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REPORTS

DATE:

1/30/2006

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

January 30, 2006

Ms. Camille Reynolds
Plains All American Pipeline, L.P.
3112 West Highway 82
Lovington, NM 88260

RE: Soil Characterization Report and Interim Remediation Plan
Prepared by Environmental Plus, Inc. and Dated January 2006
Plains All American Pipeline, L.P. South Mattix Release Site
Plains Reference 2000-10410 Located in the
SW/4 NE/4 of Section 15, Township 24 South, Range 37 East
NMPM, Lea County New Mexico
NMOCD Reference Number 1R-0091

Dear Ms. Reynolds:

The New Mexico Oil Conservation Division (NMOCD) has reviewed the above plan submitted by Plains All American Pipeline, L.P. (Plains). This plan is hereby approved with the following understandings and conditions:

1. Plains will complete an excavation, five feet below ground surface, in the area outlined in Figure 9 or the plan.
2. Samples will be collected from the sidewalls of such excavation. Such samples shall be analyzed for total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene and xylene (BTEX). Sample analyses results shall be submitted to the NMOCD Santa Fe office prior to the installation of any impermeable barrier in the bottom of the excavation or backfilling operations.
3. Upon further approval by the NMOCD, Plains will install an impermeable barrier in the base of the excavation to prevent further migration of contaminants. Material to be used for this barrier shall be proposed in the report referred to in #2 above.
4. Upon further NMOCD approval, Plains will backfill the excavation with clay and caliche.
5. Groundwater monitoring shall continue at this site.

If you have any questions, contact me at (505) 476-3492 or ed.martin@state.nm.us

NEW MEXICO OIL CONSERVATION DIVISION

Ed Martin

Edwin E. Martin
Environmental Bureau

Copy: Iain Olness, EPI

PLAINS PIPELINE

January 6, 2006

Mr. Ed Martin
New Mexico Oil Conservation Division
Environmental Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Plains Pipeline Soil Characterization Report
and Interim Remediation Plan
South Mattix Release Site
Section 15, T24S, R37E
Lea County, New Mexico

Dear Mr. Martin:

Please find attached for your approval the Soil Characterization Report and Interim Remediation Plan, dated January 2006, for the South Mattix site located in Section 15 of Township 24 South, and Range 37 East of Lea County, New Mexico. The Work Plan details site activities conducted to date and future activities to be conducted at the site.

Should you have any questions or comments, please contact me at (505) 441-0965.

Sincerely,

Camille Reynolds

Camille Reynolds
Remediation Coordinator
Plains All American Pipeline

Enclosure

PLAINS
ALL AMERICAN
PIPELINE, L.P.

SOIL CHARACTERIZATION REPORT AND INTERIM REMEDIATION PLAN

SOUTH MATTIX
PLAINS REF: 2000-10410

SW¼ OF THE NE¼ OF SECTION 15, TOWNSHIP 24 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

~10 MILES NORTHEAST OF JAL,
LEA COUNTY, NEW MEXICO

LATITUDE: N32° 13' 01" LONGITUDE: W103° 08' 57"

JANUARY 2006

PREPARED BY:

Environmental Plus, Inc.

2100 Avenue O
P.O. Box 1558
Eunice, NM 88231
Phone: (505)394-3481
FAX: (505)394-2601
jolness@envplus.net

Standard of Care

Soil Characterization Report

South Mattix
Ref. # 2000-10410

The information provided in this report was collected consistent with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993), the NMOCD Unlined Surface Impoundment Closure Guidelines (February 1993), and the Environmental Plus, Inc. (EPI) Standard Operating Procedures and Quality Assurance/Quality Control Plan. The conclusions are based on field observations and laboratory analytical reports as presented in the report. Recommendations follow NMOCD guidance and represent the professional opinions of EPI staff. These opinions were arrived at with currently accepted geologic, hydrogeologic and engineering practices at this time and location. The report was prepared or reviewed by a certified or registered EPI professional with a background in engineering, environmental, and/or the natural sciences.

This report was prepared by:

Iain A. Olness, P.G.
Hydrogeologist

6 January 2006
Date

This report was reviewed by:

Pat McCasland
Environmental Consultant

6 January 2006
Date

Table of Contents

FIGURES

TABLES

APPENDICES

1.0 Introduction

The purpose of this report is to provide the New Mexico Oil Conservation Division (NMOCD) with information pertaining to the soil impacts at the site and to prepare an interim soil remediation plan for the shallow impacted soil at the site. The Plains South Mattix site is and active crude oil pump facility and this plan proposes to remove the shallow impacted soils and isolate the deeper impacted soil to protect groundwater until such time that the facility is decommissioned and a full remediation plan is developed for the site.

2.0 Background

The Plains All American Pipeline, L.P. (Plains) South Mattix site (Ref. #2000-10410) is located in Unit Letter-G (SW¼ of the NE¼) of Section 15, Range 37 East, Township 24 South at Latitude 32°13'01"N and Longitude 103°08'57"W approximately 10 miles northeast of Jal, Lea, New Mexico on property owned by the Grobe Estate (reference *Figures 1* and *2*). There are no domestic or agricultural water wells or surface water bodies within 1,000 horizontal feet of the site. The site is associated with the Plains South Mattix crude oil transfer pump station and has historically been impacted from pump leaks and a sub-grade sump. During site soil delineation in December 2001, the vertical extent of soil impacted above the New Mexico Oil Conservation Division (NMOCD) remedial goals was determined to be approximately 50 feet below ground surface (bgs).

A two-inch groundwater monitoring well was installed during site soil delineation activities in December 2001 and the groundwater is sampled on a quarterly basis. In addition, water level measurements are recorded during the quarterly sampling visits.

During the December 13, 2002 sampling event, a 0.01 foot thickness of phase separated hydrocarbon (PSH) was measured. Likewise, a sheen of oil was observed on the purge water during well purging, but has not been observed since.

The groundwater monitoring well was sampled on a quarterly basis during 2004 and samples submitted for quantification of benzene, toluene, ethylbenzene and total xylenes (BTEX) and/or poly-aromatic hydrocarbons (PAHs). Analytical results for samples collected during the first two quarterly sampling events indicated the presence of benzene at concentrations exceeding the New Mexico Water Quality Control Commission (NMWQCC) standard. The remaining analytes were detected at various concentrations; however, all reported concentrations were below the NMWQCC standards. Analytical results for the remaining two sampling events were non-detectable (ND) for all analytes at or above each analytes respective method detection limit (MDL). Groundwater levels rose during the first three quarters of 2004 and dropped during the final quarter with the final measurement indicating a groundwater elevation of approximately 3,158.88 feet above mean sea level.

3.0 Field Activities

Ten soil borings were advanced within the perimeter of the release area from May 22, 2000 through August 30, 2000 (reference *Figure 3*). Soil borings GP-1 through GP-8 were advanced to depths of 15 to 20 feet below ground surface (bgs) from May 22 through 24, 2000. Soil boring GP-9 was advanced to a depth of 15 feet bgs on August 15, 2000 and soil boring BH-1 was advanced to a depth of 80 feet bgs on August 30, 2000.

On December 28, 2001 a groundwater monitoring well was installed 10 feet southeast of the sump to determine if groundwater had been impacted by the release (reference *Figure 3*). As soil samples were collected to a depth of 80 feet bgs during the advancement of soil boring BH-1, no soil samples were collected during the installation of groundwater monitoring well MW-1.

On August 9 and 10, 2004, the sump at the site was replaced per the New Mexico Oil Conservation Division's (NMOCD) request. During the replacement of the sump, 28 cubic yards of impacted soil were removed and transported to the Plains Lea Station Landfarm for treatment.

4.0 Field Analyses

Soil samples collected during the advancement of the soil borings were analyzed in the field for the presence of organic vapors utilizing an UltraRae™ photoionization detector (PID) equipped with a 9.8 electron volt (eV) lamp. Upon the collection of the sample, a portion of the sample was immediately placed in a laboratory provided container and placed on ice for transport to an independent laboratory. The remaining portion of the sample was placed in a self-sealing, polyethylene bag and the sample allowed to equilibrate to a temperature of ≈70ºC.

Soil boring GP-1 was advanced to a depth of 15 feet bgs where auger refusal was encountered, approximately 10 feet southeast of the sump (reference *Figure 3*). Field analyses of the soil samples indicated detectable concentrations of organic vapors in all surveyed samples (reference *Table 1*).

Soil boring GP-2 was advanced to a depth of 15 feet bgs where auger refusal was encountered, approximately 13 feet southwest of the sump (reference *Figure 3*). Field analyses of the soil samples indicated low to moderate levels of organic vapors in the samples, with concentrations generally increasing with depth (reference *Table 1*).

Soil boring GP-3 was advanced to a depth of 15 feet bgs approximately 22 feet east-northeast of the sump (reference *Figure 3*). Field analyses of the soil samples indicated low concentrations or no organic vapors present in all samples (reference *Table 1*).

Soil boring GP-4 was advanced to a depth of 15 feet bgs approximately 25 feet east-southeast of the sump (reference *Figure 3*). Field analyses of the soil samples indicated low concentrations or no organic vapors present in all samples (reference *Table 1*).

Soil boring GP-5 was advanced to a depth of 20 feet bgs where auger refusal was encountered, approximately 18 feet north-northwest of the sump (reference *Figure 3*). Field analyses of the soil samples indicated no to elevated concentrations of organic vapors present in the soil samples. The highest concentrations were detected at 5 feet bgs and continued to decrease with depth (reference *Table 1*).

Soil boring GP-6 was advanced to a depth of 15 feet bgs approximately 25 feet southwest of the sump (reference *Figure 3*). Field analyses of the soil samples indicated the presence of low concentrations of organic vapors, with the highest concentrations detected in the near surface sample (reference *Table 1*).

Soil boring GP-7 was advanced to a depth of 15 feet bgs approximately 28 feet southeast of the sump (reference *Figure 3*). Field analyses of the soil samples indicated the presence of low concentrations of organic vapors in all soil samples (reference *Table 1*).

Soil boring GP-8 was advanced to a depth of 20 feet bgs approximately 10 feet east-northeast of the sump (reference *Figure 3*). Field analyses of the soil samples indicated the presence of moderate levels of organic vapors with concentrations decreasing with depth (reference *Table 1*).

Soil boring GP-9 was advanced to a depth of 15 feet bgs where auger refusal was encountered, approximately 6 feet south-southwest of the sump (reference *Figure 3*). These soil samples were not analyzed in the field for the presence of organic vapors.

Soil boring BH-1 was advanced to a depth of 80 feet bgs in the same location as soil boring GP-1 (reference *Figure 3*). As samples had already been collected from soil boring GP-1 to a depth of 15 feet bgs, sample collection began at 25 feet bgs in this boring. Field analyses of the samples indicated the presence of detectable levels of organic vapors with concentrations generally decreasing with depth (reference *Table 1*).

