PIT REMEDIATION PLAN

Highlander Environmental Corp.
Midland, Texas

NEED GW INVESTIGATION BY ARMADARKO

December 17, 1998

RECEIVED
DEC 21 1998
Environmental Bureau
Oil Conservation Division

Mr. William C. Olson, Hydrogeologist
State of New Mexico
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Re: Subsurface Environmental Assessment - Groundwater Plume Delineation, Texaco Exploration and Production, Inc., Former Eunice # 1 (South) Gas Plant, Lea County, New Mexico

Dear Mr. Olson:

Highlander Environmental Corp. (Highlander) has been retained by Texaco Exploration and Production, Inc. (Texaco) to delineate the extent of a groundwater contaminant plume at its Eunice # 1 (South) Gas Plant (Site), located approximately 4.5 miles south of Eunice, New Mexico. The Site is situated in the northwest quarter (NW/4) of the southwest quarter (SW/4), Section 27, Township 22 South, Range 37 East, Lea County, New Mexico. Figure 1 presents a Site location and topographic map.

Background

During the period July 1996 through June 1997, Highlander was retained by Texaco to conduct subsurface environmental investigations at the Site that were required by the New Mexico Oil Conservation Division (NMOCD), in conjunction with renewal of the Site's Groundwater Discharge Plan. The investigations consisted of collection and analysis of soil samples from hand auger and rotary-drilled borings, installation of monitoring wells, collection and analysis of groundwater samples, phase-separated hydrocarbon (free product) assessment, hydraulic conductivity (slug) tests and pumping tests. The results of these investigations have been documented in reports titled, " Subsurface Environmental Assessment, Texaco Exploration and Production, Inc., Eunice # 1 (South) Gas Plant, Lea County, New Mexico, September 1996" and "Final Investigation Report, Texaco Exploration and Production, Inc., Eunice # 1 (South) Gas Plant, Lea County, New Mexico, July 1997".

During November 1997, Highlander prepared the document titled, "Subsurface Abatement Work Plan", which was prepared on behalf of Texaco and submitted to the NMOCD. The Subsurface Abatement Work Plan was approved by the NMOCD on March 4, 1998, under the condition that Texaco submit a work plan to complete the

Submit 3 Copies to Appropriate District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL API NO.
NA

5. Indicate Type of Lease STATE ☐ FEE ☐

6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name
Langlie Mattix Penrose Sand Unit

1. Type of Well:
OIL WELL ☐ GAS WELL ☐ OTHER Pits

2. Name of Operator
Anadarko Petroleum Corporation

8. Well No.
NA

3. Address of Operator
PO Box 37, Loco Hills, NM 88255

9. Pool name or Wildcat
NA

4. Well Location See exhibits #1, #2, & #3
Unit Letter _____ : _____ Feet From The _____ Line and _____ Feet From The _____ Line

Section S 22, 27 & 29 Township 22S Range 37E NMPM Lea County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	☐	PLUG AND ABANDON	☐	REMEDIAL WORK	☐	ALTERING CASING	☐
TEMPORARILY ABANDON	☐	CHANGE PLANS	☐	COMMENCE DRILLING OPNS.	☐	PLUG AND ABANDONMENT	☐
PULL OR ALTER CASING	☐			CASING TEST AND CEMENT JOB	☐		
OTHER: _____	☐			OTHER: To close three pits			[X]

12. Describe Proposed or Completed Operations *(Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work)* SEE RULE 1103.

See attachments

RECEIVED
MAR 25 1996
OCD HOBBS OFFICE

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Mike Braswell TITLE Field Foreman DATE 03-19-96

TYPE OR PRINT NAME Mike Braswell TELEPHONE NO. 677-2411

(This space for State Use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

ANADARKO PETROLEUM CORPORATION [redacted]2829 #1 LOVINGTON HWY. • P. O. BOX 37 • LOCO HILL[redacted]M 88255-0037 • (505) 677-2411 • FAX (505) 677-2414

Anadarko

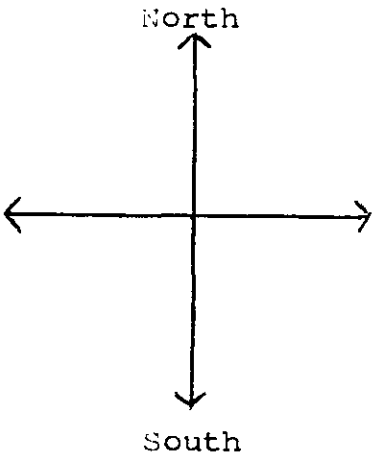
Subsequent Report - Langlie Mattix Penrose Sand Unit 3-19-96
Pit Closures

Anadarko Petroleum Corporation has closed the three emergency overflow pits located at the waterplants on the Langlie Mattix Penrose Sand Unit as per the Notice of Intent filed with the Hobbs NMOCD office on 12-12-95. The pit locations are shown on exhibits 1, 2, and 3. Soil sampling was done on these pits by coring as shown on exhibit 4 and the lab analysis of the samples are shown on exhibit 5. Anadarko went in and removed all the soil that was heavily contaminated with hydrocarbons and hauled this soil to Environmental Plus, Inc. which is an approved NMOCD Surface Waste Management Facility. There was 252 yards of contaminated soil hauled from pit #1, 216 yards hauled from pit #2 and 108 yards from pit #3. Then the pits were contoured to slope in a dome away from the centers and a 12 mil polyvinyl plastic sheeting was placed over the pit bottoms. This is designed to direct rainwater away from the pits and not allow percolation of rainwater through the remaining hydrocarbon affected soil. The pits were then backfilled with clean soil and recontoured to the original surface grade. There are pictures, as shown in exhibits 6, 7, and 8, of the pits before digging, during digging, before liner placement, after liner placement and completion of backfilling, except on pit #1. The pictures of before liner placement and after liner placement on pit #1 did not come out. Wayne Price with the NMOCD did inspect this pit before we placed the liner and backfilled. Exhibit 9 is a copy of the invoice for soil disposed of at Environmental Plus, Inc..

Anadarko
PETROLEUM CORPORATION

Mailing Address:
P. O. Drawer 130
Artesia, New Mexico 88211-0130

Office Location:
132829 #1
Lovington Hwy.
Loco Hills, New Mexico 88255
Off: (505) 677-2411
Fax: (505) 677-2414



Well Site
LMPSU #20-1
660' FSL & 1980' FEL
Sec. 27, T22S, R37E
Lea County, N. M.

149'

LMPSU Plant #1 Pit

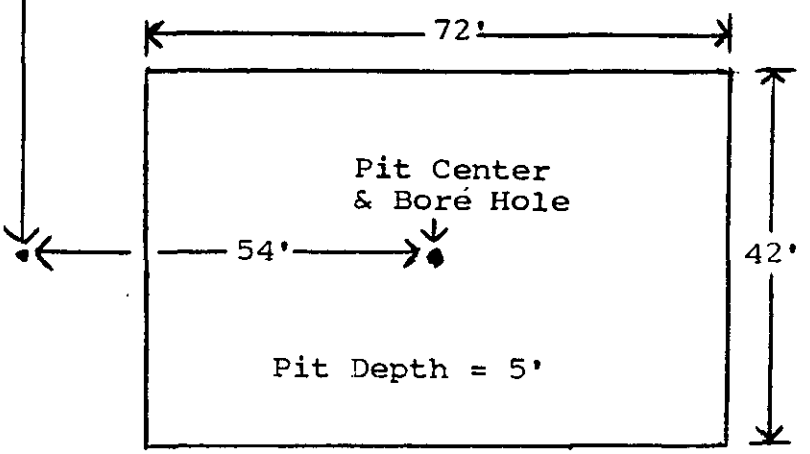
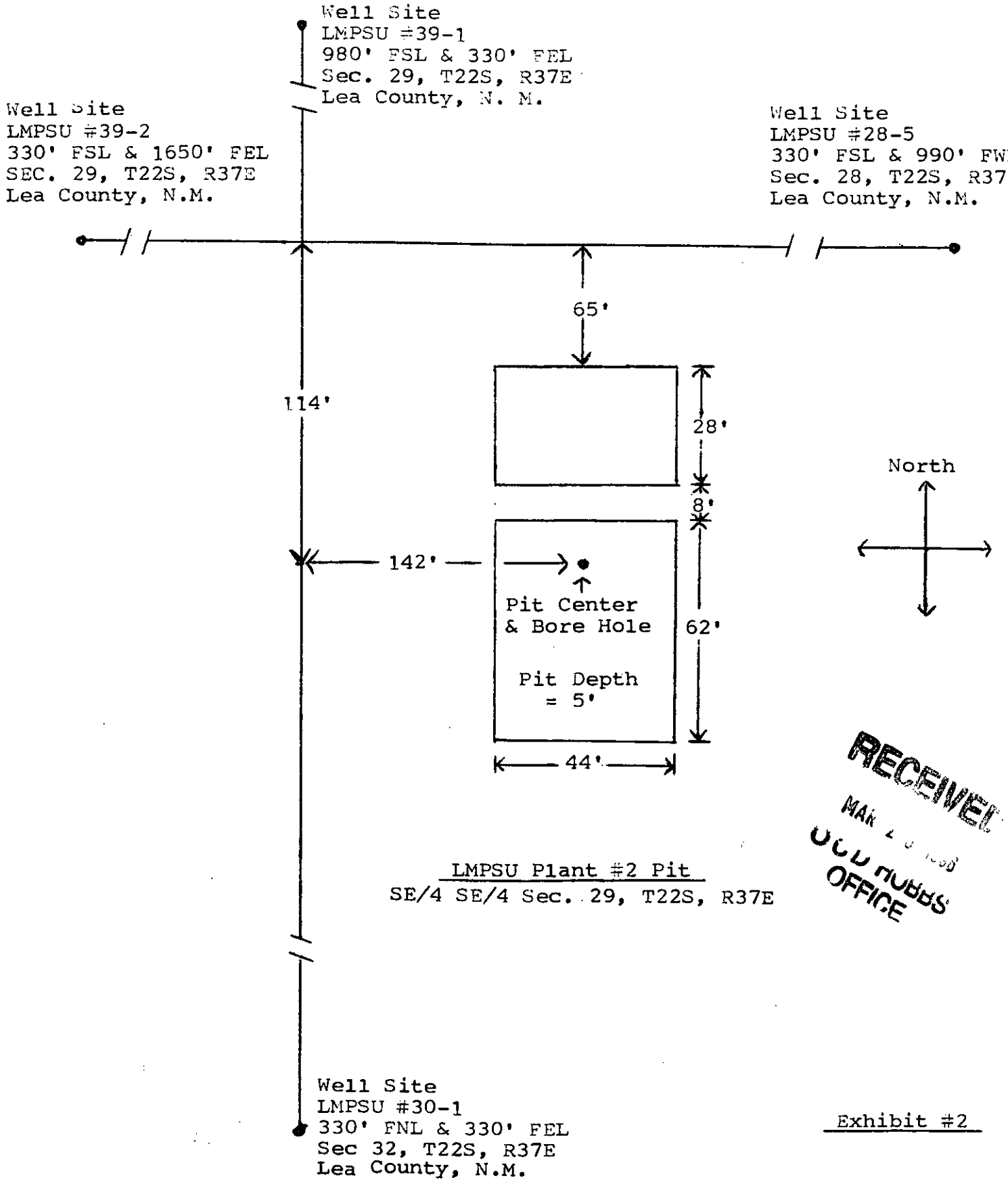


Exhibit #1

Anadarko
PETROLEUM CORPORATION

Mailing Address:
P. O. Drawer 130
Artesia, New Mexico 88211-0130

Office Location:
132829 #1
Lovington Hwy.
Loco Hills, New Mexico 88255
Off: (505) 677-2411
Fax: (505) 677-2414



