

AP - 29

ANNUAL MONITORING REPORT

YEAR(S):
2008



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ALL AMERICAN

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March 27, 2009

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

Re: Plains All American – 2008 Annual Monitoring Reports
6 Sites in Lea County, New Mexico

Dear Mr. Hansen:

Plains All American is an operator of crude oil pipelines and terminal facilities in the state of New Mexico. Plains All American actively monitors certain historical release sites exhibiting groundwater impacts, consistent with assessments and work plans developed in consultation with the New Mexico Oil Conservation Division (NMOCD). In accordance with the rules and regulations of the NMOCD, Plains All American hereby submits our Annual Monitoring reports for the following sites:

8-inch Moore to Jal #1	1R-0380	Section 16, T17S, R37E, Lea County
8-inch Moore to Jal #2	1R-0381	Section 16, T17S, R37E, Lea County
C.S. Cayler	AP-052	Section 06, T17S, R37E, Lea County
Hobbs Junction Mainline	AP-054	Section 26, T18S, R37E, Lea County
Kimbrough Sweet 8-inch	AP-0029	Section 03, T18S, R37E, Lea County
Lovington Deep 6-inch	AP-037	Section 03, T18S, R37E, Lea County

Talon/LPE (Talon) prepared these documents and has vouched for their accuracy and completeness, and on behalf of Plains All American, I have personally reviewed the documents and interviewed Talon personnel in order to verify the accuracy and completeness of these documents. It is based upon these inquiries and reviews that Plains All American submits the enclosed Annual Monitoring Reports for the above facilities.

If you have any questions or require further information, please contact me at (575) 441-1099.

Sincerely,

Jason Henry
Remediation Coordinator
Plains All American

CC: Larry Johnson, NMOCD, Hobbs, NM

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**2008 ANNUAL GROUNDWATER MONITORING REPORT
KIMBROUGH SWEET 8"
SECTION 3, TOWNSHIP 18 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO
PLAINS SRS #2000-10757
NMOCD REF. # AP-0029**

Section 3, Township 18 South, Range 37 East

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PREPARED BY:

**TALON/LPE
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March 27, 2009

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2008 ANNUAL GROUNDWATER MONITORING REPORT

**KIMBROUGH SWEET 8"
LEA COUNTY, NEW MEXICO
SRS #2000 - 10757
NMOCD REF. # AP-0029**

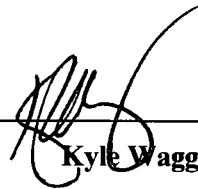
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March 2009

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

TABLE OF CONTENTS

1.0	INTRODUCTION AND OBJECTIVES	1
1.1	Objectives and Site Background	1
1.2	Previous Environmental Investigations.....	1
1.3	Regulatory Framework	1
2.0	SITE ACTIVITIES.....	3
2.1	Groundwater Monitoring Activities	3
2.2	Groundwater Gauging, Purging, and Sampling Procedures	3
2.3	Phase Separated Hydrocarbon Recovery	4
3.0	GROUNDWATER MONITORING RESULTS.....	5
3.1	Groundwater Monitoring Results.....	5
3.1.1	<i>Physical Characteristics of the First Water-Bearing Zone.....</i>	<i>5</i>
3.1.2	<i>Groundwater Gradient and Flow Direction</i>	<i>5</i>
3.1.3	<i>Phase Separated Hydrocarbon (PSH)</i>	<i>6</i>
3.1.4	<i>Groundwater Sampling Results</i>	<i>6</i>
4.0	CONCLUSIONS AND RECOMMENDATIONS	9
4.1	Summary of Findings.....	9
4.2	Recommendations.....	10

APPENDICES

Appendix A Drawings

Figure 1 - Site Plan with Proposed Monitor Well Locations Map

Figure 2a - Groundwater Gradient Map - 03/13/2008

Figure 2b - Groundwater Gradient Map - 06/18/2008

Figure 2c - Groundwater Gradient Map - 09/26/2008

Figure 2d - Groundwater Gradient Map - 12/02/2008

Figure 3a - PSH Thickness & Groundwater Concentration Map - 03/13/2008

Figure 3b - PSH Thickness & Groundwater Concentration Map - 06/18/2008

Figure 3c - PSH Thickness & Groundwater Concentration Map - 09/26/2008

Figure 3d - PSH Thickness & Groundwater Concentration Map - 12/02/2008

Figure 4 - Groundwater Concentration in Wells with PSH Map - 09/29/2008

Appendix B Tables

Table 1 - Summary of Groundwater Elevations and Phase Separated
Thickness

Table 2 - Summary of Groundwater Analytical Results

Table 3 - Summary of Groundwater Poly-Aromatic Hydrocarbon (PAH)
Analytical Results

Table 4 - Summary of PSH Monitor Wells Groundwater Analytical Results

Appendix C Laboratory Analytical Data Reports and Chain of Custody Documentation

Appendix D NMOCD C-141

1.0 INTRODUCTION AND OBJECTIVES

1.1 Objectives and Site Background

The Kimbrough Sweet 8" (site) is located approximately 7 miles northwest of Hobbs, Lea County, New Mexico, on property owned by the State of New Mexico. There are no residences, groundwater wells, or surface water bodies within a 1,000-foot radius of the site. The initial release occurred from the 8" steel pipeline on October 25, 2000. At the time of the release, the pipeline was under the ownership of EOTT Energy Pipeline. Subsequently, EOTT changed its name to Link Energy in October 2003, and Plains Marketing, L.P. (Plains) purchased the assets of Link Energy on April 1, 2004. Initial reports estimated that 60 barrels (bbls) of crude oil were released and impacted approximately 15,613 feet of surface area. Approximately 22 bbls of crude oil were initially recovered.

On February 5, 2007, Talon/LPE (Talon) was retained by Plains to assume remediation activities at the site. Remediation activities at the site were previously conducted by Environmental Plus, Inc. (EPI).

1.2 Previous Environmental Investigations

A total of eleven (11) groundwater monitor wells have been installed in the vicinity of the release (see Figure 1). With New Mexico Oil Conservation Division (NMOCD) approval and landowner concurrence, groundwater monitor wells MW-1, MW-2, MW-3, and MW-4 were installed in January 2002. Groundwater monitor wells MW-5, MW-7, MW-8, and MW-9 were installed in July 2004, and MW-6, MW-10, and MW-11 were installed in December 2004.

PSH recovery operations have been performed at the site since January 2002. Currently there are seven (7) skimmer pumps in operation. Approximately 6,121 gallons (146 bbls) of phase-separated hydrocarbon (PSH) has been recovered to date.

1.3 Regulatory Framework

Groundwater analytical data from this site was compared to the New Mexico Water Quality Control Commission (NMWQCC) groundwater standards. The following sections provide summaries of the groundwater monitoring activities conducted at the site as well as analytical results from each groundwater sampling event of 2008. Analytical results for the four sampling events are summarized in Table 2, Table 3, and Table 4 in Appendix B, and Figures 3a through 4 in Appendix A. Laboratory analytical data reports and chain of custody documentation are included in Appendix C.

New Mexico Water Quality Control Commission (NMWQCC) groundwater standards	
Compound	mg/L
Benzene	0.010
Toluene	0.750
Ethylbenzene	0.750
Total Xylenes	0.620
PAH (Naphthalene)	0.030
PAH (Benzo[a]-pyrene)	0.007

2.0 SITE ACTIVITIES

The following section presents a summary of the product recovery and groundwater monitoring activities conducted at the site. The focus of the groundwater monitoring activities included collecting groundwater measurements and groundwater samples from monitor wells for laboratory analysis.

2.1 Groundwater Monitoring Activities

A total of four groundwater monitoring events were conducted by Talon: March 2008; June 2008; September 2008; and December 2008.

During the March 2008 groundwater monitoring event, all monitor wells were gauged. Four (4) monitor wells, MW-1, MW-3, MW-4 and MW-10, were purged and sampled. Seven (7) monitor wells, MW-2, MW-5 through MW-9, and MW-11, were not sampled due to the presence of PSH. Details of the gauging, purging, and sampling activities are presented in Section 2.2.

During the June 2008 groundwater monitoring event, all monitor wells were gauged. Three (3) monitor wells, MW-3, MW-4, and MW-10 were purged and sampled. One (1) monitor well, MW-1, was not sampled pursuant to established sampling protocol. Seven (7) monitor wells, MW-2, MW-5 through MW-9, and MW-11, were not sampled due to the presence of PSH. Details of the gauging, purging, and sampling activities are presented in Section 2.2.

During the September 2008 groundwater monitoring event, all monitor wells were gauged. Nine (9) monitor wells, MW-2 and MW-3 through MW-10 were purged and sampled. Two (2) monitor wells, MW-1 and MW-11, did not produce sufficient water for the collection of a groundwater sample. Additionally, seven (7) monitor wells, MW-2, MW-5 through MW-9, and MW-11 exhibited PSH thicknesses ranging from 0.75' to 5.85'; however, groundwater samples were collected from these wells (except monitor well MW-11) per NMOCD request. Details of the gauging, purging, and sampling activities are presented in Section 2.2.

During the December 2008 groundwater monitoring event, all monitor wells were gauged. Four (4) monitor wells, MW-1, MW-3, MW-4 and MW-10, were purged and sampled. Seven (7) monitor wells, MW-2, MW-5 through MW-9, and MW-11, were not sampled due to the presence of PSH. Details of the gauging, purging, and sampling activities are presented in Section 2.2.

2.2 Groundwater Gauging, Purging, and Sampling Procedures

During each groundwater monitoring event, all monitor wells were measured to determine static water levels and monitor the presence and/or absence of PSH accumulations. Measured groundwater depths and elevations collected during the sampling events, along with historical measurements, are presented in Table 1 – Summary of Groundwater Elevations and Phase Separated Thickness in Appendix B.

All wells not containing PSH were purged a minimum of three (3) well volumes prior to sampling. During the September 2008 groundwater sampling event, the additional monitor wells containing PSH (monitor wells MW-2 and MW-5 through MW-9) were purged utilizing a pump and vinyl tubing. Purge volumes from the wells exhibiting PSH varied from one well to the

next. Each of these monitor wells was purged to a maximum extent practical that still allowed for the collection of a groundwater sample. All monitor wells were purged utilizing pumps and vinyl tubing. The pumps and tubing used to purge the wells were decontaminated with Alconox® detergent and rinsed with distilled water prior to initial use at each well. Recovered purged groundwater and recovered decon water was immediately transferred to the on-site poly tank which stores recovered PSH. This tank is monitored for accumulations and all recovered water and PSH is properly disposed of as needed. A total of approximately sixty-five (65) gallons of groundwater was purged during the quarterly groundwater monitoring events of 2008.

Groundwater samples were collected from all monitor wells utilizing dedicated disposable Teflon® bailers, except for the monitor wells exhibiting PSH that were sampled during the September 2008 groundwater sampling event. These groundwater samples were collected with the pump and vinyl tubing. The groundwater samples were transferred from the disposable bailer or vinyl tubing into laboratory supplied sample containers appropriate for the analysis requested. The groundwater samples were maintained on ice in the custody of Talon, until delivery to TraceAnalysis, Inc. in Midland, Texas for analysis. The collected groundwater samples were analyzed for BTEX by EPA Method SW-846 8021B and PAH using EPA Methods SW-846 not a SW-846 method, EPA only and 8270C.

2.3 Phase Separated Hydrocarbon Recovery

PSH recovery methods have been conducted at the site since 2002 via educator recovery system. During June of 2007, Talon installed a nitrogen skimmer system at the site. A total of seven (7) skimmer pumps were installed in monitor wells MW-2, MW-5, MW-6, MW-7, MW-8, MW-9, and MW-11. Talon conducts weekly operation and maintenance to the skimmer system and nitrogen tanks.

Recovered PSH is pumped to an on-site poly tank, which is monitor for the accumulation of PSH on a weekly basis. PSH is removed from the on-site poly tank via a vacuum truck and re-introduced to the Plains' pipeline system via the Scharb Station and/or 34 Junction South pipeline.

During 2008 the quarterly PSH recovery totals are as followed:

- 1st Quarter - 840 gallons (20 bbls)
- 2nd Quarter - 840 gallons (20 bbls)
- 3rd Quarter - 0 gallons (0 bbls)
- 4th Quarter - 462 gallons (11 bbls)

Approximately 6,109 gallons (145 bbls) of PSH have been recovered to date from the site.

3.0 GROUNDWATER MONITORING RESULTS

The results of the laboratory analyses are summarized in Table 2 – Summary of Groundwater Analytical in Appendix B. Laboratory analytical data reports and chain of custody documentation are provided in Appendix C.

3.1 Groundwater Monitoring Results

The following sections present the results from the monitoring of the first water-bearing zone underlying the site.

3.1.1 Physical Characteristics of the First Water-Bearing Zone

The first water-bearing zone underlying the site is an unconfined aquifer that appears to be part of the Ogallala Aquifer. The first water-bearing zone is likely to exhibit temporal fluctuations in saturated thickness based upon the season and the frequency and intensity of local and regional rainfall. The depth of groundwater has historically been approximately 50 to 60 feet bgs and the gradient direction is to the east.

3.1.2 Groundwater Gradient and Flow Direction

Water level measurements were collected on March 13, 2008, June 18, 2008, September 26, 2008 and December 2, 2008. Groundwater elevations at the site indicated “mounding” of the potentiometric surface in the vicinity of the release, which results in a variable apparent groundwater flow direction across the site. The monitor well fluid level measurement data arising from the four (4) monitoring events is summarized in Table 1 Summary of Groundwater Elevations and Phase Separated Hydrocarbon Thickness presented in Appendix B.

Potentiometric surface maps were constructed from four (4) of the water level measurement datasets:

- March 13, 2008
- June 18, 2008
- September 26, 2008
- December 2, 2008

These maps are Figure 2a through Figure 2d presented in Appendix A.

The potentiometric surface map for March 2008 is constructed from water level elevations collected from all monitor wells. The water level elevations exhibit a general groundwater direction of flow to the east with an approximate gradient of 0.007 feet/foot.

The potentiometric surface map for June 2008 is constructed from water level elevations from all monitor wells. The water level elevations exhibit a general groundwater direction of flow to the east with an approximate gradient of 0.007 feet/foot.

The potentiometric surface map for September 2008 is constructed from water level elevations from all monitor wells. The water level elevations exhibit a general groundwater direction of flow to the east with an approximate gradient of 0.006 feet/foot.

The potentiometric surface map for December 2008 is constructed from water level elevations from all monitor wells. The water level elevations exhibit a general groundwater direction of flow to the east with an approximate gradient of 0.009 feet/foot.

Based on fluid elevations measured at this site, the groundwater within the first water-bearing zone underlying the site flow is consistently towards the east.

3.1.3 Phase Separated Hydrocarbon (PSH)

The collection of water level measurement data was conducted using an oil/water interface probe, which was also used to determine the presence of PSH.

- In March 2008, PSH was observed in monitor wells MW-2, MW-5 through MW-9, and MW-11. PSH thickness ranged from 2.11 feet to 6.93 feet.
- In June 2008, PSH was observed in monitor wells MW-2, MW-5 through MW-9, and MW-11. PSH thickness ranged from 0.37 feet to 5.46 feet.
- In September 2008, PSH was observed in monitor wells MW-2, MW-5 through MW-9, and MW-11. PSH thickness ranged from 0.75 feet to 5.85 feet.
- In December 2008, PSH was observed in monitor wells MW-2, MW-5 through MW-9, and MW-11. PSH thickness ranged from 2.04 feet to 6.16 feet.

PSH plume maps are presented on Figure 3a through 3d. Based on these measurements, the PSH plume is delineated by the current system and appears to be stable in thickness.

PSH recovery operations have been performed at the site since January 2002. Currently there are a total of seven (7) skimmer pumps in operation in monitor wells MW-2, MW-5 through MW-9 and MW-11. A summary of the historical groundwater and PSH gauging is provided in Table 1. Approximately 6,121 gallons (146 bbls) of phase-separated hydrocarbon (PSH) has been recovered to date.

3.1.4 Groundwater Sampling Results

During the March 2008 sampling event, monitor wells MW-1, MW-3, MW-4, and MW-10 were sampled. Groundwater samples collected from these wells exhibited the following analytical results:

- Benzene concentrations ranged from <0.00100 mg/L to 10.3 mg/L. Benzene concentrations exceeded the NMWQCC groundwater standard of 0.010 mg/L in the groundwater sample collected from monitor well MW-3.
- Toluene concentrations ranged from <0.00100 mg/L to <0.00500 mg/L. All toluene concentrations were below the NMWQCC groundwater standard of 0.750 mg/L.
- Ethylbenzene concentrations ranged from <0.00100 mg/L to 0.157 mg/L. All ethylbenzene concentrations were below the NMWQCC groundwater standard of 0.750 mg/L.
- Xylene concentrations ranged from <0.00100 mg/L to 0.8950 mg/L. Xylene

concentrations exceeded the NMWQCC groundwater standard of 0.620 mg/L in the groundwater sample collected from monitor well MW-3.

- Monitor wells MW-2, MW-5 through MW-9, and MW-11 were not sampled due to the presence of PSH.

During the June 2008 sampling event, monitor wells MW-3, MW-4, and MW-10 were sampled. Groundwater samples collected from these wells exhibited the following:

- Benzene concentrations ranged from <0.00100 mg/L to 11.6 mg/L. Benzene concentrations exceeded the NMWQCC groundwater standard of 0.010 mg/L in the groundwater sample collected from monitor well MW-3.
- Toluene concentrations ranged from <0.00100 mg/L to <0.00500 mg/L. All toluene concentrations were below the NMWQCC groundwater standard of 0.750 mg/L.
- Ethylbenzene concentrations ranged from <0.00100 mg/L to 0.196 mg/L. All ethylbenzene concentrations were below the NMWQCC groundwater standard of 0.750 mg/L.
- Xylene concentrations ranged from <0.00100 mg/L to 0.177 mg/L. All xylene concentrations were below the NMWQCC groundwater standard of 0.620 mg/L.
- Monitor well MW-1 was not sampled pursuant to established sampling protocol. Monitor wells MW-2, MW-5 through MW-9, and MW-11 were not sampled due to the presence of PSH.

During the September 2008 sampling event, monitor wells MW-2 through MW-10, were sampled. Groundwater samples collected from these wells exhibited the following:

- Benzene concentrations ranged from <0.00100 mg/L to 27.8 mg/L. Benzene concentrations exceeded the NMWQCC groundwater standard of 0.010 mg/L in groundwater samples collected from monitor well MW-2, MW-3, and MW-5 through MW-9.
- Toluene concentrations ranged from <0.00100 mg/L to 23.3 mg/L. Toluene concentrations exceeded the NMWQCC groundwater standard of 0.750 mg/L in groundwater samples collected from monitor wells MW-2, and MW-5 through MW-9.
- Ethylbenzene concentrations ranged from <0.00100 mg/L to 5.84 mg/L. Ethylbenzene concentrations exceeded the NMWQCC groundwater standard of 0.750 mg/L in groundwater samples collected from monitor wells MW-2, MW-5 through MW-9.
- Xylene concentrations ranged from <0.00100 mg/L to 15.0 mg/L. Xylene concentrations exceeded the NMWQCC groundwater standard of 0.620 mg/L in groundwater samples collected from monitor wells MW-2, MW-5 through MW-9.
- PAH concentrations are summarized in Tables 3 and 4 in Appendix B.
- Monitor wells MW-1 and MW-11 were not sampled due to an insufficient amount of water.
- Monitor wells MW-2, MW-5 through MW-9, and MW-11 were not sampled due to the presence of PSH.

During the December 2008 sampling event, monitor wells MW-1, MW-3, MW-4, and MW-10 were sampled. Groundwater samples collected from these wells exhibited the following:

- Benzene concentrations ranged from <0.00100 mg/L to 12.1 mg/L. Benzene concentrations exceeded the NMWQCC groundwater standard of 0.010 mg/L in the groundwater sample collected from monitor well MW-3.
- Toluene concentrations ranged from <0.00100 mg/L to 0.189 mg/L. All toluene concentrations were below the NMWQCC groundwater standard of 0.750 mg/L.
- Ethylbenzene concentrations ranged from <0.00100 mg/L to 0.207 mg/L. All ethylbenzene concentrations were below the NMWQCC groundwater standard of 0.750 mg/L.
- Xylene concentrations ranged from <0.00100 mg/L to 0.456 mg/L. All xylene concentrations were below the NMWQCC groundwater standard of 0.620 mg/L.
- Monitor wells MW-2, MW-5 through MW-9, and MW-11 were not sampled due to the presence of PSH.

