1R - 425-01

Annual GW Mon. REPORTS

DATE:

2007

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

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
Vacuum E-2 Junction Box, Unit E Sec 2 T18S R35E
OCD Case Number 1R0425-01

Sent via E-mail and U.S. Certified Mail: Return Receipt No. 7007 0710 0003 0305 3675

Dear Mr. Hansen:

This letter summarizes the results of investigative work which was completed by Texerra from June, 2006 to the present, in accordance with the Investigation and Characterization Plan and a 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 replaced 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 to a relatively low degree by chlorides, averaging approximately 625 ppm over the affected area (Figure 2). There were no hydrocarbons revealed by field organic vapor analysis.

Groundwater chloride concentrations in a near-source monitor well had moderately elevated levels over the past several quarters, most recently measuring 690 ppm. Groundwater from up-gradient and down-gradient wells has exhibited chloride concentrations less then 50 ppm; (Figures 3a & 3b). Rice no longer proposes to attenuate groundwater chloride mass at this site through groundwater extraction, but will propose a path forward in a forthcoming "Monitoring Plan". This Monitoring Plan will supercede the presently operative Corrective Action Plan.

Sincerely,

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

Encl: Site maps, soil and groundwater data

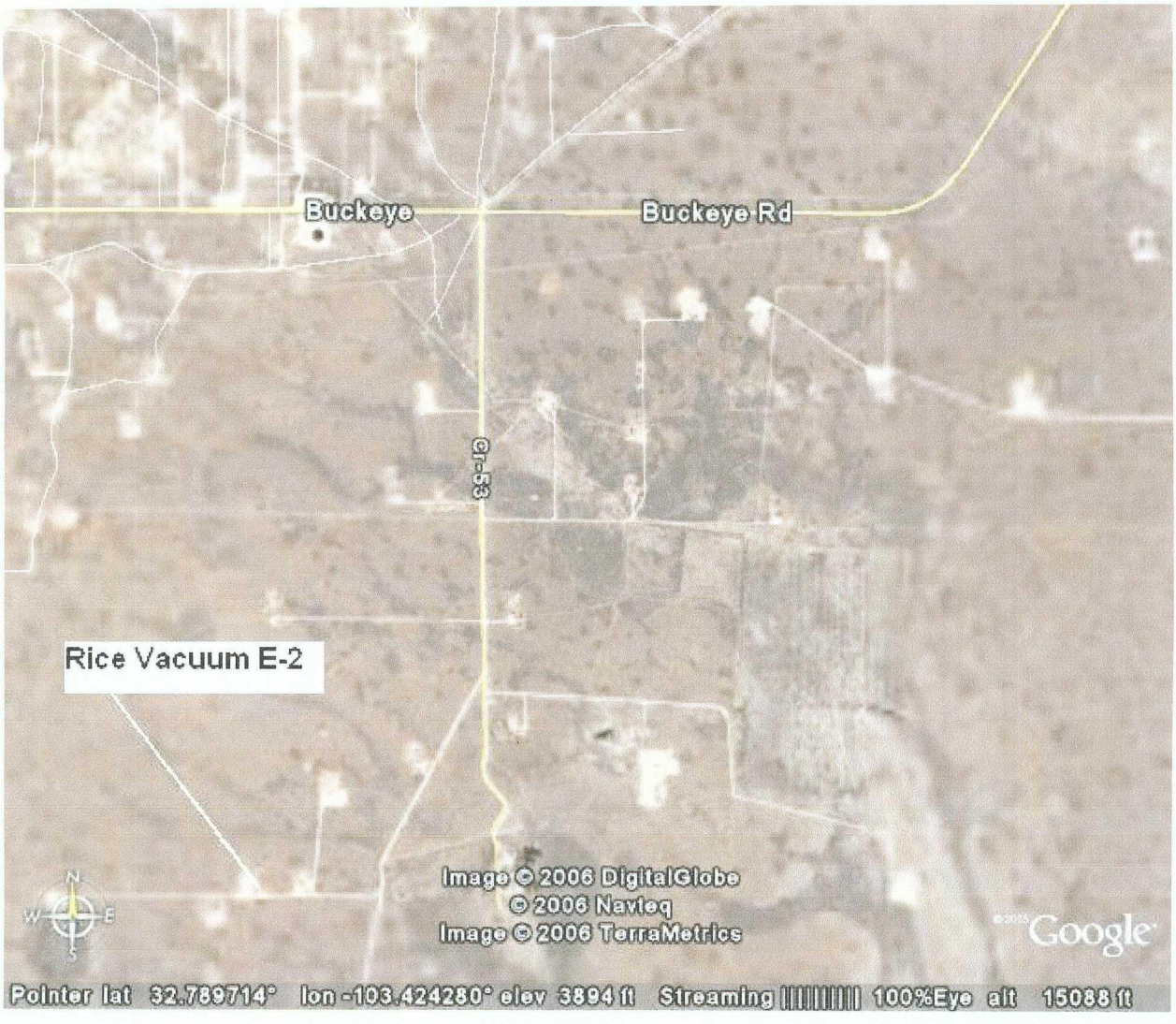

Figure 1 – Vacuum E-2 site location.

