



**SOILS CLOSURE REPORT  
E.K. QUEEN STATE  
LEA COUNTY, NEW MEXICO  
NMOCD REF. # RP-1194  
SRS # 2007-058**

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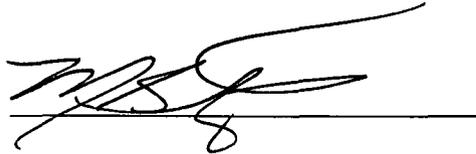
October 30, 2007

**E.K. Queen State  
Soils Closure Report**

**Plains Pipeline, L.P.  
Houston, Texas**

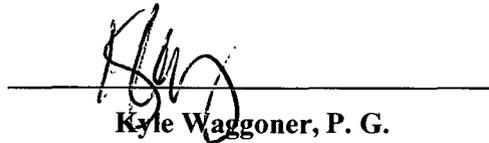
**Talon/LPE PROJECT NO. PLAINS048SPL**

**Prepared by:**

A handwritten signature in black ink, appearing to read 'MS', is written over a horizontal line.

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**October 2007**

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NMOCD - New Mexico Oil Conservation Division  
SLO – New Mexico State Land Office

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## **1.0 INTRODUCTION AND OBJECTIVES**

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### **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 State 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 State release site is located approximately 25 miles east of Loco Hills in Lea County, New Mexico. The GPS coordinates for the site are 32°44'12.4"N latitude and 103°34'41.5"W longitude. The release occurred on property owned by the New Mexico State Land Office (SLO) and is utilized as pasture land. The site is located in a rural area with a surface water body located within a 1,000 foot radius of the release point. There are no permanent residences within a 1,000 foot radius of the release point. A topographic map is provided as Figure 1 in Appendix A.

### **1.2 Site Background**

In February 2007, a release of approximately twenty (20) barrels of crude oil occurred at the site due to internal corrosion of the pipeline. Approximately 2,100 square feet of surface area was impacted by the release. Approximately 5,700 cubic yards of soil and rock were excavated and stockpiled on a plastic liner onsite.

### **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 State site is located in a rural area with a surface water body located within a 1,000 foot radius of the release point. There are no permanent residences within a 1,000 foot radius. According to information available from the New Mexico Office of the State Engineer, the nearest water well is not within 1,000 feet of the site. Based on this groundwater elevation data, the approximate depth from land surface to groundwater at the site is >100 feet below ground surface (bgs).

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 twenty (20). The ranking process is summarized below:

<u>Criteria:</u>	<u>Site Condition:</u>	<u>Ranking Score:</u>
Depth to Groundwater	>100 feet	0
<1,000 Feet to Water Source?	No	0
<200 Feet to Private Domestic Water Source?	No	0
Distance to Surface Water Body	<200 feet	20
<hr/>		
Total Ranking:		20

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

<b>Benzene</b>	<b>10 ppm</b>
<b>Total BTEX</b>	<b>50 ppm</b>
<b>TPH</b>	<b>100 ppm</b>

## **2.0 FIELD ACTIVITIES**

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### **2.1 Soil Investigation Activities**

Talon/LPE commenced excavation activities at the site in February 2007 in order to remove soil impacted above the NMOCD remedial threshold limits. Approximately 5,700 cubic yards of soil and rock were excavated and stockpiled on a plastic liner onsite. The excavated area is approximately 1,200 feet long, 15 to 30 feet wide, 2 feet in depth on average, and approximately 8 feet in depth at the deepest excavation location.

### **2.2 Soil Sampling Activities**

Upon the completion of excavation activities, on May 7, 2007, grab samples were collected from north sidewall (SW-2, SW-3, and SW-4), the south sidewall (SW-5 and SW-6), and the west sidewall (SW-1) to document the successful removal of soil impacted above NMOCD remedial thresholds (reference Figure 2). In addition, grab samples were also collected from the bottom of the excavation area (BH-1 thru BH-5) as referenced in Figure 2. The sidewall samples, as well as the samples from the bottom of the excavation area, were submitted to TraceAnalysis, Inc. in Midland, Texas for BTEX analysis by EPA method 8021B and TPH analysis by EPA method 8015. The chain-of-custody forms and laboratory data sheets are provided in Appendix C.

Furthermore, on May 7, 2007, ten five-point composite stockpile samples (SP-1 thru SP-10) were collected from the excavated soil stockpiled onsite (reference Figure 2). The stockpile samples were submitted to TraceAnalysis, Inc. in Midland, Texas for TPH analysis by EPA method 8015. The chain-of-custody forms and laboratory data sheets are provided in Appendix C.

### **2.2 Analytical Procedures**

The soil samples were placed in laboratory prepared glassware and sealed with custody tape. The samples were placed in coolers and relinquished to TraceAnalysis, Inc. in Midland, Texas for analysis. The soil samples were analyzed for BTEX using EPA method 8021B and TPH by EPA method 8015. The chain-of-custody forms and laboratory data sheets are provided in Appendix C.

### **2.4 Soil Sampling Results**

Laboratory analyses of the samples collected on May 7, 2007 showed all sampling locations in the excavated area, with the exception of BH-2 (112 mg/Kg TPH) and BH-4 (231 mg/Kg TPH) to be below the NMOCD remedial thresholds (reference Table 1). Due to the proximity of the sample concentration of BH-2 (112 mg/Kg TPH) to the NMOCD remedial threshold for TPH (100 mg/Kg), the excavation area containing the sample location for sample BH-2 was not over-excavated. The reasoning behind this decision was that the sample concentration of 112 mg/Kg was within the margin of error cited by the laboratory's QA/QC documentation. The excavation area containing the sample location for sample

BH-4 was over-excavated one foot in depth, bringing the sample location excavation depth to eight feet in this area. On May 12, 2007, upon the completion of the over-excavation activities, a grab sample was taken from the bottom of the excavation area (BH-4A) as referenced in Figure 2. Laboratory analyses of the sample BH-4A showed the excavation area to be below the NMOCD remedial thresholds (reference Table 1). Each of the composite stockpile samples exhibited TPH concentrations above the NMOCD remedial threshold of 100 ppm for TPH (reference Table 1).

## **2.5 Soil Remediation Activities**

The excavation confirmation soil samples indicated TPH and Total BTEX concentrations below NMOCD remedial threshold limits for all sample locations other than BH-2, which was not over-excavated. Due to TPH concentrations above the NMOCD remedial thresholds in the stockpiled soil, the excavated rock greater in two inches in size was screened utilizing a soil/rock screener and separated from the stockpiled soil. As a result, approximately 4,230 cubic yards of stockpiled soil was separated from 1,400 cubic yards of rock. The screened soils were then transported to an NMOCD approved landfarm.

## **2.6 Site Restoration Activities**

Subsequent to soil remediation activities, the excavation site was backfilled with both imported fill material, as well as approximately 1,400 hundred cubic yards of screened rock from the excavation area. A backhoe, bulldozer and loader were utilized to restore the site to natural grade. On September 10, 2007, two feet of topsoil was placed over all areas to be revegetated and the site was seeded with a seed mix recommended by the New Mexico State Land Office.

## **3.0 CONCLUSIONS**

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### **3.1 Recommendations**

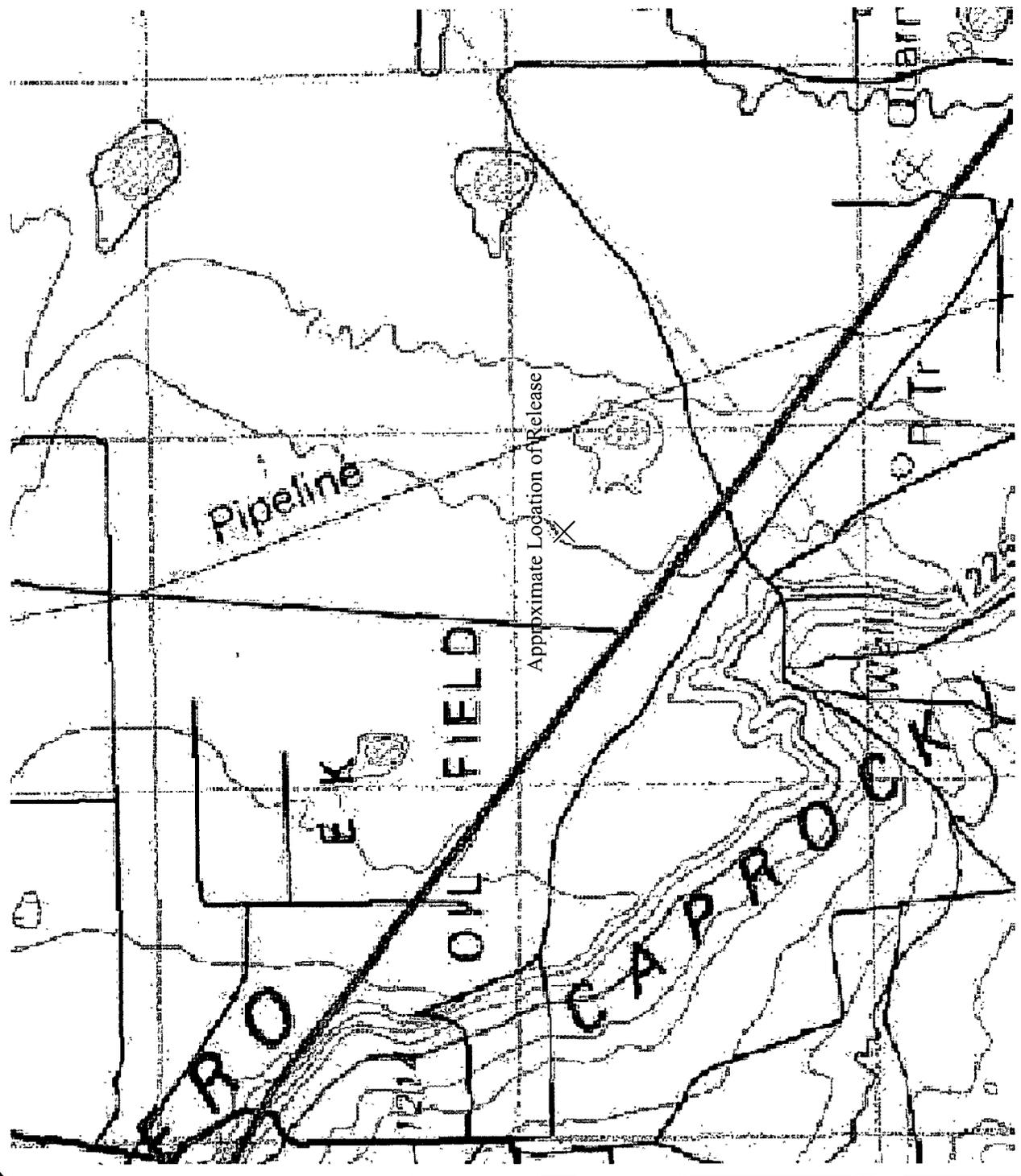
Based upon the findings of this investigation, Talon/LPE makes no further recommendations for future remediation activities in regard to this release. Talon/LPE proposes that this report be the final action in regards to the soil investigation and remediation activities at the site and recommends that Plains submit a copy of this report to the NMOCD. Furthermore, Talon/LPE requests that the NMOCD issue a letter to Plains requiring no further action in regard to this site.