LMPSU Plant #2 Pit
SE/4 SE/4 Sec. 29, T22S, R37E

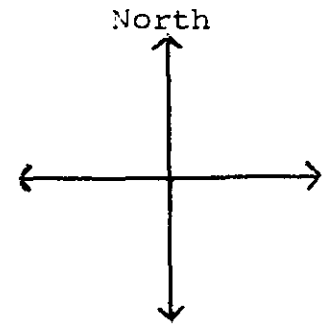
Exhibit #2

Anadarko
PETROLEUM CORPORATION

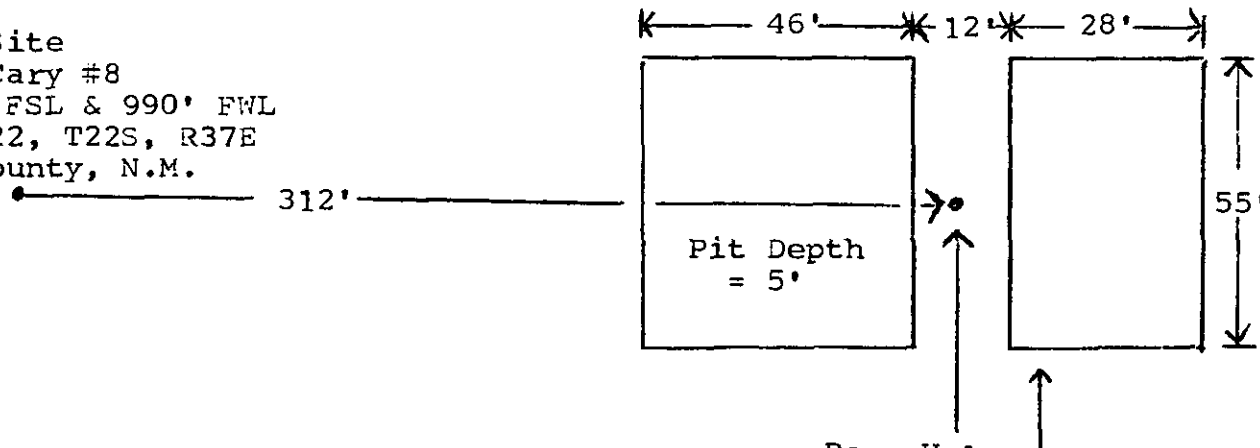
Mailing Address:
P. O. Drawer 130
Artesia, New Mexico 88211-0130

Office Location:
132829 #1
Lovington Hwy
Loco Hills, New Mexico 88255
Off: (505) 677-2411
Fax: (505) 677-2414

LMPSU Plant #3 Pit



Well Site
Will Cary #8
2310' FSL & 990' FWL
Sec. 22, T22S, R37E
Lea County, N.M.



North South Line

Well Site
LMPSU #4-5
1331' FSL &1331' FWL
Sec. 22, T22S, R37E
Lea County, N.M.

Exhibit #3

3206 Enterprise Dr.
P. O. Drawer 70
Hobbs, N.M. 88241-0070

HARRISON
Drilling & Environmental Services, Inc.
"Specializing in Environmental & Geotechnical Drilling"

PH: (505) 392-6768
FAX: (505) 392-9151

Field Notes Transcript (Sam Seed - Recorder)
Anadarko Petroleum Corporation
LMPSU Lact Pits #1, #2, & #3
Company Representative: Mr. Howard Hackett
OCD Representative: Mr. Wayne Price
Harrison Drilling Representatives: Sam Seed-Operations Mngr., Paul Brow-Field Technician/Equipment Operator, Donny Reza-Field Technician/Equipment Operator

November 30, 1995

0820 On location LMPSU Pit #3
0830 Drilling & calibration of PID
0900 20' depth. Drive sampler. No recovery. Cuttings @ surface grey powder.
0910 25' depth. Drive sampler. Reddish/brown sand. Packaged sample for lab. No odor. No staining. 2.6 PPM on PID.
0925 30' depth. Drive sampler. No odor. 1.8 PPM on PID.
1000 35' depth. Drive sampler. No odor. Packaged sample for lab. 1.9 PPM on PID. POH. Move to next location.
1040 Set up on pit #2.
1100 5' depth. Standby.
1120 10' depth. Drive sampler. Lt. to dk. grey sand & caliche. Strong to moderate hydrocarbon odor. 151.5 PPM on PID.
1140 15' depth. Drive sampler. Package sample for lab. No PID recorded. 20' depth. Drive sampler. Light tan sand & caliche fines. Very slight odor. 2.8 PPM on PID.
1215 25' depth. As above. 2.8 PPM on PID.
1220 POH. Move to Pit #1.
1250 Arrive Pit #1. Spot rig.
1315 Break for lunch.
1330 Arrive back to location.
1345 Begin drilling.
1400 Rig unstable. Rig down. Standby for matting boards.
1515 Matting boards arrive. Standby for winch truck.
1545 Winch truck arrives.
1550 Winch truck OOC. Rig down for evening.
1610 Off site.

December 1, 1995

0800 On location. Forklift Enterprises arrives to spot matting boards.
0810 Rig spotted. 15' depth. Surface cuttings returns black. Drive sampler. Dark grey sand & caliche. 6.1 PPM on PID.
0830 20' depth. Drive sample. Package sample for lab. Sand & sandstone. 8.5 PPM on PID.
0845 25' depth. Drive sampler. Slight odor. 4.0 PPM on PID. Package sample for lab.

Exhibit #4

0905 30' depth. Drive sampler. Very slight odor. 6.4 PPM on PID. Light tan to brown sand & caliche.
0915 35' depth. Drive sampler. 2.7 PPM on PID. Packaged sample for lab. Light reddish brown sand & caliche.
0935 40' depth. Drive sampler. No odor. 2.0 PPM on PID. 6" of red clay, balance caliche and light red to brown sand. Package sample for lab. Package all samples on ice for transport to lab.
1005 POH & rig down. Order cement & bentonite to plug all boreholes.
1030 Decontaminate all equipment. Secure support equipment.
1100 Meet cement truck. P&A boring(s) @ Pit #2, then #3, then #1. Witnessed by Mr. Price.
1155 Demobilize drilling equipment.
1215 Leave site to transport samples to lab in Midland, TX.
1400 Arrive Midland.
1412 Delivered samples to Maxim Technologies, Inc. lab. Return to Hobbs.

END NOTES
HAND WRITTEN ORIGINALS ON FILE @
HARRISON DRILLING & ENVIRONMENTAL SERVICES, INC.
3206 ENTERPRISE DRIVE
HOBBS, NM 88240

PH 505 392 6768
FAX 505 392 9151

MAXIM
TECHNOLOGIES INC

1703 West Industrial P.O. Box 2150 * Midland, Texas 79701 * 915/683-3349 FAX 915/686-0492

Client Jeff White
Anadarko Petroleum
P.O. Box 69470
Odessa, TX 79769

Client No. 4100164
Report No. M5-12-007
Report Date 12/12/95 14:03

Project LMPSU Pit Samples

Phone: 915/550-0023 Fax:

Date Sampled 12/01/95

Sampled By Client

Sample Type Soil

Transported by Client

P.O. # _____

Date Received 12/01/95

Lab No.	Sample Identification
M5-12-007-01	Pit #1 25'
M5-12-007-02	Pit #1 40'
M5-12-007-03	Pit #2 15'
M5-12-007-04	Pit #2 25'
M5-12-007-05	Pit #3 25'
M5-12-007-06	Pit #3 35'

MAXIM

MCC
Reviewed By

ALLAN B. JOHNSTON

Exibit #5
Page 1 of 6

MAXIM

Order # M5-12-007
12/12/95 14:03
Client: Anadarko Petroleum

TEST RESULTS BY SAMPLE

Sample: 01A Pit #1 25' Collected: 12/01/95 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Started	Analyst
CHLORIDE	SM 4500-CL,B	2410	mg/kg	14	12/07/95	JKR
TOT.PET. HYDROCARBONS SOIL	EPA 418.1	33.1	mg/kg	4.93	12/12/95	SLS

Sample: 02A Pit #1 40' Collected: 12/01/95 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Started	Analyst
CHLORIDE	SM 4500-CL,B	6010	mg/kg	14	12/07/95	JKR
TOT.PET. HYDROCARBONS SOIL	EPA 418.1	< 4.96	mg/kg	4.96	12/12/95	SLS

Sample: 03A Pit #2 15' Collected: 12/01/95 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Started	Analyst
CHLORIDE	SM 4500-CL,B	993	mg/kg	14	12/07/95	JKR
TOT.PET. HYDROCARBONS SOIL	EPA 418.1	19.6	mg/kg	4.96	12/12/95	SLS

Sample: 04A Pit #2 25' Collected: 12/01/95 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Started	Analyst
CHLORIDE	SM 4500-CL,B	1520	mg/kg	14	12/07/95	JKR
TOT.PET. HYDROCARBONS SOIL	EPA 418.1	< 4.96	mg/kg	4.96	12/12/95	SLS

Sample: 05A Pit #3 25' Collected: 12/01/95 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Started	Analyst
CHLORIDE	SM 4500-CL,B	1760	mg/kg	14	12/07/95	JKR
TOT.PET. HYDROCARBONS SOIL	EPA 418.1	< 4.83	mg/kg	4.83	12/12/95	SLS

MAXIM

Order # M5-12-007
12/12/95 14:03
Client: Anadarko Petroleum

TEST RESULTS BY SAMPLE

Sample: 06A Pit #3 35' Collected: 12/01/95 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Started	Analyst
CHLORIDE	SM 4500-CL,B	752	mg/kg	14	12/07/95	JKR
TOT.PET. HYDROCARBONS SOIL	EPA 418.1	< 4.65	mg/kg	4.65	12/12/95	SLS

MAXIM

Order # M5-12-007
12/12/95 14:03
Client: Anadarko Petroleum

TEST RESULTS BY SAMPLE

Sample Description: Pit #1 25' Lab No: 01A
Test Description: BTEX - SOIL SAMPLE Method: SW-846, 8020 Test Code: BTEX_S
Collected: 12/01/95 Category: S

Date Extracted		Date Started	12/07/95
Analyst	WJJ	Detection Limit	0.02
Units	mg/kg	Method	SW-846, 8020

Compound	Results
BENZENE	< 0.02
TOLUENE	< 0.02
ETHYLBENZENE	< 0.02
XYLENE	< 0.02

Sample Description: Pit #1 40' Lab No: 02A
Test Description: BTEX - SOIL SAMPLE Method: SW-846, 8020 Test Code: BTEX_S
Collected: 12/01/95 Category: S

Date Extracted		Date Started	12/07/95
Analyst	WJJ	Detection Limit	0.02
Units	mg/kg	Method	SW-846, 8020

Compound	Results
BENZENE	< 0.02
TOLUENE	0.02
ETHYLBENZENE	< 0.02
XYLENE	< 0.02

Sample Description: Pit #2 15' Lab No: 03A
Test Description: BTEX - SOIL SAMPLE Method: SW-846, 8020 Test Code: BTEX_S
Collected: 12/01/95 Category: S

Date Extracted		Date Started	12/07/95
Analyst	WJJ	Detection Limit	0.02
Units	mg/kg	Method	SW-846, 8020

Compound	Results

MAXIM

Order # MS-12-007
12/12/95 14:03
Client: Anadarko Petroleum

TEST RESULTS BY SAMPLE

Sample Description: Pit #2 15' Lab No: 03A
Test Description: BTEX - SOIL SAMPLE Method: SW-846, 8020 Test Code: BTEX_S
Collected: 12/01/95 Category: S

BENZENE	< 0.02
TOLUENE	0.02
ETHYLBENZENE	< 0.02
XYLENE	< 0.02

Sample Description: Pit #2 25' Lab No: 04A
Test Description: BTEX - SOIL SAMPLE Method: SW-846, 8020 Test Code: BTEX_S
Collected: 12/01/95 Category: S