The groundwater plume impacted at concentrations above the NMWQCC groundwater standards has been delineated in all directions except to the east of monitor well MW-3. The results of the laboratory analyses are summarized in Table 2 – Summary of Groundwater Analytical Results in Appendix B. Laboratory analytical data reports and chain of custody documentation are provided in Appendix C.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The following section presents a summary of the groundwater monitoring events conducted at the Kimbrough Sweet 8" site and provides recommendations for future actions.

4.1 Summary of Findings

The groundwater flow direction in the first water-bearing zone is to the east based upon the water level measurement data collected to date. The number and locations of the existing monitor well array are not adequate to detect movement of the dissolved-phase plume that might emanate east of monitor well MW-3. Down-gradient monitor well MW-3 exhibited benzene concentrations above NMWQCC groundwater standards through the four quarterly groundwater monitoring and sampling events and exhibited a xylene concentration above the NMWQCC groundwater standard during the March 2008 groundwater monitoring and sampling event.

PSH has been encountered in monitor wells MW-2, MW-5 through MW-9, and MW-11. All of these wells have skimmer pumps installed in them. The PSH plume underlying this site has been delineated by the current monitoring system. Based upon the fluid level measurements to date, the PSH plume appears to be stable. The skimmer pump network has recovered approximately 6,109 gallons (145 bbls) of PSH to date.

Monitor wells MW-2, MW-5 through MW-9 exhibited BTEX concentrations above the NMWQCC groundwater standards during the September 2008 groundwater monitoring sampling event. The dissolved-phase plume appears to be moving and/or increasing in size to the east of monitor well MW-3.

4.2 Recommendations

Based upon the results of the quarterly groundwater monitoring and PSH recovery efforts, Talon proposes the following actions:

- Gauge the monitor wells weekly to record water and PSH levels.
- Operate and maintain the existing skimmer recovery system to achieve maximum PSH recovery.
- Monitor well MW-1 will be sampled and analyzed for BTEX semi-annually and for PAH annually.
- Monitor wells MW-3, MW-4, and MW-10 will be sampled and analyzed for BTEX quarterly, unless the BTEX concentrations decline to less than laboratory reporting limits. At which time, monitor wells MW-3, and/or MW-4, and/or MW-10 will be sampled and analyzed for BTEX semi-annually.
- Monitor wells MW-2, MW-5 through MW-9, and MW-11 will be added to the quarterly sampling/analysis schedule when PSH is no longer present in each well. Pursuant to the request of the NMOCD, Plains will collect a discrete sample below the PSH in the water table from these monitor wells on an annual basis to evaluate BTEX, TPH, and PAH concentrations in the groundwater.
- Install two (2) additional monitor wells east of monitor well MW-3 to further delineate the dissolved-phase plume (see Figure 1).

APPENDIX A

Drawings

Figure 1 - Site Plan with Proposed Monitor Well Locations Map

Figure 2a - Groundwater Gradient Map - 03/13/2008

Figure 2b - Groundwater Gradient Map - 06/18/2008

Figure 2c - Groundwater Gradient Map - 09/26/2008

Figure 2d - Groundwater Gradient Map - 12/02/2008

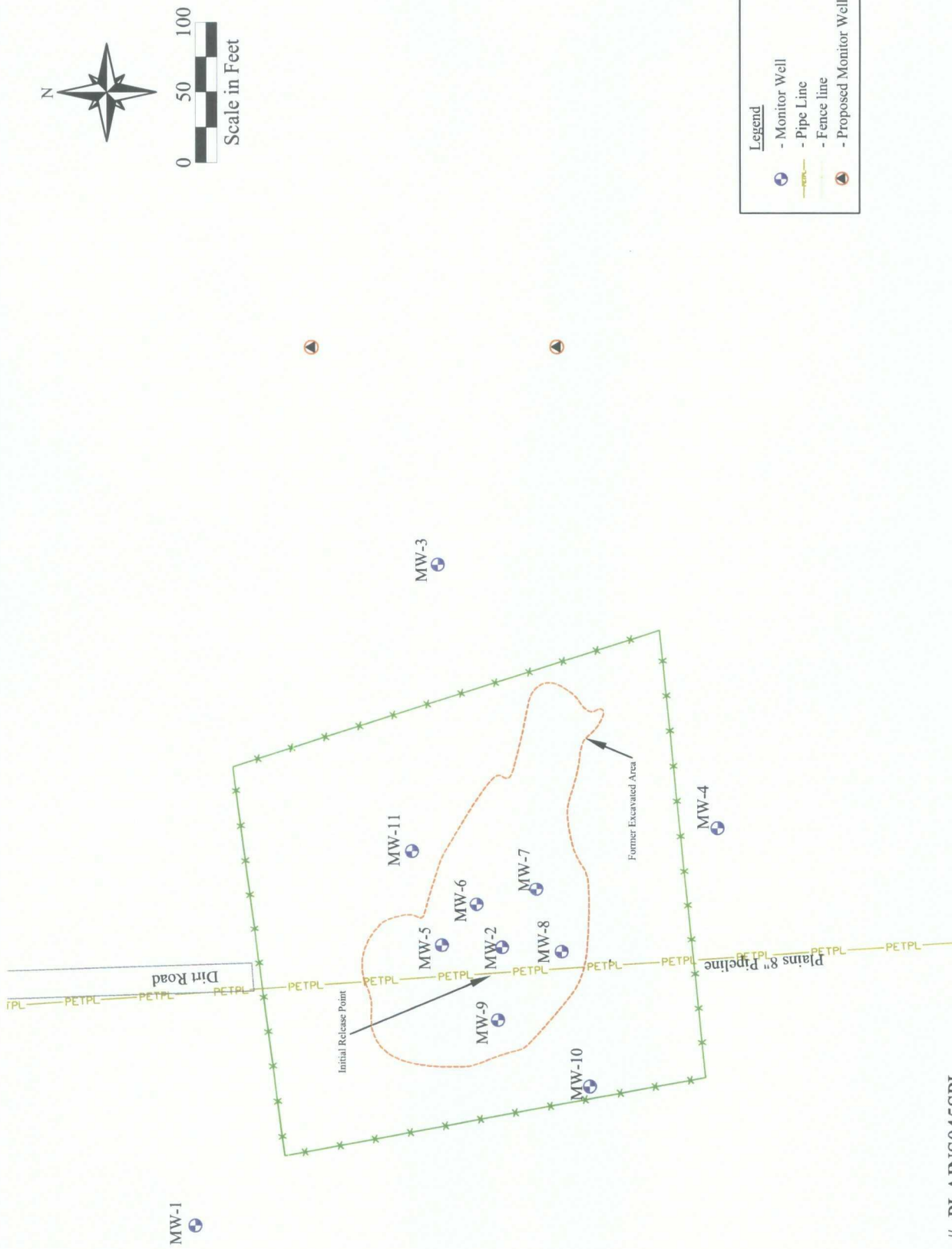
Figure 3a - PSH Thickness & Groundwater Concentration Map - 03/13/2008

Figure 3b - PSH Thickness & Groundwater Concentration Map - 06/18/2008

Figure 3c - PSH Thickness & Groundwater Concentration Map - 09/26/2008

Figure 3d - PSH Thickness & Groundwater Concentration Map - 12/02/2008

Figure 4 - Groundwater Concentration in Wells with PSH Map - 09/29/2008



Talon/LPE #: PLAINS045SPL



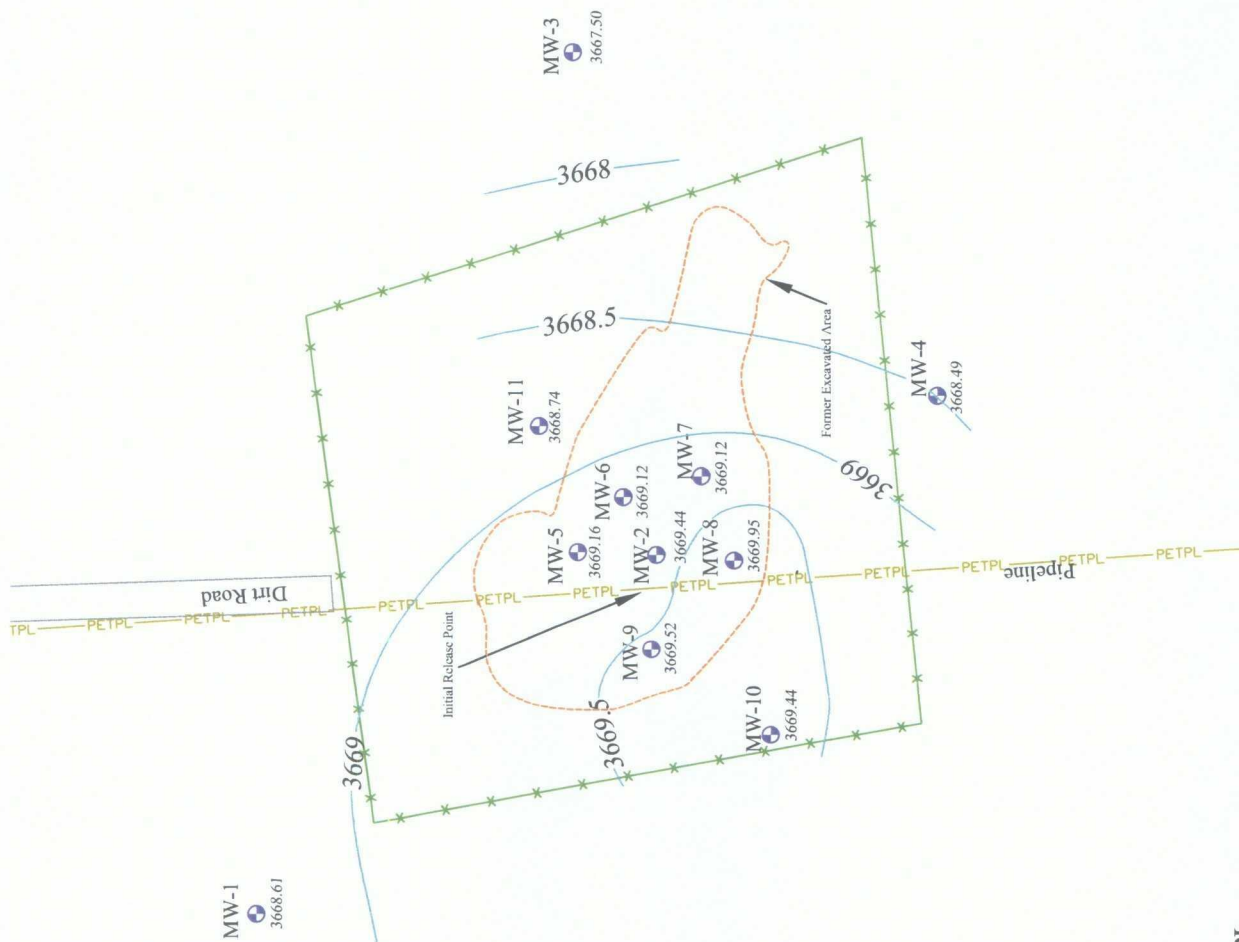
Date: 01/26/2009
 Scale: 1" = 100'
 Drawn By: SJA

Kimbrough Sweet #2000-10757
 SW 1/4 of the NE 1/4, Sec. 3, T18S, R37E
 Lea County, New Mexico
 Figure 1 - Site Plan with Proposed Well Locations



0 50 100
Scale in Feet

- Legend**
- Monitor Well
 - Pipe Line
 - Fence line
 - Groundwater Gradient Contour Line
 - Groundwater Gradient Contour Elevation



Project # PLAINS045SPL



Date: 02/25/2009

Scale: 1" = 100'

Drawn By: SJA

Kimbrough Sweet 8"

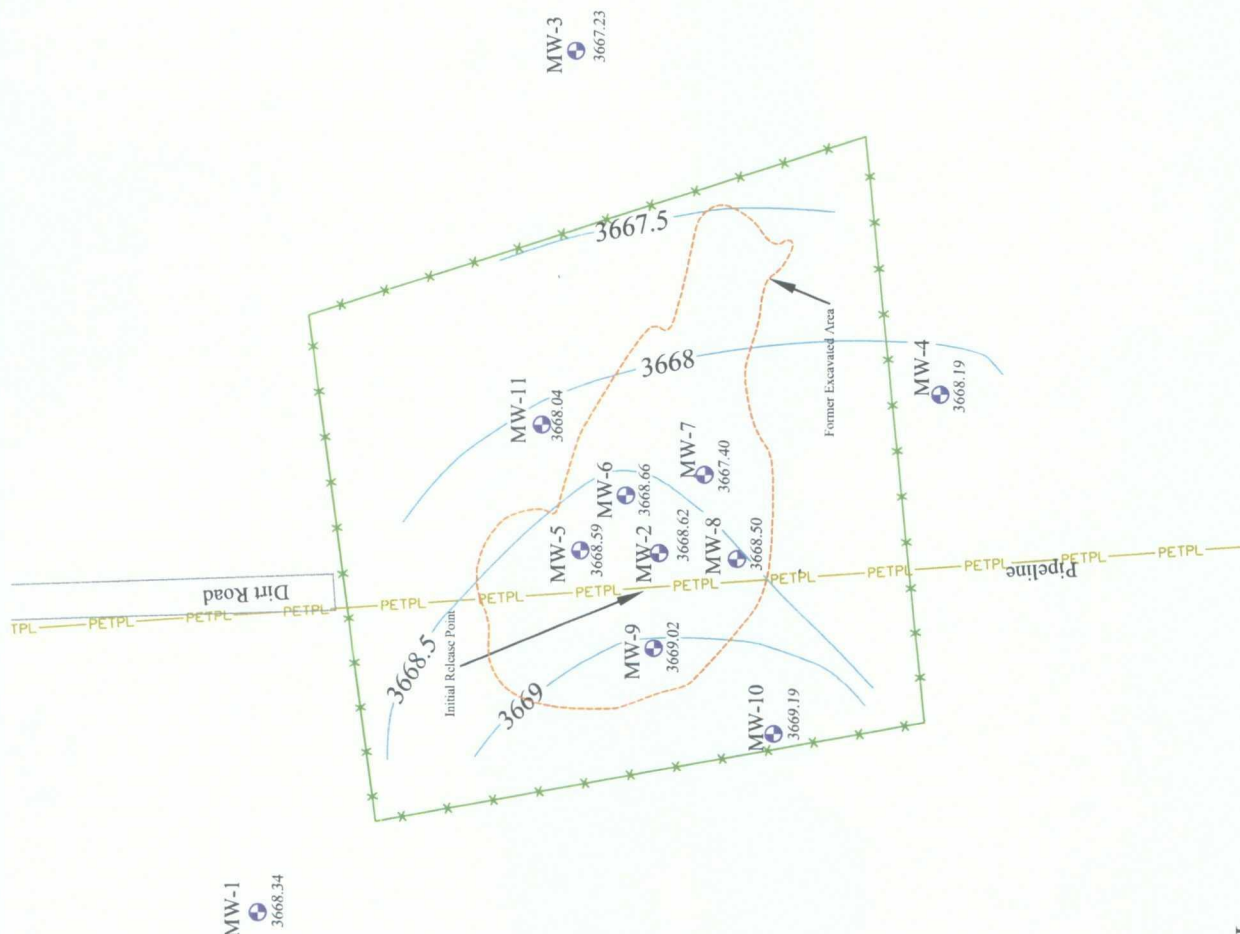
SRS # 2000-10757, NMOCD REF. # AP-0029

SW 1/4 of the NE 1/4, Sec. 3, T18S, R37E, Lea County, New Mexico

Figure 2a - Groundwater Gradient Map, - 03/13/2008



0 50 100
Scale in Feet



Project # PLAINS045SPL



Date: 02/25/2009

Scale: 1" = 100'

Drawn By: SJA

Kimbrough Sweet 8"

SRS # 2000-10757, NMOCD REF. # AP-0029

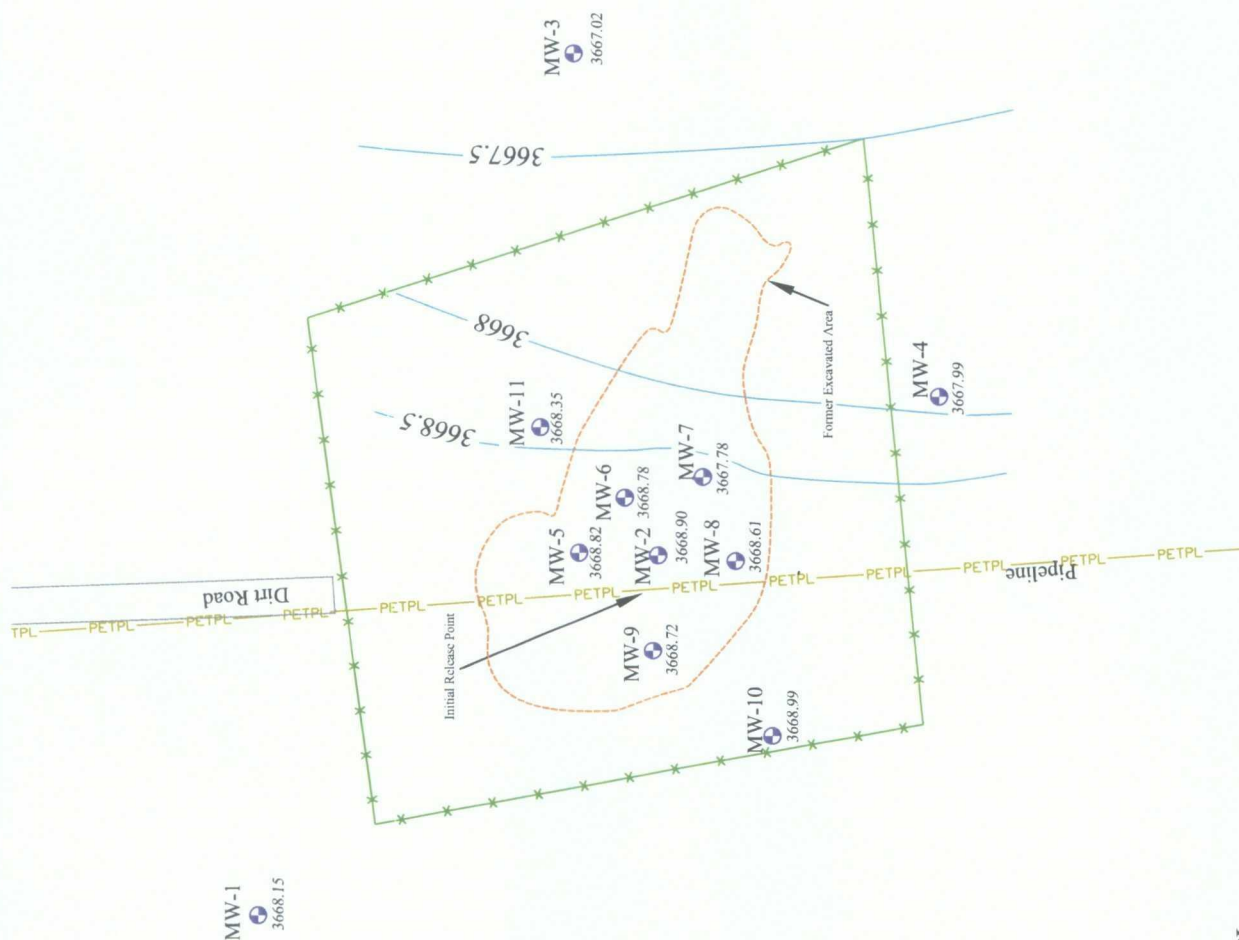
SW 1/4 of the NE 1/4, Sec. 3, T18S, R37E, Lea County, New Mexico

