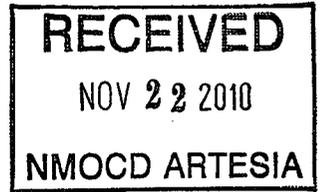


# Ocotillo ENVIRONMENTAL

Dirt Work • On-Site Remediation • Soil Testing • Excavation

November 11, 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 Report,  
Marks and Garner Production LTD Co., Levers #3Y  
Unit Letter N (SE/4, SW/4), Section 33, Township 16 South, Range 29 East,  
Eddy County, New Mexico  
(Latitude: N 32.87188°, Longitude: W 104.08195°)  
2RP #305**

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 Levers #3Y wellhead. The well is located in the southeast quarter (SE/4) of the southwest quarter (SW/4), Section 33, Township 16 South, Range 29 East, Eddy County, New Mexico (Site). The date and volume of the release are unknown. A C-141 was submitted to the New Mexico Oil Conservation Division (NMOCD) on April 24, 2009. Appendix A provides a copy of the C141. 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 65 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	50 - 99 Feet	10
Wellhead Protection Area	No	0
Distance to Surface Water Body	>1000 Horizontal Feet	0
<b>Total:</b>		<b>10</b>

The following RRALs have been assigned based on NMOCD criteria:

**Benzene** 10 mg/kg  
**Total BTEX** 50 mg/kg  
**TPH** 1,000 mg/kg

### Initial Investigation

A Remediation Workplan was prepared for the NMOCD on March 29, 2010. The Workplan reported results of previous soil samples collected at the site by R.T. Hicks Consultants, Ltd., and the results of soil borings installed by Ocotillo.

M&G proposed to “conduct excavation of the chloride impacted soil in the vicinity of soil boring BH-1 to a depth of approximately five (5) feet bgs. Horizontal delineation will be determined by laboratory analysis of samples collected during excavation. All excavated soil with a chloride concentration greater than 5,000 mg/kg will be hauled to an NMOCD approved disposal facility. Excavated soil with a chloride concentration less than 5,000 mg/kg will be blended on-site with organic material, in order to reduce the chloride concentrations to less than 1,000 mg/kg. A 20 mil plastic liner will be installed at the five foot depth, and the excavated areas will be backfilled with either clean soil or blended soil with a chloride concentration less than 1,000 mg/kg. Excess blended soil (with a chloride concentration less than 1,000 mg/kg) will be used to construct firewalls around the Marks and Garner tank batteries and / or other ancillary equipment.”

On May 12, 2010, the Remediation Workplan was approved with the following general conditions:

- Notify OCD 48 hours prior to commencement of remedial activities at each site.
- Notify OCD 48 hours prior to obtaining any samples where analyses of samples obtained are to be submitted to OCD.
- A form C-141 marked final report along with a closure report outlining work performed at each site is to be submitted to OCD upon satisfactory completion of this project. The closure report must clearly identify areas where liners have been installed.
- Any reference or statements made in the plans as to depth to groundwater not being relevant to remedial actions is not accepted by OCD.
- The type of “organic” material used for blending must be identified to OCD and is subject to OCD approval.
- Soil blending will be allowed only to the extent that the volume of blended material will be constructively used as excavation backfill and berm construction on the affected sites. In the event the volume of blended material exceeds practical usage for the affected sites, the excess material is to be disposed at an OCD approved disposal facility. “Practical usage” will be determined by OCD.
- Representative samples are to be obtained from blended material and a lab analyses performed to insure contents do not exceed the proposed chloride limits.
- Liners are to be installed in such a manner as to allow for adequate drainage to prevent ponding or pooling of water as a result of precipitation events (domed from the center outwards to the edges of the liner being installed).
- No portion of any liner may be closer than 4 feet to ground surface.

- All fluid leaks are to be repaired prior to commencement of remedial activities at each site.
- All out of service and/or leaking vessels, equipment, junk and flow lines are to be removed as necessary to facilitate remedial activities.
- Where OCD requires deeper excavation than what has been proposed, if Marks & Garner believes that the depth required is not practicable to achieve, Marks & Garner must submit evidence and/or documentation as to why the required excavation depth would not be practicable.
- Like approval by BLM will be required as applicable.

