1R - 426-214

WORKPLANS

Date:

11-2-11

TETRA TECH

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November 2, 2010

Mr. Edward Hansen
New Mexico Energy, Minerals, & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

RE: **NOTIFICATION OF GROUNDWATER IMPACT**
BLINEBRY DRINKARD (BD) F-26 VENT (1R426-214)
UNIT "F", SEC. 26, T21S, R37E
LEA COUNTY, NEW MEXICO

Mr. Hansen:

Tetra Tech, Inc. (Tetra Tech) on behalf of RICE Operating Company (ROC) notifies the New Mexico Oil Conservation Division (NMOCD), Environmental Bureau of groundwater impact at the above-referenced site in accordance with Part 30. The site location is shown on Figures 1 and 2.

As part of the ROC Junction Box Upgrade Workplan, starting on January 22, 2008, the junction box was eliminated during the pipeline replacement/upgrade program. The former junction box site was excavated to dimensions of 30 feet by 15 feet by 12 feet deep with a backhoe. PID readings and chloride field tests were conducted at regular intervals. Based on the field PID readings, TPH did not exhibit a decrease with depth. Chloride concentrations increased with depth and ranged from 1,431 milligrams per kilograms (mg/kg) at 4 feet below ground surface (bgs) to 3,149 mg/kg at 12 feet bgs. A four point composite sample for the walls was collected and submitted for analysis of TPH and chlorides. Analytical results showed a TPH total GRO/DRO of 963 mg/kg, while the chloride concentration was 768 mg/kg. A five point bottom composite sample was collected and submitted for analysis of BTEX, TPH, and chlorides. Analytical results showed a benzene concentration of <0.020 mg/kg, while the total BTEX was 3.002 mg/kg. The TPH concentration was 807.9 mg/kg, while chlorides were 368 mg/kg. No water wells were located within Section 26 which contains the site. However, one water well, located in adjacent Section 27, has groundwater at approximately 76 feet bgs.

Upon completion of the excavation, the soils were blended and placed back into the excavation. The excavation was then brought up to surface grade. On February 1, 2008, the site was seeded with a blend of native vegetation. On August 18, 2008, an

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email was submitted to the NMOCD informing of a potential groundwater impact to the site. In March 2009, ROC submitted a Junction Box Disclosure Report to the NMOCD with all the 2008 junction box closure and disclosure reports.

An Investigation and Characterization Plan (ICP) was prepared by Tetra Tech and submitted to the NMOCD on October 1, 2009. Upon approval from the NMOCD, ROC was onsite March 22, 2010, to drill three soil borings and install one monitor well in and around the vicinity of the former junction box. Field analysis indicate the site has elevated PID readings in soil boring SB-1 located in the former junction box to a depth of 25 feet below ground surface (bgs). The remainder of the borings had negligible readings on the PID. In addition, field analysis for chlorides were performed on the three soil borings with results indicating the chlorides were only elevated in soil boring SB-2 from the surface to the terminus of the boring at 40 feet bgs. As a result of the elevated chlorides in SB-2, a decision was made to install one monitor well (MW-1) approximately 57 feet southeast of the original junction box. See Appendix A for soil boring/monitor well logs. Groundwater was encountered at an approximate depth of 45 feet bgs and the monitor well was completed at a total depth of 57 feet bgs. See Figure 3 for boring/monitor well locations.

The monitor well was developed utilizing an electric submersible pump to remove the fine grained sediment disturbed during drilling to ensure collection of representative groundwater samples. The wells were then sampled pursuant to NMOCD guidelines with collected samples submitted to Cardinal Labs of Hobbs, NM for analysis of Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) by EPA method 8021B, chlorides by EPA method 4500-CL-B, sulfates by EPA method 375.4, and TDS by EPA method 160.1. Analytical results indicate the groundwater has been impacted with chlorides ranging from 975 milligrams per liter (mg/L) to 1,060 mg/L with TDS results ranging from 2,290 mg/L to 2,420 mg/L. Sulfates were negligible while no BTEX was detected in the groundwater samples. See attached Table 1 for analysis.