5.0 Laboratory Analyses

Samples collected during the advancement of the soil borings were submitted to Environmental Lab of Texas, Inc. of Odessa, Texas for quantification of gasoline range organics (GRO), diesel range organics (DRO) via EPA Method 8015M and benzene, toluene, ethylbenzene and total xylenes (BTEX) via EPA Method 8021B/5030.

Analytical results for the samples collected from soil boring GP-1 indicated total petroleum hydrocarbon concentrations (i.e., the sum of GRO and DRO) were above the NMOCD remedial guideline of 1,000 parts per million (ppm) for all samples (reference *Table 1*). Total BTEX concentrations were reported above the NMOCD remedial guideline of 50 ppm for the samples collected at 2, 5, and 10 feet bgs; however, they were reported below the NMOCD remedial guideline for the sample collected from 15 feet bgs (reference *Table 1*). Benzene concentrations were reported below the NMOCD remedial guideline of 10 ppm for all samples (reference *Table 1*).

Analytical results for the samples collected from soil boring GP-2 indicated total petroleum hydrocarbon (TPH) concentrations were above the NMOCD remedial guideline of 1,000 ppm for all samples (reference *Table 1*). Total BTEX and benzene concentrations were reported below the NMOCD remedial guideline of 50 and 10 ppm, respectively, for all samples (reference *Table 1*).

Analytical results for the samples collected from soil borings GP-3 and GP-4 indicated TPH, BTEX and benzene concentrations were below each analytes respective NMOCD remedial guideline (reference *Table 1*).

Analytical results for the samples collected from soil boring GP-5 indicated TPH, BTEX and benzene concentrations were below each analytes respective NMOCD remedial guideline, with the exception of TPH concentrations in the samples collected from 5, 10 and 15 feet bgs (reference *Table 1*).

Analytical results for the samples collected from soil boring GP-6 indicated TPH, BTEX and benzene concentrations were below each analytes respective NMOCD remedial guideline, with the exception of TPH concentrations in the samples collected from 2 feet bgs (reference *Table 1*).

Analytical results for the samples collected from soil boring GP-7 indicated TPH, BTEX and benzene concentrations were below each analytes respective NMOCD remedial guideline (reference *Table 1*).

Analytical results for the samples collected from soil boring GP-8 indicated TPH concentrations were above the NMOCD remedial guideline of 1,000 ppm for all samples (reference *Table 1*). Total BTEX and benzene concentrations were reported below the NMOCD remedial guideline of 50 and 10 ppm, respectively, for all samples (reference *Table 1*).

Analytical results for the samples collected from soil boring GP-9 indicated TPH and BTEX concentrations were above the NMOCD remedial guideline of 1,000 and 50 ppm, respectively, for all samples (reference *Table 1*). Benzene concentrations were reported below the NMOCD remedial guideline of 10 ppm for all samples (reference *Table 1*).

Analytical results for the samples collected from soil boring BH-1indicated TPH concentrations were above the NMOCD remedial guideline of 1,000 ppm for all samples with the exception of the samples collected from 55 and 80 feet bgs (reference *Table 1*). Samples were not submitted for laboratory analyses from the 65 through 75 foot bgs sampling intervals. Total BTEX and benzene concentrations were reported below the NMOCD remedial guideline of 50 and 10 ppm, respectively, for all samples (reference *Table 1*).

6.0 Groundwater Monitoring Well Installation

Based on results obtained during the advancement of the soil borings, a decision was made to install a groundwater monitoring well. The groundwater monitoring well was installed on December 28, 2001, at the same local as soil borings GP-1 and BH-1. The well was installed to a depth of 89 feet bgs and screened from a depth of 74 to 89 feet bgs (reference *Figure 3*).

7.0 Groundwater Monitoring Summary

Analytical results for sampling events conducted from December 2001 through April 2004, indicated the presence of hydrocarbon contaminants, with the exception of the samples collected in February and October of 2003 (reference *Tables 2 and 3*). Benzene was reported above the NMWQCC standard of 10 ug/L for six of these eleven sampling events (reference *Tables 2 and 3*). Analytical results for samples collected from July 2004 through November 2005 have been non-detectable (ND) for all analytes at or above each analytes respective method detection limit (MDL) (reference *Tables 2 and 3*).

8.0 Soil Status

Approximately 1,900 cubic yards of hydrocarbon-impacted soil remain in the subsurface within the vicinity of the release to a depth of at least 55 feet bgs.

9.0 Status and Recommendations

Based on field monitoring and analytical results collected during the advancement of the soil borings and installation of the groundwater monitoring well, the following recommendations are made in regards to the remaining hydrocarbon-impacted soil:

1) Excavate five feet of hydrocarbon impacted soil from within the release area (reference *Figure 9*);

2) Collect samples from the sidewalls of the excavation to verify removal of hydrocarbons;

3) Install an impermeable barrier in the base of the excavation to prevent further vertical migration of the remaining hydrocarbon impacts; and

4) Backfill the excavation with clay overlain by caliche until such time that the facility is decommissioned, at which time a full remediation plan will be developed for the entire site.

EPI, on behalf of Plains requests formal written approval from the NMOCD to implement these proposed remedial activities.

FIGURES

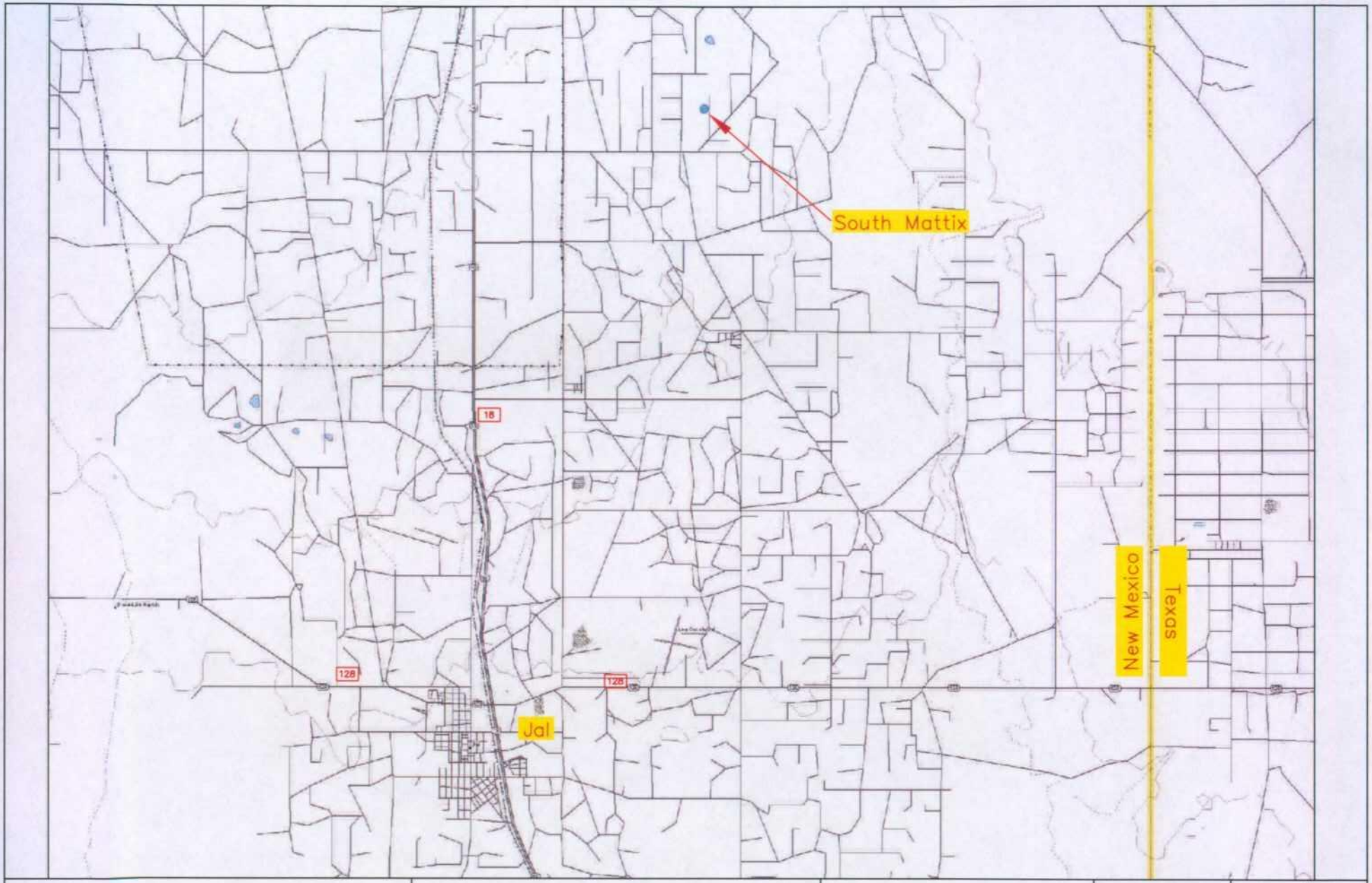

Figure 1
Area Map
Plains All American Pipeline, LP
South Mattix
2000–10410

Lea County, New Mexico
SW 1/4 of the NE 1/4, Sec. 15, T24S, R37E
N 32° 13' 1.19" W 103° 08' 57.1"
Elevation: 3,245 feet amsl