The following additional site specific conditions were also required by the OCD:

- There is a discrepancy in analytical data from samples obtained on 6/22/09 and samples obtained on 3/2/10, specifically at the 6 feet bgs interval. Please advise if any material was excavated from this sample area between the sampling dates. If material was excavated, please advise as to disposition of material excavated. Please provide this information/clarification within ten (10) calendar days of receipt of this letter.
- The proposed horizontal delineation is to include testing for hydrocarbons. Remediation requirements and the proposal to blend at this site will be dependent upon clarification of the data anomaly referenced above and the results of the delineation.

#### **Remediation Activities**

Notification was provided to the NMOCD that no material was excavated from the sample area in question between the dates of 6/22/09 and 8/2/10. Remediation of the Levers #3Y site began on July 22, 2010. Excavation began at the boring BH-1 area (immediately northwest of the well head), to a depth of five (5) feet bgs. Horizontal delineation of TPH and chlorides was conducted during the excavation process until side wall composite samples reported TPH and chloride concentrations below 1,000 mg/kg, with the exception of the North Wall Composite sample. Chloride concentrations from the north wall composite (NW Comp) were reported at 4,080 mg/kg, but excavation did not continue to the north in order to avoid excavating into the reserve drilling pit. Figure #2 shows a Site Drawing with soil sample locations and their associated chloride concentrations. Appendix B provides laboratory and chain of custody documentation.

Excavated soil was stockpiled to the north (SP-1), northwest (SP-2) and southwest (SP-3) of the well head, and soil samples were collected on July 29, 2010 for TPH and chloride analysis. TPH concentrations of the stockpiled soil were reported less than 100 mg/kg and chloride concentrations were reported less than 1,000 mg/kg at the SP-2 and SP-3 piles. The stockpile labeled SP-1 reported a chloride concentration of 2,240 mg/kg and was hauled to an NMOCD disposal facility.

Mr. Mike Bratcher  
Page 4  
November 11, 2010

The excavation was lined with a 20 mil plastic liner at a depth of five (5) feet bgs, and backfilled with the stockpiled soil (SP-2 and SP-3). Additional clean soil was imported from a nearby State pit to complete the backfilling of the excavation. Photographs of the remediation process are included in Appendix C.

As all remediation has been conducted according to the Remediation Workplan and subsequent OCD directives, Marks & Garner would appreciate your closure of this site. A final C-141 is attached as the last page of this report.

