

**VETERANS ADMINISTRATION MEDICAL CENTER**  
*Albuquerque, New Mexico*

**Contaminant Assessment, Monitor Well Installation, and Closure Plan**

Alberto A. Gutiérrez served as principal in charge of this project while serving as President of GCL, predecessor to Geolex, Inc.

In response to a Notice of Violation and subsequent Compliance Order, GCL was retained to perform a contamination assessment, install monitor wells, and develop an environmentally sound closure plan for two solvent disposal pits.

The contamination assessment consisted of a phased program utilizing a portable gas chromatograph (GC) to determine where samples should be collected and the maximum depth of each soil boring. Because the GC was used to select samples for laboratory analyses, laboratory expenditures were greatly reduced. These data were then used to develop the final closure options.

GCL installed four deep (550-foot) Resource Conservation and Recovery Act (RCRA) monitor wells at the site. The regional hydraulic gradients, geology of the site, and water levels from other wells were used to minimize the number of drilling locations at the site. This was particularly difficult since a water supply well was located between the two solvent pits. Despite the depth to groundwater, GCL was able to provide cost-effective well installations by utilizing mud-rotary methods and geophysical logging. After completion and development of the wells, dedicated bladder pumps were installed to allow for quarterly sampling per the approved closure plan. During all phases of the contamination assessment and monitor well installation, a stringent health and safety program was employed to prevent personnel from being exposed to potential organic vapors.

As part of the closure, GCL removed contaminated soil and prepared permit documents. GCL provided technical support and was involved in extensive negotiations with the state regulatory agency to demonstrate that the monitor well construction design met the criteria of the Environmental Protection Agency (EPA) Technical Enforcement Guidance Document.

At this site, GCL also performed the first clean closure for a RCRA hazardous waste management unit in New Mexico. Closure was performed under an accelerated three-week schedule designed to meet the land ban deadline for pit disposal of liquid wastes. Due to the accelerated schedule, the state regulatory agency was involved in assessing the acceptable level of volatile organic compounds that could remain for "clean" closure. A portable GC was used to screen soils on-site and to select samples for confirmatory laboratory analyses. Field screening was also used to segregate soils and evaluate those requiring off-site disposal at a permitted facility. The screening process minimized the costs associated with off-site disposal.

**Major Project Elements:**

- Remedial design/ Remedial action
- RCRA
- Hazardous waste management
- Program/Project management/QAQC
- Health and safety/training
- Environmental data management
- Environmental risk assessments
- Regulatory compliance/ Permitting
- Air quality and emissions studies
- Hydrology/Hydrogeology

