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

October 13, 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., Cave State #4
Unit Letter F (SE/4, NW/4), Section 4, Township 17 South, Range 29 East,
Eddy County, New Mexico
(Latitude: N 32.86636°, Longitude: W 104.08299°)
2RP #307

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 Cave State #4 wellhead. The well is located in the southeast quarter (SE/4) of the northwest quarter (NW/4), Section 4, Township 17 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 9, 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
		Total: 10

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 April 5, 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:

- Area identified as BH-1 is to be excavated to a depth of 6 to 8 feet bgs, or to as near that depth range as is practicable. The horizontal delineation towards the well head is to include testing for hydrocarbons. Remediation and excavation of this area will be dependent upon results of the delineation.

- Photos taken of the site on 2/26/10 show a stockpile of what appears to be hydrocarbon impacted soils. Samples taken on 6/22/09 of what is believed to be this stockpile, show TPH levels to be 43,270 mg/kg. This soil stockpile is to be disposed of at an OCD approved disposal facility. Samples are to be obtained from underneath the stockpile area and tested for contaminants. Remedial actions may be required dependent upon the testing results.

Remediation Activities

Remediation of the Cave State #4 site began on May 21, 2010. Excavation began at the boring BH-1 area (immediately east of the well head), to a depth of eight (8) 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. Chloride concentrations from the north wall composite (NW Comp) and the west wall north composite (WW N Comp) were reported at 2,440 mg/kg and 2,520 mg/kg, respectively, 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. Table 1 provides a summary of laboratory results of samples. Appendix B provides laboratory and chain of custody documentation.

Stockpiled soil located northwest of the well head was hauled to an NMOCD disposal facility and a soil sample was collected from beneath the pile on May 24, 2010 (SP Comp). TPH concentrations from that sample were reported by the laboratory as 128 mg/kg, and chloride concentrations were reported as1,640 mg/kg. Soil was excavated from the stockpile area to a depth of five (5) feet bgs, until chloride concentrations were reported as 816 mg/kg (SP 1 Comp).

Soil removed during excavation was blended on-site with caliche from a nearby pit until chloride concentrations were reported by the laboratory as less than 1,000 mg/kg (SP W B Comp = 704 mg/kg).

The excavation east of the well head was lined with a 20 mil plastic liner at a depth of eight (8) feet bgs, and backfilled with the blended soil. The excavation at the stockpiled soil location was also backfilled with blended soil. Excess blended soil was used to construct a firewall around the tank battery. 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 or Cindy.Crain@gmail.com.

