1R - 427-180

WORKPLANS

Date:
6-11-10

IR427-180

Texerra

RECEIVED OCD

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Tel: 432-634-9257 E-mail: lpg@texerra.com

June 11th, 2010

2010 JUN 21 A 11: 00

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 N-18 Junction: UL N Sec 18 T 20S R 37E

Sent via E-mail & U.S. Certified Mail w/ Return Receipt No. 7007 0710 0003 0305 3873

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 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 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.

Background and Previous Work

The site is located approximately 3.7 miles south 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 30+/- feet in unconsolidated Tertiary alluvium of the Ogallala Formation.

ROC removed a wooden junction box at this location in August of 2004 as part of its facility maintenance and upgrade program. (See Figure 2: Rice Junction Box Disclosure Report). As the original wood junction box was removed soils were sampled using a backhoe, creating a 35 by 25 by 12 ft deep excavation (Figures 3 & 4). The excavated soils were blended and then backfilled into the excavation to a depth of 6 ft bgs where a one foot thick compacted clay barrier was installed (Figure 5). The remaining excavated soil material was backfilled into the excavation above the clay barrier to the existing ground surface (Figure 6). The disturbed surface was then seeded with a native vegetation mix (Figure 7).

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 removed and a clay barrier installed to impede the downward migration of chlorides.

Elevated soil chloride concentrations were found at depth 10 ft south and east of the former junction box (Figure 2). Insignificant concentrations (< 100 ppm) of gasoline (GRO) and diesel range organics (DRO) were encountered in the excavated soil and in the sidewalls and bottom of the excavation (Figure 2). Petroleum hydrocarbons were therefore ruled out as a potential constituent of concern.

ROC proposes additional investigative work to determine if there is the potential for groundwater degradation from residual soil chlorides, which are the constituent 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 soil 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

Copy: Rice Operating Company

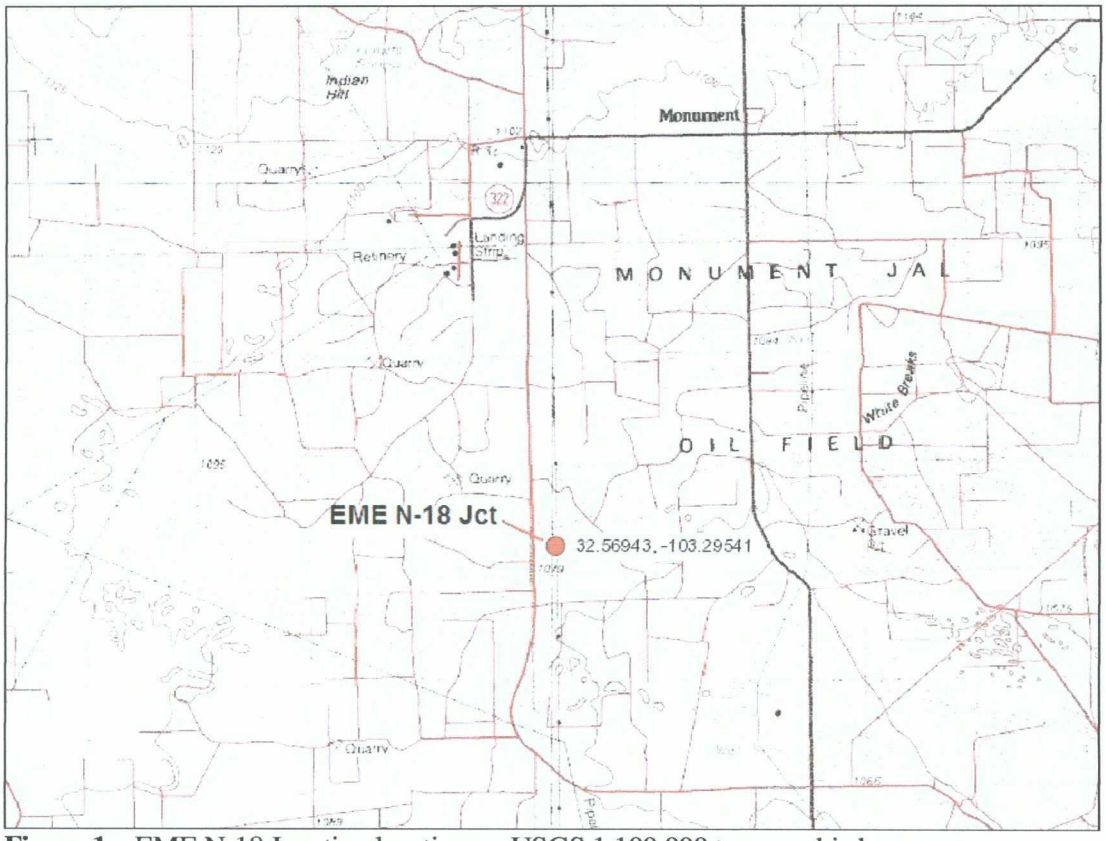

Figure 1 – EME N-18 Junction location on USGS 1:100,000 topographic base map

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

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
							Length	Width	Depth
EME	N-18	N	18	20S	37E	Lea	11	7	5

LAND TYPE: BLM _____ STATE _____ FEE LANDOWNER Jimmy T. Cooper OTHER _____

Depth to Groundwater 35 feet NMOCD SITE ASSESSMENT RANKING SCORE: 20

Date Started 8/9/2004 Date Completed 8/27/2004 OCD Witness No

Soil Excavated 389 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 8/23/2004 Sample Depth 12 ft

Procure 5-point composite sample of bottom and 4-point composite sample of excavation sidewalls. TPH and chloride laboratory test results completed by using an approved lab and testing procedures pursuant to NMOCD guidelines.

