1R - 427-174

GENERAL CORRESPONDENCE

YEAR(S):
2007

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

July 16th, 2007

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
State Q EOL (UL Q Sec 16 T 20S R 37E) 1R427-174

Sent via E-mail and U.S. Certified Mail: Return Receipt No. 7006 0100 0001 2438 3852

Dear Mr. Hansen:

RICE Operating Company (RICE) has Texerra 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. This Investigation and Characterization Plan (ICP) is a proposal 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.

Background and Previous Work

The site is located approximately three miles south/southeast of Monument in Lea County (Figure 1). The topography is gently sloping toward the southeast. Soils on the site are mapped in the Lea County Soil Survey as belonging to Pyote-Maljamar-Kermit soil association. These are characterized as gently undulating and rolling, sandy soils of six feet or more depth overlying caliche. Groundwater is believed to occur at a depth of approximately 25 +/- feet, occurring in unconsolidated Tertiary alluvium of the Ogallala Formation, and is believed to flow toward the southeast in the direction of the surface topographic gradient.

As part of their on-going SWD facility upgrades, Rice removed a wooden junction box (associated with a boot) at this location, and replaced it with a concrete junction box in November of 2004. The site was re-graded to natural contours and seeded to native grasses in June of 2005.

A grab soil sample taken 12 ft below the surface at the former junction box location found a diesel range organics (DRO) concentration of 2,730 ppm; (see Appendix A). OCD was notified that this site has potential for groundwater impacts, and subsequent site investigation was then planned. A photographic chronology of these activities is provided in Appendix B.

The surface (ecological) impact of this junction box was limited, as visual observation indicated that vegetation was not affected beyond approximately 25 ft from the former junction box; (Photograph 1). However, as some potential for groundwater contamination may exist, further evaluation is warranted for petroleum hydrocarbons, the primary constituent of concern. Therefore, ROC proposes additional investigative work, as outlined below, to determine if groundwater was impacted by the former junction box.

It should be noted that the source of this impact is historical, since the former junction box has been removed. Further, baseline groundwater quality is known to be impaired in many locations due to historical practices in the Monument area

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 a vertical and lateral delineation of soil hydrocarbon concentrations (using a PID). Field methods will be verified against laboratory analysis of representative samples. Prepare 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]. It should be noted, however, that the presence of

active production facilities nearby may constrain the placement of borings and monitor wells.
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 protective of groundwater will be proposed to OCD. If further study indicates that this junction box site may pose a present or future risk of impacting groundwater quality, then a corrective action plan (CAP) will be developed for the protection of groundwater, and this will be proposed to OCD.

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 70701
Tel: 432-634-9257
E-mail: lpg@texerra.com
Web site: www.texerra.com