Date Extracted		Date Started	12/07/95
Analyst	WJJ	Detection Limit	0.02
Units	mg/kg	Method	SW-846, 8020

Compound	Results
BENZENE	< 0.02
TOLUENE	< 0.02
ETHYLBENZENE	< 0.02
XYLENE	< 0.02

Sample Description: Pit #3 25' Lab No: 05A
Test Description: BTEX - SOIL SAMPLE Method: SW-846, 8020 Test Code: BTEX_S
Collected: 12/01/95 Category: S

Date Extracted		Date Started	12/07/95
Analyst	WJJ	Detection Limit	0.02
Units	mg/kg	Method	SW-846, 8020

Compound	Results
BENZENE	< 0.02
TOLUENE	< 0.02
ETHYLBENZENE	< 0.02
XYLENE	< 0.02

MAXIM

Order # M5-12-007
12/12/95 14:03
Client: Anadarko Petroleum

TEST RESULTS BY SAMPLE

Sample Description: Pit #3 35'
Test Description: BTEX - SOIL SAMPLE
Collected: 12/01/95

Lab No: 06A
Method: SW-846, 8020 Test Code: BTEX_S
Category: S

Date Extracted		Date Started	12/07/95
Analyst	WJJ	Detection Limit	0.02
Units	mg/kg	Method	SW-846, 8020

Compound	Results
BENZENE	< 0.02
TOLUENE	< 0.02
ETHYLBENZENE	< 0.02
XYLENE	< 0.02

ANADARKO PETROLEUM CORPORATION [redacted]2829 #1 LOVINGTON HWY. • P. O. BOX 37 • LOCO HILLS[redacted] 88255-0037 • (505) 677-2411 • FAX (505) 677-2414

Anadarko

Pit #1

Before Digging

During Digging

Exhibit #6

• LOCO HILLS [redacted]88255-0037 • (505) 677-2411 • FAX (505) 677-2414

Anadarko

Pit #2

Before Digging

During Digging

Before Liner Placement

Exhibit #7

ANADARKO PETROLEUM CORPORATION • [redacted]829 #1 LOVINGTON HWY. • P. O. BOX 37 • LOCO HILLS [redacted]88255-0037 • (505) 677-2411 • FAX (505) 677-2414

Anadarko

Pit #2

After Liner Placement

Completion of Backfill

Exhibit #7

• LOCO HILLS 88255-0037 • (505) 677-2411 • FAX (505) 677-2414

Anadarko

Pit #3

Before Digging

During Digging

Before Liner Placement

Exhibit #8

ANADARKO PETROLEUM CORPORATION [redacted]829 #1 LOVINGTON HWY. • P. O. BOX 37 • LOCO HILLS [redacted]88255-0037 • (505) 677-2411 • FAX (505) 677-2414

Anadarko

Pit #3

After Liner Placement

Completion of Backfill

Exhibit #8

INVOICE

ENVIRONMENTAL PLUS, INC.

STATE APPROVED LAND FARM

PHONE (505) 394-3481 P.O. BOX 969
EUNICE, NEW MEXICO 88231
FED. ID 85-0416233

Nº 152

DATE 3-8-96

Anadarko
P.O. Box 806
Eunice, NM 88231

Contaminated soil from Pits 1,2,&3. 576 Yards @ $14.00 Per Yard	$8,064.00
5.25% Sales Tax	423.36
Total	$8,487.36

Anadarko-Lease Hills Ven. # _____
Lease Name/Well # LMPSU WP #1,2+3
Description Contaminated soil from pits
Nominals 283 . 3000
Property # _____
AFE # 12034
Inv. Type _____ Inv. ID _____
EXP____ W/O____ CAP____ P&A____
Date 3-14-96
Approval _____

Thank You!

RECEIVED
MAR 25 1996
HOBBS OFFICE

Exhibit #9

NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88241-1980
(505) 393-6161

NMOCD INTER-OFFICE CORRESPONDENCE

TO: Roger Anderson-Environmental Bureau Chief

From: Wayne Price-Environmental Engineer

Date: July 19, 1996

Reference: Anadarko Pit Closures

Subject: Pit Closures and Chlorides

Comments:

Dear Roger,

Jerry requested I remind you of the Pit Closure project in which Anadarko came to Santa Fe and met with NMOCD.

I have included the C-103's closure plans submitted by Anadarko dated 3/19/96, My recommendations to Jerry dated 4/18/96, and a letter Jerry wrote to Bill LeMay on 4/23/96.

We are requesting that the NMOCD Environmental Bureau review the pit closures and provide guidance and recommendations to the district on this matter.

Any help in this technical and policy decision making process would be greatly appreciated and we value your comments.

cc: Jerry Sexton-NMOCD District I Supervisor
Bill LeMay-NMOCD Director

attachments-3 pit closures
-2 letters

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OFFICE OF THE SECRETARY
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-5950

Jennifer A. Salisbury
CABINET SECRETARY

96 AM 8 52

April 23, 1996

To: Bill LeMay

From: Jerry Sexton

Subject: Pit closure and chlorides

Anadarko sent in the pit closure forms for the pits they came to Santa Fe to discuss with You, Roger, and Bill Olson. Chlorides were not addressed in the pit closure forms that were sent in and my question is if this is acceptable.

Wayne recommends that this be part of the closure plan with the realization that this is a policy decision that needs to be made in Santa Fe on how we address this issue. If I remember the discussion in Santa Fe this was exactly how Anadarko proposed to close the pit and were not going to address the chlorides. I do not remember us giving a decision if this would be okay.

I don't have a problem which ever way you want us to go. If I remember what Anadarko said was that if they were guidelines they were not going to check for chlorides.

cc: Roger Anderson
Bill Olson
Wayne Price

NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88241-1980
(505) 393-6161

OIL CONSERVATION DIVISION
RECEIVED

96 APR 24 AM 8 52

cc: ROGER ANDERSON/
BILL OLSON

NMOCD INTER-OFFICE CORRESPONDENCE

TO: Jerry Sexton-NMOCD District I Supervisor

From: Wayne Price-Environmental Engineer

Date: April 18, 1996

Reference: Anadarko Petroleum Corporation

Subject: Langlie Mattix Penrose Sand Unit (Pit Closures).
Pit #1-511'FSL & 1926' FEL - Sec 27,-Ts22s,-R37e
Pit #2-866'FSL & 188' FEL - Sec 29,-Ts22s,-R37e
Pit #3-2310FSL & 1303' FWL - Sec 22,-Ts22s,-R37e

Comments:

Dear Jerry,

I have reviewed the three above referenced Pit Closures submitted by Anadarko and have found that the final closure reports do not properly address the "OCD APPROVAL CONDITIONS FOR RCRA EXEMPT UNLINED PIT CLOSURES" conditions that were attached to their original C-103.

Please note the issue of the High Chlorides content that was experienced during the time of the soil borings when they were checking vertical extent in Pit #1 was not addressed in the closure report. Also, there was no mention or documentation of any determination that resulted from the Santa Fe meeting which negated my original recommendation. Therefore, it appears that Anadarko has not fulfilled the requirements set forth in the OCD approval conditions.

The other following deficiencies which were noted and are common to all three closures are listed below.

1. Item #1b. of the conditions require that if contaminated soils are not remediated to recommended levels then a risk assessment will be provided which shows that an alternate clean-up level or treatment technology is protective of the environment.

   There was no "Risk Assessment Closure" information provided.

2. Item #1c.& 1d. of the conditions ask for Final soil contaminant levels.

   This information was not provided with the closures.

3. Item #4.- **Anadarko did not provide the "Pit Remediation and Closure Report" form as requested.**

4. Item #5.-**Copies were not provided to the NMOCD Santa Fe office.**

Please note that after the Santa Fe meeting there was no communication from Anakarko to me requesting specific information on proper closure required by NMOCD District I. Therefore I could only assume that Anadarko had received permission to close the pits using an **alternate method other than our "Unlined Surface Impoundment Closure Guidelines".**

Please note on February 21, 1996 I visited the three sites. Pit #1 and #2 were already excavated and preparation was being made to place liners in them. Pit #3 was completed but equipment still on site. I inspected the three pits and found heavy BS&W still remaining in them. This waste material had been covered with dirt. I used a 3 foot long dirt tier to take subsurface samples. I informed Mike Braswell of Anadarko of this and he indicated he would take care of it. I did not receive any feedback from Anadarko on how much additional material was removed, if any.

My findings on this matter is that Anadarko was not being consistent with their previously submitted work plans. In that plan they had committed to removing all the heavily contaminated material.

Therefore I cannot recommend approval until these matters are properly addressed.

I would like to recommend that you review the closures and if you feel they are closed properly or adequately then request you approve them, or send them up to our Santa Fe Environmental group and get their opinion on the matter.

If Anadarko is utilizing an **alternate "Risk Assessment Method" for closure** then I recommend the closures be sent to Roger Anderson. Roger has indicated to me that all new "Risk Assessment Methods" be reviewed by his department since the Districts have not been trained in this area yet.

cc:

attachments-1 Pit closures for pit #1,2,3

NMOCD
Inter-Office Correspondence

TO: Roger Anderson-Environmental Bureau Chief

From: Wayne Price-Environmental Engineer

Date: January 09, 1996

Reference: Anadarko Pit Closure

Subject: Meeting with Anadarko personnel.

Tony Meyer-Div. Production Mgr.
Mike Grey-Environmental & Saf. Rep.
Mike Braswell-Pro. foreman.

Jerry Sexton-NMOCD District I Supervisor
Wayne Price- NMOCD Environmental Engineer

Dear Roger,

Please note that Anadarko requested a meeting today concerning the issue of my recommendation to them that they should investigate the high chlorides content that was experienced during the time of the soil borings when they were checking vertical extent in the pits.

As a result of our meeting in Hobbs today, **Anadarko has decided to come to Santa Fe Next week and meet with Mr. LeMay and you concerning this issue. Jerry Sexton is also going to attend since he will be up there.**

It appears their main complaint and concern is that the NMOCD has allowed these type of unlined pits to be operated by companies in the past and now they do not feel they should be responsible or obligated to check for possible ground water contamination and Anadarko is worried about the liability and possible future cost if ground water has been impacted.

Also they pointed out that our Pit Closure guidelines do not mention Chlorides and that I have overstepped my authority by asking them to include chlorides during their sampling event.

Please note my preliminary investigation and field reports indicates a high probability that natural occurring ground water exist and the discharge from the pit might have impacted this water. The LMPSU #1 pit soil boring sample taken at 40' was moist to wet, the driller on site indicated we were in top of the water. The chlorides on this sample were around 6000 ppm.

I approved the pit closure plan with our standard pit closure conditions and a **recommendation** (not requirement) that Anadarko further investigate the high Chlorides content from pit #1.

Please note during my field trips in the past I have routinely witnessed standing fluids in these pits. During the soil borings there was so much oily sludge in the pit it would not support the rig and special arrangements had to be made to compensate for this.

These pits were originally netted and at times had free oil on them. There is an estimated 15 to 20 feet of oily contaminated sludge and Basic Sediment (BS) remaining in the pit.

Bill Olson has most of the file contents, if you need additional information, pictures, field notes, maps, etc. please do not hesitate to call.

cc: Jerry Sexton-District I Supervisor
Bill Olson-Hydrogeologist

TO: BILL OLSON
NMOCD

NMOCD Inter-Correspondence

To: Jerry Sexton-District I Supervisor

From: Wayne Price-Environmental Engineer District I

Date: December 13, 1995

Reference: Anadarko Petroleum Corp.

Subject: Submitted C-103's Pit Closures for Approval

Comments:

Dear Jerry,

Please find attached Anadarko's Pit Closures for the three pits located in the Langlie Mattix Penrose area. I have reviewed these closures and have discussed them with our Santa Fe Environmental Bureau.

