1R - 425-03

Annual GW Mon. REPORTS

DATE:

2007

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

RECEIVED
2008 MAR 17 PM 1 31

March 7th, 2008

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: **Annual Report**
Rice Operating Company –Vacuum SWD System
UL K Sec 35 T17S R35E
K-35-1 Boot. OCD Case Number 1R0425-03

Sent via E-mail and U.S. Certified Mail: Return Receipt No. 7007 0710 0003 0305 3699

Dear Mr. Hansen:

This letter summarizes the results of investigative work completed by Texerra and Rice Operating Company over the course of the past year, in accordance with the Investigation and Characterization Plan and the subsequent Corrective Action Plan, both of which were approved by NMOCD. This work evaluated the potential for groundwater contamination stemming from the operation of a former junction box, which was removed in 2004. A site location map is given in Figure 1.

Soils in the vicinity of the former junction box were found to be impacted by chlorides, averaging 1,929 ppm over the affected area; (Figure 2). Field PID analysis of soil hydrocarbons were below detection except below the former junction box, where a maximum reading of 68 ppm was measured 10 ft below the surface.

Elevated levels of chlorides were recently measured (January 18th, 2008) in the groundwater beneath the former junction box (4,550 ppm in MW-4) and approximately 30 ft northeast (1,300 ppm in MW-1). Similarly elevated levels were observed in February of 2007; (Figures 3 & 4).

Pilot-scale withdrawal of groundwater from the at-source well (MW-4) was conducted in April and May of 2007, where a total of approximately 240 gallons of water were removed. The removal of this limited amount of water did not demonstrably affect groundwater chloride levels either in the at-source well (MW-4) or near-source, down-gradient well (MW-1). It is likely that substantially more groundwater will need to be removed to significantly reduce groundwater chloride mass, presumably to the desorbtion of chlorides from the aquifer matrix and capillary fringe below the former junction box.

Rice therefore plans to install a near-source (approx. 30 to 50 ft down-gradient, near SB-2 in Figure 4) 4-inch diameter recovery well and operate a continuous flow pump and storage system, similar to the one presently operating at the Vacuum N-6-1 location. Rice will operate this system for a sufficient period of time to determine if the additional flow capacity provided by this system will serve to effectively attenuate groundwater chloride levels, and report the results to NMOCD.

Please contact either myself or Kristin Pope of Rice Operating Company, if you have any questions or would like to discuss any aspect of this project.

Thank you.

Sincerely,

L. Peter Galusky, Jr. Ph.D.
Principal

Encl: Site maps, soil and groundwater data

Figure 1 – Vacuum K-35-1 site location.

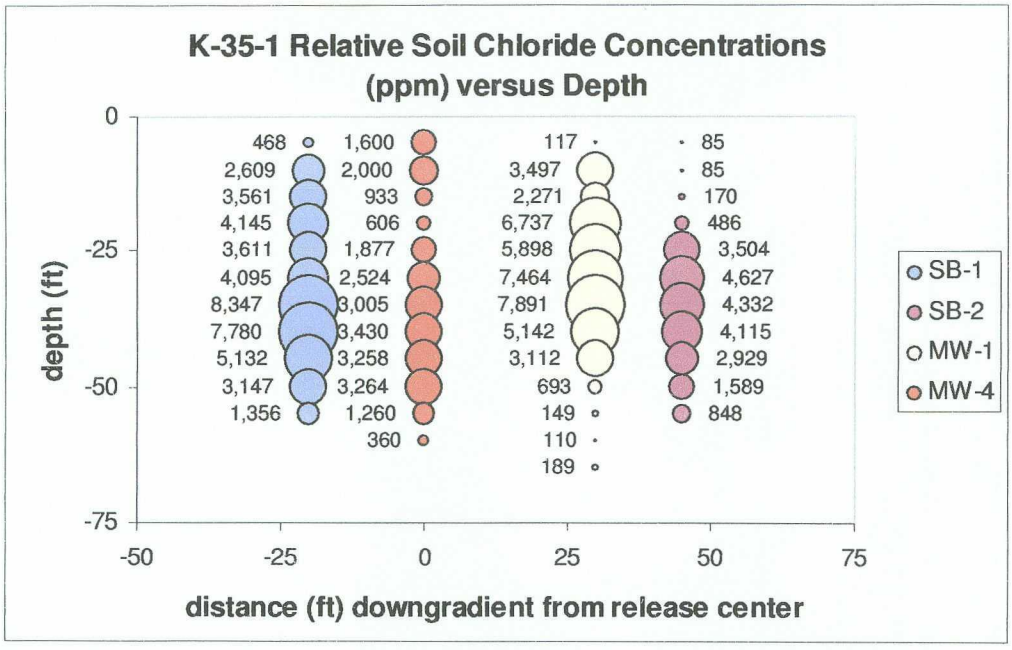

Figure 2 – Soil chloride concentrations measured in June, 2006. The average soil chloride concentration of the affected area was 1,929 ppm.

