

Phoenix Chvironmental LLC

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January 14, 2005

Kevin O Butler & Associates PO Drawer 2436 Midland, Texas 79702

Attn: Mr. Bill Robinson Vice President E & P

RE: Remediation Work Plan for the South Caprock Queen Unit Battery Spill Located in the NW/SW Sec. 33, T14S, R31E of Lea Co., New Mexico

Dear Mr. Robinson:

Phoenix Environmental, LLC (Phoenix) would like to take this time to thank you and Kevin O Butler & Associates for the opportunity to provide our professional services on the site remediation of the above listed site.

If you have any questions and/or need more data in regards to this project please call at any time.

Sincerely,

Allen Hodge, REM Sr. Project Manager Phoenix Environmental LLC

Cc: Mr. Kevin Butler



Summary/Overview

The South Caprock Queen Battery spill site should be completed and remediated in accordance with the standards of the New Mexico Oil Conservation Division (NMOCD) guidelines for cleanup of leaks and spills. It is our understanding that any potential contamination from the site was a result of activities associated with the production of oil and gas.

The potential contaminates of concern are mid to high-level concentrations of petroleum-based hydrocarbons and produced water that were lost due to leaks from the Battery and were absorbed by the surrounding near-surface soils.

The NMOCD regulates the remediation and disposal of non-domestic wastes resulting from the Oil and Gas industry. In addition, the NMOCD administers all Water Quality Act regulations pertaining to surface and ground water except sewage for the oil and gas industry. This authority includes the disposition of non-domestic, non-hazardous wastes at Oil and Gas facilities.

The South Caprock Queen Battery site is located in NW/SW of Sec. 33, T14S, and R31E in Lea County New Mexico. The site had a GPS reading of 33° 03' 35" N and 103° 50' 03" W with an elevation of 4,436' ASL. The lands primary use is domestic pasture for ranching and the production of oil and gas.

The ground water depth data available for this section from the state engineer's office showed the depth to ground water to be in the 220' range.

Pursuant to the standards of the NMOCD guidelines for clean up of leaks and spills, the clean up level for this site will be at <100ppm of TPH and ND for BTEX. The NMOCD has also asked that the chlorides be less than 250ppm for clean up. This is due to the fact that the spill ran off the caprock and down an arroyo for an estimated 2,000 feet.

On 12-8-04 Mr. Allen Hodge from Phoenix and Mr. Paul Sheeley with the NMOCD met on location to look at the spill area. The purpose of this meeting was to discus possible work plan options due to the poor site access from the caprock and arroyo.

- 1. The impacted soils located at the battery on top of the cap would be push up and mix with clean caliche and use for berm material around battery for secondary containment.
- 2. The impacted soils that can be accessed from the spill that went off the cap and down the arroyo would be picked up with a backhoe and trucked



back on top and mixed with clean caliche and used for berm material and secondary containment.

- 3. The areas of the arroyo that can be accessed with the backhoe but not trucks would be mixed in place adding some fertilizer to enhance natural attenuation of the impacted soils.
- 4. The areas of the arroyo that can not be accessed would be tested to define what will be left in place due to no access.

The following scope of work that has been requested for the listed site was based on data from our site visit on 12-8-04 and the requirements of the MNOCD for site clean up.

Scope of work

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- 1. First Phoenix will call New Mexico One-Call for line spot clearance before any excavation at the site.
- 2. Phoenix will mobilize to the site equipment and personnel necessary to start and complete the site remediation as required, getting the site back into regulatory compliance.
- 3. Impacted soils at the site would be addressed in the following ways.
 - The impacted soils located at the battery on top of the cap would be push up and mix with clean caliche and use for berm material around battery for secondary containment
 - The impacted soils that can be accessed from the spill that went off the cap and down the arroyo would be picked up with a backhoe and trucked back on top and mixed with clean caliche and used for berm material and secondary containment
 - The areas of the arroyo that can be accessed with the backhoe but not trucks would be mixed in place adding some fertilizer to enhance natural attenuation of the impacted soils.
 - The areas of the arroyo that can not be accessed would be tested to define what will be left in place due to no access.



- 4. Phoenix will field screen the site during the excavation and once the TPH and CL has dropped below clean up requirements final samples will be taken and sent to a third party lab for analysis.
- 5. Once all of the remediation criteria have been met for site closure and regulatory compliance, the site will be contoured to prevent the ponding of any water.
- 6. Once all of the closure criteria have been met, a final closure report will be prepared by Phoenix. This report will include a summary of remediation operations, findings on-site and lab analysis, site maps and project photos.

If you have any questions and/or need more data in regards to this project please call 505-631-8314 at any time.

Sincerely,

Allen Hodge, REM Sr. Project Manager Phoenix Environmental LLC

Cc: Mr. Kevin Butler Mr. Bill Robinson