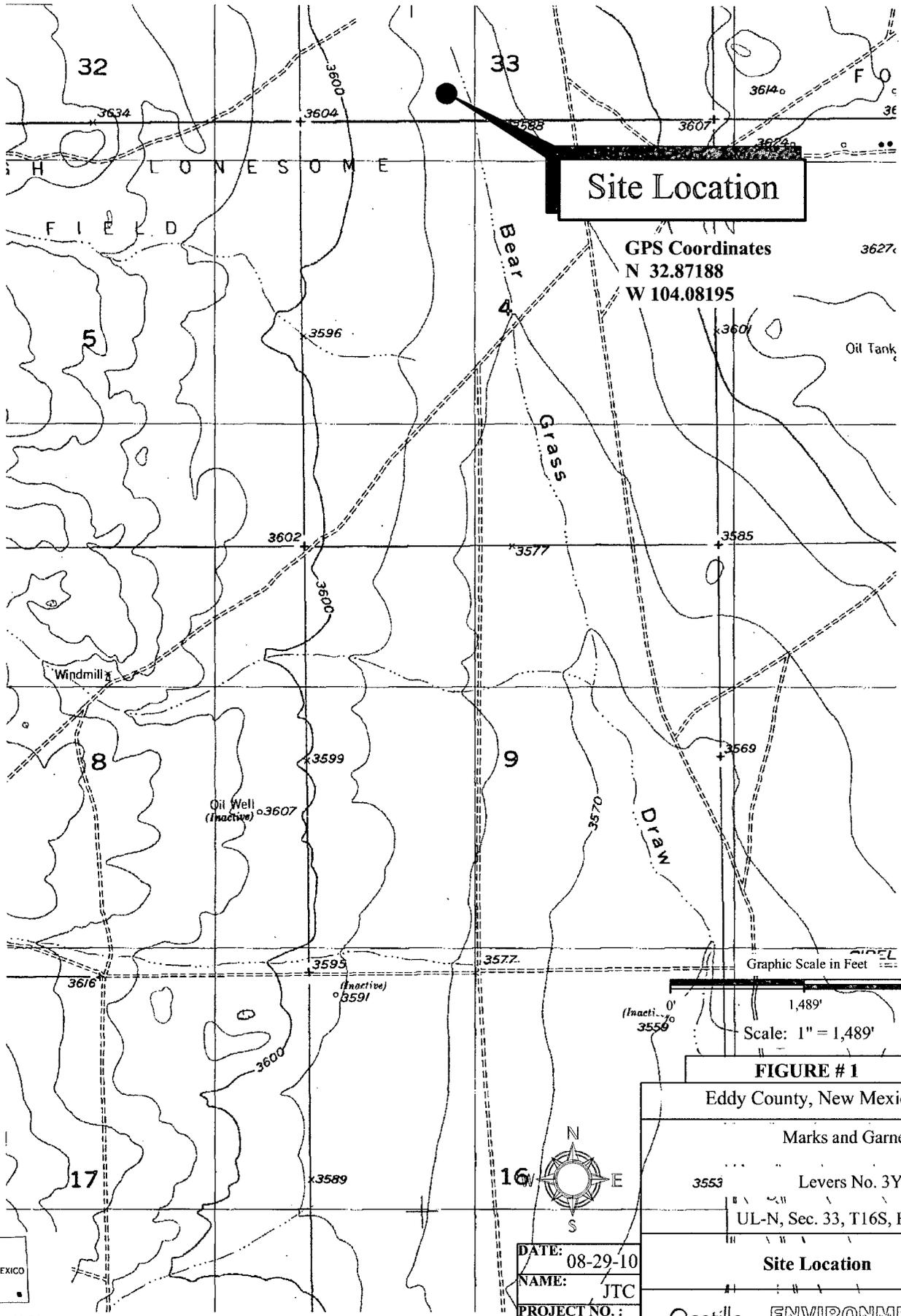
If you have any questions or need additional information, please call Mr. Quinton Welborn at (575) 631-0949, or myself at (575) 441-7244. We may also be reached by email at [qwelborn@valornet.com](mailto:qwelborn@valornet.com) or [Cindy.Crain@gmail.com](mailto:Cindy.Crain@gmail.com).

Sincerely,  
***Ocotillo Environmental, LLC***

A handwritten signature in cursive script that reads "Cindy K. Crain".

Cindy K. Crain, P.G.  
Environmental Manager

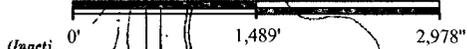
cc: Quinton Welborn, Marks & Garner



**Site Location**

GPS Coordinates  
 N 32.87188  
 W 104.08195

Graphic Scale in Feet



Scale: 1" = 1,489'

