

# SOILS REMEDIATION WORKPLAN E.K. QUEEN TRUNK LEA COUNTY, NEW MEXICO NMOCD REF. # RP-1167 SRS #2007-024

Section 19, Township 18 South, Range 34 East

Prepared for:

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#### AVERAGE DEPTH OF WATER REPORT 06/12/2007

							(Depth	water in	reet)
Bsn	Tws	Rng Sec	Zone	X	Y	Wells	Min	Max	Avg
L	18S	34E 19				1	105	105	105

Record Count: 1

#### E.K. Queen Trunk Soils Remediation Workplan

Plains Pipeline, L.P. Houston, Texas

Talon/LPE PROJECT NO. PLAINS041SPL

Prepared by:

Marc Stroope

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NMOCD – New Mexico Oil Conservation Division BLM – New Mexico Bureau of Land Management

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#### 1.0 INTRODUCTION AND OBJECTIVES

#### 1.1 Objectives and Site Location

Talon/LPE was retained by Plains Pipeline, L.P. (Plains) to conduct a soils investigation at the E.K. Queen Trunk crude oil pipeline release site in Lea County, New Mexico. The purpose of this investigation was to delineate and remediate hydrocarbon impacted soils at this location.

The E.K. Queen Trunk release site is located approximately 25 miles east of Loco Hills in Lea County, New Mexico. The GPS coordinates for the site are 32°43'44.1"N latitude and 103°36'01.3"W longitude. The release occurred on property owned by the United States Department of Interior Bureau of Land Management (BLM) and is utilized as pasture land. The site is located in a rural area with no residences or surface water within a 1,000 foot radius of the facility. A topographic map is provided as Figure 1 in Appendix A.

#### 1.2 Site Background

In January 2007, a release of approximately ninety (90) barrels of crude oil occurred at the site due to internal corrosion of the pipeline, of which approximately seventy (70) barrels were recovered. Approximately sixteen thousand (16,000) square feet of surface area was impacted by the release. Approximately 2,500 cubic yards of soil were excavated and placed on a plastic liner.

#### 1.3 Regulatory Framework

The NMOCD has developed guidance for all federal, state, and fee lands in New Mexico for remediating contaminants resulting from leaks, spills, and releases of oilfield wastes or products. This guidance assigns ranking scores to sites based on depth to groundwater, distance from water supply sources, and distance to surface water bodies, and provides remediation/clean-up targets for benzene, Total BTEX (benzene, toluene, ethylbenzene, and xylenes), and total petroleum hydrocarbons (TPH). Based on site visits, the E.K. Queen Trunk site is located in a rural area with no permanent residence or surface water within a 1,000 foot radius of the release point. According to information available from the New Mexico Office of the State Engineer, the nearest water well is not within 1000 feet of the site. Based on this groundwater elevation data, the approximate depth from land surface to groundwater at the site is 105 feet below ground surface (bgs). The impacted area was excavated to a depth of approximately 18 feet, making the depth to groundwater from the depth of the excavation 87 feet.

According to NMOCD guidance, and based on depth to groundwater, distance from water supply sources, and distance to surface water bodies the site ranking for this site is ten (10). The ranking process is summarized below:

Criteria:	Site Condition:	Ranking Score:
Depth to Groundwater	87 feet	10
<1,000 Feet to Water Source?	No	0
<200 Feet to Private Domestic Water Source?	No	0
Distance to Surface Water Body	>1,000 feet	0
Total Ranking:		10

Based on the calculated rating, the applicable remediation guidelines for this site are as follows:

Benzene 10 ppm Total BTEX 50 ppm TPH 1,000 ppm

#### 2.0 FIELD ACTIVITIES

#### 2.1 Soil Investigation Activities

Talon/LPE commenced excavation activities at the site in January 2007 in order to remove soil impacted above the NMOCD remedial threshold limits. Approximately 2,500 cubic yards of soil were excavated and placed on a plastic liner. The excavated area is approximately 225 feet long, 70 feet wide, and three feet in depth.

#### 2.2 Soil Sampling Activities

Upon the completion of excavation activities, grab samples were collected from the north sidewall (NW-1, NW-2, and NW-3) and the south sidewall (WW-1, WW-2, and WW-3) to document the successful removal of soil impacted above NMOCD remedial thresholds (reference Figure 2). In addition, grab samples were also collected from the middle wall (MW-1, MW-2, and MW-3) and bottom of the excavation (BH-1, BH-2, and BH-3) as referenced in Figure 2. Laboratory analyses of the samples collected on March 7, 2007 showed all sample locations in the excavated area to be below the NMOCD remedial thresholds (reference Table 1). Stockpile samples (SP-1, SP-2, SP-3, and SP-4) collected on March 7, 2007 exhibited TPH and Total BTEX concentrations above the NMOCD remedial thresholds (reference Figure 2 and Table 1).

#### 3.0 CONCLUSIONS

#### 3.1 Proposed Remediation Activities

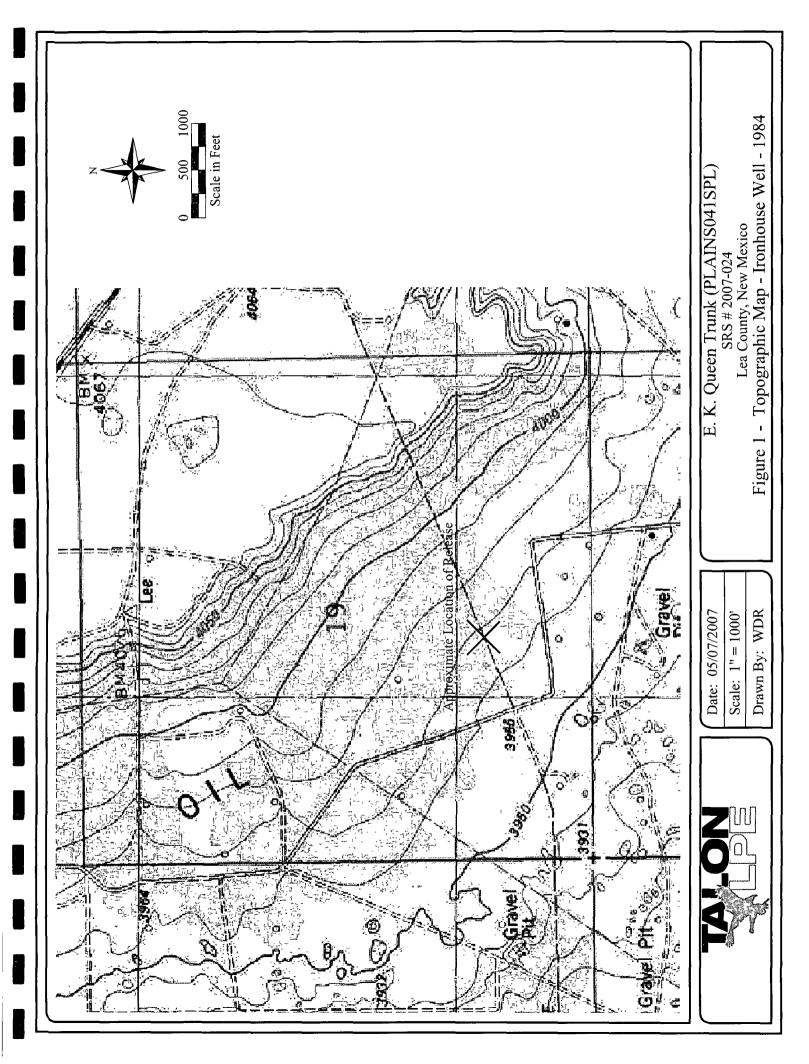
The excavation confirmation soil samples indicated TPH and Total BTEX concentrations below NMOCD guidelines. Therefore, Talon/LPE proposes that the excavated soil be transported to an NMOCD approved landfill and the excavation area be backfilled with imported fill material.

