

1R - 435

# REPORTS

DATE:

2/28/2006

**2005 ANNUAL GROUNDWATER MONITORING REPORT**

**Arco Getty Site  
UL-N, SE ¼ of SW ¼ Section 27, T22S, R37E  
Plains Pipeline EMS Number 2001-10849  
Lea County, New Mexico**

**Terracon Project Number 94047622**

**February 28, 2006**

*Entire report is  
on the L-Drive*

***Prepared for:***

**Plains Pipeline, L.P.  
3705 East Highway 158  
Midland, Texas 79706  
OCD ID Number 231735**

***Prepared by:***

**Terracon**

**Midland, Texas**

February 28, 2006

Plains Pipeline, L.P.  
3705 East Highway 158  
Midland, Texas 79706  
Attn: Ms. Camille Reynolds

Telephone: (505) 393-5611  
Fax: (505) 397-0697

**Terracon**  
Consulting Engineers & Scientists

Terracon Consultants, Inc.  
24 Smith Road, Suite 261  
Midland, Texas 79705  
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Re: 2005 Annual Groundwater Monitoring Report  
Arco Getty Site  
UL-N, SE ¼ of SW ¼ Section 27, T22S, R37E  
Lea County, New Mexico  
Plains Pipeline, L.P. EMS Number 2001-10849  
Terracon Project Number 94047622

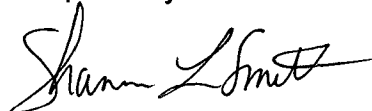
Dear Ms. Camille Reynolds:

Terracon is pleased to submit four copies of the Quarterly Groundwater Monitoring Report for the above referenced site.

We appreciate the opportunity to perform these services for Plains Pipeline, L.P. Please contact either of the undersigned at (432) 684-9600 if you have questions regarding the information provided in the report.

Sincerely,  
**Terracon**

Prepared by:

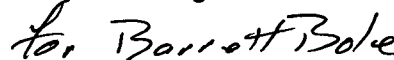


Shanna L. Smith  
Project Manager

Reviewed by:



Barrett Bole, P.G.  
Sr. Project Manager



## TABLE OF CONTENTS

**Terracon**

Page No.

1.0	INTRODUCTION.....	1
2.0	FIELD ACTIVITIES .....	2
3.0	DATA EVALUATION .....	3
4.0	FINDINGS AND RECOMMENDATIONS .....	3

### LIST OF APPENDICES

Appendix A:	Figure 1– Topographic Map
	Figure 2 – Site Plan
	Figure 3A – Groundwater Gradient Map (9/21/05)
	Figure 3B – Groundwater Gradient Map (12/13/05)
Appendix B:	Tables
Appendix C:	Laboratory Data Sheets
Appendix D:	Release Notification and Corrective Action (Form C-141)

## **2005 Annual Groundwater Monitoring Report**

**Arco Getty Site**  
**UL-N, SE ¼ of ¼ Section 27, T22S, R37E**  
**Plains EMS Number 2001-10849**  
**Lea County, New Mexico**

**Terracon Project Number 94047622**

### **1.0 INTRODUCTION**

#### **1.1 Site Description**

<b>Site Name</b>	Arco Getty
<b>Site Location/GPS</b>	5 miles south of Lea County, Eunice, NM off State Rd. 18/32° 21' 30.4" N, 103° 09' 08.1"W
<b>General Site Description</b>	Pipeline right-of-way surrounded by native pasture land.

A topographic map is included as Figure 1 and a site plan is included as Figure 2 of Appendix A.

#### **1.2 Scope of Work**

Terracon conducted quarterly groundwater sampling events for the calendar year 2005 on September 21 and December 13, 2005 at the Arco Getty site located in Lea County, New Mexico.

The objective of the quarterly sampling events was to gauge the three groundwater monitoring wells and to collect samples of groundwater from each well for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX).

#### **1.3 Standard of Care**

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Terracon makes no warranties, either express or implied, regarding the findings, conclusions or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report.

#### **1.4 Additional Scope Limitations**

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, non-detectable or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this remediation activities. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations or exploratory services; the data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

#### **1.5 Reliance**

This report has been prepared for the exclusive use of PLAINS PIPELINE, L.P., and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of PLAINS PIPELINE, L.P. and Terracon. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in this report, and Terracon's Terms and Conditions. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to the client and all relying parties unless otherwise agreed in writing.

### **2.0 FIELD ACTIVITIES**

#### **2.1 Groundwater Monitoring and Sampling**

Quarterly monitoring and sampling events were performed on September 21 and December 13, 2005. The sampling events consisted of gauging three monitor wells MW-1 through MW-3, purging, and sampling. The monitor wells were purged of approximately three well volumes of groundwater utilizing a PVC bailer or electrical pump equipped with disposable polyethylene tubing. Groundwater was allowed to recharge before collecting a groundwater sample with a disposable bailer or directly from the polyethylene tubing. The purged water was contained in specified drums for each well onsite.

Groundwater samples were placed in laboratory-supplied containers appropriate to the analyses requested, sealed with custody tape and placed on ice in a cooler, which was secured with a custody seal. The sample coolers and completed chain-of-custody forms were hand delivered to Environmental Labs of Texas (ELOT) analytical laboratory in Odessa, Texas for standard (5-7 day) turnaround analysis for benzene, toluene, ethylbenzene and xylenes (BTEX) using EPA SW-846 Method 8021B.

### **3.0 DATA EVALUATION**

#### **3.1 Water Level Data**

Water level measurement data, collected on September 21 and December 13, 2005, were used to construct groundwater gradient maps that are included as Figures 3A and 3B (Appendix A). Groundwater elevation contours generated from the quarterly sampling events of 2005 indicated the general groundwater gradient to be toward the north or northeast. Water level measurement data is summarized in Table 1 in Appendix B. No phase separated hydrocarbons (PSH) were detected on the surface of the groundwater.

#### **3.2 Groundwater Analysis Data**

Laboratory results from the analysis of groundwater samples collected from the monitor wells are summarized in Table 2 in Appendix B. The executed chain-of-custody forms and laboratory data sheets are provided in Appendix C.

Groundwater samples collected on September 21 and December 13, 2005, from monitor wells MW-1 through MW-3 did not exhibit BTEX constituents above the 0.001 mg/L reporting limit. Groundwater samples were below the NMOCD criteria for BTEX constituents.

### **4.0 FINDINGS AND RECOMMENDATIONS**

#### **4.1 Findings**

The annual groundwater report presents the results of two groundwater monitoring and sampling events for the 2005 calendar year. The groundwater gradients during the quarterly sampling events for 2005 indicate the groundwater flow direction to the north or northeast. There were no detectable BTEX constituents present during these reporting periods.

#### **4.2 Recommendations**

Based upon the conclusions, the following activities are recommended:

- Continued quarterly groundwater sampling of the monitor wells for two additional quarters. If at the end of this time the groundwater sample results document four consecutive quarters below NMOCD standards, a closure report will be prepared and submitted to the NMOCD. If at the end of this time it is determined that groundwater is impacted, then Plains will continue the groundwater monitoring program in accordance with NMOCD guidelines.



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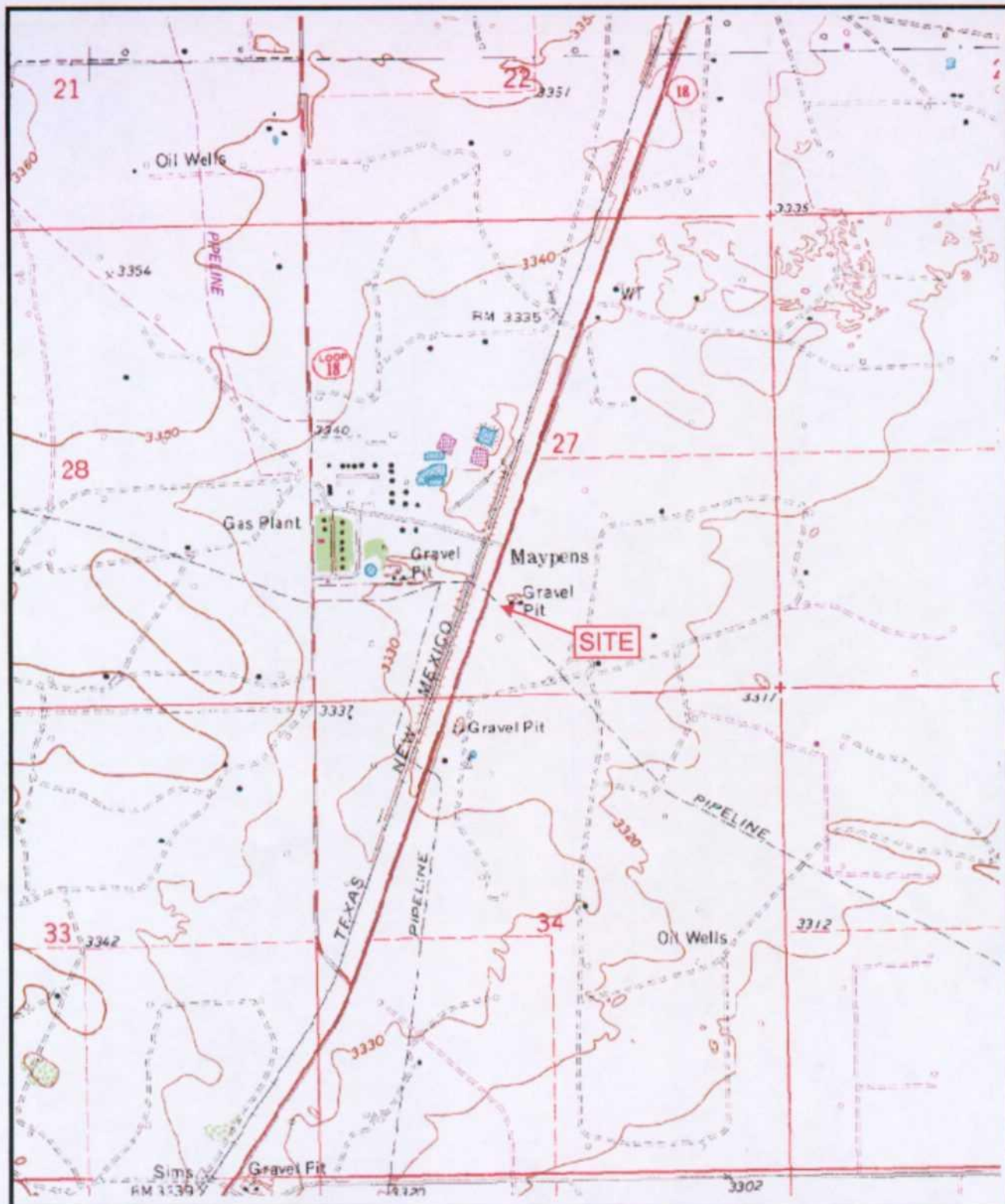
## **APPENDIX A**