Figure 2b - Groundwater Gradient Map, - 06/18/2008



0 50 100
Scale in Feet

- Legend**
- Monitor Well
 - Pipe Line
 - Fence line
 - Groundwater Gradient Contour Line
 - Groundwater Gradient Contour Elevation



Project # PLAINS045SPL



Date: 02/25/2009

Scale: 1" = 100'

Drawn By: SJA

Kimbrough Sweet 8"

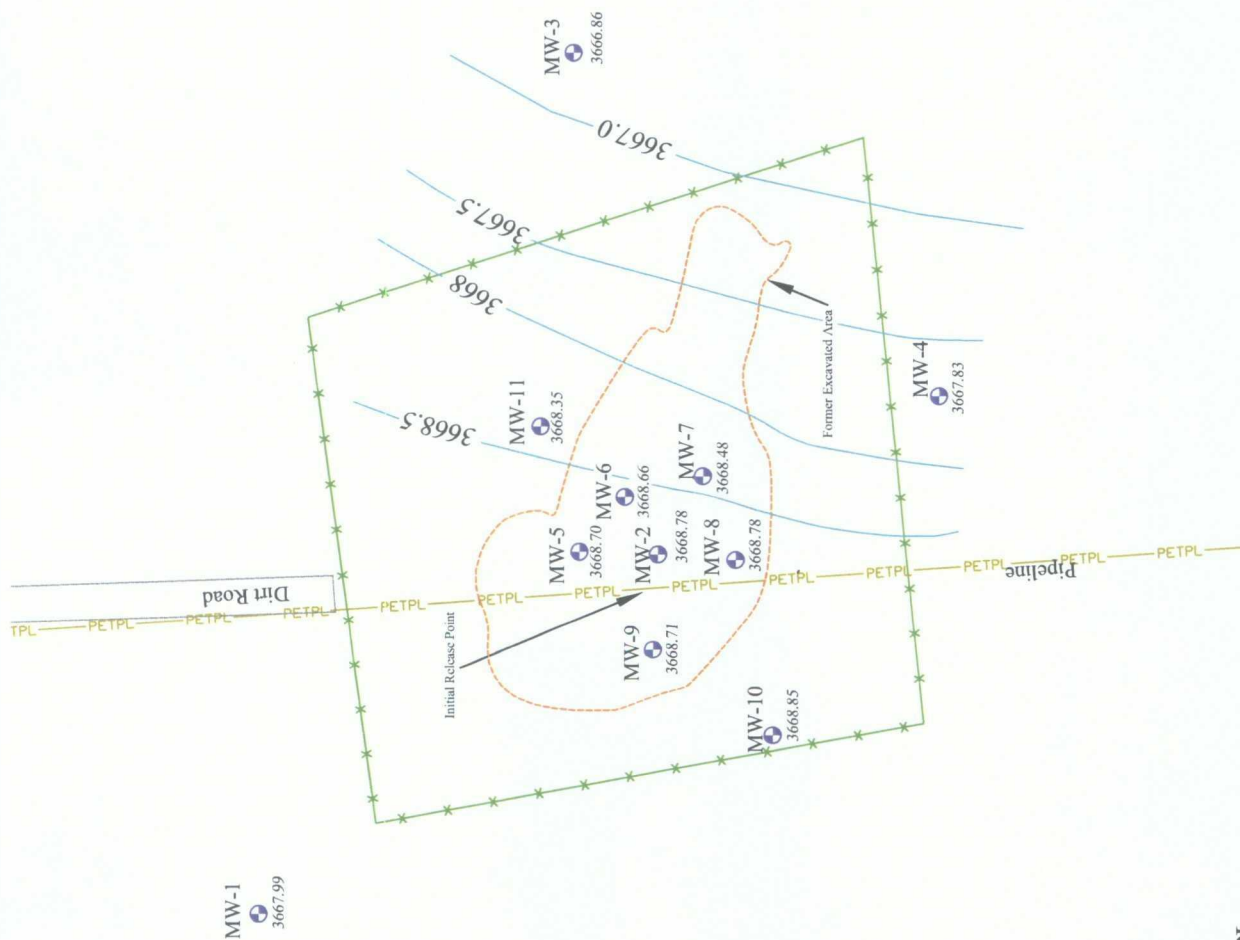
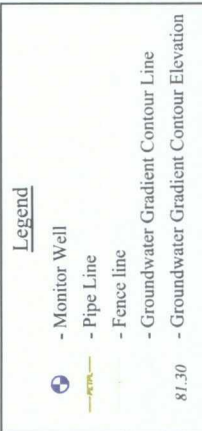
SRS # 2000-10757, NMOCD REF. # AP-0029

SW 1/4 of the NE 1/4, Sec. 3, T18S, R37E, Lea County, New Mexico

Figure 2c - Groundwater Gradient Map, - 09/26/2008



0 50 100
Scale in Feet



Project # PLAINS045SPL



Date: 02/25/2009

Scale: 1" = 100'

Drawn By: SJA

Kimbrough Sweet 8"

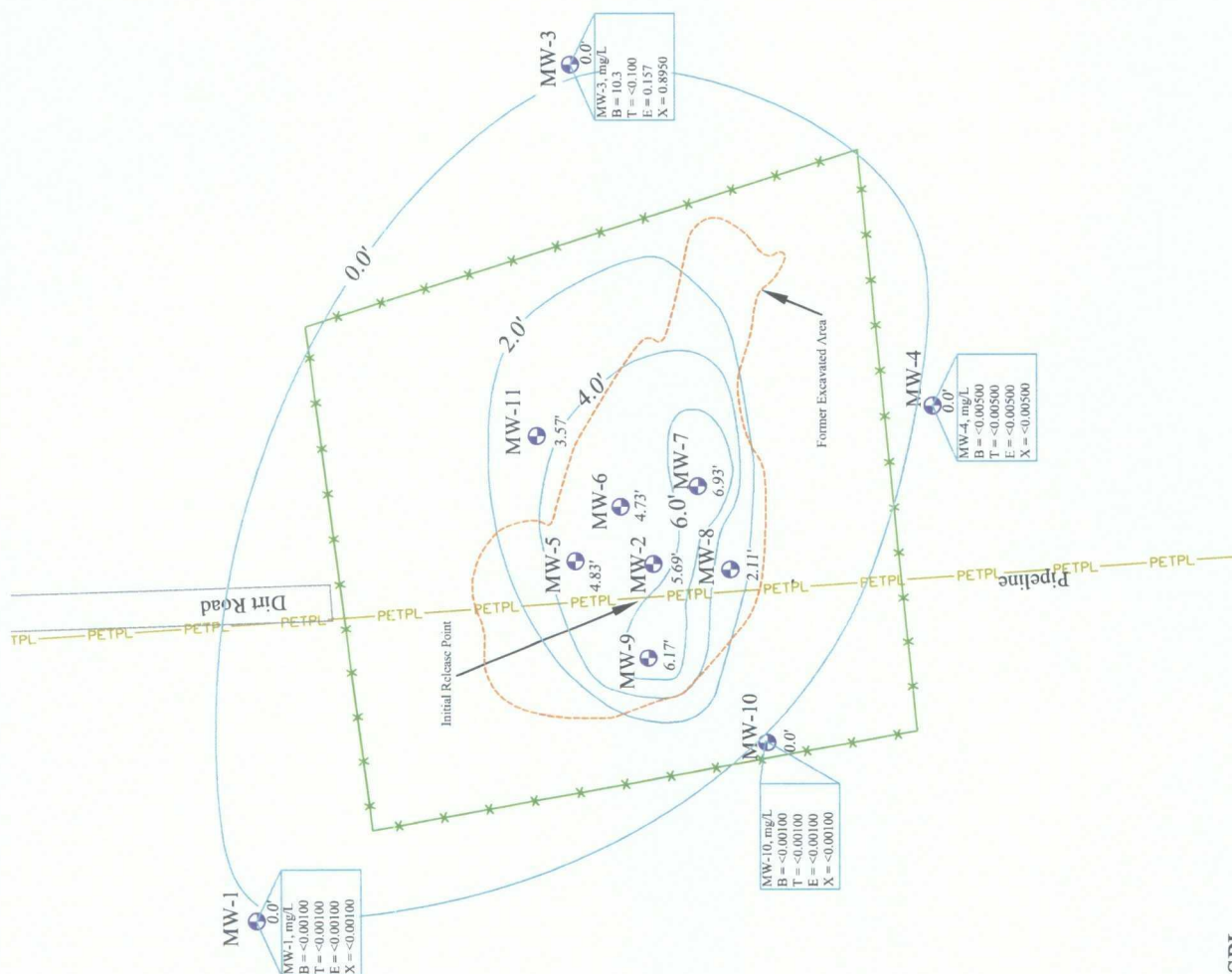
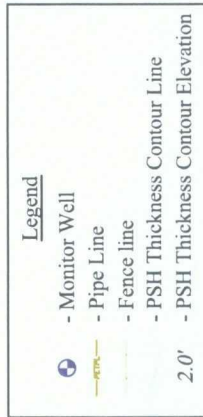
SRS # 2000-10757, NMOCD REF. # AP-0029

SW 1/4 of the NE 1/4, Sec. 3, T18S, R37E, Lea County, New Mexico

Figure 2d - Groundwater Gradient Map, - 12/02/2008



0 50 100
Scale in Feet



Project # PLAINS045SPL



Date: 03/25/2009

Scale: 1" = 100'

Drawn By: SJA

Kimbrough Sweet 8"

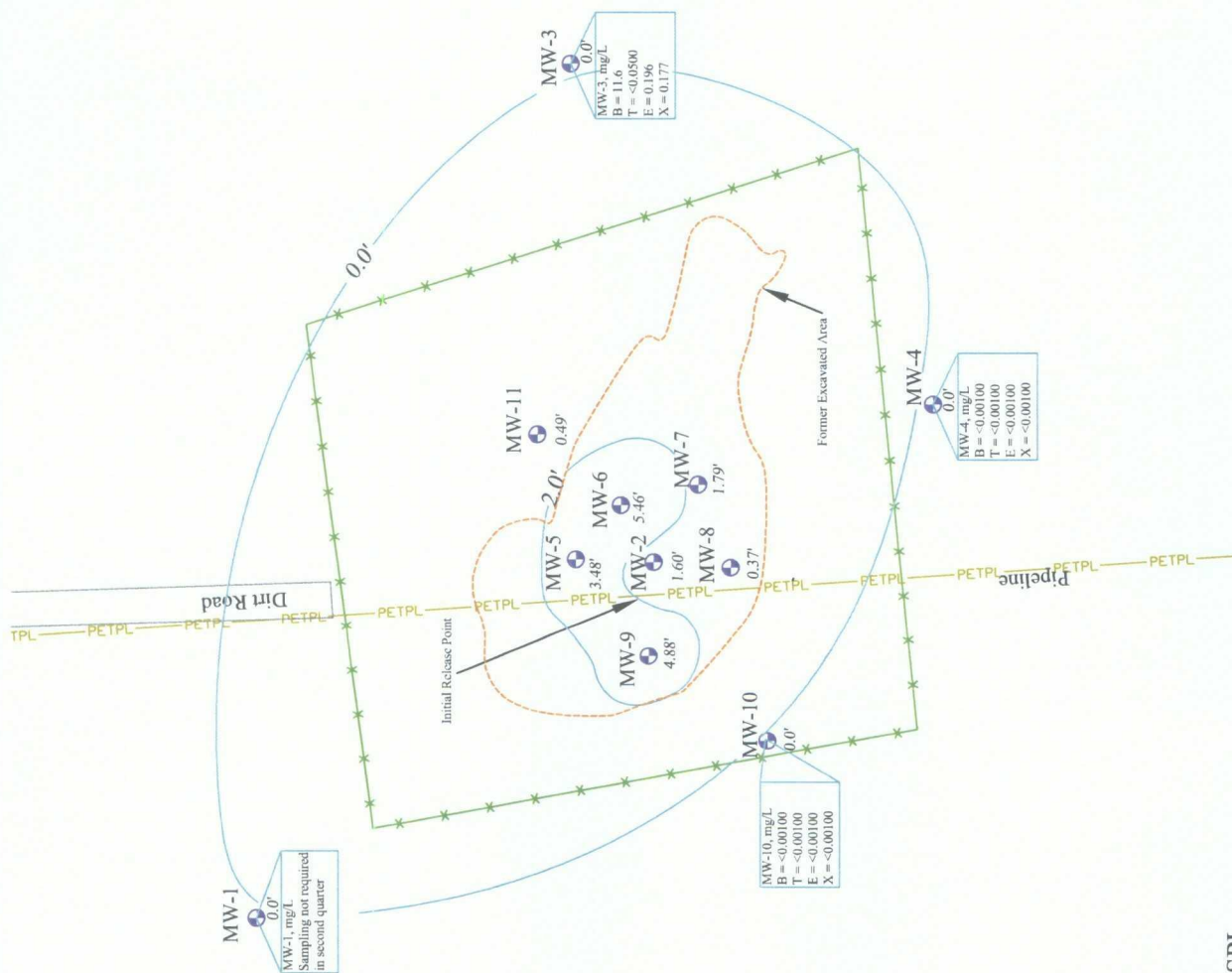
SRS # 2000-10757, NMOCD REF. # AP-0029

SW 1/4 of the NE 1/4, Sec. 3, T18S, R37E, Lea County, New Mexico

Figure 3a - PSH Thickness & Groundwater Concentration Map, - 03/13/2008



0 50 100
Scale in Feet



Project # PLAINS045SPL



Date: 03/25/2009

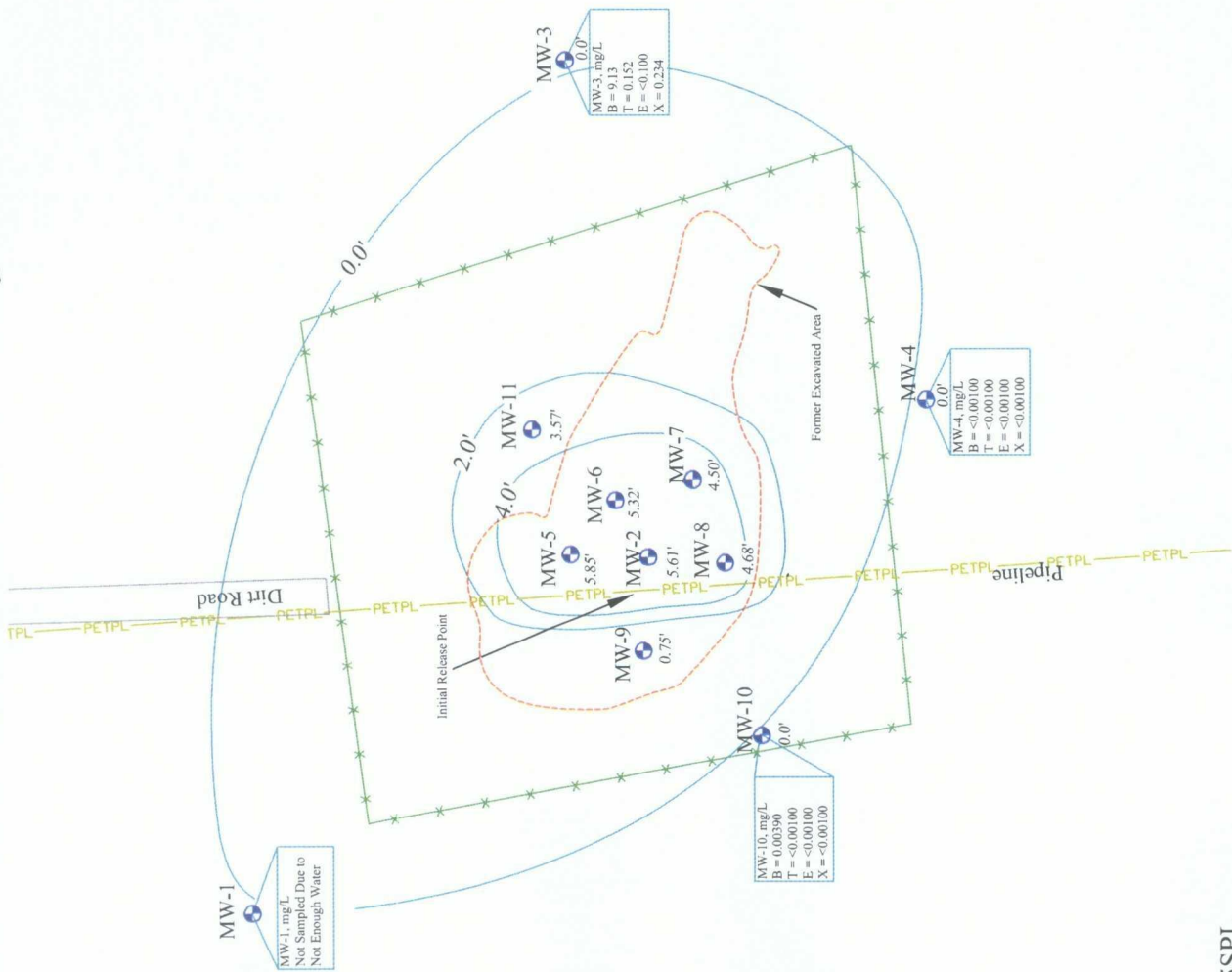
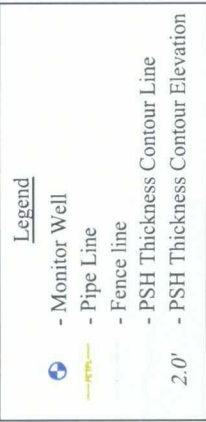
Scale: 1" = 100'

Drawn By: SJA

Kimbrough Sweet 8"

SRS # 2000-10757, NMOCD REF. # AP-0029

SW 1/4 of the NE 1/4, Sec. 3, T18S, R37E, Lea County, New Mexico
Figure 3b - PSH Thickness & Groundwater Concentration Map, - 06/18/2008



Kimbrough Sweet 8"
 SRS # 2000-10757, NMOCD REF. # AP-0029
 SW 1/4 of the NE 1/4, Sec. 3, T18S, R37E, Lea County, New Mexico
 Figure 3c - PSH Thickness & Groundwater Concentration Map, - 09/26/2008