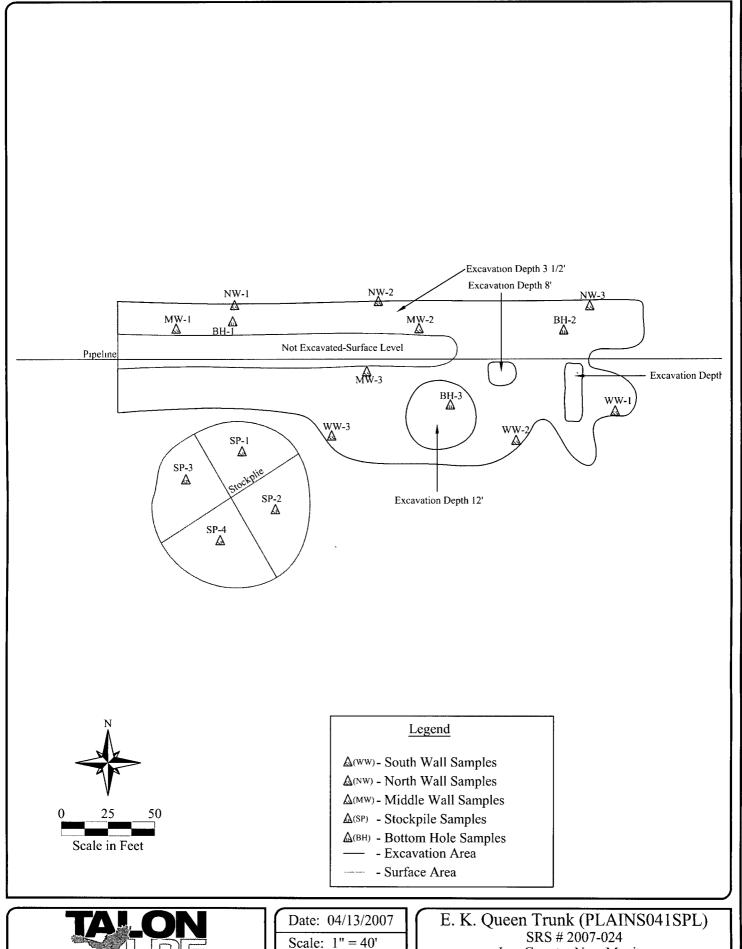
Upon completion of the backfill activities, the activities will be compiled as a soil closure report and submitted to the NMOCD for approval.

# Appendix A

# **Drawings**

Figure 1 – Topographic Map Figure 2 – Site Map With Confirmation Sampling Locations







Drawn By: WDR

Lea County, New Mexico

Figure 2 - Site Map with Confirmation Sampling Locations

# **APPENDIX B**

# **Tables**

Table 1 – Summary of Soil Analytical Data



# Table 1 Summary of Soil Analytical Data Plains Pipeline, L.P. EK Queen 6" Trunk Lea County, NM SRS# 2007-024 Talon/LPE Project Number PLAINS041SPL

				Conc	entration		
		mg/Kg			mg/Kg		
Sample Designation	Date Sampled	Total TPH	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX
NW-1	03/07/07	146	< 0.00200	0.00544	0.00255	0.00541	0.03635
NW-2	03/07/07	183	0.00583	0.0171	0.0123	0.0334	0.06863
NW-3	03/07/07	169	< 0.00200	0.00266	0.00489	0.01099	0.01854
MW-1	03/07/07	47.6	< 0.00200	0.00234	0.00339	0.00919	0.01492
MW-2	03/07/07	270	< 0.00200	0.00362	< 0.00200	0.00499	0.00861
MW-3	03/07/07	268	0.00442	0.0231	0.0171	0.03058	0.07520
WW-1	03/07/07	78.9	0.00448	0.0357	0.0377	0.0606	0.13848
WW-2	03/07/07	24.9	< 0.00200	0.00508	0.00273	0.00663	0.01444
WW-3	03/07/07	11.3	< 0.00200	< 0.00200	< 0.00200	< 0.00200	< 0.00200
BH-1	03/07/07	612	< 0.00200	0.00336	0.0162	0.0339	0.05346
BH-2	03/07/07	806	< 0.00200	0.00231	0.00647	0.01834	0.02712
BH-3	03/07/07	372	< 0.00200	< 0.00200	< 0.00200	< 0.00200	< 0.00200
SP-1	03/07/07	13,500	1.38	34.1	28.5	57.0	120.98
SP-2	03/07/07	21,600	6.54	45.7	47.8	84.7	184.74
SP-3	03/07/07	18,000	6.50	112	107	175.5	401
SP-4	03/07/07	6,800	1.23	16.8	19.0	33.48	70.51
NMOCD Remediation Gu	ildelines	1,000	10				50

Bolded values are in excess of the NMOCD Remediation Thresholds

#### **APPENDIX C**

Laboratory Analytical Data Sheets and Chain of Custody Documentation



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# Analytical Report

#### **Prepared for:**

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

Project: 101 Line to Judkins Project Number: EMS# 2006-026 Location: Lea County New Mexico

Lab Order Number: 7C09003

Report Date: 03/14/07

Project Number EMS# 2006-026

Project Number EMS# 2006-026
Project Manager Camille Reynolds

Fax (432) 687-4914

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
NW-1	7C09003-01	Soıl	03/07/07 14 50	03-08-2007 17 30
NW-2	7C09003-02	Soil	03/07/07 14 56	03-08-2007 17 30
NW-3	7C09003-03	Soil	03/07/07 15 09	03-08-2007 17 30
MW-1	7C09003-04	Soil	03/07/07 15 17	03-08-2007 17 30
MW-2	7C09003-05	Soil	03/07/07 15 24	03-08-2007 17 30
MW-3	7C09003-06	Soil	03/07/07 15 31	03-08-2007 17 30
ww-1	7C09003-07	Soil	03/07/07 15 40	03-08-2007 17 30
WW-2	7C09003-08	Soil	03/07/07 15 46	03-08-2007 17 30
WW-3	7C09003-09	Soil	03/07/07 15 55	03-08-2007 17 30
BH-1	7C09003-10	Soil	03/07/07 16 10	03-08-2007 17 30
ВН-2	7C09003-11	Soil	03/07/07 16 21	03-08-2007 17 30
ВН-3	7C09003-12	Soil	03/07/07 16 26	03-08-2007 17 30
SP_1	7C09003-13	Soil	03/07/07 16 40	03-08-2007 17 30
SP-2	7C09003-14	Soil	03/07/07 16 50	03-08-2007 17 30
SP_3	7C09003-15	Soil	03/07/07 17 03	03-08-2007 17 30
SP-4	7C09003-16	Soil	03/07/07 17 18	03-08-2007 17 30

Project Number EMS# 2006-026
Project Manager Camille Reynolds

Fax (432) 687-4914

#### Organics by GC Environmental Lab of Texas

Environmental Lab of Texas											
Analyte	Result	Reporting Limit	Units	Deletere	Detel	Downson	A	Madead	Notes		
NW-1 (7C09003-01) Soil	Result	- Dimit	- Cints	Dilution	Batch	Prepared	Analyzed	Method	Notes		
	T (0 00+ <b>5</b> 0)		4 1					ED4 0021D			
Benzene	J [0.00172]	0 00200	mg/kg dry	2	EC70902	03/09/07	03/09/07	EPA 8021B			
Toluene	0.00544	0 00200	"	"	11	"	"	"			
Ethylbenzene \(\)	0.00255	0 00200	**		**	"	"				
Xylene (p/m)	0.00247	0 00200	"	n	11	"	"	"			
Xylene (o)	0.00294	0 00200				"	"				
Surrogate: a,a,a-Trifluorotoluene		85.0 %	75-12		"	"	"	"			
Surrogate. 4-Bromofluorobenzene		93 8 %	75-12	5	"	"	n	"			
Carbon Ranges C6-C12	J [5.29]	10 0	mg/kg dry	1	EC70809	03/08/07	03/09/07	EPA 8015M			
Carbon Ranges C12-C28	131	10 0	"	**	**	"	11	**			
Carbon Ranges C28-C35	15.0	10 0	**	"	n	u	11	**			
Total Hydrocarbons	146	10 0		"	n	**	11	u			
Surrogate: 1-Chlorooctane		103 %	70-13	0	"	"	"	"			
Surrogate: 1-Chlorooctadecane		128 %	70-13	0	"	"	"	"			
NW-2 (7C09003-02) Soil											
Benzene	0.00583	0 00200	mg/kg dry	2	EC70902	03/09/07	03/09/07	EPA 8021B			
Toluene	0.0171	0 00200	"	u	"	"	11	"			
Ethylbenzene	0.0123	0 00200	u	"	"	"	"	**			
Xylene (p/m)	0.0224	0 00200	u	"	**	**	"	**			
Xylene (o)	0.0110	0 00200	'n	"	n	Ħ	"	Ħ			
Surrogate. a,a,a-Trifluorotoluene		88.6 %	75-12	5	"	"	"	"			
Surrogate 4-Bromofluorobenzene		87.6 %	75-12	5	"	"	"	"			
Carbon Ranges C6-C12	10.4	10 0	mg/kg dry	1	EC70809	03/08/07	03/10/07	EPA 8015M			
Carbon Ranges C12-C28	157	10 0	"	11	,,	n	n	**			
Carbon Ranges C28-C35	15.5	10 0	"	"	**	n	n				
Total Hydrocarbons	183	10 0	**	,,	"	n	11	"			
Surrogate: 1-Chlorooctane		103 %	70-13	0	"	"	n	"			
Surrogate: 1-Chlorooctadecane		129 %	70-13	0	"	"	"	"			
NW-3 (7C09003-03) Soil											
Benzene	ND	0 00200	mg/kg dry	2	EC70902	03/09/07	03/09/07	EPA 8021B			
Toluene	0.00266	0 00200	n	**	"	**	н	**			
Ethylbenzene	0.00489	0 00200	"	**	n	11	"	**			
Xylene (p/m)	0.00645	0 00200			н	"	"	"			
Xylene (o)	0.00454	0 00200		**	"		n	"			
Surrogate a,a,a-Trifluorotoluene		82.8 %	75-12.	5	"	"	,,	"			
Surrogate 4-Bromofluorobenzene		87.4 %	75-12.		"	,,	"	"			
Carbon Ranges C6-C12	J [8.35]	10 0	mg/kg dry	1	EC70809	03/08/07	03/10/07	EPA 8015M	j		