I have signed the bottom of the C-103 to let you know that I have reviewed and approve. I have also attached our generic "OCD Approval Conditions" that Bill Olson designed to simplify this process.

Please note during my field trips I noted that in Pit #1 wet moist sand was encountered at 40 feet. Both Anadarko's and my results indicate that high chloride contents are present. Therefore I have made a recommendation to Anadarko that they further investigate this to see if they have impacted ground water. For your information the WQCC regulatory limits on chlorides is 250 ppm. Anadarko results reflect over 6000 ppm which is approximately 24 times the limit allowed coupled with the fact that the drilling indicated that we were probably at the top of the water.

I have enclosed the C-103 for your approval. Please let me know if you need additional info.

Thanks!

cc: Roger Anderson-Environmental Bureau Chief

BILL,

WOULD YOU MIND LOOKING OVER, THIS IS THE ANADARKO PROJECT I DISCUSSED ON THE PHONE WITH YOU!

THANKS

Submit 3 Copies to Appropriate District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL API NO. NA

5. Indicate Type of Lease STATE ☐ FEE ☐

6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name: Langlie Mattix Penrose Sand Unit

1. Type of Well: OIL WELL ☐ GAS WELL ☐ OTHER Pits

2. Name of Operator: Anadarko Petroleum Corporation

8. Well No. NA

3. Address of Operator: P.O. Box 37, Loco Hills, N.M. 88255

9. Pool name or Wildcat NA

4. Well Location
Unit Letter _____ : _____ Feet From The See exhibits #1, #2, & #3 Line and _____ Feet From The _____ Line

Section s 22, 27 & 29 Township 22S Range 37 E NMPM Lea County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	☐	PLUG AND ABANDON	☐	REMEDIAL WORK	☐	ALTERING CASING	☐
TEMPORARILY ABANDON	☐	CHANGE PLANS	☐	COMMENCE DRILLING OPNS.	☐	PLUG AND ABANDONMENT	☐
PULL OR ALTER CASING	☐			CASING TEST AND CEMENT JOB	☐		
OTHER: To close three pits.	☒			OTHER:			☐

12. Describe Proposed or Completed Operations *(Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work)* SEE RULE 1103.

See attachments

RECEIVED
DEC 13 1995
OCD HOBBS OFFICE

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Mike Braswell TITLE Field Foreman DATE 12-12-95

TYPE OR PRINT NAME Mike Braswell TELEPHONE NO. 677-2411

(This space for State Use)

APPROVED BY JERRY SEXTON DIST. SUP. TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

Approved per attached OCD Approval Conditions and Recommend that Anadarko further investigate the High Chlorides content from Pit #1.

OCD APPROVAL CONDITIONS
FOR
RCRA EXEMPT
UNLINED PIT CLOSURES

1. The following closure actions will be performed in accordance with OCD's February 1993 "SURFACE IMPOUNDMENT CLOSURE GUIDELINES":

   a. Vertical and horizontal extent of contamination will be determined either prior to, during or upon completion of remedial actions.

   b. Contaminated soils will be remediated to the OCD's recommended levels or a risk assessment will be provided which shows that an alternate cleanup level is protective of surface water, ground water, human health and the environment.

   c. Final soil contaminant concentrations will be determined upon completion of remedial actions.

   d. Soil samples for verification of completion of remedial actions will be sampled and analyzed for benzene, toluene, ethylbenzene, xylene **and** total petroleum hydrocarbons.

2. All wastes removed from a specific site will be disposed of at an OCD approved facility.

3. The OCD Santa Fe Office's Environmental Bureau Chief and the OCD Hobbs District Office will be notified within 24 hours of the discovery of ground water contamination related to a pit closure.

4. Upon completion of all closure activities, a completed OCD "Pit Remediation and Closure Report" form containing the results of all pit closure and soil remediation activities will be submitted to the OCD for approval. The report will include the concentrations and application rates of any materials or additives used to enhance bioremediation of the contaminants and the final concentrations of any soils landfarmed onsite or the final disposition of soils removed from the site . To simplify the approval process, the OCD requests that the final pit closure reports be submitted only upon completion of all closure activities including onsite remediation or landfarming of contaminated soils.

5. All original documents will be submitted to the OCD Hobbs Office for approval with copies provided to the OCD Santa Fe Office.

6. OCD approval does not relieve you of liability should closure activities determine that contamination exists which is beyond the scope of the work plan or if the closure activities fail to adequately remediate contamination related to your activities. In addition, OCD approval does not relieve you of responsibility for compliance with other federal, state or local laws and regulations.

Anadarko
PETROLEUM CORPORATION

Mailing Address:
P. O. Drawer 130
Artesia, New Mexico 88211-0130

Office Location:
132829 #1
Lovington Hwy.
Loco Hills, New Mexico 88255
Off. (505) 677-2411
Fax: (505) 677-2414

Sundry Notice - Langlie Mattix Penrose Sand Unit 12-12-95
Pit Closures

Anadarko Petroleum Corporation request the approval to close three emergency overflow pits located at waterplants on our Langlie Mattix Penrose Sand Unit. These pits are located in Lea County, New Mexico in Sections 22, 27 and 29 of Township 22 South, Range 37 East. A more detailed location of these pits are shown on exhibits 1, 2 and 3. Soil sampling was done on these pits by coring, as shown on exhibit 4, and samples were sent in for lab analysis. The lab analysis results are shown in exhibit 5. The bore holes were then plugged to surface with a cement and bentonite mixture. As shown by the lab results, Anadarko has determined that the fluids from these pits have not contaminated the soil down to the shallow fresh water zone which is found in this area at approximately 50' from surface. Anadarko now plans to go in and remove all of the soil that is heavily contaminated with hydrocarbons. Note: All the removed affected soil will be hauled to an approved NMOCD Surface Waste Management Facility. At this point, the bottom of the pits will then be contoured to slope in a dome away from the centers and a 12 mil polyvinyl plastic sheeting will be placed over the pit bottoms. The domes will be designed to direct rainwater away from the pits and not allow percolation of rainwater through the remaining hydrocarbon affected soil. The pits will then be backfilled with clean soil and recontoured back to the original surface grade. There will be a minimun of 3' of clean soil placed over the polyvinyl covers.

Anadarko
PETROLEUM CORPORATION

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Loco Hills, New Mexico 88255
Off: (505) 677-2411
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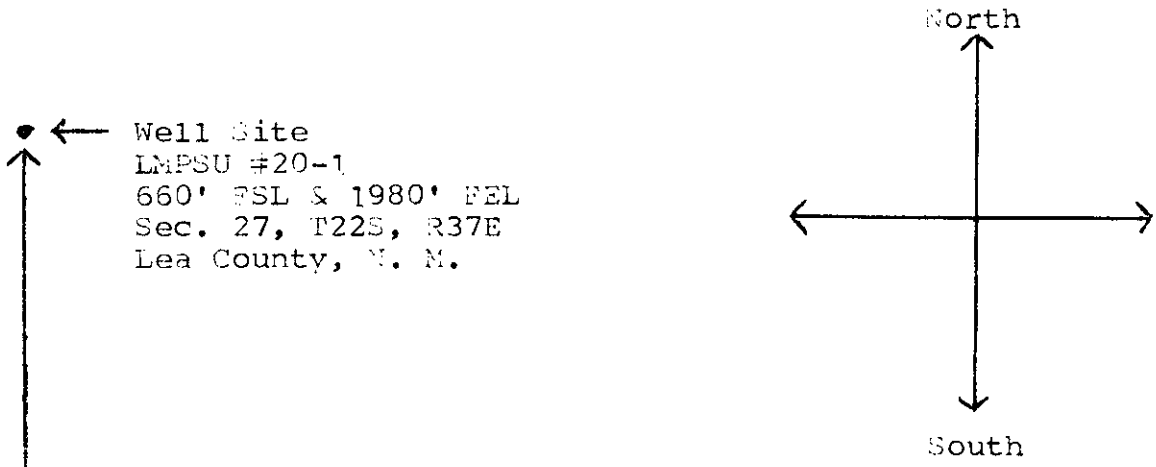


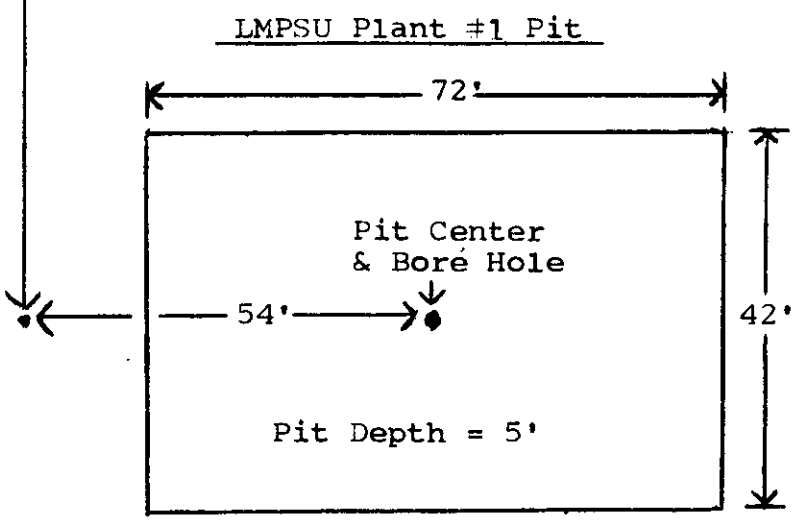
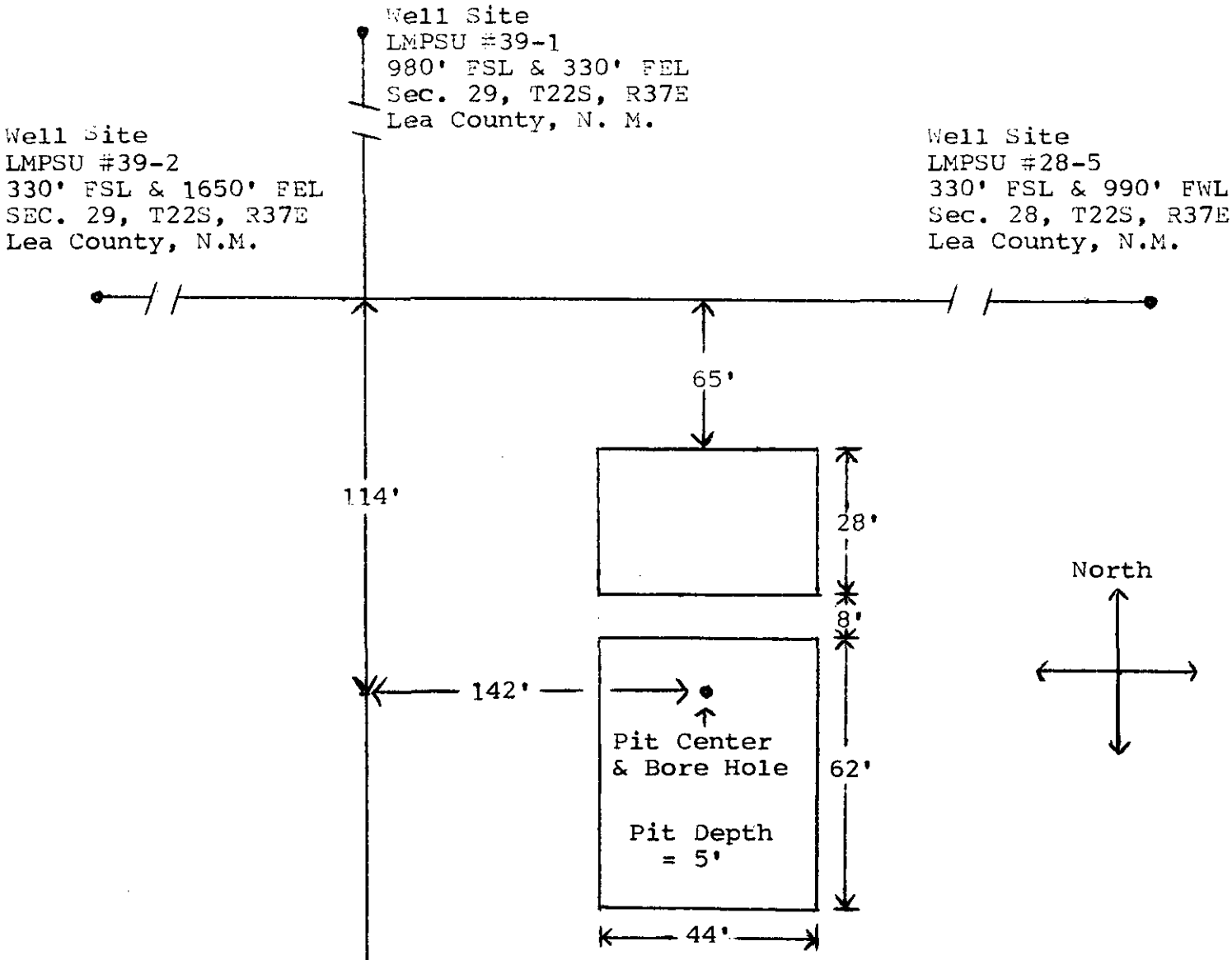


