# NEW MEXICO OIL CONSERVATION DIVISION GROUND WATER DISCHARGE PERMIT AMENDMENT / MODIFICATION

#### I. Type of operation

The facility operates as a soil remediation, recycling and landfarm facility.

#### II. Operator

Gandy Marley, Inc. Attn: Larry Gandy 1109 East Broadway P.O. Box 827 Tatum, New Mexico 88267 (505) 398-4960

#### III. Location of Landfarm

The facility is located in Southeastern New Mexico, southeast of Roswell. The facility is situated on privately owned land in Chaves County, New Mexico, in sections 4, 5, 8 and 9 of T11S, R31E.

This location is approximately 39 miles east of Roswell and approximately 33 miles northwest of Tatum. The site is approximately 2.5 miles south of US 380 and 4 miles west of state highway 172.

#### IV. Modification Request

This permit modification request proposes to use landfill-type cells for the disposal of oilfield waste including petroleum and chloride impacted debris, mud, soils, sludges, tankbottoms and filters associated with the drilling, operating and maintenance of oil and gas wells and related operations of the oil and gas industry. Cells will be constructed with a berm of no more than 10 feet and no less than 5 feet in height and no less than 8 feet in width at the top with a clay liner on the inside with a 3 to 1 slope. Excavation will be no more than 20 feet below ground level. Debris that may blow will be placed below ground level and be covered with sufficient soil to prevent blowing by the end of each workday. As a cell fills at one end, 2 feet of soil will be placed on top with a slight slope to prevent pooling of rainwater, but not steep enough to promote erosion.

We propose to build these cells in the same location as existing landfarm cells that have been remediated to the requirements of our existing permit to minimize surface disturbance.

# V. Land and Ownership

The facility is situated on privately-owned land all other adjacent lands are owned by Robert W. (Bill) Marley, one of the owners of this facility.

Case Nos. <u>13454 & 13455</u>

CRI Exhibit No. <u>5</u>

Hearing Date: March 25, 2005

# VI. Facility Description and Design

Proposed cell construction design is attached.

# VIII. Spill/Leak Prevention and REPORTING (Contingency Plans)

The proposed cells are contained within the perimeter of the existing landfarm. Additionally each cell will be surrounded with a berm having minimum height of 5 feet above ground level. Equipment and machinery which could be used in the event of any storm water runoff will be at the facility at all times. Should a leak or spill occur at the OCD facility, notification to the OCD would be made immediately in accordance with OCD Rule 116 and WQCC Section 120.

### IX. Inspecting, Maintenance and Reporting

The facility will be inspected on a regular basis and immediately following significant precipitation and/ or wind. Inspections will include examination of berms, fences and the remediation area. Perimeter and interior berms will be maintained to prevent erosion. General maintenance will be routinely performed. Any necessary repairs will be made immediately.

#### X. Closure Plan

Upon closure, and following notification to the OCD that operations have ceased, fresh soils will be used to cover the cells to a minimum depth of 2 feet and sloped in a manner that promotes drainage. Any additional requirements or conditions of the OCD will be met.

#### XI. Site Characteristics&Fresh Water Protection Demonstration

There are no drainages or water wells within one mile of the facility boundary. Approximately 34 mile southeast of the site there is a seep at the base of the Mescalero Rim. This seep is located topographically higher (200 feet) than the facility and is a result of seepage from an overlying aquifer (Ogallala Fm.) the water is collected by the rancher and distributed through underground pipes to stock tanks on the ranch property. There are three such stock tanks within one mile of the outside perimeter fence of the facility.

While there are no water wells within one mile of the facility, subsurface drilling has encountered groundwater saturation within Upper Triassic sediments. The depth to this groundwater is 150 feet. A sample of the groundwater was obtained from three drill holes. The samples were analyzed at Assaigai Analytical Laboratories in Albuquerque New Mexico. A copy of the analytical results is presented within this submittal. This groundwater flows eastward and is controlled by stratigraphic and structural features within the Triassic sediments.

This information was obtained from geologic data from a sub-surface drilling program conducted in the region in July 1994.

The surface geology consists entirely of Quaternary age alluvial deposits. This alluvium consists of fine yellow-brown sand and clays and contains abundant granitic and chert cobbles. This material was derived from the Tertiary age Ogallala Fm. Which is located topographically higher and east of the site. Thickness of the alluvial material varies from 5 to 25 feet thick.

Immediately underlying the alluvial deposits are Upper Triassic sediments. These sediments were deposited in a fluvial environment and consist of fine to very fine-grained sandstones, interbedded with siltstones and mudstones. The Upper Triassic sediments underlying the proposed site dip approximately one degree to the east. The thickness of these sediments varies from 25 to 150 feet. Groundwater saturation was encountered in sandstone lenses below depths of 150 feet.

The aquifer material consists of thin (10-30 feet), lenticular fine to very fine-grained sandstones. Due to the fluvial nature of these sands, individual sandstones lenses are discontinuous and difficult to correlate. The site consists of two soil types including Alma Loam and Franklin-Roswell Complex. These soils are typically well-drained with slopes of 0 to 15 percent.

Vegetation consists primarily of Tabossa, Bufffalo Grass, Vine-Mesquite, Cactus, Sand Dropseed, Little Bluestem, Sand Bluestem, Sandur, Three-Awn, Shinery Oak, Yucca and Sand Sagebrush. No rare or endangered plant species are located near the site or in the surrounding area.

The facility lies outside any 100-year floodplain boundary. The proposed site is in an area found on Federal Insurance Rate Map (FIRM) #3501250850. This map has not been printed because the National Flood Insurance Program has established that this is in an area of minimum flood hazards.

The perimeter berms have been designed to alleviate stormwater run-on and run-off during a 100 year stormwater event. Should such a storm event occur, the OCD will be notified immediately of any flooding or washout.

# XII. H2S Contingency Plan

Hydrogen Sulfide can be expected at a solidification unit. Appropriate signs will be and H2S training will be provided to all personnel and all provisions set forth in OCD Rule 118 will be met.

#### XIII. Additional Information

All WQCC regulatory requirements applicable to this facility and OCD rules applicable to the OCD facility will be fully complied with.

# **GMI CELL DESIGN**

