

AP-11

REPORTS

YEAR(S):

JULY 7, 2007



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P. O. Box 3487
Houston, TX 77253-3487
5555 San Felipe Road
Houston, TX 77056-2799
Telephone: (713) 296-3510
FAX: (713) 499-8595

CERTIFIED MAIL 91 7108 2133 3931 6645 7164

July 7, 2007

Mr. Wayne Price
Environment Bureau
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87504

RE: 2006 Annual Groundwater Monitoring Report, Former Bertha Barber Tank Battery (BBTB) Remediation, Lea County, NM

Dear Mr. Price:

Please find enclosed the Site Remediation Activity Report for the former BBTB site. The activities in this report were based on a plan which was previously approved by OCD. This report, which was prepared by BBC International., summarizes the excavation, liner installation, backfilling, and reseeding activities which were completed on May 7, 2007.

If you have any questions or need any additional information, please contact me at (713) 296-3510 or at TCPersaud@MarathonOil.com.

Sincerely,

A handwritten signature in cursive script that reads 'Terry Persaud'.

Terry Persaud
Advanced HES Professional

\TCP
Enclosure

cc: Tom Breninger w/o enclosure
Dennis Williams w/ enclosure

File: NM-BBTB-2504-001

FORMER BERTHA BARBER TANK BATTERY

2007 Site Remediation Activities Report

May 2007

MARATHON OIL COMPANY

HOUSTON, TEXAS

Prepared By:

BBC International, Inc.
World-Wide Environmental Specialists

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Figure 1: Proposed Excavation Map

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Appendix II: Site Activities Pictures

1.0 INTRODUCTION

The subject site is located in Section 5, Township 20 South, Range 37 East. The site is located approximately 1.5 miles south of Monument, New Mexico.

In November 1998, ARCADIS Geraghty & Miller, Inc. performed a preliminary soil investigation. The soil investigation consisted of 36 soil borings in the large tank bottom pit, the small tank bottom pit, the former tank pad, the location of the former oil/water separator, and the hardpan area west of the oil/water separator. In December 1998, five of the soil borings were converted into monitor wells.

Additional soil borings and monitor wells were placed to delineate the site in August 1999. Three monitor wells and three soil borings were added in December 2002 for further delineation in the saltwater evaporation pit.

The New Mexico Oil Conservation Division (NMOCD) gave permission to Marathon Oil Company (MOC) to discontinue sampling monitor well MW-10 as of March 6, 2003 due to potential impact from pipeline release up gradient of the site.

2.0 PROPOSED REMEDIATION

In the Annual Groundwater report of December 2006 submitted to the NMOCD, Marathon Oil Company proposed remediation activities that involved excavating areas at the site, installation of plastic liners in certain areas, then backfilling the excavations with clean soil. See **Figure 1** for a map depicting the proposed excavations and lined areas.

On February 15, 2007, Mr. Wayne Price of the NMOCD, approved the remediation plan via e-mail. See **Appendix I**.

3.0 REMEDIATION ACTIVITIES

On April 11, 2007, site remediation activities were started according to the NMOCD-approved plan.

As shown on Figure 1, the areas in yellow were excavated to 1 foot below ground surface (bgs) to remove hard asphaltic material. These areas included the area south of the pit as well as the sluice box and former tank battery areas. The section outlined without color south of the pit represents various shallower excavations throughout that area. All sections in blue were excavated to 2 feet bgs. In addition, areas shown in light blue were lined with a 20 mil plastic liner before backfilling. These areas include the pit area and the section west of the tank battery. The total area of the proposed excavation covers approximately 50,645 square feet.

Excavation, lining, and backfilling activities were completed on April 27, 2007. A total of 4,140 cubic yards of soil was excavated and disposed of at C & C Land Farm, an NMOCD-approved land farm in Monument, NM. A total of 4,080 cubic yards of clean soil was backfilled at the site.

Please see **Appendix II** for pictures of site activities.

On May 7, 2007, the site was seeded with native grasses and disced. This concludes soil remediation activities at the site.