DWG By: Iain Olness
June 2004

REVISED:
Nov. 2005

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Miles

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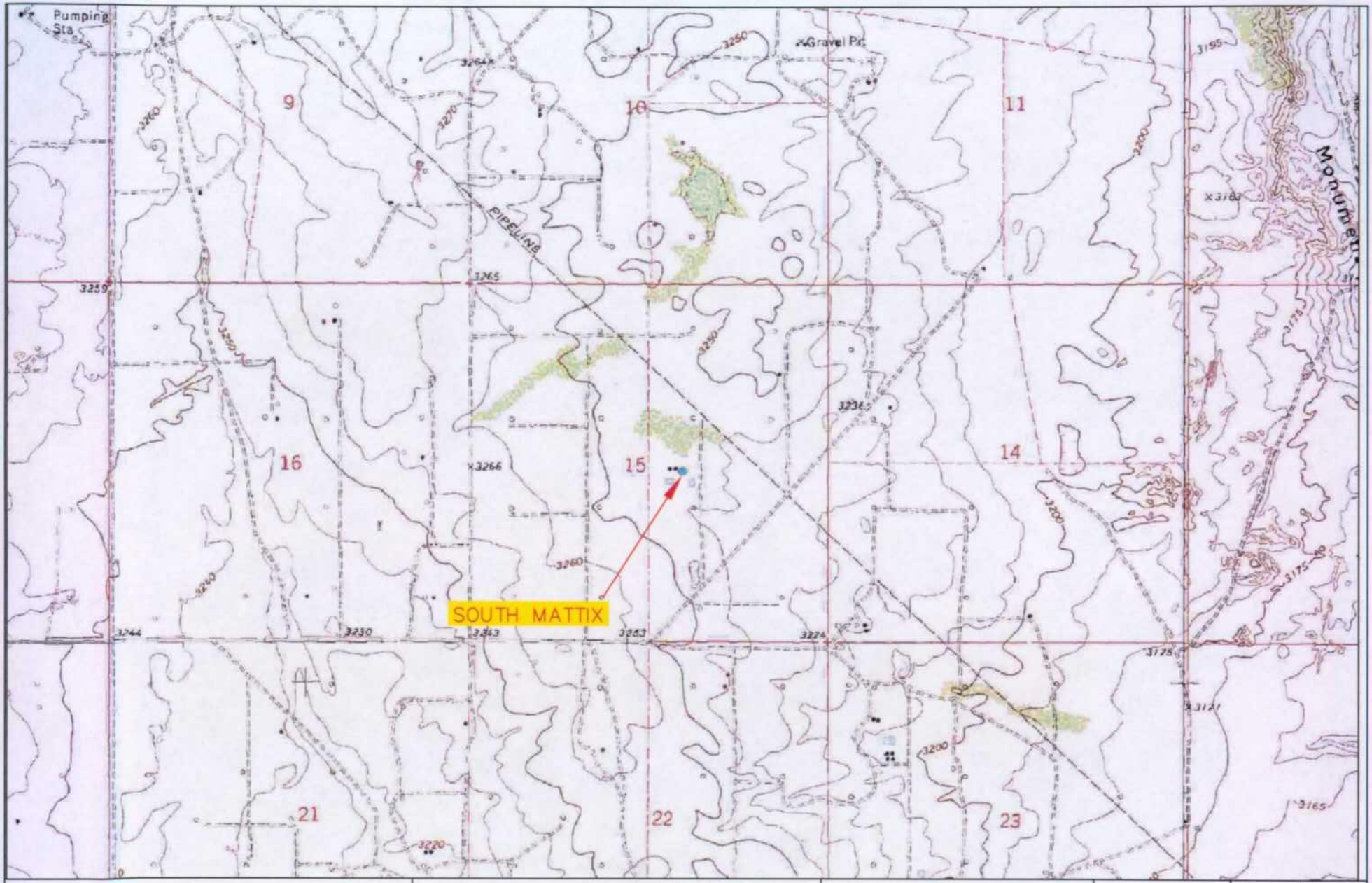

Figure 2
Site Location Map
Plains All American Pipeline, LP
South Mattix
2000–10410

Lea County, New Mexico
SW 1/4 of the NE 1/4, Sec. 15, T24S, R37E
N 32° 13' 1.19" W 103° 08' 57.1"
Elevation: 3,245 feet amsl

DWG By: Iain Olness
June 2004

REVISED:
Nov. 2005

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Feet

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1 of 1

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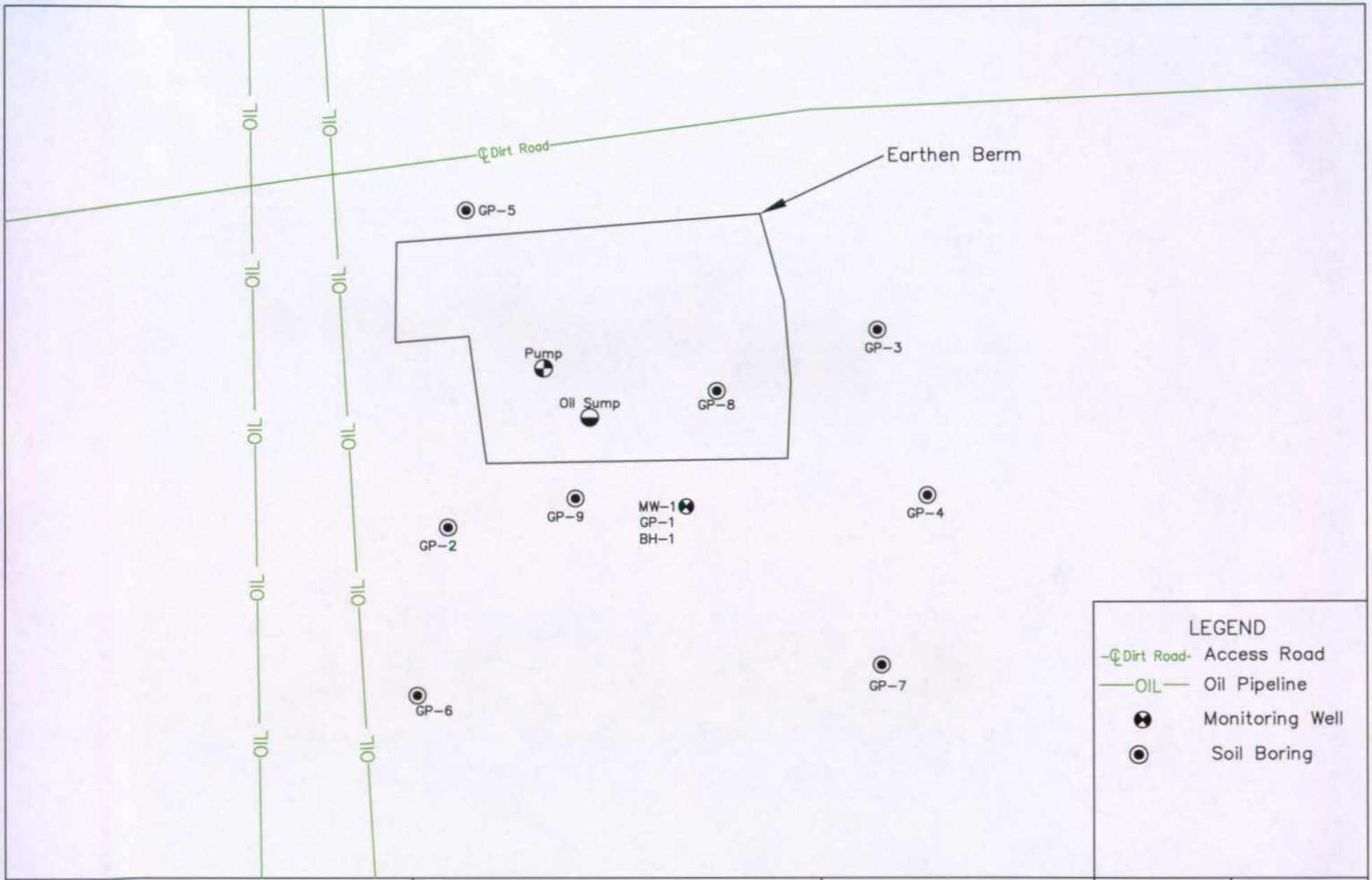

Figure 3
Site Map
Plains All American Pipeline, LP
South Mattix
2000-10410

Lea County, New Mexico
SW 1/4 of the NE 1/4, Sec. 15, T24S, R37E
N 32° 13' 1.19" W 103° 08' 57.1"
Elevation: 3,245 feet amsl

DWG By: Iain Olness
June 2004

REVISED:
Nov. 2005

SHEET
1 of 1

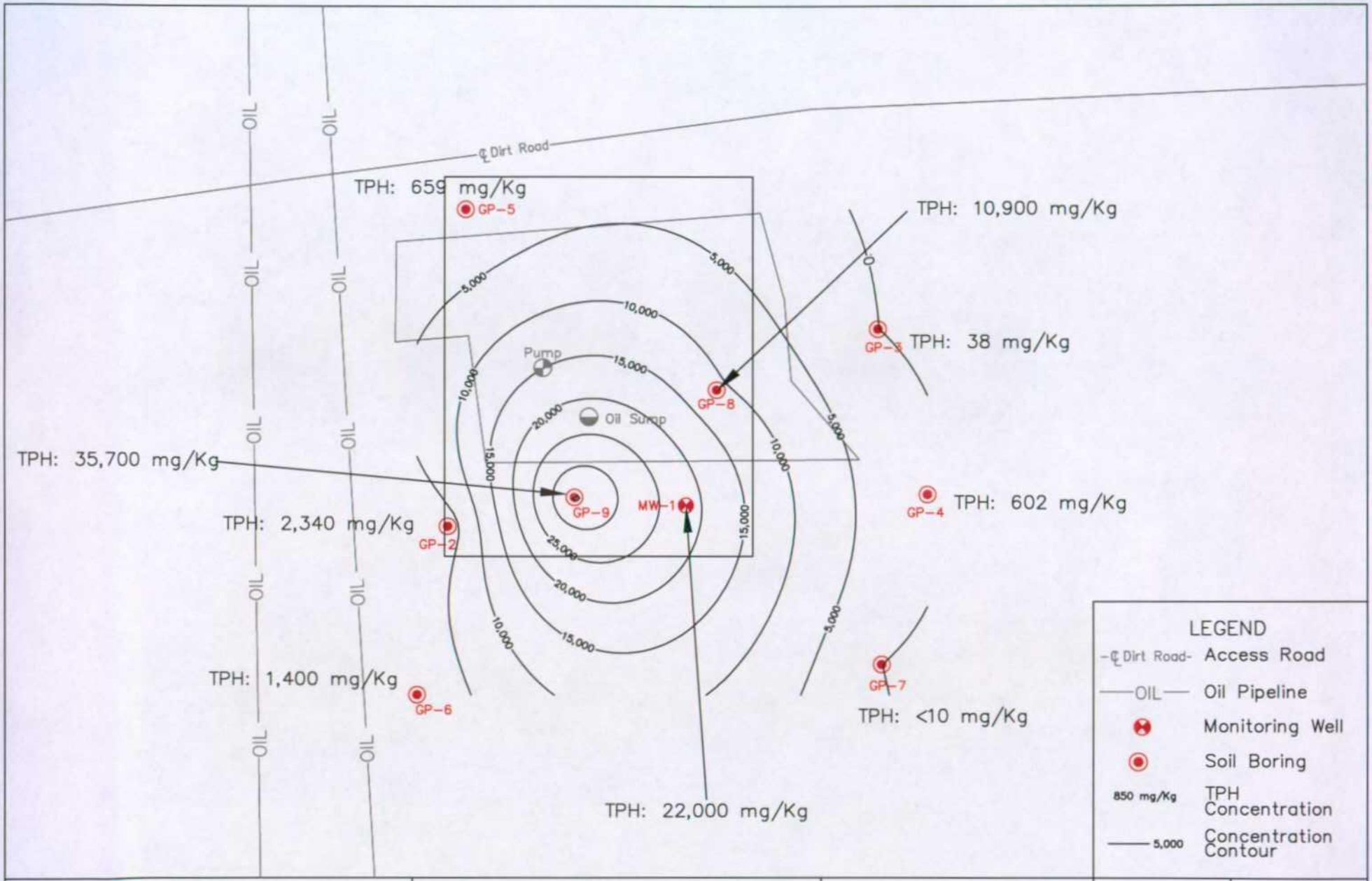

Figure 4
TPH Concentrations in Soil at 2 feet bgs
Plains All American Pipeline, LP
South Mattix
2000–10410