**FIGURE # 1**

Eddy County, New Mexico

Marks and Garner

3553 Levers No. 3Y

UL-N, Sec. 33, T16S, R29E

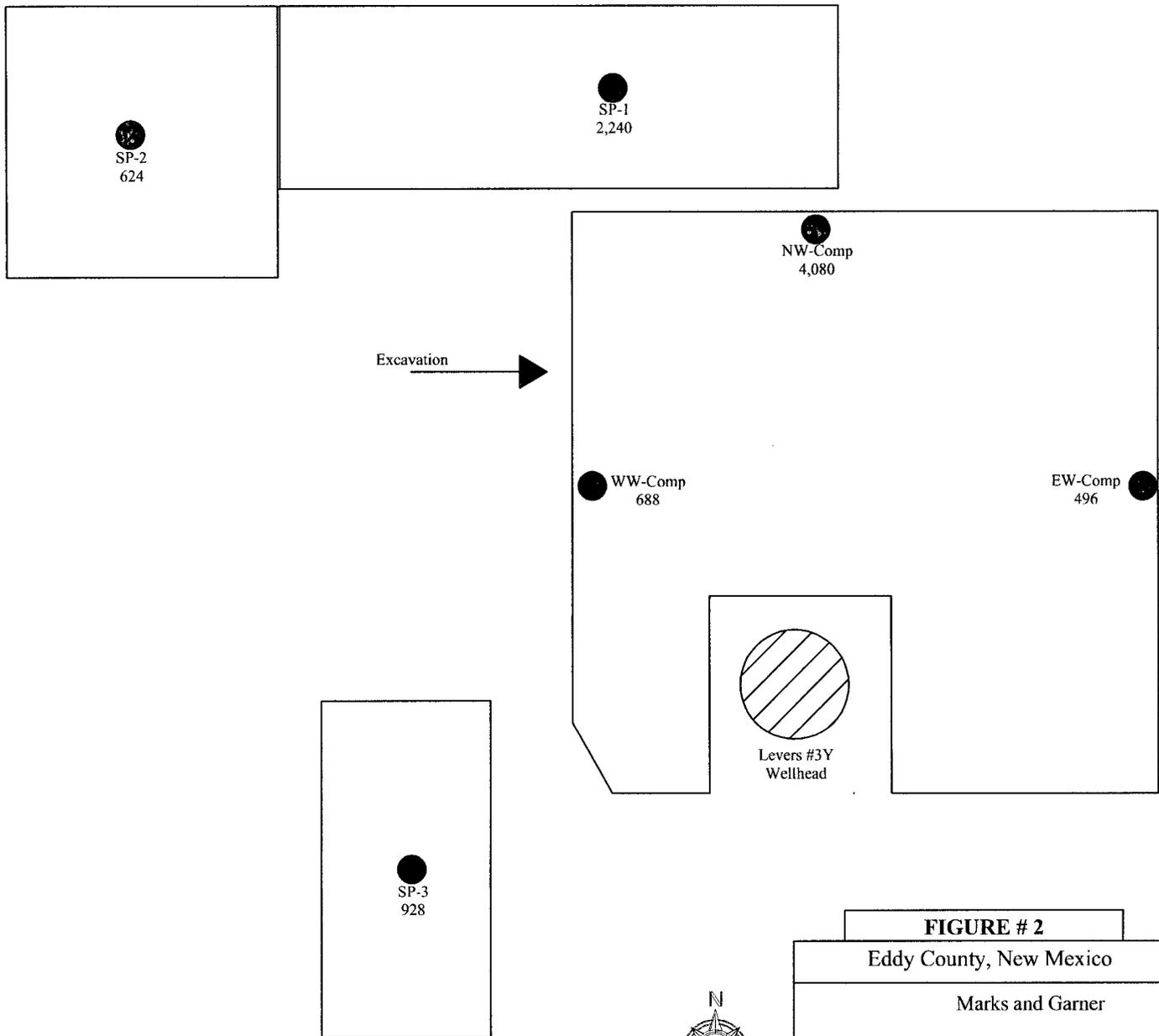
**Site Location**

DATE: 08-29-10  
 NAME: JTC  
 PROJECT NO.: 0110-011C

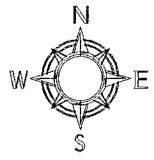
Ocotillo ENVIRONMENTAL



QUADRANGLE LOCATION



<b>LEGEND</b>	
	Soil Sample Location
	With Chloride
WW-Comp 688	Concentration (mg/kg)



<b>FIGURE # 2</b>	
Eddy County, New Mexico	
Marks and Garner	
Lever No. 3Y	
UL-N, Sec. 33, T16S, R29E	
<b>Site Drawing With Boring Locations</b>	
<b>DATE:</b> 08-29-10	<b>PROJECT NO.:</b> 0110-011C
<b>NAME:</b> JTC	