Environmental Lab of Texas

A Xenco Laboratories Company

Project Number EMS# 2006-026
Project Manager Camille Reynolds

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#### Organics by GC Environmental Lab of Texas

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NW-3 (7C09003-03) Soil									
Carbon Ranges C12-C28	147	10 0	mg/kg dry	1	EC70809	03/08/07	03/10/07	EPA 8015M	
Carbon Ranges C28-C35	22.2	10 0	"	"	**	"	11	u	
Total Hydrocarbons	169	10 0	**	n	"	n	11	"	
Surrogate 1-Chlorooctane		100 %	70-1.	30	n	"	"	"	
Surrogate, 1-Chlorooctadecane		126 %	70-13	30	"	"	"	n	
MW-1 (7C09003-04) Soil									
Benzene	ND	0 00200	mg/kg dry	2	EC70902	03/09/07	03/09/07	EPA 8021B	
Toluene	0.00234	0 00200	**	"	n	"	"	**	
Ethylbenzene	0.00339	0 00200	**	*	11	"	"	"	
Xylene (p/m)	0.00512	0 00200	**	**	"	"	"	**	
Xylene (o)	0.00407	0 00200	**	**	"	n	"	,,	
Surrogate a,a,a-Trifluorotoluene		85 6 %	75-12	25	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.2 %	75-12	25	"	"	n	"	
Carbon Ranges C6-C12	12.9	10 0	mg/kg dry	1	EC70901	03/09/07	03/10/07	EPA 8015M	
Carbon Ranges C12-C28	34.7	10 0	"	**	11	"	11	**	
Carbon Ranges C28-C35	J [3.94]	10 0	"	н	**	"	11		
Total Hydrocarbons	47.6	10 0	"	11	"	n	"	"	
Surrogate 1-Chlorooctane		107 %	70-1.	30	"	"	"	"	
Surrogate 1-Chlorooctadecane		126 %	70-13	30	"	"	"	"	
MW-2 (7C09003-05) Soil									
Benzene	J [0.000902]	0 00200	mg/kg dry	2	EC70902	03/09/07	03/09/07	EPA 8021B	
Toluene	0.00362	0 00200	**	"	n	"	"	•	
Ethylbenzene	J [0.00161]	0 00200	n	*	n	н	11	u	
Xylene (p/m)	0.00207	0 00200	11	**	11	"	"	11	
Xylene (o)	0.00292	0 00200	"	**	#	"	"	11	
Surrogate: a.a.a-Trıfluorotoluene		81.2 %	75-12	25	"	"	"	n	
Surrogate: 4-Bromofluorobenzene		83.2 %	75-12	?5	"	"	n	rr .	
Carbon Ranges C6-C12	J [6.88]	10 0	mg/kg dry	1	EC70901	03/09/07	03/10/07	EPA 8015M	
Carbon Ranges C12-C28	244	10 0	**	11	"	"	"	51	
Carbon Ranges C28-C35	26.4	10 0	**	"	"	n	u	<b>11</b>	
Total Hydrocarbons	270	10 0	н	"	"	н	н	и	
Surrogate: 1-Chlorooctane		105 %	70-13	30	,,	"	"	n	
Surrogate: 1-Chlorooctadecane		126 %	70-13	30	"	n	"	n	

Environmental Lab of Texas

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Project Number EMS# 2006-026
Project Manager Camille Reynolds

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#### Organics by GC Environmental Lab of Texas

			mentai La						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Droparad	Analyzed	Method	No
MW-3 (7C09003-06) Soil	- Tosur			Dilution	Daten	Prepared	Anaryzed	Wellod	NO
Benzene	0.00442	0 00200	mg/kg dry	2	FC70002	02/00/07	03/09/07	EPA 8021B	
Toluene	0.0231	0 00200	mg/kg tily	Z	EC70902	03/09/07	03/09/07	11	
Ethylbenzene	0.0171	0 00200	"	"		н	**	н	
Xylene (p/m)	0.0215	0 00200	11	,,	,,	н	"	Ħ	
Xylene (p/m) Xylene (o)	0.00908	0 00200	"	"		"		n	
Surrogate. a,a,a-Trifluorotoluene		88 0 %	75-12	5	,,	,,	,,	n	
Surrogate: 4-Bromofluorobenzene		87 8 %	75-12		"	,,	"	n	
Carbon Ranges C6-C12	J [9.98]	10 0	mg/kg dry	1	EC70901	03/09/07	03/10/07	EPA 8015M	
Carbon Ranges C12-C28	232	10 0	"	,,	"	"	"	n	
Carbon Ranges C28-C35	36.2	10 0	"	"	••	n	**	**	
Total Hydrocarbons	268	10 0	и	"		н	n	11	
Surrogate 1-Chlorooctane		103 %	70-13	0		n	"	n	
Surrogate 1-Chlorooctadecane		128 %	70-13		"	"	"	n	
WW-1 (7C09003-07) Soil	·····								
Benzene	0.00448	0 00200	mg/kg dry	2	EC70902	03/09/07	03/12/07	EPA 8021B	
Toluene	0.0357	0 00200	"	"	"	n	**	н	
Ethylbenzene	0.0377	0 00200	"	"	n	Ħ	"	н	
Xylene (p/m)	0.0424	0 00200	11	"	"	"	u	51	
Xylene (o)	0.0182	0 00200	"	н	**	"	n	.,	
Surrogate a,a,a-Trıfluorotoluene		766%	75-12.	5	n	"	"	"	
Surrogate. 4-Bromofluorobenzene		90.6 %	75-12.	5	"	"	"	"	
Carbon Ranges C6-C12	14.0	10 0	mg/kg dry	1	EC70901	03/09/07	03/10/07	EPA 8015M	
Carbon Ranges C12-C28	53.5	10 0	#1	n	11	n	**	11	
Carbon Ranges C28-C35	11.4	10 0	11	11	"	"	n	"	
Total Hydrocarbons	78.9	10 0	"	"	"	"	u	**	
Surrogate 1-Chlorooctane		103 %	70-13	0	"	"	"	"	
Surrogate: 1-Chlorooctadecane		125 %	70-13	0	"	"	"	"	
WW-2 (7C09003-08) Soil									
Benzene	ND	0 00200	mg/kg dry	2	EC70902	03/09/07	03/12/07	EPA 8021B	
Toluene	0.00508	0 00200	n	"	"	11	11	11	
Ethylbenzene	0.00273	0 00200	**	n	**	"	,,		
Xylene (p/m)	0.00344	0 00200	**	11	11	u.	и	n .	
Xylene (o)	0.00319	0 00200	п	"	"	n	n	n	
Surrogate a,a,a-Trıfluorotoluene		77 8 %	75-12.	5	"	,,	"	"	
Surrogate 4-Bromofluorobenzene		84 4 %	75-12.	5	"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EC70901	03/09/07	03/10/07	EPA 8015M	