**Figure 1 – Topographic Map**

**Figure 2 – Site Plan**

**Figure 3A – Groundwater Gradient Map (9/12/05)**

**Figure 3B – Groundwater Gradient Map (12/13/05)**



**USGS TOPOGRAPHIC QUADRANGLE MAP**

Rattlesnake Canyon, New Mexico

Dated 1977

SCALE: 1" = 24,000'

PROJECT NO. 94047622

**Terracon**



**ARCO GETTY**

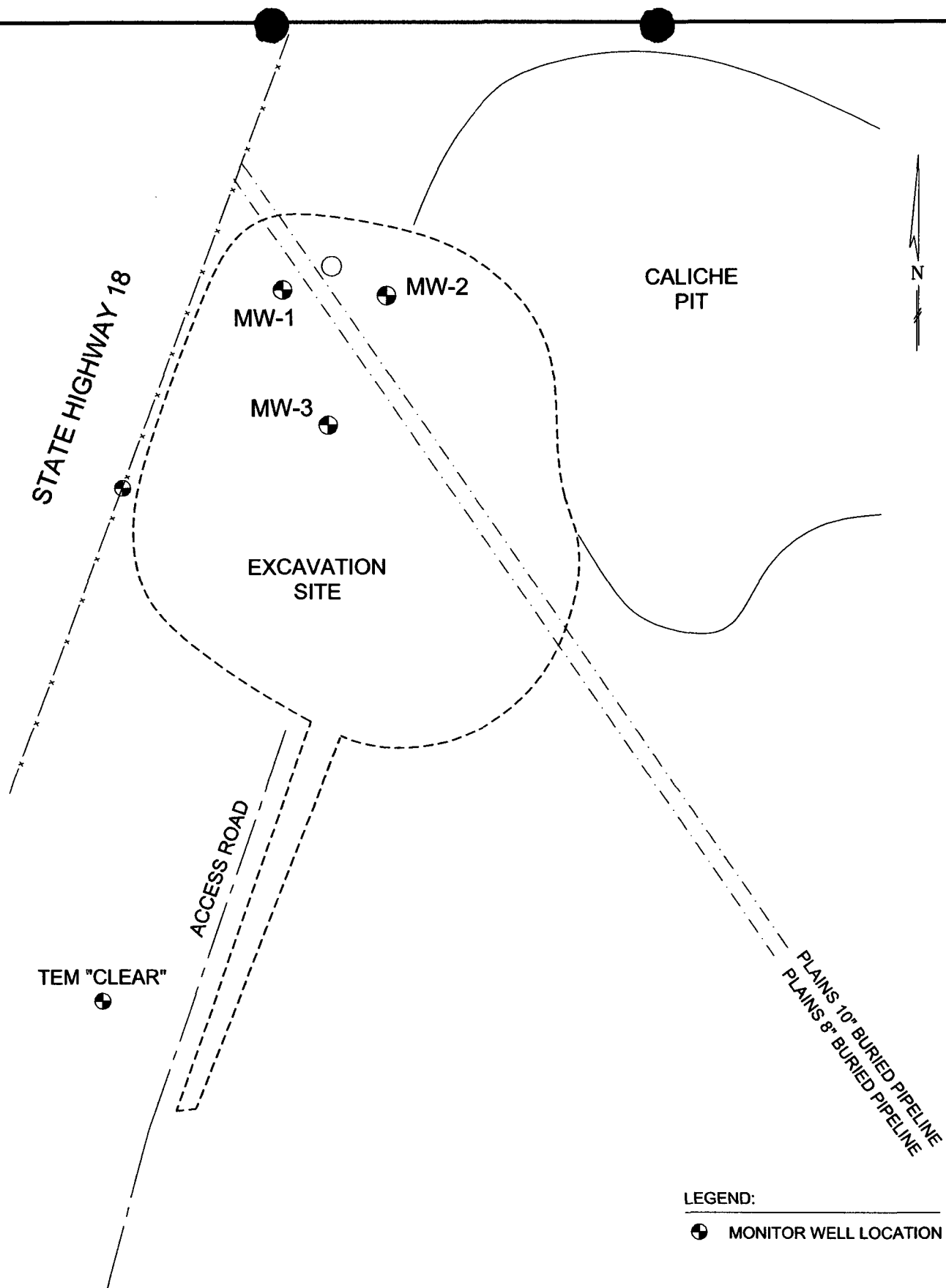
UL - N, SE 1/4 of SW 1/4 Sec 27, T22S, R37E

5 Miles South of Eunice, NM

Eunice, Lea County, New Mexico

**FIGURE 1: TOPOGRAPHIC MAP**

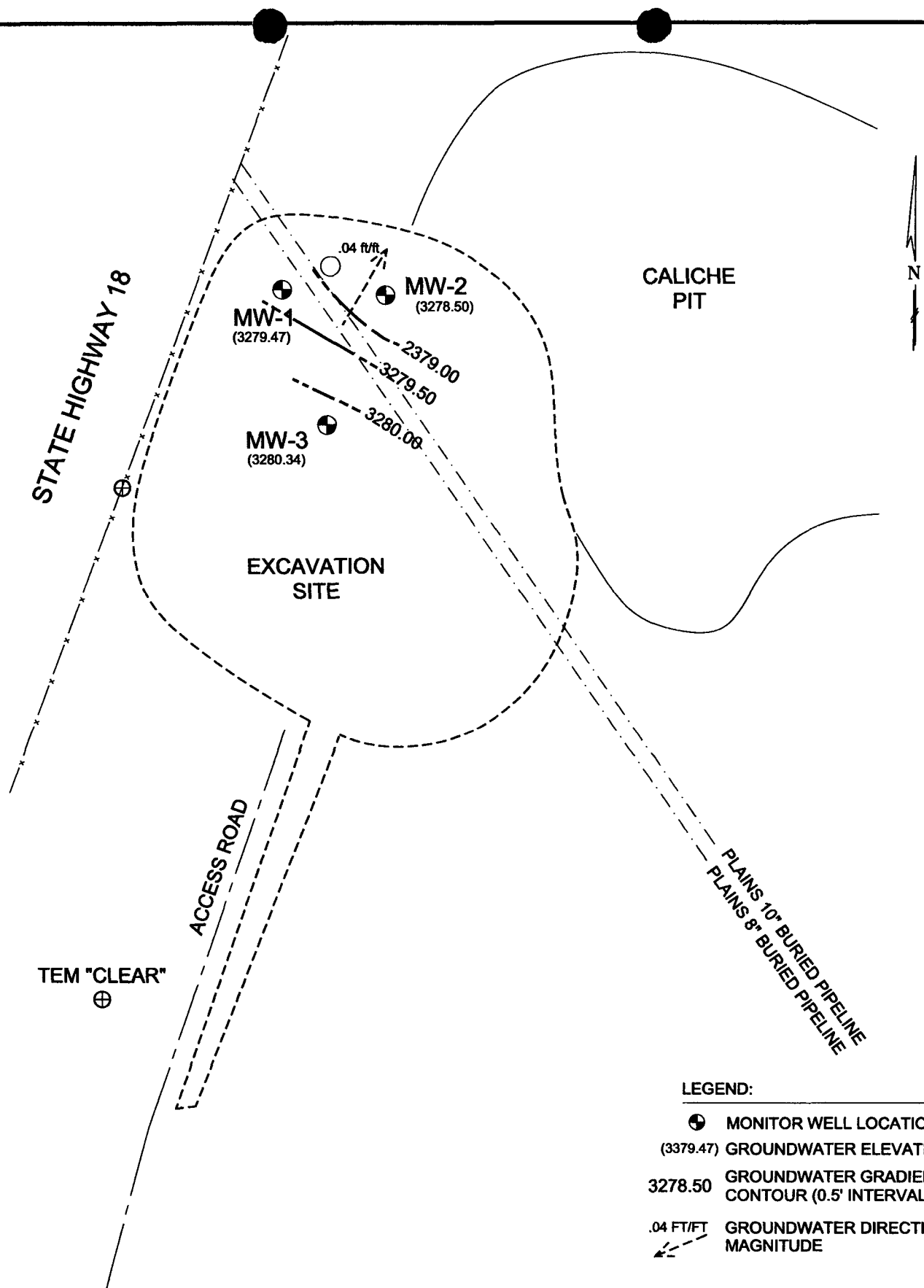
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THIS DRAWING SHOULD  
NOT BE USED SEPARATELY  
FROM ORIGINAL REPORT.

0 30 60 feet  
APPROXIMATE SCALE

PLAINS PIPELINE  
ARCO GETTY - GMS#2001-10849  
LEA COUNTY, NEW MEXICO



DATE: 02/10/06 FILENAME: O:\HBC\Env\2004\94047622-D.dwg

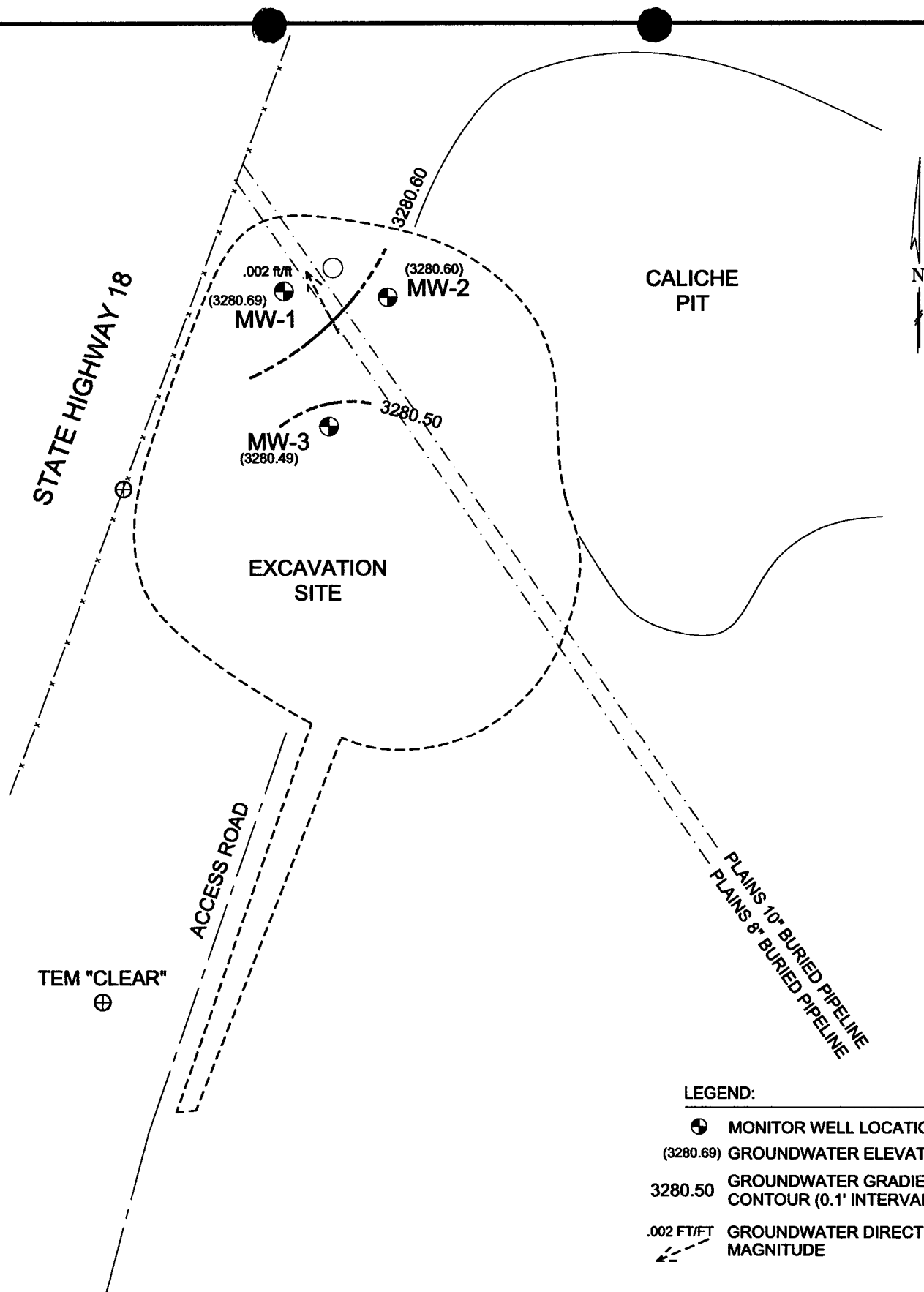
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FROM ORIGINAL REPORT.