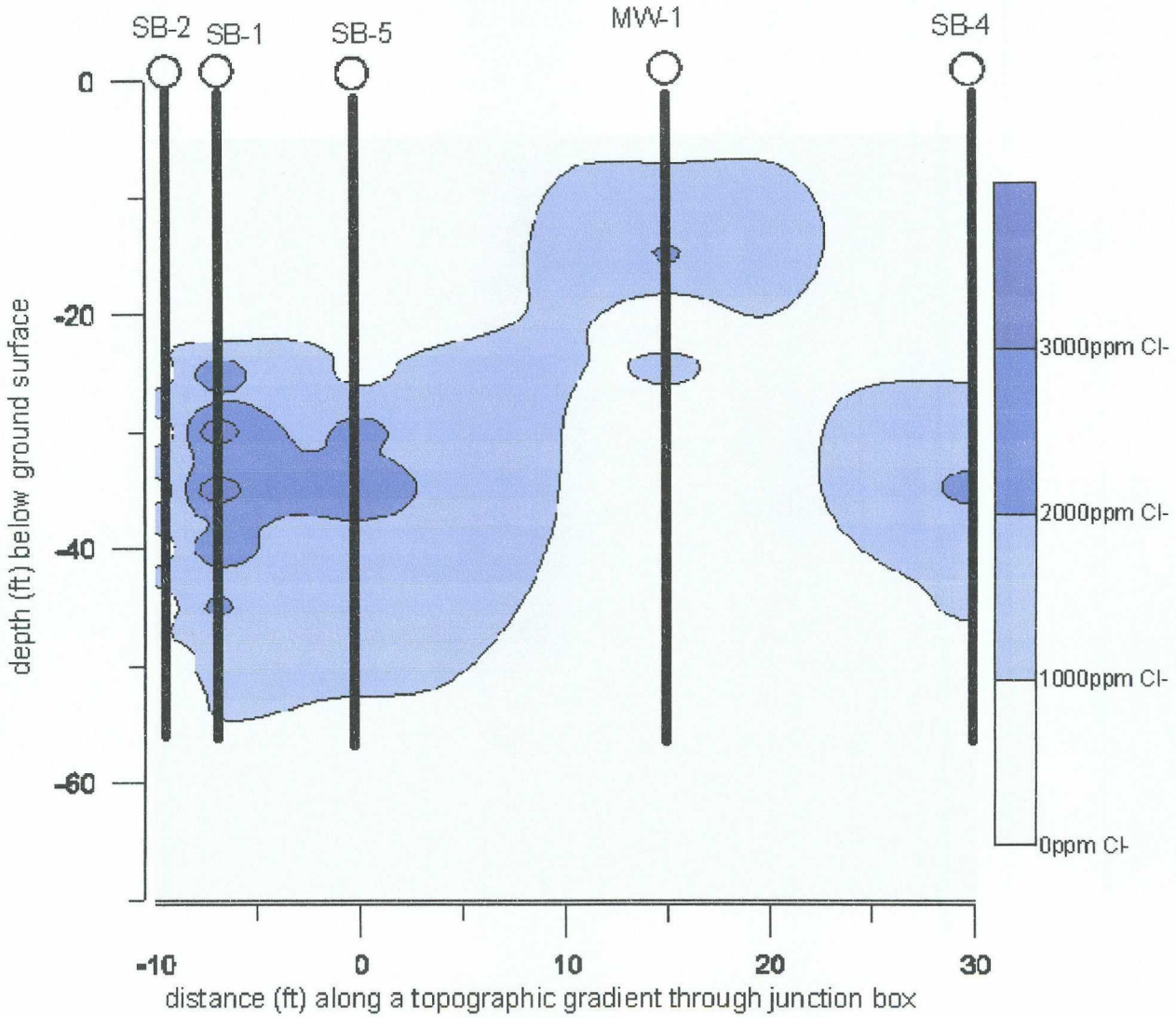

Figure 2 – Interpolated soil chloride concentrations (mg/kg). *The approximate **average soil chloride concentration** throughout the affected area is **625 mg/kg**.*