# Appendix A

## Drawings

Figure 1 – Topographic Map

Figure 2 – Site Map With Confirmation Sampling Locations



E. K. Queen State (PLAINS048SPL)  
SRS # 2007-058  
Lea County, New Mexico

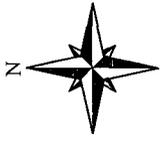
Figure 1 - Topographic Map (Ironhouse Well - 1984)

Date: 05/07/2007

Scale: 1" = 1000'

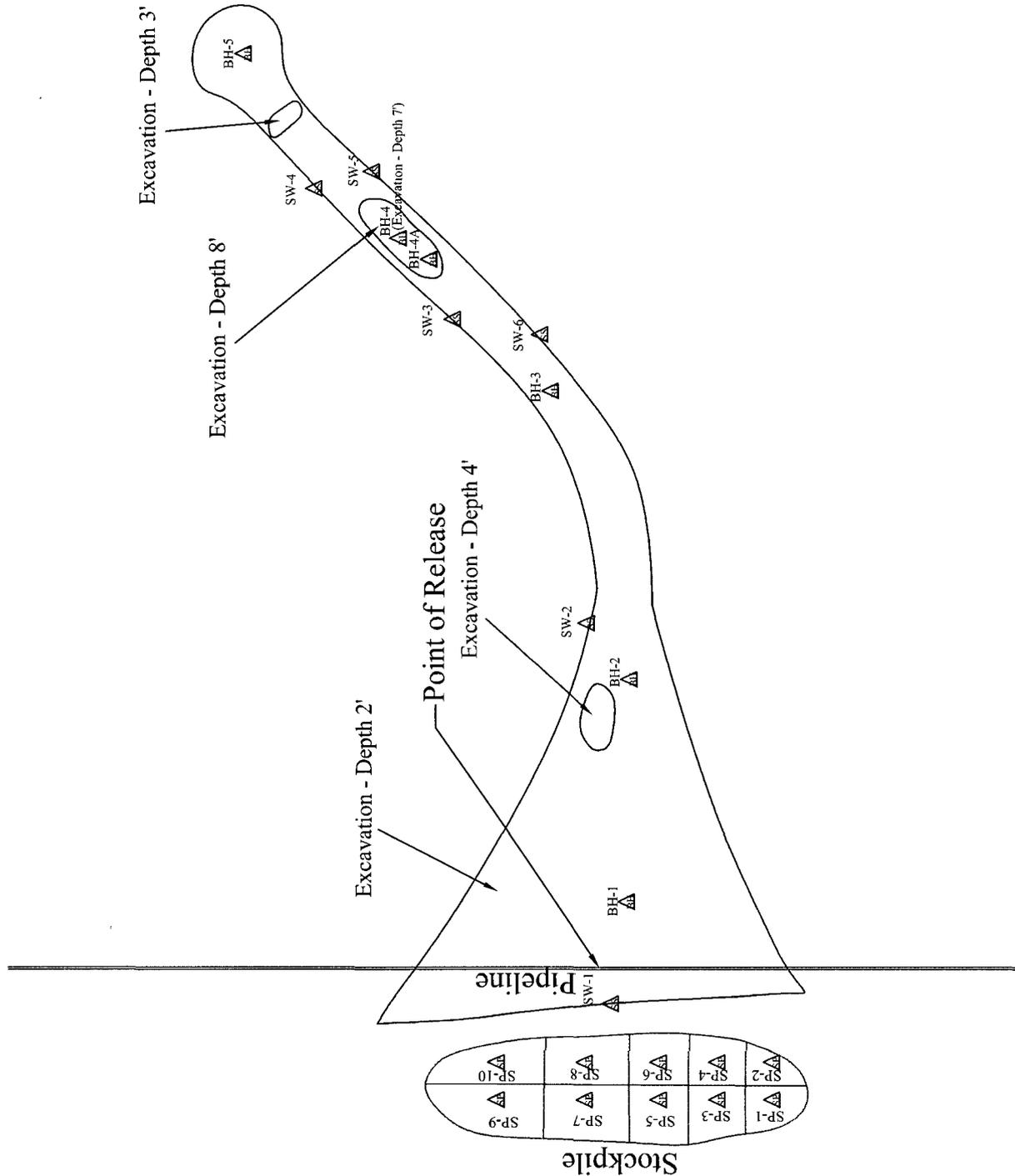
Drawn By: WDR





**Legend**

- ▲ - Stock Pile Samples
- ▲ - Bottom Hole Samples
- ▲ - Side Wall Samples
- - Excavation
- - Pipeline



E. K. Queen State (PLAINS048SPL)

SRS # 2007-058

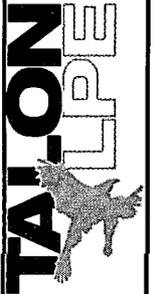
Lea County, New Mexico

Figure 2 - Site Plan with Confirmation Sampling Locations

Date: 05/11/2007

Scale: 1" = 150'

Drawn By: WDR



## APPENDIX B

### Tables

Table 1 – Summary of Soil Analytical Data

**Table 1**  
**Summary of Soil Analytical Data**  
**Plains Pipeline, L.P.**  
**EK Queen State**  
**Lea County, NM SRS# 2007-058**  
**Talon/LPE Project Number PLAINS048SPL**

Sample Designation	Date Sampled	Concentration								
		Status	mg/Kg			mg/Kg				
			TPH DRO	TPH GRO	Total TPH	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX
SP-1	05/07/07		130	25.6	<b>156</b>	NS	NS	NS	NS	NS
SP-2	05/07/07		1,720	1,010	<b>2,730</b>	NS	NS	NS	NS	NS
SP-3	05/07/07		26,400	2,310	<b>28,710</b>	NS	NS	NS	NS	NS
SP-4	05/07/07		10,300	5,940	<b>16,240</b>	NS	NS	NS	NS	NS
SP-5	05/07/07		16,300	3,420	<b>19,720</b>	NS	NS	NS	NS	NS
SP-6	05/07/07		2,950	2,280	<b>5,230</b>	NS	NS	NS	NS	NS
SP-7	05/07/07		17,600	1,050	<b>18,650</b>	NS	NS	NS	NS	NS
SP-8	05/07/07		4,280	1,870	<b>6,150</b>	NS	NS	NS	NS	NS
SP-9	05/07/07		2,170	228	<b>2,398</b>	NS	NS	NS	NS	NS
SP-10	05/07/07		1,600	605	<b>2,205</b>	NS	NS	NS	NS	NS
SW-1	05/07/07	Excavated	<50.0	19.0	<50.0	<0.0100	<0.0100	0.0398	0.110	0.1498
SW-2	05/07/07	Excavated	<50.0	9.58	<50.0	<0.0100	<0.0100	<0.0100	0.0542	0.0542
SW-3	05/07/07	Excavated	<50.0	6.36	<50.0	<0.0100	<0.0100	<0.0100	0.0419	0.0419
SW-4	05/07/07	Excavated	<50.0	5.09	<50.0	<0.0100	<0.0100	<0.0100	0.0349	0.0349
SW-5	05/07/07	Excavated	<50.0	4.36	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
SW-6	05/07/07	Excavated	<50.0	3.19	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
BH-1	05/07/07	Excavated	<50.0	2.88	<50.0	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
BH-2	05/07/07	Excavated	112	4.18	<b>116</b>	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
BH-3	05/07/07	Excavated	76.4	2.94	79.3	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
BH-4	05/07/07	Excavated	227	4.12	<b>231</b>	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
BH-5	05/07/07	Excavated	<50.0	<1.00	<50.0	<0.0100	<0.0100	<0.0100	0.0289	0.0289
BH-4A	05/12/07	Excavated	58.5	3.85	62.3	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
<b>NMOCD Remediation Guidelines</b>					<b>100</b>	<b>10</b>				<b>50</b>

<sup>1</sup> *Bolded values are in excess of the NMOCD Remediation Thresholds*

<sup>2</sup> *NS - not sampled*

**APPENDIX C**

**Laboratory Analytical Data Sheets and Chain of Custody  
Documentation**



# TRACEANALYSIS, INC.

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6015 Harris Parkway Suite 110 Ft. Worth, Texas 76132 817•201•5260  
E-Mail: [iab@traceanalysis.com](mailto:iab@traceanalysis.com)

## Analytical and Quality Control Report

Eb Taylor  
Talon LPE-Hobbs  
318 E Taylor  
Hobbs, TX, 88240

Report Date: May 10, 2007

Work Order: 7050812



Project Location: Lea County, NM  
Project Name: EK Queen State  
Project Number: Plains048SPL

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
123592	SP-1	soil	2007-05-07	09:50	2007-05-08
123593	SP-2	soil	2007-05-07	10:04	2007-05-08
123594	SP-3	soil	2007-05-07	10:15	2007-05-08
123595	SP-4	soil	2007-05-07	10:30	2007-05-08
123596	SP-5	soil	2007-05-07	10:43	2007-05-08
123597	SP-6	soil	2007-05-07	10:59	2007-05-08
123598	SP-7	soil	2007-05-07	11:12	2007-05-08
123599	SP-8	soil	2007-05-07	11:28	2007-05-08
123600	SP-9	soil	2007-05-07	11:42	2007-05-08
123601	SP-10	soil	2007-05-07	11:57	2007-05-08

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 15 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

**Standard Flags**

**B** - The sample contains less than ten times the concentration found in the method blank.

## Case Narrative

Samples for project EK Queen State were received by TraceAnalysis, Inc. on 2007-05-08 and assigned to work order 7050812. Samples for work order 7050812 were received intact at a temperature of 3 deg C.