Environmental Lab of Texas

A Xenco Laboratories Company

Project Number EMS# 2006-026
Project Manager Camille Reynolds

Fax (432) 687-4914

#### Organics by GC Environmental Lab of Texas

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
WW-2 (7C09003-08) Soil									
Carbon Ranges C12-C28	24.9	10 0	mg/kg dry	1	EC70901	03/09/07	03/10/07	EPA 8015M	
Carbon Ranges C28-C35	ND	10 0	"	u	n	n	**	"	
Total Hydrocarbons	24.9	10 0	it.		"	n	n	"	
Surrogate 1-Chlorooctane		101 %	70-1.	30	н	"	"	n	
Surrogate. I-Chlorooctadecane		122 %	70-1.	30	"	"	"	"	
WW-3 (7C09003-09) Soil									
Benzene	ND	0 00200	mg/kg dry	2	EC70902	03/09/07	03/12/07	EPA 8021B	
Toluene	ND	0 00200	n	"	11	11	"	**	
Ethylbenzene	ND	0 00200	"	n	11	11	"	n	
Xylene (p/m)	ND	0 00200	"	11	n	"	"	11	
Xylene (o)	ND	0 00200	"	**		н	"	"	
Surrogate: a,a,a-Trifluorotoluene		70 4 %	75-1.	25	n	,,	"	"	S-DUF
Surrogate: 4-Bromofluorobenzene		85 2 %	75-12	25	"	"	"	"	
Carbon Ranges C6-C12	ND	10 0	mg/kg dry	1	EC70901	03/09/07	03/10/07	EPA 8015M	
Carbon Ranges C12-C28	11.3	10 0	н	"	"	"	"	u	
Carbon Ranges C28-C35	ND	10 0	"	*	"	"	"	**	
Total Hydrocarbons	11.3	10 0	н	**	11	н	"	и	
Surrogate 1-Chlorooctane		106 %	70-1.	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		127 %	70-1.	30	"	n	n	"	
BH-1 (7C09003-10) Soil									
Benzene	ND	0 00200	mg/kg dry	2	EC71207	03/12/07	03/12/07	EPA 8021B	
Toluene	0.00336	0 00200	н	**	"	n	**	••	
Ethylbenzene	0.0162	0 00200	**		n	et	"	"	
Xylene (p/m)	0.0220	0 00200	11	**	**	н	"	•	
Xylene (o)	0.0119	0 00200	11	**	11	n	11	•	
Surrogate: a.a,a-Trifluorotoluene		66 6 %	75-12	25	"	n	"	n .	S-0-
Surrogate 4-Bromofluorobenzene		82 2 %	75-12	25	"	n	"	"	
Carbon Ranges C6-C12	21.2	10 0	mg/kg dry	1	EC70901	03/09/07	03/10/07	EPA 8015M	
Carbon Ranges C12-C28	531	10 0	11		**	n	n	"	
Carbon Ranges C28-C35	59.4	10 0	"		11	n	n	"	
Total Hydrocarbons	612	10 0	**	**	11	11	**	n	
Surrogate: 1-Chlorooctane		110 %	70-13	30	,,	"	n	n	

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#### Organics by GC Environmental Lab of Texas

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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes		
BH-2 (7C09003-11) Soil											
Benzene	ND	0 00200	mg/kg dry	2	EC71207	03/12/07	03/12/07	EPA 8021B			
Toluene	0.00231	0 00200	"	"	"	"	n	n			
Ethylbenzene	0.00647	0 00200	n	**	*	O .	n	n			
Xylene (p/m)	0.0110	0 00200	n	"	**	tt	"	**			
Xylene (o)	0.00734	0 00200	n	"	**	**	**	н			
Surrogate: a,a,a-Trıfluorotoluene		64.6 %	75-1	25	"	"	"	n .	S-0-		
Surrogate. 4-Bromofluorobenzene		80 8 %	75-1	25	"	"	"	"			
Carbon Ranges C6-C12	50.9	10 0	mg/kg dry	1	EC70901	03/09/07	03/10/07	EPA 8015M			
Carbon Ranges C12-C28	686	10 0	11	**	"	н	"	11			
Carbon Ranges C28-C35	68.6	10 0	11	**	"	11	"	11			
Total Hydrocarbons	806	10 0	11	"	n	"	"	11			
Surrogate: 1-Chlorooctane		117 %	70-1	30	"	"	"	"			
Surrogate 1-Chlorooctadecane		140 %	70-1	30	"	n	n	n	S-0-		
BH-3 (7C09003-12) Soil											
Benzene	ND	0 00200	mg/kg dry	2	EC71207	03/12/07	03/12/07	EPA 8021B			
Toluene	ND	0 00200	u	"	"	u	n				
Ethylbenzene	ND	0 00200	n	"	"	"	11	**			
Xylene (p/m)	ND	0 00200	"	"	**	n	н	"			
Xylene (o)	ND	0 00200	"	11	"	••	"	"			
Surrogate · a,a,a-Trıfluorotoluene		71.2 %	75-1	25	"	"	"	"	S-0-		
Surrogate. 4-Bromofluorobenzene		80.0 %	75-1	25	"	"	"	"			
Carbon Ranges C6-C12	J [7.68]	10 0	mg/kg dry	1	EC70901	03/09/07	03/10/07	EPA 8015M	J		
Carbon Ranges C12-C28	332	10 0	"	11	"	"	"	11			
Carbon Ranges C28-C35	40.3	10 0	**	"	"	"	**	n			
Total Hydrocarbons	372	10 0	**	"		"	"	**			
Surrogate 1-Chlorooctane		109 %	70-1	30	"	"	"	"			
Surrogate. 1-Chlorooctadecane		132 %	70-1	30	"	"	"	"	S-0-		
SP_1 (7C09003-13) Soil											
Benzene	1.38	0 200	mg/kg dry	200	EC71207	03/12/07	03/12/07	EPA 8021B			
Toluene	34.1	0 200	n	**	11	"	"	,,			
Ethylbenzene	28.5	0 200	11	"	"	n	11	H			
Xylene (p/m)	40.4	0 200	11	"	Ħ	п	**	**			
Xylene (o)	16.6	0 200	"	n	n	11	я	H			
Surrogate a,a.a-Trıfluorotoluene		104 %	75-1	25	"	"	"	n,			
Surrogate 4-Bromofluorobenzene		91.4%	75-1	25	"	"	"	"			
Carbon Ranges C6-C12	3750	50 0	mg/kg dry	5	EC70901	03/09/07	03/10/07	EPA 8015M			

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		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
SP_1 (7C09003-13) Soil									
Carbon Ranges C12-C28	9040	50 0	mg/kg dry	5	EC70901	03/09/07	03/10/07	EPA 8015M	
Carbon Ranges C28-C35	680	50 0	**	"	"	11	"	H	
Total Hydrocarbons	13500	50 0	н	"	"	n	"	n	
Surrogate. 1-Chlorooctane		44 2 %	70-1	130	"	"	"	"	S-00
Surrogate: 1-Chlorooctadecane		51.4 %	70-1	130	"	"	"	"	S-06
SP-2 (7C09003-14) Soil									
Benzene	6.54	0 400	mg/kg dry	400	EC71207	03/12/07	03/12/07	EPA 8021B	
Toluene	45.7	0 400	**	"	"	11	"	n	
Ethylbenzene	47.8	0 400	**	"	"	n	"	**	
Xylene (p/m)	60.2	0 400	**	"	"	n	"	H	
Xylene (o)	24.5	0 400	11	"	н	n	"	Ħ	
Surrogate a,a,a-Trifluorotoluene		93 4 %	75-	125	"	"	"	n .	
Surrogate 4-Bromofluorobenzene		116 %	75-1	125	"	"	"	"	
Carbon Ranges C6-C12	6150	50 0	mg/kg dry	5	EC70901	03/09/07	03/10/07	EPA 8015M	
Carbon Ranges C12-C28	14500	50 0	"		**	11	"	11	
Carbon Ranges C28-C35	903	50 0	**	**	11	11	**	**	
Total Hydrocarbons	21600	50 0	"	"	D.	11	**	**	
Surrogate 1-Chlorooctane		58.6 %	70-1	130	"	"	"	n	S-06
Surrogate 1-Chlorooctadecane		66 4 %	70-1	130	n	"	"	tt	S-06
SP_3 (7C09003-15) Soil									
Benzene	6.50	0 400	mg/kg dry	400	EC71207	03/12/07	03/12/07	EPA 8021B	
Toluene	112	0 400	n	"	n	**	"	11	
Ethylbenzene	107	0 400	n	"		"	"	**	
Xylene (p/m)	127	0 400	**	*	n	*	*	**	
Xylene (o)	48.5	0 400	11	"	11	**	н	"	
Surrogate a,a,a-Trifluorotoluene		126 %	75-1	25	"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		124 %	75-1	25	"	"	"	"	
Carbon Ranges C6-C12	6860	50 0	mg/kg dry	5	EC70901	03/09/07	03/10/07	EPA 8015M	
Carbon Ranges C12-C28	10400	50 0	"	11	11	,,	*	91	
Carbon Ranges C28-C35	705	50 0	u		**	"	n	"	
Total Hydrocarbons	18000	50 0	n	"	"	"	"	"	
Surrogate: 1-Chlorooctane		55.4 %	70-1	'30	"	"	"	"	S-06
Surrogate 1-Chlorooctadecane		55 2 %	70-1	30	"	"	"	"	S-06