Sincerely,
Ocotillo Environmental, LLC

Cindy K. Crain

Cindy K. Crain, P.G.
Environmental Manager

cc: Quinton Welborn, Marks & Garner

FIGURES

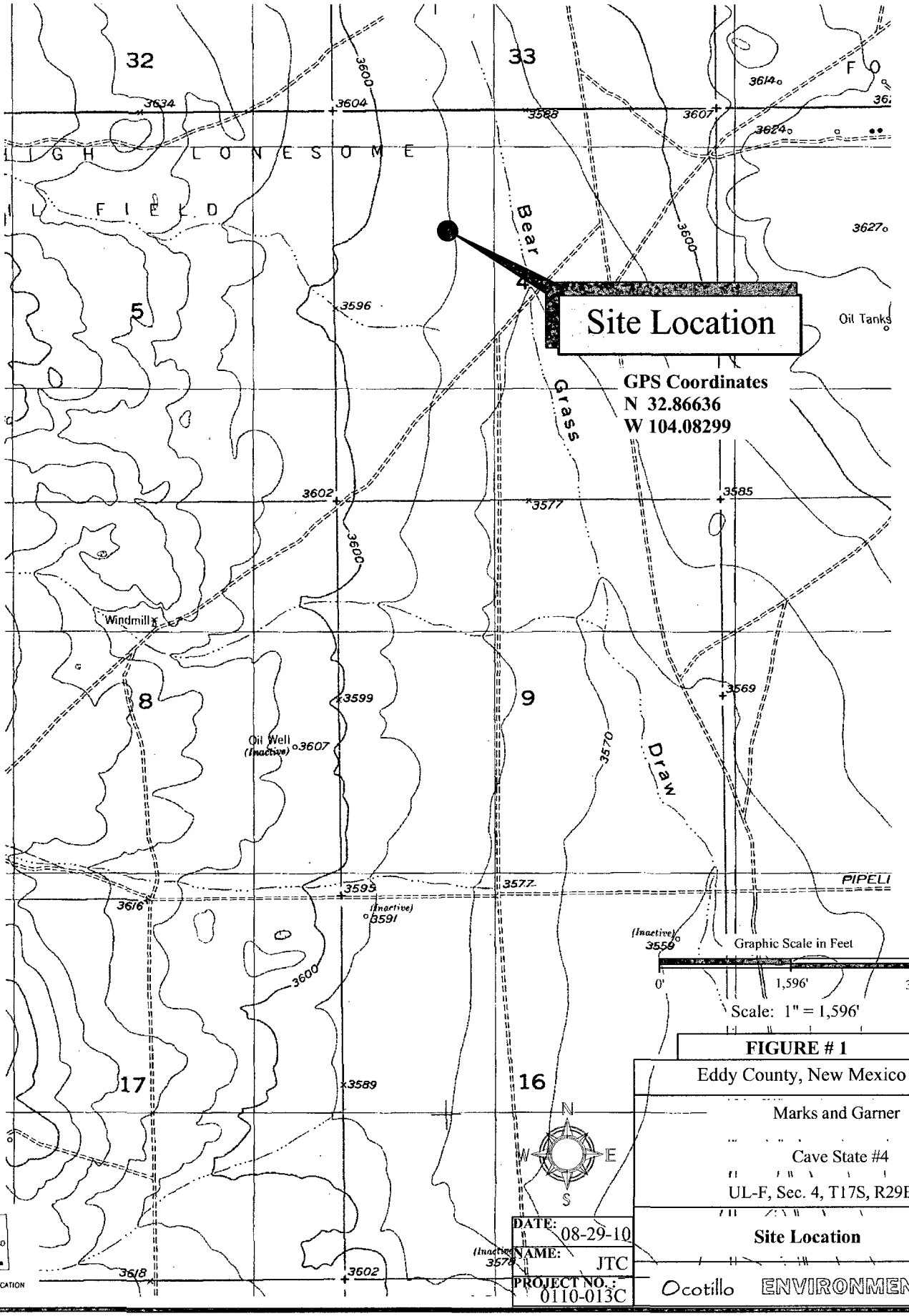


FIGURE # 1

Eddy County, New Mexico

Marks and Garner

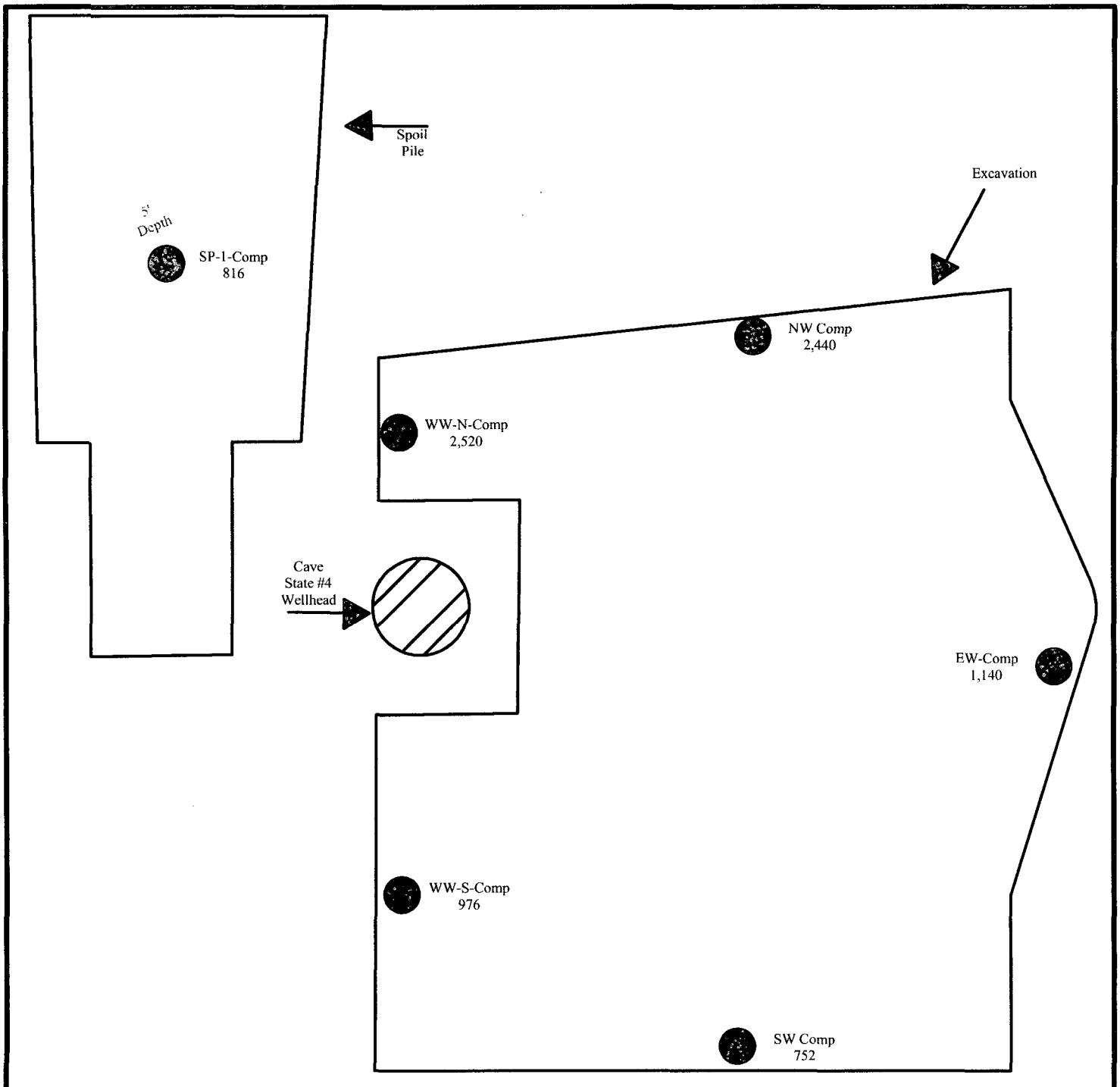
Cave State #4

UL-F, Sec. 4, T17S, R29E

Site Location

DATE:	08-29-10
NAME:	JTC
PROJECT NO.:	0110-013C

Ocotillo ENVIRONMENTAL



Graphic Scale in Feet

0' 10' 20'

Scale: 1" = 10'

LEGEND

WW-S-Comp 976 — Soil Sample Location With Chloride Concentration (mg/kg)

N W E S

FIGURE # 2

Eddy County, New Mexico

Marks and Garner

Cave State No. 4

UL-F, Sec. 4, T17S, R29E

Site Drawing With Boring Locations

DATE: 08-29-10

NAME: JTC

PROJECT NO.: 0110-013C

Ocotillo ENVIRONMENTAL

TABLE

Table 1:
Summary of Laboratory Analysis of Soil Samples from Excavation
Marks & Garner, Cave State #4
Unit Letter F, Section 4, Township 17 South, Range 29 East
Eddy County, New Mexico

Sample Date	Sample Name	TPH - GRO (C6 - C10) (mg/kg)	TPH - DRO (>C10 - C28) (mg/kg)	Total TPH (mg/kg)	Benzene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)	Soil Status
5/24/10	NW Comp	<10.0	29.8	29.8	---	---	2,440	
5/24/10	WW S Comp	<10.0	<10.0	<20.0	---	---	976	
5/24/10	SW Comp	<10.0	14.9	14.9	---	---	752	
5/25/10	WW N Comp	<10.0	123	123			2,520	
5/25/10	EW Comp	<10.0	<10.0	<20.0			1,140	
5/24/10	SP Comp	<10.0	128	128	<0.050	<0.45	1,640	
6/2/10	SP 1 Comp						816	
5/24/10	SP W Comp	<10.0	536	536	<0.050	<0.45	2,480	
5/27/10	#2 SP W Comp						1,310	
6/2/10	SP W B Comp						704	
5/24/10	SP A Comp	<10.0	207	207	<0.050	<0.45	1,840	
5/25/10	SP 2 Comp	<10.0	109	109			1,280	
5/26/10	SP 3 Comp						1,380	
5/26/10	1 x 1 blend Comp						752	
5/26/10	3/4 x 1 blend Comp						832	
5/26/10	1/2 x 1 blend Comp						896	

Notes: *Samples Analyzed by Cardinal Laboratories, Hobbs, New Mexico.*

1. BGS: Below ground surface.
2. mg/kg: Milligrams per kilogram.
3. --- No data available.
4. < Less than the test method detection limit.