Date: 03/25/2009
 Scale: 1" = 100'
 Drawn By: SJA

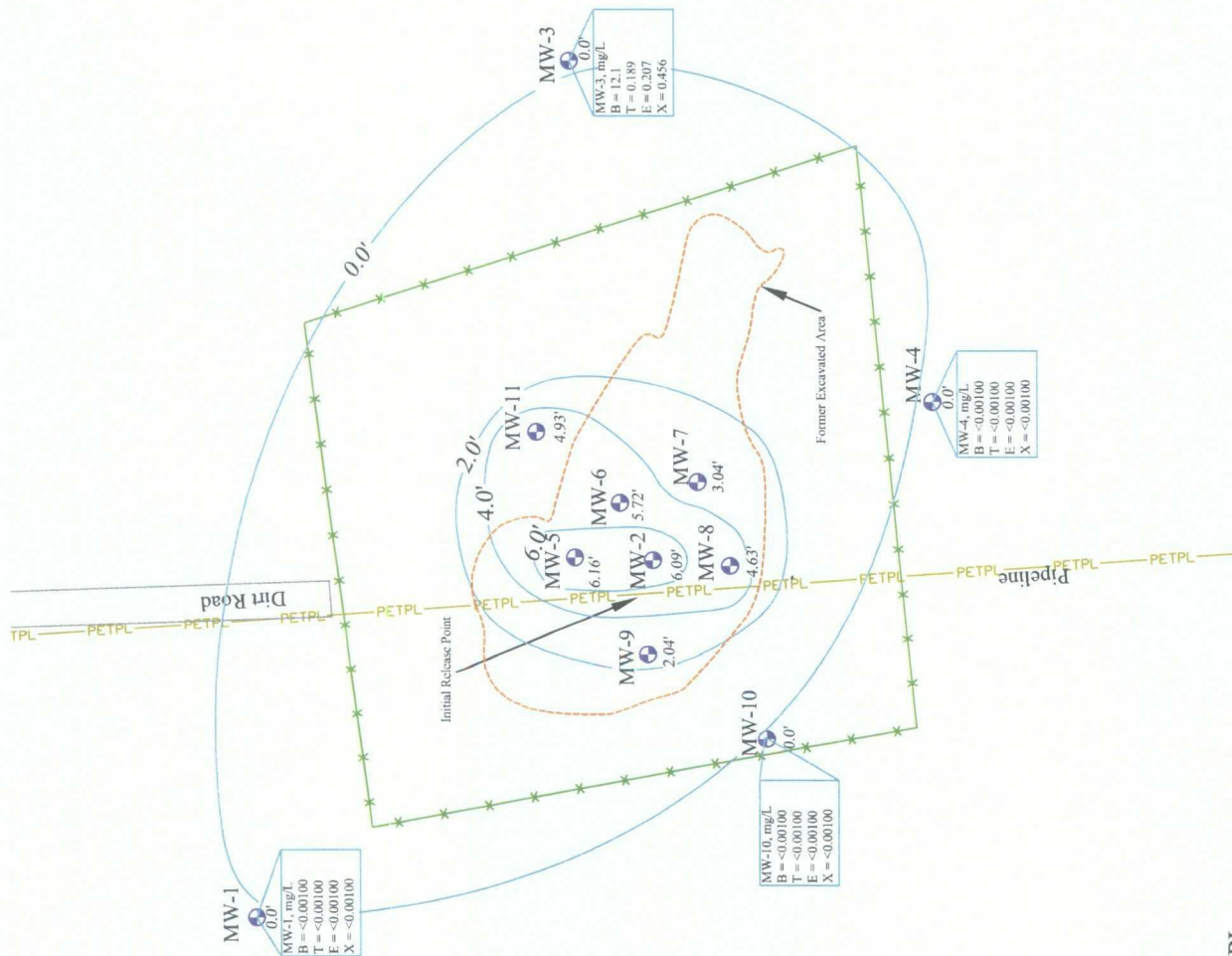
TALON LPE

Project # PLAINS045SPL



0 50 100
Scale in Feet

- Legend**
- Monitor Well
 - Pipe Line
 - Fence line
 - PSH Thickness Contour Line
 - PSH Thickness Contour Elevation



Project # PLAINS045SPL



Date: 03/25/2009

Scale: 1" = 100'

Drawn By: SJA

Kimbrough Sweet 8"

SRS # 2000-10757, NMOCD REF. # AP-0029

SW 1/4 of the NE 1/4, Sec. 3, T18S, R37E, Lea County, New Mexico
Figure 3d - PSH Thickness & Groundwater Concentration Map, - 12/02/2008

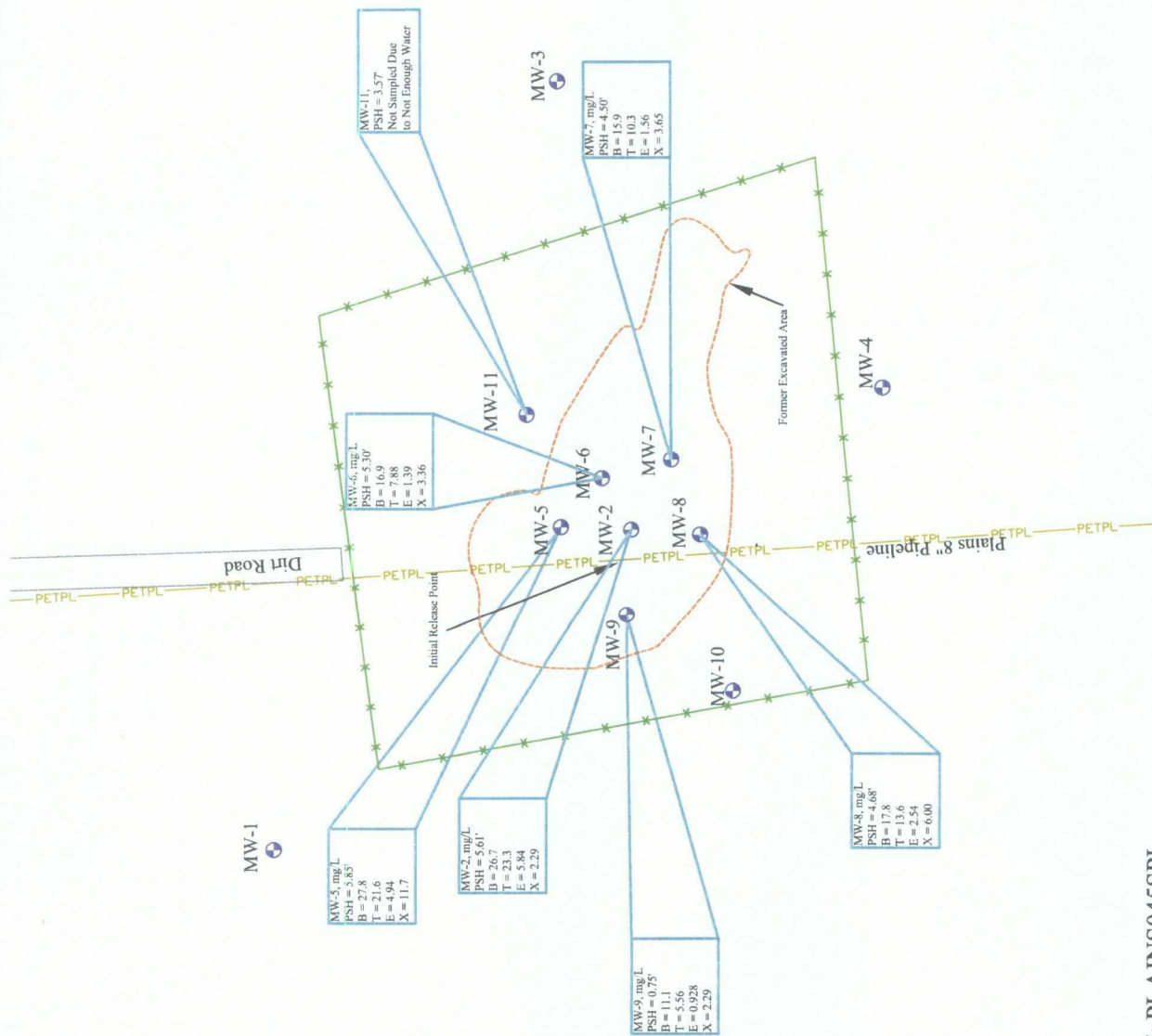


0 50 100
Scale in Feet

Legend

- Monitor Well
- Pipe Line
- Fence line
- Benzene
- Toluene
- Ethylbenzene
- Xylene

B
T
E
X



Talon/LPE #: PLAINS045SPL



Date: 10/08/2008

Scale: 1" = 100'

Drawn By: SJA

Kimbrough Sweet 8" (PLAINS045SPL)

SRS # 2000-10757, NMOCD REF. # AP-0029

SW 1/4 of the NE 1/4, Sec. 3, T18S, R37E, Lea County, New Mexico

Figure 4 - Groundwater Concentration in Wells with PSH Map - 09/29/2008

APPENDIX B

Tables

Table 1 - Summary of Groundwater Elevations and Phase Separated Thickness

Table 2 - Summary of Groundwater Analytical Results

Table 3 - Summary of Groundwater Poly-Aromatic Hydrocarbon (PAH) Analytical Results

Table 4 - Summary of PSH Monitor Wells Groundwater Analytical Results



Table 1
SUMMARY OF GROUNDWATER ELEVATIONS AND
PHASE SEPARATED HYDROCARBON THICKNESS
PLAINS MARKETING, L.P. SRS #2000-10757
KIMBROUGH SWEET 8"
NMOCD REF. # AP-0029
LEQ COUNTY, NM
TALON/LPE PROJECT NUMBER: PLAINS045SPL

Monitor Well#	Date Gauged	Relative Top of Casing Elevation	Depth to PSH	Depth to Water	PSH Thickness	Corrected Relative Groundwater Elevation
		feet amsl*	feet btoc*	feet btoc	feet	feet amsl
MW-1	01/24/02	Well Installed 24 January 2002				
MW-1	10/04/02	3,723.13		51.26		3,671.87
MW-1	12/11/02			51.43		3,671.70
MW-1	02/20/03			51.62		3,671.51
MW-1	02/11/04			52.45		3,670.68
MW-1	08/16/04			53.15		3,669.98
MW-1	03/22/05			52.70		3,670.43
MW-1	03/31/05			52.65		3,670.48
MW-1	04/22/05			52.69		3,670.44
MW-1	05/12/05			52.73		3,670.40
MW-1	05/25/05			52.73		3,670.40
MW-1	06/28/05			52.81		3,670.32
MW-1	07/25/05			52.91		3,670.22
MW-1	08/22/05			52.98		3,670.15
MW-1	11/14/05			53.18		3,669.95
MW-1	11/30/05			53.47		3,669.66
MW-1	02/06/06			53.67		3,669.46
MW-1	03/01/06			53.21		3,669.92
MW-1	05/02/06			52.34		3,670.79
MW-1	05/25/06			51.45		3,671.68
MW-1	08/10/06			53.45		3,669.68
MW-1	11/29/06			53.60		3,669.53
MW-1	12/06/06			53.63		3,669.50
MW-1	01/10/07			53.71		3,669.42
MW-1	02/08/07			53.58		3,669.55
MW-1	03/01/07			53.91		3,669.22
MW-1	03/06/07			53.62		3,669.51
MW-1	03/14/07			53.85		3,669.28
MW-1	04/02/07			53.67		3,669.46
MW-1	04/09/07			53.89		3,669.24
MW-1	04/16/07			53.92		3,669.21
MW-1	05/01/07			53.93		3,669.20
MW-1	05/21/07			53.99		3,669.14
MW-1	06/13/07			53.90		3,669.23
MW-1	06/26/07			53.92		3,669.21
MW-1	07/18/07			54.02		3,669.11
MW-1	09/13/07			54.13		3,669.00
MW-1	10/24/07			54.19		3,668.94
MW-1	12/03/07			54.32		3,668.81
MW-1	01/29/08			54.51		3,668.62
MW-1	03/13/08			54.52		3,668.61
MW-1	05/14/08			54.64		3,668.49
MW-1	06/03/08			54.67		3,668.46
MW-1	06/18/08			54.79		3,668.34
MW-1	07/01/08			54.73		3,668.40
MW-1	07/02/08			54.82		3,668.31
MW-1	08/28/08			54.89		3,668.24
MW-1	09/26/08			54.98		3,668.15
MW-1	10/27/08			55.06		3,668.07
MW-1	12/02/08			55.14		3,667.99



Table 1
SUMMARY OF GROUNDWATER ELEVATIONS AND
PHASE SEPARATED HYDROCARBON THICKNESS
PLAINS MARKETING, L.P. SRS #2000-10757
KIMBROUGH SWEET 8"
NMOCD REF. # AP-0029
LEQ COUNTY, NM
TALON/LPE PROJECT NUMBER: PLAINS045SPL

Monitor Well#	Date Gauged	Relative Top of Casing Elevation	Depth to PSH	Depth to Water	PSH Thickness	Corrected Relative Groundwater Elevation
		feet amsl*	feet btoc*	feet btoc	feet	feet amsl
MW-2	01/08/02	Well Installed 8 January 2002				
MW-2	01/09/02	3,722.90	49.20	53.60	4.40	3,673.26
MW-2	10/04/02		49.21	56.33	7.12	3,672.98
MW-2	11/11/02		49.25	56.30	7.05	3,672.95
MW-2	12/11/02		49.25	56.34	7.09	3,672.94
MW-2	02/20/03		49.57	56.30	6.73	3,672.66
MW-2	03/26/03		49.66	58.09	8.43	3,672.40
MW-2	04/08/03		49.68	58.11	8.43	3,672.38
MW-2	04/23/03		50.00	56.90	6.90	3,672.21
MW-2	04/24/03		49.75	58.10	8.35	3,672.32
MW-2	04/25/03		49.78	57.95	8.17	3,672.30
MW-2	05/03/03		49.77	58.10	8.33	3,672.30
MW-2	05/06/03		49.75	58.08	8.33	3,672.32
MW-2	06/09/03		49.83	58.13	8.30	3,672.24
MW-2	06/30/03		49.95	58.04	8.09	3,672.14
MW-2	04/12/04		50.58	58.91	8.33	3,671.49
MW-2	06/04/04		50.85	57.62	6.77	3,671.37
MW-2	06/21/04		50.74	59.01	8.27	3,671.33
MW-2	10/21/04		50.59	58.20	7.61	3,671.55
MW-2	03/22/05		51.02	55.90	4.88	3,671.39
MW-2	03/31/05		51.02	55.90	4.88	3,671.39
MW-2	04/22/05		50.98	56.50	5.52	3,671.37
MW-2	05/25/05		51.23	55.61	4.38	3,671.23
MW-2	07/25/05		51.11	57.74	6.63	3,671.13
MW-2	11/30/05		51.50	58.85	7.35	3,670.67
MW-2	02/06/06		51.64	56.19	4.55	3,670.81
MW-2	03/01/06		51.67	59.20	7.53	3,670.48
MW-2	05/02/06		51.91	58.86	6.95	3,670.30
MW-2	05/25/06		51.19	58.62	7.43	3,670.97
MW-2	08/10/06		51.45	59.00	7.55	3,670.70
MW-2	11/29/06		51.63	59.18	7.55	3,670.52
MW-2	12/06/06		51.67	59.11	7.44	3,670.49
MW-2	01/10/07		51.78	58.03	6.25	3,670.50
MW-2	03/01/07		52.41	60.05	7.64	3,669.73
MW-2	03/06/07		52.92	61.25	8.33	3,669.15
MW-2	03/14/07		52.14	60.43	8.29	3,669.93
MW-2	04/02/07		51.93	59.22	7.29	3,670.24
MW-2	04/09/07		52.95	58.44	5.49	3,669.40
MW-2	04/16/07		51.92	59.09	7.17	3,670.26
MW-2	05/01/07		50.58	60.17	9.59	3,671.36
MW-2	05/21/07		57.42	59.03	1.61	3,665.32
MW-2	06/26/07		52.68	57.24	4.56	3,669.76
MW-2	06/28/07		52.64	56.53	3.89	3,669.87
MW-2	07/18/07		52.55	57.79	5.24	3,669.83
MW-2	08/21/07		52.50	57.65	5.15	3,669.89
MW-2	08/30/07		52.51	57.50	4.99	3,669.89
MW-2	09/13/07		52.40	58.20	5.80	3,669.92
MW-2	10/09/07		53.11	57.17	4.06	3,669.38
MW-2	10/17/07		52.81	56.67	3.86	3,669.70
MW-2	10/24/07		52.76	57.88	5.12	3,669.63
MW-2	11/02/07		53.01	56.52	3.51	3,669.54
MW-2	11/12/07		53.02	56.51	3.49	3,669.53
MW-2	12/03/07		52.74	57.37	4.63	3,669.70



Table 1
SUMMARY OF GROUNDWATER ELEVATIONS AND
PHASE SEPARATED HYDROCARBON THICKNESS
PLAINS MARKETING, L.P. SRS #2000-10757
KIMBROUGH SWEET 8"
NMOCDF. # AP-0029
LEQ COUNTY, NM
TALON/LPE PROJECT NUMBER: PLAINS045SPL

Monitor Well#	Date Gauged	Relative Top of Casing Elevation	Depth to PSH	Depth to Water	PSH Thickness	Corrected Relative Groundwater Elevation
		feet amsl*	feet btoc*	feet btoc	feet	feet amsl
MW-2	01/03/08		52.80	59.21	6.41	3,669.46
MW-2	01/07/08		53.05	59.11	6.06	3,669.24
MW-2	01/22/08		52.69	59.19	6.50	3,669.56
MW-2	01/29/08		53.08	56.87	3.79	3,669.44
MW-2	02/06/08		53.02	58.09	5.07	3,669.37
MW-2	02/12/08		53.00	58.07	5.07	3,669.39
MW-2	03/13/08		52.89	58.58	5.69	3,669.44
MW-2	03/19/08		52.95	59.12	6.17	3,669.33
MW-2	03/27/08		53.82	55.64	1.82	3,668.90
MW-2	04/01/08		53.31	58.17	4.86	3,669.10
MW-2	04/11/08		53.53	58.09	4.56	3,668.91
MW-2	04/16/08		54.84	55.59	0.75	3,667.99
MW-2	04/30/08		52.95	59.29	6.34	3,669.32
MW-2	05/14/08		53.51	57.82	4.31	3,668.96
MW-2	06/03/08		54.36	54.98	0.62	3,668.48
MW-2	06/10/08		54.49	55.20	0.71	3,668.34
MW-2	06/18/08		54.12	55.72	1.60	3,668.62
MW-2	07/01/08		54.31	56.91	2.60	3,668.33
MW-2	07/02/08		53.92	55.16	1.24	3,668.86
MW-2	07/24/08		54.87	55.18	0.31	3,668.00
MW-2	08/06/08		54.32	57.93	3.61	3,668.22
MW-2	08/28/08		53.57	57.82	4.25	3,668.91
MW-2	09/26/08		53.44	59.05	5.61	3,668.90
MW-2	10/27/08		53.56	59.04	5.48	3,668.79
MW-2	12/02/08		53.51	59.60	6.09	3,668.78
MW-3	01/24/02		Well Installed 24 January 2002			
MW-3	10/04/02	3,720.60		49.77		3,670.83
MW-3	12/11/02			49.93		3,670.67
MW-3	02/20/03			50.13		3,670.47
MW-3	02/11/04			50.98		3,669.62
MW-3	08/16/04			51.64		3,668.96
MW-3	03/22/05			51.14		3,669.46
MW-3	03/31/05			51.16		3,669.44
MW-3	04/22/05			51.18		3,669.42
MW-3	05/12/05			51.26		3,669.34
MW-3	05/25/05			51.26		3,669.34
MW-3	06/28/05			51.38		3,669.22
MW-3	07/25/05			51.48		3,669.12
MW-3	08/22/05			51.52		3,669.08
MW-3	11/14/05			51.63		3,668.97
MW-3	11/30/05			51.92		3,668.68
MW-3	02/06/06			52.15		3,668.45
MW-3	03/01/06			51.77		3,668.83
MW-3	05/02/06			53.90		3,666.70
MW-3	05/25/06			53.48		3,667.12
MW-3	08/10/06			51.45		3,669.15
MW-3	11/29/06			51.67		3,668.93
MW-3	12/06/06			51.70		3,668.90
MW-3	01/10/07			51.80		3,668.80
MW-3	02/08/07			52.14		3,668.46
MW-3	03/01/07			52.40		3,668.20



Table 1
SUMMARY OF GROUNDWATER ELEVATIONS AND
PHASE SEPARATED HYDROCARBON THICKNESS
PLAINS MARKETING, L.P. SRS #2000-10757
KIMBROUGH SWEET 8"
NMOCDF REF. # AP-0029
LEQ COUNTY, NM
TALON/LPE PROJECT NUMBER: PLAINS045SPL