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#### Organics by GC Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP-4 (7C09003-16) Soil									
Benzene	1.23	0 200	mg/kg dry	200	EC71207	03/12/07	03/12/07	EPA 8021B	
Toluene	16.8	0 200	**	11	"	n	"	o ·	
Ethylbenzene	19.0	0 200	**	11	11	u	"	•	
Xylene (p/m)	24.3	0 200	**	11	**	"	"	n	
Xylene (o)	9.18	0 200	**	ti .	11	"	"		
Surrogate. a,a,a-Trifluorotoluene		88.6 %	75-1	25	"	"	"	n	
Surrogate 4-Bromofluorobenzene		106 %	75-1	25	"	"	"	"	
Carbon Ranges C6-C12	2140	10 0	mg/kg dry	1	EC70901	03/09/07	03/10/07	EPA 8015M	
Carbon Ranges C12-C28	4510	10 0	n	n	**	"	**	**	
Carbon Ranges C28-C35	176	10 0	"		**	"	**	**	
Total Hydrocarbons	6830	10 0	"	"	**	"	**	11	
Surrogate: 1-Chlorooctane		185 %	70-1	30	"	"	n	"	S-04
Surrogate: 1-Chlorooctadecane		197 %	70-1	30	"	"	n	"	S-04

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#### General Chemistry Parameters by EPA / Standard Methods Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
NW-1 (7C09003-01) Soil									
% Moisture	ND	0 1	%	1	EC71206	03/09/07	03/12/07	% calculation	
NW-2 (7C09003-02) Soil									
% Moisture	ND	0 1	%	1	EC71206	03/09/07	03/12/07	% calculation	
NW-3 (7C09003-03) Soil									
% Moisture	0.1	0 1	%	1	EC71206	03/09/07	03/12/07	% calculation	
MW-1 (7C09003-04) Soil									
% Moisture	1.0	0 1	%	1	EC71206	03/09/07	03/12/07	% calculation	
MW-2 (7C09003-05) Soil									
% Moisture	ND	0 1	%	1	EC71206	03/09/07	03/12/07	% calculation	
MW-3 (7C09003-06) Soil									
% Moisture	1.4	0 1	%	1	EC71206	03/09/07	03/12/07	% calculation	
WW-1 (7C09003-07) Soil									
% Moisture	0.2	0 1	%	1	EC71206	03/09/07	03/12/07	% calculation	
WW-2 (7C09003-08) Soil									
% Moisture	0.2	0 1	%	1	EC71206	03/09/07	03/12/07	% calculation	
WW-3 (7C09003-09) Soil									
% Moisture	0.1	0 1	%	1	EC71206	03/09/07	03/12/07	% calculation	
BH-1 (7C09003-10) Soil									
% Moisture	2.0	0 1	%	1	EC71206	03/09/07	03/12/07	% calculation	
BH-2 (7C09003-11) Soil									
% Moisture	1.4	0 1	%	1	EC71206	03/09/07	03/12/07	% calculation	

Project 101 Line to Judkins

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# General Chemistry Parameters by EPA / Standard Methods Environmental Lab of Texas

Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1.2	0 1	%	1	EC71206	03/09/07	03/12/07	% calculation	
8.2	0 1	%	1	EC71206	03/09/07	03/12/07	% calculation	
8.4	0 1	%	1	EC71206	03/09/07	03/12/07	% calculation	
7.1	0 1	%	1	EC71206	03/09/07	03/12/07	% calculation	
3.9	0 1	%	1	EC71206	03/09/07	03/12/07	% calculation	
	8.2 8.4 7.1	Result Limit  1.2 0 1  8.2 0 1  7.1 0 1	1.2 01 %  8.2 01 %  8.4 01 %  7.1 01 %	Result   Limit   Units   Dilution	Result   Limit   Units   Dilution   Batch	Result   Limit   Units   Dilution   Batch   Prepared	Result         Limit         Units         Dilution         Batch         Prepared         Analyzed           1.2         0 1         %         1         EC71206         03/09/07         03/12/07           8.2         0 1         %         1         EC71206         03/09/07         03/12/07           8.4         0 1         %         1         EC71206         03/09/07         03/12/07           7.1         0 1         %         1         EC71206         03/09/07         03/12/07	Result

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

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EC70809 - Solvent Extraction (GC)										
Blank (EC70809-BLK1)				Prepared (	)3/08/07 Aı	nalyzed 03	/12/07			
Carbon Ranges C6-C12	ND	10 0	mg/kg wet							
Carbon Ranges C12-C28	ND	10 0	n							
Carbon Ranges C28-C35	ND	10 0	n							
Total Hydrocarbons	ND	10 0	n							
Surrogate 1-Chlorooctane	52 8		mg/kg	50 0		106	70-130			
Surrogate 1-Chlorooctadecane	62 1		"	50 0		124	70-130			
LCS (EC70809-BS1)				Prepared (	03/08/07 Aı	nalyzed 03	/09/07			
Carbon Ranges C6-C12	561	10 0	mg/kg wet	500		112	75-125			
Carbon Ranges C12-C28	487	10 0	"	500		97 4	75-125			
Carbon Ranges C28-C35	ND	10 0	"	0 00			75-125			
Total Hydrocarbons	1050	10 0	"	1000		105	75-125			
Surrogate 1-Chlorooctane	57 5		mg/kg	50 0		115	70-130			
Surrogate 1-Chlorooctadecane	62 2		n	50 0		124	70-130			
Calibration Check (EC70809-CCV1)				Prepared (	03/08/07 A	nalyzed 03	/13/07			
Carbon Ranges C6-C12	222		mg/kg	250		88 8	80-120			
Carbon Ranges C12-C28	235		"	250		94 0	80-120			
Total Hydrocarbons	456		"	500		91 2	80-120			
Surrogate 1-Chlorooctane	54 2		"	50 0		108	70-130			
Surrogate 1-Chlorooctadecane	53 4		n	50 0		107	70-130			
Matrix Spike (EC70809-MS1)	Sou	ırce: 7C08000	5-11	Prepared (	03/08/07 Aı	nalyzed 03	3/10/07			
Carbon Ranges C6-C12	643	10 0	mg/kg dry	534	ND	120	75-125			
Carbon Ranges C12-C28	533	10 0	"	534	ND	99 8	75-125			
Carbon Ranges C28-C35	ND	10 0	"	0 00	ND		75-125			
Total Hydrocarbons	1180	10 0	"	1070	ND	110	75-125			
Surrogate 1-Chlorooctane	64 9		mg/kg	50 0		130	70-130			
Surrogate 1-Chlorooctadecane	65 0		"	50 0		130	70-130			

Project 101 Line to Judkins

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#### **Organics by GC - Quality Control**