0 30 60 feet  
APPROXIMATE SCALE

PLAINS PIPELINE  
ARCO GETTY - GMS#2001-10849  
LEA COUNTY, NEW MEXICO

**FIGURE 3A: GROUNDWATER GRADIENT  
MAP (9/21/05)**

DATE: 02/10/06 FILENAME: O:\HBC\Env\2004\94047622-D.dwg



LEGEND:

- ⊕ MONITOR WELL LOCATION
- (3280.69) GROUNDWATER ELEVATION
- 3280.50 GROUNDWATER GRADIENT & CONTOUR (0.1' INTERVALS)
- .002 FT/FT GROUNDWATER DIRECTION & MAGNITUDE

THIS DRAWING SHOULD  
NOT BE USED SEPARATELY  
FROM ORIGINAL REPORT.

0 30 60 feet  
APPROXIMATE SCALE

PLAINS PIPELINE  
ARCO GETTY - GMS#2001-10849  
LEA COUNTY, NEW MEXICO

**FIGURE 3B: GROUNDWATER GRADIENT  
MAP (12/13/05)**

## **APPENDIX B**

### **Tables**

Table 1

## GROUNDWATER ELEVATION DATA

Plains Pipeline, L.P.  
 Arco Getty  
 UL - N, SE 1/4 of SW 1/4 Sec 27, T22S, R37E  
 5 miles South of Eunice, Lea County, New Mexico  
 Plains Pipeline Leak Number 2001-10849  
 Terracon Project Number 94047622

*All measurements are in feet except where noted*

WELL LOCATION	DATE MEASURED	CASING WELL ELEVATION*	DEPTH TO PRODUCT (feet)	DEPTH TO WATER (feet)	Total Depth (feet)	CORRECTED GROUNDWATER ELEVATION
MW-1	09/13/05			48.68	56.02	
	09/14/05			48.69	53.64	
	09/19/05			48.98	53.69	
	09/21/05	3329.32		49.85	54.09	3279.47
	12/13/05			48.63	53.88	3280.69
MW-2	09/13/05			48.61	55.51	
	09/14/05			48.64	51.72	
	09/19/05			48.64	56.86	
	09/21/05	3329.14		50.64	57.23	3278.50
	12/13/05			48.57	57.54	3280.57
MW-3	09/13/05			48.55	57.97	
	09/14/05			48.56	51.43	
	09/19/05			48.56	52.65	
	09/21/05	3329.00		48.66	53.23	3280.34
	12/13/05			48.51	53.03	3280.49



**Table 2**  
**CONCENTRATIONS OF BTEX IN GROUNDWATER**

**Plains Pipeline, L.P.**  
**Arco-Getty**  
**UL - N, SE 1/4 of SW 1/4 Sec 27, T22S, R37E**  
**5 Miles South of Eunice, Lea County, New Mexico**  
**Plains All American Pipeline Leak Number 2001-10849**  
**Terracon Project Number 94047622**

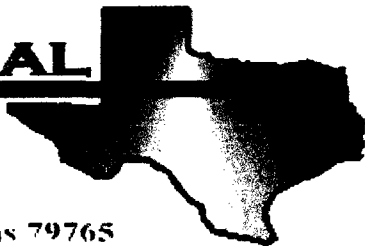
*All concentrations are in mg/L*

SAMPLE DATE	SAMPLE LOCATION	SW 846-8021B, 5030					
		BENZENE	TOLUENE	ETHYL- BENZENE	M,P- XYLENES	O- XYLENES	TOTAL BTEX
2/10/2005	NBH-1	0.199	0.800	0.262	0.662	0.361	2.284
9/21/2005	MW-1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	MW-2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	MW-3	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
12/13/2005	MW-1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	MW-2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	MW-3	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

## **APPENDIX C**

### **Laboratory Data Sheets**

# ENVIRONMENTAL LAB OF



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

**Prepared for:**

Camille Reynolds

Plains All American EH & S

1301 S. County Road 1150

Midland, TX 79706-4476

Project: Arco Getty

Project Number: 2001-10849

Location: None Given

Lab Order Number: 5B10016

Report Date: 02/21/05

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Arco Getty  
Project Number: 2001-10849  
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Reported:  
02/21/05 15:01

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
NBH-1	5B10016-01	Water	02/10/05 12:51	02/10/05 15:59

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Arco Getty  
Project Number: 2001-10849  
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Reported:  
02/21/05 15:01

**Volatile Organic Compounds by EPA Method 8260B**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>NBH-1 (5B10016-01) Water</b>									
<b>Benzene</b>	<b>199</b>	10.0	ug/l	10	EB52103	02/18/05	02/18/05	EPA 8260B	
<b>Toluene</b>	<b>800</b>	10.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>262</b>	10.0	"	"	"	"	"	"	
<b>Xylene (p/m)</b>	<b>662</b>	10.0	"	"	"	"	"	"	
<b>Xylene (o)</b>	<b>361</b>	10.0	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		103 %	68-129		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		90.8 %	72-132		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		101 %	74-118		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		98.0 %	65-140		"	"	"	"	

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Arco Getty  
Project Number: 2001-10849  
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Reported:  
02/21/05 15:01

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

**Batch EB52103 - EPA 624**

**Blank (EB52103-BLK1)**

Prepared & Analyzed: 02/18/05

Benzene	ND	1.00	ug/l							
Toluene	ND	1.00	"							
Ethylbenzene	ND	1.00	"							
Xylene (p/m)	ND	1.00	"							
Xylene (o)	ND	1.00	"							
Surrogate: Dibromofluoromethane	53.9		"	50.0		108	68-129			
Surrogate: 1,2-Dichloroethane-d4	47.2		"	50.0		94.4	72-132			
Surrogate: Toluene-d8	49.9		"	50.0		99.8	74-118			
Surrogate: 4-Bromofluorobenzene	50.6		"	50.0		101	65-140			

**LCS (EB52103-BS1)**

Prepared & Analyzed: 02/18/05

Benzene	55.7		ug/l	50.0		111	70-130			
Toluene	56.5		"	50.0		113	70-130			
Ethylbenzene	55.5		"	50.0		111	70-130			
Xylene (p/m)	96.5		"	100		96.5	70-130			
Xylene (o)	56.7		"	50.0		113	70-130			
Surrogate: Dibromofluoromethane	49.7		"	50.0		99.4	68-129			
Surrogate: 1,2-Dichloroethane-d4	48.2		"	50.0		96.4	72-132			
Surrogate: Toluene-d8	50.2		"	50.0		100	74-118			
Surrogate: 4-Bromofluorobenzene	49.1		"	50.0		98.2	65-140			

**Calibration Check (EB52103-CCV1)**

Prepared & Analyzed: 02/18/05

Toluene	52.8		ug/l	50.0		106	70-130			
Ethylbenzene	50.8		"	50.0		102	70-130			
Surrogate: Dibromofluoromethane	52.7		"	50.0		105	68-129			
Surrogate: 1,2-Dichloroethane-d4	47.1		"	50.0		94.2	72-132			
Surrogate: Toluene-d8	50.5		"	50.0		101	74-118			
Surrogate: 4-Bromofluorobenzene	49.0		"	50.0		98.0	65-140			

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Page 3 of 5

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Arco Getty  
Project Number: 2001-10849  
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Reported:  
02/21/05 15:01

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

**Batch EB52103 - EPA 624**

**Matrix Spike (EB52103-MS1)**

Source: SB15001-01

Prepared & Analyzed: 02/18/05

Benzene	54.8		ug/l	50.0	ND	110	80-120			
Toluene	55.7		"	50.0	ND	111	80-120			
Ethylbenzene	56.3		"	50.0	ND	113	80-120			
Xylene (p/m)	97.9		"	100	ND	97.9	80-120			
Xylene (o)	57.2		"	50.0	ND	114	80-120			
Surrogate: Dibromofluoromethane	45.6		"	50.0		91.2	68-129			
Surrogate: 1,2-Dichloroethane-d4	44.9		"	50.0		89.8	72-132			
Surrogate: Toluene-d8	48.2		"	50.0		96.4	74-118			
Surrogate: 4-Bromofluorobenzene	48.9		"	50.0		97.8	65-140			

**Matrix Spike Dup (EB52103-MSD1)**

Source: SB15001-01

Prepared & Analyzed: 02/18/05

Benzene	56.4		ug/l	50.0	ND	113	80-120	2.88	20	
Toluene	58.0		"	50.0	ND	116	80-120	4.05	20	
Ethylbenzene	57.2		"	50.0	ND	114	80-120	1.59	20	
Xylene (p/m)	99.1		"	100	ND	99.1	80-120	1.22	20	
Xylene (o)	59.0		"	50.0	ND	118	80-120	3.10	20	
Surrogate: Dibromofluoromethane	48.6		"	50.0		97.2	68-129			
Surrogate: 1,2-Dichloroethane-d4	48.1		"	50.0		96.2	72-132			
Surrogate: Toluene-d8	51.0		"	50.0		102	74-118			
Surrogate: 4-Bromofluorobenzene	50.3		"	50.0		101	65-140			

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Arco Getty  
Project Number: 2001-10849  
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Reported:  
02/21/05 15:01

### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference  
LCS Laboratory Control Spike  
MS Matrix Spike  
Dup Duplicate

Report Approved By:

*Raland K. Tuttle*

Date:

2/21/2005

Raland K. Tuttle, Lab Manager  
Celey D. Keene, Lab Director, Org. Tech Director  
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Page 5 of 5



# ENVIRONMENTAL, GEOTECHNICAL AND CONSTRUCTION MATERIALS SERVICES

## CHAIN OF CUSTODY RECORD



Office Location Midland, TX

Project Manager Shanna Smith

Sampler's Name

Shanna Smith

Project Name

Acco Getty

No/Type of Containers

2

VOA

A/G

250 ml

P/O

2

Identifying Marks of Sample(s)