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

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

MAY - 1 2009

Form C-141
Revised October 10, 2003

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

30-015-24742

Release Notification and Corrective Action

nMLB0913441726

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 Cave ST #4	Facility Type Oil Well

Surface Owner State	Mineral Owner Marks & Garner	Lease No.30-015-24742

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	4	17S	29E	1650	N	1650	W	Eddy

Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release Leak	Volume of Release	Volume Recovered
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery
Was Immediate Notice Given? ☐ Yes ☐ No ☑ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☑ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Leaking well head, Clean well head and effected area

Describe Area Affected and Cleanup Action Taken.*

Fix Leak.

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: Quinton Welborn

Printed Name: Quinton Welborn

Title: manager

E-mail Address: QWELBORN@VALORNET.COM

Date: Phone:

OIL CONSERVATION DIVISION

Signed By Mike Bratcher

Approved by ~~District Supervisor~~:

Approval Date: MAY 14 2009 Expiration Date:

Conditions of Approval: Remediation per OCD Rules & Guidelines Attached ☒

Attach Additional Sheets If Necessary

MLB0913439885

2RP-307

Date: 4/9/09

APPENDIX B

ANALYTICAL DATA AND CHAIN OF CUSTODY DOCUMENTATION

CARDINAL LABORATORIES

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

May 26, 2010

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

Re: Cave State #4 (Marks & Gardner)

Enclosed are the results of analyses for sample number H19958, received by the laboratory on 05/24/10 at 3:36 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 though 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: 4 (includes Chain of Custody)

Sincerely,

Celey D. Keene
Laboratory Director

This report conforms with NELAP requirements.