#### **Environmental Lab of Texas**

		Reporting		Spike	Source		%REC	n	RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EC70809 - Solvent Extraction (GC)										
Matrix Spike Dup (EC70809-MSD1)	Sou	rce: 7C08006	5-11	Prepared (	03/08/07 A	nalyzed 03	3/10/07			
Carbon Ranges C6-C12	642	10 0	mg/kg dry	534	ND	120	75-125	0 00	20	
Carbon Ranges C12-C28	535	10 0	"	534	ND	100	75-125	0 200	20	
Carbon Ranges C28-C35	ND	10.0	"	0 00	ND		75-125		20	
Total Hydrocarbons	1180	10 0	"	1070	ND	110	75-125	0 00	20	
Surrogate 1-Chlorooctane	64 6		mg/kg	50 0		129	70-130			
Surrogate 1-Chlorooctadecane	649		"	50 0		130	70-130			
Batch EC70901 - Solvent Extraction (GC)										
Blank (EC70901-BLK1)				Prepared (	03/09/07 At	nalyzed 03	3/12/07			
Carbon Ranges C6-C12	ND	10 0	mg/kg wet							
Carbon Ranges C12-C28	ND	10 0	"							
Carbon Ranges C28-C35	ND	10 0	"							
Total Hydrocarbons	ND	10 0	"							
Surrogate 1-Chlorooctane	52 8		mg/kg	50 0		106	70-130			
Surrogate 1-Chlorooctadecane	62 2		"	50 0		124	70-130			
LCS (EC70901-BS1)				Prepared (	03/09/07 Aı	nalyzed 03	3/10/07			
Carbon Ranges C6-C12	561	10 0	mg/kg wet	500		112	75-125			
Carbon Ranges C12-C28	496	10 0	н	500		99 2	75-125			
Carbon Ranges C28-C35	ND	10 0	"	0 00			75-125			
Total Hydrocarbons	1060	10 0	11	1000		106	75-125			
Surrogate 1-Chlorooctane	63 1		mg/kg	50 0		126	70-130			
Surrogate 1-Chlorooctadecane	64 2		"	50 0		128	70-130			
Calibration Check (EC70901-CCV1)				Prepared (	)3/09/07 Ai	nalyzed 03	/13/07			
Carbon Ranges C6-C12	235		mg/kg	250		94 0	80-120			
Carbon Ranges C12-C28	275		"	250		110	80-120			
Total Hydrocarbons	510		"	500		102	80-120			
Surrogate 1-Chlorooctane	549		·····	50 0		110	70-130			
Surrogate 1-Chlorooctadecane	55 9		"	50 0		112	70-130			

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

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

Batch	EC70901	_	Solvent	Extraction	(GC)	)

Matrix Spike (EC70901-MS1)	Sourc	e: 7C09003	3-09	Prepared	03/09/07	Analyzed 0	3/13/07			
Carbon Ranges C6-C12	544	10 0	mg/kg dry	501	ND	109	75-125			
Carbon Ranges C12-C28	485	10 0	"	501	11 3	94 6	75-125			
Carbon Ranges C28-C35	ND	10 0	"	0 00	ND		75-125			
Total Hydrocarbons	1030	10 0	"	1000	11 3	102	75-125			
Surrogate 1-Chlorooctane	548		mg/kg	50 0		110	70-130			
Surrogate 1-Chlorooctadecane	55 2		"	50 0		110	70-130			
Matrix Spike Dup (EC70901-MSD1)	Sourc	e: 7C09003	3-09	Prepared	03/09/07	Analyzed 0	3/10/07			
Carbon Ranges C6-C12	554	10 0	mg/kg dry	501	ND	111	75-125	1 82	20	
Carbon Ranges C12-C28	484	10 0	"	501	11 3	94 4	75-125	0 212	20	
Carbon Ranges C28-C35	ND	10 0	"	0 00	ND		75-125		20	
Total Hydrocarbons	1040	10 0	"	1000	11 3	103	75-125	0 976	20	
Surrogate 1-Chlorooctane	64 1		mg/kg	50 0		128	70-130			
Surrogate 1-Chlorooctadecane	64 6		"	50 0		129	70-130			

#### Batch EC70902 - EPA 5030C (GC)

Blank (EC70902-BLK1)					Prepared & Anal	yzed 03/09/07	
Benzene		ND	0 00100	mg/kg wet			
Toluene		ND	0 00100	"			
Ethylbenzene		ND	0 00100	"			
Xylene (p/m)		ND	0 00100	"			
Xylene (o)		ND	0 00100	"			
Surrogate a,a,a-Trifluorotoluene		51 5		ug/kg	50 0	103	75-125
Surrogate 4-Bromofluorobenzene		52 1		"	50 0	104	75-125
LCS (EC70902-BS1)					Prepared & Anal	yzed 03/09/07	
Benzene	•	0 0518	0 00100	mg/kg wet	0 0500	104	80-120
Toluene		0 0481	0 00100	"	0 0500	96 2	80-120
Ethylbenzene		0 0501	0 00100	*	0 0500	100	80-120
Xylene (p/m)		0 0933	0 00100	,,	0 100	93 3	80-120
Xylene (o)		0 0442	0 00100	11	0 0500	88 4	80-120
Surrogate a,a,a-Trifluorotoluene		49 2		ug/kg	50 0	98 4	75-125
Surrogate 4-Bromofluorobenzene		56 0		"	50 0	112	75-125

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#### 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
Batch EC70902 - EPA 5030C (GC)										
Calibration Check (EC70902-CCV1)				Prepared &	k Analyzed	03/09/07				
Benzene	53 8		ug/kg	50 0		108	80-120			
Toluene	47 2		11	50 0		94 4	80-120			
Ethylbenzene	46 0		**	50 0		92 0	80-120			
Xylene (p/m)	88 1		**	100		88 1	80-120			
Xylene (o)	41 5		**	50 0		83 0	80-120			
Surrogate a,a,a-Trifluorotoluene	50 4		n	50 0		101	75-125			
Surrogate 4-Bromofluorobenzene	53 1		"	50 0		106	75-125			
Matrix Spike (EC70902-MS1)	Sou	rce: 7C09001	-04	Prepared &	& Analyzed	03/09/07				
Benzene	0 0993	0 00200	mg/kg dry	0 107	0 00113	91 7	80-120			
Foluene	0 0971	0 00200	11	0 107	0 00279	88 1	80-120			
Ethylbenzene	0 0947	0 00200	11	0 107	0 00341	85 3	80-120			
Xylene (p/m)	0 193	0 00200	11	0 214	0 0119	84 6	80-120			
Xylene (o)	0 0989	0 00200	11	0 107	0 00706	85 8	80-120			
Surrogate a,a,a-Trifluorotoluene	40 5		ug/kg	50 0		81 0	75-125			
Surrogate 4-Bromofluorohenzene	43 8		"	50 0		87 6	75-125			
Matrix Spike Dup (EC70902-MSD1)	Sou	rce: 7C09001	-04	Prepared &	& Analyzed	03/09/07				
Benzene	0 0961	0 00200	mg/kg dry	0 107	0 00113	88 8	80-120	3 21	20	
Гoluene	0 0926	0 00200	**	0 107	0 00279	83 9	80-120	4 88	20	
Ethylbenzene	0 0953	0 00200	11	0 107	0 00341	85 9	80-120	0 701	20	
Xylene (p/m)	0 188	0 00200	"	0 214	0 0119	82 3	80-120	2 76	20	
Xylene (o)	0 0943	0 00200	11	0 107	0 00706	81 5	80-120	5 14	20	
Surrogate a,a,a-Trıfluorotoluene	42 8		ug/kg	50 0		85 6	75-125			
Surrogate 4-Bromofluorobenzene	43 9		"	50 0		87 8	75-125			
Batch EC71207 - EPA 5030C (GC)										
Blank (EC71207-BLK1)				Prepared &	& Analyzed	03/12/07				
Benzene	ND	0 00100	mg/kg wet							
Toluene	ND	0 00100	**							
Ethylbenzene	ND	0 00100	"							
Xylene (p/m)	ND	0 00100	"							
Xylene (o)	ND	0 00100	11							
Surrogate a,a,a-Trifluorotoluene	43 2		ug/kg	50 0		86 4	75-125			<u> </u>
Surrogate 4-Bromofluorobenzene	44 6		"	50 0		89 2	75-125			