Samples were analyzed for the following tests using their respective methods.

Test	Method
TPH DRO	Mod. 8015B
TPH GRO	S 8015B

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 7050812 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

## Analytical Report

**Sample: 123592 - SP-1**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 37068	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32157	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		130	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		94.0	mg/Kg	1	150	63	61.7 - 143.2

**Sample: 123592 - SP-1**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 37075	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32159	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		25.6	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.791	mg/Kg	1	1.00	79	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.38	mg/Kg	1	1.00	138	67.5 - 140.3

**Sample: 123593 - SP-2**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 37068	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32157	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		1720	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	<sup>1</sup>	269	mg/Kg	1	150	179	61.7 - 143.2

**Sample: 123593 - SP-2**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 37117	Date Analyzed: 2007-05-09	Analyzed By: AG
Prep Batch: 32190	Sample Preparation: 2007-05-09	Prepared By: AG

<sup>1</sup>High surrogate recovery due to peak interference.

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		1010	mg/Kg	100	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		84.6	mg/Kg	100	100	85	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		104	mg/Kg	100	100	104	67.5 - 140.3

**Sample: 123594 - SP-3**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 37108	Date Analyzed: 2007-05-09	Analyzed By: AG
Prep Batch: 32183	Sample Preparation: 2007-05-09	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		26400	mg/Kg	5	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	2	788	mg/Kg	5	150	525	61.7 - 143.2

**Sample: 123594 - SP-3**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 37117	Date Analyzed: 2007-05-09	Analyzed By: AG
Prep Batch: 32190	Sample Preparation: 2007-05-09	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		2310	mg/Kg	100	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		86.2	mg/Kg	100	100	86	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		138	mg/Kg	100	100	138	67.5 - 140.3

**Sample: 123595 - SP-4**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 37108	Date Analyzed: 2007-05-09	Analyzed By: AG
Prep Batch: 32183	Sample Preparation: 2007-05-09	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		10300	mg/Kg	5	50.0

<sup>2</sup>High surrogate recovery due to peak interference.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	3	804	mg/Kg	5	150	536	61.7 - 143.2

**Sample: 123595 - SP-4**

Analysis: TPH GRO                      Analytical Method: S 8015B                      Prep Method: S 5035  
 QC Batch: 37117                      Date Analyzed: 2007-05-09                      Analyzed By: AG  
 Prep Batch: 32190                      Sample Preparation: 2007-05-09                      Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		5940	mg/Kg	100	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		110	mg/Kg	100	100	110	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)	4	236	mg/Kg	100	100	236	67.5 - 140.3

**Sample: 123596 - SP-5**

Analysis: TPH DRO                      Analytical Method: Mod. 8015B                      Prep Method: N/A  
 QC Batch: 37108                      Date Analyzed: 2007-05-09                      Analyzed By: AG  
 Prep Batch: 32183                      Sample Preparation: 2007-05-09                      Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		16300	mg/Kg	5	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	5	278	mg/Kg	5	150	185	61.7 - 143.2

**Sample: 123596 - SP-5**

Analysis: TPH GRO                      Analytical Method: S 8015B                      Prep Method: S 5035  
 QC Batch: 37117                      Date Analyzed: 2007-05-09                      Analyzed By: AG  
 Prep Batch: 32190                      Sample Preparation: 2007-05-09                      Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		3420	mg/Kg	200	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		161	mg/Kg	200	200	80	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		258	mg/Kg	200	200	129	67.5 - 140.3

<sup>3</sup>High surrogate recovery due to peak interference.

<sup>4</sup>High surrogate recovery due to peak interference.

<sup>5</sup>High surrogate recovery due to peak interference.

**Sample: 123597 - SP-6**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 37068	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32157	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<b>2950</b>	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	<sup>6</sup>	387	mg/Kg	1	150	258	61.7 - 143.2

**Sample: 123597 - SP-6**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 37117	Date Analyzed: 2007-05-09	Analyzed By: AG
Prep Batch: 32190	Sample Preparation: 2007-05-09	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<b>2280</b>	mg/Kg	100	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		85.9	mg/Kg	100	100	86	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)	<sup>7</sup>	143	mg/Kg	100	100	143	67.5 - 140.3

**Sample: 123598 - SP-7**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 37108	Date Analyzed: 2007-05-09	Analyzed By: AG
Prep Batch: 32183	Sample Preparation: 2007-05-09	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<b>17600</b>	mg/Kg	5	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	<sup>8</sup>	729	mg/Kg	5	150	486	61.7 - 143.2

**Sample: 123598 - SP-7**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 37117	Date Analyzed: 2007-05-09	Analyzed By: AG
Prep Batch: 32190	Sample Preparation: 2007-05-09	Prepared By: AG

<sup>6</sup>High surrogate recovery due to peak interference.

<sup>7</sup>High surrogate recovery due to peak interference.

<sup>8</sup>High surrogate recovery due to peak interference.

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		1050	mg/Kg	50	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		46.8	mg/Kg	50	50.0	94	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		61.8	mg/Kg	50	50.0	124	67.5 - 140.3

**Sample: 123599 - SP-8**

Analysis: TPH DRO                      Analytical Method: Mod. 8015B                      Prep Method: N/A  
QC Batch: 37068                      Date Analyzed: 2007-05-08                      Analyzed By: AG  
Prep Batch: 32157                      Sample Preparation: 2007-05-08                      Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		4280	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	<sup>9</sup>	380	mg/Kg	1	150	253	61.7 - 143.2

**Sample: 123599 - SP-8**

Analysis: TPH GRO                      Analytical Method: S 8015B                      Prep Method: S 5035  
QC Batch: 37117                      Date Analyzed: 2007-05-09                      Analyzed By: AG  
Prep Batch: 32190                      Sample Preparation: 2007-05-09                      Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		1870	mg/Kg	100	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		85.7	mg/Kg	100	100	86	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		128	mg/Kg	100	100	128	67.5 - 140.3

**Sample: 123600 - SP-9**

Analysis: TPH DRO                      Analytical Method: Mod. 8015B                      Prep Method: N/A  
QC Batch: 37068                      Date Analyzed: 2007-05-08                      Analyzed By: AG  
Prep Batch: 32157                      Sample Preparation: 2007-05-08                      Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		2170	mg/Kg	1	50.0

<sup>9</sup>High surrogate recovery due to peak interference.



**Method Blank (1)**      QC Batch: 37068

QC Batch: 37068      Date Analyzed: 2007-05-08      Analyzed By: AG  
 Prep Batch: 32157      QC Preparation: 2007-05-08      Prepared By: MS

Parameter	Flag	MDL Result	Units	RL
DRO		<13.4	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		102	mg/Kg	1	150	68	61.7 - 143.2

**Method Blank (1)**      QC Batch: 37075

QC Batch: 37075      Date Analyzed: 2007-05-08      Analyzed By: AG  
 Prep Batch: 32159      QC Preparation: 2007-05-08      Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<0.739	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.887	mg/Kg	1	1.00	89	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.982	mg/Kg	1	1.00	98	67.5 - 140.3

**Method Blank (1)**      QC Batch: 37108

QC Batch: 37108      Date Analyzed: 2007-05-09      Analyzed By: AG  
 Prep Batch: 32183      QC Preparation: 2007-05-09      Prepared By: MS

Parameter	Flag	MDL Result	Units	RL
DRO		<13.4	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		104	mg/Kg	1	150	69	61.7 - 143.2

**Method Blank (1)**      QC Batch: 37117

QC Batch: 37117      Date Analyzed: 2007-05-09      Analyzed By: AG  
 Prep Batch: 32190      QC Preparation: 2007-05-09      Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		0.872	mg/Kg	1



Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	220	mg/Kg	1	250	<13.4	88	62.5 - 135.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	218	mg/Kg	1	250	<13.4	87	62.5 - 135.4	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	122	100	mg/Kg	1	150	81	67	66.6 - 140.9

**Laboratory Control Spike (LCS-1)**

QC Batch: 37117  
Prep Batch: 32190

Date Analyzed: 2007-05-09  
QC Preparation: 2007-05-09

Analyzed By: AG  
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	8.35	mg/Kg	1	10.0	<0.739	84	57.7 - 102.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	7.21	mg/Kg	1	10.0	<0.739	72	57.7 - 102.5	15	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.19	0.814	mg/Kg	1	1.00	119	81	36.8 - 152.5
4-Bromofluorobenzene (4-BFB)	1.01	1.00	mg/Kg	1	1.00	101	100	70 - 130

**Matrix Spike (MS-1) Spiked Sample: 123603**

QC Batch: 37068  
Prep Batch: 32157

Date Analyzed: 2007-05-08  
QC Preparation: 2007-05-08

Analyzed By: AG  
Prepared By: MS

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	383	mg/Kg	1	250	<13.4	153	29.7 - 168.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	361	mg/Kg	1	250	<13.4	144	29.7 - 168.6	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.