CARDINAL LABORATORIES

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

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

Receiving Date: 05/24/10
Reporting Date: 05/26/10
Project Owner: MARKS & GARDNER
Project Name: CAVE STATE #4
Project Location: NW OF LOCO HILL, NM

Sampling Date: 05/24/10
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 6 °C
Sample Received By: JH
Analyzed By: ZL

LAB NUMBER	SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE		05/25/10	05/25/10	05/25/10	05/25/10
H19958-1	SP COMP	<0.050	<0.050	<0.050	<0.300
H19958-2	SP -W-COMP	<0.050	<0.050	<0.050	<0.300
H19958-6	SP -A-COMP	<0.050	<0.050	<0.050	<0.300
Quality Control		0.020	0.020	0.021	0.062
True Value QC		0.020	0.020	0.020	0.060
% Recovery		100	100	105	103
Relative Percent Difference		<1.0	4.6	3.7	2.8

METHOD: EPA SW-846 8021B

TEXAS NELAP CERTIFICATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE, AND TOTAL XYLENES. Reported on wet weight.

Chemist

05/26/10
Date

H19958 BTEX OCO

CARDINAL LABORATORIES

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

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

Receiving Date: 05/24/10
Reporting Date: 05/26/10
Project Owmer: MARKS & GARNER
Project Name: CAVE STATE #4
Project Location: NW OF LOCO HILLS, NM

Sampling Date: 05/24/10
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 6°C
Sample Received By: JH
Analyzed By: AB/HM

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/kg)	DRO (>C_{10}-C_{28}) (mg/kg)	*Cl^- (mg/kg)
ANALYSIS DATE		05/26/10	05/26/10	05/25/10
H19958-1	SP-COMP.	<10.0	128	1,640
H19958-2	SP-W-COMP.	<10.0	536	2,480
H19958-3	NW-COMP.	<10.0	29.8	2,440
H19958-4	WW-S-COMP.	<10.0	<10.0	976
H19958-5	SW-COMP.	<10.0	14.9	752
H19958-6	SP-A-COMP.	<10.0	207	1,840
Quality Control		473	455	500
True Value QC		500	500	500
% Recovery		94.6	91.0	100
Relative Percent Difference		0.3	5.1	< 0.1

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl^-: Std. Methods 4500-Cl^-B
*Analyses performed on 1:4 w:v aqueous extracts. Reported on wet weight.
Not accredited for GRO/DRO and Chloride.

Chemist

05/26/10
Date

H19958 TCL OCO

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: MARKS + GARNER OCOTILLO	**BILL TO**
Project Manager: CINDY CRAIN	P.O. #:
Address:	Company: OCOTILLO
City: Hobbs State: NM Zip: 88240	Attn:
Phone #: 577-441-7244 Fax #:	Address:
Project #: Project Owner:	City:
Project Name: CAVE STATE #4	State: Zip:
Project Location: NW OF LOCO HILL, NM.	Phone #:
Sampler Name: Don Green	Fax #:

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	TPH 8015	BTEX	CL
H19958-1	SP- Comp.	C	1			✓					✓		5/24/10	11:30	✓	✓	✓
2	SP-W-Comp.	C	1			✓					✓		"	12:30	✓	✓	✓
3	NW- Comp.	C	1			✓					✓		"	13:00	✓		✓
4	WW-S- Comp.	C	1			✓					✓		"	13:15	✓		✓
5	SW - Comp.	C	1			✓					✓		"	13:30	✓		✓
6	SP-A - Comp.	C	1			✓					✓		"	14:05	✓	✓	✓
		6	6	0	0	6	0	0	0	0	6	0	0	0			

Relinquished By: Don Green	Date: 5/24/10 Time: 15:36	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By: Jodi Henson	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool: ☐ Yes ☐ No 6°C Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) GH	REMARKS:

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

#26

CARDINAL LABORATORIES

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

May 27, 2010

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

Re: Cave State #4

Enclosed are the results of analyses for sample number H19967, received by the laboratory on 05/25/10 at 12:53 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 though 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

This report conforms with NELAP requirements.

CARDINAL LABORATORIES

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

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

Receiving Date: 05/25/10
Reporting Date: 05/27/10
Project Owmer: MARKS & GARNER
Project Name: CAVE STATE #4
Project Location: NW OF LOCO HILLS, NM

Sampling Date: 05/25/10
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 3.5°C
Sample Received By: JH
Analyzed By: AB/HM

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/kg)	DRO (>C_{10}-C_{28}) (mg/kg)	*Cl^- (mg/kg)
ANALYSIS DATE		05/26/10	05/26/10	05/26/10
H19967-1	SP-2-COMP.	<10.0	109	1,280
H19967-2	WW-N-COMP.	<10.0	123	2,520
H19967-3	EW-COMP.	<10.0	<10.0	1,140
Quality Control		486	488	500
True Value QC		500	500	500
% Recovery		97.2	97.6	100
Relative Percent Difference		1.1	5.1	< 0.1