Monitor Well#	Date Gauged	Relative Top of Casing Elevation	Depth to PSH	Depth to Water	PSH Thickness	Corrected Relative Groundwater Elevation
		feet amsl*	feet btoc*	feet btoc	feet	feet amsl
MW-3	03/06/07			51.96		3,668.64
MW-3	03/14/07			52.43		3,668.17
MW-3	04/02/07			52.22		3,668.38
MW-3	04/09/07			52.45		3,668.15
MW-3	04/16/07			52.48		3,668.12
MW-3	05/01/07			52.61		3,667.99
MW-3	05/21/07			52.55		3,668.05
MW-3	06/13/07			52.46		3,668.14
MW-3	06/26/07			52.50		3,668.10
MW-3	07/18/07			52.59		3,668.01
MW-3	09/13/07			52.69		3,667.91
MW-3	10/24/07			52.80		3,667.80
MW-3	12/03/07			52.89		3,667.71
MW-3	01/29/08			53.03		3,667.57
MW-3	03/13/08			53.10		3,667.50
MW-3	05/14/08			53.23		3,667.37
MW-3	06/03/08			53.27		3,667.33
MW-3	06/18/08			53.37		3,667.23
MW-3	07/01/08			53.33		3,667.27
MW-3	07/02/08			53.41		3,667.19
MW-3	08/28/08			53.47		3,667.13
MW-3	09/26/08			53.58		3,667.02
MW-3	10/27/08			53.62		3,666.98
MW-3	12/02/08			53.74		3,666.86
MW-4	01/24/02		Well Installed 24 January 2002			
MW-4	10/04/02	3,721.03		49.35		3,671.68
MW-4	12/11/02			49.50		3,671.53
MW-4	02/20/03			49.69		3,671.34
MW-4	02/11/04			50.51		3,670.52
MW-4	08/16/04			50.91		3,670.12
MW-4	03/22/05			50.67		3,670.36
MW-4	03/31/05			50.70		3,670.33
MW-4	04/22/05			50.71		3,670.32
MW-4	05/12/05			50.80		3,670.23
MW-4	05/25/05			50.80		3,670.23
MW-4	06/28/05			50.92		3,670.11
MW-4	07/25/05			51.02		3,670.01
MW-4	08/22/05			51.06		3,669.97
MW-4	11/14/05			51.15		3,669.88
MW-4	11/30/05			51.43		3,669.60
MW-4	02/06/06			51.68		3,669.35
MW-4	03/01/06			51.21		3,669.82
MW-4	05/02/06			51.88		3,669.15
MW-4	05/25/06			50.17		3,670.86
MW-4	08/10/06			51.96		3,669.07
MW-4	11/29/06			52.16		3,668.87
MW-4	12/06/06			52.19		3,668.84
MW-4	01/10/07			52.27		3,668.76
MW-4	02/08/07			51.65		3,669.38
MW-4	03/01/07			51.97		3,669.06
MW-4	03/06/07			52.45		3,668.58



Table 1
SUMMARY OF GROUNDWATER ELEVATIONS AND
PHASE SEPARATED HYDROCARBON THICKNESS
PLAINS MARKETING, L.P. SRS #2000-10757
KIMBROUGH SWEET 8"
NMOCD REF. # AP-0029
LEQ COUNTY, NM
TALON/LPE PROJECT NUMBER: PLAINS045SPL

Monitor Well#	Date Gauged	Relative Top of Casing Elevation	Depth to PSH	Depth to Water	PSH Thickness	Corrected Relative Groundwater Elevation
		feet amsl*	feet btoc*	feet btoc	feet	feet amsl
MW-4	03/14/07			51.93		3,669.10
MW-4	04/02/07			51.73		3,669.30
MW-4	04/09/07			51.95		3,669.08
MW-4	04/16/07			51.46		3,669.57
MW-4	05/01/07			52.04		3,668.99
MW-4	05/21/07			52.05		3,668.98
MW-4	06/13/07			51.96		3,669.07
MW-4	06/26/07			51.96		3,669.07
MW-4	07/18/07			52.09		3,668.94
MW-4	09/13/07			52.20		3,668.83
MW-4	10/24/07			52.25		3,668.78
MW-4	12/03/07			52.36		3,668.67
MW-4	01/29/08			52.44		3,668.59
MW-4	03/13/08			52.54		3,668.49
MW-4	05/14/08			52.70		3,668.33
MW-4	06/03/08			52.75		3,668.28
MW-4	06/18/08			52.84		3,668.19
MW-4	07/01/08			52.81		3,668.22
MW-4	07/02/08			52.89		3,668.14
MW-4	08/28/08			52.93		3,668.10
MW-4	09/26/08			53.04		3,667.99
MW-4	10/27/08			53.14		3,667.89
MW-4	12/02/08			53.20		3,667.83
MW-5	07/28/04		Well Installed 28 July 2004			
MW-5	08/16/04	3,723.58	51.65	59.86	8.21	3,671.11
MW-5	03/22/05		51.46	59.00	7.54	3,671.37
MW-5	03/31/05		51.46	59.00	7.54	3,671.37
MW-5	04/22/05		52.62	55.95	3.33	3,670.63
MW-5	05/25/05		52.18	56.23	4.05	3,671.00
MW-5	07/25/05		52.06	57.97	5.91	3,670.93
MW-5	11/30/05		52.17	60.20	8.03	3,670.61
MW-5	02/06/06		52.44	60.51	8.07	3,670.33
MW-5	03/01/06		52.45	60.53	8.08	3,670.32
MW-5	05/02/06		52.68	59.94	7.26	3,670.17
MW-5	05/25/06		52.30	59.89	7.59	3,670.52
MW-5	08/10/06		52.33	60.28	7.95	3,670.46
MW-5	11/29/06		52.45	60.24	7.79	3,670.35
MW-5	12/06/06		52.44	60.19	7.75	3,670.37
MW-5	01/10/07		52.48	58.87	6.39	3,670.46
MW-5	03/01/07		52.75	60.48	7.73	3,670.06
MW-5	03/06/07		52.70	60.48	7.78	3,670.10
MW-5	03/14/07		51.85	61.25	9.40	3,670.79
MW-5	04/02/07		52.70	60.55	7.85	3,670.10
MW-5	04/09/07		52.74	60.50	7.76	3,670.06
MW-5	04/16/07		52.74	60.55	7.81	3,670.06
MW-5	05/01/07		52.81	60.49	7.68	3,670.00
MW-5	05/21/07		52.85	60.57	7.72	3,669.96
MW-5	06/26/07		53.90	55.68	1.78	3,669.50
MW-5	06/28/07		54.07	54.71	0.64	3,669.45
MW-5	07/18/07		53.80	56.97	3.17	3,669.46
MW-5	08/21/07		54.19	54.47	0.28	3,669.36



Table 1
SUMMARY OF GROUNDWATER ELEVATIONS AND
PHASE SEPARATED HYDROCARBON THICKNESS
PLAINS MARKETING, L.P. SRS #2000-10757
KIMBROUGH SWEET 8"
NMOC D REF. # AP-0029
LEQ COUNTY, NM
TALON/LPE PROJECT NUMBER: PLAINS045SPL

Monitor Well#	Date Gauged	Relative Top of Casing Elevation	Depth to PSH	Depth to Water	PSH Thickness	Corrected Relative Groundwater Elevation
		feet amsl*	feet btoc*	feet btoc	feet	feet amsl
MW-5	08/30/07		52.90	60.12	7.22	3,669.96
MW-5	09/13/07		53.11	58.74	5.63	3,669.91
MW-5	10/09/07		54.39	54.79	0.40	3,669.15
MW-5	10/17/07		53.10	60.32	7.22	3,669.76
MW-5	10/24/07		54.10	55.55	1.45	3,669.34
MW-5	11/02/07		54.38	54.71	0.33	3,669.17
MW-5	11/12/07		53.16	60.33	7.17	3,669.70
MW-5	12/03/07		53.65	58.43	4.78	3,669.45
MW-5	01/03/08		54.64	55.57	0.93	3,668.85
MW-5	01/07/08		54.43	55.56	1.13	3,669.04
MW-5	01/22/08		54.87	58.53	3.66	3,668.34
MW-5	01/29/08		53.89	58.47	4.58	3,669.23
MW-5	02/06/08		53.87	58.69	4.82	3,669.23
MW-5	02/12/08		53.89	58.70	4.81	3,669.21
MW-5	03/13/08		53.94	58.77	4.83	3,669.16
MW-5	03/19/08		53.78	59.98	6.20	3,669.18
MW-5	03/27/08		54.44	57.16	2.72	3,668.87
MW-5	04/01/08		54.11	59.06	4.95	3,668.98
MW-5	04/11/08		54.37	58.07	3.70	3,668.84
MW-5	04/16/08		54.85	55.80	0.95	3,668.64
MW-5	04/30/08		54.37	58.16	3.79	3,668.83
MW-5	05/12/08		54.47	57.89	3.42	3,668.77
MW-5	06/03/08		53.92	61.08	7.16	3,668.94
MW-5	06/10/08		55.92	57.66	1.74	3,667.49
MW-5	06/18/08		54.64	58.12	3.48	3,668.59
MW-5	07/01/08		54.80	59.00	4.20	3,668.36
MW-5	07/02/08		54.35	58.15	3.80	3,668.85
MW-5	07/07/08		54.22	60.41	6.19	3,668.74
MW-5	07/24/08		55.40	57.16	1.76	3,668.00
MW-5	08/06/08		54.93	59.62	4.69	3,668.18
MW-5	08/28/08		54.55	57.54	2.99	3,668.73
MW-5	09/26/08		54.18	60.03	5.85	3,668.82
MW-5	10/27/08		54.41	59.34	4.93	3,668.68
MW-5	12/02/08		54.26	60.42	6.16	3,668.70
MW-6	12/08/04	Well installed 8 December 2004				
MW-6	12/15/04	3,721.68	49.49	56.62	7.13	3,671.48
MW-6	03/22/05		49.55	56.86	7.31	3,671.40
MW-6	03/31/05		49.55	56.86	7.31	3,671.40
MW-6	04/22/05		50.82	51.66	0.84	3,670.78
MW-6	05/25/05		50.61	53.11	2.50	3,670.82
MW-6	06/28/05		49.83	57.69	7.86	3,671.06
MW-6	07/25/05		50.30	55.50	5.20	3,670.86
MW-6	11/30/05		50.33	58.35	8.02	3,670.55
MW-6	02/06/06		50.65	58.80	8.15	3,670.22
MW-6	03/01/06		50.63	58.64	8.01	3,670.25
MW-6	05/02/06		50.82	58.10	7.28	3,670.13
MW-6	05/25/06		50.21	58.12	7.91	3,670.68
MW-6	08/10/06		50.47	59.55	9.08	3,670.30
MW-6	11/29/06		50.63	58.33	7.70	3,670.28
MW-6	12/06/06		50.60	58.33	7.73	3,670.31
MW-6	01/10/07		50.71	57.36	6.65	3,670.31



Table 1
SUMMARY OF GROUNDWATER ELEVATIONS AND
PHASE SEPARATED HYDROCARBON THICKNESS
PLAINS MARKETING, L.P. SRS #2000-10757
KIMBROUGH SWEET 8"
NMOCD REF. # AP-0029
LEQ COUNTY, NM
TALON/LPE PROJECT NUMBER: PLAINS045SPL

Monitor Well#	Date Gauged	Relative Top of Casing Elevation	Depth to PSH	Depth to Water	PSH Thickness	Corrected Relative Groundwater Elevation
		feet amsl*	feet btoc*	feet btoc	feet	feet amsl
MW-6	02/08/07		50.71	58.38	7.67	3,670.20
MW-6	02/19/07		58.36	58.87	0.51	3,663.27
MW-6	03/01/07		50.89	58.45	7.56	3,670.03
MW-6	03/06/07		50.86	58.58	7.72	3,670.05
MW-6	03/14/07		52.80	58.51	5.71	3,668.31
MW-6	04/02/07		50.86	58.54	7.68	3,670.05
MW-6	04/09/07		50.87	58.56	7.69	3,670.04
MW-6	04/16/07		50.92	58.54	7.62	3,670.00
MW-6	05/01/07		50.91	58.57	7.66	3,670.00
MW-6	05/21/07		50.96	58.62	7.66	3,669.95
MW-6	06/26/07		52.20	53.25	1.05	3,669.38
MW-6	06/28/07		52.10	53.10	1.00	3,669.48
MW-6	07/18/07		51.89	54.61	2.72	3,669.52
MW-6	08/21/07		52.32	52.56	0.24	3,669.34
MW-6	08/30/07		51.23	57.72	6.49	3,669.80
MW-6	09/13/07		51.88	54.85	2.97	3,669.50
MW-6	10/09/07		52.45	52.65	0.20	3,669.21
MW-6	10/17/07		51.61	58.61	7.00	3,669.37
MW-6	10/24/07		51.24	58.30	7.06	3,669.73
MW-6	11/02/07		52.04	54.86	2.82	3,669.36
MW-6	11/12/07		52.10	54.91	2.81	3,669.30
MW-6	12/03/07		51.78	56.60	4.82	3,669.42
MW-6	01/03/08		51.94	56.64	4.70	3,669.27
MW-6	01/07/08		52.19	56.62	4.43	3,669.05
MW-6	01/22/08		51.89	57.06	5.17	3,669.27
MW-6	01/29/08		51.92	56.70	4.78	3,669.28
MW-6	02/06/08		51.97	57.79	5.82	3,669.13
MW-6	02/12/08		51.99	57.81	5.82	3,669.11
MW-6	03/13/08		52.09	56.82	4.73	3,669.12
MW-6	03/19/08		51.99	57.37	5.38	3,669.15
MW-6	03/27/08		52.40	55.83	3.43	3,668.94
MW-6	04/01/08		52.39	55.93	3.54	3,668.94
MW-6	04/11/08		52.58	55.63	3.05	3,668.80
MW-6	04/16/08		53.04	53.26	0.22	3,668.62
MW-6	04/30/08		52.79	54.57	1.78	3,668.71
MW-6	05/14/08		52.51	56.20	3.69	3,668.80
MW-6	05/23/08		53.49	53.89	0.40	3,668.15
MW-6	06/03/08		52.52	57.19	4.67	3,668.69
MW-6	06/10/08		52.51	57.59	5.08	3,668.66
MW-6	06/18/08		52.47	57.93	5.46	3,668.66
MW-6	07/01/08		53.01	56.07	3.06	3,668.36
MW-6	07/02/08		52.90	54.18	1.28	3,668.65
MW-6	07/24/08		53.43	55.22	1.79	3,668.07
MW-6	08/06/08		53.20	56.80	3.60	3,668.12
MW-6	08/28/08		52.50	56.46	3.96	3,668.78
MW-6	09/26/08		52.37	57.67	5.30	3,668.78
MW-6	10/27/08		52.52	57.24	4.72	3,668.69
MW-6	12/02/08		52.45	58.17	5.72	3,668.66
MW-7	07/28/04	Well Installed 28 July 2004				
MW-7	08/16/04	3,722.74	52.14	52.70	0.56	3,670.54
MW-7	10/21/04		51.00	55.23	4.23	3,671.32



Table 1
SUMMARY OF GROUNDWATER ELEVATIONS AND
PHASE SEPARATED HYDROCARBON THICKNESS
PLAINS MARKETING, L.P. SRS #2000-10757
KIMBROUGH SWEET 8"
NMOCD REF. # AP-0029
LEQ COUNTY, NM
TALON/LPE PROJECT NUMBER: PLAINS045SPL

Monitor Well#	Date Gauged	Relative Top of Casing Elevation	Depth to PSH	Depth to Water	PSH Thickness	Corrected Relative Groundwater Elevation
		feet amsl*	feet btoc*	feet btoc	feet	feet amsl
MW-7	03/22/05		50.78	57.48	6.70	3,671.29
MW-7	03/31/05		50.78	57.48	6.70	3,671.29
MW-7	04/22/05		51.92	57.31	5.39	3,670.28
MW-7	05/25/05		51.78	53.44	1.66	3,670.79
MW-7	06/28/05		51.53	55.39	3.86	3,670.82
MW-7	07/25/05		52.07	53.35	1.28	3,670.54
MW-7	11/30/05		51.50	58.48	6.98	3,670.54
MW-7	02/06/06		51.75	58.71	6.96	3,670.29
MW-7	03/01/06		52.10	57.31	5.21	3,670.12
MW-7	05/02/06		52.35	56.91	4.56	3,669.93
MW-7	05/25/06		52.79	58.60	5.81	3,669.37
MW-7	08/10/06		51.56	58.61	7.05	3,670.48
MW-7	11/29/06		51.76	58.86	7.10	3,670.27
MW-7	12/06/06		51.78	58.91	7.13	3,670.25
MW-7	01/10/07		51.86	56.96	5.10	3,670.37
MW-7	02/08/07		51.92	58.85	6.93	3,670.13
MW-7	02/19/07		52.35	56.42	4.07	3,669.98
MW-7	03/01/07		52.21	58.13	5.92	3,669.94
MW-7	03/06/07		52.14	58.56	6.42	3,669.96
MW-7	03/14/07		52.07	58.86	6.79	3,669.99
MW-7	04/02/07		52.03	59.06	7.03	3,670.01
MW-7	04/09/07		52.09	59.11	7.02	3,669.95
MW-7	04/16/07		52.08	59.16	7.08	3,669.95
MW-7	05/01/07		52.16	58.82	6.66	3,669.91
MW-7	05/21/07		52.14	59.11	6.97	3,669.90
MW-7	06/26/07		52.20	58.98	6.78	3,669.86
MW-7	06/28/07		52.20	58.73	6.53	3,669.89
MW-7	07/18/07		52.24	58.77	6.53	3,669.85
MW-7	08/21/07		52.30	58.79	6.49	3,669.79
MW-7	08/30/07		52.30	58.83	6.53	3,669.79
MW-7	09/13/07		52.35	58.89	6.54	3,669.74
MW-7	10/09/07		52.37	58.96	6.59	3,669.71
MW-7	10/17/07		52.40	59.02	6.62	3,669.68
MW-7	10/24/07		52.39	58.98	6.59	3,669.69
MW-7	11/02/07		52.47	59.05	6.58	3,669.61
MW-7	11/12/07		52.49	57.99	5.50	3,669.70
MW-7	12/03/07		52.57	59.12	6.55	3,669.52
MW-7	01/03/08		52.39	59.12	6.73	3,669.68
MW-7	01/07/08		52.57	59.08	6.51	3,669.52
MW-7	01/22/08		52.71	59.09	6.38	3,669.39
MW-7	01/29/08		52.74	59.21	6.47	3,669.35
MW-7	02/06/08		52.77	59.13	6.36	3,669.33
MW-7	02/12/08		52.75	59.10	6.35	3,669.36
MW-7	03/13/08		52.86	59.79	6.93	3,669.19
MW-7	03/19/08		52.88	59.26	6.38	3,669.22
MW-7	03/27/08		52.96	59.29	6.33	3,669.15
MW-7	04/01/08		52.93	59.53	6.40	3,668.97
MW-7	04/11/08		53.01	59.39	6.38	3,669.09
MW-7	04/16/08		53.02	59.41	6.39	3,669.08
MW-7	04/30/08		53.05	59.46	6.41	3,669.05
MW-7	05/14/08		53.12	59.43	6.31	3,668.99
MW-7	05/23/08		53.31	59.61	6.30	3,668.80
MW-7	06/03/08		53.29	59.53	6.24	3,668.83



Table 1
SUMMARY OF GROUNDWATER ELEVATIONS AND
PHASE SEPARATED HYDROCARBON THICKNESS
PLAINS MARKETING, L.P. SRS #2000-10757
KIMBROUGH SWEET 8"
NMOC REF. # AP-0029
LEQ COUNTY, NM
TALON/LPE PROJECT NUMBER: PLAINS045SPL