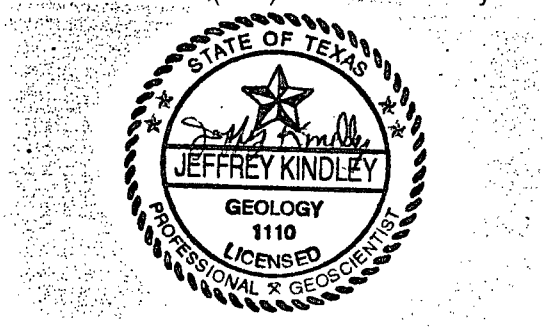
With the impact of chlorides to monitor well MW-1, ROC proposes to install an up gradient monitor well (MW-2) at the site. Additional monitoring wells may be required to further delineate groundwater quality in the area. The additional monitor well(s) will be constructed according to EPA and industry standards and developed either by bailing with a rig or hand bailer, or pumping with an electric submersible pump to remove fine grained sediment disturbed during drilling and to ensure collection of representative groundwater samples.

Upon completion of the additional monitor well(s), it will be properly purged and sampled. Groundwater samples will be submitted to a laboratory for analysis of Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) by method EPA 8021B, and chloride by method 4500-Cl-B.

ROC is the service provider (agent) for the BD SWD System and has no ownership of any portion of the pipeline, well or facility. The BD SWD System is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis. In general, project funding is not forthcoming until NMOCD approves the work plan. Therefore, your timely review of this submission is requested.

TETRA TECH

Please accept this request for an additional monitor well and as notification of groundwater impact to the above reference site. Should you have any questions or concerns regarding this site, please do not hesitate to contact either Hack Conder of ROC at (575) 393-9174 or myself at (432) 682-4559.