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## Analytical and Quality Control Report

Eb Taylor  
Talon LPE-Hobbs  
318 E Taylor  
Hobbs, TX, 88240

Report Date: May 10, 2007

Work Order: 7050813



Project Location: Lea County, NM  
Project Name: EK Queen State  
Project Number: Plains048SPL

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
123602	SW-1	soil	2007-05-07	12:15	2007-05-08
123603	SW-2	soil	2007-05-07	12:35	2007-05-08
123604	SW-3	soil	2007-05-07	12:51	2007-05-08
123605	SW-4	soil	2007-05-07	13:03	2007-05-08
123606	SW-5	soil	2007-05-07	13:18	2007-05-08
123607	SW-6	soil	2007-05-07	13:31	2007-05-08
123608	BH-1	soil	2007-05-07	13:57	2007-05-08
123609	BH-2	soil	2007-05-07	14:10	2007-05-08
123610	BH-3	soil	2007-05-07	14:27	2007-05-08
123611	BH-4	soil	2007-05-07	14:48	2007-05-08
123612	BH-5	soil	2007-05-07	15:09	2007-05-08

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 24 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

**Standard Flags**

B - The sample contains less than ten times the concentration found in the method blank.

## Case Narrative

Samples for project EK Queen State were received by TraceAnalysis, Inc. on 2007-05-08 and assigned to work order 7050813. Samples for work order 7050813 were received intact at a temperature of 3 deg C.

Samples were analyzed for the following tests using their respective methods.

Test	Method
BTEX	S 8021B
TPH DRO	Mod. 8015B
TPH GRO	S 8015B

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 7050813 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

## Analytical Report

**Sample: 123602 - SW-1**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035
QC Batch: 37074	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32159	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<b>0.0398</b>	mg/Kg	1	0.0100
Xylene		<b>0.110</b>	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.866	mg/Kg	1	1.00	87	26 - 117.8
4-Bromofluorobenzene (4-BFB)		0.841	mg/Kg	1	1.00	84	51.1 - 119.1

**Sample: 123602 - SW-1**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 37068	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32157	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		125	mg/Kg	1	150	83	61.7 - 143.2

**Sample: 123602 - SW-1**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 37075	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32159	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<b>19.0</b>	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.804	mg/Kg	1	1.00	80	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.11	mg/Kg	1	1.00	111	67.5 - 140.3

**Sample: 123603 - SW-2**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035
QC Batch: 37074	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32159	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<b>0.0542</b>	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.878	mg/Kg	1	1.00	88	26 - 117.8
4-Bromofluorobenzene (4-BFB)		0.829	mg/Kg	1	1.00	83	51.1 - 119.1

**Sample: 123603 - SW-2**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 37068	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32157	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		138	mg/Kg	1	150	92	61.7 - 143.2

**Sample: 123603 - SW-2**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 37075	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32159	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<b>9.58</b>	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.808	mg/Kg	1	1.00	81	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.03	mg/Kg	1	1.00	103	67.5 - 140.3

**Sample: 123604 - SW-3**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035
QC Batch: 37074	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32159	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<b>0.0419</b>	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.855	mg/Kg	1	1.00	86	26 - 117.8
4-Bromofluorobenzene (4-BFB)		0.828	mg/Kg	1	1.00	83	51.1 - 119.1

**Sample: 123604 - SW-3**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 37068	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32157	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		113	mg/Kg	1	150	75	61.7 - 143.2

**Sample: 123604 - SW-3**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 37075	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32159	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<b>6.36</b>	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.780	mg/Kg	1	1.00	78	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.30	mg/Kg	1	1.00	130	67.5 - 140.3



**Sample: 123606 - SW-5**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035
QC Batch: 37074	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32159	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.856	mg/Kg	1	1.00	86	26 - 117.8
4-Bromofluorobenzene (4-BFB)		0.835	mg/Kg	1	1.00	84	51.1 - 119.1

**Sample: 123606 - SW-5**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 37068	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32157	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		151	mg/Kg	1	150	101	61.7 - 143.2

**Sample: 123606 - SW-5**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 37075	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32159	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<b>4.36</b>	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.785	mg/Kg	1	1.00	78	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.21	mg/Kg	1	1.00	121	67.5 - 140.3

**Sample: 123607 - SW-6**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035
QC Batch: 37074	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32159	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.866	mg/Kg	1	1.00	87	26 - 117.8
4-Bromofluorobenzene (4-BFB)		0.837	mg/Kg	1	1.00	84	51.1 - 119.1

**Sample: 123607 - SW-6**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 37068	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32157	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		139	mg/Kg	1	150	93	61.7 - 143.2

**Sample: 123607 - SW-6**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 37075	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32159	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<b>3.19</b>	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.795	mg/Kg	1	1.00	80	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.17	mg/Kg	1	1.00	117	67.5 - 140.3

**Sample: 123608 - BH-1**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035
QC Batch: 37074	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32159	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.854	mg/Kg	1	1.00	85	26 - 117.8
4-Bromofluorobenzene (4-BFB)		0.836	mg/Kg	1	1.00	84	51.1 - 119.1

**Sample: 123608 - BH-1**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 37068	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32157	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		109	mg/Kg	1	150	73	61.7 - 143.2

**Sample: 123608 - BH-1**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 37075	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32159	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		2.88	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.782	mg/Kg	1	1.00	78	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.19	mg/Kg	1	1.00	119	67.5 - 140.3

**Sample: 123609 - BH-2**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035
QC Batch: 37074	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32159	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.884	mg/Kg	1	1.00	88	26 - 117.8
4-Bromofluorobenzene (4-BFB)		0.850	mg/Kg	1	1.00	85	51.1 - 119.1

**Sample: 123609 - BH-2**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 37068	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32157	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<b>112</b>	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		113	mg/Kg	1	150	75	61.7 - 143.2

**Sample: 123609 - BH-2**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 37075	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32159	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<b>4.18</b>	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.810	mg/Kg	1	1.00	81	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.16	mg/Kg	1	1.00	116	67.5 - 140.3

**Sample: 123610 - BH-3**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035
QC Batch: 37074	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32159	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.862	mg/Kg	1	1.00	86	26 - 117.8
4-Bromofluorobenzene (4-BFB)		0.841	mg/Kg	1	1.00	84	51.1 - 119.1

**Sample: 123610 - BH-3**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 37068	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32157	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<b>76.4</b>	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		112	mg/Kg	1	150	75	61.7 - 143.2

**Sample: 123610 - BH-3**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 37075	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32159	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<b>2.94</b>	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.794	mg/Kg	1	1.00	79	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.12	mg/Kg	1	1.00	112	67.5 - 140.3

**Sample: 123611 - BH-4**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035
QC Batch: 37074	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32159	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.860	mg/Kg	1	1.00	86	26 - 117.8
4-Bromofluorobenzene (4-BFB)		0.824	mg/Kg	1	1.00	82	51.1 - 119.1

**Sample: 123611 - BH-4**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 37068	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32157	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		227	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		118	mg/Kg	1	150	79	61.7 - 143.2

**Sample: 123611 - BH-4**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 37075	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32159	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		4.12	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.789	mg/Kg	1	1.00	79	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.14	mg/Kg	1	1.00	114	67.5 - 140.3

**Sample: 123612 - BH-5**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035
QC Batch: 37116	Date Analyzed: 2007-05-09	Analyzed By: AG
Prep Batch: 32190	Sample Preparation: 2007-05-09	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<b>0.0289</b>	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.853	mg/Kg	1	1.00	85	26 - 117.8
4-Bromofluorobenzene (4-BFB)		0.849	mg/Kg	1	1.00	85	51.1 - 119.1

**Sample: 123612 - BH-5**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 37069	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32157	Sample Preparation: 2007-05-08	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		97.0	mg/Kg	1	150	65	61.7 - 143.2

**Sample: 123612 - BH-5**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 37117	Date Analyzed: 2007-05-09	Analyzed By: AG
Prep Batch: 32190	Sample Preparation: 2007-05-09	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.808	mg/Kg	1	1.00	81	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.08	mg/Kg	1	1.00	108	67.5 - 140.3

**Method Blank (1)**      QC Batch: 37068

QC Batch: 37068	Date Analyzed: 2007-05-08	Analyzed By: AG
Prep Batch: 32157	QC Preparation: 2007-05-08	Prepared By: MS

Parameter	Flag	MDL Result	Units	RL
DRO		<13.4	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		102	mg/Kg	1	150	68	61.7 - 143.2

**Method Blank (1)**      QC Batch: 37069

QC Batch: 37069      Date Analyzed: 2007-05-08      Analyzed By: AG  
 Prep Batch: 32157      QC Preparation: 2007-05-08      Prepared By: MS

Parameter	Flag	MDL Result	Units	RL
DRO		<13.4	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		176	mg/Kg	1	150	117	61.7 - 143.2

**Method Blank (1)**      QC Batch: 37074

QC Batch: 37074      Date Analyzed: 2007-05-08      Analyzed By: AG  
 Prep Batch: 32159      QC Preparation: 2007-05-08      Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00110	mg/Kg	0.01
Toluene		<0.00150	mg/Kg	0.01
Ethylbenzene		<0.00160	mg/Kg	0.01
Xylene		<0.00410	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.837	mg/Kg	1	1.00	84	62.6 - 117.6
4-Bromofluorobenzene (4-BFB)		0.815	mg/Kg	1	1.00	82	53.9 - 125.1

**Method Blank (1)**      QC Batch: 37075

QC Batch: 37075      Date Analyzed: 2007-05-08      Analyzed By: AG  
 Prep Batch: 32159      QC Preparation: 2007-05-08      Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<0.739	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.887	mg/Kg	1	1.00	89	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.982	mg/Kg	1	1.00	98	67.5 - 140.3

**Method Blank (1)**      QC Batch: 37116

QC Batch: 37116      Date Analyzed: 2007-05-09      Analyzed By: AG  
Prep Batch: 32190      QC Preparation: 2007-05-09      Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00110	mg/Kg	0.01
Toluene		<0.00150	mg/Kg	0.01
Ethylbenzene		<0.00160	mg/Kg	0.01
Xylene		<0.00410	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.872	mg/Kg	1	1.00	87	62.6 - 117.6
4-Bromofluorobenzene (4-BFB)		0.747	mg/Kg	1	1.00	75	53.9 - 125.1

**Method Blank (1)**      QC Batch: 37117

QC Batch: 37117      Date Analyzed: 2007-05-09      Analyzed By: AG  
Prep Batch: 32190      QC Preparation: 2007-05-09      Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		0.872	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.904	mg/Kg	1	1.00	90	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.952	mg/Kg	1	1.00	95	67.5 - 140.3

**Laboratory Control Spike (LCS-1)**

QC Batch: 37068      Date Analyzed: 2007-05-08      Analyzed By: AG  
Prep Batch: 32157      QC Preparation: 2007-05-08      Prepared By: MS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	264	mg/Kg	1	250	<13.4	106	62.5 - 135.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

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control spikes continued ...