NBH-1

Date

2/10/05

Time

1251

Matrix

W

Container

WV

VOA - 40 ml vial

W - Water

A/G - Amber / Or Glass 1 Liter

SD - Solid

L - Liquid

250 ml - Glass wide mouth

A - Air Bag

C - Charcoal tube

P/O - Plastic or other

SL - sludge

O - Oil

Turn around time

☒ Normal

☐ 50% Rush

☐ 100% Rush

Relinquished by (Signature)

Shanna Smith

Date

2/10/05

Time

1559

Relinquished by (Signature)

Shanna Smith

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Shanna Smith

Date

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Shanna Smith

Date

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Time

# Environmental Lab of Texas Variance / Corrective Action Report – Sample Log-In

Client: Plains P/L

Date/Time: 02-10-05 @ 1559

Order #: 5B10016

Initials: JMM

## Sample Receipt Checklist

Temperature of container/cooler?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	2.5	C
Shipping container/cooler in good condition?	<input type="radio"/> Yes	<input type="radio"/> No	N/A	
Custody Seals intact on shipping container/cooler?	<input type="radio"/> Yes	<input type="radio"/> No	Not present	N/A
Custody Seals intact on sample bottles?	<input type="radio"/> Yes	<input type="radio"/> No	<del>Not present</del>	
Chain of custody present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Sample Instructions complete on Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Chain of Custody signed when relinquished and received?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Chain of custody agrees with sample label(s)	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Container labels legible and intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Sample Matrix and properties same as on chain of custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Samples in proper container/bottle?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Samples properly preserved?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Sample bottles intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Preservations documented on Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Containers documented on Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
Sufficient sample amount for indicated test?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
All samples received within sufficient hold time?	<input checked="" type="radio"/> Yes	<input type="radio"/> No		
VOC samples have zero headspace?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Not Applicable	

Other observations:

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## Variance Documentation:

Contact Person: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted by: \_\_\_\_\_  
Regarding: \_\_\_\_\_

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Corrective Action Taken:

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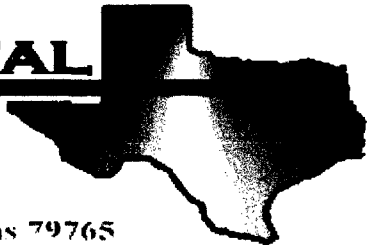
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# ENVIRONMENTAL LAB OF



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

**Prepared for:**

Daniel Bryant

Plains All American EH & S

1301 S. County Road 1150

Midland, TX 79706-4476

Project: Arco Getty

Project Number: 2001-10849

Location: None Given

Lab Order Number: 5I21015

Report Date: 09/30/05

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Arco Getty  
Project Number: 2001-10849  
Project Manager: Daniel Bryant

Fax: (432) 687-4914

Reported:  
09/30/05 09:05

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	5I21015-01	Water	09/21/05 12:20	09/21/05 16:30
MW-2	5I21015-02	Water	09/21/05 12:30	09/21/05 16:30
MW-3	5I21015-03	Water	09/21/05 12:45	09/21/05 16:30

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Arco Getty  
Project Number: 2001-10849  
Project Manager: Daniel Bryant

Fax: (432) 687-4914

Reported:  
09/30/05 09:05

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (5121015-01) Water</b>									
Benzene	ND	0.00100	mg/L	1	EI52622	09/26/05	09/26/05	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		89.2 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	80-120		"	"	"	"	
<b>MW-2 (5121015-02) Water</b>									
Benzene	ND	0.00100	mg/L	1	EI52622	09/26/05	09/26/05	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		102 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.8 %	80-120		"	"	"	"	
<b>MW-3 (5121015-03) Water</b>									
Benzene	ND	0.00100	mg/L	1	EI52622	09/26/05	09/26/05	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		83.0 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.0 %	80-120		"	"	"	"	

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Arco Getty  
Project Number: 2001-10849  
Project Manager: Daniel Bryant

Fax: (432) 687-4914

Reported:  
09/30/05 09:05

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EI52622 - EPA 5030C (GC)**

**Blank (EI52622-BLK1)**

Prepared & Analyzed: 09/26/05

Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	44.5		ug/l	40.0		111	80-120			
Surrogate: 4-Bromofluorobenzene	47.8		"	40.0		120	80-120			

**LCS (EI52622-BS1)**

Prepared & Analyzed: 09/26/05

Benzene	43.1		ug/l	50.0		86.2	80-120			
Toluene	41.6		"	50.0		83.2	80-120			
Ethylbenzene	49.3		"	50.0		98.6	80-120			
Xylene (p/m)	91.4		"	100		91.4	80-120			
Xylene (o)	52.4		"	50.0		105	80-120			
Surrogate: a,a,a-Trifluorotoluene	38.0		"	40.0		95.0	80-120			
Surrogate: 4-Bromofluorobenzene	42.0		"	40.0		105	80-120			

**Calibration Check (EI52622-CCV1)**

Prepared: 09/26/05 Analyzed: 09/27/05

Benzene	49.9		ug/l	50.0		99.8	80-120			
Toluene	44.9		"	50.0		89.8	80-120			
Ethylbenzene	50.2		"	50.0		100	80-120			
Xylene (p/m)	92.4		"	100		92.4	80-120			
Xylene (o)	50.9		"	50.0		102	80-120			
Surrogate: a,a,a-Trifluorotoluene	40.2		"	40.0		100	0-200			
Surrogate: 4-Bromofluorobenzene	39.6		"	40.0		99.0	0-200			

**Matrix Spike (EI52622-MS1)**

Source: 5123008-07

Prepared: 09/26/05 Analyzed: 09/27/05

Benzene	0.0413	0.00100	mg/L	0.0500	ND	82.6	80-120			
Toluene	0.0406	0.00100	"	0.0500	ND	81.2	80-120			
Ethylbenzene	0.0483	0.00100	"	0.0500	ND	96.6	80-120			
Xylene (p/m)	0.0887	0.00100	"	0.100	ND	88.7	80-120			
Xylene (o)	0.0537	0.00100	"	0.0500	ND	107	80-120			
Surrogate: a,a,a-Trifluorotoluene	33.5		ug/l	40.0		83.8	80-120			
Surrogate: 4-Bromofluorobenzene	43.5		"	40.0		109	80-120			

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Page 3 of 5

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Arco Getty  
Project Number: 2001-10849  
Project Manager: Daniel Bryant

Fax: (432) 687-4914

Reported:  
09/30/05 09:05

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EI52622 - EPA 5030C (GC)**

**Matrix Spike Dup (EI52622-MSD1)**

Source: 5123008-07

Prepared: 09/26/05 Analyzed: 09/27/05

Benzene	0.0461	0.00100	mg/L	0.0500	ND	92.2	80-120	11.0	20	
Toluene	0.0448	0.00100	"	0.0500	ND	89.6	80-120	9.84	20	
Ethylbenzene	0.0553	0.00100	"	0.0500	ND	111	80-120	13.9	20	
Xylene (p/m)	0.0985	0.00100	"	0.100	ND	98.5	80-120	10.5	20	
Xylene (o)	0.0572	0.00100	"	0.0500	ND	114	80-120	6.33	20	
Surrogate: a,a,a-Trifluorotoluene	34.5		ug/l	40.0		86.2	80-120			
Surrogate: 4-Bromofluorobenzene	46.8		"	40.0		117	80-120			

Environmental Lab of Texas

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

Page 4 of 5

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Arco Getty  
Project Number: 2001-10849  
Project Manager: Daniel Bryant

Fax: (432) 687-4914

Reported:  
09/30/05 09:05

### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference  
LCS Laboratory Control Spike  
MS Matrix Spike  
Dup Duplicate

Report Approved By:

*Raland K. Tuttle*

Date:

9/30/2005

Raland K. Tuttle, Lab Manager  
Celey D. Keene, Lab Director, Org. Tech Director  
Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director  
LaTasha Cornish, Chemist  
Sandra Sanchez, Lab Tech.

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If you have received this material in error, please notify us immediately at 432-563-1800.



# HBC Terracon

Consulting Engineers & Scientists

Office Location Midland TXProject Manager Shanna SmithSampler's Name Brandon WilsonSampler's Signature B. WilsonPO/SO #: 2001-10849Laboratory: ELOT

Address: \_\_\_\_\_

Contact: \_\_\_\_\_

Phone: \_\_\_\_\_

## ANALYSIS REQUESTED

Lab use only  
Due Date: \_\_\_\_\_Temp. of coolers  
when received (C°): 60.0

1 2 3 4 5

Page \_\_\_\_\_ of \_\_\_\_\_

Proj. No. 94047622 Project Name ARCO Getty No./Type of Containers 6/600Matrix W Date 9/2/05 Time 12:20 Identifying Marks of Sample(s) mw-1 VOA 2 A/G 1 L. 250 ml P/O

I I 12:30 mw-2 2

I 12:45 mw-3 2

Lab Sample ID (Lab Use Only) SI21015-01-02-03Turn around time ☒ Normal ☐ 50% Rush ☐ 100% RushRelinquished by (Signature) B. Wilson Date: 9/2/05 Time: 12:30 Received by (Signature) Carmel Kelly Date: 9/2/05 Time: 16:30

Relinquished by (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

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NOTES:

Daniel Bryant w/ Plainslabels/sealsOilSL - sludgeC - Charcoal tubeP/O - Plastic or otherOilOilOilOilOilOilOilOilOilOil

Houston Office

11555 Clay Road, Suite 100

Houston, Texas 77043

(713) 690-8989 Fax (713) 690-8787

Dallas Office

8901 Carpenter Freeway, Suite 100

Dallas, Texas 75247

(214) 640-1010 Fax (214) 630-7070

Fort Worth Office

2601 Gravel Drive

Fort Worth, Texas 76118

(817) 268-8600 Fax (817) 268-8602

Austin Office

5307 Industrial Oaks Blvd. # 160

Austin, Texas 78735

(512) 442-1122 Fax (512) 442-1181

Atlanta Office

2855 Premiere Parkway, Suite C

Duluth, Georgia 30097

(770) 623-0755 Fax (770) 623-9625

# Variance / Corrective Action Report – Sample Log-In

Client: Plains/HBC  
 Date/Time: 9/21/05 16:30  
 Order #: 5121015  
 Initials: CK

## Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	6.0 C
Shipping container/cooler in good condition?	<input checked="" type="checkbox"/> YES	No	
Custody Seals intact on shipping container/cooler?	Yes	No	<del>Not present</del>
Custody Seals intact on sample bottles?	<input checked="" type="checkbox"/> YES	No	Not present
Chain of custody present?	<input checked="" type="checkbox"/> YES	No	
Sample Instructions complete on Chain of Custody?	<input checked="" type="checkbox"/> YES	No	
Chain of Custody signed when relinquished and received?	<input checked="" type="checkbox"/> YES	No	
Chain of custody agrees with sample label(s)	<input checked="" type="checkbox"/> YES	No	
Container labels legible and intact?	<input checked="" type="checkbox"/> YES	No	
Sample Matrix and properties same as on chain of custody?	<input checked="" type="checkbox"/> YES	No	
Samples in proper container/bottle?	<input checked="" type="checkbox"/> YES	No	
Samples properly preserved?	<input checked="" type="checkbox"/> YES	No	
Sample bottles intact?	<input checked="" type="checkbox"/> YES	No	
Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> YES	No	
Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> YES	No	
Sufficient sample amount for indicated test?	<input checked="" type="checkbox"/> YES	No	
All samples received within sufficient hold time?	<input checked="" type="checkbox"/> YES	No	
VOC samples have zero headspace?	<input checked="" type="checkbox"/> YES	No	Not Applicable