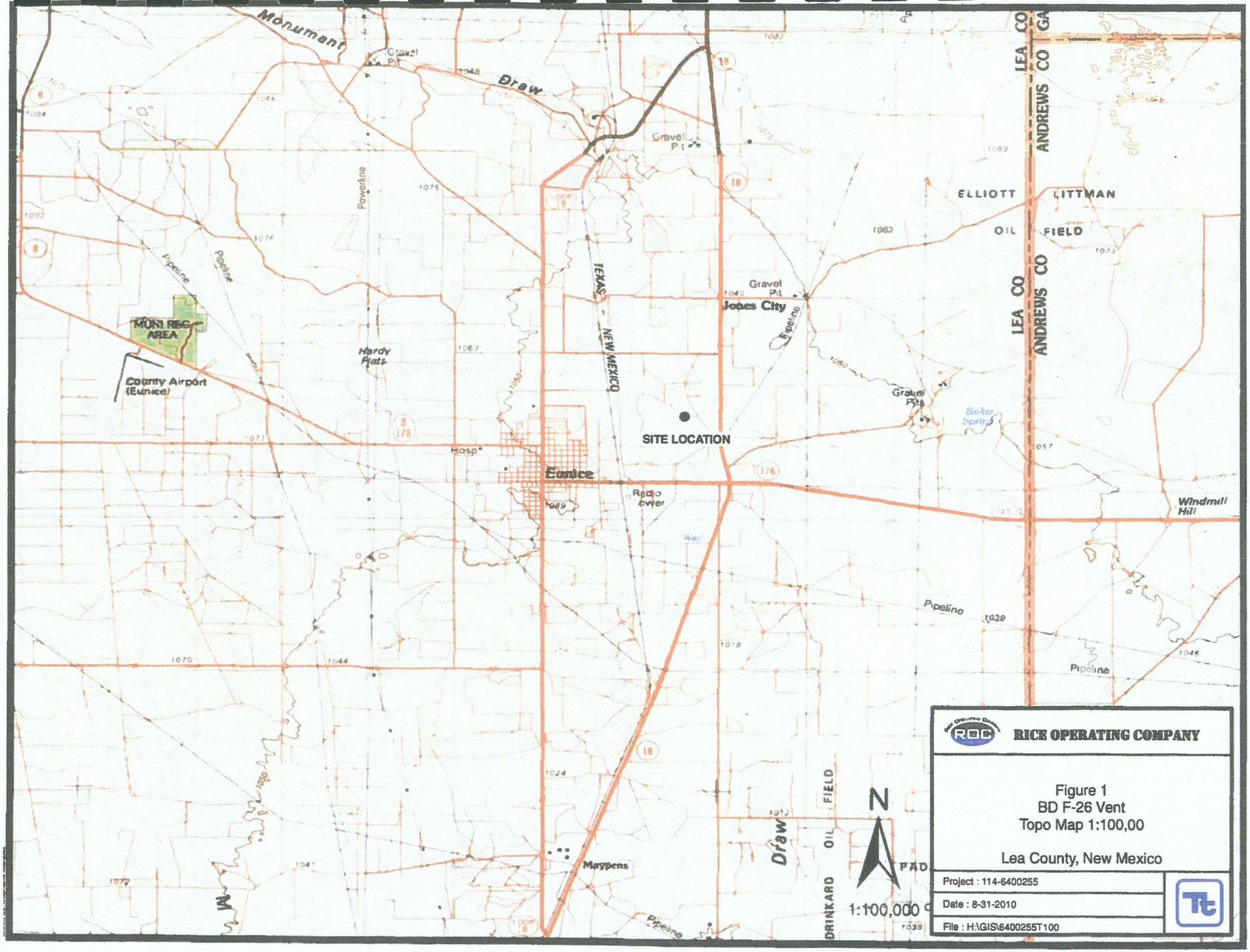


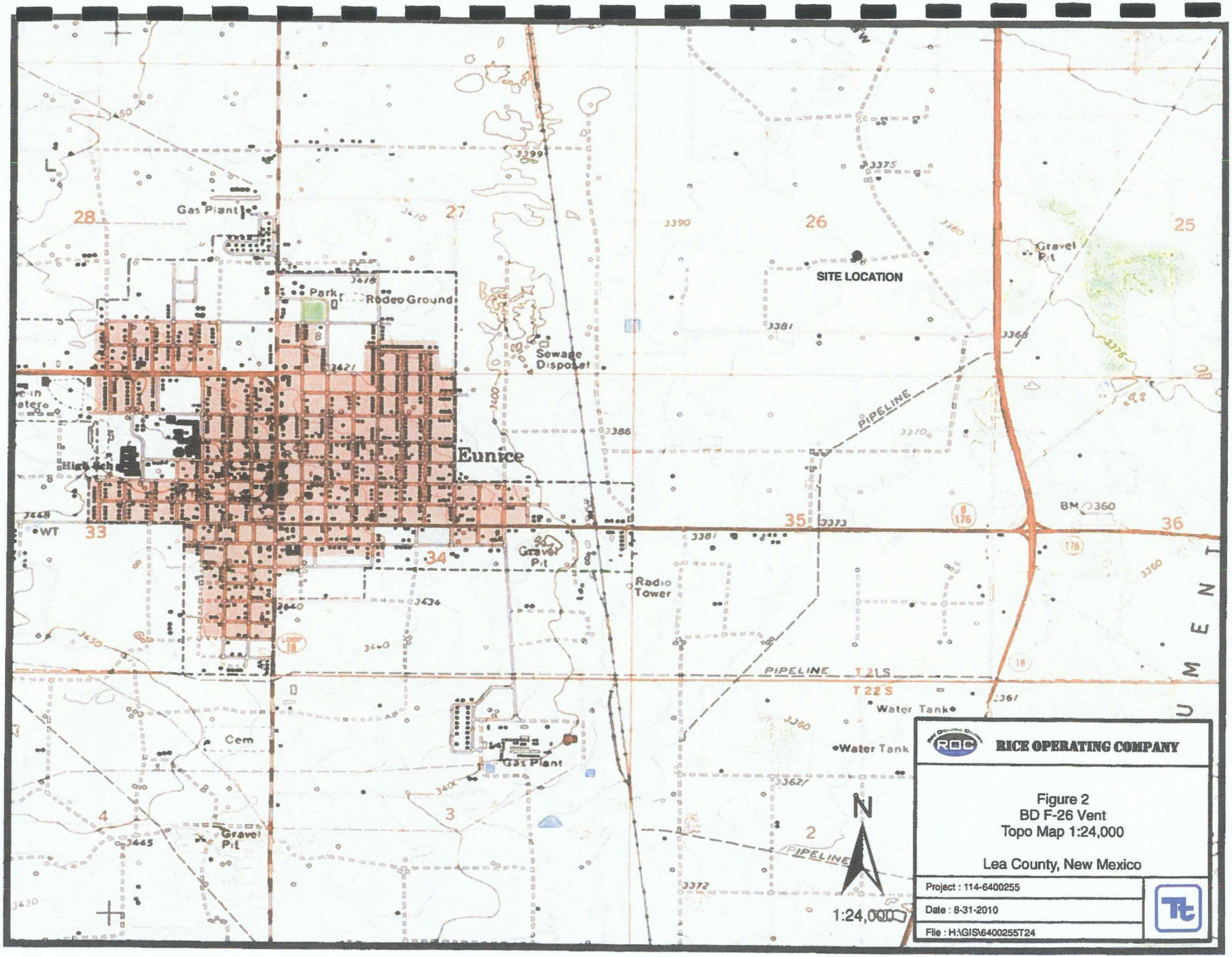
Tetra Tech, Inc.