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

Chemist

05/27/10
Date

H19967 TCL OCO

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: MARKS & GARNER	**BILL TO**
Project Manager: Cindy CRAIN	P.O. #:
Address: 2125 FRENCH DRIVE, PO BOX 1816	Company: COG OIL LLC
City: Hobbs State: N.M. Zip: 88240	Attn:
Phone #: 575-441-7244 Fax #:	Address:
Project #: Project Owner:	City:
Project Name: CAVE STATE #4	State: Zip:
Project Location: NW of Loco Hills, N.M.	Phone #:
Sampler Name: Don Green	Fax #:

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST												
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	TPH 8015	Cl											
H19967-1	SP-2 - Comp.	C	1			✓					✓		5/25/10	10:00	✓	✓											
2	WW-N - Comp.	C	1			✓					✓		"	"	✓	✓											
3	EW - Comp.	C	1			✓					✓		"	"	✓	✓											

Relinquished By: Don Green	Date: 5/25/10 Time: 12:53	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By: Jodi Henson	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	REMARKS: 441-0405 call Don w/ cl - results
	35°C		

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

#26

CARDINAL LABORATORIES

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

May 27, 2010

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

Re: Cave State #1

Enclosed are the results of analyses for sample number H19971, received by the laboratory on 05/26/10 at 3:06 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 though 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

This report conforms with NELAP requirements.

CARDINAL LABORATORIES

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

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

Receiving Date: 05/26/10
Reporting Date: 05/27/10
Project Number: MARKS & GARDNER
Project Name: CAVE STATE #1
Project Location: NW OF LOCO HILLS, NM

Analysis Date: 05/27/10
Sampling Date: 05/26/10
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 3°C
Sample Received By: JH
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl^- (mg/kg)
H19971-1	SP - 3 - COMP.	1,380
H19971-2	1 X 1 - COMP.	752
H19971-3	3/4 X 1 - COMP.	832
H19971-4	1/2 X 1 - COMP.	896
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-Cl^-B

Note: Analyses performed on 1:4 w:v aqueous extracts.

Chemist

05/27/10
Date

H19971 Ocotillo

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: MARKS & GARNER	**BILL TO**
Project Manager: Cindy CRAIN	P.O. #:
Address: 2125 FRENCH DRIVE - P.O. Box 1816	Company: OCOTILLO
City: Hobbs State: NM. Zip: 88240	Attn:
Phone #: 575-441-7244 Fax #:	Address:
Project #: Project Owner:	City:
Project Name: CAVE STATE #1	State: Zip:
Project Location: NW of LocoHills, N.M.	Phone #:
Sampler Name: DON GREEN	Fax #:

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	BTEX
H19971-1	SP-3 - Comp.	C	1			✓					✓		5/26/10	2:00	✓
2	1x1 - Comp.	C	1			✓					✓		✓	✓	✓
3	3/4 x 1 - Comp.	C	1			✓					✓		✓	✓	✓
4	1/2 x 1 - Comp.	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: Don Green	Date: 5/26/10 Time: 15:06	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By: Jodi Henson	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No	CHECKED BY: (Initials)	REMARKS: RUSH!! 441-0405 Don

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

#26

CARDINAL LABORATORIES

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

May 28, 2010

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

Re: Cave State #4

Enclosed are the results of analyses for sample number H19999, received by the laboratory on 05/28/10 at 9:25 am.

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 though 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

This report conforms with NELAP requirements.

CARDINAL LABORATORIES

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

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

Receiving Date: 05/28/10
Reporting Date: 05/28/10
Project Number: MARKS & GARDNER
Project Name: CAVE STATE #4
Project Location: NW OF LOCO HILLS, NM

Analysis Date: 05/28/10
Sampling Date: 05/27/10
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 5°C
Sample Received By: JH
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl^- (mg/kg)
H19999-1	#2 - SP - W - COMP.	1,310
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-Cl^-B

Note: Analysis performed on a 1:4 w:v aqueous extract.

Chemist

05/28/10
Date

H19999 Ocotillo

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	MARKS & GARNER	**BILL TO**	
Project Manager:	Cindy CRAIN	P.O. #:	
Address:	2125 FRENCH DRIVE, P.O. Box # 1816	Company:	Ocotillo
City:	Hobbs State: NM Zip: 88240	Attn:	
Phone #:	575-441-7244 Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:	CAVE STATE #4	State:	Zip:
Project Location:	NW of Loco Hills, NM.	Phone #:	
Sampler Name:	Don Green	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	CL
H19999-1	#2-SP-W-comp.	C	1			✓					✓		5/27/10	15:30	✓

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Relinquished By:	Date: 5/28/10 Time: 9:23	Received By:	
Don Green			
Relinquished By:	Date: 5/28/10 Time: 9:25	Received By:	Jodi Henson
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	JH

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:

RUSH!!

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#26

CARDINAL LABORATORIES

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

June 2, 2010

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

Re: Cave State #4

Enclosed are the results of analyses for sample number H20025, received by the laboratory on 06/02/10 at 1:52 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 though 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

This report conforms with NELAP requirements.