cc: CDH, KFP, file

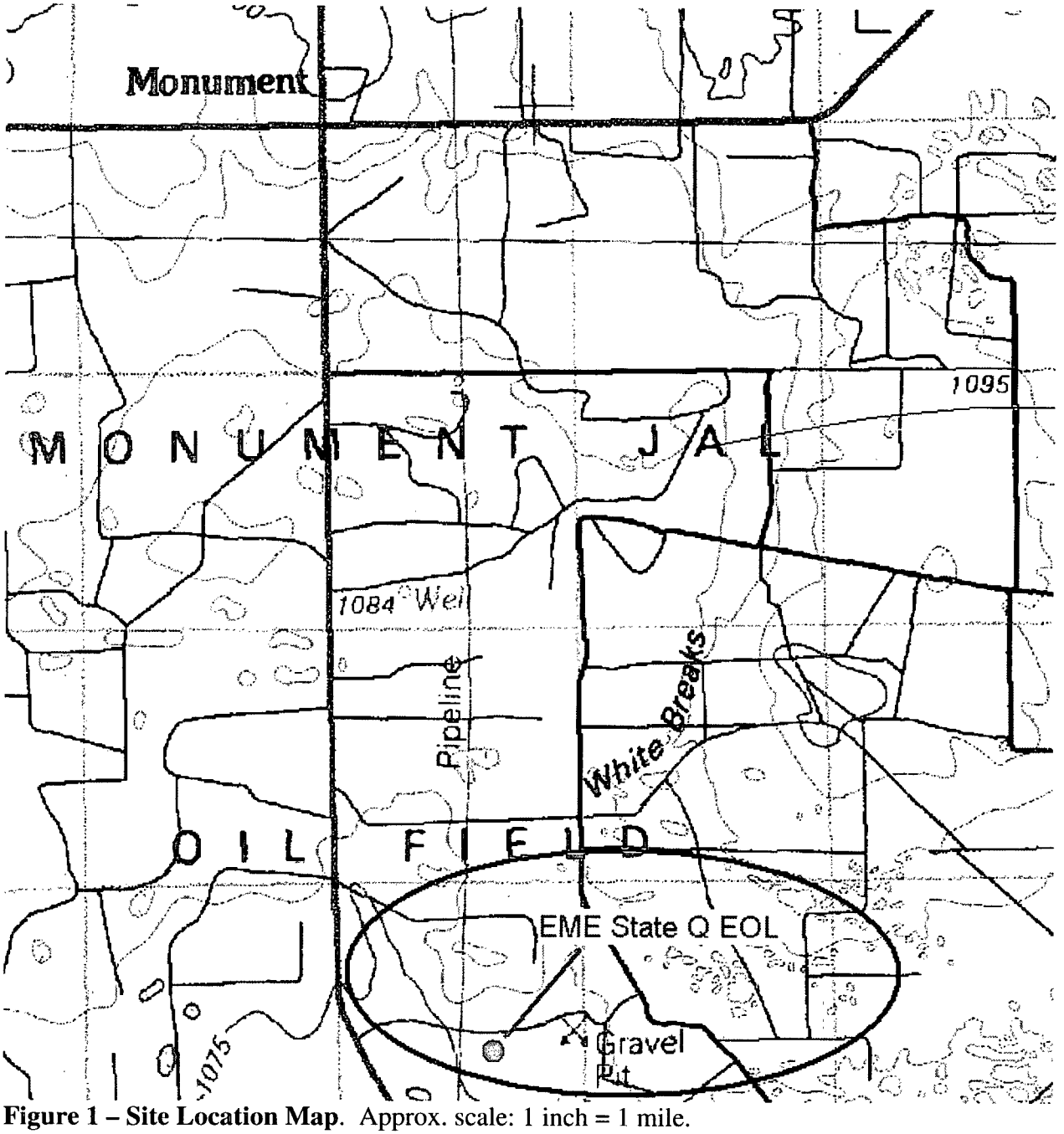

Figure 1 – Site Location Map. Approx. scale: 1 inch = 1 mile.

Appendix A – Junction Box Disclosure Report

RICE OPERATING COMPANY
JUNCTION BOX **DISCLOSURE*** REPORT

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
							Length	Width	Depth
EME	State 'Q' EOL boot	J	16	20S	37E	Lea	12	8	6

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

Depth to Groundwater 19-50 feet NMOCD SITE ASSESSMENT RANKING SCORE: 20

Date Started 11/5/2004 Date Completed 2/28/2005 OCD Witness No

Soil Excavated 133 cubic yards Excavation Length 30 Width 10 Depth 12 feet

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

FINAL ANALYTICAL RESULTS: **Sample Date** 11/29/2004 **Sample Depth** 12 ft

Procure 5-point composite sample of bottom and 4-point composite sample of excavation sidewalls. 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	Chlorides mg/kg
4-WALL COMP.	PID = 0.1 ppm				<10.0	<10.0	63.8
BOTTOM COMP.	0.0223	0.28	0.806	3.104	651	2730	479
BACKFILL COMP.	PID = 10.1 ppm				30.8	465	<20.0

General Description of Remedial Action: This junction box contained a boot. This box site was delineated using a backhoe while PID screenings and chloride field tests were performed on the soil samples that were collected at regular intervals. Chloride concentrations were elevated and did not relent throughout the 30 x 10 x 12-ft-deep excavation. PID levels were also elevated. Lab results confirmed that TPH concentrations at 12 ft did not meet NMOCD guidelines. The excavation was backfilled with the excavated soil that was blended on site. An identification plate has been placed on the surface to the mark the junction box for future environmental considerations. NMOCD was notified on 6/29/2005 of potential groundwater impact at this site.

ADDITIONAL EVALUATION IS *HIGH* PRIORITY

enclosures: chloride graph, photos, lab results, PID screenings, plan-view, BTEX table

CHLORIDE FIELD TESTS

LOCATION	DEPTH (ft)	ppm
vertical at junction box	7	202
	8	289
	9	260
	10	318
	11	434
	12	405
	13	550
	14	724
	15	608
	16	724
	17	898
	18	956

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

SITE SUPERVISOR Joe Gatts SIGNATURE not available COMPANY RICE Operating Company

Appendix B – Photo chronology.

Photograph 1 – Undisturbed junction box with boot.

Photograph 1 – Delineation and excavation.

Appendix B – Photo chronology (continued)

Photograph 2 – Floor of new concrete junction box.

Photograph 3 – Reseeding around new junction box.