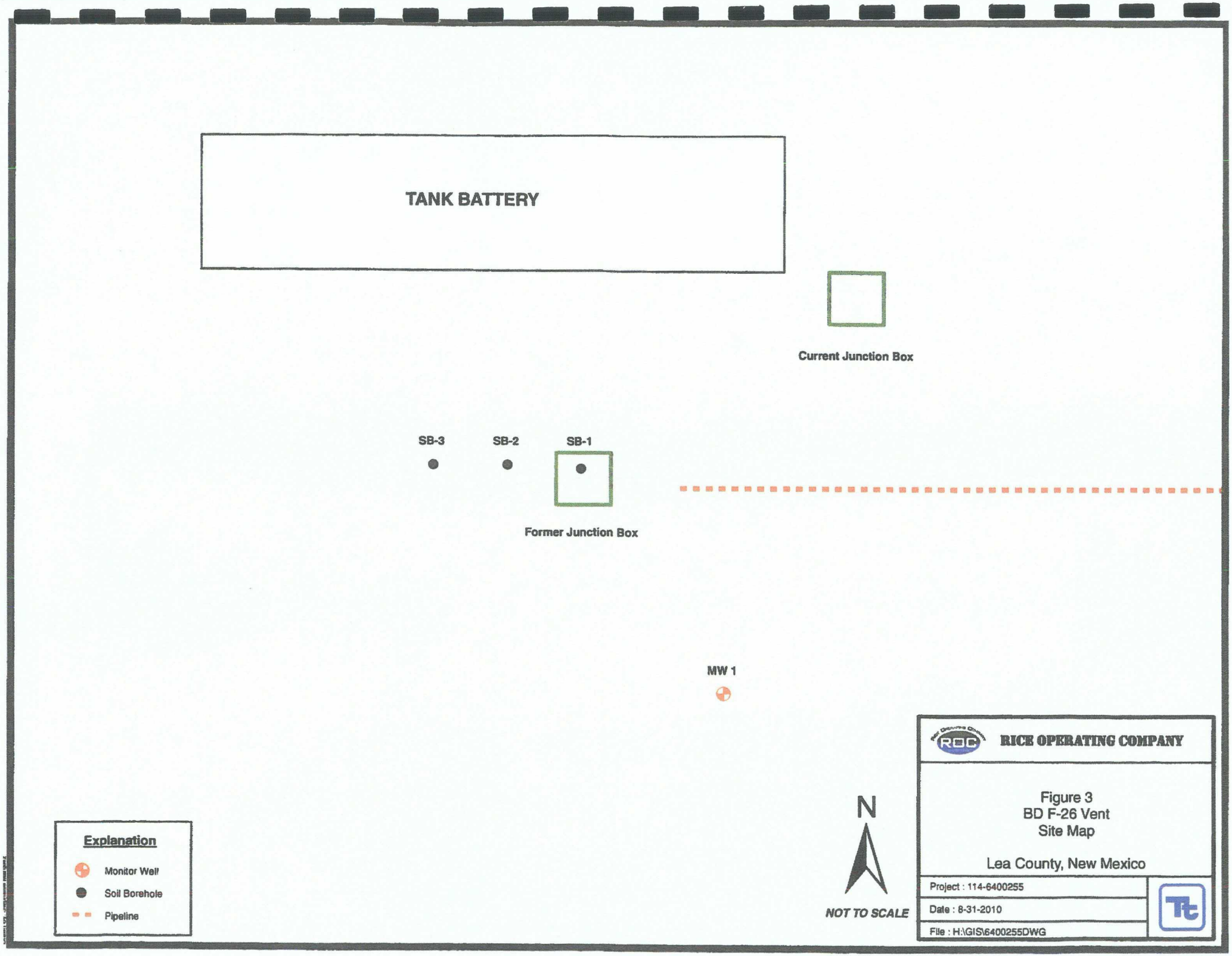
Jeffrey Kindley, P.G.
Senior Environmental Geologist