CARDINAL LABORATORIES

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

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

Receiving Date: 06/02/10
Reporting Date: 06/02/10
Project Number: MARKS & GARDNER
Project Name: CAVE STATE #4
Project Location: NW OF LOCO HILLS, NM

Analysis Date: 06/02/10
Sampling Date: 06/02/10
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 2°C
Sample Received By: JH
Analyzed By: AB

LAB NO.	SAMPLE ID	Cl^- (mg/kg)
H20025-1	SP-W-B-COMP.	704
H20025-2	SP-1-COMP.	816
Quality Control		520
True Value QC		500
% Recovery		104
Relative Percent Difference		3.8

METHOD: Standard Methods	4500-Cl^-B

Note: Analyses performed on 1:4 w:v aqueous extracts.

Chemist

06/02/10
Date

H20025 Ocotillo

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: MARKS + GARNER		**BILL TO**	
Project Manager: Cindy CRAIN		P.O. #:	
Address: 2125 FRENCH DRIVE, P.O. BOX 1816		Company: OXOT, LLC	
City: Hobbs	State: NM Zip: 88240	Attn:	
Phone #: 575-441-7244	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name: CAVE STATE #4		State:	Zip:
Project Location: N/W of Loco Hills, N.M.		Phone #:	
Sampler Name: Don Green		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	CL
H20075-1	SP-W-B-Comp.	C	1			✓					✓		6/2/10	10:00	✓
2	SP-1-Comp	C	1			✓					✓		6/2/10	12:30	✓

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Relinquished By: Don Green	Date: 6/2/10 Time: 13:52	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By: Jodi Henson	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)	REMARKS: RUSH!!
	20°C		

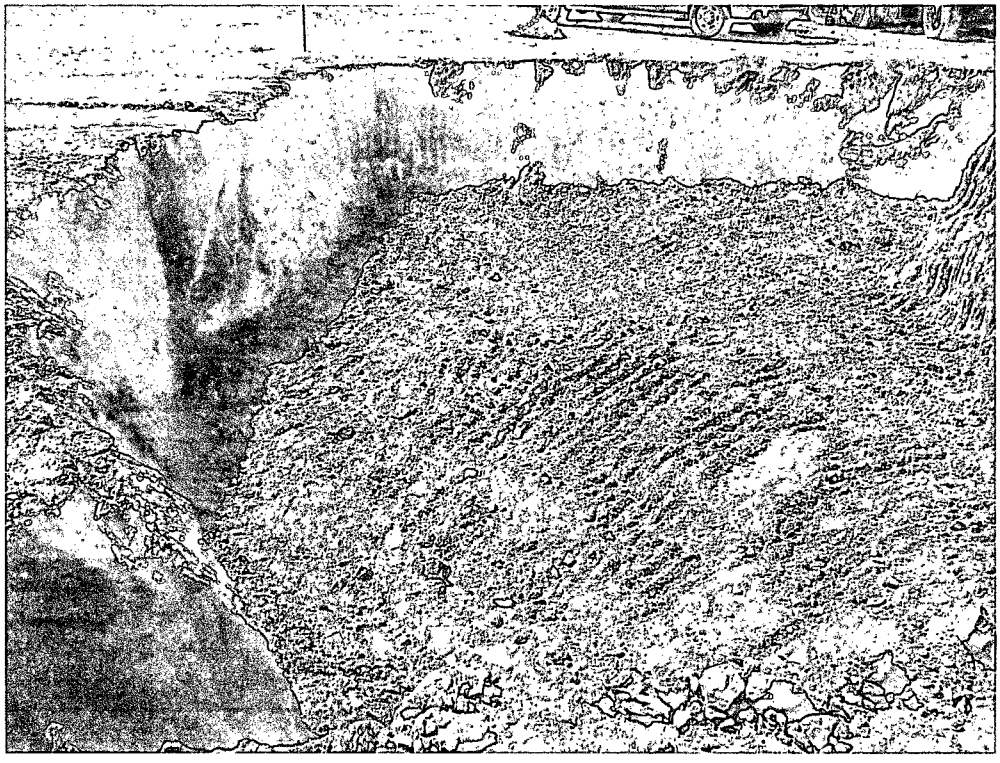
† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#26