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	314	mg/Kg	1	250	<13.4	126	62.5 - 135.4	17	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
n-Triacontane	116	131	mg/Kg	1	150	77	87	66.6 - 140.9

**Laboratory Control Spike (LCS-1)**

QC Batch: 37069  
 Prep Batch: 32157

Date Analyzed: 2007-05-08  
 QC Preparation: 2007-05-08

Analyzed By: AG  
 Prepared By: MS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	291	mg/Kg	1	250	<13.4	116	62.5 - 135.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	308	mg/Kg	1	250	<13.4	123	62.5 - 135.4	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
n-Triacontane	132	124	mg/Kg	1	150	88	83	66.6 - 140.9

**Laboratory Control Spike (LCS-1)**

QC Batch: 37074  
 Prep Batch: 32159

Date Analyzed: 2007-05-08  
 QC Preparation: 2007-05-08

Analyzed By: AG  
 Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.938	mg/Kg	1	1.00	<0.00110	94	68.6 - 123.4
Toluene	0.954	mg/Kg	1	1.00	<0.00150	95	74.6 - 119.3
Ethylbenzene	0.947	mg/Kg	1	1.00	<0.00160	95	72.3 - 126.2
Xylene	2.87	mg/Kg	1	3.00	<0.00410	96	76.5 - 121.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.955	mg/Kg	1	1.00	<0.00110	96	68.6 - 123.4	2	20
Toluene	0.956	mg/Kg	1	1.00	<0.00150	96	74.6 - 119.3	0	20
Ethylbenzene	0.948	mg/Kg	1	1.00	<0.00160	95	72.3 - 126.2	0	20

continued ...

control spikes continued ...

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Xylene	2.87	mg/Kg	1	3.00	<0.00410	96	76.5 - 121.6	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.777	0.776	mg/Kg	1	1.00	78	78	64.1 - 118.2
4-Bromofluorobenzene (4-BFB)	0.793	0.798	mg/Kg	1	1.00	79	80	68.7 - 125.8

**Laboratory Control Spike (LCS-1)**

QC Batch: 37075  
 Prep Batch: 32159

Date Analyzed: 2007-05-08  
 QC Preparation: 2007-05-08

Analyzed By: AG  
 Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	7.92	mg/Kg	1	10.0	<0.739	79	57.7 - 102.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	8.34	mg/Kg	1	10.0	<0.739	83	57.7 - 102.5	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.18	1.20	mg/Kg	1	1.00	118	120	36.8 - 152.5
4-Bromofluorobenzene (4-BFB)	1.00	1.01	mg/Kg	1	1.00	100	101	70 - 130

**Laboratory Control Spike (LCS-1)**

QC Batch: 37116  
 Prep Batch: 32190

Date Analyzed: 2007-05-09  
 QC Preparation: 2007-05-09

Analyzed By: AG  
 Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.907	mg/Kg	1	1.00	<0.00110	91	68.6 - 123.4
Toluene	0.917	mg/Kg	1	1.00	<0.00150	92	74.6 - 119.3
Ethylbenzene	0.906	mg/Kg	1	1.00	<0.00160	91	72.3 - 126.2
Xylene	2.74	mg/Kg	1	3.00	<0.00410	91	76.5 - 121.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.923	mg/Kg	1	1.00	<0.00110	92	68.6 - 123.4	2	20
Toluene	0.932	mg/Kg	1	1.00	<0.00150	93	74.6 - 119.3	2	20
Ethylbenzene	0.922	mg/Kg	1	1.00	<0.00160	92	72.3 - 126.2	2	20
Xylene	2.79	mg/Kg	1	3.00	<0.00410	93	76.5 - 121.6	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.



Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	173	mg/Kg	1	250	<13.4	69	29.7 - 168.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	211	mg/Kg	1	250	<13.4	84	29.7 - 168.6	20	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	85.5	83.7	mg/Kg	1	150	57	56	43.4 - 193.9

**Matrix Spike (MS-1) Spiked Sample: 123611**

QC Batch: 37074  
Prep Batch: 32159

Date Analyzed: 2007-05-08  
QC Preparation: 2007-05-08

Analyzed By: AG  
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.865	mg/Kg	1	1.00	<0.00110	86	64.4 - 115.7
Toluene	0.898	mg/Kg	1	1.00	<0.00150	90	57.8 - 124.4
Ethylbenzene	0.906	mg/Kg	1	1.00	<0.00160	91	64.8 - 125.8
Xylene	2.74	mg/Kg	1	3.00	<0.00410	91	65.2 - 121.8

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.889	mg/Kg	1	1.00	<0.00110	89	64.4 - 115.7	3	20
Toluene	0.927	mg/Kg	1	1.00	<0.00150	93	57.8 - 124.4	3	20
Ethylbenzene	0.952	mg/Kg	1	1.00	<0.00160	95	64.8 - 125.8	5	20
Xylene	2.89	mg/Kg	1	3.00	<0.00410	96	65.2 - 121.8	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.770	0.755	mg/Kg	1	1	77	76	52.8 - 121.7
4-Bromofluorobenzene (4-BFB)	0.802	0.806	mg/Kg	1	1	80	81	66.7 - 131.9

**Matrix Spike (MS-1) Spiked Sample: 123611**

QC Batch: 37075  
Prep Batch: 32159

Date Analyzed: 2007-05-08  
QC Preparation: 2007-05-08

Analyzed By: AG  
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	9.08	mg/Kg	1	10.0	4.12	50	10 - 141.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	9.70	mg/Kg	1	10.0	4.12	56	10 - 141.5	7	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.661	0.673	mg/Kg	1	1	66	67	40 - 125.3
4-Bromofluorobenzene (4-BFB)	1.17	1.15	mg/Kg	1	1	117	115	86.7 - 144.5

**Matrix Spike (MS-1)** Spiked Sample: 123612

QC Batch: 37116  
Prep Batch: 32190

Date Analyzed: 2007-05-09  
QC Preparation: 2007-05-09

Analyzed By: AG  
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.901	mg/Kg	1	1.00	<0.00110	90	64.4 - 115.7
Toluene	0.939	mg/Kg	1	1.00	<0.00150	94	57.8 - 124.4
Ethylbenzene	0.954	mg/Kg	1	1.00	<0.00160	95	64.8 - 125.8
Xylene	2.89	mg/Kg	1	3.00	0.0289	95	65.2 - 121.8

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.893	mg/Kg	1	1.00	<0.00110	89	64.4 - 115.7	1	20
Toluene	0.935	mg/Kg	1	1.00	<0.00150	94	57.8 - 124.4	0	20
Ethylbenzene	0.950	mg/Kg	1	1.00	<0.00160	95	64.8 - 125.8	0	20
Xylene	2.88	mg/Kg	1	3.00	0.0289	95	65.2 - 121.8	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.766	0.767	mg/Kg	1	1	77	77	52.8 - 121.7
4-Bromofluorobenzene (4-BFB)	0.807	0.793	mg/Kg	1	1	81	79	66.7 - 131.9

**Matrix Spike (MS-1)** Spiked Sample: 123612

QC Batch: 37117  
Prep Batch: 32190

Date Analyzed: 2007-05-09  
QC Preparation: 2007-05-09

Analyzed By: AG  
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	6.36	mg/Kg	1	10.0	0.9561	54	10 - 141.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	6.54	mg/Kg	1	10.0	0.9561	56	10 - 141.5	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.