FIGURE 1

PROPOSED EXCAVATION MAP

Former Bertha Barber
Tank Battery

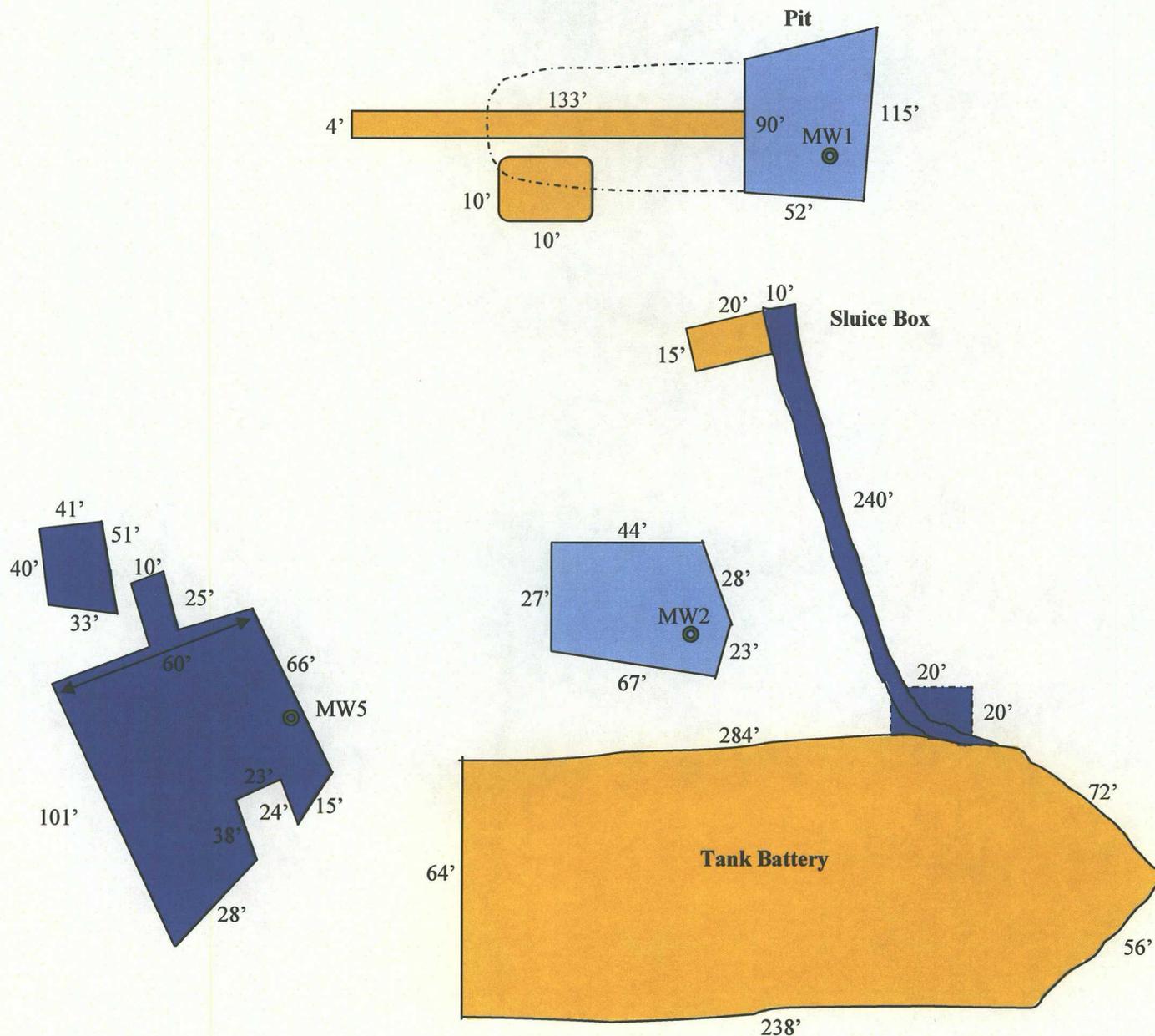
May 2007

Marathon Oil Company
Houston, Texas

Prepared by:
BBC International, Inc.



Figure 1. MARATHON OIL COMPANY BERTHA BARBER TANK BATTERY Proposed Excavation



LEGEND

- 2' Excavation & 20 mil Liner
- 2' Maximum Excavation
- 1' Excavation
- Monitor Well
- Various Shallow Excavations

BBC INTERNATIONAL, INC.

**MARATHON OIL COMPANY
FORMER BERTHA BARBER TB**

Date: 5-10-07

Drawn By: JG

Disk:

Sheet 1 of 1 Sheets

Scale: Not to Scale

File Name

APPENDIX I

NMOCD APPROVAL E-MAIL

Former Bertha Barber
Tank Battery

May 2007

Marathon Oil Company
Houston, Texas

Prepared by:
BBC International, Inc.