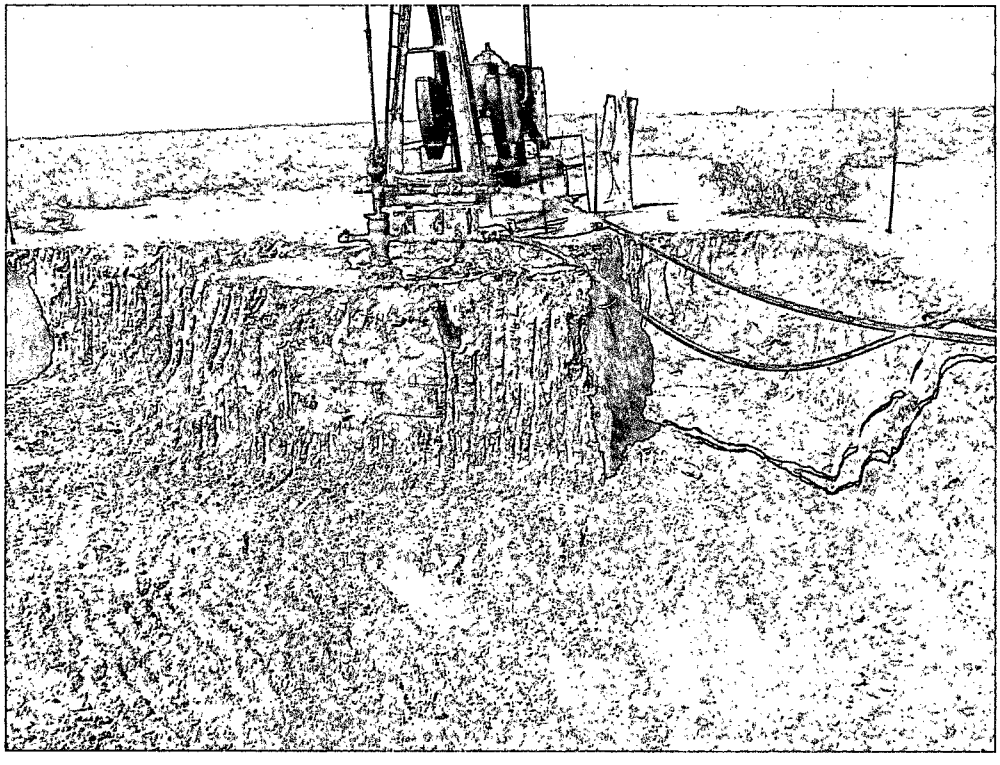
APPENDIX C

PHOTOGRAPHS

MARKS & GARNER, CAVE STATE #4

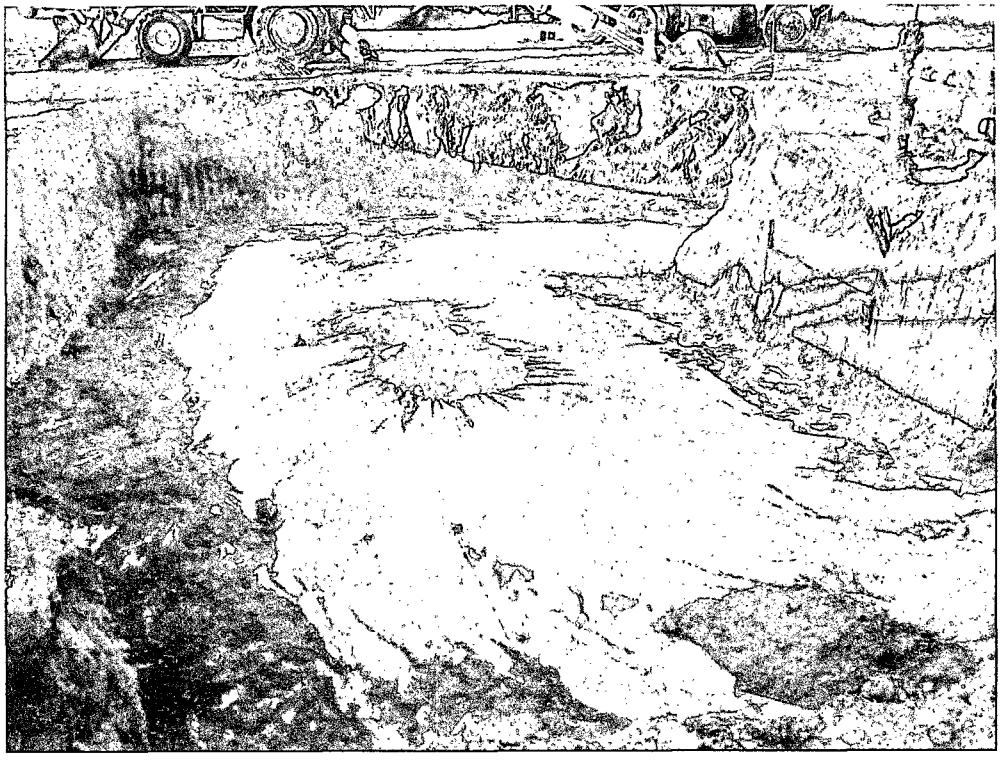


1. View to east of excavation east of well head.

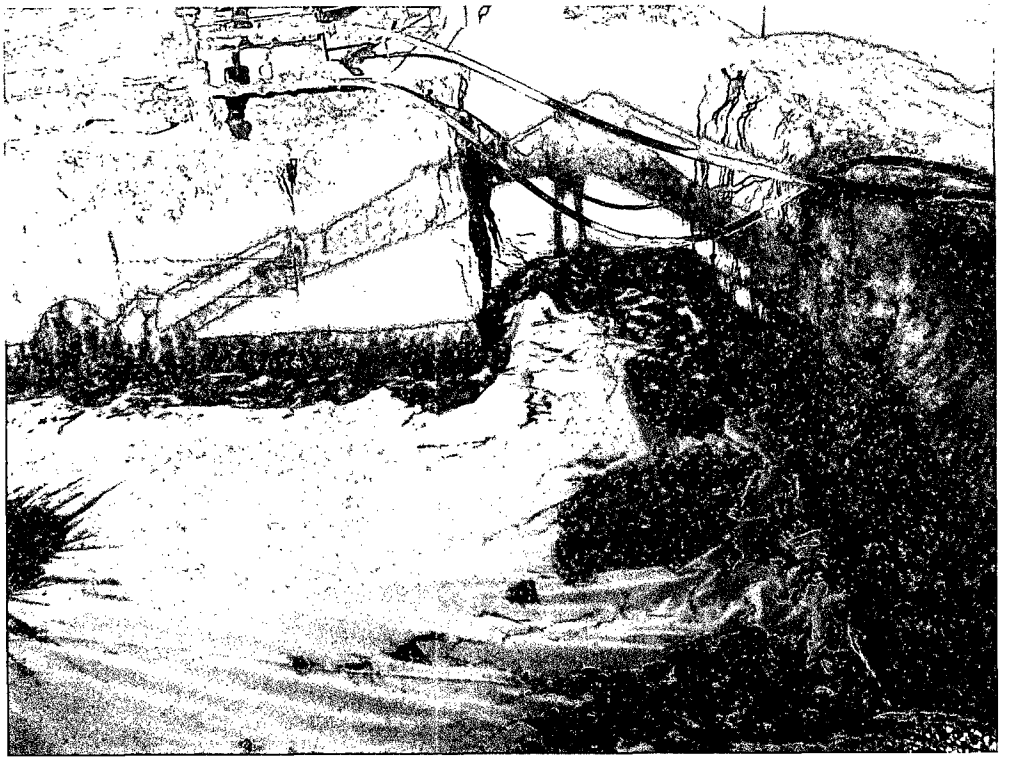