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Contact Person: Herb New Mexico  
E-mail: ETaylor@TaylorLPE.com

Phone #: 505 393-4261  
Fax #: 505 393-4658  
E-mail: ETaylor@TaylorLPE.com

Project #: PLAINS  
Project Name: PLAINS 0485R  
Sampler Signature: EK Queen  
Project Location (including state): LEA COUNTY NEW MEXICO

## ANALYSIS REQUEST (Circle or Specify Method No.)

<input type="checkbox"/>	TPH 418.1 / TX1005 / TX1005 Ext(C35)
<input type="checkbox"/>	TPH 8015 (RO, DRO, TVHC)
<input type="checkbox"/>	PAH 8270C / 625
<input type="checkbox"/>	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/2007
<input type="checkbox"/>	TCLP Metals Ag As Ba Cd Cr Pb Se Hg
<input type="checkbox"/>	TCLP Volatiles
<input type="checkbox"/>	TCLP Semi Volatiles
<input type="checkbox"/>	TCLP Pesticides
<input type="checkbox"/>	RCI
<input type="checkbox"/>	GC/MS Vol. 8260B / 624
<input type="checkbox"/>	GC/MS Semi Vol. 8270C / 625
<input type="checkbox"/>	PCBs 8082 / 608
<input type="checkbox"/>	Pesticides 8081A / 608
<input type="checkbox"/>	BOD, TSS, pH
<input type="checkbox"/>	Moisture Content

LAB #	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX			PRESERVATIVE METHOD					DATE	TIME
				WATER	SOIL	AIR	SLUDGE	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NaOH		
123002	SW-1	1										5/7	12:15
603	SW-2	1										5/7	12:35
604	SW-3	1										5/7	12:51
605	SW-4	1										5/7	13:03
606	SW-5	1										5/7	13:18
607	SW-6	1										5/7	13:31
608	BH-1	1										5/7	13:57
609	BH-2	1										5/7	14:10
610	BH-3	1										5/7	14:27
611	BH-4	1										5/7	14:48
612	BH-5	1										5/7	15:18

Relinquished by: [Signature] Date: 5/18/07 Time: 6:22  
 Received by: [Signature] Date: 5/18/07 Time: 6:23

Relinquished by: [Signature] Date: 5/18/07 Time: 12:50  
 Received by: [Signature] Date: 5/18/07 Time: 12:50

REMARKS:

LAB USE ONLY

Print:  N

Headspace:  N

Temp: 3

Log-in-Review: YMS

Carrier # 609

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

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6015 Harris Parkway Suite 110 Ft Worth, Texas 76132 817•201•5260  
E-Mail lab@traceanalysis.com

## Analytical and Quality Control Report

Marc Stroope  
Talon LPE-Hobbs  
318 E Taylor  
Hobbs, TX, 88240

Report Date: May 18, 2007

Work Order: 7051418



Project Location: Lea County, NM  
Project Name: EK Queen State  
Project Number: Plains048SPL

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
124019	BH-4A	soil	2007-05-12	09:00	2007-05-14

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 8 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

### Standard Flags

**B** - The sample contains less than ten times the concentration found in the method blank.

## Case Narrative

Samples for project EK Queen State were received by TraceAnalysis, Inc. on 2007-05-14 and assigned to work order 7051418. Samples for work order 7051418 were received intact at a temperature of 3.5 deg C.

Samples were analyzed for the following tests using their respective methods.

Test	Method
BTEX	S 8021B
TPH DRO	Mod. 8015B
TPH GRO	S 8015B

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 7051418 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

## Analytical Report

**Sample: 124019 - BH-4A**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035
QC Batch: 37202	Date Analyzed: 2007-05-14	Analyzed By: AG
Prep Batch: 32266	Sample Preparation:	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.808	mg/Kg	1	1.00	81	26 - 117.8
4-Bromofluorobenzene (4-BFB)		0.855	mg/Kg	1	1.00	86	51.1 - 119.1

**Sample: 124019 - BH-4A**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 37288	Date Analyzed: 2007-05-14	Analyzed By: AG
Prep Batch: 32278	Sample Preparation: 2007-05-14	Prepared By: MS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<b>58.5</b>	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		206	mg/Kg	1	150	137	32.9 - 167

**Sample: 124019 - BH-4A**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 37203	Date Analyzed: 2007-05-14	Analyzed By: AG
Prep Batch: 32266	Sample Preparation:	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<b>3.85</b>	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.786	mg/Kg	1	1.00	79	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.21	mg/Kg	1	1.00	121	67.5 - 140.3

Method Blank (1) QC Batch: 37202

QC Batch: 37202  
Prep Batch: 32266

Date Analyzed: 2007-05-14  
QC Preparation: 2007-05-14

Analyzed By: AG  
Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00110	mg/Kg	0.01
Toluene		<0.00150	mg/Kg	0.01
Ethylbenzene		<0.00160	mg/Kg	0.01
Xylene		<0.00410	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.804	mg/Kg	1	1.00	80	62.6 - 117.6
4-Bromofluorobenzene (4-BFB)		0.754	mg/Kg	1	1.00	75	53.9 - 125.1

Method Blank (1) QC Batch: 37203

QC Batch: 37203  
Prep Batch: 32266

Date Analyzed: 2007-05-14  
QC Preparation: 2007-05-14

Analyzed By: AG  
Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<0.739	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.888	mg/Kg	1	1.00	89	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.969	mg/Kg	1	1.00	97	67.5 - 140.3

Method Blank (1) QC Batch: 37288

QC Batch: 37288  
Prep Batch: 32278

Date Analyzed: 2007-05-14  
QC Preparation: 2007-05-14

Analyzed By: AG  
Prepared By: MS

Parameter	Flag	MDL Result	Units	RL
DRO		<14.6	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		174	mg/Kg	1	150	116	44.7 - 133.6

Laboratory Control Spike (LCS-1)

QC Batch: 37202  
Prep Batch: 32266

Date Analyzed: 2007-05-14  
QC Preparation: 2007-05-14

Analyzed By: AG  
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.939	mg/Kg	1	1.00	<0.00110	94	68.6 - 123.4
Toluene	0.955	mg/Kg	1	1.00	<0.00150	96	74.6 - 119.3
Ethylbenzene	0.963	mg/Kg	1	1.00	<0.00160	96	72.3 - 126.2
Xylene	2.93	mg/Kg	1	3.00	<0.00410	98	76.5 - 121.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.916	mg/Kg	1	1.00	<0.00110	92	68.6 - 123.4	2	20
Toluene	0.933	mg/Kg	1	1.00	<0.00150	93	74.6 - 119.3	2	20
Ethylbenzene	0.944	mg/Kg	1	1.00	<0.00160	94	72.3 - 126.2	2	20
Xylene	2.87	mg/Kg	1	3.00	<0.00410	96	76.5 - 121.6	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.746	0.709	mg/Kg	1	1.00	75	71	64.1 - 118.2
4-Bromofluorobenzene (4-BFB)	0.816	0.821	mg/Kg	1	1.00	82	82	68.7 - 125.8

**Laboratory Control Spike (LCS-1)**

QC Batch: 37203  
 Prep Batch: 32266

Date Analyzed: 2007-05-14  
 QC Preparation: 2007-05-14

Analyzed By: AG  
 Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	8.15	mg/Kg	1	10.0	<0.739	82	57.7 - 102.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	8.25	mg/Kg	1	10.0	<0.739	82	57.7 - 102.5	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.12	1.17	mg/Kg	1	1.00	112	117	36.8 - 152.5
4-Bromofluorobenzene (4-BFB)	1.06	1.06	mg/Kg	1	1.00	106	106	70 - 130

**Laboratory Control Spike (LCS-1)**

QC Batch: 37288  
 Prep Batch: 32278

Date Analyzed: 2007-05-14  
 QC Preparation: 2007-05-14

Analyzed By: AG  
 Prepared By: MS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	221	mg/Kg	1	250	<14.6	88	47.5 - 144.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	192	mg/Kg	1	250	<14.6	77	47.5 - 144.1	14	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
n-Triacontane	174	179	mg/Kg	1	150	116	119	57.3 - 131.6

**Matrix Spike (MS-1)** Spiked Sample: 123929

QC Batch: 37202  
Prep Batch: 32266

Date Analyzed: 2007-05-14  
QC Preparation: 2007-05-14

Analyzed By: AG  
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.920	mg/Kg	1	1.00	<0.00110	92	64.4 - 115.7
Toluene	0.948	mg/Kg	1	1.00	<0.00150	95	57.8 - 124.4
Ethylbenzene	0.969	mg/Kg	1	1.00	<0.00160	97	64.8 - 125.8
Xylene	2.94	mg/Kg	1	3.00	<0.00410	98	65.2 - 121.8

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.915	mg/Kg	1	1.00	<0.00110	92	64.4 - 115.7	0	20
Toluene	0.952	mg/Kg	1	1.00	<0.00150	95	57.8 - 124.4	0	20
Ethylbenzene	0.987	mg/Kg	1	1.00	<0.00160	99	64.8 - 125.8	2	20
Xylene	3.01	mg/Kg	1	3.00	<0.00410	100	65.2 - 121.8	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.722	0.733	mg/Kg	1	1	72	73	52.8 - 121.7
4-Bromofluorobenzene (4-BFB)	0.833	0.836	mg/Kg	1	1	83	84	66.7 - 131.9

**Matrix Spike (MS-1)** Spiked Sample: 124019

QC Batch: 37203  
Prep Batch: 32266

Date Analyzed: 2007-05-14  
QC Preparation: 2007-05-14

Analyzed By: AG  
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	8.72	mg/Kg	1	10.0	3.85	49	10 - 141.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	7.60	mg/Kg	1	10.0	3.85	38	10 - 141.5	14	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.688	0.698	mg/Kg	1	1	69	70	40 - 125.3
4-Bromofluorobenzene (4-BFB)	1.26	1.22	mg/Kg	1	1	126	122	86.7 - 144.5

**Matrix Spike (MS-1)** Spiked Sample: 124019

QC Batch: 37288 Date Analyzed: 2007-05-14 Analyzed By: AG  
Prep Batch: 32278 QC Preparation: 2007-05-14 Prepared By: MS

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	282	mg/Kg	1	250	58.5	89	11.7 - 152.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	283	mg/Kg	1	250	58.5	113	11.7 - 152.3	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	186	183	mg/Kg	1	150	124	122	17 - 163.1

**Standard (ICV-1)**

QC Batch: 37202 Date Analyzed: 2007-05-14 Analyzed By: AG

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0912	91	85 - 115	2007-05-14
Toluene		mg/Kg	0.100	0.0945	94	85 - 115	2007-05-14
Ethylbenzene		mg/Kg	0.100	0.0968	97	85 - 115	2007-05-14
Xylene		mg/Kg	0.300	0.295	98	85 - 115	2007-05-14

**Standard (CCV-1)**

QC Batch: 37202 Date Analyzed: 2007-05-14 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0917	92	85 - 115	2007-05-14
Toluene		mg/Kg	0.100	0.0938	94	85 - 115	2007-05-14
Ethylbenzene		mg/Kg	0.100	0.0928	93	85 - 115	2007-05-14
Xylene		mg/Kg	0.300	0.282	94	85 - 115	2007-05-14