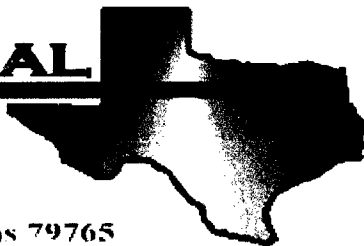
Other observations:

## Variance Documentation:

Contact Person: - \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted by: \_\_\_\_\_  
 Regarding: \_\_\_\_\_

Corrective Action Taken:

# ENVIRONMENTAL LAB OF



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

**Prepared for:**

Camille Reynolds

Plains All American EH & S

1301 S. County Road 1150

Midland, TX 79706-4476

Project: Arco Getty

Project Number: 2001-10849

Location: None Given

Lab Order Number: 5L13007

Report Date: 12/16/05

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Arco Getty  
Project Number: 2001-10849  
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Reported:  
12/16/05 17:48

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	5L13007-01	Water	12/13/05 09:30	12/13/05 12:27
MW-2	5L13007-02	Water	12/13/05 09:40	12/13/05 12:27
MW-3	5L13007-03	Water	12/13/05 09:20	12/13/05 12:27

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Arco Getty  
Project Number: 2001-10849  
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Reported:  
12/16/05 17:48

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (5L13007-01) Water</b>									
Benzene	ND	0.00100	mg/L	1	EL51406	12/14/05	12/14/05	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		93.0 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.2 %	80-120		"	"	"	"	
<b>MW-2 (5L13007-02) Water</b>									
Benzene	ND	0.00100	mg/L	1	EL51406	12/14/05	12/14/05	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		97.5 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.2 %	80-120		"	"	"	"	
<b>MW-3 (5L13007-03) Water</b>									
Benzene	ND	0.00100	mg/L	1	EL51406	12/14/05	12/14/05	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		95.0 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.0 %	80-120		"	"	"	"	

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Arco Getty  
Project Number: 2001-10849  
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Reported:  
12/16/05 17:48

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EL51406 - EPA 5030C (GC)**

**Blank (EL51406-BLK1)**

Prepared & Analyzed: 12/14/05

Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	36.7		ug/l	40.0		91.8	80-120			
Surrogate: 4-Bromofluorobenzene	35.7		"	40.0		89.2	80-120			

**LCS (EL51406-BS1)**

Prepared: 12/14/05 Analyzed: 12/16/05

Benzene	0.0445	0.00100	mg/L	0.0500		89.0	80-120			
Toluene	0.0511	0.00100	"	0.0500		102	80-120			
Ethylbenzene	0.0522	0.00100	"	0.0500		104	80-120			
Xylene (p/m)	0.108	0.00100	"	0.100		108	80-120			
Xylene (o)	0.0539	0.00100	"	0.0500		108	80-120			
Surrogate: a,a,a-Trifluorotoluene	39.0		ug/l	40.0		97.5	80-120			
Surrogate: 4-Bromofluorobenzene	41.0		"	40.0		102	80-120			

**Calibration Check (EL51406-CCV1)**

Prepared: 12/14/05 Analyzed: 12/16/05

Benzene	47.7		ug/l	50.0		95.4	80-120			
Toluene	53.4		"	50.0		107	80-120			
Ethylbenzene	57.2		"	50.0		114	80-120			
Xylene (p/m)	118		"	100		118	80-120			
Xylene (o)	59.8		"	50.0		120	80-120			
Surrogate: a,a,a-Trifluorotoluene	33.4		"	40.0		83.5	80-120			
Surrogate: 4-Bromofluorobenzene	41.7		"	40.0		104	80-120			

**Matrix Spike (EL51406-MS1)**

Source: SL14002-05

Prepared: 12/14/05 Analyzed: 12/15/05

Benzene	0.0448	0.00100	mg/L	0.0500	ND	89.6	80-120			
Toluene	0.0520	0.00100	"	0.0500	ND	104	80-120			
Ethylbenzene	0.0563	0.00100	"	0.0500	ND	113	80-120			
Xylene (p/m)	0.116	0.00100	"	0.100	ND	116	80-120			
Xylene (o)	0.0594	0.00100	"	0.0500	ND	119	80-120			
Surrogate: a,a,a-Trifluorotoluene	38.1		ug/l	40.0		95.2	80-120			
Surrogate: 4-Bromofluorobenzene	47.9		"	40.0		120	80-120			

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Arco Getty  
Project Number: 2001-10849  
Project Manager: Camille Reynolds

Fax: (432) 687-4914

Reported:  
12/16/05 17:48

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch EL51406 - EPA 5030C (GC)**

**Matrix Spike Dup (EL51406-MSD1)**

**Source: 5L14002-05**

**Prepared & Analyzed: 12/14/05**

Benzene	0.0467	0.00100	mg/L	0.0500	ND	93.4	80-120	4.15	20	
Toluene	0.0554	0.00100	"	0.0500	ND	111	80-120	6.51	20	
Ethylbenzene	0.0585	0.00100	"	0.0500	ND	117	80-120	3.48	20	
Xylene (p/m)	0.119	0.00100	"	0.100	ND	119	80-120	2.55	20	
Xylene (o)	0.0594	0.00100	"	0.0500	ND	119	80-120	0.00	20	
Surrogate: a,a,a-Trifluorotoluene	32.2		ug/l	40.0		80.5	80-120			
Surrogate: 4-Bromofluorobenzene	43.0		"	40.0		108	80-120			

Plains All American EH & S  
1301 S. County Road 1150  
Midland TX, 79706-4476

Project: Arco Getty  
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Project Manager: Camille Reynolds

Fax: (432) 687-4914

Reported:  
12/16/05 17:48

### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference  
LCS Laboratory Control Spike  
MS Matrix Spike  
Dup Duplicate

Report Approved By:

*Raland K. Tuttle*

Date: 12/16/2005

Raland K. Tuttle, Lab Manager  
Celey D. Keene, Lab Director, Org. Tech Director  
Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director  
LaTasha Cornish, Chemist  
Sandra Sanchez, Lab Tech.

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.





Environmental Lab of Texas  
Variance / Corrective Action Report - Sample Log-In

Patient: Plains  
Date/Time: 12/13/05 12:27  
Order #: 5L13007  
Initials: OK

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	2.5	C
Shipping container/cooler in good condition?	<u>Yes</u>	No		
Custody Seals intact on shipping container/cooler?	Yes	No	<del>Not present</del>	
Custody Seals intact on sample bottles?	<u>Yes</u>	No	Not present	
Chain of custody present?	<u>Yes</u>	No		
Sample Instructions complete on Chain of Custody?	<u>Yes</u>	No		
Chain of Custody signed when relinquished and received?	<u>Yes</u>	No		
Chain of custody agrees with sample label(s)	<u>Yes</u>	No		
Container labels legible and intact?	<u>Yes</u>	No		
Sample Matrix and properties same as on chain of custody?	<u>Yes</u>	No		
Samples in proper container/bottle?	<u>Yes</u>	No		
Samples properly preserved?	<u>Yes</u>	No		
Sample bottles intact?	<u>Yes</u>	No		
Preservations documented on Chain of Custody?	<u>Yes</u>	No		
Containers documented on Chain of Custody?	<u>Yes</u>	No		
Sufficient sample amount for indicated test?	<u>Yes</u>	No		
All samples received within sufficient hold time?	<u>Yes</u>	No		
VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable	

Other observations:

Variance Documentation:

Contact Person: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted by: \_\_\_\_\_  
Regarding: \_\_\_\_\_

Corrective Action Taken:

**APPENDIX D**

**Release Notification and Corrective Action (Form 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 October 10, 2003

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 Pipeline, LP	Contact: Camille Reynolds
Address 3112 W. US Hwy 82, Lovington, NM	Telephone No. 505-441-0965
Facility Name Arco Getty	Facility Type: Steel one inch line connected to a 16" suction header

Surface Owner: State of New Mexico	Mineral Owner	Lease No.
------------------------------------	---------------	-----------

LOCATION OF RELEASE

Unit Letter N	Section 27	Township 22S	Range 37E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
------------------	---------------	-----------------	--------------	---------------	------------------	---------------	----------------	---------------

Latitude 32°21'31" Longitude 103°09'09"

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: 10 bbls	Volume Recovered 0 bbls
Source of Release: Steel one inch line connected to a 16" suction header	Date and Hour of Occurrence 1/11/2001 @11:30	Date and Hour of Discovery 1/11/2001 @12:30
Was Immediate Notice Given? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Donna Williams	
By Whom? Wayne Brunette	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* Steel one inch line connected to 16" suction header. The line was repaired and impacted near surface soil stockpiled on plastic.

Describe Area Affected and Cleanup Action Taken.\* The impacted soil was excavated and stockpiled on plastic.

NOTE: This information was obtained from historical EOTT files, Plains acquired EOTT/Link on April 1, 2004 and Plains assumes this information to be correct.

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

Signature: <i>Camille Reynolds</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Camille Reynolds	Approved by District Supervisor:	
Title: Remediation Coordinator	Approval Date:	Expiration Date:
E-mail Address: cjreynolds@paalp.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 3/10/2006 Phone: (505)441-0965		

Attach Additional Sheets If Necessary

**Martin, Ed**

**From:** Camille J Reynolds [cjreynolds@paalp.com]  
**Sent:** Monday, June 06, 2005 1:36 PM  
**To:** 'Martin, Ed'  
**Subject:** RE: Arco Getty Site

1R-435

Ed;

Plains has proposed that a 20 millimeter polyethylene liner be installed at the site. There are 2 gas (Dynege) lines that are to the west of our excavation. I am not sure of the exact location but they are believed to be app. 20 to 30 feet to the west of the excavation.

Sincerely,  
Camille

-----Original Message-----

**From:** Martin, Ed [mailto:EMARTIN@state.nm.us]  
**Sent:** Thursday, June 02, 2005 4:01 PM  
**To:** Camille Reynolds (E-mail)  
**Subject:** Arco Getty Site

Hey, Camille. Some questions:

1. One picture of the site shows a pipeline that the caption says has been removed. What other pipelines exist at the site to prevent further excavation to, say 15 feet, before the installation of the "impermeable" liner?
2. What type of liner is being proposed? Clay? Synthetic?