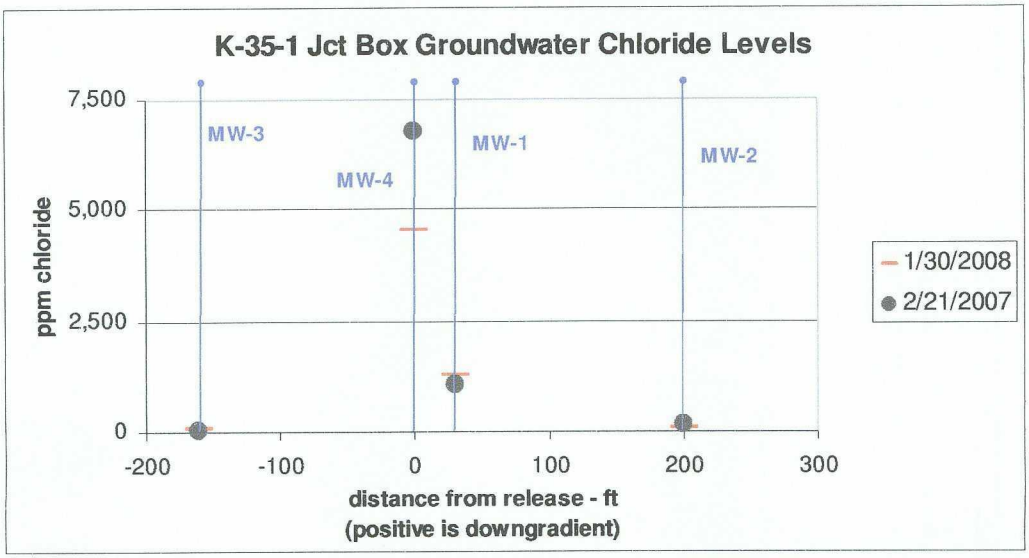

Figure 3 – Vacuum K-35-1. Snapshot of monitor well chloride concentrations, 1st quarters of 2007 and 2008.

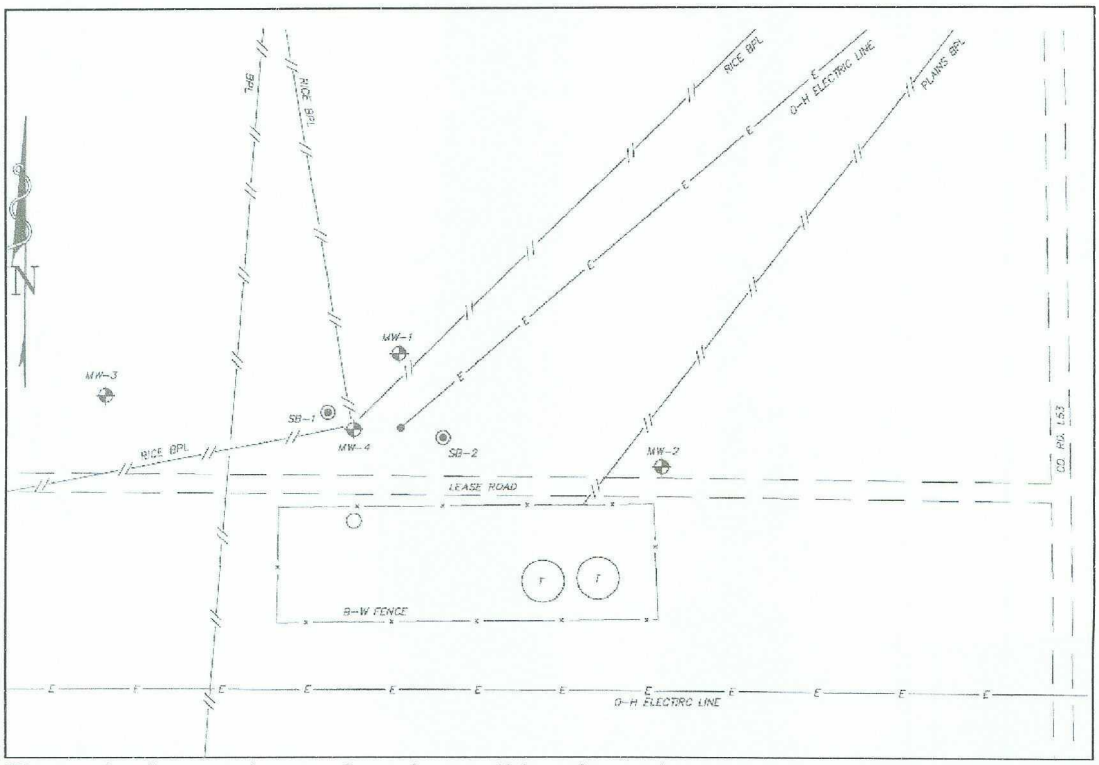

Figure 4 – Surveyed map of monitor well locations. Approx. scale: 1 inch = 100 ft. A 4-inch diameter recovery well will be installed near the location of SB-2.