**Standard (ICV-1)**

QC Batch: 37203 Date Analyzed: 2007-05-14 Analyzed By: AG



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<b>Company Name:</b> ALON LPE <b>Address:</b> 318 E TAMIAR HOBBS NM <b>Contact Person:</b> SAB TAMAR <b>Phone #:</b> 505 393-4261 <b>Fax #:</b> 505 393-4458 <b>E-mail:</b> etaylor@taylor.com mstroop@taylor.com		<b>Project #:</b> P1415085 PL <b>Project Name:</b> E K QUEEN TRUNK SITE <b>Project Location (including state):</b> LEA COUNTY NEW MEXICO <b>Sampler Signature:</b> [Signature]					
<b>LAB #</b> (LAB USE ONLY) 124019	<b>FIELD CODE</b> BH-4A	<b># CONTAINERS</b> 1	<b>VOLUME / AMOUNT</b> SLUDGE	<b>MATRIX</b> SOIL AIR SLUDGE	<b>PRESERVATIVE METHOD</b> H <sub>2</sub> SO <sub>4</sub> NaOH ICE NONE	<b>SAMPLING DATE</b> 5/14/07	<b>SAMPLING TIME</b> 9:00
<b>Relinquished by:</b> [Signature]		<b>Date:</b> 5/14/07	<b>Time:</b> 6:00	<b>Received by:</b> [Signature]		<b>Date:</b> 5/14/07	<b>Time:</b> 6:00
<b>Relinquished by:</b> [Signature]		<b>Date:</b> 5/14/07	<b>Time:</b> 10:10	<b>Received by:</b> [Signature]		<b>Date:</b> 5/14/07	<b>Time:</b> 10:10

## ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8021B / 602 / 8260B / 624	X
BTEX 8021B / 602 / 8260B / 624	X
TPH 418.1 / TX1005 / TX1005 EXT(C35)	X
PH 8018 GFC DRO / TVHC	X
PAH 8270C / 625	
Total Metals Ag As Ba Cd Cr Pb Se Hg 8010B/2007	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC/MS Vol. 8260B / 624	
GC/MS Semi Vol. 8270C / 625	
PCBs 8082 / 608	
Pesticides 8081A / 608	
BOD, TSS, pH	
Moisture Content	
Turn Around Time if different from standard	Hold

**LAB USE ONLY**

Intact  Y / N

Headspace  Y / N

Temp 3.5

Log-in-Review ms

Carrier # canx

REMARKS: Change SR to BH per Marc Grange 5/14/07

All Tests - Midland  
 Dry Weight Basis Required  
 TRRP Report Required  
 Check if Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

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**APPENDIX D**

**Photograph Documentation**

**TALON/LPE**

**Client:** Plains All American  
**Location:** E.K. Queen State  
Lea County, New Mexico

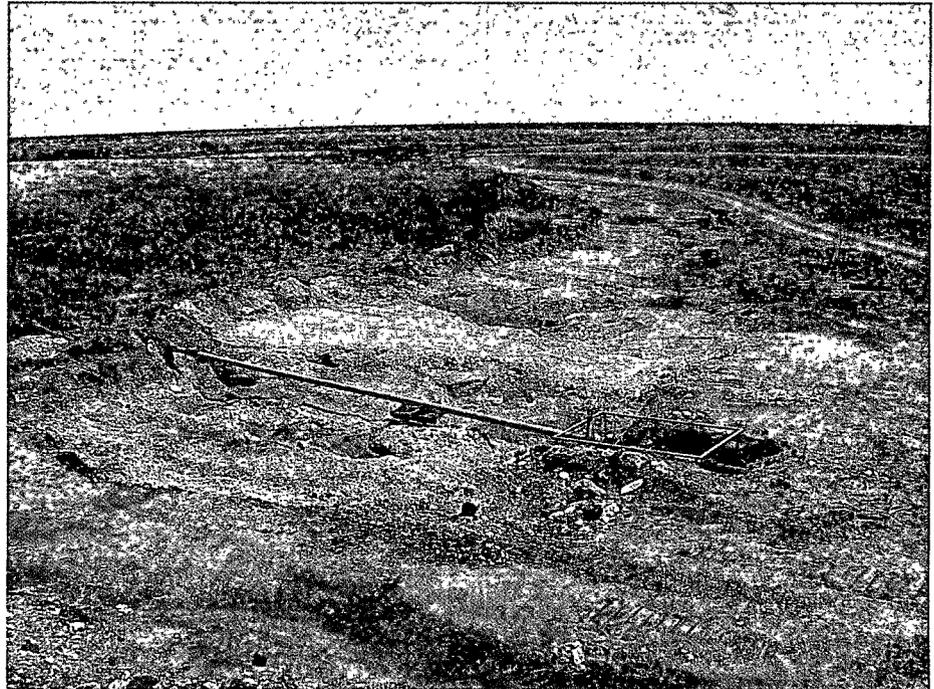
**Photographic Documentation**

**Prepared by:** Marc Stroope  
**Photographer:** Marc Stroope  
**Project Number:** PLAINS048SPL

**Photograph No. 1**

**Direction:** East

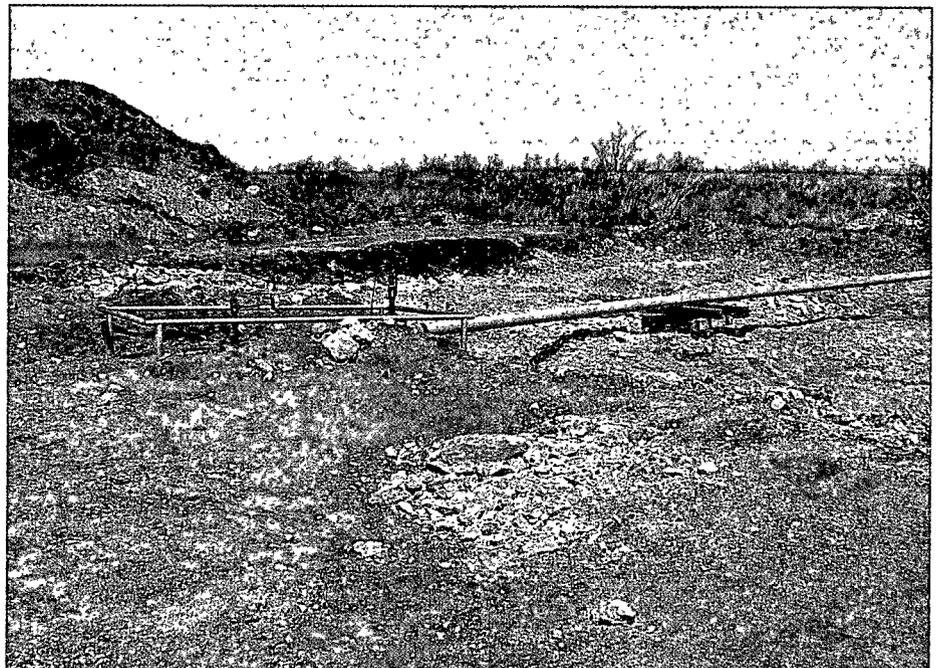
**Description:** View of excavation area.