Cliff P. Brunson

From: Persaud, Terry [tcpersaud@marathonoil.com]
Sent: Monday, March 05, 2007 11:54 AM
To: Jennifer Gilkey
Cc: Kurki, Vijay K.; Cliff Brunson
Subject: OCD aproval for the Former Bertha Barber Remediation Project.

Jennifer,

Here is the e-mail from Wayne Price of the OCD granting approval for this project.

thanks

Terry

From: Price, Wayne, EMNRD [mailto:wayne.price@state.nm.us]
Sent: Thursday, February 15, 2007 5:05 PM
To: Kurki, Vijay K.
Cc: Persaud, Terry
Subject: RE:

OCD hereby approves of the action plan.

Please be advised that approval of this plan does not relieve the owner/operator of responsibility should operations result in pollution of surface water, ground water or the environment. Nor does approval of the permit relieve the owner/operator of its responsibility to comply with any other applicable governmental authority's rules and regulations.

Wayne Price
Environmental Bureau Chief
Oil Conservation Division
1220 S. Saint Francis
Santa Fe, NM 87505
505-476-3490
Fax: 505-476-3462

From: Kurki, Vijay K. [mailto:vkkurki@marathonoil.com]
Sent: Thursday, February 15, 2007 1:39 PM
To: Price, Wayne, EMNRD
Cc: Persaud, Terry
Subject:

Hi Wayne,

Following up on our conversation earlier today, Marathon Oil Company (MOC) is requesting the approval of OCD to start the proposed remediation as outlined in section 3.0 of the 2006 Annual Groundwater Monitoring Report.

As outlined in section 3.0 and shown on Figure 3 of the report, MOC will excavate the site, install plastic liners in certain areas, and backfill the excavations with clean soils. I have attached Figure 3 for easy reference, which shows approximate dimensions of planned excavation. The amount of soil to be excavated and hauled to

5/10/2007

NMOCD approved landfarm.

Upon OCD's approval, MOC will work with BBC International, Inc and a contractor to move this project forward. Terry Persaud will oversee this project for MOC and his contact information is stated below for future reference. Let me know if you have any questions on this request.

<<Figure 3 - 2006 GW Monitoring Report.pdf>>

Thanks

Vijay K. Kurki, P.E.
Environmental Supervisor
Marathon Oil Co.
Phone: (713) 296-2213
Cell: (713) 408-6775
Fax: (713) 499-6746
VKKurki@MarathonOil.com

Terry Persaud, P.E.
Advanced HES Professional

Marathon Oil Company
P. O. Box 3487
Mail Stop 34:02
Houston, TX 77253-3487

Phone: (713) 296-3510
Fax: (713) 499-8595

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5/10/2007

APPENDIX II

SITE ACTIVITIES PICTURES

Former Bertha Barber
Tank Battery

May 2007

Marathon Oil Company
Houston, Texas

Prepared by:
BBC International, Inc.