Lea County, New Mexico
SW 1/4 of the NE 1/4, Sec. 15, T24S, R37E
N 32° 13' 1.19" W 103° 08' 57.1"
Elevation: 3,245 feet amsl

DWG By: Iain Olness
October 2005

REVISED:
Dec. 2005

SHEET
1 of 1

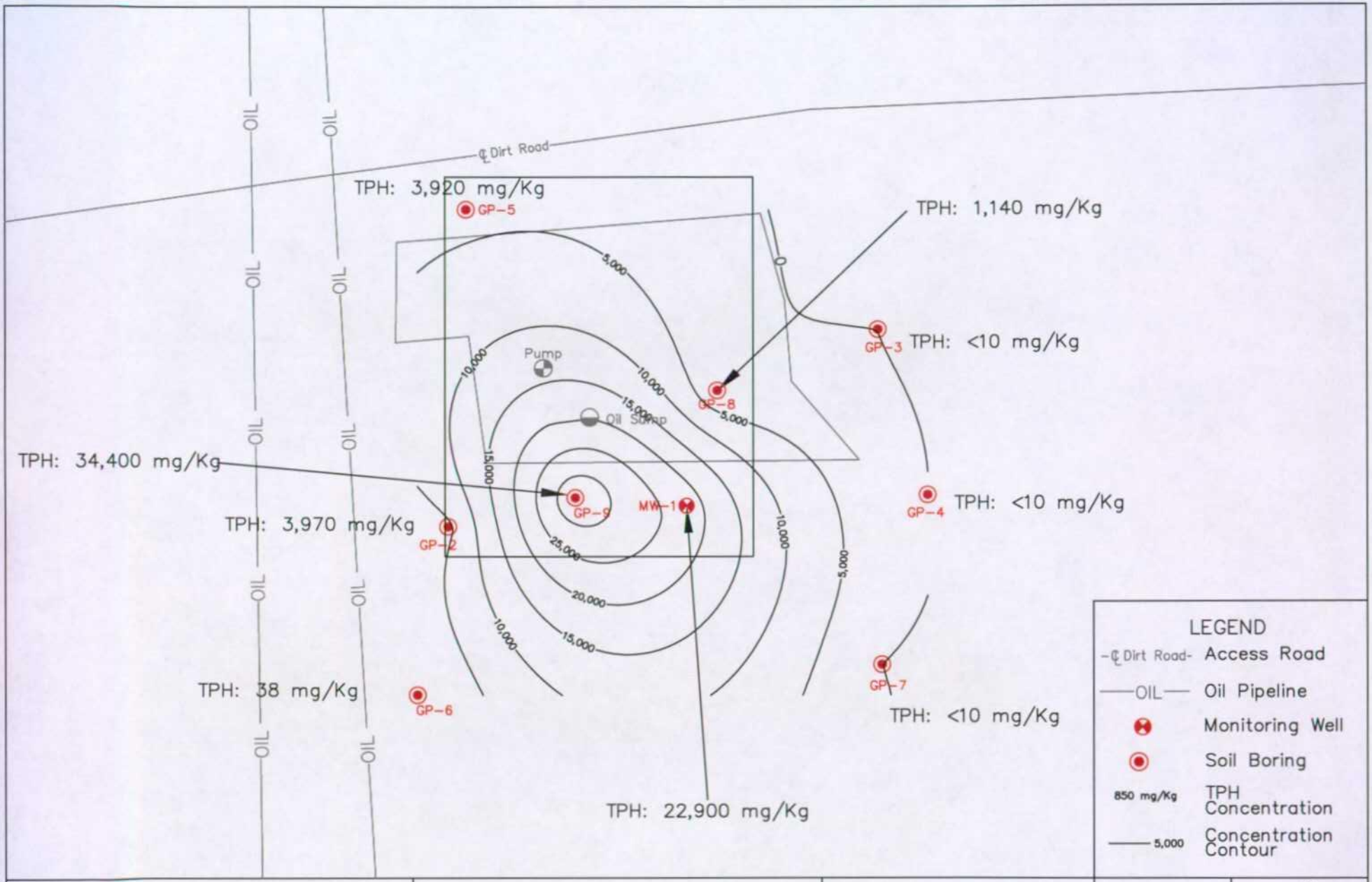

Figure 5
TPH Concentrations in Soil at 5 feet bgs
Plains All American Pipeline, LP
South Mattix
2000-10410

Lea County, New Mexico
SW 1/4 of the NE 1/4, Sec. 15, T24S, R37E
N 32° 13' 1.19" W 103° 08' 57.1"
Elevation: 3,245 feet amsl

DWG By: Iain Olness
October 2005

REVISED:
Dec. 2005

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1 of 1

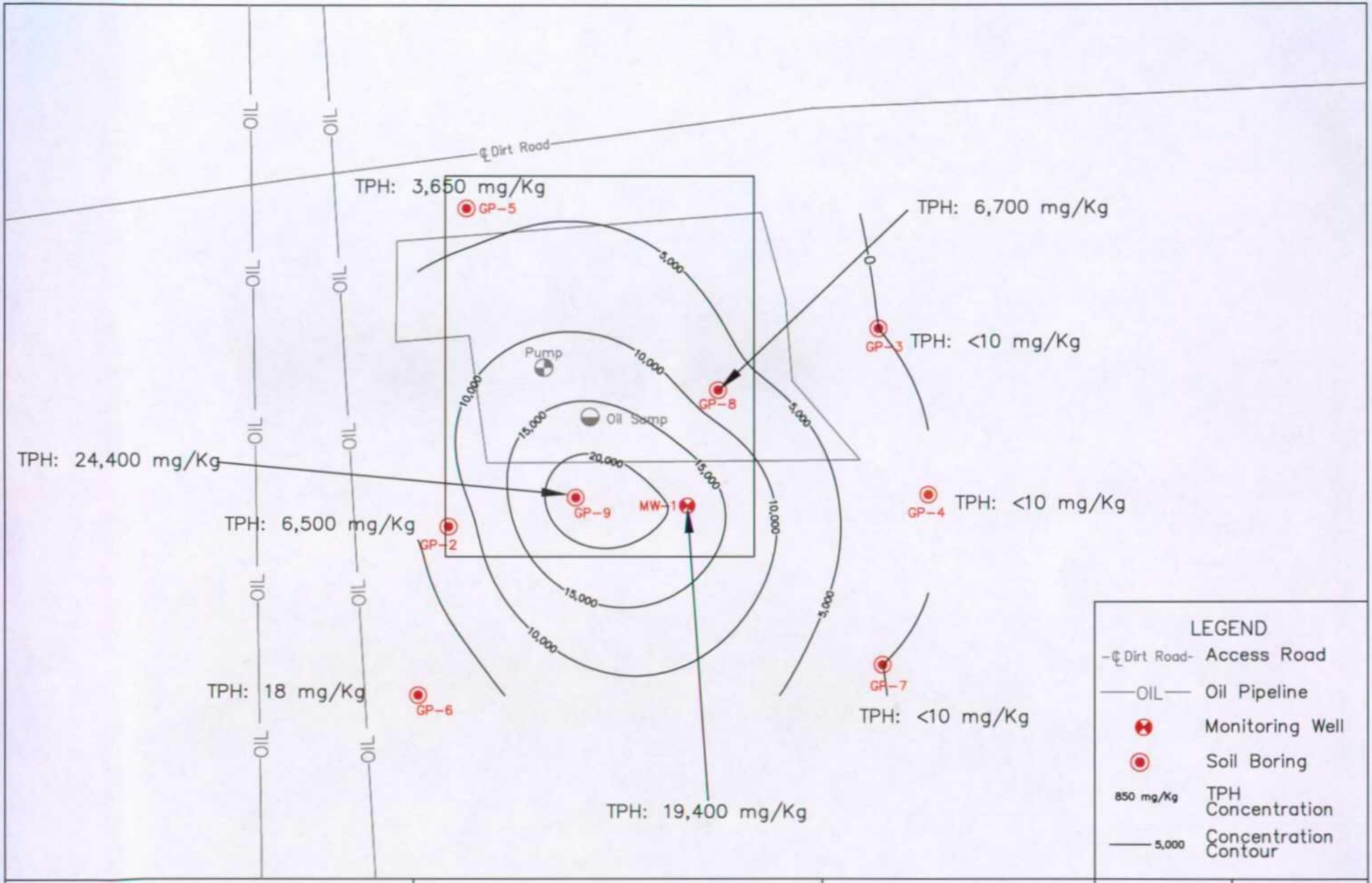

Figure 6
TPH Concentrations in Soil at 10 feet bgs
Plains All American Pipeline, LP
South Mattix
2000-10410

Lea County, New Mexico
SW 1/4 of the NE 1/4, Sec. 15, T24S, R37E
N 32° 13' 1.19" W 103° 08' 57.1"
Elevation: 3,245 feet amsl

