

1R - 425-03

Annual GW Mon. REPORTS

DATE:

2010

Texerra

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March 30th, 2011

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 K-35-1 Boot, UL K, Sec 35, T17S, R35E
OCD Case Number 1R0425-03

Sent via E-mail and U.S. Certified Mail: No. 7006 0100 0001 2438 4101

Mr. Hansen:

This letter summarizes progress made for this project over the past calendar year pursuant to the NMOCD approved Corrective Action Plan for this site. Location and site schematic maps are given in Figures 1 and 2, respectively. In brief:

- Approximately 14,779 barrels of chloride affected groundwater have been withdrawn from a near-source recovery well (RW-1) over the period June 2008 through December 2010 (Figure 3). A portion of this water has been treated on-site using reverse osmosis and used for site irrigation. The balance has been used for Rice SWD line and well maintenance purposes.
- Groundwater chloride concentrations in the at-source monitor well (MW-4) have declined from approximately 6,770 ppm in February 2007 to 520 ppm by October of 2010 (Figure 4).
- The ground surface has been effectively restored to native vegetation (Figures 5 and 6).

It appears that we are approaching a point of diminishing returns with respect to the chloride concentration (and thus mass removed) from the recovery well and the change in chloride concentrations in groundwater sampled from the affected wells (MW-1 & MW-4). As such, we plan to continue groundwater withdrawal during 2011 and to propose a path forward or a termination request after we have compiled and analyzed this additional data.

VAC K-35-1

ROC is the service provider (agent) for the Vacuum Salt Water Disposal System and has no ownership of any portion of pipeline, well or facility. The Vacuum SWD System is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis.

Please do not hesitate to contact either myself or Rice Operating Company if you have any questions or need additional information.

Sincerely,

A handwritten signature in black ink, appearing to be 'L. Peter Galusky, Jr.', written in a cursive style.

L. Peter Galusky, Jr. Ph.D.

Copy: Rice Operating Company

VAC K-35-1



Figure 1 – Vac K-35-1 location.

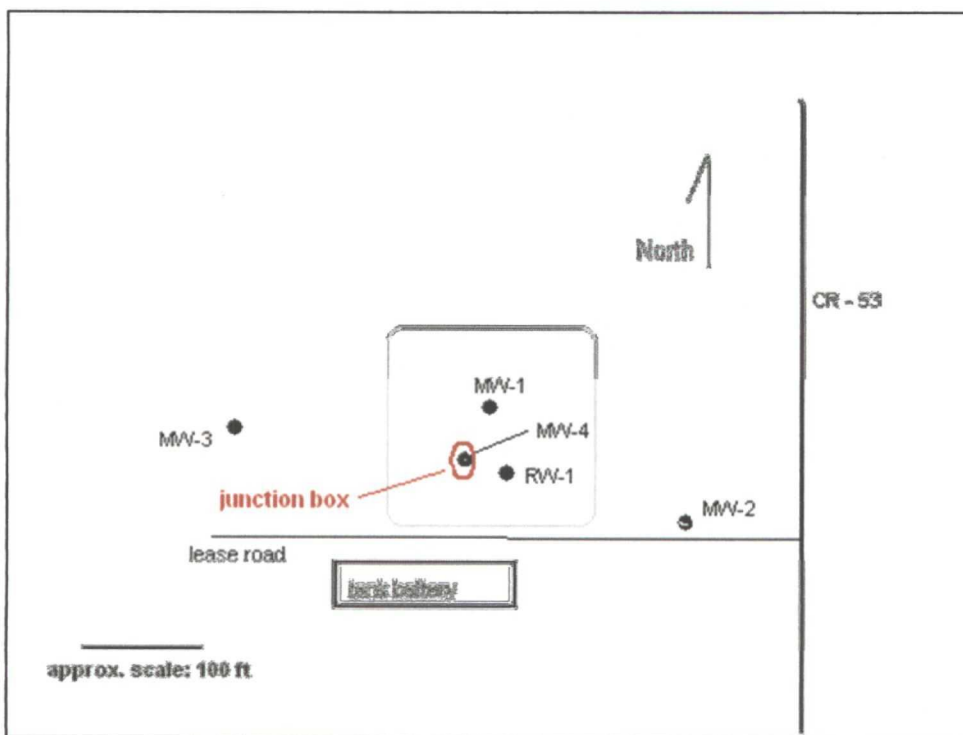


Figure 2 – Vac K-35-1 approx. monitor/recovery well locations.