Project 101 Line to Judkins

Project Number EMS# 2006-026
Project Manager Camille Reynolds

Fax (432) 687-4914

#### 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
Batch EC71207 - EPA 5030C (GC)										
LCS (EC71207-BS1)				Prepared &	z Analyzed	03/12/07				
Benzene	0 0431	0 00100	mg/kg wet	0 0500		86 2	80-120			
Toluene	0 0412	0 00100	*	0 0500		82 4	80-120			
Ethylbenzene	0 0421	0 00100	"	0 0500	-	84 2	80-120			
Xylene (p/m)	0 0859	0 00100	"	0 100		85 9	80-120			
Xylene (o)	0 0406	0 00100	**	0 0500		81 2	80-120			
Surrogate a,a,a-Trifluorotoluene	41 9		ug/kg	50 0		83 8	75-125			
Surrogate 4-Bromofluorobenzene	47 1		"	50 0		94 2	75-125			
Calibration Check (EC71207-CCV1)				Prepared (	03/12/07 A	nalyzed 03	3/13/07			
Benzene	46 3		ug/kg	50 0		92 6	80-120			
Toluene	41 2		"	50 0		82 4	80-120			
Ethylbenzene	42 2		"	50 0		84 4	80-120			
Xylene (p/m)	85 3		11	100		85 3	80-120			
Xylene (o)	41 2		"	50 0		82 4	80-120			
Surrogate a,a,a-Trifluorotoluene	41.8		n	50 0		83 6	75-125			
Surrogate 4-Bromofluorobenzene	45 7		n	50 0		91 4	75-125			
Matrix Spike (EC71207-MS1)	Sou	rce: 7C09003	3-12	Prepared (	)3/12/07 A	nalyzed 03	3/13/07			
Benzene	0 0803	0 00200	mg/kg dry	0 101	ND	79 5	80-120			M
Toluene	0 0763	0 00200	"	0 101	ND	75 5	80-120			M
Ethylbenzene	0 0675	0 00200	11	0 101	ND	66 8	80-120			M
Xylene (p/m)	0 138	0 00200	"	0 202	ND	68 3	80-120			M
Xylene (o)	0 0631	0 00200	"	0 101	ND	62 5	80-120			M
Surrogate a,a,a-Trifluorotoluene	37 8		ug/kg	50 0		75 6	75-125			
Surrogate 4-Bromofluorobenzene	39 3		"	50 0		78 6	75-125			
Matrix Spike Dup (EC71207-MSD1)	Sou	rce: 7C09003	3-12	Prepared (	)3/12/07 A	nalyzed 03	3/13/07			
Benzene	0 0787	0 00200	mg/kg dry	0 101	ND	77 9	80-120	2 03	20	M
Toluene	0 0701	0 00200	"	0 101	ND	69 4	80-120	8 42	20	M
Ethylbenzene	0 0692	0 00200	••	0 101	ND	68 5	80-120	2 51	20	M
Xylene (p/m)	0 135	0 00200	"	0 202	ND	66 8	80-120	2 22	20	M
Xylene (o)	0 0614	0 00200	**	0 101	ND	60 8	80-120	2 76	20	M
Surrogate a,a,a-Trifluorotoluene	37 5		ug/kg	50 0		75 0	75-125			
Surrogate 4-Bromofluorobenzene	38 3		"	50 0		76 6	75-125			

Project 101 Line to Judkins

Spike

Source

Project Number EMS# 2006-026
Project Manager Camille Reynolds

Fax (432) 687-4914

RPD

%REC

# General Chemistry Parameters by EPA / Standard Methods - Quality Control

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EC71206 - General Preparation (Pre	ep)									
Blank (EC71206-BLK1)				Prepared	03/09/07 A	nalyzed 03	/12/07			
% Solids	100		%							
Duplicate (EC71206-DUP1)	Sour	ce: 7C09011-	01	Prepared	03/09/07 A	Analyzed 03	/12/07			
% Solids	91 2		%		91 0			0 220	20	
Duplicate (EC71206-DUP2)	Sour	ce: 7C09003-	09	Prepared	03/09/07 A	analyzed 03	/12/07			
% Solids	99 6		%		99 9			0 301	20	

Fax (432) 687-4914 Project 101 Line to Judkins Plains All American EH & S Project Number EMS# 2006-026 1301 S County Road 1150 Project Manager Camille Reynolds Midland TX, 79706-4476

#### **Notes and Definitions**

S-DUP	Duplicate analysis confirmed surrogate failure due to matrix effects
S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect
M8	The MS and/or MSD were below the acceptance limits See Blank Spike (LCS)
J	Detected but below the Reporting Limit, therefore, result is an estimated concentration (CLP J-Flag)
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:

3/14/2007

Brent Barron, Laboratory Director/Corp. Technical Director Celey D. Keene, Org. Tech Director Raland K. Tuttle, Laboratory Consultant

James Mathis, QA/QC Officer Jeanne Mc Murrey, Inorg. Tech Director Plains All American EH & SProject101 Line to Judkins1301 S County Road 1150Project NumberEMS# 2006-026Midland TX, 79706-4476Project ManagerCamille Reynolds

Fax (432) 687-4914

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**

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Odessa, Texas 79765 12600 West I-20 East

Phone: 432-583-1800 Fax: 432-563-1713

TAT brisbrist × × àŚ Lone Star □ NPDES Z Z Z **S Z** Z Z RUST (84, AS (alubertos-eng) TAT HRUR ပ္ LEA COUNTY NEW MEXICO EK QUEEN 6"TRUNK 0 PLAINS041SPL TRRP M FLO.N Sample Containers Intact? Custody seals on container(s) 5:30 Temperature Open Receipt. /OCs Free of Headspace? BTEX 6021B75030 or BTEX 8260 Custody seals on codler(s) Laboratory Comments abels on container(s) [] Standard Wetals: As Ag Ba Cd Cr Pb Hg Se TCLP. SARVESPICEC Annual (CI SO4, Alkalimiy) Project Name: Project Loc: PO #: Project #: Cations (Ca. Mg Na. K) Report Format: 9001 XT 9001 XI Hat Maros 80128 1.814 HqT 10/0 S S S S (J) CAN = CLOUITAMSIEL B=SDINSONG Ofher (Specify) W 4 anoN Orchan HOPN OSZH HCI PONH age × × Cotal #. of Containers benetii - blei Fax No: e-mail: 16:10 14.50 14:56 15:09 15:17 15:24 15:31 15 40 15:46 15:55 Time Sampled " LEXA Received by ELOT 3/7/2007 3/7/2007 3/7/2007 3/7/2007 3/7/2007 3/7/2007 3/7/2007 3/7/2007 3/7/2007 3/7/2007 Date Sampled 5.30 Ending Depth digad prinnigaB HOBBS NEW MEXICO 88240 3807 3-8-07 Date Company Address: 318 E TAYLOR 432-238-6388 EB TAYLOR TALONLPE FIELD CODE व NW-2 NW-3 MW-2 MW-3 WW-2 WW-3 NW-1 MW-1 WW-1 7609003 BH-1 **ひとのした** Sampler Signature: Project-Manager: Company Name Telephone No: City/State/Zip. Special Instructions: elinquished by elinguished by ORDER #: (tab use only) 3 0 3 10 S ۲ 5 Ö (klno seu del) # 8AJ

# **Environmental Lab of Texas**

#### CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East Odessa, Texas 79765 Phone: 432-563-1800 Fax: 432-563-1713