DWG By: Iain Olness
October 2005

REVISED:
Dec. 2005

0 10 20
Feet

SHEET
1 of 1

N

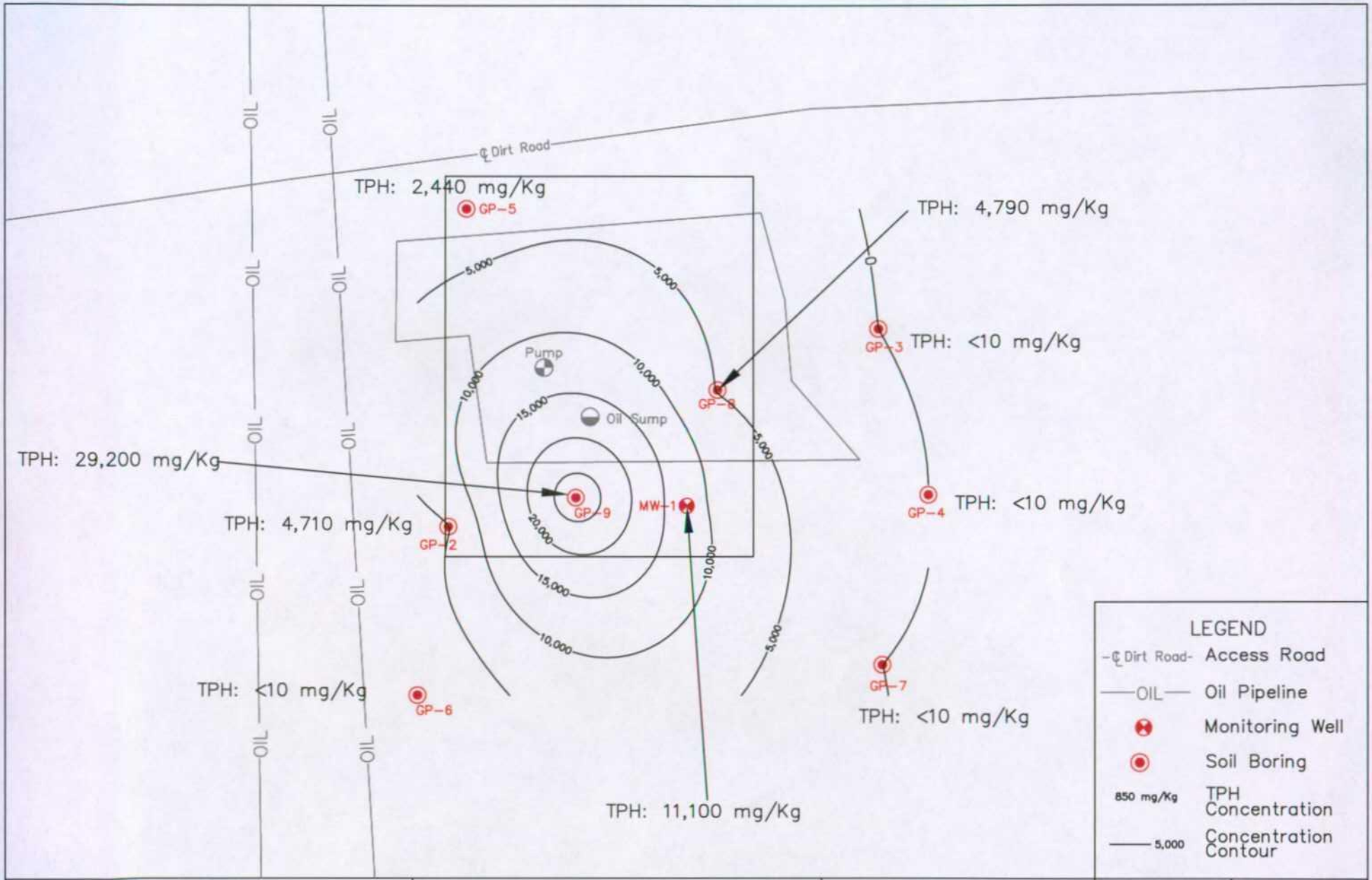

Figure 7
TPH Concentrations in Soil at 15 feet bgs
Plains All American Pipeline, LP
South Mattix
2000-10410

Lea County, New Mexico
SW 1/4 of the NE 1/4, Sec. 15, T24S, R37E
N 32° 13' 1.19" W 103° 08' 57.1"
Elevation: 3,245 feet amsl

DWG By: Iain Olness
October 2005

REVISED:
Dec. 2005

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Feet

SHEET
1 of 1

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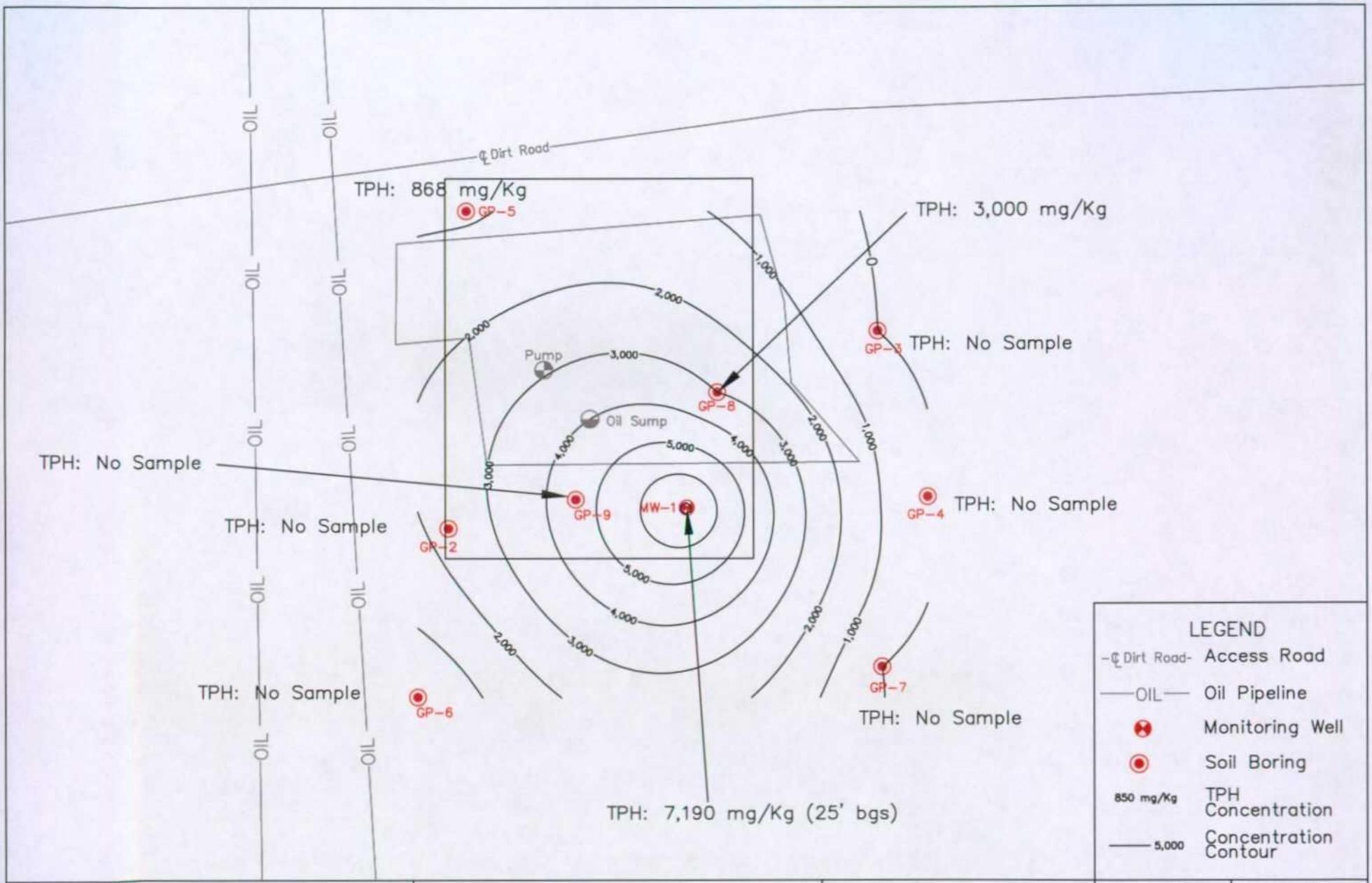

Figure 8
TPH Concentrations in Soil at 20 feet bgs
Plains All American Pipeline, LP
South Mattix
2000–10410

Lea County, New Mexico
SW 1/4 of the NE 1/4, Sec. 15, T24S, R37E
N 32° 13' 1.19" W 103° 08' 57.1"
Elevation: 3,245 feet amsl

DWG By: Iain Olness
October 2005

REVISED:
Dec. 2005

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Feet

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1 of 1

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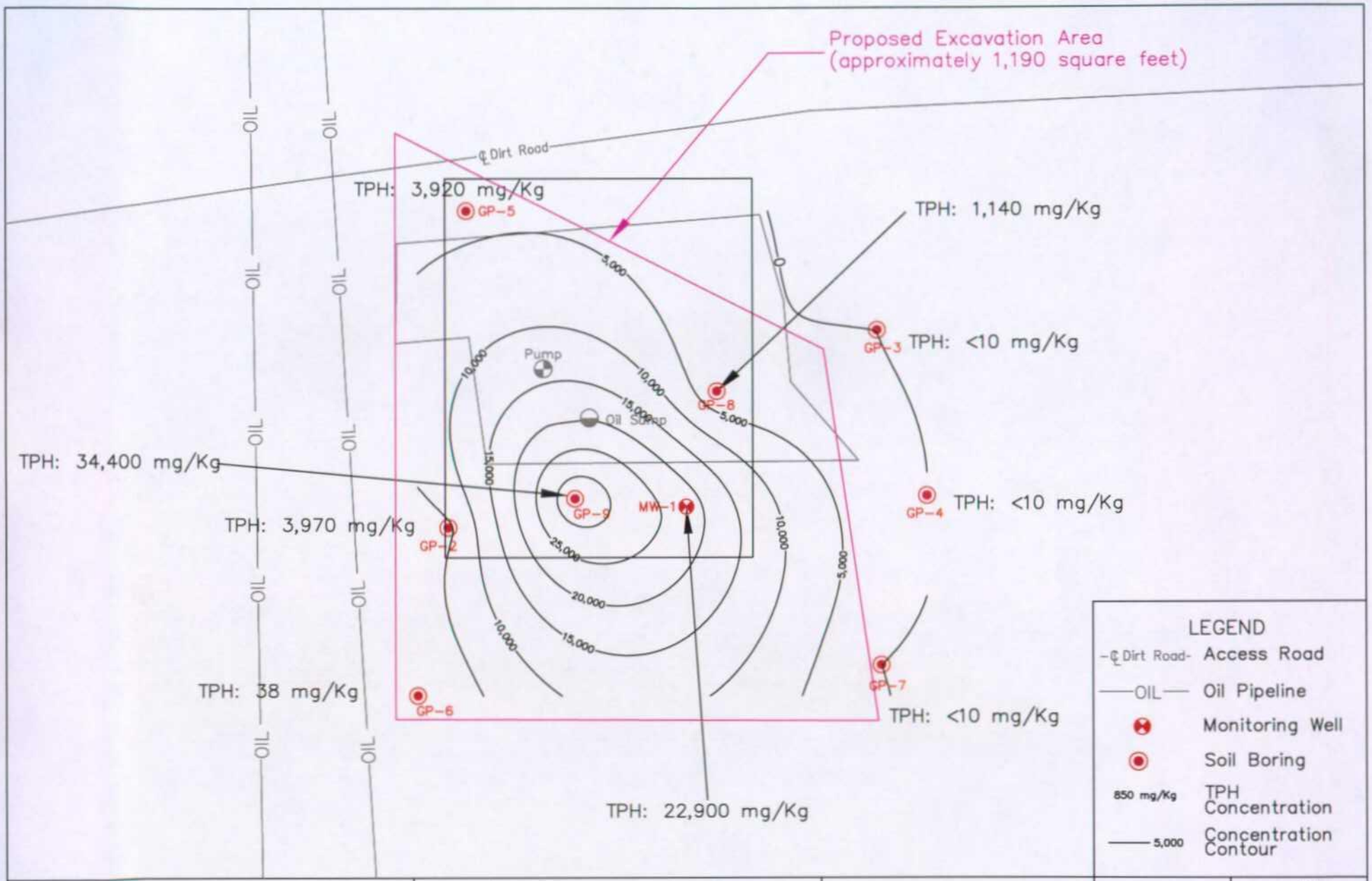

Figure 9
Proposed Excavation Area to a Depth of 5 Feet
Plains All American Pipeline, LP
South Mattix
2000-10410

Lea County, New Mexico
SW 1/4 of the NE 1/4, Sec. 15, T24S, R37E
N 32° 13' 1.19" W 103° 08' 57.1"
Elevation: 3,245 feet amsl