Exhibit #1

Anadarko
PETROLEUM CORPORATION

Mailing Address:
P. O. Drawer 130
Artesia, New Mexico 88211-0130

Office Location:
132829 #1
Lovington Hwy.
Loco Hills, New Mexico 88255
Off: (505) 677-2411
Fax: (505) 677-2414



LMPSU Plant #2 Pit
SE/4 SE/4 Sec. 29, T22S, R37E

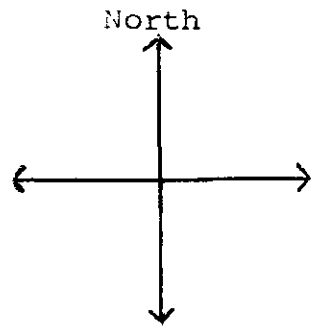
Exhibit #2

Anadarko
PETROLEUM CORPORATION

Mailing Address:
P. O. Drawer 130
Artesia, New Mexico 88211-0130

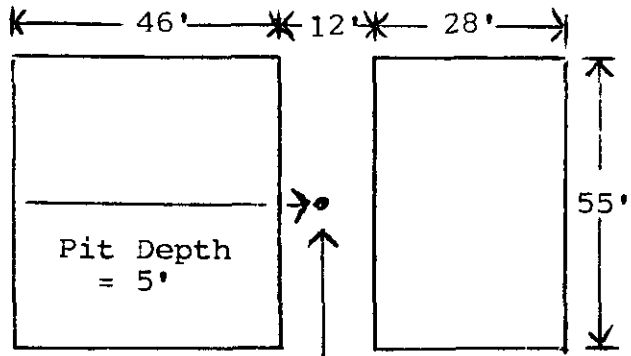
Office Location:
132829 #1
Lovington Hwy
Loco Hills, New Mexico 88255
Off: (505) 677-2411
Fax. (505) 677-2414

LMPSU Plant #3 Pit



Well Site
Will Cary #8
2310' FSL & 990' FWL
Sec. 22, T22S, R37E
Lea County, N.M.

312'



Bore Hole

North South Line

Well Site
LMPSU #4-5
1331' FSL &1331' FWL
Sec. 22, T22S, R37E
Lea County, N.M.

Exhibit #3

3206 Enterprise Dr.
P. O. Drawer 70
Hobbs, N.M. 88241-0070

HARRISON
Drilling & Environmental Services, Inc.
"Specializing In Environmental & Geotechnical Drilling"

PH: (505) 392-6768
FAX: (505) 392-9151

Field Notes Transcript (Sam Seed - Recorder)
Anadarko Petroleum Corporation
LMPSU Lact Pits #1, #2, & #3
Company Representative: Mr. Howard Hackett
OCD Representative: Mr. Wayne Price
Harrison Drilling Representatives: Sam Seed-Operations Mngr., Paul Brow-Field Technician/Equipment Operator, Donny Reza-Field Technician/Equipment Operator

November 30, 1995

0820 On location LMPSU Pit #3
0830 Drilling & calibration of PID
0900 20' depth. Drive sampler. No recovery. Cuttings @ surface grey powder.
0910 25' depth. Drive sampler. Reddish/brown sand. Packaged sample for lab. No odor. No staining. 2.6 PPM on PID.
0925 30' depth. Drive sampler. No odor. 1.8 PPM on PID.
1000 35' depth. Drive sampler. No odor. Packaged sample for lab. 1.9 PPM on PID. POH. Move to next location.
1040 Set up on pit #2.
1100 5' depth. Standby.
1120 10' depth. Drive sampler. Lt. to dk. grey sand & caliche. Strong to moderate hydrocarbon odor. 151.5 PPM on PID.
1140 15' depth. Drive sampler. Package sample for lab. No PID recorded. 20' depth. Drive sampler. Light tan sand & caliche fines. Very slight odor. 2.8 PPM on PID.
1215 25' depth. As above. 2.8 PPM on PID.
1220 POH. Move to Pit #1.
1250 Arrive Pit #1. Spot rig.
1315 Break for lunch.
1330 Arrive back to location.
1345 Begin drilling.
1400 Rig unstable. Rig down. Standby for matting boards.
1515 Matting boards arrive. Standby for winch truck.
1545 Winch truck arrives.
1550 Winch truck OOC. Rig down for evening.
1610 Off site.

December 1, 1995

0800 On location. Forklift Enterprises arrives to spot matting boards.
0810 Rig spotted. 15' depth. Surface cuttings returns black. Drive sampler. Dark grey sand & caliche. 6.1 PPM on PID.
0830 20' depth. Drive sample. Package sample for lab. Sand & sandstone. 8.5 PPM on PID.
0845 25' depth. Drive sampler. Slight odor. 4.0 PPM on PID. Package sample for lab.

Exhibit #4

0905 30' depth. Drive sampler. Very slight odor. 6.4 PPM on PID. Light tan to brown sand & caliche.
0915 35' depth. Drive sampler. 2.7 PPM on PID. Packaged sample for lab. Light reddish brown sand & caliche.
0935 40' depth. Drive sampler. No odor. 2.0 PPM on PID. 6" of red clay, balance caliche and light red to brown sand. Package sample for lab. Package all samples on ice for transport to lab.
1005 POH & rig down. Order cement & bentonite to plug all boreholes.
1030 Decontaminate all equipment. Secure support equipment.
1100 Meet cement truck. P&A boring(s) @ Pit #2, then #3, then #1. Witnessed by Mr. Price.
1155 Demobilize drilling equipment.
1215 Leave site to transport samples to lab in Midland, TX.
1400 Arrive Midland.
1412 Delivered samples to Maxim Technologies, Inc. lab. Return to Hobbs.

END NOTES
HAND WRITTEN ORIGINALS ON FILE @
HARRISON DRILLING & ENVIRONMENTAL SERVICES, INC.
3206 ENTERPRISE DRIVE
HOBBS, NM 88240

PH 505 392 6768
FAX 505 392 9151

MAXIM
TECHNOLOGIES INC

1703 West Industrial P.O. Box 2150 * Midland, Texas 79701 * 915/683-3349 FAX 915/686-0492

Client Jeff White
Anadarko Petroleum
P.O. Box 69470
Odessa, TX 79769

Client No. 4100164
Report No. M5-12-007
Report Date 12/12/95 14:03

Project LMPSU Pit Samples

Phone: 915/550-0023 Fax:

Date Sampled 12/01/95

Sampled By Client

Sample Type Soil

Transported by Client

P.O. # _____

Date Received 12/01/95

Lab No.	Sample Identification
M5-12-007-01	Pit #1 25'
M5-12-007-02	Pit #1 40'
M5-12-007-03	Pit #2 15'
M5-12-007-04	Pit #2 25'
M5-12-007-05	Pit #3 25'
M5-12-007-06	Pit #3 35'

MAXIM

Reviewed By

ALLAN B. JOHNSTON

Exibit #5

MAXIM

Order # M5-12-007
12/12/95 14:03
Client: Anadarko Petroleum

TEST RESULTS BY SAMPLE

Sample: 01A Pit #1 25' Collected: 12/01/95 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Started	Analyst
CHLORIDE	SM 4500-CL,B	2410	mg/kg	14	12/07/95	JKR
TOT.PET. HYDROCARBONS SOIL	EPA 418.1	33.1	mg/kg	4.93	12/12/95	SLS

Sample: 02A Pit #1 40' Collected: 12/01/95 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Started	Analyst
CHLORIDE	SM 4500-CL,B	6010	mg/kg	14	12/07/95	JKR
TOT.PET. HYDROCARBONS SOIL	EPA 418.1	< 4.96	mg/kg	4.96	12/12/95	SLS

Sample: 03A Pit #2 15' Collected: 12/01/95 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Started	Analyst
CHLORIDE	SM 4500-CL,B	993	mg/kg	14	12/07/95	JKR
TOT.PET. HYDROCARBONS SOIL	EPA 418.1	19.6	mg/kg	4.96	12/12/95	SLS

Sample: 04A Pit #2 25' Collected: 12/01/95 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Started	Analyst
CHLORIDE	SM 4500-CL,B	1520	mg/kg	14	12/07/95	JKR
TOT.PET. HYDROCARBONS SOIL	EPA 418.1	< 4.96	mg/kg	4.96	12/12/95	SLS

Sample: 05A Pit #3 25' Collected: 12/01/95 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Started	Analyst
CHLORIDE	SM 4500-CL,B	1760	mg/kg	14	12/07/95	JKR
TOT.PET. HYDROCARBONS SOIL	EPA 418.1	< 4.83	mg/kg	4.83	12/12/95	SLS

MAXIM

Order # M5-12-007
12/12/95 14:03
Client: Anadarko Petroleum

TEST RESULTS BY SAMPLE

Sample: 06A Pit #3 35' Collected: 12/01/95 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Started	Analyst
CHLORIDE	SM 4500-CL.B	752	mg/kg	14	12/07/95	JKR
TOT.PET. HYDROCARBONS SOIL	EPA 418.1	< 4.65	mg/kg	4.65	12/12/95	SLS

MAXIM

Order # MS-12-007
12/12/95 14:03
Client: Anadarko Petroleum

TEST RESULTS BY SAMPLE

Sample Description: Pit #1 25' Lab No: 01A
Test Description: BTEX - SOIL SAMPLE Method: SW-846, 8020 Test Code: BTEX_S
Collected: 12/01/95 Category: S

Date Extracted		Date Started	12/07/95
Analyst	WJJ	Detection Limit	0.02
Units	mg/kg	Method	SW-846, 8020

Compound	Results
BENZENE	< 0.02
TOLUENE	< 0.02
ETHYLBENZENE	< 0.02
XYLENE	< 0.02

Sample Description: Pit #1 40' Lab No: 02A
Test Description: BTEX - SOIL SAMPLE Method: SW-846, 8020 Test Code: BTEX_S
Collected: 12/01/95 Category: S

Date Extracted		Date Started	12/07/95
Analyst	WJJ	Detection Limit	0.02
Units	mg/kg	Method	SW-846, 8020

Compound	Results
BENZENE	< 0.02
TOLUENE	0.02
ETHYLBENZENE	< 0.02
XYLENE	< 0.02

Sample Description: Pit #2 15' Lab No: 03A
Test Description: BTEX - SOIL SAMPLE Method: SW-846, 8020 Test Code: BTEX_S
Collected: 12/01/95 Category: S

Date Extracted		Date Started	12/07/95
Analyst	WJJ	Detection Limit	0.02
Units	mg/kg	Method	SW-846, 8020