**APPENDIX A**  
**INITIAL C141 DOCUMENTATION**

District I  
1625 N French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

MAY 1 2009

Form C-14  
Revised October 10, 2001

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

30-015-02787

Release Notification and Corrective Action

NMLB0913439033

OPERATOR

Initial Report  Final Report

Name of Company Marks & Garner Production 14070	Contact Quinton Welborn
Address P.O. Box 1089	Telephone No. 575-393-9358
Facility Name LEAKS 603V	Facility Type Oil Well
Surface Owner State	Mineral Owner Marks & Garner
	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	33	16S	29E	330	S	1970	W	Eddy

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

Leaking wellhead, clean well head and affected area

Describe Area Affected and Cleanup Action Taken.\*

Fix Leak + clean well head

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <i>Quinton Welborn</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: <i>Quinton Welborn</i>	Signed By <i>Mike Brannon</i> Approved by District Supervisor:	
Title: <i>MANAGER</i>	Approval Date: <i>MAY 14 2009</i>	Expiration Date:
E-mail Address: <i>QWELBORN@VALORNET.CO.NM</i>	Conditions of Approval: <i>Remediation per OGD Rules &amp; Guidelines</i>	Attached <input checked="" type="checkbox"/>
Date: <i>4-24-09</i>	Phone: <i>575-393-9358</i>	

Attach Additional Sheets If Necessary

NMLB0913438704

DATE: 4/16/09

2RP-305

**APPENDIX B**

**ANALYTICAL DATA AND CHAIN OF CUSTODY  
DOCUMENTATION**



**ARDINAL  
LABORATORIES**

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

---

August 4, 2010

Cindy Crain  
Ocotillo Environmental  
P.O. Box 1816  
Hobbs, NM 88241

Re: Levers 3-Y

Enclosed are the results of analyses for sample number H20456, received by the laboratory on 07/29/10 at 1:30 pm.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.2	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 3 (includes Chain of Custody)

Sincerely,

Celey D. Keene  
Laboratory Director

ANALYTICAL RESULTS FOR  
OCOTILLO ENVIRONMENTAL  
ATTN: CINDY CRAIN  
P.O. BOX 1816  
HOBBS, NM 88241  
FAX TO: (432) 272-0304

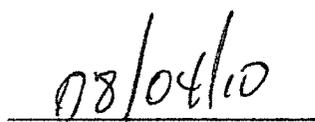
Receiving Date: 07/29/10  
Reporting Date: 08/04/10  
Project Owner: NOT GIVEN  
Project Name: LEVERS 3-Y  
Project Location: NW OF LOCO HILLS, NM

Sampling Date: 07/29/10  
Sample Type: SOIL  
Sample Condition: COOL & INTACT @ 4°C  
Sample Received By: JH  
Analyzed By: AB/HM

LAB NUMBER	SAMPLE ID	GRO (C <sub>6</sub> -C <sub>10</sub> ) (mg/kg)	DRO (>C <sub>10</sub> -C <sub>28</sub> ) (mg/kg)	*Cl <sup>-</sup> (mg/kg)
ANALYSIS DATE		08/03/10	08/03/10	07/30/10
H20456-1	EW-COMP.	<10.0	<10.0	496
H20456-2	NW-COMP.	<10.0	14.6	4,080
H20456-3	WW-COMP.	<10.0	<10.0	688
H20456-4	SP-1	<10.0	18.7	2,240
H20456-5	SP-2	<10.0	11.7	624
H20456-6	SP-3	<10.0	<10.0	928
Quality Control		429	432	510
True Value QC		500	500	500
% Recovery		85.8	86.4	102
Relative Percent Difference		4.2	1.8	<0.1

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl<sup>-</sup>: Std. Methods 4500-Cl<sup>-</sup>B  
\*Analyses performed on 1:4 w:v aqueous extracts. Reported on wet weight.