DWG By: Iain Olness
October 2005

REVISED:
Dec. 2005

0 10 20
Feet

SHEET
1 of 1

N

TABLES

TABLE 1

Summary of Soil Boring Analytical Results

South Mattix - Ref #2000-10410

Soil Boring ID	Sample Depth (feet)	Sample Date	PID Analyses (ppm)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	m,p-Xylenes (mg/Kg)	o-Xylene (mg/Kg)	Total BTEX (mg/Kg)	TPH (as gasoline) (mg/Kg)	TPH (as diesel) (mg/Kg)	Total TPH (mg/Kg)
GP-1	2	22-May-00	466	5.44	9.6	13.0	43	6.53	**77.7**	4,077	17,961	**22,038**
	5		433	4.33	22.0	19.7	48.8	24.4	**119**	6,231	16,631	**22,862**
	10		- -	2.04	16.7	12.7	36.7	21.7	**89.8**	5,132	14,271	**19,403**
	15		313	0.329	3.33	2.82	11.5	5.08	23.1	2,066	9,005	**11,071**
GP-2	2	22-May-00	20.0	*<0.100*	*<0.100*	*<0.100*	*<0.100*	0.237	0.237	*<100*	2,243	**2,243**
	5		82.8	0.248	1.97	1.40	5.61	2.36	11.6	739	3,232	**3,971**
	10		190	0.402	2.62	2.52	10.8	3.26	19.6	1,159	5,344	**6,503**
	15		184	*<0.100*	1.49	1.45	5.95	2.32	11.2	824	3,881	**4,705**
GP-3	2	22-May-00	1.5	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.500*	*<10.0*	28	28
	5		3.6	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.500*	*<10.0*	*<10.0*	*<20.0*
	10		0.8	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.500*	*<10.0*	*<10.0*	*<20.0*
	15		0.0	*<0.100*	0.184	*<0.100*	*<0.100*	*<0.100*	0.184	*<10.0*	*<10.0*	*<20.0*
GP-4	2	23-May-00	6.2	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.500*	*<50.0*	552	552
	5		4.3	*<0.100*	0.139	*<0.100*	*<0.100*	*<0.100*	0.139	*<10.0*	*<10.0*	*<20.0*
	10		0.0	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.500*	*<10.0*	*<10.0*	*<20.0*
	15		0.0	*<0.100*	*<0.100*	0.120	0.165	*<0.100*	0.285	*<10.0*	*<10.0*	*<20.0*
GP-5	2	23-May-00	0.0	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.500*	*<50.0*	609	609
	5		406	*<0.100*	2.460	2.900	11.200	1.830	18.4	847	3,068	**3,915**
	10		235	*<0.100*	1.620	1.920	6.490	1.280	11.3	766	2,886	**3,652**
	15		213	*<0.100*	0.468	0.565	1.860	0.705	3.60	376	2,065	**2,441**
	20		106	*<0.100*	0.169	0.172	0.584	0.415	1.34	148	720	868
GP-6	2	23-May-00	28.6	*<0.100*	*<0.100*	0.134	0.150	0.322	0.606	*<100*	1,301	**1,301**
	5		5.6	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.500*	*<10.0*	28	28
	10		4.6	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.500*	*<10.0*	18	18
	15		2.4	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.500*	*<10.0*	*<10.0*	*<20.0*
GP-7	2	24-May-00	1.9	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.500*	*<50.0*	*<50.0*	*<20.0*
	5		0.1	*<0.100*	0.152	*<0.100*	0.106	*<0.100*	0.258	*<10.0*	*<10.0*	*<20.0*
	10		2.0	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.500*	*<10.0*	*<10.0*	*<20.0*
	15		1.6	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.100*	*<0.500*	*<10.0*	*<10.0*	*<20.0*
GP-8	2	24-May-00	184	2.07	2.17	1.91	6.79	1.53	14.5	712	10,160	**10,872**
	5		133	*<0.100*	0.515	0.592	1.86	0.990	3.96	186	950	**1,136**
	10		128	0.562	3.29	2.30	10.600	3.48	20.2	1,275	5,429	**6,704**
	15		100	0.258	1.72	1.40	6.43	1.74	11.5	919	3,875	**4,794**
	20		94.0	*<0.100*	0.998	0.755	3.81	1.49	7.05	474	2,528	**3,002**

[1] Red, bolded values are in excess of the NMOCD Remediation Thresholds

[2] - - : Not Analyzed

[3] The TPH remedial threshold is 1,000 mg/Kg to a depth of approximately 35 feet and 100 mg/Kg below 35 feet.

TABLE 1

Summary of Soil Boring Analytical Results

South Mattix - Ref #2000-10410

Soil Boring ID	Sample Depth (feet)	Sample Date	PID Analyses (ppm)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	m,p-Xylenes (mg/Kg)	o-Xylene (mg/Kg)	Total BTEX (mg/Kg)	TPH (as gasoline) (mg/Kg)	TPH (as diesel) (mg/Kg)	Total TPH (mg/Kg)
GP-9	2	15-Aug-00	- -	1.62	6.90	17.3	56.9	7.63	**90.4**	5,528	18,876	**24,404**
	5		- -	1.76	14.0	18.9	63.2	21.7	**120**	6,425	22,782	**29,207**
	10		- -	0.279	11.8	11.2	42.8	19.1	**85.2**	9,067	25,377	**34,444**
	15		- -	0.731	11.5	8.23	32.5	14.5	**67.5**	8,392	27,330	**35,722**
BH-1	25	30-Aug-00	494	0.262	<0.100	5.22	23.3	12.2	41.0	1,527	5,661	**7,188**
	30		381	*<0.025*	1.19	3.20	14.400	8.71	27.5	1,372	5,171	**6,543**
	35		298	*<0.025*	0.075	0.362	1.71	1.50	3.65	570	3,097	**3,667**
	40		25.7	*<0.025*	*<0.025*	*<0.025*	*<0.025*	*<0.025*	*<0.125*	<10	118	**118**
	45		327	*<0.025*	*<0.025*	0.404	1.36	0.937	2.70	287	1,321	**1,608**
	50		130	*<0.025*	*<0.025*	0.037	0.111	0.170	0.318	154	1,192	**1,346**
	55		8.3	*<0.025*	*<0.025*	*<0.025*	*<0.025*	*<0.025*	*<0.125*	*<10.0*	51	51
	60		13.4	- -	- -	- -	- -	- -	- -	- -	- -	- -
	65		2.5	- -	- -	- -	- -	- -	- -	- -	- -	- -
	70		1.5	- -	- -	- -	- -	- -	- -	- -	- -	- -
	75		0.3	- -	- -	- -	- -	- -	- -	- -	- -	- -
	80		0.3	*<0.025*	*<0.025*	*<0.025*	*<0.025*	*<0.025*	*<0.125*	*<10.0*	*<10.0*	*<20.0*
NMOCD Remedial Thresholds				**10**					**50**			**1,000/100[3]**

[1] Red, bolded values are in excess of the NMOCD Remediation Thresholds

[2] - - : Not Analyzed

[3] The TPH remedial threshold is 1,000 mg/Kg to a depth of approximately 35 feet and 100 mg/Kg below 35 feet.

APPENDIX

APPENDIX A

Analytical Reports
and
Chain-of-Custody Forms

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY
ATTN: MR. WAYNE BRUNETTE
P.O. BOX 1660
MIDLAND, TEXAS 79703
FAX: 915-684-3456

Sample Type: Soil
Sample Condition: Intact/Iced/45 deg. F
Project #: EOTT South Mattix
Project Name: None Given
Project Location: Sec. 15, T 24S, R 37E, Unit Letter G

Sampling Date: 05/22/00
Receiving Date: 05/24/00
Analysis Date: 05/26 & 05/27/00

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
26020	ESMGP1-02	5.44	9.61	13.0	43.1	6.53
26021	ESMGP1-05	4.33	22.0	19.7	48.8	24.4
26022	ESMGP1-10	2.04	16.7	12.7	36.7	21.7
26023	ESMGP1-15	0.329	3.33	2.82	11.5	5.08
26024	ESMGP2-02	<0.100	<0.100	<0.100	<0.100	0.237
26025	ESMGP2-05C	0.248	1.97	1.40	5.61	2.36
	% IA	102	98	100	109	99
	% EA	94	92	96	110	102
	BLANK	<0.100	<0.100	<0.100	<0.100	<0.100

METHODS: SW 846-8021B,5030

Raland K. Tuttle

6-21-00
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY
ATTN: MR. WAYNE BRUNETTE
P.O. BOX 1660
MIDLAND, TEXAS 79703
FAX: 915-684-3456

Sample Type: Soil
Sample Condition: Intact/Iced/45 deg. F
Project #: EOTT South Mattix
Project Name: None Given
Project Location: Sec. 15, T 24S, R 37E, Unit Letter G

Sampling Date: See Below
Receiving Date: 05/24/00
Analysis Date: 05/28 & 05/29/00

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg	SAMPLE DATE
26026	ESMGP2-10C	0.402	2.62	2.52	10.8	3.26	05/22/00
26027	ESMGP2-15C	<0.100	1.49	1.45	5.95	2.32	05/22/00
26028	ESMGP3-02	<0.100	<0.100	<0.100	<0.100	<0.100	05/22/00
26029	ESMGP3-05C	<0.100	<0.100	<0.100	<0.100	<0.100	05/22/00
26030	ESMGP3-10	<0.100	<0.100	<0.100	<0.100	<0.100	05/22/00
26031	ESMGP3-15	<0.100	0.184	<0.100	<0.100	<0.100	05/22/00
26032	ESMGP4-02	<0.100	<0.100	<0.100	<0.100	<0.100	05/23/00
26033	ESMGP4-05	<0.100	0.139	<0.100	<0.100	<0.100	05/23/00
26034	ESMGP4-10C	<0.100	<0.100	<0.100	<0.100	<0.100	05/23/00
26035	ESMGP4-15C	<0.100	<0.100	0.120	0.165	<0.100	05/23/00
26036	ESMGP5-02	<0.100	<0.100	<0.100	<0.100	<0.100	05/23/00
26037	ESMGP5-05	<0.100	2.46	2.90	11.2	1.83	05/23/00
26038	ESMGP5-10C	<0.100	1.62	1.92	6.49	1.28	05/23/00
26039	ESMGP5-15C	<0.100	0.468	0.565	1.86	0.705	05/23/00
26040	ESMGP5-20C	<0.100	0.169	0.172	0.584	0.415	05/23/00
26041	ESMGP6-02	<0.100	<0.100	0.134	0.150	0.322	05/23/00
26042	ESMGP6-05C	<0.100	<0.100	<0.100	<0.100	<0.100	05/23/00
26043	ESMGP6-10C	<0.100	<0.100	<0.100	<0.100	<0.100	05/23/00
26044	ESMGP6-15C	<0.100	<0.100	<0.100	<0.100	<0.100	05/23/00
26045	ESMGP7-02	<0.100	<0.100	<0.100	<0.100	<0.100	05/24/00
26046	ESMGP7-05C	<0.100	0.152	<0.100	0.106	<0.100	05/24/00
26047	ESMGP7-10C	<0.100	<0.100	<0.100	<0.100	<0.100	05/24/00
26048	ESMGP7-15	<0.100	<0.100	<0.100	<0.100	<0.100	05/24/00
26049	ESMGP8-02	2.07	2.17	1.91	6.79	1.53	05/24/00
	% IA	90	86	86	92	86	
	% EA	92	92	93	100	92	
	BLANK	<0.100	<0.100	<0.100	<0.100	<0.100	