Compound	Results

MAXIM

Order # M5-12-007
12/12/95 14:03
Client: Anadarko Petroleum

TEST RESULTS BY SAMPLE

Sample Description: Pit #2 15' Lab No: 03A
Test Description: BTEX - SOIL SAMPLE Method: SW-846, 8020 Test Code: BTEX_S
Collected: 12/01/95 Category: S

BENZENE	< 0.02
TOLUENE	0.02
ETHYLBENZENE	< 0.02
XYLENE	< 0.02

Sample Description: Pit #2 25' Lab No: 04A
Test Description: BTEX - SOIL SAMPLE Method: SW-846, 8020 Test Code: BTEX_S
Collected: 12/01/95 Category: S

Date Extracted		Date Started	12/07/95
Analyst	WJJ	Detection Limit	0.02
Units	mg/kg	Method	SW-846, 8020

Compound	Results
BENZENE	< 0.02
TOLUENE	< 0.02
ETHYLBENZENE	< 0.02
XYLENE	< 0.02

Sample Description: Pit #3 25' Lab No: 05A
Test Description: BTEX - SOIL SAMPLE Method: SW-846, 8020 Test Code: BTEX_S
Collected: 12/01/95 Category: S

Date Extracted		Date Started	12/07/95
Analyst	WJJ	Detection Limit	0.02
Units	mg/kg	Method	SW-846, 8020

Compound	Results
BENZENE	< 0.02
TOLUENE	< 0.02
ETHYLBENZENE	< 0.02
XYLENE	< 0.02

MAXIM

Order # MS-12-007
12/12/95 14:03
Client: Anadarko Petroleum

TEST RESULTS BY SAMPLE

Sample Description: Pit #3 35'
Test Description: BTEX - SOIL SAMPLE
Collected: 12/01/95

Lab No: 06A
Method: SW-846, 8020 Test Code: BTEX_S
Category: S

Date Extracted		Date Started	12/07/95
Analyst	WJJ	Detection Limit	0.02
Units	mg/kg	Method	SW-846, 8020

Compound	Results
BENZENE	< 0.02
TOLUENE	< 0.02
ETHYLBENZENE	< 0.02
XYLENE	< 0.02

Submit 3 Copies to Appropriate District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

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DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL API NO.
NA

5. Indicate Type of Lease STATE ☐ FEE ☐

6. State Oil & Gas Lease No.

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(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

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Langlie Mattix Penrose Sand Unit

1. Type of Well:
OIL WELL ☐ GAS WELL ☐ OTHER Pits

2. Name of Operator
Anadarko Petroleum Corporation

8. Well No.
NA

3. Address of Operator
P.O. Box 37, Loco Hills, N.M. 88255

9. Pool name or Wildcat
NA

4. Well Location
Unit Letter _____ : _____ Feet From The See exhibits #1, #2, & #3 Line and _____ Feet From The _____ Line

Section s 22, 27 & 29 Township 22S Range 37 E NMPM Lea County

10. Elevation (*Show whether DF, RKB, RT, GR, etc.*)

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	PLUG AND ABANDONMENT ☐
PULL OR ALTER CASING ☐		CASING TEST AND CEMENT JOB ☐	
OTHER: To close three pits. ☒		OTHER: ☐	

12. Describe Proposed or Completed Operations (*Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work*) SEE RULE 1103.

See attachments

RECEIVED
DEC 13 1995
OCD HOBBS OFFICE

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Mike Braswell TITLE Field Foreman DATE 12-12-95

TYPE OR PRINT NAME Mike Braswell TELEPHONE NO. 677-2411

(This space for State Use)

APPROVED BY LW PREG-NMOCD ENVR ENGR * Wayne Price 12/13/95
JERRY SEXTON- DIST. SUP. * TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

Approved per attached OCD Approval Conditions and Recommend that Anadarko further investigate the High Chlorides content from Pit #1.

OCD APPROVAL CONDITIONS FOR RCRA EXEMPT UNLINED PIT CLOSURES

1. The following closure actions will be performed in accordance with OCD's February 1993 "SURFACE IMPOUNDMENT CLOSURE GUIDELINES":

   a. Vertical and horizontal extent of contamination will be determined either prior to, during or upon completion of remedial actions.

   b. Contaminated soils will be remediated to the OCD's recommended levels or a risk assessment will be provided which shows that an alternate cleanup level is protective of surface water, ground water, human health and the environment.

   c. Final soil contaminant concentrations will be determined upon completion of remedial actions.

   d. Soil samples for verification of completion of remedial actions will be sampled and analyzed for benzene, toluene, ethylbenzene, xylene **and** total petroleum hydrocarbons.

2. All wastes removed from a specific site will be disposed of at an OCD approved facility.

3. The OCD Santa Fe Office's Environmental Bureau Chief and the OCD Hobbs District Office will be notified within 24 hours of the discovery of ground water contamination related to a pit closure.

4. Upon completion of all closure activities, a completed OCD "Pit Remediation and Closure Report" form containing the results of all pit closure and soil remediation activities will be submitted to the OCD for approval. The report will include the concentrations and application rates of any materials or additives used to enhance bioremediation of the contaminants and the final concentrations of any soils landfarmed onsite or the final disposition of soils removed from the site . To simplify the approval process, the OCD requests that the final pit closure reports be submitted only upon completion of all closure activities including onsite remediation or landfarming of contaminated soils.

5. All original documents will be submitted to the OCD Hobbs Office for approval with copies provided to the OCD Santa Fe Office.

6. OCD approval does not relieve you of liability should closure activities determine that contamination exists which is beyond the scope of the work plan or if the closure activities fail to adequately remediate contamination related to your activities. In addition, OCD approval does not relieve you of responsibility for compliance with other federal, state or local laws and regulations.

Anadarko
PETROLEUM CORPORATION

Mailing Address:
P. O. Drawer 130
Artesia, New Mexico 88211-0130

Office Location:
132829 #1
Lovington Hwy
Loco Hills, New Mexico 88255
Off: (505) 677-2411
Fax: (505) 677-2414

Sundry Notice - Langlie Mattix Penrose Sand Unit 12-12-95
Pit Closures

Anadarko Petroleum Corporation request the approval to close three emergency overflow pits located at waterplants on our Langlie Mattix Penrose Sand Unit. These pits are located in Lea County, New Mexico in Sections 22, 27 and 29 of Township 22 South, Range 37 East. A more detailed location of these pits are shown on exhibits 1, 2 and 3. Soil sampling was done on these pits by coring, as shown on exhibit 4, and samples were sent in for lab analysis. The lab analysis results are shown in exhibit 5. The bore holes were then plugged to surface with a cement and bentonite mixture. As shown by the lab results, Anadarko has determined that the fluids from these pits have not contaminated the soil down to the shallow fresh water zone which is found in this area at approximately 50' from surface. Anadarko now plans to go in and remove all of the soil that is heavily contaminated with hydrocarbons. Note: All the removed affected soil will be hauled to an approved NMOCD Surface Waste Management Facility. At this point, the bottom of the pits will then be contoured to slope in a dome away from the centers and a 12 mil polyvinyl plastic sheeting will be placed over the pit bottoms. The domes will be designed to direct rainwater away from the pits and not allow percolation of rainwater through the remaining hydrocarbon affected soil. The pits will then be backfilled with clean soil and recontoured back to the original surface grade. There will be a minimun of 3' of clean soil placed over the polyvinyl covers.

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Off. (505) 677-2411
Fax: (505) 677-2414