cc: ROC – Hack Conder

enclosures: Figures, Table


Monument Draw
Gravel Pit
Powerline
Pipeline
MUNI REC AREA
County Airport (Eunice)
Hardy Flats
TEXAS
NEW MEXICO
Hosp
Eunice
Radio Tower
SITE LOCATION
Jones City
Gravel Pit
ELLIOTT OIL FIELD
LITTMAN OIL FIELD
LEA CO
ANDREWS CO
Baker Spring
Windmill Hill
Pipeline
Maypens
Draw
DRINKARD OIL FIELD
PAD
N
1:100,000
RICE OPERATING COMPANY
Figure 1
BD F-26 Vent
Topo Map 1:100,00
Lea County, New Mexico
Project : 114-6400255
Date : 8-31-2010
File : H:\GIS\6400255T100


SITE LOCATION
Eunice
Gas Plant
Park
Rodeo Ground
Sewage Disposal
Gravel Pit
PIPELINE
Radio Tower
Water Tank
Cem
BM 3360
T 22 S
28
27
26
25
33
34
35
36
4
3
2
N
1:24,000
RICE OPERATING COMPANY
Figure 2
BD F-26 Vent
Topo Map 1:24,000
Lea County, New Mexico
Project : 114-6400255
Date : 8-31-2010
File : H:\GIS\6400255T24


TANK BATTERY
Current Junction Box
SB-3
SB-2
SB-1
Former Junction Box
MW 1
Explanation
Monitor Well
Soil Borehole
Pipeline
N
NOT TO SCALE
RICE OPERATING COMPANY
Figure 3
BD F-26 Vent
Site Map
Lea County, New Mexico
Project : 114-6400255
Date : 8-31-2010
File : H:\GIS\6400255DWG

Rice Operating Company
BD F-26 Vent
Lea County, New Mexico

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	49.41	59.10	1.60	8.0	04/20/10	1,060	2,290	<0.001	<0.001	<0.001	<0.003	197	Clear no odor
1	45.46	59.10	2.20	8.0	07/26/10	975	2,420	<0.001	<0.001	<0.001	<0.003	138	Clear no odor
1													

Graph 1
Rice Operating Company
MW-1
BD F-26 Vent
Lea County, New Mexico