	Project Manager:	EB TAYLOR										-					•	Pro	ject	Nar	ne:				EK	QU	EEN	V 6"	TR	UN	K_		
	Company Name TALONLPE									Project #						ect#: PLAINS041SPL																	
	Company Address:	318 E TAYLOR		A.L		~ <u>.</u>												P	roja	ct L	oc:				!	LEA	COL	JNT	YN	EW	MEXI	ICO	
	City/State/Zip:	HOBBS NEW MEXICO 88	240																	PC	) #: _											<del></del>	
	Telephone No:	432-238-6388				Fax No:											Re	port	Fo	rmat	:	2	Star	ndar	d		П	(RR	P	[	NF	PDES	3
	Sampler Signature:	El Den		سـ		e-mail:						nj(s	×			(1); <u></u>	lget.	<u>.</u>															
(lab use o										rese	rvatu	on &:	#of	Conta	iners		Ma	trix	53			TOT	LP.	An eg	alyz							48, 72 hrs	
LAB # (lab use only)	FIEI	LD CODE	Seginning Depth	Ending Depth	Date Sampled	Time Sampled	seld Filtered	Total #. of Contamers	{ce	HNO,	нсі	H <sub>2</sub> SO <sub>4</sub>	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	None		DW-Drinkang Waler SL-Skidge GW = Groundwater SESol/Solid			TPH TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl. SO4, Alkalinity)	SAR / ESP / CEC	s Ay Ba Cd Cr Pb Hg	Volatiles	Serrivolatries	BTEX BEZTERSONO OF BTEX 8260	RCI	NORM.	ландын 44 де 4 де желенде байлан колон колон колон байланды де желенде байланды желенде желенде желен желен же		RUSH TAT (Pre-Schedule) 24,	Standard TAT
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-15		SP-3			3/7/2007	17:03			Х								٤	3															х
~\(¢		SP-4			3/7/2007	17:18			Х								5	3											$\perp$		$\perp$		Х
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Relinquis	· · · · · · · · · · · · · · · · · · ·	3-8-01	1 -	me 30	Received by EL	or - 10	<u>.</u>	2	<u></u>	· .					3/	Da 8	je 07	63	Tim	ا ان	Ten	40° npei	atur	j G	pon?	Rec	eipt:	·,	2	0		°Ċ	

# **Environmental Lab of Texas**

Variance/ Corrective Action Report- Sample Log-In

ient: <u>lalan LPE</u>				
ate/ Time: 3 (8) 6 7 17:36				
<b>かID#</b> : <u> </u>				
itials: 07~				
Sample Receipt	Checklist		Client Ini	itials
Temperature of container/ cooler?	χes \	No	2.5 °C	
Shipping container in good condition?	Yes	No		
Custody Seals intact on shipping container/ cooler?	Yes	No	<a>Not Present?</a>	
Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
Chain of Custody present?	Yes>	No	7400 M	
Sample instructions complete of Chain of Custody?	⟨Ýēs⊃	No		
Chain of Custody signed when relinquished/ received?	(Yes)	No		
Chain of Custody agrees with sample label(s)?	Yes,	No	ID written on Cont./ Lid	
Container label(s) legible and intact?	Yes	No	Not Applicable	
0 Sample matrix/ properties agree with Chain of Custody?	Yes	No		
1 Containers supplied by ELOT?	Yes>	No		
2 Samples in proper container/ bottle?	Yes	No	See Below	
3 Samples properly preserved?	Yes	No	See Below	
4 Sample bottles intact?	Yes	No		
5 Preservations documented on Chain of Custody?	Xes	No		
6 Containers documented on Chain of Custody?	Yes	No		
7 Sufficient sample amount for indicated test(s)?	exes:	No	See Below	
18 All samples received within sufficient hold time?	¥ee	No	See Below	
19 Subcontract of sample(s)?	Yes	No	Not Applicable	
20 VOC samples have zero headspace?	(Yes)	No	Not Applicable	]
Variance Docur	mentation			
ontact: Contacted by:	NAME OF THE PROPERTY OF THE PR		Date/ Time:	
egarding:	·····	PARAGES - Pla Marido minerio		· ************************************
Forrective Action Taken:				····
Check all that Apply:  See attached e-mail/ fax  Client understands and woul  Cooling process had begun				

# APPENDIX D

# **Photograph Documentation**

#### TALON/LPE

Client: Plains All American Location: E.K. Queen Trunk

Lea County, New Mexico

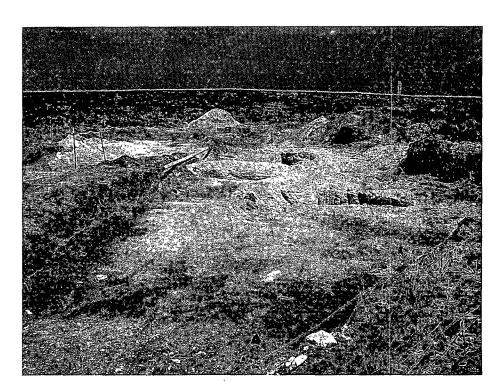
#### Photographic Documentation

Prepared by: Marc Stroope
Photographer: Marc Stroope
Project Number: PLAINS041SPL

#### Photograph No. 1

**Direction:** East

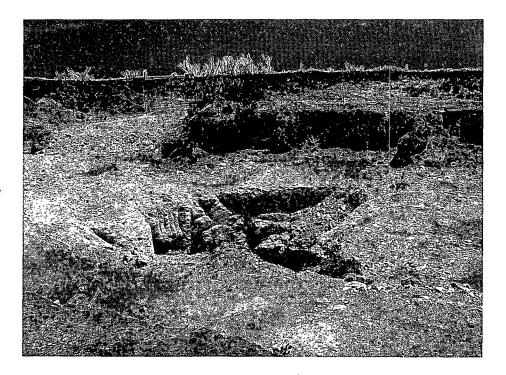
**Description:** View of excavation area.



#### Photograph No. 2

**Direction:** South

**Description:** View of excavation area.



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 Submit 2 Copies to appropri District Office in accorda with Rule 116 on b side of fc

Form C-1

Revised October 10, 2

#### **Release Notification and Corrective Action**

	OPERATOR	x In	itial Report  Final Re									
Name of Company Plains Pipeline	Contact Camille Reynolds											
Address 3112 W. US Hwy 82, Lovington, NM 88260	Telephone No. 505-441-0965											
Facility Name E.K. Queen 6 Inch Trunk line	Facility Type 6"Steel Pipeline											
Surface Owner BLM Mineral Owner		Lease	No.									
LOCATIO	ON OF RELEASE											
	th/South Line   Feet from the	East/West Line	County									
N 19 18S 34E		Lea										
(43') Latitude 32° 43' 44.1"	Longitude_103° 36' 01.	<u>3"                                    </u>	<del></del>									
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	E OF RELEASE											
Type of Release Crude Oil	Volume of Release 90 barr	els Volume	Recovered 70 barrels									
Source of Release 6" Steel Pipeline	Date and Hour of Occurrer		d Hour of Discovery									
Was Immediate Notice Given?	01/11/2007 @ 11:30 If YES, To Whom?	01/11/2	007@11:52									
X Yes No Not Require	Pat Caperton		d Hour of Discovery 007 @ 11:52									
By Whom? Camille Reynolds	Date and Hour 01/11/2007		( A)									
Was a Watercourse Reached?  ☐ Yes ☒ No	If YES, Volume Impacting	the Watercourse.										
If a Watercourse was Impacted, Describe Fully.*			to Hospine									
11 a wastoomse was imposed, Describe I mily.			15 000 00									
			150									
			LEOCOTOTIONS.									
Describe Cause of Problem and Remedial Action Taken Internal corros	on of the 6 inch steel nineline n	esulted in release	of sweet crude oil. The line is a									
inch steel gathering line that produces approximately 433 barrels of oil i	per day. The pressure on the lin	e is annovimetely	150 pei and the amounts of the									
sweet crude oil is 42. The sweet crude has an H <sub>2</sub> S content of <10 ppm.	The line is approximately 1.5 f	eet bgs at the relea	ise point.									
Describe Area Affected and Cleanup Action Taken.* The impacted soil	Was excavated and stockniled a	n plactic										
The impassed bott	was excavated and stockphot o	u prasuc.										
I hereby certify that the information given above is true and complete to	the best of my knowledge and	radamtand that are										
should their operations have failed to adequately investigate and remedia or the environment. In addition, NMOCD acceptance of a C-141 report federal state or local laws and/or requisions	does not relieve the operator of	eat to ground wat	er, surface water, human health									
federal, state, or local laws and/or regulations.	, , , , , , , , , , , , , , , , , , ,		compitance with any other									
	OIL CON	SERVATION	DIVISION									
Signature: Camplle Krynoldo		_	•									
) 0 1	Approved by District Supervis	ENCO / (										
Printed Name: Camille Reynolds	Trover of District Supervis		X6.e									
Title: Remediation Coordinator	Approval Date: 5-29.87	Expiration	Date: 7.29.57									
E-mail Address: cjreynolds@paalp.com	Conditions of Approval:		7									
Date: 01/16/2007 Phone:505-441-0965	THEMET FINAL FEB	2.05 23	Attached									
Attach Additional Sheets If Necessary	-SUDMIT LINALTER	LEKT DA	) 1 + 1 - 1									
Lacely - PPACO715031397,		<b>†</b>	N7 1167									
- ·•			•									