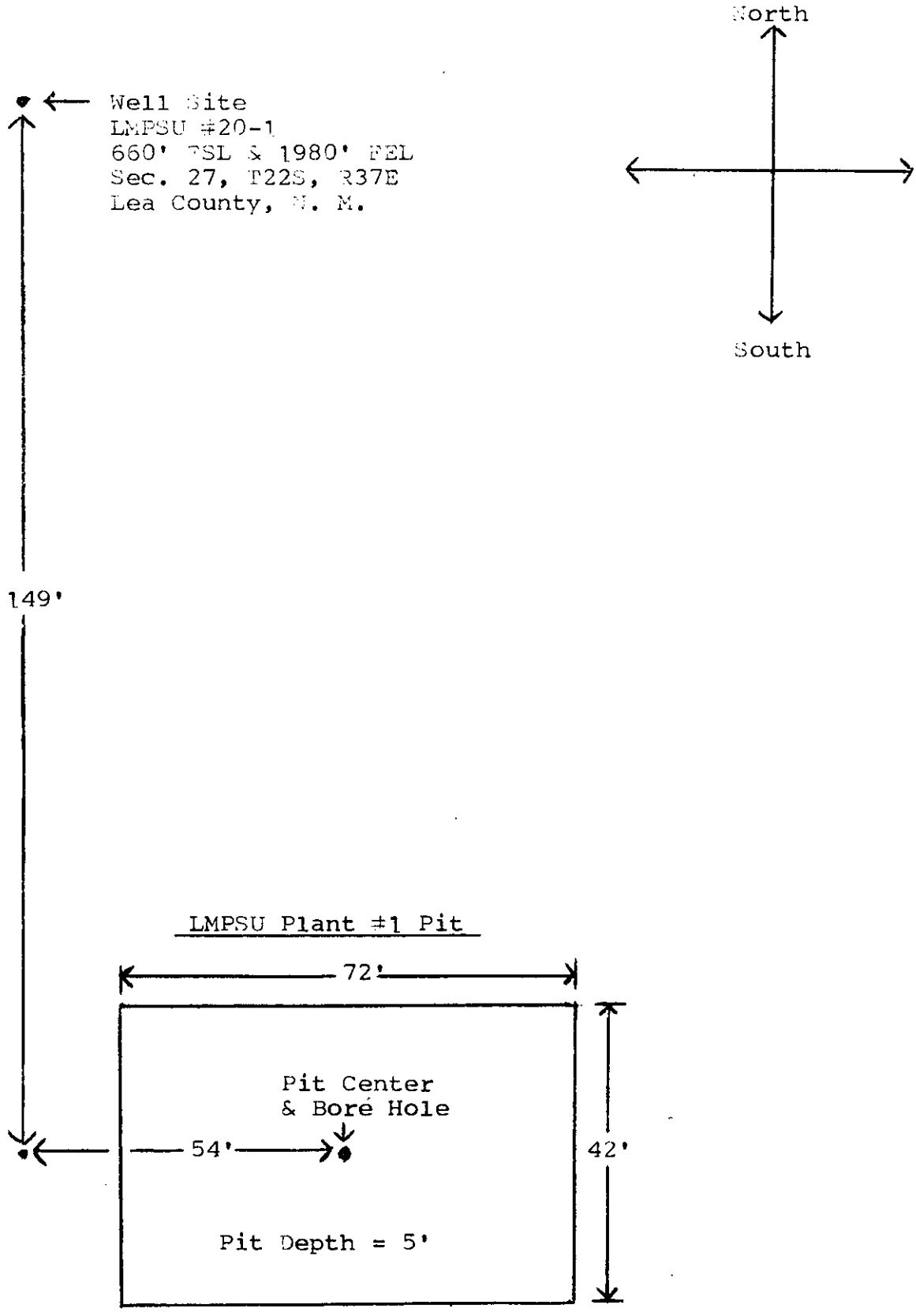


Exhibit #1

Anadarko
PETROLEUM CORPORATION

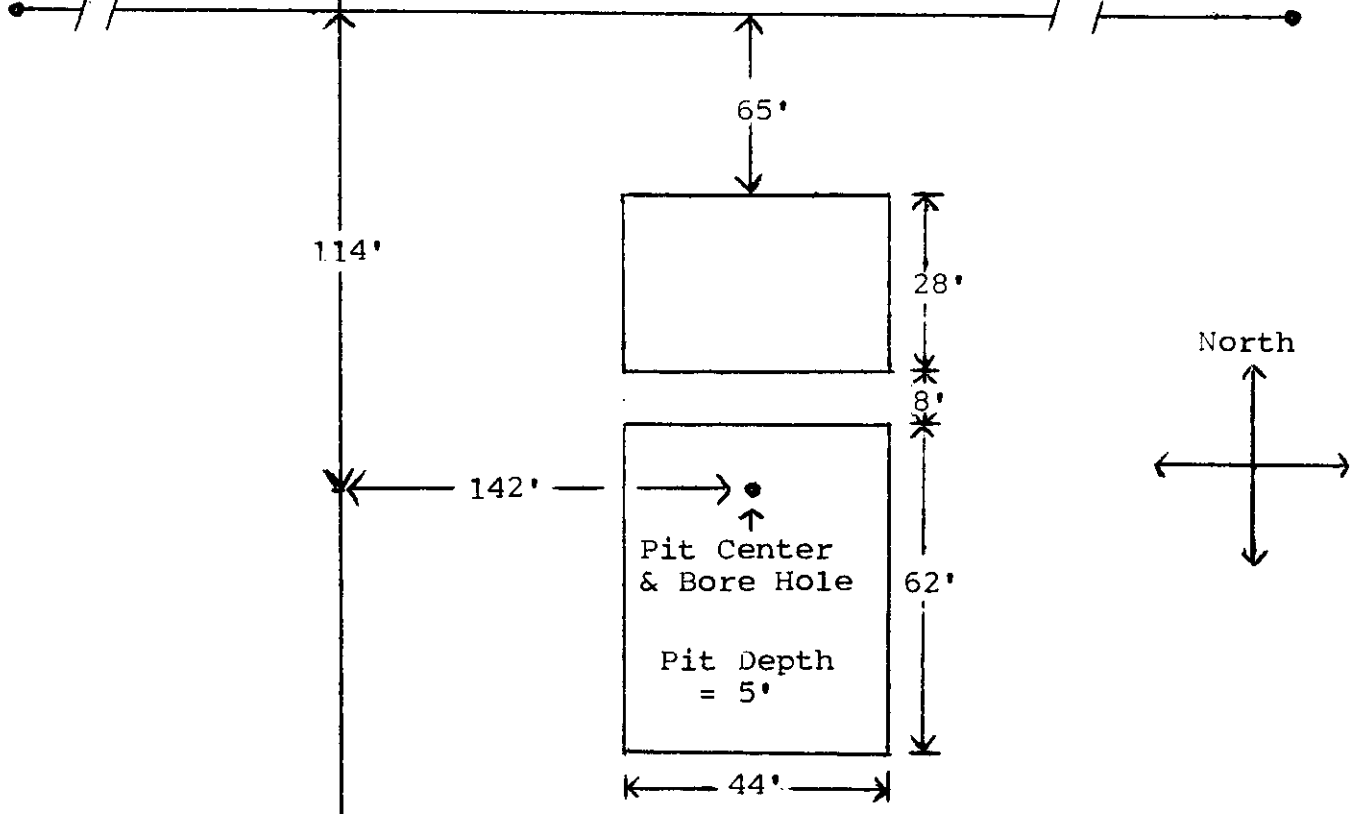
Mailing Address:
P. O. Drawer 130
Artesia, New Mexico 88211-0130

Office Location:
132829 #1
Lovington Hwy
Loco Hills, New Mexico 88255
Off: (505) 677-2411
Fax: (505) 677-2414

Well Site
LMPSU #39-1
980' FSL & 330' FEL
Sec. 29, T22S, R37E
Lea County, N. M.

Well Site
LMPSU #39-2
330' FSL & 1650' FEL
SEC. 29, T22S, R37E
Lea County, N.M.

Well Site
LMPSU #28-5
330' FSL & 990' FWL
Sec. 28, T22S, R37E
Lea County, N.M.



LMPSU Plant #2 Pit
SE/4 SE/4 Sec. 29, T22S, R37E

Well Site
LMPSU #30-1
330' FNL & 330' FEL
Sec 32, T22S, R37E
Lea County, N.M.

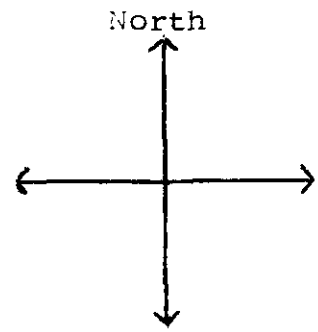
Exhibit #2

Anadarko
PETROLEUM CORPORATION

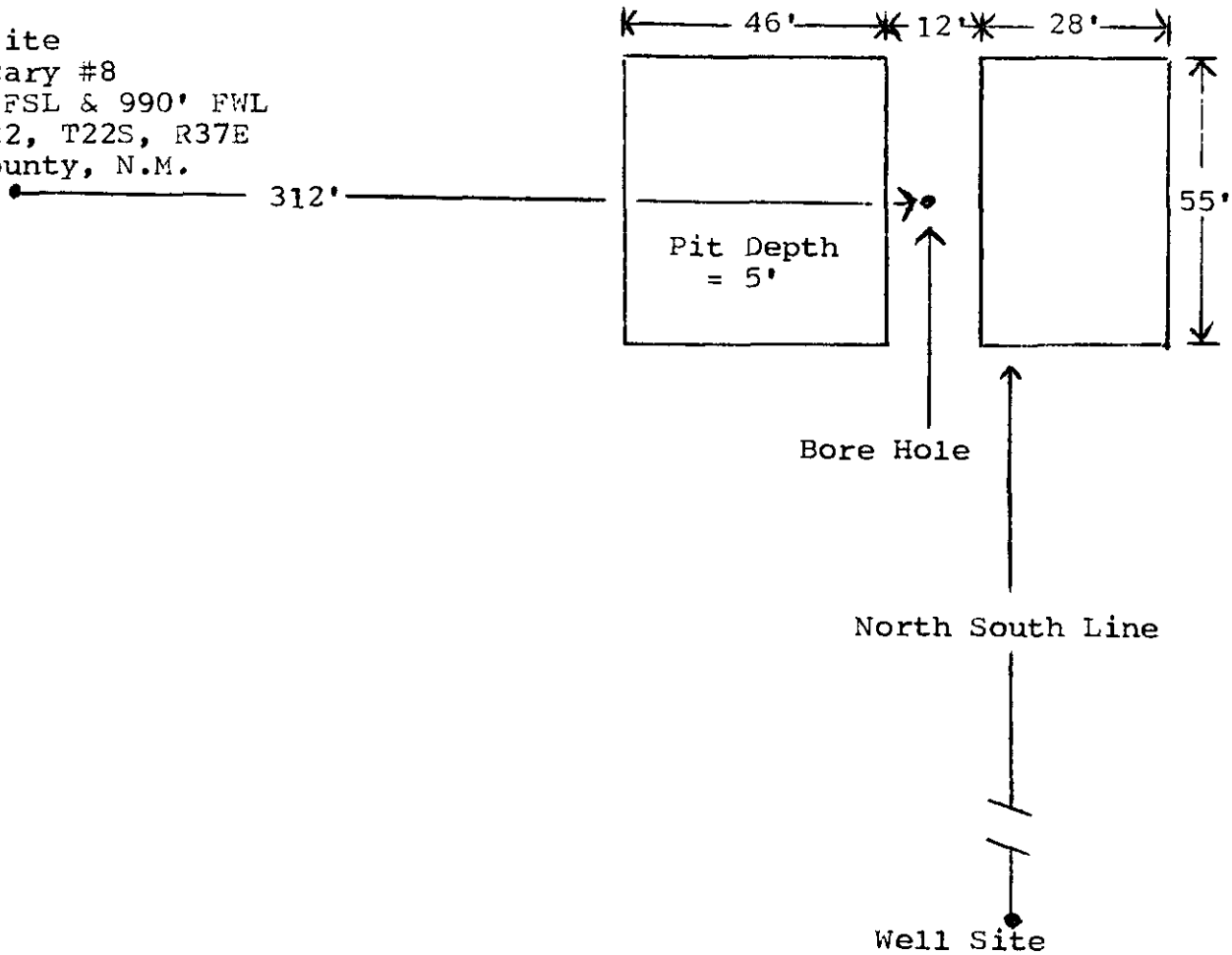
Mailing Address:
P. O. Drawer 130
Artesia, New Mexico 88211-0130

Office Location:
132829 #1
Lovington Hwy
Loco Hills, New Mexico 88255
Off: (505) 677-2411
Fax: (505) 677-2414

LMPSU Plant #3 Pit



Well Site
Will Cary #8
2310' FSL & 990' FWL
Sec. 22, T22S, R37E
Lea County, N.M.



Well Site
LMPSU #4-5
1331' FSL &1331' FWL
Sec. 22, T22S, R37E
Lea County, N.M.

Exhibit #3

3206 Enterprise Dr.
P. O. Drawer 70
Hobbs, N.M. 88241-0070

HARRISON
Drilling & Environmental Services, Inc.
"Specializing in Environmental & Geotechnical Drilling"

PH: (505) 392-6768
FAX: (505) 392-9151

Field Notes Transcript (Sam Seed - Recorder)
Anadarko Petroleum Corporation
LMPSU Lact Pits #1, #2, & #3
Company Representative: Mr. Howard Hackett
OCD Representative: Mr. Wayne Price
Harrison Drilling Representatives: Sam Seed-Operations Mngr., Paul Brow-Field Technician/Equipment Operator, Donny Reza-Field Technician/Equipment Operator

November 30, 1995

0820 On location LMPSU Pit #3
0830 Drilling & calibration of PID
0900 20' depth. Drive sampler. No recovery. Cuttings @ surface grey powder.
0910 25' depth. Drive sampler. Reddish/brown sand. Packaged sample for lab. No odor. No staining. 2.6 PPM on PID.
0925 30' depth. Drive sampler. No odor. 1.8 PPM on PID.
1000 35' depth. Drive sampler. No odor. Packaged sample for lab. 1.9 PPM on PID. POH. Move to next location.
1040 Set up on pit #2.
1100 5' depth. Standby.
1120 10' depth. Drive sampler. Lt. to dk. grey sand & caliche. Strong to moderate hydrocarbon odor. 151.5 PPM on PID.
1140 15' depth. Drive sampler. Package sample for lab. No PID recorded. 20' depth. Drive sampler. Light tan sand & caliche fines. Very slight odor. 2.8 PPM on PID.
1215 25' depth. As above. 2.8 PPM on PID.
1220 POH. Move to Pit #1.
1250 Arrive Pit #1. Spot rig.
1315 Break for lunch.
1330 Arrive back to location.
1345 Begin drilling.
1400 Rig unstable. Rig down. Standby for matting boards.
1515 Matting boards arrive. Standby for winch truck.
1545 Winch truck arrives.
1550 Winch truck OOC. Rig down for evening.
1610 Off site.

December 1, 1995

0800 On location. Forklift Enterprises arrives to spot matting boards.
0810 Rig spotted. 15' depth. Surface cuttings returns black. Drive sampler. Dark grey sand & caliche. 6.1 PPM on PID.
0830 20' depth. Drive sample. Package sample for lab. Sand & sandstone. 8.5 PPM on PID.
0845 25' depth. Drive sampler. Slight odor. 4.0 PPM on PID. Package sample for lab.

Exhibit #4

0905 30' depth. Drive sampler. Very slight odor. 6.4 PPM on PID. Light tan to brown sand & caliche.
0915 35' depth. Drive sampler. 2.7 PPM on PID. Packaged sample for lab. Light reddish brown sand & caliche.
0935 40' depth. Drive sampler. No odor. 2.0 PPM on PID. 6" of red clay, balance caliche and light red to brown sand. Package sample for lab. Package all samples on ice for transport to lab.
1005 POH & rig down. Order cement & bentonite to plug all boreholes.
1030 Decontaminate all equipment. Secure support equipment.
1100 Meet cement truck. P&A boring(s) @ Pit #2, then #3, then #1. Witnessed by Mr. Price.
1155 Demobilize drilling equipment.
1215 Leave site to transport samples to lab in Midland, TX.
1400 Arrive Midland.
1412 Delivered samples to Maxim Technologies, Inc. lab. Return to Hobbs.