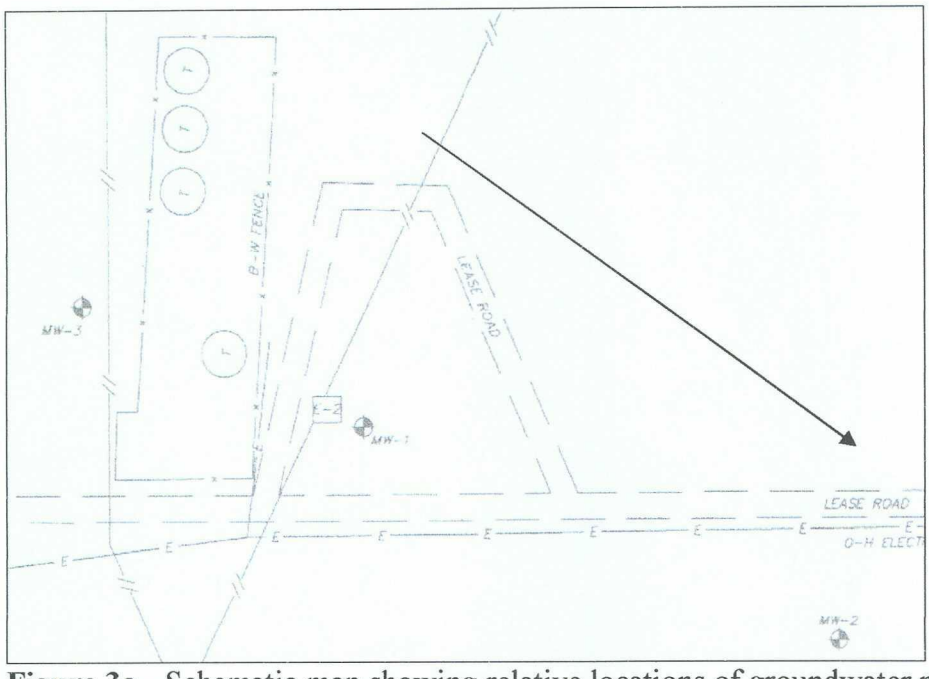

Figure 3a - Schematic map showing relative locations of groundwater monitor wells. MW-1 is the "near-source" well. The direction of groundwater flow is given by the black arrow. North is "up".

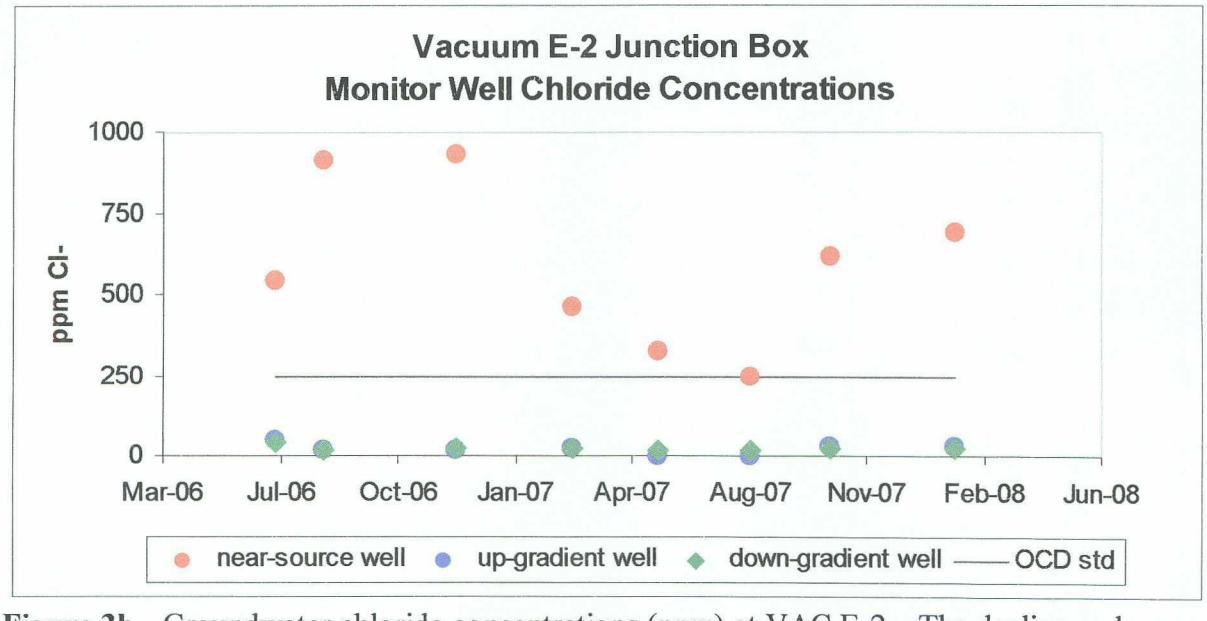

Figure 3b - Groundwater chloride concentrations (ppm) at VAC E-2. The decline and subsequent recovery of chloride concentration in the near-source well is likely reflects dilution from groundwater recharge from January through September, 2007, which experienced above-normal precipitation.