project history is taken from Rice's Junction Box Disclosure Report (Figure 2): This end-of-line (EOL) box was located next to an abandoned production facility. After the box lumber was removed, the site was delineated using a backhoe to collect soil samples at regular intervals creating a 30*25*12 ft deep excavation. Chloride field tests performed on each sample yielded relatively low concentrations throughout. PID measurements were also conducted on the samples which exhibited elevated concentrations and soils exhibited a noticeable hydrocarbon presence. Composite samples were collected from the final excavation for laboratory analysis. A bottom composite sample tested 208 ppm for chlorides, 201 ppm for gasoline range organics (GRO) and 927 ppm for diesel range organics (DRO). OCD TPH guidelines were thus not met. The excavated soil was blended on site and then backfilled into the excavation and contoured to the surrounding terrain. The disturbed surface was seeded with a blend of native vegetation on 11/13/2006. An identification plate was placed on the surface at the site of the former junction box to mark this location for future environmental considerations. Photographs of this work are given in the Appendix.

It should be noted that there is no longer a threat of continued, compounded impact at this site as the former junction box has been eliminated.

ROC proposes additional investigative work to determine if there is potential for groundwater degradation from residual soil hydrocarbons and/or chlorides which are the *constituents of concern*, as outlined below.

Proposed Work Elements

1. Summarize information and data collected by ROC to date.
2. Summarize additional, publicly available regional and local hydrological information.
3. Conduct vertical and lateral delineation of residual soil petroleum hydrocarbons and chlorides. If warranted, install a monitor well to provide a direct measurement of potential groundwater impact. [All monitoring wells will be constructed per NM Dept. Environment standards].
4. 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 this work indicates that there is a present or future risk of impacting groundwater quality from past operations at this location, then a corrective action plan (CAP) will be developed and proposed to OCD.

I appreciate the opportunity to work with you and your staff on these projects. Please call either myself, at the number below, or Hack Conder (ROC) at 575-393-9174, 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 70701
Tel: 432-634-9257
E-mail: lpg@texerra.com
Web site: www.texerra.com