METHODS: SW 846-8021B,5030

Raland K. Tuttle

6-21-00
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY
ATTN: MR. WAYNE BRUNETTE
P.O. BOX 1660
MIDLAND, TEXAS 79703
FAX: 915-684-3456

Sample Type: Soil
Sample Condition: Intact/Iced/45 deg. F
Project #: EOTT South Mattix
Project Name: None Given
Project Location: Sec. 15, T 24S, R 37E, Unit Letter G

Sampling Date: 05/24/00
Receiving Date: 05/24/00
Analysis Date: 05/28 & 05/29/00

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
26050	ESMGP8-05	<0.100	0.515	0.592	1.86	0.990
26051	ESMGP8-10	0.562	3.29	2.30	10.6	3.48
26052	ESMGP8-15	0.258	1.72	1.40	6.43	1.74
26053	ESMGP8-20	<0.100	0.998	0.755	3.81	1.49
	% IA	100	96	99	108	96
	% EA	92	92	93	100	92
	BLANK	<0.100	<0.100	<0.100	<0.100	<0.100

METHODS: SW 846-8021B,5030

Raland K. Tuttle

6-21-00
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY
ATTN: MR. WAYNE BRUNETTE
P.O. BOX 1660
MIDLAND, TEXAS 79703
FAX: 915-684-3456

Sample Type: Soil
Sample Condition: Intact/ Iced/ 45 deg. F
Project #: EOTT South Mattix
Project Name: None Given
Project Location: Sec. 15, T 245, R 37E, Unit Letter G

Sampling Date: See Below
Receiving Date: 05/24/00
Analysis Date: 05/27/00

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg	SAMPLE DATE
26020	ESMGP1-02	4077	17961	05/22/00
26021	ESMGP1-05	6231	16631	05/22/00
26022	ESMGP1-10	5132	14271	05/22/00
26023	ESMGP1-15	2066	9005	05/22/00
26024	ESMGP2-02	<100	2243	05/22/00
26025	ESMGP2-05C	739	3232	05/22/00
26026	ESMGP2-10C	1159	5344	05/22/00
26027	ESMGP2-15C	824	3881	05/22/00
26028	ESMGP3-02	<10	28	05/22/00
26029	ESMGP3-05C	<10	<10	05/22/00
26030	ESMGP3-10	<10	<10	05/22/00
26031	ESMGP3-15	<10	<10	05/22/00
26032	ESMGP4-02	<50	552	05/23/00
26033	ESMGP4-05	<10	<10	05/23/00
26034	ESMGP4-10C	<10	<10	05/23/00
26035	ESMGP4-15C	<10	<10	05/23/00
26036	ESMGP5-02	<50	609	05/23/00
	% INSTRUMENT ACCURACY	104	111	
	% EXTRACTION ACCURACY	95	103	
	BLANK	<10	<10	

Methods: SW 846-8015M

Raland K. Tuttle

6-21-00
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY
ATTN: MR. WAYNE BRUNETTE
P.O. BOX 1660
MIDLAND, TEXAS 79703
FAX: 915-684-3456

Sample Type: Soil
Sample Condition: Intact/ Iced/ 45 deg. F
Project #: EOTT South Mattix
Project Name: None Given
Project Location: Sec. 15, T 245, R 37E, Unit Letter G

Sampling Date: See Below
Receiving Date: 05/24/00
Analysis Date: 05/28/00

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg	SAMPLE DATE
26037	ESMGP5-05	847	3068	05/23/00
26038	ESMGP5-10C	766	2886	05/23/00
26039	ESMGP5-15C	376	2065	05/23/00
26040	ESMGP5-20C	148	720	05/23/00
26041	ESMGP6-02	<100	1301	05/23/00
26042	ESMGP6-05C	<10	28	05/23/00
26043	ESMGP6-10C	<10	18	05/23/00
26044	ESMGP6-15C	<10	<10	05/23/00
26045	ESMGP7-02	<50	<50	05/24/00
26046	ESMGP7-05C	<10	<10	05/24/00
26047	ESMGP7-10C	<10	<10	05/24/00
26048	ESMGP7-15	<10	<10	05/24/00
26049	ESMGP8-02	712	10160	05/24/00
26050	ESMGP8-05	186	950	05/24/00
26051	ESMGP8-10	1275	5429	05/24/00
26052	ESMGP8-15	919	3875	05/24/00
26053	ESMGP8-20	474	2528	05/24/00
	% INSTRUMENT ACCURACY	111	122	
	% EXTRACTION ACCURACY	95	103	
	BLANK	<10	<10	

Methods: SW 846-8015M

Raland K. Tuttle

6-21-00
Date

Environmental Lab of Texas, Inc.

12600 West I-20 East Odessa, Texas 79765
(915) 563-1800 FAX (915) 563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Wayne Brunette

Phone #: 915-556-0190

FAX #: 915-684-3456

Company Name & Address: Eott

Project Name: South Mattix

Project #: Eott South Mattix

Project Location: Sec 15 T24S R37E Unit Letter G

Sampler Signature: Benjamin Cody Miller

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	BTEX 8021B/5030	TPH 8015M	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	NCI
26020	ESMGP1-02	1		✓							✓			5-22	7:22	✓	✓						
26021	ESMGP1-05	1		✓							✓			5-22	8:36	✓	✓						
26022	ESMGP1-10	1		✓							✓			5-22	9:00	✓	✓						
26023	ESMGP1-15	1		✓							✓			5-22	9:19	✓	✓						
26024	ESMGP2-02	1		✓							✓			5-22	11:16	✓	✓						
26025	ESMGP2-05c	1		✓							✓			5-22	11:20	✓	✓						
26026	ESMGP2-10c	1		✓							✓			5-22	11:36	✓	✓						
26027	ESMGP2-15c	1		✓							✓			5-22	11:50	✓	✓						
26028	ESMGP3-02	1		✓							✓			5-22	2:00	✓	✓						
26029	ESMGP3-05c	1		✓							✓			5-22	2:22	✓	✓						
26030	ESMGP3-10	1		✓							✓			5-22	2:46	✓	✓						

Relinquished by:	Date:	Time:	Received by:
Ben Miller	5-24	1:50 PM	Umesh RM
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by Laboratory:

REMARKS: 45°F

Environmental Lab of Texas, Inc. 12600 West I-20 East Odessa, Texas
(915) 563-1800 FAX (915) 563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Wayne Brunette
Phone #: 915-556-0190
FAX #: 915-684-3456
Company Name & Address: Eott
Project Name: South Mattix
Project #: Eott South Mattix
Project Location: Sec 15 T24S R37E Unit Letter G
Sampler Signature: Benjamin Cody Mills

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	BTEX 8021B/5030	TPH #1 8015M	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	HCL
26031	ESMGP3-15	1		✓							✓			5-22	3:00	✓	✓						
26032	ESMGP4-02	1		✓							✓			5-23	7:43	✓	✓						
26033	ESMGP4-05	1		✓							✓			5-23	7:57	✓	✓						
26034	ESMGP4-10c	1		✓							✓			5-23	8:09	✓	✓						
26035	ESMGP4-15c	1		✓							✓			5-23	8:19	✓	✓						
26036	ESMGP5-02	1		✓							✓			5-23	8:46	✓	✓						
26037	ESMGP5-05	1		✓							✓			5-23	9:00	✓	✓						
26038	ESMGP5-10c	1		✓							✓			5-23	9:10	✓	✓						
26039	ESMGP5-15c	1		✓							✓			5-23	9:39	✓	✓						
26040	ESMGP5-20c	1		✓							✓			5-23	1:33	✓	✓						
26041	ESMGP6-02	1		✓							✓			5-23	1:49	✓	✓						

Relinquished by:	Date:	Time:	Received by:
Benj Mills	5-24	1:50PM	[illegible]
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by Laboratory:

REMARKS

Environmental Lab of Texas, Inc.

12600 West I-20 East Odessa, Texas 79765
(915) 563-1800 FAX (915) 563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Wayne Brunette

Phone #: 915-556-0190

FAX #: 915-684-3456

Company Name & Address: Eott

Project Name: South Mattix

Project #: Eott South Mattix

Project Location: Sec 15 T24S R37E Unit Letter G

Sampler Signature: Benjamin Cody Miller

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	BTEX 8021B/5030	TPH 8015M	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	RCI
26042	ESMGP6-05c	1		✓							✓			5-23	1:59	✓	✓						
26043	ESMGP6-10c	1		✓							✓			5-23	2:28	✓	✓						
26044	ESMGP6-15c	1		✓							✓			5-23	2:40	✓	✓						
26045	ESMGP7-02	1		✓							✓			5/24	7:29	✓	✓						
26046	ESMGP7-05c	1		✓							✓			5/24	7:39	✓	✓						
26047	ESMGP7-10c	1		✓							✓			5/24	7:49	✓	✓						
26049	ESMGP7-15	1		✓							✓			5/24	8:10	✓	✓						
26049	ESMGP8-02	1		✓							✓			5-24	9:24	✓	✓						
26050	ESMGP8-05	1		✓							✓			5-24	9:36	✓	✓						
26051	ESMGP8-10	1		✓							✓			5-24	9:50	✓	✓						
26052	ESMGP8-15	1		✓							✓			5-24	10:26	✓	✓						

Relinquished by:	Date:	Time:	Received by:
Ben Miller	5-24	1:50 PM	Umeela Rm
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by Laboratory:

REMARKS

Environmental Lab of Texas, Inc. [redacted]

(915) 563-1800 FAX (915) 563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

4-4

Project Manager: Wayne Barnette

Phone #: 915-556-090

FAX #: 915-684-3456

Company Name & Address: Eott

Project Name: South Mathix

Project #: Eott South Mathix

Project Location: Sec 15 T24S R37E Unit Letter G

Sampler Signature: Benjamin Cody Miller

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: TEX. 8015M (GRO / DRO)	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	
24053	ESMGP8-20				✓						✓			5-24	10:40	✓	✓					

Relinquished by:	Date:	Time:	Received by:
Ben Miller	5-24	1:50 PM	Hanna Rad
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by: (Laboratory)

REMARKS

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY
ATTN: MR. WAYNE BRUNETTE
P.O. BOX 1660
MIDLAND, TEXAS 79703
FAX: 915-684-3456
FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil
Sample Condition: Intact/ Iced/ 31 deg. F
Project #: None Given
Project Name: South Mattix
Project Location: Sec 15 T24S R37E

Sampling Date: 08/15/00
Receiving Date: 08/23/00
Analysis Date: 08/25/00

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg
29628	ESMGP9-10C	5528	18876
29629	ESMGP9-15C	6425	22782
29630	ESMGP9-05C	9067	25377
29631	ESMGP9-02C	8392	27330
	% INSTRUMENT ACCURACY	99	100
	% EXTRACTION ACCURACY	102	104
	BLANK	<10	<10

Methods: SW 846-8015M

Raland K. Tuttle

8-30-00
Date

ENVIRONMENTAL
LAB OF , INC.
"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY
ATTN: MR. WAYNE BRUNETTE
P.O. BOX 1660
MIDLAND, TEXAS 79703
FAX: 915-684-3456
FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil
Sample Condition: Intact/ Iced/ 31 deg. F
Project #: None Given
Project Name: South Mattix
Project Location: Sec 15 T24S R37E

Sampling Date: 08/15/00
Receiving Date: 08/23/00
Analysis Date: 08/25/00

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
29628	ESMGP9-10C	0.279	11.8	11.2	42.8	19.1
29629	ESMGP9-15C	0.731	11.5	8.23	32.5	14.5
29630	ESMGP9-05C	1.76	14.0	18.9	63.2	21.7
29631	ESMGP9-02C	1.62	6.90	17.3	56.9	7.63
	% IA	94	101	93	102	92
	% EA	96	96	95	96	91
	BLANK	<0.025	<0.025	<0.025	<0.025	<0.025

METHODS: SW 846-8021B,5030

Raland K. Tuttle

8-30-00
Date

Environmental Lab of Texas, Inc.