2. View to west of excavation at well head.

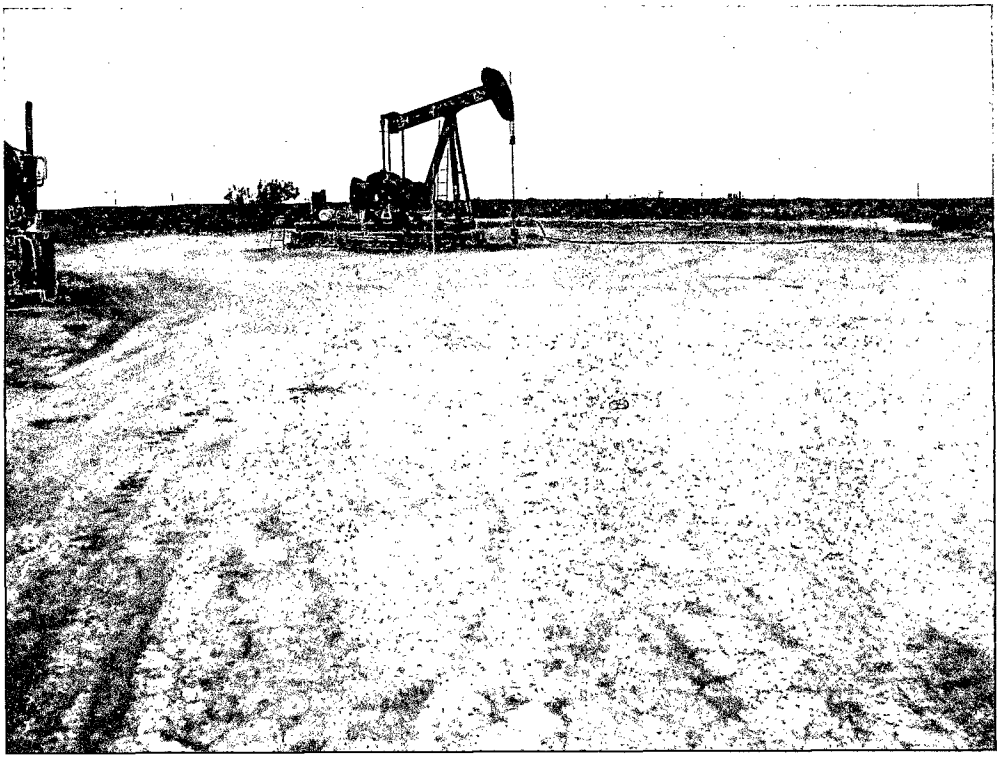
3. View of blended soil used for backfill.



4. View to south of plastic lined excavation.



5. View of west of plastic lined excavation.



6. View to north of remediated site.

FINAL C-141