Sample Location	PID ppm	GRO mg/kg	DRO mg/kg	Chloride mg/kg
4-WALL COMP.	0.0	<10.0	<10.0	255
BOTTOM COMP.	0.0	<10.0	<10.0	425
REMED. BACKFILL	0.0	<10.0	<10.0	404

CHLORIDE FIELD TESTS

LOCATION	DEPTH (ft)	ppm
vertical at junction	6	359
	7	330
	8	420
	9	230
	10	300
	11	360
	12	509
10 ft south of junction	6	210
	7	269
	8	332
	9	990
	10	1050
	11	1620
	12	1560
10 ft east of junction	6	750
	8	1019
	10	1689
	12	1169
4-wall comp.	n/a	390
bottom comp.	12	509
remed. backfill	n/a	269

General Description of Remedial Action: This junction box site was delineated using a backhoe while PID field screenings and chloride field tests were conducted at regular intervals. All PID readings were relatively low and lab results confirmed TPH concentrations well below NMOCD guidelines. Although chloride concentrations declined laterally throughout the 35 x 25 x 12-ft-deep excavation, chloride concentrations did not decline with depth in some areas. The excavated soil was blended on site and backfilled into the excavation up to 6 ft BGS. At 6 ft, a 1-ft-thick compacted clay barrier was installed to inhibit further downward migration of chloride. The remained soils were backfilled on top of the clay. A new watertight junction box was built over this location. On 10/18/2004, the disturbed surface was seeded with a blend of native vegetation and is expected to return to productive capacity at a normal rate. A identification plate has been placed on the surface for future environmental considerations and to mark the presence of clay below. NMOCD has been notified of potential groundwater impact.

ADDITIONAL EVALUATION IS HIGH PRIORITY

enclosures: chloride graphs, photos, lab results, PID field screenings, clay test, diagram

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

SITE SUPERVISOR Rob Elam SIGNATURE not available COMPANY Curt's Environmental--Odessa, TX

REPORT ASSEMBLED BY Kristin Farris Pope SIGNATURE Kristin Farris Pope

DATE 5/27/2005 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 N-18 Junction Box Disclosure Report

Figure 3 – Initial excavation during replacement of junction box at EME N-18.

Figure 4 – Excavation of former junction box at EME N-18.

Figure 5 – Installation of subsurface clay barrier at EME N-18 Jct.

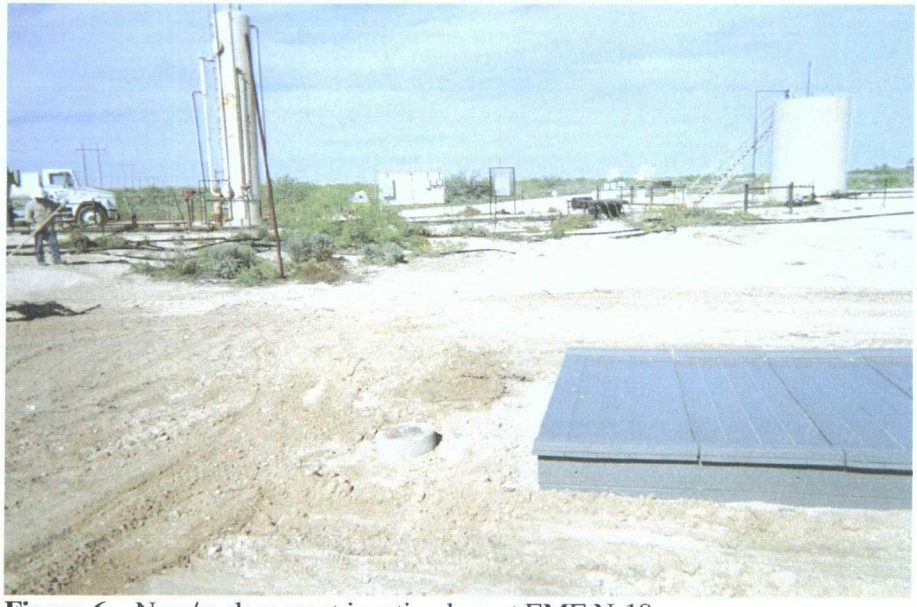

Figure 6 – New/replacement junction box at EME N-18.

Figure 7 – Seed of surface w/ native vegetation mix at EME N-19 Junction.