Marathon Oil Company
Former Bertha Barber Tank Battery



Excavation of MW-1 Area



Excavation of MW-1 Area



Excavation of MW-1 Area

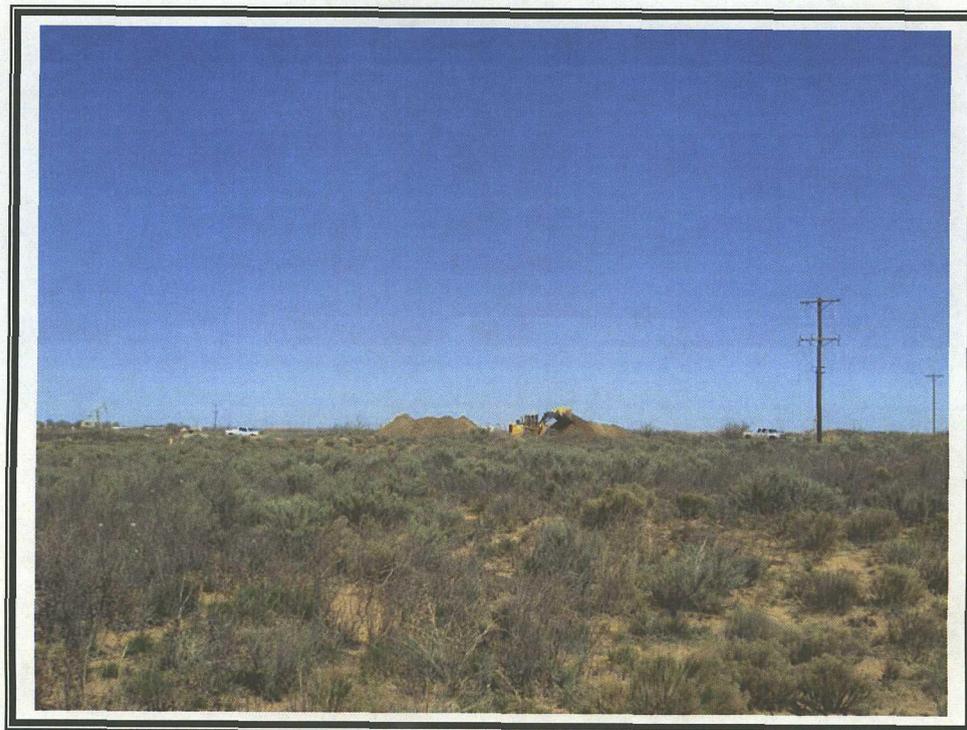


Excavation of MW-1 Area

Marathon Oil Company
Former Bertha Barber Tank Battery



Excavation of MW-1 Area



Excavation of MW-1 Area



Excavation of MW-1 Area



Excavation of MW-1 Area

Marathon Oil Company
Former Bertha Barber Tank Battery



Excavation of MW-5 Area



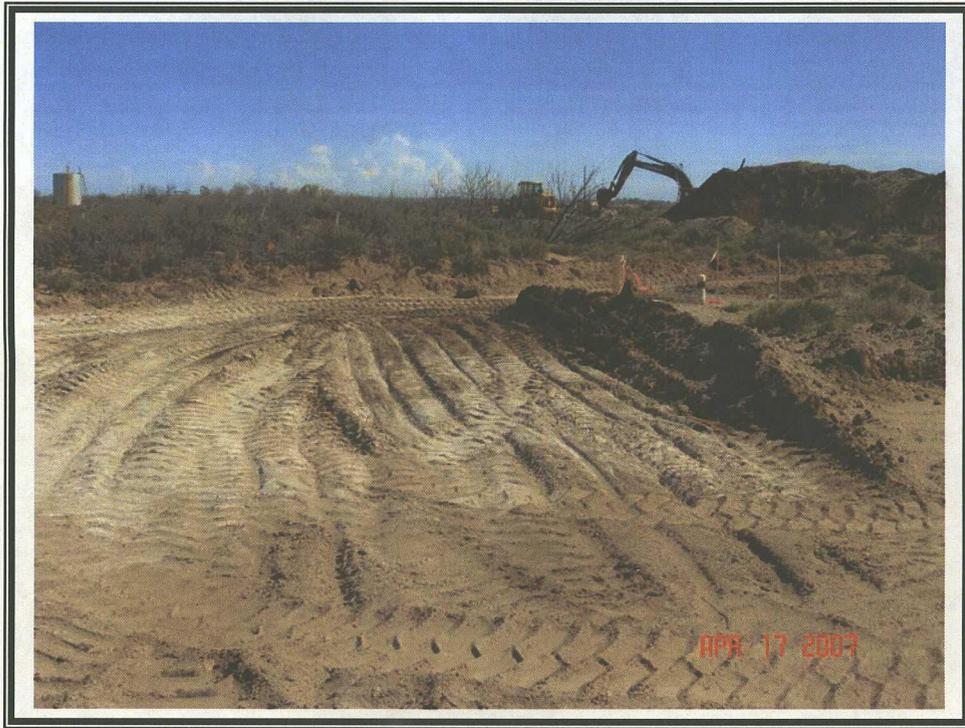
Excavation of MW-5 Area



Excavation of MW-5 Area



Excavation of MW-5 Area



Excavation of MW-5 Area

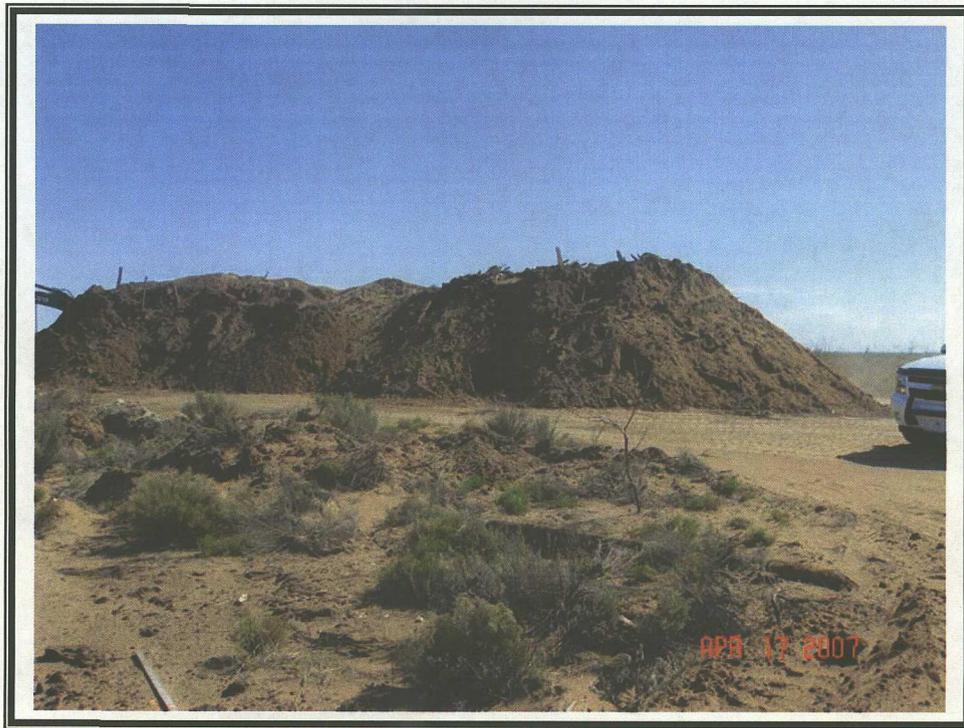


Excavation of MW-5 Area

Marathon Oil Company
Former Bertha Barber Tank Battery



Excavation of MW-5 Area



Excavation of MW-5 Area



Excavation of MW-1 Area



Excavation of MW-1 Area



Excavation of MW-1 Area



Excavation of Sluice Box



Excavation of Sluice Box