cc: Rice Operating Company

Attachments: ... *as noted above.*

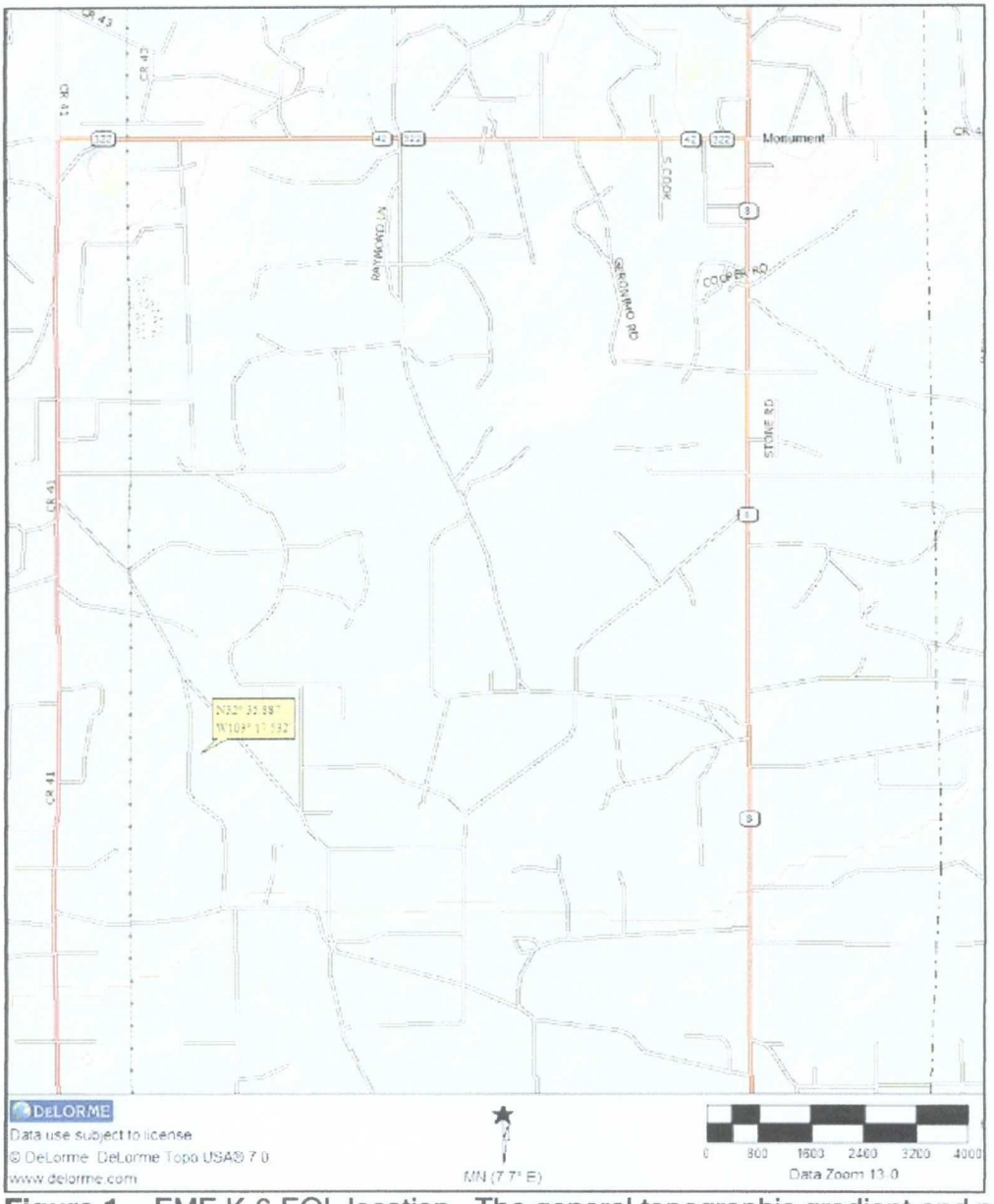

Figure 1 – EME K-6 EOL location. The general topographic gradient and presumed water table gradient is toward the southeast.

RICE OPERATING COMPANY
JUNCTION BOX DISCLOSURE* REPORT

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	NEW BOX DIVERSIONS - FEET		
							Length	Width	Depth
EME	Hartman Ball 'A' EOL	K	6	20S	37E	Lea	no box--pit eliminated		

LAND TYPE: BLM X STATE ____ FEE LANDOWNER ____ OTHER ____

Depth to Groundwater: 31 feet NMOCD SITE ASSESSMENT RANKING SCORE: 20

Date Started: 9/21/2006 Date Completed: 11/13/2006 NMOCD Witness: no

Soil Excavated: 333 cubic yards Excavation Length: 35 Width: 25 Depth: 12 feet

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

FINAL ANALYTICAL RESULTS: Sample Date: 10/20/2006 Sample Depth: 12 ft

Precise 5-point composite sample of the excavation bottom. TPH, BTEX and chloride laboratory test results completed by using an approved lab and testing procedures pursuant to NMOCD guidelines.

Sample Location	Benzene mg/kg	Toluene mg/kg	Ethyl Benzene mg/kg	Total Xylenes mg/kg	GRO mg/kg	DRO mg/kg	Chloride mg/kg
4-WALL COMP	<0.005	<0.005	0.043	0.052	15.2	233	112
BOTTOM COMP	PID = 61.6				201.0	927	208
REMED. BACKFILL	<0.005	<0.005	<0.005	<0.015	12.3	496	96

General Description of Remedial Action:

The end-of-line (EOL) box was located next to an abandoned production facility. After the box lumber was removed, the site was delineated using a backhoe to collect soil samples at regular intervals creating a 35 x 25 x 12-ft excavation. Chloride field tests performed on each sample yielded relatively low concentrations throughout. PID measurements were also conducted on the samples which exhibited elevated concentrations and only exhibited a noticeable hydrocarbon presence. Composite samples were collected from the final excavation for laboratory analyses. OCD TPH guidelines were not met. The excavated soil was hauled on site and then backfilled into the excavation and contoured to the surrounding terrain. The disturbed surface was seeded with a blend of native vegetation on 11/13/2006. An identification plate was placed on the surface at the site of the former junction to mark this location for future environmental considerations. OCD was notified of potential groundwater impact at this site on 7/27/2007.

CHLORIDE FIELD TESTS

LOCATION	DEPTH (ft)	ppm
4-wall comp.	n/a	322
bottom comp.	12	317
backfill comp.	n/a	277

ADDITIONAL EVALUATION IS *HIGH* PRIORITY

enclosures: photos, lab results, PID field screenings, BTEX comparison table, plan view

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

SITE SUPERVISOR: Darrell Mitchell SIGNATURE: Darrell Mitchell COMPANY: RICE Operating Company

REPORT ASSEMBLED BY: Kristin Farris Pope SIGNATURE: Kristin Farris Pope

DATE: 2/6/2007 TITLE: Project Scientist

** This site is a "DISCLOSURE." It will be placed on a prioritized list of similar sites for further consideration.*

Figure 2 – EME K-6 EOL Disclosure Report

APPENDIX – Photographs taken before and during junction box removal.

backfilling November 2006

continuing backfill November 2006

seeding disturbed surface 11/13/2006

compacting backfill November 2006