Monitor Well#	Date Gauged	Relative Top of Casing Elevation	Depth to PSH	Depth to Water	PSH Thickness	Corrected Relative Groundwater Elevation
		feet amsl*	feet btoc*	feet btoc	feet	feet amsl
MW-7	06/10/08		53.33	59.58	6.25	3,668.79
MW-7	06/18/08		54.16	55.95	1.79	3,668.40
MW-7	07/01/08		54.28	55.76	1.48	3,668.31
MW-7	07/02/08		53.90	55.50	1.60	3,668.68
MW-7	07/24/08		54.59	55.36	0.77	3,668.07
MW-7	08/06/08		54.71	55.54	0.83	3,667.95
MW-7	08/28/08		54.01	55.30	1.29	3,668.60
MW-7	09/26/08		53.51	58.01	4.50	3,668.78
MW-7	10/27/08		54.05	56.02	1.97	3,668.49
MW-7	12/02/08		53.96	57.00	3.04	3,668.48
MW-8	07/30/04		Well Installed 30 July 2004			
MW-8	08/16/04	3,722.85	53.96	54.41	0.45	3,668.85
MW-8	10/21/04		51.15	54.38	3.23	3,671.38
MW-8	03/22/05		50.78	57.15	6.37	3,671.43
MW-8	03/31/05		50.78	57.15	6.37	3,671.43
MW-8	04/22/05		51.90	57.08	5.18	3,670.43
MW-8	05/25/05		51.99	52.15	0.16	3,670.84
MW-8	06/28/05		50.04	57.31	7.27	3,672.08
MW-8	07/25/05		51.82	54.14	2.32	3,670.80
MW-8	11/30/05		51.47	58.47	7.00	3,670.68
MW-8	02/06/06		51.75	57.80	6.05	3,670.50
MW-8	03/01/06		51.91	57.90	5.99	3,670.34
MW-8	05/02/06		52.26	56.95	4.69	3,670.12
MW-8	05/25/06		51.47	57.61	6.14	3,670.77
MW-8	08/10/06		52.28	54.69	2.41	3,670.33
MW-8	11/29/06		51.98	57.22	5.24	3,670.35
MW-8	12/06/06		52.48	55.71	3.23	3,670.05
MW-8	01/10/07		51.84	57.01	5.17	3,670.49
MW-8	02/08/07		52.10	58.61	6.51	3,670.10
MW-8	02/19/07		52.48	56.67	4.19	3,669.95
MW-8	03/01/07		52.25	57.13	4.88	3,670.11
MW-8	03/06/07		52.17	57.92	5.75	3,670.11
MW-8	03/14/07		52.06	58.21	6.15	3,670.18
MW-8	04/02/07		52.07	58.42	6.35	3,670.15
MW-8	04/09/07		52.08	58.49	6.41	3,670.13
MW-8	04/16/07		52.11	58.54	6.43	3,670.10
MW-8	05/01/07		52.17	58.40	6.23	3,670.06
MW-8	05/21/07		52.19	58.51	6.32	3,670.03
MW-8	06/26/07		53.10	54.80	1.70	3,669.58
MW-8	06/28/07		53.09	54.52	1.43	3,669.62
MW-8	07/18/07		52.52	57.55	5.03	3,669.83
MW-8	08/21/07		52.96	55.52	2.56	3,669.63
MW-8	08/30/07		53.20	55.17	1.97	3,669.45
MW-8	09/13/07		52.90	55.67	2.77	3,669.67
MW-8	10/09/07		52.41	57.00	4.59	3,669.98
MW-8	10/17/07		52.80	56.87	4.07	3,669.64
MW-8	10/24/07		52.78	57.10	4.32	3,669.64
MW-8	11/02/07		53.52	53.71	0.19	3,669.31
MW-8	12/03/07		52.61	58.39	5.78	3,669.66
MW-8	01/03/08		53.70	53.89	0.19	3,669.13
MW-8	01/07/08		53.61	53.91	0.30	3,669.21

Table 1
SUMMARY OF GROUNDWATER ELEVATIONS AND
PHASE SEPARATED HYDROCARBON THICKNESS
PLAINS MARKETING, L.P. SRS #2000-10757
KIMBROUGH SWEET 8"
NMOCD REF. # AP-0029
LEQ COUNTY, NM
TALON/LPE PROJECT NUMBER: PLAINS045SPL

Monitor Well#	Date Gauged	Relative Top of Casing Elevation	Depth to PSH	Depth to Water	PSH Thickness	Corrected Relative Groundwater Elevation
		feet amsl*	feet btoc*	feet btoc	feet	feet amsl
MW-8	01/22/08		53.70	54.19	0.49	3,669.10
MW-8	01/29/08		53.21	56.43	3.22	3,669.32
MW-8	02/06/08		53.06	56.79	3.73	3,669.42
MW-8	02/12/08		53.03	56.82	3.79	3,669.44
MW-8	03/13/08		52.69	54.80	2.11	3,669.95
MW-8	03/19/08		53.54	55.73	2.19	3,669.09
MW-8	03/27/08		53.92	54.45	0.53	3,668.88
MW-8	04/01/08		53.57	56.94	3.37	3,668.94
MW-8	04/11/08		54.23	55.48	1.25	3,668.50
MW-8	04/16/08		54.01	54.20	0.19	3,668.82
MW-8	04/30/08		54.04	54.28	0.24	3,668.79
MW-8	05/14/08		53.52	57.24	3.72	3,668.96
MW-8	05/23/08		54.37	54.59	0.22	3,668.46
MW-8	06/03/08		54.28	54.49	0.21	3,668.55
MW-8	06/10/08		54.37	54.54	0.17	3,668.46
MW-8	06/18/08		54.31	54.68	0.37	3,668.50
MW-8	07/01/08		54.53	54.68	0.15	3,668.31
MW-8	07/02/08		53.98	54.56	0.58	3,668.81
MW-8	07/24/08		54.50	55.85	1.35	3,668.22
MW-8	08/06/08		54.71	55.05	0.34	3,668.11
MW-8	08/28/08		54.13	54.39	0.26	3,668.69
MW-8	09/26/08		53.77	58.45	4.68	3,668.61
MW-8	10/27/08		54.14	55.22	1.08	3,668.60
MW-8	12/02/08		53.61	58.24	4.63	3,668.78
MW-9	07/30/04	Well Installed 30 July 2004				
MW-9	08/16/04	3,722.80	53.92	54.65	0.73	3,668.81
MW-9	10/21/04		50.95	53.99	3.04	3,671.55
MW-9	03/22/05		51.04	54.53	3.49	3,671.41
MW-9	03/31/05		51.04	54.53	3.49	3,671.41
MW-9	04/22/05		51.71	51.77	0.06	3,671.08
MW-9	05/25/05		51.70	52.22	0.52	3,671.05
MW-9	06/28/05		50.95	55.84	4.89	3,671.36
MW-9	07/25/05		51.74	52.89	1.15	3,670.95
MW-9	11/30/05		51.24	57.92	6.68	3,670.89
MW-9	02/06/06		51.47	58.25	6.78	3,670.65
MW-9	03/01/06		51.99	56.32	4.33	3,670.38
MW-9	05/02/06		52.12	56.23	4.11	3,670.27
MW-9	05/25/06		51.42	55.99	4.57	3,670.92
MW-9	08/10/06		51.41	58.20	6.79	3,670.71
MW-9	11/29/06		51.56	58.24	6.68	3,670.57
MW-9	12/06/06		51.61	58.30	6.69	3,670.52
MW-9	01/10/07		51.63	57.17	5.54	3,670.62
MW-9	02/08/07		51.72	58.31	6.59	3,670.42
MW-9	02/19/07		52.31	56.42	4.11	3,670.08
MW-9	03/01/07		51.95	57.59	5.64	3,670.29
MW-9	03/06/07		51.89	58.01	6.12	3,670.30
MW-9	03/14/07		51.82	58.24	6.42	3,670.34
MW-9	04/02/07		51.81	58.33	6.52	3,670.34
MW-9	04/09/07		51.88	58.40	6.52	3,670.27
MW-9	04/16/07		51.88	58.45	6.57	3,670.26
MW-9	05/01/07		51.93	58.09	6.16	3,670.25



Table 1
SUMMARY OF GROUNDWATER ELEVATIONS AND
PHASE SEPARATED HYDROCARBON THICKNESS
PLAINS MARKETING, L.P. SRS #2000-10757
KIMBROUGH SWEET 8"
NMOCD REF. # AP-0029
LEQ COUNTY, NM
TALON/LPE PROJECT NUMBER: PLAINS045SPL

Monitor Well#	Date Gauged	Relative Top of Casing Elevation	Depth to PSH	Depth to Water	PSH Thickness	Corrected Relative Groundwater Elevation
		feet amsl*	feet btoc*	feet btoc	feet	feet amsl
MW-9	05/21/07		51.98	58.45	6.47	3,670.17
MW-9	06/26/07		52.04	58.52	6.48	3,670.11
MW-9	06/28/07		52.04	58.50	6.46	3,670.11
MW-9	07/18/07		51.93	58.41	6.48	3,670.22
MW-9	08/21/07		52.03	58.50	6.47	3,670.12
MW-9	08/30/07		53.15	53.45	0.30	3,669.62
MW-9	09/13/07		52.24	57.67	5.43	3,670.02
MW-9	10/09/07		52.15	58.48	6.33	3,670.02
MW-9	10/17/07		53.31	58.52	5.21	3,668.97
MW-9	11/02/07		52.38	57.82	5.44	3,669.88
MW-9	11/12/07		53.39	53.55	0.16	3,669.39
MW-9	12/03/07		52.42	58.14	5.72	3,669.81
MW-9	01/03/08		52.38	58.59	6.21	3,669.80
MW-9	01/07/08		52.47	58.56	6.09	3,669.72
MW-9	01/22/08		52.86	56.67	3.81	3,669.56
MW-9	01/29/08		52.71	57.84	5.13	3,669.58
MW-9	02/06/08		52.54	58.38	5.84	3,669.68
MW-9	02/12/08		52.56	58.41	5.85	3,669.66
MW-9	03/13/08		52.66	58.83	6.17	3,669.52
MW-9	03/19/08		52.57	58.78	6.21	3,669.61
MW-9	03/27/08		52.64	58.87	6.23	3,669.54
MW-9	04/01/08		52.66	58.83	6.17	3,669.52
MW-9	04/11/08		52.74	58.39	5.65	3,669.50
MW-9	04/16/08		53.73	58.96	5.23	3,668.55
MW-9	05/14/08		52.82	59.04	6.22	3,669.36
MW-9	06/03/08		54.09	54.99	0.90	3,668.62
MW-9	06/10/08		53.50	59.81	6.31	3,668.67
MW-9	06/18/08		53.29	58.17	4.88	3,669.02
MW-9	07/01/08		53.20	59.06	5.86	3,669.01
MW-9	07/02/08		53.75	58.94	5.19	3,668.53
MW-9	07/07/08		53.26	59.25	5.99	3,668.94
MW-9	07/24/08		53.36	59.48	6.12	3,668.83
MW-9	08/06/08		54.43	55.08	0.65	3,668.31
MW-9	08/28/08		53.43	56.83	3.40	3,669.03
MW-9	09/26/08		54.01	54.76	0.75	3,668.72
MW-9	10/27/08		54.03	55.01	0.98	3,668.67
MW-9	12/02/08		53.89	55.93	2.04	3,668.71
MW-10	12/07/04	Well installed 7 December 2004				
MW-10	12/15/04	3,723.62		52.17		3,671.45
MW-10	03/22/05			52.28		3,671.34
MW-10	03/31/05			52.31		3,671.31
MW-10	04/22/05			52.36		3,671.26
MW-10	05/12/05			52.41		3,671.21
MW-10	05/25/05			52.42		3,671.20
MW-10	06/28/05			52.52		3,671.10
MW-10	07/25/05			52.61		3,671.01
MW-10	08/22/05			52.67		3,670.95
MW-10	11/14/05			52.76		3,670.86
MW-10	11/30/05			53.05		3,670.57
MW-10	02/06/06			53.29		3,670.33
MW-10	03/01/06			53.85		3,669.77



Table 1
SUMMARY OF GROUNDWATER ELEVATIONS AND
PHASE SEPARATED HYDROCARBON THICKNESS
PLAINS MARKETING, L.P. SRS #2000-10757
KIMBROUGH SWEET 8"
NMOCD REF. # AP-0029
LEQ COUNTY, NM
TALON/LPE PROJECT NUMBER: PLAINS045SPL

Monitor Well#	Date Gauged	Relative Top of Casing Elevation	Depth to PSH	Depth to Water	PSH Thickness	Corrected Relative Groundwater Elevation
		feet amsl*	feet btoc*	feet btoc	feet	feet amsl
MW-10	05/02/06			53.47		3,670.15
MW-10	05/25/06			53.08		3,670.54
MW-10	08/10/06			53.07		3,670.55
MW-10	11/29/06			53.29		3,670.33
MW-10	12/06/06			53.32		3,670.30
MW-10	01/10/07			53.38		3,670.24
MW-10	02/08/07			53.24		3,670.38
MW-10	03/01/07			53.73		3,669.89
MW-10	03/06/07			53.51		3,670.11
MW-10	03/14/07			53.52		3,670.10
MW-10	04/02/07			53.35		3,670.27
MW-10	04/09/07			53.57		3,670.05
MW-10	04/16/07			53.58		3,670.04
MW-10	05/01/07			53.63		3,669.99
MW-10	05/21/07			53.65		3,669.97
MW-10	06/13/07			53.57		3,670.05
MW-10	06/26/07			53.60		3,670.02
MW-10	07/18/07			53.69		3,669.93
MW-10	09/13/07			53.79		3,669.83
MW-10	10/24/07			53.86		3,669.76
MW-10	12/03/07			53.98		3,669.64
MW-10	01/29/08			54.06		3,669.56
MW-10	03/13/08			54.18		3,669.44
MW-10	05/14/08			54.28		3,669.34
MW-10	06/03/08			54.31		3,669.31
MW-10	06/18/08			54.43		3,669.19
MW-10	07/01/08			54.38		3,669.24
MW-10	07/02/08			54.47		3,669.15
MW-10	08/28/08			54.54		3,669.08
MW-10	09/26/08			54.63		3,668.99
MW-10	10/27/08			54.70		3,668.92
MW-10	12/02/08			54.77		3,668.85
MW-11	12/07/04	Well installed 7 December 2004				
MW-11	12/15/04	3,722.03	50.49	55.54	5.05	3,671.04
MW-11	03/22/05		50.33	56.71	6.38	3,671.06
MW-11	03/31/05		50.33	56.71	6.38	3,671.06
MW-11	04/22/05		50.34	56.95	6.61	3,671.03
MW-11	05/25/05		51.34	53.06	1.72	3,670.52
MW-11	06/28/05		50.67	57.07	6.40	3,670.72
MW-11	07/25/05		51.06	55.54	4.48	3,670.52
MW-11	11/30/05		51.11	57.79	6.68	3,670.25
MW-11	02/03/06		51.35	58.06	6.71	3,670.01
MW-11	03/01/06		51.39	58.16	6.77	3,669.96
MW-11	05/02/06		51.54	58.25	6.71	3,669.82
MW-11	05/25/06		51.12	57.97	6.85	3,670.23
MW-11	08/10/06		51.10	57.97	6.87	3,670.24
MW-11	11/29/06		51.32	58.24	6.92	3,670.02
MW-11	12/06/06		52.33	53.48	1.15	3,669.59
MW-11	01/10/07		51.37	57.98	6.61	3,670.00
MW-11	02/08/07		51.47	58.49	7.02	3,669.86
MW-11	02/19/07		51.57	58.38	6.81	3,669.78



Table 1
SUMMARY OF GROUNDWATER ELEVATIONS AND
PHASE SEPARATED HYDROCARBON THICKNESS
PLAINS MARKETING, L.P. SRS #2000-10757
KIMBROUGH SWEET 8"
NMOCD REF. # AP-0029
LEQ COUNTY, NM
TALON/LPE PROJECT NUMBER: PLAINS045SPL

Monitor Well#	Date Gauged	Relative Top of Casing Elevation	Depth to PSH	Depth to Water	PSH Thickness	Corrected Relative Groundwater Elevation
		feet amsl*	feet btoc*	feet btoc	feet	feet amsl
MW-11	03/01/07		51.61	58.38	6.77	3,669.74
MW-11	03/06/07		51.57	58.39	6.82	3,669.78
MW-11	03/14/07		51.57	58.34	6.77	3,669.78
MW-11	04/02/07		51.62	58.41	6.79	3,669.73
MW-11	04/09/07		52.63	58.38	5.75	3,668.83
MW-11	04/16/07		51.64	58.38	6.74	3,669.72
MW-11	05/01/07		51.68	58.39	6.71	3,669.68
MW-11	05/21/07		51.90	58.62	6.72	3,669.46
MW-11	06/26/07		51.80	58.44	6.64	3,669.57
MW-11	06/28/07		51.80	58.38	6.58	3,669.57
MW-11	07/18/07		51.76	58.31	6.55	3,669.62
MW-11	10/24/07		51.94	58.26	6.32	3,669.46
MW-11	11/02/07		52.00	58.32	6.32	3,669.40
MW-11	11/12/07		52.01	58.30	6.29	3,669.39
MW-11	12/03/07		52.58	56.55	3.97	3,669.05
MW-11	01/03/08		53.19	54.23	1.04	3,668.74
MW-11	01/07/08		52.96	54.22	1.26	3,668.94
MW-11	01/22/08		52.77	56.36	3.59	3,668.90
MW-11	01/29/08		54.02	55.34	1.32	3,667.88
MW-11	02/06/08		52.51	57.88	5.37	3,668.98
MW-11	02/12/08		52.53	57.90	5.37	3,668.96
MW-11	03/13/08		52.93	56.50	3.57	3,668.74
MW-11	03/19/08		52.71	57.58	4.87	3,668.83
MW-11	04/01/08		53.35	54.89	1.54	3,668.53
MW-11	04/11/08		53.16	56.08	2.92	3,668.58
MW-11	04/16/08		53.65	53.83	0.18	3,668.36
MW-11	05/14/08		53.18	56.64	3.46	3,668.50
MW-11	05/23/08		53.85	54.01	0.16	3,668.16
MW-11	06/03/08		53.87	54.16	0.29	3,668.13
MW-11	06/10/08		53.92	54.11	0.19	3,668.09
MW-11	06/18/08		53.94	54.43	0.49	3,668.04
MW-11	07/01/08		54.06	54.25	0.19	3,667.95
MW-11	07/02/08		53.69	53.92	0.23	3,668.32
MW-11	07/24/08		53.76	56.96	3.20	3,667.95
MW-11	08/06/08		54.37	54.59	0.22	3,667.64
MW-11	08/28/08		53.75	54.13	0.38	3,668.24
MW-11	09/26/08		53.32	56.89	3.57	3,668.35
MW-11	10/27/08		53.17	57.75	4.58	3,668.40
MW-11	12/02/08		53.19	58.12	4.93	3,668.35

Total manual recovery

Approximate system recovery

* Corrected Groundwater Elevation = Top of Casing Elevation - (Depth to Water Below Top of Casing - (SG)(PSH Thickness)))

btoc - below top of casing

amsl - above mean sea level



TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
PLAINS MARKETING, L.P. SRS# 2000-10757
KIMBROUGH SWEET 8"
NMOCD REF. #AP-0029
LEA COUNTY, NEW MEXICO
TALON/LPE PROJECT NUMBER: PLAINS045SPL

All concentrations are in mg/L.