Ed Martin  
New Mexico Oil Conservation Division  
Environmental Bureau  
1220 S. St. Francis  
Santa Fe, NM 87505  
Phone: 505-476-3492  
Fax: 505-476-3462

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#####  
Attention:

The information contained in this message and/or attachments is intended only for the person or entity to which it is addressed and may contain confidential and/or privileged material. If you received this in error, please contact the Plains Service Desk at 713-646-4444 and delete the material from any system and destroy any copies.

This footnote also confirms that this email message has been scanned for Viruses and Content and cleared.

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For more information please visit <http://www.messagelabs.com/email>

**Martin, Ed**

---

**To:** Camille Reynolds (E-mail)  
**Subject:** Arco Getty Site

Hey, Camille. Some questions:

1. One picture of the site shows a pipeline that the caption says has been removed. What other pipelines exist at the site to prevent further excavation to, say 15 feet, before the installation of the "impermeable" liner?
2. What type of liner is being proposed? Clay? Synthetic?

*Ed Martin*

New Mexico Oil Conservation Division  
Environmental Bureau  
1220 S. St. Francis  
Santa Fe, NM 87505  
Phone: 505-476-3492  
Fax: 505-476-3462

April 28, 2005

**Terracon**

New Mexico Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505  
Attn: Mr. Edwin Martin

Telephone: (505) 476-3440  
Fax: (505) 476-3462

Re: Work Plan for Site Investigation and Remediation  
Arco Getty  
UL – N, SE1/4 of SW ¼ Sec. 27, T22S, R37E  
Lea County, New Mexico  
Plains Leak Number 2001-10849  
Terracon Project No. 94047622  
NMOCD Ref. 1R-0435

Dear Mr. Martin:

Attached with this letter is a copy of the excavation site map and sample locations, proposed monitor well location map, and analytical tables.

On behalf of Plains Pipeline, L.P., Terracon is submitting the attached information in reference to the Work Plan Addendum dated March 18, 2005.

If you have any questions, contact Camille Reynolds at (505) 441-0965 or [cjreynolds@paalp.com](mailto:cjreynolds@paalp.com).

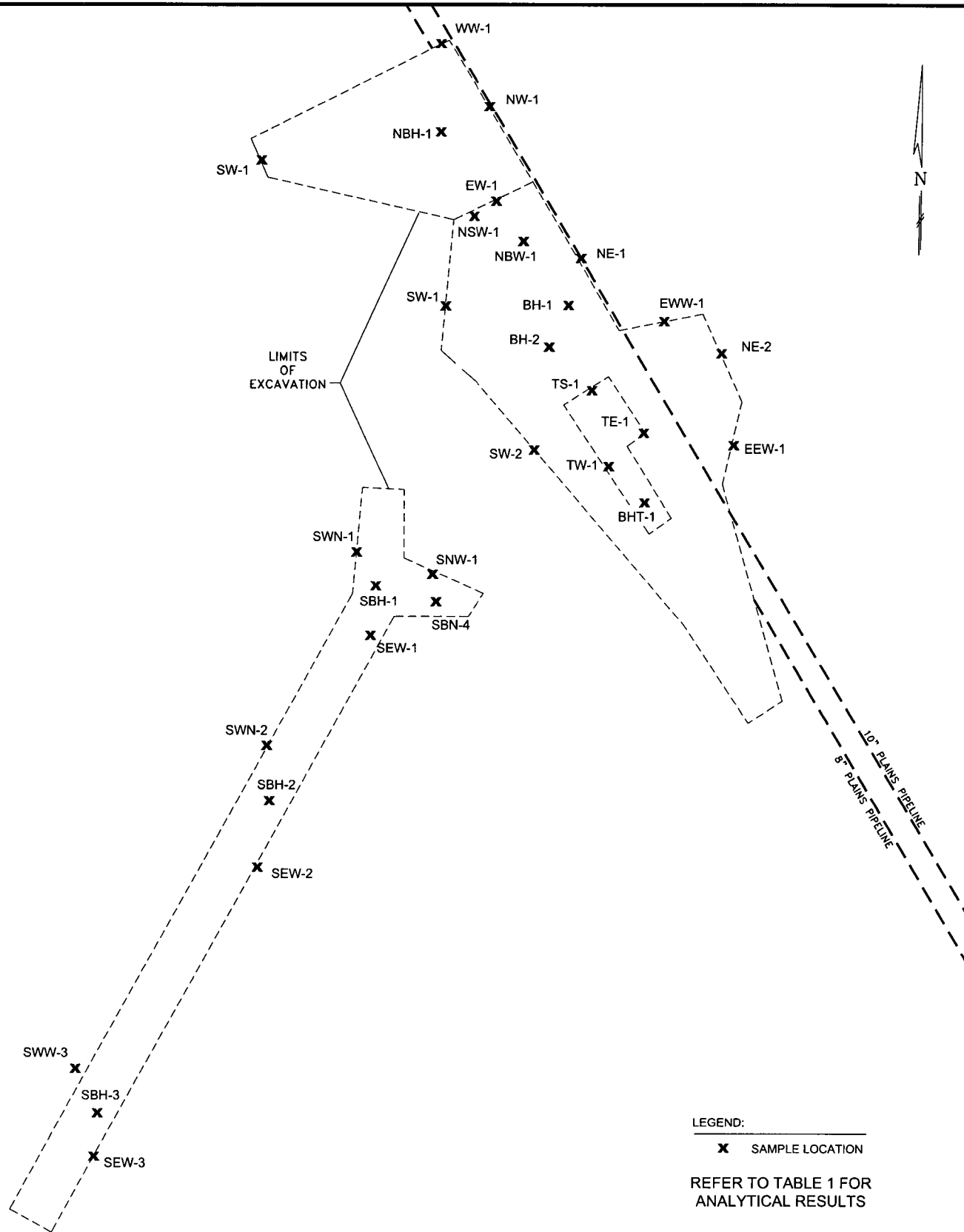
Sincerely,

**Terracon**

Prepared by:

Shanna L. Smith  
Project Manager

DATE: 04/28/05 FILENAME: O:\HBC\Env\2004\94047622-C.dwg



THIS DRAWING SHOULD  
NOT BE USED SEPARATELY  
FROM ORIGINAL REPORT.

0 20 40 FEET  
APPROXIMATE SCALE

PLAINS PIPELINE, L.P.  
ARCO GETTY REF.#2001-10849  
LEA COUNTY, NEW MEXICO

**HBC**  
**Terracon** Project No.: 94047622

**FIGURE 2: SITE PLAN**

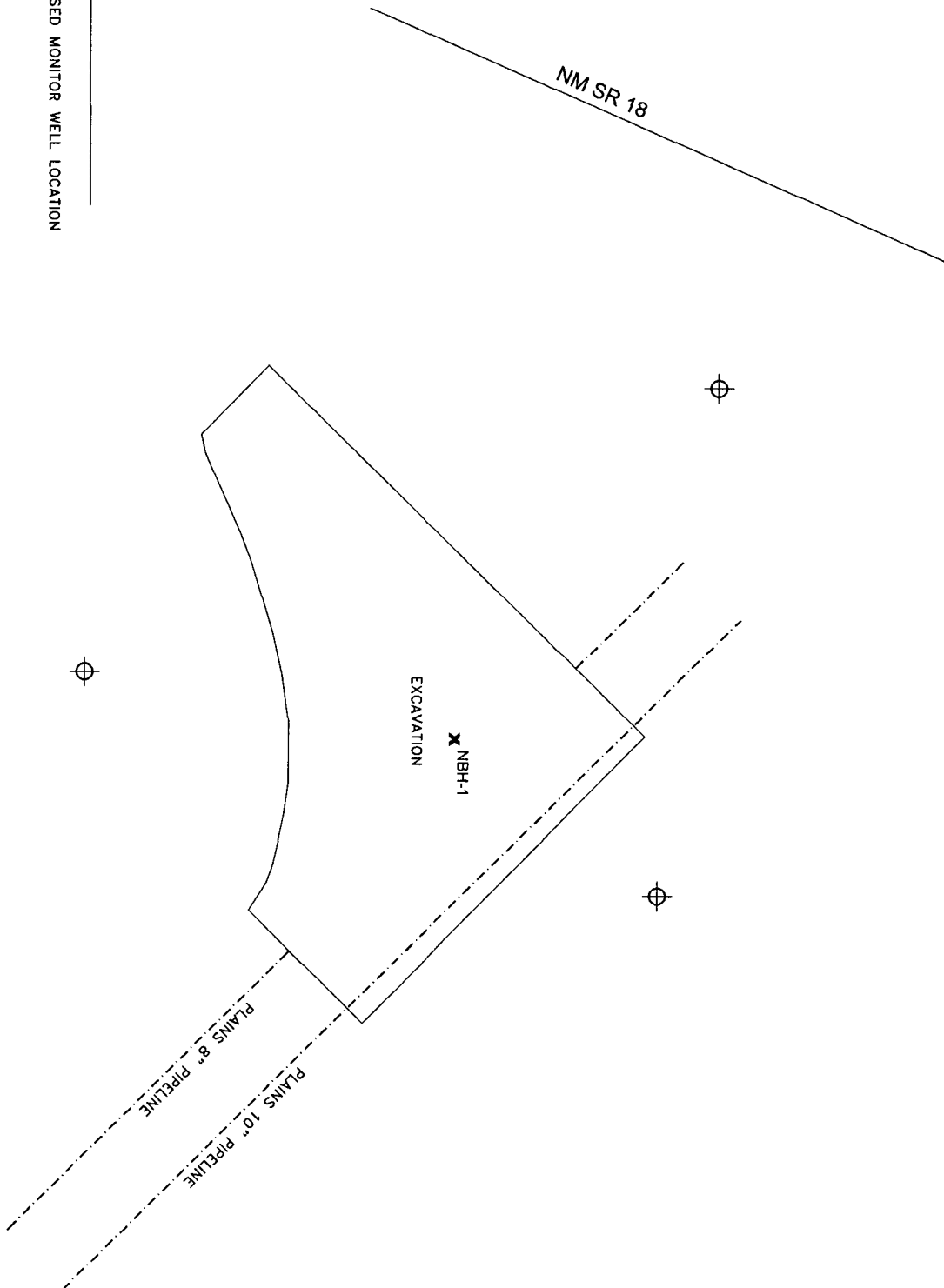


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NOT BE USED SEPARATELY  
FROM ORIGINAL REPORT.



