

April 5, 2010

Mr. Mike Bratcher  
Oil Conservation Division  
New Mexico Energy, Minerals and Natural Resources Department  
1301 W. Grand Avenue  
Artesia, New Mexico 88210

**Re: Remediation Workplan,  
Marks and Garner Production LTD Co., Mosley Spring 32 State Com #2  
Unit Letter N (SE/4, SW/4), Section 32, Township 23 South, Range 25 East,  
Eddy County, New Mexico  
(Latitude: N 32.25518°, Longitude: W 104.41948°)**

Dear Mr. Bratcher:

Marks and Garner Production LTD Co. (M&G), has retained Ocotillo Environmental, LLC (Ocotillo) to remediate impacts to soil from a leak at the Mosley Spring 32 State Com #2 tank battery (Site). The Site is located in the southeast quarter (SE/4) of the southwest quarter (SW/4), Section 32, Township 23 South, Range 25 East, Eddy County, New Mexico. The date and volume of the release are unknown. An initial C-141 is included in Appendix A. Figure 1 shows the site location.

Based on published literature (1961), well records of the New Mexico State Engineer, and well records of the United States Geological Survey, groundwater occurs at approximately 245 feet bgs in the well located nearest the Site. No domestic water wells are located within 1,000 feet of the site. The NMOCD has established recommended remediation action levels (RRALs) for benzene, total BTEX and TPH resulting from spills of natural gas liquids ("Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993"). Remediation levels for benzene, total BTEX and TPH were calculated using the following NMOCD criteria:

Criteria	Result	Ranking Score
Depth-to-Groundwater	>100 Feet	0
Wellhead Protection Area	No	0
Distance to Surface Water Body	>1000 Horizontal Feet	0
	<b>Total:</b>	<b>0</b>

The following RRALs have been assigned based on NMOCD criteria:

**Benzene** 10 mg/kg  
**Total BTEX** 50 mg/kg  
**TPH** 5,000 mg/kg

OCD Case# 14393  
Marks & Garner  
July 22, 2010  
Ex# 10

### **Current Investigation**

On March 6, 2010, Ocotillo installed four (4) soil borings (BH-1, BH-3, BH-4, and BH-5) at the site, using an air rotary drilling rig, in order to assess the horizontal and vertical limits of the spill. Soil Boring BH-2 was to be installed in the area to the southwest of the wellhead; however, it was determined that this area is the reserve pit location and the soil boring was not installed. Soil samples from the exploratory borings were collected in five foot intervals from the ground surface to a depth of approximately 16 feet below ground surface (bgs) in BH-1 and BH-3, to 11' in BH-4, and to 6' in BH-5. All soil borings were plugged with bentonite. Figure 2 shows the locations of the soil borings. Appendix B provides copies of the Well Record and Logs provided to the Office of the State Engineer.

The soil samples from the soil borings were placed in clean glass sample jars, labeled, chilled in an ice chest, and delivered under chain-of-custody control to Xenco Laboratories, located in Odessa, Texas. All soil samples collected from borings BH-1, BH-3 through BH-5, and the surface (0-1' bgs) at the BH-2 location were analyzed for chlorides by EPA method E300. Table 1 presents a summary of the laboratory analysis of soil samples. Laboratory analysis and chain of custody documentation are included in Appendix C.

Referring to Table 1, chloride concentrations in samples from boring BH-1 were reported above 250 mg/kg at a depth of 15 -16' bgs (2,520 mg/kg). The soil sample collected at the surface (0-1' bgs) at the BH-2 location reported a chloride concentration of 1,340 mg/kg. All other samples collected at the Site reported chloride concentrations less than 250 mg/kg, with the exception of boring BH-1 at 0-1' bgs (337 mg/kg) and boring BH-5 at 3-4' bgs (362 mg/kg).

### **Proposed Remediation**

With depth to groundwater at greater than 200 feet below ground surface, and a hard limestone layer encountered at a depth from one (1) to seven (7) feet bgs, Marks and Garner does not believe that the chloride concentrations reported from samples collected at the Site, warrant remediation. Marks and Garner respectfully requests that this Site be deemed "No Further Action Required".

If you have any questions or need additional information, please call Mr. Quinton Welborn at (575) 631-0949, or myself at (575) 441-7244. We may also be reached by email at [qwelborn@valornet.com](mailto:qwelborn@valornet.com) or [Cindy.Crain@gmail.com](mailto:Cindy.Crain@gmail.com).

Sincerely,  
*Ocotillo Environmental, LLC*

Cindy K. Crain, P.G.  
Environmental Manager

cc: Quinton Welborn, Marks & Garner

## FIGURES

# TABLE

APPENDIX A

INITIAL C141

**APPENDIX B**

**WELL RECORD AND LOGS**

APPENDIX C

ANALYTICAL DATA AND CHAIN OF CUSTODY  
DOCUMENTATION