12600 West I-20 East Odessa, Texas 79763
(915) 563-1800 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: WAYNE BRUNETTE EOTT
Phone #: 915 · 556 · 0190
FAX #: 915 · 684 · 3456
Company Name & Address: E.O.T.T.
Project #:
Project Name: South Mattix
Project Location: Sec 15 T24S R37E
Sampler Signature: X Britt Clay

ANALYSIS REQUEST

1 of 1

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	HONE	OTHER	SAMPLING: DATE	TIME	BTEX 8021B/5030	TPH 418.1 8015M	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	RCI
29628	ESMGP9-10C	1	4		✓									8-15-00	1035	✓	✓						
29629	ESMGP9-15C	1	4		✓										1110	✓	✓						
29630	ESMGP9-05C	1	4		✓										1047	✓	✓						
29631	ESMGP9-02C														1035	✓	✓						

Relinquished by:	Date:	Time:	Received by:
Britt Clay	6-23-00	0600	
	6-23-00	0615	
	08-23-00	10:30A	Received by Laboratory

REMARKS

Originals to W. Brunette + P. McCasland

31°F

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY
ATTN: MR. WAYNE BRUNETTE
P.O. BOX 1660
MIDLAND, TEXAS 79703
FAX: 915-684-3456
FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil
Sample Condition: Intact/ Iced/ 1deg C.
Project #: None Given
Project Name: South Mattix
Project Location: S15 T24S R37E

Sampling Date: 08/30/00
Receiving Date: 09/05/00
Analysis Date: 09/10/00

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg
30383	ESMBH1-25	1527	5661
30384	ESMBH1-30	1372	5171
30385	ESMBH1-35	570	3097
30386	ESMBH1-40	<10	118
30387	ESMBH1-45	287	1321
30388	ESMBH1-50	154	1192
30389	ESMBH1-55	<10	51
30390	ESMBH1-80	<10	<10
	% INSTRUMENT ACCURACY	95	122
	% EXTRACTION ACCURACY	119	107
	BLANK	<10	<10

Methods: SW 846-8015M

Raland K. Tuttle

9-18-00
Date

12600 West I-20 East • Odessa, Texas 79765 • (915) 563-1800 • Fax (915) 563-1713

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY
ATTN: MR. WAYNE BRUNETTE
P.O. BOX 1660
MIDLAND, TEXAS 79703
FAX: 915-684-3456
FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil
Sample Condition: Intact/ Iced/ 1deg. C
Project #: None Given
Project Name: South Mattix
Project Location: S15 T24S R37E

Sampling Date: 08/30/00
Receiving Date: 09/05/00
Analysis Date: 09/08/00

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
30383	ESMBH1-25	0.262	<0.100	5.22	23.3	12.2
30384	ESMBH1-30	<0.025	1.19	3.20	14.4	8.71
30385	ESMBH1-35	<0.025	0.075	0.362	1.71	1.50
30386	ESMBH1-40	<0.025	<0.025	<0.025	<0.025	<0.025
30387	ESMBH1-45	<0.025	<0.025	0.404	1.36	0.937
30388	ESMBH1-50	<0.025	<0.025	0.037	0.111	0.170
30389	ESMBH1-55	<0.025	<0.025	<0.025	<0.025	<0.025
30390	ESMBH1-80	<0.025	<0.025	<0.025	<0.025	<0.025
	% IA	106	104	107	112	103
	% EA	87	92	94	100	95
	BLANK	<0.025	<0.025	<0.025	<0.025	<0.025

METHODS: SW 846-8021B,5030

Raland K. Tuttle

9-18-00
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY
ATTN: MR. WAYNE BRUNETTE
P.O. BOX 1660
MIDLAND, TEXAS 79703
FAX: 915-684-3456
FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil
Sample Condition: Intact/ Iced/ 1deg. C
Project #: None Given
Project Name: South Mattix
Project Location: S15 T24S R37E

Sampling Date: 08/30/00
Receiving Date: 09/05/00
Analysis Date: 09/15/00

ELT#	FIELD CODE	SPLP BENZENE mg/L	SPLP TOLUENE mg/L	SPLP ETHYLBENZENE mg/L	SPLP m,p-XYLENE mg/L	SPLP o-XYLENE mg/L
30388	ESMBH1-50	<0.001	<0.001	<0.001	0.002	0.002
30389	ESMBH1-55	<0.001	<0.001	<0.001	<0.001	<0.001
30390	ESMBH1-80	<0.001	<0.001	<0.001	<0.001	<0.001
	% IA	100	98	99	104	95
	% EA	103	98	100	104	96
	BLANK	<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: SW 846-1312, 8021B,5030

Raland K. Tuttle

9-19-00
Date

Environmental Lab of Texas, Inc.

12600 West I-20 East Odessa, Texas 79763
(915) 563-1800 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Wayne Brunette EOTT

Phone #: 915 · 556 · 0190

FAX #: 915 · 684 · 3456

Company Name & Address: E.O.T.T.

Project #:

Project Name: South Mattix

Project Location: S15 T24S R37E

Sampler Signature:

ANALYSIS REQUEST

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	MATRIX: SOIL	MATRIX: AIR	MATRIX: SLUDGE	MATRIX: OTHER	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: NONE	PRESERVATIVE METHOD: OTHER	SAMPLING: DATE	SAMPLING: TIME	BTEX 8021B/5030	TPH ~~418.1~~ 8015M	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	RCI	SPLP BTEX
30383	ESMBH1-25	1			✓						✓			8-30-00	1130	✓	✓							
30384	ESMBH1-30	1			✓						✓				1155	✓	✓							
30385	ESMBH1-35	1			✓						✓				1210	✓	✓							
30386	ESMBH1-40	1			✓						✓				1220	✓	✓							
30387	ESMBH1-45	1			✓						✓				1241	✓	✓							
30388	ESMBH1-50	1			✓						✓			8-30-00	1410	✓	✓						✓	
30389	ESMBH1-55	1			✓						✓				1435	✓	✓						✓	
	~~ESMBH1-60~~	1			✓						✓				~~1450~~	~~✓~~	~~✓~~							
	~~ESMBH1-65~~	1			✓						✓				~~1511~~	~~✓~~	~~✓~~							
	~~ESMBH1-70~~	1			✓						✓				~~1611~~	~~✓~~	✓							
	~~ESMBH1-75~~	1			✓						✓				~~1639~~	~~✓~~	~~✓~~							

Relinquished by:	Date:	Time:	Received by:
	9-5-00	0750	
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by Laboratory:
	9-5-00	10:00AM	

REMARKS

Originals to W. Brunette + P. McCasland EPI

Temp. 1°C

Environmental Lab of Texas, Inc.

12600 West I-20 East Odessa, Texas 79763
(915) 563-1800 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Wayne Brunette EOTT

Phone #: 915 · 556 · 0190

FAX #: 915 · 684.3456

Company Name & Address: E.O.T.T.

Project #:

Project Name: South Matties

Project Location: S15 T24S R37E

Sampler Signature: Pat McCuall

ANALYSIS REQUEST

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	BTEX 8021B/5030	TPH ~~418.1~~ 8015M	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	RCI	SPLP BTEX
	ESMBH-1																							
30390	ESMBH-80	1			✓						✓			8:30	1719	✓	✓							✓

Relinquished by:	Date:	Time:	Received by:
Pat McCuall	9-5-00	0750	Lelack Jones
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date: 9-5-00	Time: 10:00AM	Received by Laboratory: SB

REMARKS

Originals to W. Brunette & P. McCusland EPI

Temp. 1°C

APPENDIX B

Informational Copy of Initial C-141

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

Form C-141
Revised March 17, 1999

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: **Plains All American Pipeline**	Contact: **Camille Reynolds**
Address **PO Box 1660 5805 East Highway 80 Midland, Texas 79706**	Telephone No. **505.393.5611**
Facility Name **South Mattix #2000-10410**	Facility Type **Crude oil pump sump**
Surface Owner: **Grobe**	Mineral Owner / Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County: Lea
G	**15**	**T24S**	**R37E**					

Latitude: 32°13'01"N Longitude: 103°08'57"W

NATURE OF RELEASE

Type of Release **Crude Oil**	Volume of Release **unknown**	Volume Recovered **0 barrels**
Source of Release **Crude oil pump & sump**	Date and Hour of Occurrence **Historical**	Date and Hour of Discovery **December 2000**
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom?	
By Whom? **NA**	Date and Hour **NA**	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. **NA**	

If a Watercourse was Impacted, Describe Fully.*
NA

Describe Cause of Problem and Remedial Action Taken.*
Crude oil pump & sump **The crude oil sump has leaked.**

Describe Area Affected and Cleanup Action Taken.* ***656 sqft (20' x 30'): Site soil has been delineated. Remedial Goals: TPH 8015m = 1000 mg/Kg for soil from the surface to 40'bgs & 100 mg/Kg for soil from 40'bgs to 90'bgs, Benzene = 10 mg/Kg, and BTEX, i.e., the mass sum of Benzene, Ethyl Benzene, Toluene, and Xylenes = 50 mg/Kg.***

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:	**OIL CONSERVATION DIVISION**	
Printed Name: Camille Reynolds	Approved by District Supervisor:	
E-mail Address: CJReynolds@paalp.com	Approval Date:	Expiration Date:
Title: District Environmental Supervisor	Conditions of Approval:	Attached ☐
Date: Phone: 505.393.5611		

* Attach Additional Sheets If Necessary