PLAINS PIPELINE, L.P.  
ARCO GETTY REF. # 2001-10849  
LEA COUNTY, NEW MEXICO

LEGEND:  
⊕ PROPOSED MONITOR WELL LOCATION



**Table 2**  
**CONCENTRATIONS OF TPH & BTEX IN GROUNDWATER**

**Plains Pipeline, L.P.**  
**Arco-Getty**  
**UL - N, SE 1/4 of SW 1/4 Sec 27, T22S, R37E**  
**5 Miles South of Eunice, Lea County, New Mexico**  
**Plains All American Pipeline Leak Number 2001-10849**  
**Terracon Project Number 94047622**

*All concentrations are in mg/L*

SAMPLE DATE	SAMPLE LOCATION	SW 846-8260B, 5030					
		BENZENE	TOLUENE	ETHYL- BENZENE	M,P- XYLENES	O- XYLENES	TOTAL BTEX
2/10/2005	NBH-1	0.199	0.800	0.262	0.662	0.361	2.284

Table 1

## CONCENTRATIONS OF TPH &amp; BTEX IN SOIL

Plains Pipeline, L.P.  
 Arco-Getty  
 UL - N, SE 1/4 of SW 1/4 Sec 27, T22S, R37E  
 5 Miles South of Eunice, Lea County, New Mexico  
 Plains All American Pipeline Leak Number 2001-10849  
 Terracon Project Number 94047622

All concentrations are in mg/kg

SAMPLE DATE	SAMPLE LOCATION	EPA 8015 modified			EPA Method 8260B						SW 846 9253
		TPH C <sub>6</sub> -C <sub>12</sub>	TPH >C <sub>12</sub> -C <sub>25</sub>	TPH C <sub>6</sub> -C <sub>35</sub>	BENZENE	TOLUENE	ETHYL-BENZENE	M.P. XYLENES	O-XYLENES	BTEX	
01/11/05	EL-1 20'	<10.0	<10.0	<10.0							
	EL-2 10'	<10.0	<10.0	<10.0							
	EL-2 15'	<10.0	<10.0	<10.0							
	EL-2 20'	<10.0	<10.0	<10.0							
	EL-3 20'	<10.0	<10.0	<10.0							
	EL-4 10'	<10.0	<10.0	<10.0							
01/18/05	NE-1	<10.0	16.1	16.1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	NE-2	19.2	1410	1430	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	SW-1	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	0.0156	<0.025	0.0156	
	SW-2	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	0.0199	<0.025	0.0199	
	BH-1	<10.0	50.4	50.4	<0.025	<0.025	<0.025	0.0175	<0.025	0.0175	170
	BH-2	<10.0	30.8	30.8	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	TS-1	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	TW-1	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	BHT-1	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	TE-1	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	SP-1 & 2	6.22	47.6	47.6	<0.025	<0.025	<0.025	0.0167	<0.025	0.0167	
	SP-3	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	0.0296	<0.025	0.0296	
	SP-4A	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	SP-4B	<10.0	45.0	45.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	SP-5	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	SP-6	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	0.029	0.0388	0.0678	
	SBH-1 3'	14.6	57.8	72.4	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	SBH-2 3'	859	1900	2760	<0.025	<0.025	0.194	0.674	0.12	0.988	
	SBH-3 3'	155	916	1070	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<20.0
	SBH-4 3'	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	SBH-5 1'	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	0.0233	<0.025	0.0233	
	SWW-1 2'	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	0.0261	<0.025	0.0261	
	SWW-2 2'	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	SWW-3 2'	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	SEW-1 2'	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	SEW-2 2'	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	SEW-3 2'	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	NBH-1 2'	<10.0	13.8	13.8	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	NSW-1 2'	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	CP-1	<10.0	<10.0	<10.0	<0.025	<0.025	0.0216	0.0562	0.0231	0.1009	<20.0
	CP-2	<10.0	26.8	26.8	<0.025	0.017	0.283	0.0718	0.0295	0.4013	<20.0
01/19/05	SNW-1 2'	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
01/24/05	NW-1 5'	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	0.0218	<0.025	0.0218	
	NW-1 15'	7.16	21.8	21.8	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	WW-1 5'	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	WW-1 15'	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	EW-1 5'	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	EW-1 15'	6.09	42.1	42.1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	SW-1 5'	<10.0	25.2	25.2	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	SW-1 15'	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	NBH-1 20'	1050	2480	3530	0.196	1.130	0.272	2.950	1.870	6.418	
	SP-7	215	652	867	<0.025	0.074	0.174	0.830	0.527	<0.025	
01/24/05	DBH-1 25'	337	929	1270	<25.0	0.215	0.236	2.480	1.36	4.291	
	DBH-1 31'	71.4	318	389	<25.0	<25.0	<25.0	0.0368	0.0172	0.054	
01/27/05	NE-2A	19.2	730	749	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	SBH-2A 5'	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	0.0211	<0.025	0.0211	
	SBH-3A 4.5'	12.7	90.4	103	<0.025	<0.025	<0.025	0.035	0.0174	0.0524	
02/04/05	NE-2B	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	SP-9	48.6	149	198	<0.025	0.0218	0.0183	0.112	0.175	0.3271	
	SP-10	77.9	276	354	<0.025	<0.025	<0.025	0.0282	0.177	0.2052	
	EW-1	<10.0	307	307	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
	EEW-1	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
02/10/05	NBH-1 25'	1280	1720	3000	1.480	24.800	10.700	37.800	16.500	91.28	
	NBH-1 30'	3450	4390	7840	2.200	43.100	26.500	50.400	24.900	147.1	
	NBH-1 35'	4910	6180	11100	3.310	49.200	34.300	54.900	32.700	174.41	
	NBH-1 40'	194	492	686	<0.025	0.169	0.616	1.320	0.766	2.871	
	NBH-1 45'	32.5	50.8	83.3	0.0253	1.240	1.650	3.410	2.020	8.3453	
	NBH-1 50'	25.2	57.8	83.0	0.090	0.415	0.176	0.353	0.164	1.1975	

CONCENTRATIONS IN BOLD ARE ABOVE REGULATORY LIMITS



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**

Governor

**Joanna Prukop**

Cabinet Secretary

**Mark E. Fesmire, P.E.**

Director

**Oil Conservation Division**

March 30, 2005

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

Re: Workplan for Site Excavation and Remediation  
Arco Getty Site  
NMOCD Ref. 1R-0435

Dear Ms. Reynolds:

The New Mexico Oil Conservation Division has received the workplan shown above for the Arco Getty release site, located in N-27-22S-37E. The workplan is hereby denied.

Please re-submit the workplan and include the following information:

1. Soil analysis results for TPH and BTEX at 25, 30, 35, and 40 feet bgs for soil samples taken from the base of the excavation as shown in the Project Information Summary section of the workplan.
2. A plat of the site showing the horizontal extent of the spill and also showing existing pipelines at the site that may hamper the remediation efforts. Also show on this plat the sites of the proposed groundwater monitor wells in relation to the original spill area.
3. This plat also must contain groundwater gradient information.

A "map" is referred to in the workplan that may contain some of the necessary information, but no map was included in the workplan sent to me.

If you have any questions, contact me at (505) 476-3492 or [emartin@state.nm.us](mailto:emartin@state.nm.us)

NEW MEXICO OIL CONSERVATION DIVISION

Edwin E. Martin

cc: Larry Johnson, NMOCD, Hobbs



**PLAINS  
PIPELINE**

March 22, 2005

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

1R-435

Re: Plains All American Pipeline Work Plan Addendum for  
Site Excavation and Remediation  
Arco Getty Site  
SE ¼, SW ¼ of Section 27, T22S, R37E  
Lea County, New Mexico

Dear Mr. Martin:

Please find attached for your approval the Work Plan Addendum for Site Excavation and Remediation, dated March 18, 2005, for the Arco Getty site located in Section 27 of Township 22 South, and Range 37 East of Lea County, New Mexico. The Work Plan Addendum details site activities conducted to date and future activities for remediation and closure of the site.

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

Sincerely,

Camille Reynolds  
Remediation Coordinator  
Plains All American Pipeline

Cc: Larry Johnson, NMOCD, Hobbs Office

Enclosure

March 18, 2005

Plains Pipeline, L.P.  
3705 East Highway 158  
Midland, Texas 79706  
Attn: Ms. Camille Reynolds

Phone: (505) 393-5611  
Fax: (505) 397-0697



110 W. Louisiana, Suite 300  
Midland, Texas 79701  
Phone 432.684.9600  
Fax 432.684.9608  
www.terracon.com

Re: Addendum to Work Plan for Site Excavation/Remediation on September 28, 2004  
Additional Activities Include: Liner Installation, Site Restoration, and Monitor Well Installation  
Arco - Getty (TX-NMX), EMS #2001-10849  
UL - N, SE ¼ of SW ¼ Section 27, T22S, R37E  
Lea County, New Mexico  
5 Miles south of Eunice, NM off State Road 18  
Plains Marketing, L.P., EMS Number 2001-10849  
Terracon Project Number 94047622

Dear Ms. Reynolds:

Terracon appreciates the opportunity to submit this addendum to our approved work plan ("Work Plan for Site Excavation/Remediation" on September 28, 2004) to place an impermeable liner at 10' below ground surface (bgs) in the source area excavation, conduct site restoration, and to install monitor wells at the above-referenced site. This work plan includes the project information summary, scope of services, estimated compensation recommendations, proposed monitor well map, and photographs of the project site.

#### **A. PROJECT INFORMATION SUMMARY**

The Arco - Getty leak site is located approximately 5 miles south of Eunice, NM on NM State Road 18. The leak site is located on property owned by New Mexico State Land Trust with the surface rights currently leased by Mr. Roscoe Andrew Sims.

The leak occurred on January 11, 2001 with approximately 10 barrels of crude oil spilling into the surrounding pastureland and adjacent caliche pit. A crew was dispatched to the site and a clamp was affixed to the pipeline as a temporary repair. Saturated topsoil was excavated and placed on an impermeable liner, yielding approximately 100 cubic yards of soil.

Delineation of petroleum hydrocarbons at the project site was conducted in November 2001 with a "Work Plan Supplement and Remediation Alternatives" (Work Plan) report being submitted in January 2002 by Environmental Plus, Inc. (EPI) located in Eunice, NM. No further work was

performed except for the initial response. The proposed excavation was based on the data reviewed in the Work Plan. For the areas where the soil sample results exceeded 500 mg/kg total petroleum hydrocarbon (TPH), those soils were excavated and hauled to the land farm located at the Plains Pipeline Lea Station. For the areas where the soil samples that did not exceed 500 mg/kg TPH, those soils were excavated and stockpiled onsite.

The leak source area was excavated to approximately 20 feet below ground surface (bgs) in January, 2005. The sidewall analytical results for TPH and benzene, toluene, ethylbenzene, xylenes (BTEX) were below New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases of 10 mg/kg Benzene, 50 mg/kg total BTEX, and 100 mg/kg TPH.

The soil sample collected from the base of the excavation at 20 feet bgs had a TPH concentration of 3,530 mg/kg. Due to the TPH concentration exceeding NMOCD guidelines, a trailer mounted drill unit was utilized to investigate the total depth of impact. Soil samples were collected at 5 foot vertical intervals using a hollow stem auger and stainless steel probe with a vinyl sleeve. The soil samples collected from 25, 30, 35, and 40 feet bgs also exceeded NMOCD guidelines for TPH and BTEX concentrations. The TPH and BTEX concentrations from the soil samples collected at 45 and 50 feet bgs were below NMOCD thresholds.

During the soil investigation, groundwater was encountered at approximately 47 feet bgs. A groundwater sample was collected from the soil boring to evaluate the petroleum hydrocarbon concentrations in the groundwater. The groundwater concentrations for benzene, toluene, and total xylenes were above the New Mexico Water Quality Control Commission Ground Water Standards. The groundwater sample was not collected from a completed monitor well; therefore, detected BTEX concentrations may not be representative of actual groundwater conditions.