Sample Location	Sample Date	Benzene	Toluene	Ethyl-benzene	Xylene
NMWQCC Remedial Limits		0.010	0.750	0.750	0.620
MW-1	03/13/08	<0.00100	<0.00100	<0.00100	<0.00100
	06/18/08	Sampling not required in second quarter			
	09/26/08	Not Sampled Due to Not Enough Water			
	12/02/08	<0.00100	<0.00100	<0.00100	<0.00100
MW-2	03/13/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	06/18/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	09/29/08	26.7	23.3	5.84	15.0
	12/02/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
MW-3	03/13/08	10.3	<0.100	0.157	0.895
	06/18/08	11.6	<0.0500	0.196	0.177
	09/26/08	9.13	0.152	<0.100	0.234
	12/02/08	12.1	0.189	0.207	0.456
MW-4	03/13/08	<0.00500	<0.00500	<0.00500	<0.00500
	06/18/08	<0.00100	<0.00100	<0.00100	<0.00100
	09/26/08	<0.00100	<0.00100	<0.00100	<0.00100
	12/02/08	<0.00100	<0.00100	<0.00100	<0.00100
MW-5	03/13/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	06/18/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	09/29/08	27.8	21.6	4.94	11.7
	12/02/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
MW-6	03/13/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	06/18/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	09/29/08	16.9	7.88	1.39	3.36
	12/02/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
MW-7	03/13/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	06/18/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	09/26/08	15.9	10.3	1.56	3.65
	12/02/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
MW-8	03/13/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	06/18/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	09/26/08	17.8	13.6	2.54	6.00
	12/02/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
MW-9	03/13/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	06/18/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	09/29/08	11.1	5.56	0.928	2.29
	12/02/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
MW-10	03/13/08	<0.00100	<0.00100	<0.00100	<0.00100
	06/18/08	<0.00100	<0.00100	<0.00100	<0.00100
	09/26/08	0.00390	<0.00100	<0.00100	<0.00100
	12/02/08	<0.00100	<0.00100	<0.00100	<0.00100
MW-11	03/13/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	06/18/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons			
	09/26/08	Not Sampled Due to Not Enough Water			
	12/02/08	Not Sampled Due to Presence of Phase Separated Hydrocarbons			

Bolded values are in excess of the NMWQCC Remediation Limits



TABLE 3
SUMMARY OF GROUNDWATER POLY-AROMATIC
HYDROCARBON (PAH) ANALYTICAL RESULTS
PLAINS MARKETING, L.P. - SRS# 2000-10757
KIMBROUGH SWEET 8"
NMOCD REF. # AP-0029
LEA COUNTY, NEW MEXICO
TALON/LPE PROJECT NUMBER: PLAINS045SPL

All concentrations are in mg/L

Sample Location	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]-anthracene	Benzo[a]-pyrene	Benzo[b]-fluoranthene	Benzo[g,h,i]-perylene	Benzo[k]-fluoranthene	Chrysene	Dibenz[a,h]-anthracene	Dibenzofuran	Fluoranthene	Indeno[1,2,3-cd]-pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
		NMWQCC Remedial Limits				0.007											0.030		
MW-3	09/26/08	<0.00200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.00151	<0.000200	0.00119	<0.000200	0.0127	0.0498	0.000940	<0.000200
MW-4	09/26/08	<0.00200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000236	0.000247	<0.000200	<0.000200
MW-10	09/26/08	<0.00200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200

¹ **Bolded** values are in excess of the NMWQCC Remediation Thresholds



TABLE 4
SUMMARY OF PSH MONITOR WELLS GROUNDWATER ANALYTICAL RESULTS
PLAINS MARKETING, L.P. SRS# 2000-10757
KIMBROUGH SWEET 8"
NMOCD REF. # AP-0029
LEA COUNTY, NEW MEXICO
TALON/LPE PROJECT NUMBER: PLAINS045SPL

All concentrations are in mg/L

Sample Location	Sample Date	Benzene	Toluene	Ethylbenzene	Xylene	TPH DRO	TPH GRO	Total TPH	Acenaphthene	Acenaphthylene	Anthracene	Benz[a]-anthracene	Benz[a]-pyrene	Benz[b]-fluoranthene	Benz[g,h,i]-perylene	Benz[k]-fluoranthene	Chrysene	Dibenzo[a,h]-anthracene	Dibenzofuran	Fluoranthene	Fluorene	Indeno[1,2,3-cd]-pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
NMWQCC Remedial Limits		0.01	0.75	0.75	0.62								0.0007												0.030		
MW-2	09/29/08	26.7	23.3	5.84	15.0	2200	279	2479	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	0.00585	<0.00100	<0.00100	0.0628	<0.00100	0.216	0.0146	0.319	<0.00100	5.87	6.94	3.22	0.432	0.0285
MW-5	09/29/08	27.8	21.6	4.94	11.7	357	246	603	<0.00100	<0.00100	0.418	<0.00100	<0.00100	<0.00100	0.00607	0.00607	0.0670	<0.00100	0.204	<0.00100	0.311	<0.00100	5.64	6.47	2.99	0.414	<0.00100
MW-6	09/29/08	16.9	7.88	1.39	3.36	38.1	81.8	119.9	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000532	0.000532	0.00571	<0.000200	0.0195	0.00117	0.0288	<0.000200	0.238	0.282	0.156	0.0350	0.00204
MW-7	09/26/08	15.9	10.3	1.56	3.65	373	102	475	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	0.00441	<0.00100	<0.00100	0.0500	<0.00100	0.151	0.00907	0.235	<0.00100	3.04	3.67	1.57	0.284	0.0273
MW-8	09/26/08	17.8	13.6	2.54	6.00	893	137	1030	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.00816	<0.000200	<0.000200	0.102	<0.000200	0.318	0.0208	0.434	<0.000200	6.52	7.62	3.28	0.582	0.0412
MW-9	09/29/08	11.1	5.56	0.928	2.29	119	60.0	179.0	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000275	<0.000200	<0.000200	0.00683	<0.000200	0.0149	0.000513	0.0216	<0.000200	0.173	0.206	0.104	0.0267	0.00274

*Bolded values are in excess of the NMWQCC Remediation Thresholds
BTEX, TPH and PAH analysis per the NMOCD in monitor wells that contain PSH*

APPENDIX C

Laboratory Analytical Data Reports and Chain of Custody Documentation



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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

Shanna Smith
Talon LPE-Amarillo
921 North Bivins
Amarillo, TX, 79107

Report Date: March 21, 2008

Work Order: 8031335



Project Location: Lea County, NM
Project Name: Kimbrough Sweet
Project Number: Plains045SPL
SRS#: SRS# 2000-10757

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
153651	MW-1	water	2008-03-13	10:42	2008-03-13
153652	MW-3	water	2008-03-13	10:50	2008-03-13
153653	MW-4	water	2008-03-13	10:57	2008-03-13
153654	MW-10	water	2008-03-13	11:05	2008-03-13

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.

Analytical Report

Sample: 153651 - MW-1

Analysis: BTEX
QC Batch: 46633
Prep Batch: 40116

Analytical Method: S 8021B
Date Analyzed: 2008-03-18
Sample Preparation: 2008-03-18

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.104	mg/L	1	0.100	104	77.8 - 121.1
4-Bromofluorobenzene (4-BFB)		0.0576	mg/L	1	0.100	58	40.1 - 136

Sample: 153651 - MW-1

Analysis: Total BTEX
QC Batch: 46633
Prep Batch: 40116

Analytical Method: S 8021B
Date Analyzed: 2008-03-18
Sample Preparation: 2008-03-18

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Total BTEX		<0.00100	mg/L	1	0.00100

Sample: 153652 - MW-3

Analysis: BTEX
QC Batch: 46722
Prep Batch: 40146

Analytical Method: S 8021B
Date Analyzed: 2008-03-20
Sample Preparation: 2008-03-19

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		10.3	mg/L	100	0.00100
Toluene		<0.100	mg/L	100	0.00100
Ethylbenzene		0.157	mg/L	100	0.00100
Xylene		0.895	mg/L	100	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		10.2	mg/L	100	10.0	102	77.8 - 121.1
4-Bromofluorobenzene (4-BFB)		7.43	mg/L	100	10.0	74	40.1 - 136

Sample: 153652 - MW-3

Analysis:	Total BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	46722	Date Analyzed:	2008-03-20	Analyzed By:	DC
Prep Batch:	40146	Sample Preparation:	2008-03-19	Prepared By:	DC

Parameter	Flag	RL Result	Units	Dilution	RL
Total BTEX		11.4	mg/L	100	0.00100

Sample: 153653 - MW-4

Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	46722	Date Analyzed:	2008-03-20	Analyzed By:	DC
Prep Batch:	40146	Sample Preparation:	2008-03-19	Prepared By:	DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00500	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		<0.00500	mg/L	5	0.00100
Xylene		<0.00500	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.509	mg/L	5	0.500	102	77.8 - 121.1
4-Bromofluorobenzene (4-BFB)		0.365	mg/L	5	0.500	73	40.1 - 136

Sample: 153653 - MW-4

Analysis:	Total BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	46722	Date Analyzed:	2008-03-20	Analyzed By:	DC
Prep Batch:	40146	Sample Preparation:	2008-03-19	Prepared By:	DC

Parameter	Flag	RL Result	Units	Dilution	RL
Total BTEX		<0.00500	mg/L	5	0.00100

Sample: 153654 - MW-10

Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	46633	Date Analyzed:	2008-03-18	Analyzed By:	DC
Prep Batch:	40116	Sample Preparation:	2008-03-18	Prepared By:	DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.103	mg/L	1	0.100	103	77.8 - 121.1
4-Bromofluorobenzene (4-BFB)		0.0546	mg/L	1	0.100	55	40.1 - 136

Sample: 153654 - MW-10

Analysis: Total BTEX Analytical Method: S 8021B Prep Method: S 5030B
QC Batch: 46633 Date Analyzed: 2008-03-18 Analyzed By: DC
Prep Batch: 40116 Sample Preparation: 2008-03-18 Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Total BTEX		<0.00100	mg/L	1	0.00100

Method Blank (1) QC Batch: 46633

QC Batch: 46633 Date Analyzed: 2008-03-18 Analyzed By: DC
Prep Batch: 40116 QC Preparation: 2008-03-18 Prepared By: DC

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000300	mg/L	0.001
Toluene		<0.000200	mg/L	0.001
Ethylbenzene		<0.000500	mg/L	0.001
Xylene		<0.000400	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.109	mg/L	1	0.100	109	77.2 - 129.1
4-Bromofluorobenzene (4-BFB)		0.109	mg/L	1	0.100	109	69.1 - 122.3

Method Blank (1) QC Batch: 46722

QC Batch: 46722 Date Analyzed: 2008-03-20 Analyzed By: DC
Prep Batch: 40146 QC Preparation: 2008-03-19 Prepared By: DC

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000300	mg/L	0.001
Toluene		<0.000200	mg/L	0.001
Ethylbenzene		<0.000500	mg/L	0.001
Xylene		<0.000400	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.103	mg/L	1	0.100	103	77.2 - 129.1
4-Bromofluorobenzene (4-BFB)		0.0736	mg/L	1	0.100	74	69.1 - 122.3

Laboratory Control Spike (LCS-1)

QC Batch: 46633
Prep Batch: 40116

Date Analyzed: 2008-03-18
QC Preparation: 2008-03-18

Analyzed By: DC
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.112	mg/L	1	0.100	<0.00110	112	84 - 119.7
Toluene	0.113	mg/L	1	0.100	<0.00100	113	84.9 - 118.2
Ethylbenzene	0.115	mg/L	1	0.100	<0.00100	115	84.4 - 118.6
Xylene	0.352	mg/L	1	0.300	<0.00290	117	84.8 - 117.8

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	0.109	mg/L	1	0.100	<0.00110	109	84 - 119.7	3	20
Toluene	0.110	mg/L	1	0.100	<0.00100	110	84.9 - 118.2	3	20
Ethylbenzene	0.112	mg/L	1	0.100	<0.00100	112	84.4 - 118.6	3	20
Xylene	0.346	mg/L	1	0.300	<0.00290	115	84.8 - 117.8	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)	0.109	0.108	mg/L	1	0.100	109	108	80 - 128.3
4-Bromofluorobenzene (4-BFB)	0.110	0.109	mg/L	1	0.100	110	109	67.7 - 126.3

Laboratory Control Spike (LCS-1)

QC Batch: 46722
Prep Batch: 40146

Date Analyzed: 2008-03-20
QC Preparation: 2008-03-19

Analyzed By: DC
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.106	mg/L	1	0.100	<0.00110	106	84 - 119.7
Toluene	0.107	mg/L	1	0.100	<0.00100	107	84.9 - 118.2
Ethylbenzene	0.106	mg/L	1	0.100	<0.00100	106	84.4 - 118.6
Xylene	0.317	mg/L	1	0.300	<0.00290	106	84.8 - 117.8

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	0.105	mg/L	1	0.100	<0.00110	105	84 - 119.7	1	20
Toluene	0.106	mg/L	1	0.100	<0.00100	106	84.9 - 118.2	1	20
Ethylbenzene	0.106	mg/L	1	0.100	<0.00100	106	84.4 - 118.6	0	20
Xylene	0.315	mg/L	1	0.300	<0.00290	105	84.8 - 117.8	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)	0.102	0.103	mg/L	1	0.100	102	103	80 - 128.3
4-Bromofluorobenzene (4-BFB)	0.0745	0.0758	mg/L	1	0.100	74	76	67.7 - 126.3

Matrix Spike (MS-1) Spiked Sample: 153297

QC Batch: 46633
Prep Batch: 40116

Date Analyzed: 2008-03-18
QC Preparation: 2008-03-18

Analyzed By: DC
Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.503	mg/L	5	0.500	<0.00550	101	77.5 - 121.1
Toluene	0.500	mg/L	5	0.500	<0.00500	100	78.8 - 119.6
Ethylbenzene	0.486	mg/L	5	0.500	<0.00500	97	77.9 - 120.5
Xylene	1.41	mg/L	5	1.50	<0.0145	94	78.3 - 119.4

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	0.501	mg/L	5	0.500	<0.00550	100	77.5 - 121.1	0	20
Toluene	0.501	mg/L	5	0.500	<0.00500	100	78.8 - 119.6	0	20
Ethylbenzene	0.491	mg/L	5	0.500	<0.00500	98	77.9 - 120.5	1	20
Xylene	1.43	mg/L	5	1.50	<0.0145	95	78.3 - 119.4	1	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)	0.525	0.519	mg/L	5	0.5	105	104	86.6 - 118.9
4-Bromofluorobenzene (4-BFB)	¹ 0.293	0.298	mg/L	5	0.5	59	60	59.4 - 127.3

Matrix Spike (MS-1) Spiked Sample: 153939

QC Batch: 46722
Prep Batch: 40146

Date Analyzed: 2008-03-20
QC Preparation: 2008-03-19

Analyzed By: DC
Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	2.83	mg/L	20	2.00	0.9306	95	77.5 - 121.1
Toluene	1.81	mg/L	20	2.00	<0.0200	90	78.8 - 119.6
Ethylbenzene	1.96	mg/L	20	2.00	0.368	80	77.9 - 120.5
Xylene	² 6.70	mg/L	20	6.00	2.9543	62	78.3 - 119.4

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	2.92	mg/L	20	2.00	0.9306	99	77.5 - 121.1	3	20
Toluene	2.02	mg/L	20	2.00	<0.0200	101	78.8 - 119.6	11	20
Ethylbenzene	2.06	mg/L	20	2.00	0.368	85	77.9 - 120.5	5	20
Xylene	³ 6.84	mg/L	20	6.00	2.9543	65	78.3 - 119.4	2	20

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

¹ BFB out of control limits; TFT shows method to be in control.

² Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

³ Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)		2.09	2.10	mg/L	20	2	104	105	86.6 - 118.9
4-Bromofluorobenzene (4-BFB)	⁴ ⁵	0.960	0.969	mg/L	20	2	48	48	59.4 - 127.3

Standard (ICV-1)

QC Batch: 46633

Date Analyzed: 2008-03-18

Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.106	106	85 - 115	2008-03-18
Toluene		mg/L	0.100	0.109	109	85 - 115	2008-03-18
Ethylbenzene		mg/L	0.100	0.114	114	85 - 115	2008-03-18
Xylene	⁶	mg/L	0.300	0.350	117	85 - 115	2008-03-18

Standard (CCV-1)

QC Batch: 46633

Date Analyzed: 2008-03-18

Analyzed By: DC

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.100	100	85 - 115	2008-03-18
Toluene		mg/L	0.100	0.0995	100	85 - 115	2008-03-18
Ethylbenzene		mg/L	0.100	0.0964	96	85 - 115	2008-03-18
Xylene		mg/L	0.300	0.278	93	85 - 115	2008-03-18

Standard (ICV-1)

QC Batch: 46722

Date Analyzed: 2008-03-20

Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.103	103	85 - 115	2008-03-20
Toluene		mg/L	0.100	0.104	104	85 - 115	2008-03-20
Ethylbenzene		mg/L	0.100	0.103	103	85 - 115	2008-03-20
Xylene		mg/L	0.300	0.304	101	85 - 115	2008-03-20

Standard (CCV-1)

QC Batch: 46722

Date Analyzed: 2008-03-20

Analyzed By: DC

⁴BFB out of control limits; TFT shows method to be in control.

⁵BFB out of control limits; TFT shows method to be in control.

⁶Xylene outside of control limits on ICV. ICV component average is 0.1130 which is within acceptable range. This is acceptable by Method 8000.

Report Date: March 21, 2008
Plains045SPL

Work Order: 8031335
Kimbrough Sweet

Page Number: 8 of 8
Lea County, NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0983	98	85 - 115	2008-03-20
Toluene		mg/L	0.100	0.0976	98	85 - 115	2008-03-20
Ethylbenzene		mg/L	0.100	0.0928	93	85 - 115	2008-03-20
Xylene		mg/L	0.300	0.265	88	85 - 115	2008-03-20



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E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Shanna Smith
Talon LPE-Amarillo
921 North Bivins
Amarillo, TX, 79107

Report Date: June 24, 2008

Work Order: 8061834



Project Location: Hobbs, NM
Project Name: Kimbrough Sweet 8 inch
Project Number: Plains045SPL
SRS#: SRS# 2000-10757

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
163942	MW-3	water	2008-06-18	13:31	2008-06-18
163943	MW-4	water	2008-06-18	13:59	2008-06-18
163944	MW-10	water	2008-06-18	13:47	2008-06-18

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 7 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Certifications

Lubbock - NELAP T104704219-08-TX

El Paso - NELAP T104704221-08-TX

Standard Flags

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

Case Narrative

Samples for project Kimbrough Sweet 8 inch were received by TraceAnalysis, Inc. on 2008-06-18 and assigned to work order 8061834. Samples for work order 8061834 were received intact without headspace and at a temperature of 2.1 deg C.

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

Test	Method
BTEX	S 8021B

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 8061834 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.

Report Date: June 24, 2008
Plains045SPL

Work Order: 8061834
Kimbrough Sweet 8 inch

Page Number: 4 of 7
Hobbs, NM

Analytical Report

Sample: 163942 - MW-3

Laboratory: Midland
Analysis: BTEX
QC Batch: 49662
Prep Batch: 42588

Analytical Method: S 8021B
Date Analyzed: 2008-06-21
Sample Preparation: 2008-06-20

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		11.6	mg/L	50	0.00100
Toluene		<0.0500	mg/L	50	0.00100
Ethylbenzene		0.196	mg/L	50	0.00100
Xylene		0.177	mg/L	50	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3.83	mg/L	50	5.00	77	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		3.62	mg/L	50	5.00	72	52 - 124.1

Sample: 163943 - MW-4

Laboratory: Midland
Analysis: BTEX
QC Batch: 49662
Prep Batch: 42588

Analytical Method: S 8021B
Date Analyzed: 2008-06-21
Sample Preparation: 2008-06-20

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0725	mg/L	1	0.100	72	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		0.0733	mg/L	1	0.100	73	52 - 124.1

Sample: 163944 - MW-10

Laboratory: Midland
Analysis: BTEX
QC Batch: 49662
Prep Batch: 42588

Analytical Method: S 8021B
Date Analyzed: 2008-06-21
Sample Preparation: 2008-06-20

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Report Date: June 24, 2008
Plains045SPL

Work Order: 8061834
Kimbrough Sweet 8 inch

Page Number: 5 of 7
Hobbs, NM

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0730	mg/L	1	0.100	73	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		0.0744	mg/L	1	0.100	74	52 - 124.1

Method Blank (1) QC Batch: 49662

QC Batch: 49662
Prep Batch: 42588

Date Analyzed: 2008-06-21
QC Preparation: 2008-06-20

Analyzed By: DC
Prepared By: DC

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000200	mg/L	0.001
Toluene		<0.000200	mg/L	0.001
Ethylbenzene		<0.000200	mg/L	0.001
Xylene		<0.000300	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0776	mg/L	1	0.100	78	44.6 - 137.4
4-Bromofluorobenzene (4-BFB)		0.0781	mg/L	1	0.100	78	37.1 - 130.9

Laboratory Control Spike (LCS-1)

QC Batch: 49662
Prep Batch: 42588

Date Analyzed: 2008-06-21
QC Preparation: 2008-06-20

Analyzed By: DC
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0830	mg/L	1	0.100	<0.000200	83	71.7 - 120.5
Toluene	0.0819	mg/L	1	0.100	<0.000200	82	75.4 - 118.8
Ethylbenzene	0.0820	mg/L	1	0.100	<0.000200	82	73.5 - 118
Xylene	0.246	mg/L	1	0.300	<0.000300	82	72.9 - 118.2

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

Report Date: June 24, 2008
Plains045SPL

Work Order: 8061834
Kimbrough Sweet 8 inch

Page Number: 6 of 7
Hobbs, NM

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.0829	mg/L	1	0.100	<0.000200	83	71.7 - 120.5	0	20
Toluene	0.0816	mg/L	1	0.100	<0.000200	82	75.4 - 118.8	0	20
Ethylbenzene	0.0816	mg/L	1	0.100	<0.000200	82	73.5 - 118	0	20
Xylene	0.245	mg/L	1	0.300	<0.000300	82	72.9 - 118.2	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)	0.0760	0.0764	mg/L	1	0.100	76	76	38.2 - 131.6
4-Bromofluorobenzene (4-BFB)	0.0777	0.0782	mg/L	1	0.100	78	78	43.9 - 132.4