END NOTES
HAND WRITTEN ORIGINALS ON FILE @
HARRISON DRILLING & ENVIRONMENTAL SERVICES, INC.
3206 ENTERPRISE DRIVE
HOBBS, NM 88240

PH 505 392 6768
FAX 505 392 9151

MAXIM TECHNOLOGIES INC

1703 West Industrial P.O. Box 2150 • Midland, Texas 79701 • 915/683-3349 FAX 915/686-0492

Client Jeff White
Anadarko Petroleum
P.O. Box 69470
Odessa, TX 79769

Client No. 4100164
Report No. M5-12-007
Report Date 12/12/95 14:03

Project LMPSU Pit Samples

Phone: 915/550-0023 Fax:

Date Sampled 12/01/95

Sampled By Client

Sample Type Soil

Transported by Client

P.O. # _____

Date Received 12/01/95

Lab No.	Sample Identification
M5-12-007-01	Pit #1 25'
M5-12-007-02	Pit #1 40'
M5-12-007-03	Pit #2 15'
M5-12-007-04	Pit #2 25'
M5-12-007-05	Pit #3 25'
M5-12-007-06	Pit #3 35'

MAXIM

MCC
Reviewed By

ALLAN B. JOHNSTON

MAXIM

Order # M5-12-007
12/12/95 14:03
Client: Anadarko Petroleum

TEST RESULTS BY SAMPLE

Sample: 01A Pit #1 25' Collected: 12/01/95 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Started	Analyst
CHLORIDE	SM 4500-CL.B	2410	mg/kg	14	12/07/95	JKR
TOT.PET. HYDROCARBONS SOIL	EPA 418.1	33.1	mg/kg	4.93	12/12/95	SLS

Sample: 02A Pit #1 40' Collected: 12/01/95 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Started	Analyst
CHLORIDE	SM 4500-CL.B	6010	mg/kg	14	12/07/95	JKR
TOT.PET. HYDROCARBONS SOIL	EPA 418.1	< 4.96	mg/kg	4.96	12/12/95	SLS

Sample: 03A Pit #2 15' Collected: 12/01/95 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Started	Analyst
CHLORIDE	SM 4500-CL.B	993	mg/kg	14	12/07/95	JKR
TOT.PET. HYDROCARBONS SOIL	EPA 418.1	19.6	mg/kg	4.98	12/12/95	SLS

Sample: 04A Pit #2 25' Collected: 12/01/95 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Started	Analyst
CHLORIDE	SM 4500-CL.B	1520	mg/kg	14	12/07/95	JKR
TOT.PET. HYDROCARBONS SOIL	EPA 418.1	< 4.96	mg/kg	4.96	12/12/95	SLS

Sample: 05A Pit #3 25' Collected: 12/01/95 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Started	Analyst
CHLORIDE	SM 4500-CL.B	1760	mg/kg	14	12/07/95	JKR
TOT.PET. HYDROCARBONS SOIL	EPA 418.1	< 4.83	mg/kg	4.83	12/12/95	SLS

MAXIM

Order # M5-12-007
12/12/95 14:03
Client: Anadarko Petroleum

TEST RESULTS BY SAMPLE

Sample: 06A Pit #3 35' Collected: 12/01/95 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Started	Analyst
CHLORIDE	SM 4500-CL.B	752	mg/kg	14	12/07/95	JKR
TOT.PET. HYDROCARBONS SOIL	EPA 418.1	< 4.65	mg/kg	4.65	12/12/95	SLS

MAXIM

Order # M5-12-007
12/12/95 14:03
Client: Anadarko Petroleum

TEST RESULTS BY SAMPLE

Sample Description: Pit #1 25' Lab No: 01A
Test Description: BTEX - SOIL SAMPLE Method: SW-846, 8020 Test Code: BTEX_S
Collected: 12/01/95 Category: S

Date Extracted		Date Started	12/07/95
Analyst	WJJ	Detection Limit	0.02
Units	mg/kg	Method	SW-846, 8020

Compound	Results
BENZENE	< 0.02
TOLUENE	< 0.02
ETHYLBENZENE	< 0.02
XYLENE	< 0.02

Sample Description: Pit #1 40' Lab No: 02A
Test Description: BTEX - SOIL SAMPLE Method: SW-846, 8020 Test Code: BTEX_S
Collected: 12/01/95 Category: S

Date Extracted		Date Started	12/07/95
Analyst	WJJ	Detection Limit	0.02
Units	mg/kg	Method	SW-846, 8020

Compound	Results
BENZENE	< 0.02
TOLUENE	0.02
ETHYLBENZENE	< 0.02
XYLENE	< 0.02

Sample Description: Pit #2 15' Lab No: 03A
Test Description: BTEX - SOIL SAMPLE Method: SW-846, 8020 Test Code: BTEX_S
Collected: 12/01/95 Category: S

Date Extracted		Date Started	12/07/95
Analyst	WJJ	Detection Limit	0.02
Units	mg/kg	Method	SW-846, 8020

Compound	Results

MAXIM

Order # MS-12-007
12/12/95 14:03
Client: Anadarko Petroleum

TEST RESULTS BY SAMPLE

Sample Description: Pit #2 15'
Test Description: BTEX - SOIL SAMPLE
Collected: 12/01/95

Lab No: 03A
Method: SW-846, 8020 Test Code: BTEX_S
Category: S

BENZENE	< 0.02
TOLUENE	0.02
ETHYLBENZENE	< 0.02
XYLENE	< 0.02

Sample Description: Pit #2 25'
Test Description: BTEX - SOIL SAMPLE
Collected: 12/01/95

Lab No: 04A
Method: SW-846, 8020 Test Code: BTEX_S
Category: S

Date Extracted	_____	Date Started	12/07/95
Analyst	WJJ	Detection Limit	0.02
Units	mg/kg	Method	SW-846, 8020

Compound	Results
BENZENE	< 0.02
TOLUENE	< 0.02
ETHYLBENZENE	< 0.02
XYLENE	< 0.02

Sample Description: Pit #3 25'
Test Description: BTEX - SOIL SAMPLE
Collected: 12/01/95

Lab No: 05A
Method: SW-846, 8020 Test Code: BTEX_S
Category: S

Date Extracted	_____	Date Started	12/07/95
Analyst	WJJ	Detection Limit	0.02
Units	mg/kg	Method	SW-846, 8020

Compound	Results
BENZENE	< 0.02
TOLUENE	< 0.02
ETHYLBENZENE	< 0.02
XYLENE	< 0.02

MAXIM

Order # M5-12-007
12/12/95 14:03
Client: Anadarko Petroleum

TEST RESULTS BY SAMPLE

Sample Description: Pit #3 35'
Test Description: BTEX - SOIL SAMPLE
Collected: 12/01/95

Lab No: 06A
Method: SW-846, 8020 Test Code: BTEX_S
Category: S

Date Extracted		Date Started	12/07/95
Analyst	WJJ	Detection Limit	0.02
Units	mg/kg	Method	SW-846, 8020

Compound	Results
BENZENE	< 0.02
TOLUENE	< 0.02
ETHYLBENZENE	< 0.02
XYLENE	< 0.02

OIL CONSERVATION DIVISION
RECEIVED
'95 DEC 26 AM 8 52

TO: BILL OLSON
NMOCD

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

☐ Telephone ☒ Personal	Time 11:00 AM	Date 12/18/95

Originating Party	Other Parties
JEFF WHITE & MIKE BRASWELL	
ANADARKO	

Subject: LANGLIE MATTIX PENROSE Pit #1

Discussion: MET WITH JERRY SEXTON & ANADARKO PERSONNEL DISCUSSED FURTHER INVESTIGATION FOR POSSIBLE GROUND WATER CONTAMINATION

Conclusions or Agreements

ANADARKO WILL NOTIFY NMOCD WHEN INVESTIGATION STARTS - IF GROUND WATER IS DETERMINED TO BE CONTAMINATED, ANADARKO ~~X~~ SHOULD NOTIFY NMOCD-SF.

Distribution: CC: BILL OLSON

Signed

cc: JERRY SEXTON
ROBERT ANDERSON
BILL OLSON

OIL CONSERVATION DIVISION
RECEIVED

'95 NOV 20 AM 8 52

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal	Time 3:40 PM	Date 11-16-95
Originating Party		Other Parties
HOWARD HACKETT		

Subject ANADARKO Pit CLOSURES

Discussion HOWARD INDICATED THEY ARE PERFORMING SOIL BORINGS STARTING SOMETIME NEXT WEEK!

Conclusions or Agreements

WILL NOTIFY NMOCD DAY BEFORE SO WE MAY WITNESS!

Distribution

Signed

cc: JERRY SEXTON
ROGER ANDERSON
BILL OLSEN

NEW MEXICO OIL CONSERVATION COMMISSION
FIELD TRIP REPORT

INSPECTION	CLASSIFICATION	FACILITY	HOURS	QUARTER HOURS

Name WAYNE PRICE Date 10-26-95 ≈ 1:00 PM Miles _____ District I

Time of Departure 7 AM Time of Return 4 PM Car No. G 0472

In the space below indicate the purpose of the trip and the duties performed, listing wells or leases visited and any action taken.

Signature [signature]

ANADARKO - PIT CLOSURE

MET WITH JEFF WHITE & HOWARD HACKETT AT PIT S OF EUNICE LMPSU LACT # 3 TANK BATTERY 22-22S-37E (SEE ATTACHED SKETCH)

ANADARKO HAD DUG DOWN ≈ 25' WITH TRACK HOE - VISUAL STAINED SOIL IN BOTTOM OF HOLE & SIDE WALLS.

BS&W HAS BEEN EXCAVATED OUT OF PIT & HAULED OFF?

ANADARKO WILL SUBMIT C-103's FOR WORK APPROVAL

Mileage		Per Diem		Hours	
UIC		UIC		UIC	
RFA		RFA		RFA	
Other		Other		Other	

TYPE INSPECTION PERFORMED

H = Housekeeping
P = Plugging
C = Plugging Cleanup
T = Well Test
R = Repair/Workover
F = Waterflow
M = Mishap or Spill
W = Water Contamination
O = Other

INSPECTION CLASSIFICATION

U = Underground Injection Control - Any inspection of or related to injection project, facility, or well or resulting from injection into any well. (SWD, 2ndry injection and production wells, water flows or pressure tests, surface injection equipment, plugging, etc.)
R = Inspections relating to Reclamation Fund Activity
O = Other - Inspections not related to injection or The Reclamation Fund
E = Indicates some form of enforcement action taken in the field (Show immediately below the letter U, R or O)

NATURE OF SPECIFIC WELL OR FACILITY INSPECTED

D = Drilling
P = Production
I = Injection
C = Combined prod. inj. operations
S = SWD
U = Underground Storage
G = General Operation
F = Facility or location
M = Meeting
O = Other

SITE FACILITY DIAGRAM
ANADARKO PETRO. CORP.
LMPSU LACT 3 TANK BATTERY
LEASE SER.# 14-08-0001-8607
SEC 22 - 22 - S - 37 E

LOCATION OF SITE SECURITY
ANADARKO PETRO. CORP.
P.O. BOX 805
EUNICE NEW MEXICO 88231
PHONE NO. 505-394-3134

PRODUCTION SYSTEM - CLOSED
1. OIL SALES BY SEALED LACT UNIT
2. A. PRODUCTION PHASE
1. VALVES 5 SEALED CLOSED
B. SALES PHASE - SALES FROM SST-1
1. VALVES 5 SEALED CLOSED
NOTE: VALVES 2 ARE ON 1" GAS ROLLING LINES