Installation of 20 mil Plastic Liner – MW-1 Area

Marathon Oil Company
Former Bertha Barber Tank Battery



Installation of 20 mil Plastic Liner – MW-1 Area



Installation of 20 mil Plastic Liner – MW-1 Area



Installation of 20 mil Plastic Liner – MW-1 Area



Installation of 20 mil Plastic Liner – MW-1 Area



Installation of 20 mil Plastic Liner – MW-1 Area



Installation of 20 mil Plastic Liner – MW-1 Area



Installation of 20 mil Plastic Liner – MW-1 Area



Installation of 20 mil Plastic Liner – MW-1 Area



Installation of 20 mil Plastic Liner – MW-1 Area



Installation of 20 mil Plastic Liner – MW-1 Area

Marathon Oil Company
Former Bertha Barber Tank Battery



Backfilling of MW-1 Area



Backfilling of MW-1 Area

Marathon Oil Company
Former Bertha Barber Tank Battery



Backfilling of MW-1 Area



Excavation of MW-2 Area



Excavation of MW-2 Area



Excavation of MW-2 Area

Marathon Oil Company
Former Bertha Barber Tank Battery



Excavation of MW-2 Area

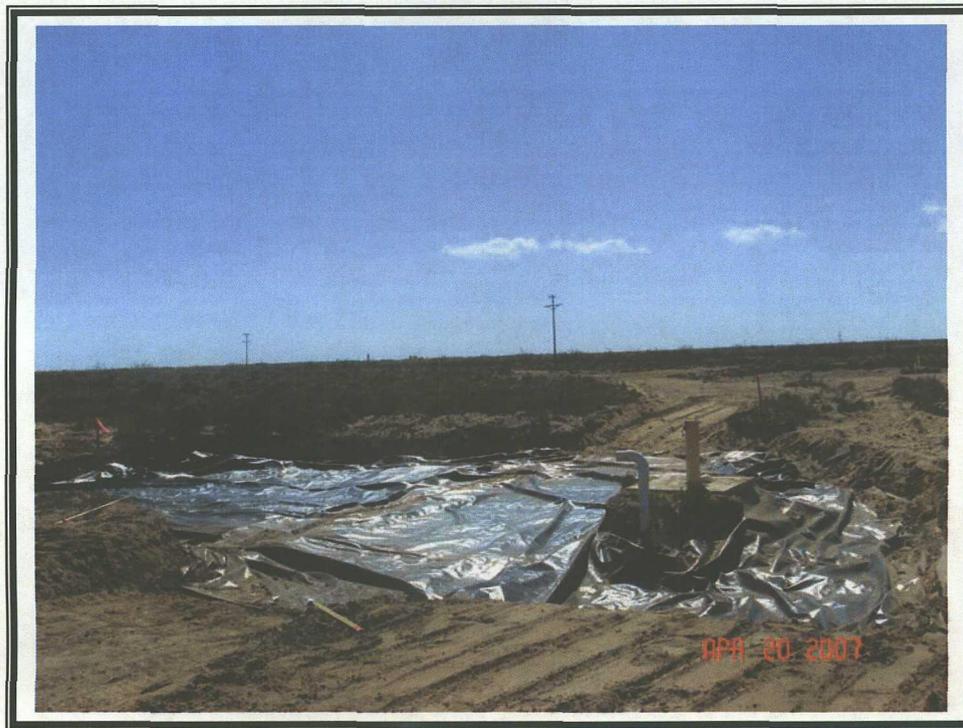


Excavation of MW-2 Area

Marathon Oil Company
Former Bertha Barber Tank Battery



20 mil Plastic Lines – MW-2 Area



20 mil Plastic Lines – MW-2 Area

Marathon Oil Company
Former Bertha Barber Tank Battery



Site Backfilling



Site Backfilling

Marathon Oil Company
Former Bertha Barber Tank Battery



Site Backfilling



Backfilled Site Prior to Seeding



Backfilled Site Prior to Seeding



Backfilled Site Prior to Seeding

Marathon Oil Company
Former Bertha Barber Tank Battery



Backfilled Site Prior to Seeding

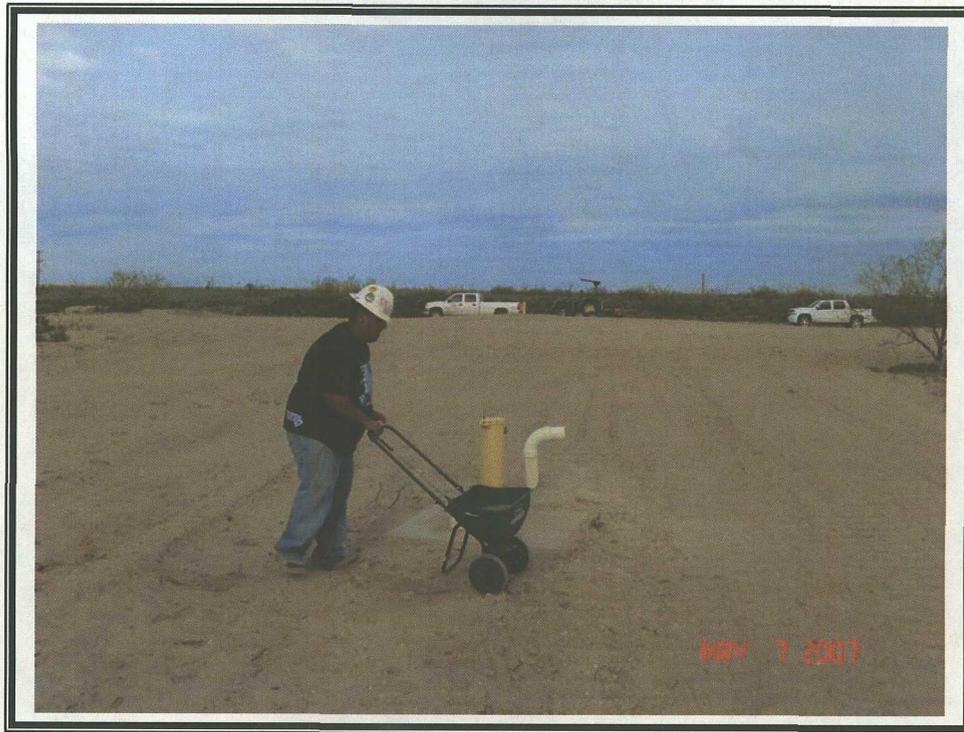




Backfilled Site Prior to Seeding



Backfilled Site Prior to Seeding



Spreading Seed



Discing in seed



Disced & seeded



Disced & seeded

Marathon Oil Company
Former Bertha Barber Tank Battery



Disced & seeded



Disced & seeded

Marathon Oil Company
Former Bertha Barber Tank Battery



Disced & seeded