**Photograph No. 2**

**Direction:** Northwest

**Description:** View of excavation area.



**TALON/LPE**

**Client:** Plains All American  
**Location:** E.K. Queen State  
Lea County, New Mexico

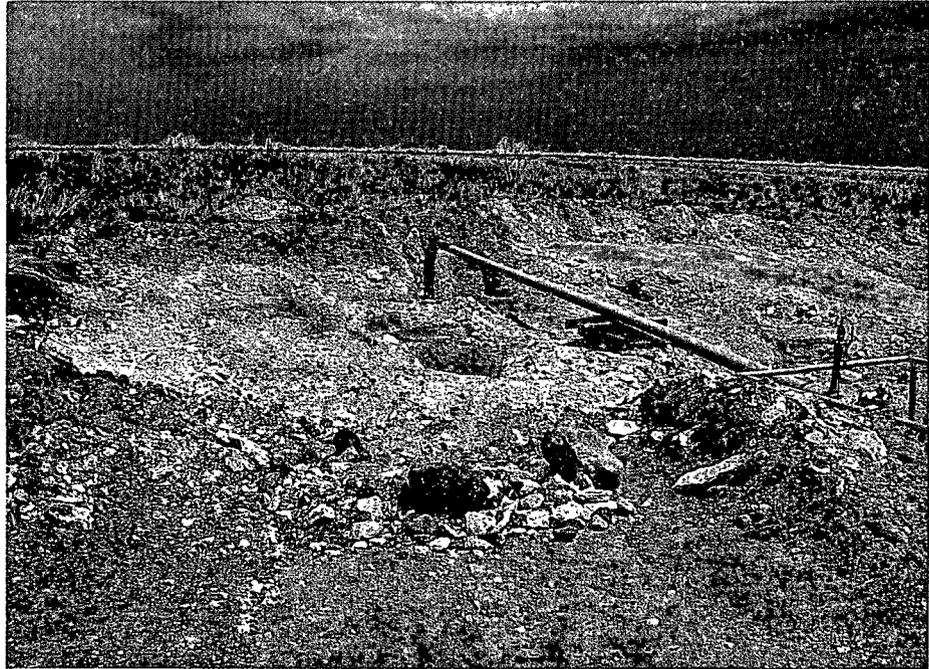
**Photographic Documentation**

**Prepared by:** Marc Stroope  
**Photographer:** Marc Stroope  
**Project Number:** PLAINS048SPL

**Photograph No. 3**

**Direction:** North

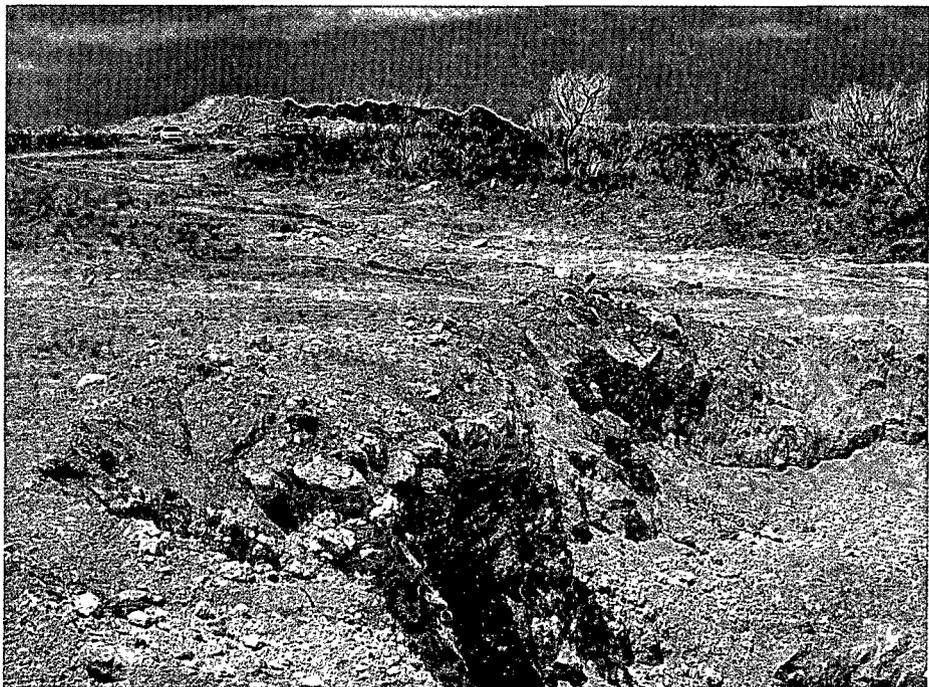
**Description:**  
View of excavation  
area.



**Photograph No. 4**

**Direction:** Southwest

**Description:**  
View of excavation  
area.



**TALON/LPE**

**Client:** Plains All American  
**Location:** E.K. Queen State  
Lea County, New Mexico

**Photographic Documentation**

**Prepared by:** Marc Stroope  
**Photographer:** Marc Stroope  
**Project Number:** PLAINS048SPL

**Photograph No. 5**

**Direction:** Northwest

**Description:** View of backfilled area after reseeding.



**Photograph No. 6**

**Direction:** Southeast

**Description:** View of backfilled area after reseeding.



**TALON/LPE**

**Client:** Plains All American  
**Location:** E.K. Queen State  
Lea County, New Mexico

**Photographic Documentation**

**Prepared by:** Marc Stroope  
**Photographer:** Marc Stroope  
**Project Number:** PLAINS048SPL

**Photograph No. 7**

**Direction:** North

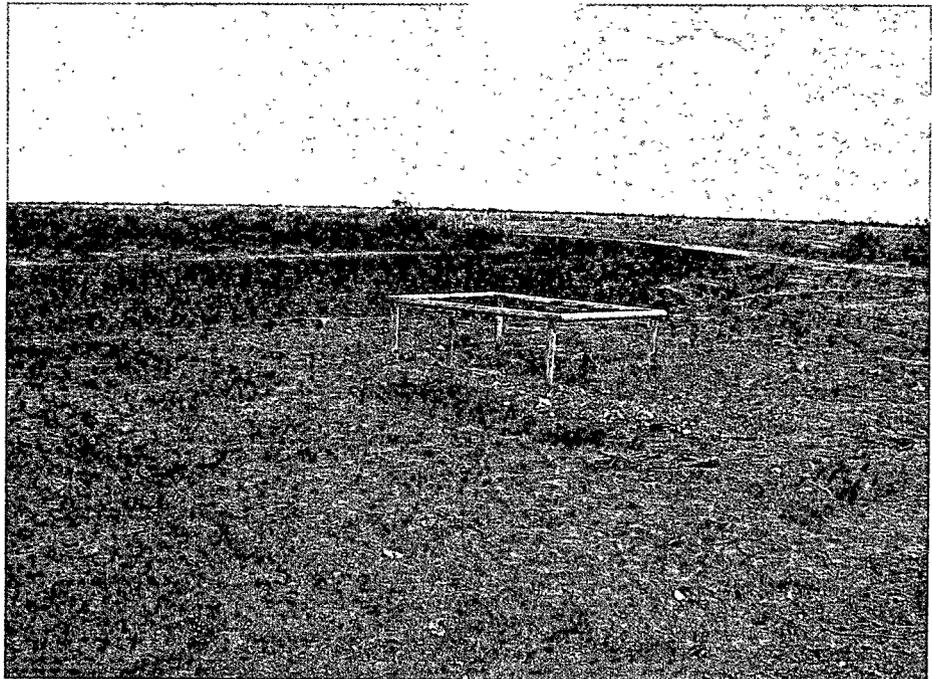
**Description:**  
View of backfilled area  
after reseeding.



**Photograph No. 8**

**Direction:** Southeast

**Description:**  
View of backfilled area  
after reseeding.



**APPENDIX E**

**NMOCD C-141 Reports**

Initial C-141 Report  
Final C-141 Report

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

Form C-1  
Revised October 10, 2

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

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	Contact Camille Reynolds	
Address 3112 W. US Hwy 82, Lovington, NM 88260	Telephone No. 505-441-0965	
Facility Name E.K. Queen 6 Inch State	Facility Type 6" Steel Pipeline	
Surface Owner SLO	Mineral Owner	Lease No.

LOCATION OF RELEASE

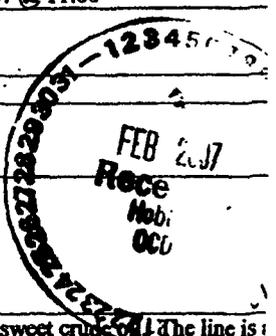
Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	20	18S	34E					Lea

Latitude 32° 44' 12.4" Longitude 103° 34' 41.5"

*GW~98'*

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 20 barrels	Volume Recovered 0 barrels
Source of Release 6" Steel Pipeline	Date and Hour of Occurrence 02/02/2007 @ 10:45	Date and Hour of Discovery 02/02/2007 @ 11:00
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Pat Caperton	
By Whom? Camille Reynolds	Date and Hour 02/02/2007 @ 14:33	
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 Internal corrosion of the 6 inch steel pipeline resulted in release of sweet crude oil. The line is 6 inch steel gathering line that produces approximately 433 barrels of oil per day. The pressure on the line is approximately 150 psi and the gravity 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 feet bgs at the release point.

*Estimated 2164 sq ft Area of impact*

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

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>	OIL CONSERVATION DIVISION	
Printed Name: Camille Reynolds	Approved by District Supervisor: <i>[Signature]</i>	
Title: Remediation Coordinator	Approval Date: 6.28.07	Expiration Date: 8.30.07
E-mail Address: cireynolds@paalp.com	Conditions of Approval:	
Date: 02/05/2007	SUBMITTAL OF FINAL C-141 BY <i>[Signature]</i>	

\* Attach Additional Sheets If Necessary

*Facility - FPAC 703829486  
2000-2020 10501*

Attached   
RP# *1194*

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**  
**RP- 1194**

**OPERATOR**

Initial Report  Final Report

Name of Company Plains Pipeline	Contact Camille Reynolds
Address 3112 West Hwy 82, Lovington, NM 88260	Telephone No. 505-441-0965
Facility Name EK Queen 6" State 2007-058	Facility Type 6" Steel Pipeline

Surface Owner State of New Mexico	Mineral Owner	Lease No.
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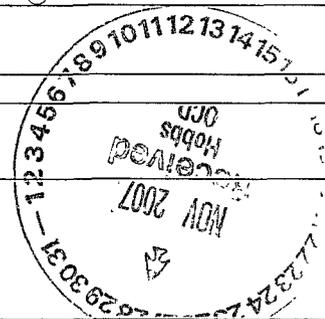
**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	20	18S	34E					Lea

Latitude 32° 44' 12.4" Longitude 103° 34' 41.5"

**NATURE OF RELEASE**

Type of Release Crude Oil	Volume of Release 20 barrels	Volume Recovered 0 Barrels
Source of Release 6" Steel Pipeline	Date and Hour of Occurrence 02/02/2007 @ 10:45	Date and Hour of Discovery 02/02/2007 @ 11:00
Was Immediate Notice Given? x Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Pat Caperton	
By Whom? Camille Reynolds	Date and Hour 02/02/2007 @ 14:33	
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.\* External corrosion of the 6 inch steel pipeline resulted in the release of sweet crude oil. The line is a 6 inch steel gathering line that produces approximately 433 barrels of oil per day. The pressure on the line is approximately 150 psi and the gravity of the sweet crude oil is 42. The sweet crude has an H2S content of <10 ppm. The line is approximately 1.5 feet bgs at the release point.

Describe Area Affected and Cleanup Action Taken.\*  
As per the NMOCD approved Soils Remediation Work Plan dated May 23, 2007 the crude oil release area was excavated: impacted soil was placed adjacent to the excavation, confirmation soil samples were collected from the floor and walls of the excavation. Once confirmation samples were below NMOCD regulatory standards, the excavation was backfilled with both imported fill material, as well as screened rock from the excavation area. The area was restored to topographic grade and the site was subsequently revegetated with a seed mix recommended by the SLO.

Please see the attached Talon Soil Closure Report dated October 30, 2007 for details of remedial activities conducted for site closure.

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 Superintendent <i>J. Johnson</i> <b>ENVIRONMENTAL ENGINEER</b>	
Title: Remediation Coordinator	Approval Date: <u>11.28.07</u>	Expiration Date: <u>    </u>
E-mail Address: cgreynolds@paalp.com	Conditions of Approval:	Attached <input type="checkbox"/> RP-1194
Date: <u>11/28/2007</u>	Phone: 505-441-0965	