Figure 3 – Vac K-35-1 solar-powered groundwater recovery system.

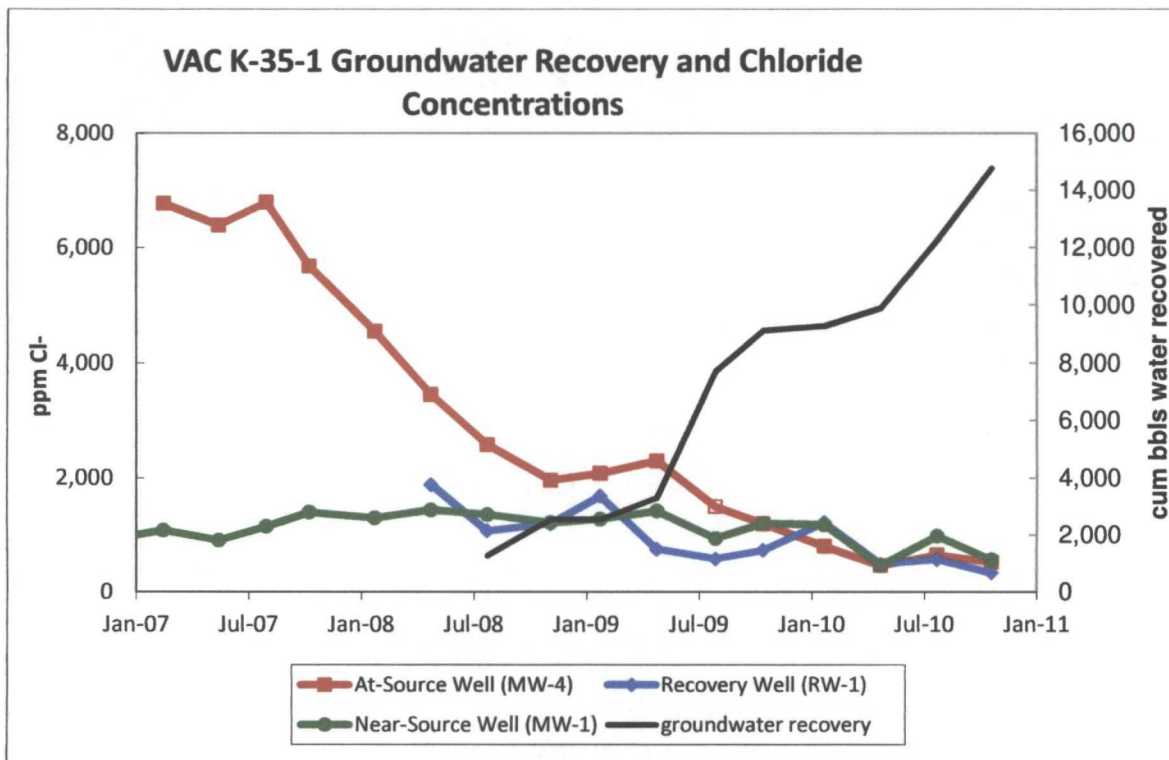


Figure 4 – Cumulative groundwater withdrawal (right axis) and groundwater chloride concentrations at VAC K-35-1.



Figure 5 – Vac K-35-1 view south across affected surface before restoration efforts, October 2006.



Figure 6 – Vac K-35-1 view south across affected surface following surface restoration, January 2011.