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date

H20456 TCL OCO



# CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603  
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

PAGE 1 of 1

Company Name: <b>MARKS + GARNER</b>		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>											
Project Manager: <b>CINDY CRAIN</b>		P.O. #:													
Address: <b>2125 FRENCH DRIVE, P.O. Box 1816</b>		Company: <b>Deotillo</b>													
City: <b>Hobbs</b> State: <b>NM</b> Zip: <b>88240</b>		Attn:													
Phone #: <b>575-441-7244</b> Fax #:		Address:													
Project #: Project Owner:		City:													
Project Name: <b>LEVERS 3-Y</b>		State: Zip:													
Project Location: <b>NW OF LOCO HILLS, NM</b>		Phone #:													
Sampler Name: <b>Don Green</b>		Fax #:													

FOR LAB USE ONLY		GRAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.			SAMPLING		DATE	TIME	TPH	CL
Lab I.D.	Sample I.D.			GROUNDWATER	WASTEWATER	SOIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER							
<del>H20456-1</del>	<del>EW - Comp.</del>	C	1											7/29/10	9:00	✓	✓	
2	NW - Comp.	C	1			✓								"	"	✓	✓	
3	WW - Comp.	C	1			✓								"	"	✓	✓	
4	SP-1	C	1			✓								"	"	✓	✓	
5	SP-2	C	1			✓								"	"	✓	✓	
6	SP-3	C	1			✓								"	"	✓	✓	

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: <b>Don Green</b>	Date: <b>7/29/10</b> Time: <b>13:30</b>	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No   Add'l Phone #:
Relinquished By:	Date:	Received By: <b>Godi Benson</b>	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No   Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool / Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	CHECKED BY: (Initials) <b>GH</b>	REMARKS:

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

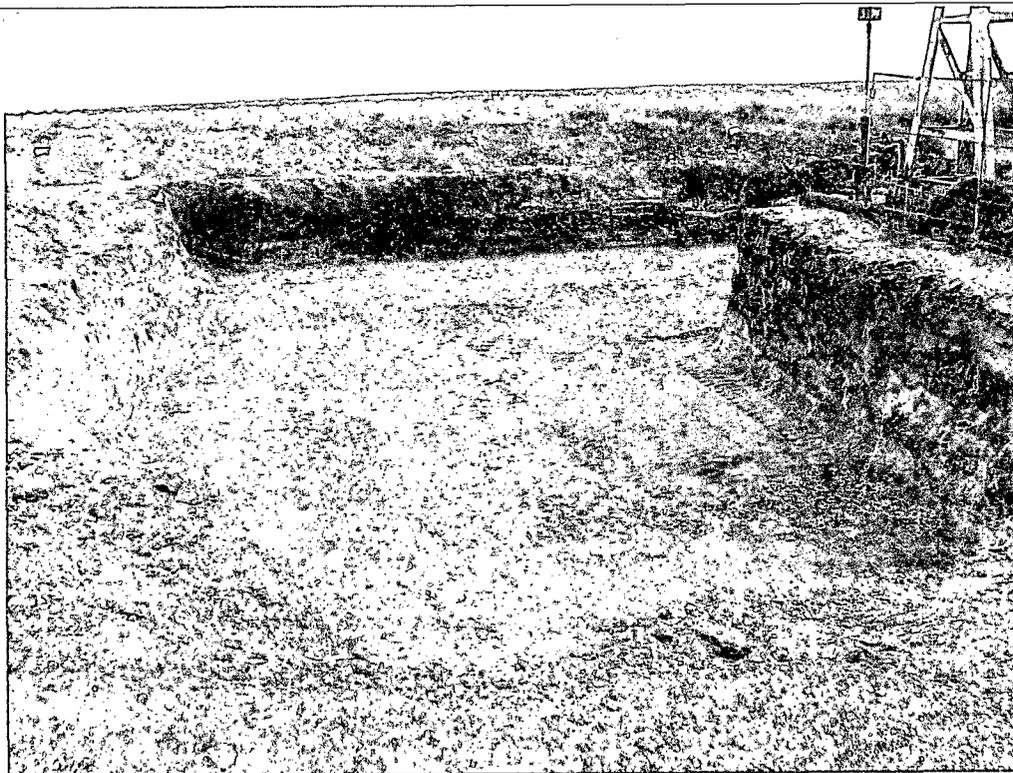
#26

**APPENDIX C**  
**PHOTOGRAPHS**

**MARKS & GARNER, LEVERS #3Y**



**1. View to northwest of excavation.**



**2. View to north of excavation.**

**MARKS & GARNER, LEVERS #3Y**



**3. View to east of excavation.**

**FINAL C-141**