Terracon will develop a generic safety plan to be used by our personnel during field services. At this time, we anticipate that a USEPA Level D work uniform consisting of hard hats, safety glasses, protective gloves, and steel-toed boots will be required by all personnel in the work area. It may become necessary to upgrade this level of protection, at additional cost, while sampling activities are being conducted in the event that petroleum or chemical constituents are encountered in soils or groundwater which presents an increased risk for personal exposure.

## **B. SCOPE OF SERVICES**

### **Liner Installation**

The objective of the proposed scope of services is to install an impermeable liner 10' bgs in the source area excavation and to restore the site, to as near possible, to the natural grade of the

surrounding grade. Due to multiple pipelines located in the area and safety factors associated with the excavation, the liner will be installed at 10' bgs. The source area excavation will be widened at 10' bgs to include a three to five foot buffer zone around the perimeter of the impacted soil column. A twenty millimeter thick liner, constructed of polyethylene and is impervious to petroleum hydrocarbons will be installed to isolate the source material and to cease the vertical migration of contaminants of concern.

All blended material adhering to NMOCD remediation levels and clean overburden soil removed during excavation activities will be used as backfill. Additional soil needed for blending and backfill operations will be purchased, as needed, from the NM State Land Office. Backfill will be placed in one foot lifts and compacted with heavy equipment. Site restoration of the project site will match, as near as possible, to the natural grade of the surrounding area.

### **Soil Borings**

Three soil borings will be advanced on-site using a truck-mounted drilling rig, equipped with air-rotary drilling capabilities. The subcontracted drilling services will be supervised by a licensed monitoring well driller. The soil borings will be advanced to approximately 60 feet bgs. The proposed number of soil borings and total boring depths will not be exceeded without verbal approval from the client.

Soil boring locations will generally be located radially outward from the known crude oil impact zone. It is proposed that the soil borings be located at the source area, and northwest and southwest of the source area. Soil boring locations are depicted on the attached map. Please note that boring locations may be altered due to the locations of existing pipelines and excavations. Drilling equipment will be cleaned using a high-pressure washer prior to beginning the project and before beginning each boring.

Soil cuttings will be collected at five foot intervals, until groundwater is encountered, to document lithology, color and relative moisture content. In addition, the samples will be field screened using sensory methods and/or a photoionization detector (PID) to detect the presence of volatile organic compounds.

### **Groundwater Monitoring Wells**

The soil borings will be converted to groundwater monitoring wells to evaluate on-site groundwater within the assessment area. Monitoring wells will be constructed as follows:

- Installation of 20 feet of 2-inch diameter, 0.010-inch machine slotted PVC well screen with a threaded bottom cap;
- Installation of 2-inch diameter, threaded, flush-joint PVC riser pipe to surface;



- Addition of pre-sieved silica sand/gravel for annular sand/gravel pack around the well screen from the bottom of the boring to approximately 2 feet above the top of the well screen
- Placement of hydrated bentonite pellets above the sand pack to two feet below ground surface;
- Addition of cement/bentonite slurry to the surface; and
- Installation of an above-grade completion monitoring well riser with a locking well cap inset in a flush-mount, concrete well pad.

The monitoring wells will be developed by purging and removing groundwater until fluids appear relatively free of fine-grained sediment. Drill cuttings will be incorporated onto existing stockpiles on-site, and groundwater will be stored temporarily on-site in labeled 55-gallon drums. The drum labels will identify the apparent contents of the drum and the initial accumulation date.

Following development of the monitoring wells and prior to groundwater sample collection, each well will be purged with a new disposable bailer or low-flow sampling equipment. Each monitoring well will be purged of a minimum of three well casing volumes of groundwater, until the monitoring well formation fails to recharge, (i.e., well runs dry) or consistent values (i.e., less than 10% variance between consecutive readings) are obtained for pH, temperature and conductivity. Subsequent to sufficient recharge, one groundwater sample will be collected from each monitoring well utilizing a new, disposable, polypropylene bailer or low-flow sampling equipment.

### **Sampling Program**

Terracon's soil and groundwater sampling program will consist of the following:

- Collection of three soil samples from each soil boring from the zone exhibiting the highest PID readings and the capillary fringe zone. If, based on these observations, no elevated PID readings are observed, the samples will be collected from the capillary fringe zone, from the interval exhibiting a change in lithology, from the bottom of the boring, and/or from the interval of most likely environmental impact as determined in the field by the sampling professional.
- Collection of one groundwater sample from each groundwater monitoring well using a new, disposable, polypropylene bailer or low-flow sampling equipment. If crude oil is encountered, a groundwater sample will not be collected.

The soil and groundwater samples will be collected and placed in laboratory prepared containers, labeled, and placed on ice in a cooler which will be secured with a custody seal. The soil samples and completed chain-of-custody forms will be transported to Environmental Lab of Texas (ELOT), in Odessa, Texas for analysis of BTEX using United States Environmental Protection Agency (EPA) Method 8021 and TPH using EPA Method Modified 8015. The groundwater samples and completed chain-of-custody forms will be transported to ELOT for BTEX analysis. Laboratory analysis will be performed under standard laboratory turnaround time of 7 to 10 working days.

### **Laboratory Analytical Program**

The soil and groundwater samples collected from the soil borings and monitoring wells will be analyzed for volatile organic compounds (BTEX and TPH) using the following methods:

<u>Analysis</u>	<u>Sample Type</u>	<u>No. of Samples</u>	<u>Laboratory Method</u>
BTEX	Water	3	SW-846 Method 8021
TPH	Soil	9	EPA Method Mod. 8015

### **Preparation of Final Report**

Upon completion of site activities and receipt of the laboratory analytical results, a final report will be prepared that will include the following:

- Documentation of field activities;
- Site plan showing pertinent site features;
- Soil boring/monitoring well logs;
- Analytical laboratory results;
- Data evaluation and presentation of findings; and,
- Recommendations concerning further action, if necessary.

Terracon is prepared to commence work in late March, 2005, pending approval by NMOCD. It is anticipated that the field activities will be completed in three days. The standard analytical turnaround time is 7 to 10 working days (expedited turnaround is available at an additional charge). Preliminary verbal results may be available within 24 hours of Terracon's receipt of laboratory analytical reports. The final written report will be available two weeks following Terracon's receipt of final laboratory analytical reporting. This written report will reflect final results, findings and recommendations, and, as such, will take precedence over any verbal reports that Terracon personnel may have provided. All field services will be performed under modified Level D safety personal protective equipment. The analysis, comments and recommendations presented in the written report will be based on the information collected as discussed in this work plan.

Terracon's services will be performed in a manner consistent with generally accepted practices of the professional undertaken in similar studies in the same geographic area during the same period. Terracon makes no warranties, expressed or implied, regarding its services, findings, conclusions or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report. These services will be performed in accordance with the scope of work agreed with you, our client, as set forth in this work plan.

Findings, conclusions and recommendations resulting from these services will be based upon information derived from on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, nondetectable or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic substances, petroleum products, or other latent conditions beyond those identified during this scope of work. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations or exploratory services; the data, interpretations, findings and our recommendations are based solely upon data obtained at the time and within the scope of these services.

### **C. CONCLUSION**

- Plains Pipeline, L.P. will provide to Terracon, prior to mobilization, legal right of entry to the site (and other areas if required) to conduct the scope of services.
- Plains Pipeline, L.P. will notify Terracon, prior to mobilization, of any restrictions, special site access requirements, or known potentially hazardous conditions at the site (e.g., hazardous materials or processes, specialized protective equipment requirements, unsound structural conditions, etc.)
- Utilities on private land that are not located by public companies will be located by property owner/operator.
- Work can be performed during normal business hours (Monday through Friday, 7:00 am to 7:00 pm).
- Traffic control services are not required.
- The site is readily accessible by truck.

Plains Pipeline, L.P.  
Arco - Getty  
Terracon Project Number 94047622  
March 18, 2005

**Terracon**

If any of these assumptions or conditions are not accurate or change during the project, the stated fee is subject to change. Please contact us immediately if you are aware of any inaccuracies in these assumptions and conditions, so we may revise the work plan or fee.

Transportation and disposal of removed soil cuttings and/or development water and other waste materials are out-of-scope services and not included in this work plan. Terracon anticipates generating approximately eight drums of groundwater during the field activities. Terracon would be pleased to provide a separate work plan for such services once a final volume of waste is determined.

#### **D. GENERAL COMMENTS**

This work plan is valid for 60 days from the date of this work plan. We appreciate the opportunity to provide this work plan and look forward to working with you on this project. If this work plan meets with your approval, please sign the notification to proceed in accordance with the Master Services Agreement between Plains Pipeline, L.P. and Terracon and return a copy via fax at (432) 684-9608 or mail to our Midland Office at 110 West Louisiana, Suite 300, Midland, Texas 79701.

If you should have any questions or comments regarding this work plan, please contact either of the undersigned.

Sincerely,  
**Terracon**



Shanna L. Smith  
Project Manager  
Midland Office



Barrett W. Bole, P.G.  
Project Manager  
Midland Office

CC: Mr. Jeff Dann, Plains All American, Houston Office

Plains Pipeline, L.P.  
Arco - Getty  
Lea County, New Mexico  
EMS#2001-10849  
Terracon Project #94047622



Northwest view of excavation.



Southeast view of excavation.



Plains Pipeline, L.P.  
Arco - Getty  
Lea County, New Mexico  
EMS#2001-10849  
Terracon Project #94047622



North view of source area prior to removing pipeline.



Southern view of excavation.

Plains Pipeline, L.P.  
Arco - Getty  
Lea County, New Mexico  
EMS#2001-10849  
Terracon Project #94047622



Northwest view of excavation after removing pipeline.



Northwest view of source area excavation after removing pipeline.

**Martin, Ed**

**From:** Camille J Reynolds [cjreynolds@paalp.com]  
**Sent:** Monday, February 28, 2005 8:12 AM  
**To:** 'EMartin@state.nm.us'  
**Subject:** Notification of Groundwater Impact

1R-435

Dear Mr. Martin:

Plains All American Pipeline submits this notification of groundwater impact due to a crude oil release at the Arco Getty Release Site. The site is located in Unit N of Section 27, Township 22 South, Range 37 East of Lea County, New Mexico. This submittal follows verbal notification made by Camille Reynolds on Feb. 25, 2005. A groundwater sample was collected during the installation of a soil boring at the release point to complete delineation at the site. The groundwater sample indicated elevated levels of BTEX, no PSH was observed in the bore hole. A Work Plan will be submitted to your office to address the activities to be conducted at the site. If you have any questions or concerns regarding this matter please contact me at 505-441-0965.

Sincerely,

Camille Reynolds  
Environmental Coordinator  
Plains All American

#####  
Attention:  
The information contained in this message and/or attachments is intended only for the person or entity to which it is addressed and may contain confidential and/or privileged material. If you received this in error, please contact the Plains Service Desk at 713-646-4444 and delete the material from any system and destroy any copies.

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