Matrix Spike (MS-1) Spiked Sample: 163942

QC Batch: 49662
Prep Batch: 42588

Date Analyzed: 2008-06-21
QC Preparation: 2008-06-20

Analyzed By: DC
Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	12.6	mg/L	50	5.00	11.5731	20	10 - 160.8
Toluene	3.16	mg/L	50	5.00	<0.0100	63	10 - 160.7
Ethylbenzene	3.33	mg/L	50	5.00	0.1957	63	10 - 158.3
Xylene	9.43	mg/L	50	15.0	0.1768	62	10 - 158

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	13.1	mg/L	50	5.00	11.5731	30	10 - 160.8	4	20
Toluene	3.29	mg/L	50	5.00	<0.0100	66	10 - 160.7	4	20
Ethylbenzene	3.52	mg/L	50	5.00	0.1957	66	10 - 158.3	6	20
Xylene	9.92	mg/L	50	15.0	0.1768	65	10 - 158	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)	3.61	3.68	mg/L	50	5	72	74	33.1 - 132.5
4-Bromofluorobenzene (4-BFB)	2.77	2.84	mg/L	50	5	55	57	37.5 - 136

Standard (ICV-1)

QC Batch: 49662

Date Analyzed: 2008-06-21

Analyzed By: DC

Report Date: June 24, 2008
Plains045SPL

Work Order: 8061834
Kimbrough Sweet 8 inch

Page Number: 7 of 7
Hobbs, NM

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.101	101	85 - 115	2008-06-21
Toluene		mg/L	0.100	0.0987	99	85 - 115	2008-06-21
Ethylbenzene		mg/L	0.100	0.0983	98	85 - 115	2008-06-21
Xylene		mg/L	0.300	0.295	98	85 - 115	2008-06-21

Standard (CCV-1)

QC Batch: 49662

Date Analyzed: 2008-06-21

Analyzed By: DC

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0899	90	85 - 115	2008-06-21
Toluene		mg/L	0.100	0.0881	88	85 - 115	2008-06-21
Ethylbenzene		mg/L	0.100	0.0876	88	85 - 115	2008-06-21
Xylene		mg/L	0.300	0.261	87	85 - 115	2008-06-21



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E-Mail: lab@traceanalysis.com

Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Shanna Smith
Talon LPE-Amarillo
921 North Bivins
Amarillo, TX, 79107

Report Date: October 7, 2008

Work Order: 8092650



Project Location: Hobbs, NM
Project Name: Kimbrough Sweet 8 inch
Project Number: Plains045SPL
SRS#: SRS# 2000-10757

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
174865	MW-3	water	2008-09-26	10:44	2008-09-26
174866	MW-4	water	2008-09-26	11:00	2008-09-26
174867	MW-10	water	2008-09-26	11:10	2008-09-26
174868	MW-7	water	2008-09-26	12:45	2008-09-26
174869	MW-8	water	2008-09-26	13:26	2008-09-26

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 22 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 Kimbrough Sweet 8 inch were received by TraceAnalysis, Inc. on 2008-09-26 and assigned to work order 8092650. Samples for work order 8092650 were received intact without headspace and at a temperature of 3.2 deg. C.

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

Test	Method
BTEX	S 8021B
PAH	S 8270C
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 8092650 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.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 4 of 22
Hobbs, NM

Analytical Report

Sample: 174865 - MW-3

Laboratory: Midland

Analysis: BTEX

QC Batch: 52877

Prep Batch: 45308

Analytical Method: S 8021B

Date Analyzed: 2008-09-30

Sample Preparation: 2008-09-30

Prep Method: S 5030B

Analyzed By: DC

Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		9.13	mg/L	100	0.00100
Toluene		0.152	mg/L	100	0.00100
Ethylbenzene		<0.100	mg/L	100	0.00100
Xylene		0.234	mg/L	100	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		7.79	mg/L	100	10.0	78	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		8.00	mg/L	100	10.0	80	52 - 124.1

Sample: 174865 - MW-3

Laboratory: Lubbock

Analysis: PAH

QC Batch: 53057

Prep Batch: 45459

Analytical Method: S 8270C

Date Analyzed: 2008-10-03

Sample Preparation: 2008-10-02

Prep Method: S 3510C

Analyzed By: DS

Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		0.0498	mg/L	1	0.000200
2-Methylnaphthalene		0.0127	mg/L	1	0.000200
1-Methylnaphthalene		0.0283	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		0.00151	mg/L	1	0.000200
Fluorene		0.00119	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Phenanthrene		0.000940	mg/L	1	0.000200
Fluoranthene		<0.000200	mg/L	1	0.000200
Pyrene		<0.000200	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		<0.000200	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200

continued ...

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 5 of 22
Hobbs, NM

sample 174865 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0557	mg/L	1	0.0800	70	37.4 - 123
2-Fluorobiphenyl		0.0574	mg/L	1	0.0800	72	34.3 - 130
Terphenyl-d14		0.0605	mg/L	1	0.0800	76	10 - 252

Sample: 174866 - MW-4

Laboratory: Midland

Analysis: BTEX

QC Batch: 52877

Prep Batch: 45308

Analytical Method: S 8021B

Date Analyzed: 2008-09-30

Sample Preparation: 2008-09-30

Prep Method: S 5030B

Analyzed By: DC

Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0813	mg/L	1	0.100	81	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		0.0829	mg/L	1	0.100	83	52 - 124.1

Sample: 174866 - MW-4

Laboratory: Lubbock

Analysis: PAH

QC Batch: 53057

Prep Batch: 45459

Analytical Method: S 8270C

Date Analyzed: 2008-10-03

Sample Preparation: 2008-10-02

Prep Method: S 3510C

Analyzed By: DS

Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		0.000247	mg/L	1	0.000200
2-Methylnaphthalene		0.000236	mg/L	1	0.000200
1-Methylnaphthalene		<0.000200	mg/L	1	0.000200

continued ...

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 6 of 22
Hobbs, NM

sample 174866 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		<0.000200	mg/L	1	0.000200
Fluorene		<0.000200	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Phenanthrene		<0.000200	mg/L	1	0.000200
Fluoranthene		<0.000200	mg/L	1	0.000200
Pyrene		<0.000200	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		<0.000200	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0603	mg/L	1	0.0800	75	37.4 - 123
2-Fluorobiphenyl		0.0576	mg/L	1	0.0800	72	34.3 - 130
Terphenyl-d14		0.0677	mg/L	1	0.0800	85	10 - 252

Sample: 174867 - MW-10

Laboratory: Midland
Analysis: BTEX
QC Batch: 52857
Prep Batch: 45269

Analytical Method: S 8021B
Date Analyzed: 2008-09-29
Sample Preparation: 2008-09-29

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.00390	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0778	mg/L	1	0.100	78	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		0.0799	mg/L	1	0.100	80	52 - 124.1

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 7 of 22
Hobbs, NM

Sample: 174867 - MW-10

Laboratory: Lubbock
Analysis: PAH
QC Batch: 53057
Prep Batch: 45459

Analytical Method: S 8270C
Date Analyzed: 2008-10-03
Sample Preparation: 2008-10-02

Prep Method: S 3510C
Analyzed By: DS
Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000200	mg/L	1	0.000200
2-Methylnaphthalene		<0.000200	mg/L	1	0.000200
1-Methylnaphthalene		<0.000200	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		<0.000200	mg/L	1	0.000200
Fluorene		<0.000200	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Phenanthrene		<0.000200	mg/L	1	0.000200
Fluoranthene		<0.000200	mg/L	1	0.000200
Pyrene		<0.000200	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		<0.000200	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0609	mg/L	1	0.0800	76	37.4 - 123
2-Fluorobiphenyl		0.0625	mg/L	1	0.0800	78	34.3 - 130
Terphenyl-d14		0.0676	mg/L	1	0.0800	84	10 - 252

Sample: 174868 - MW-7

Laboratory: Midland
Analysis: BTEX
QC Batch: 52857
Prep Batch: 45269

Analytical Method: S 8021B
Date Analyzed: 2008-09-29
Sample Preparation: 2008-09-29

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		15.9	mg/L	100	0.00100
Toluene		10.3	mg/L	100	0.00100

continued ...

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 8 of 22
Hobbs, NM

sample 174868 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Ethylbenzene		1.56	mg/L	100	0.00100
Xylene		3.65	mg/L	100	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8.04	mg/L	100	10.0	80	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		8.39	mg/L	100	10.0	84	52 - 124.1

Sample: 174868 - MW-7

Laboratory: Lubbock
Analysis: PAH
QC Batch: 53057
Prep Batch: 45459

Analytical Method: S 8270C
Date Analyzed: 2008-10-03
Sample Preparation: 2008-10-02

Prep Method: S 3510C
Analyzed By: DS
Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene	¹	1.57	mg/L	5	0.000200
2-Methylnaphthalene	²	3.67	mg/L	5	0.000200
1-Methylnaphthalene	³	3.04	mg/L	5	0.000200
Acenaphthylene		<0.00100	mg/L	5	0.000200
Acenaphthene		<0.00100	mg/L	5	0.000200
Dibenzofuran		0.151	mg/L	5	0.000200
Fluorene		0.235	mg/L	5	0.000200
Anthracene		<0.00100	mg/L	5	0.000200
Phenanthrene		0.284	mg/L	5	0.000200
Fluoranthene		0.00907	mg/L	5	0.000200
Pyrene		0.0273	mg/L	5	0.000200
Benzo(a)anthracene		<0.00100	mg/L	5	0.000200
Chrysene		0.0500	mg/L	5	0.000200
Benzo(b)fluoranthene		0.00441	mg/L	5	0.000200
Benzo(k)fluoranthene		<0.00100	mg/L	5	0.000200
Benzo(a)pyrene		<0.00100	mg/L	5	0.000200
Indeno(1,2,3-cd)pyrene		<0.00100	mg/L	5	0.000200
Dibenzo(a,h)anthracene		<0.00100	mg/L	5	0.000200
Benzo(g,h,i)perylene		<0.00100	mg/L	5	0.000200

¹Estimated concentration value greater than standard range.

²Estimated concentration value greater than standard range.

³Estimated concentration value greater than standard range.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 9 of 22
Hobbs, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5	4	0.152	mg/L	5	0.0800	190	37.4 - 123
2-Fluorobiphenyl		0.0609	mg/L	5	0.0800	76	34.3 - 130
Terphenyl-d14		0.0857	mg/L	5	0.0800	107	10 - 252

Sample: 174868 - MW-7

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 52902
Prep Batch: 45325

Analytical Method: Mod. 8015B
Date Analyzed: 2008-10-01
Sample Preparation: 2008-10-01

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		373	mg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	5	38.3	mg/L	1	10.0	383	70 - 130

Sample: 174868 - MW-7

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 52858
Prep Batch: 45269

Analytical Method: S 8015B
Date Analyzed: 2008-09-29
Sample Preparation: 2008-09-29

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		102	mg/L	100	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8.77	mg/L	100	10.0	88	70 - 130
4-Bromofluorobenzene (4-BFB)		8.69	mg/L	100	10.0	87	70 - 130

Sample: 174869 - MW-8

Laboratory: Midland
Analysis: BTEX
QC Batch: 52857
Prep Batch: 45269

Analytical Method: S 8021B
Date Analyzed: 2008-09-29
Sample Preparation: 2008-09-29

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

⁴8270 Only - One basic surrogate is out of control limits. The other two basic surrogates show extraction was performed properly.

⁵High surrogate recovery due to peak interference.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 10 of 22
Hobbs, NM

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		17.8	mg/L	100	0.00100
Toluene		13.6	mg/L	100	0.00100
Ethylbenzene		2.54	mg/L	100	0.00100
Xylene		6.00	mg/L	100	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8.04	mg/L	100	10.0	80	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		8.64	mg/L	100	10.0	86	52 - 124.1

Sample: 174869 - MW-8

Laboratory: Lubbock
Analysis: PAH
QC Batch: 53057
Prep Batch: 45459

Analytical Method: S 8270C
Date Analyzed: 2008-10-03
Sample Preparation: 2008-10-02

Prep Method: S 3510C
Analyzed By: DS
Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene	⁶	3.28	mg/L	10	0.000200
2-Methylnaphthalene	⁷	7.62	mg/L	10	0.000200
1-Methylnaphthalene	⁸	6.52	mg/L	10	0.000200
Acenaphthylene		<0.00200	mg/L	10	0.000200
Acenaphthene		<0.00200	mg/L	10	0.000200
Dibenzofuran		0.318	mg/L	10	0.000200
Fluorene		0.434	mg/L	10	0.000200
Anthracene		<0.00200	mg/L	10	0.000200
Phenanthrene		0.582	mg/L	10	0.000200
Fluoranthene		0.0208	mg/L	10	0.000200
Pyrene		0.0412	mg/L	10	0.000200
Benzo(a)anthracene		<0.00200	mg/L	10	0.000200
Chrysene		0.102	mg/L	10	0.000200
Benzo(b)fluoranthene		0.00816	mg/L	10	0.000200
Benzo(k)fluoranthene		<0.00200	mg/L	10	0.000200
Benzo(a)pyrene		<0.00200	mg/L	10	0.000200
Indeno(1,2,3-cd)pyrene		<0.00200	mg/L	10	0.000200
Dibenzo(a,h)anthracene		<0.00200	mg/L	10	0.000200
Benzo(g,h,i)perylene		<0.00200	mg/L	10	0.000200

⁶Estimated concentration value greater than standard range.

⁷Estimated concentration value greater than standard range.

⁸Estimated concentration value greater than standard range.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 11 of 22
Hobbs, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5	⁹	0.175	mg/L	10	0.0800	219	37.4 - 123
2-Fluorobiphenyl		0.0654	mg/L	10	0.0800	82	34.3 - 130
Terphenyl-d14		0.0925	mg/L	10	0.0800	116	10 - 252

Sample: 174869 - MW-8

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 52902
Prep Batch: 45325

Analytical Method: Mod. 8015B
Date Analyzed: 2008-10-01
Sample Preparation: 2008-10-01

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		893	mg/L	5	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	¹⁰	73.9	mg/L	5	10.0	739	70 - 130

Sample: 174869 - MW-8

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 52858
Prep Batch: 45269

Analytical Method: S 8015B
Date Analyzed: 2008-09-29
Sample Preparation: 2008-09-29

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		137	mg/L	100	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8.73	mg/L	100	10.0	87	70 - 130
4-Bromofluorobenzene (4-BFB)		9.44	mg/L	100	10.0	94	70 - 130

Method Blank (1) QC Batch: 52857

QC Batch: 52857
Prep Batch: 45269

Date Analyzed: 2008-09-29
QC Preparation: 2008-09-29

Analyzed By: DC
Prepared By: DC

⁹8270 Only - One basic surrogate is out of control limits. The other two basic surrogates show extraction was performed properly.

¹⁰High surrogate recovery due to peak interference.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 12 of 22
Hobbs, NM

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000500	mg/L	0.001
Toluene		<0.000700	mg/L	0.001
Ethylbenzene		<0.000700	mg/L	0.001
Xylene		<0.00180	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0857	mg/L	1	0.100	86	44.6 - 137.4
4-Bromofluorobenzene (4-BFB)		0.0872	mg/L	1	0.100	87	37.1 - 130.9

Method Blank (1) QC Batch: 52858

QC Batch: 52858
Prep Batch: 45269

Date Analyzed: 2008-09-29
QC Preparation: 2008-09-29

Analyzed By: DC
Prepared By: DC

Parameter	Flag	MDL Result	Units	RL
GRO		0.0857	mg/L	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0898	mg/L	1	0.100	90	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0875	mg/L	1	0.100	88	50 - 130

Method Blank (1) QC Batch: 52877

QC Batch: 52877
Prep Batch: 45308

Date Analyzed: 2008-09-30
QC Preparation: 2008-09-30

Analyzed By: DC
Prepared By: DC

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000500	mg/L	0.001
Toluene		<0.000700	mg/L	0.001
Ethylbenzene		<0.000700	mg/L	0.001
Xylene		<0.00180	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0814	mg/L	1	0.100	81	44.6 - 137.4
4-Bromofluorobenzene (4-BFB)		0.0818	mg/L	1	0.100	82	37.1 - 130.9

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 13 of 22
Hobbs, NM

Method Blank (1) QC Batch: 52902

QC Batch: 52902
Prep Batch: 45325

Date Analyzed: 2008-10-01
QC Preparation: 2008-10-01

Analyzed By: LD
Prepared By: LD

Parameter	Flag	MDL Result	Units	RL
DRO		<2.44	mg/L	5

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		7.14	mg/L	1	10.0	71	70 - 130

Method Blank (1) QC Batch: 53057

QC Batch: 53057
Prep Batch: 45459

Date Analyzed: 2008-10-03
QC Preparation: 2008-10-02

Analyzed By: DS
Prepared By: DS

Parameter	Flag	MDL Result	Units	RL
Naphthalene		<0.0000730	mg/L	0.0002
2-Methylnaphthalene		<0.0000509	mg/L	0.0002
1-Methylnaphthalene		<0.0000748	mg/L	0.0002
Acenaphthylene		<0.0000767	mg/L	0.0002
Acenaphthene		<0.000142	mg/L	0.0002
Dibenzofuran		<0.0000470	mg/L	0.0002
Fluorene		<0.0000569	mg/L	0.0002
Anthracene		<0.0000876	mg/L	0.0002
Phenanthrene		<0.0000552	mg/L	0.0002
Fluoranthene		<0.0000954	mg/L	0.0002
Pyrene		<0.0000497	mg/L	0.0002
Benzo(a)anthracene		<0.0000328	mg/L	0.0002
Chrysene		<0.0000990	mg/L	0.0002
Benzo(b)fluoranthene		<0.0000684	mg/L	0.0002
Benzo(k)fluoranthene		<0.0000830	mg/L	0.0002
Benzo(a)pyrene		<0.0000549	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		<0.0000869	mg/L	0.0002
Dibenzo(a,h)anthracene		<0.0000605	mg/L	0.0002
Benzo(g,h,i)perylene		<0.0000681	mg/L	0.0002

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0669	mg/L	1	0.0800	84	10 - 146
2-Fluorobiphenyl		0.0623	mg/L	1	0.0800	78	10 - 141
Terphenyl-d14		0.0773	mg/L	1	0.0800	97	10 - 266

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 14 of 22
Hobbs, NM

Laboratory Control Spike (LCS-1)

QC Batch: 52857
Prep Batch: 45269

Date Analyzed: 2008-09-29
QC Preparation: 2008-09-29

Analyzed By: DC
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0843	mg/L	1	0.100	<0.000500	84	71.7 - 120.5
Toluene	0.0855	mg/L	1	0.100	<0.000700	86	75.4 - 118.8
Ethylbenzene	0.0858	mg/L	1	0.100	<0.000700	86	73.5 - 118
Xylene	0.258	mg/L	1	0.300	<0.00180	86	72.9 - 118.2

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	0.0842	mg/L	1	0.100	<0.000500	84	71.7 - 120.5	0	20
Toluene	0.0862	mg/L	1	0.100	<0.000700	86	75.4 - 118.8	1	20
Ethylbenzene	0.0863	mg/L	1	0.100	<0.000700	86	73.5 - 118	1	20
Xylene	0.261	mg/L	1	0.300	<0.00180	87	72.9 - 118.2	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)	0.0806	0.0796	mg/L	1	0.100	81	80	38.2 - 131.6
4-Bromofluorobenzene (4-BFB)	0.0843	0.0835	mg/L	1	0.100	84	84	43.9 - 132.4

Laboratory Control Spike (LCS-1)

QC Batch: 52858
Prep Batch: 45269

Date Analyzed: 2008-09-29
QC Preparation: 2008-09-29

Analyzed By: DC
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	0.897	mg/L	1	1.00	0.0857	81	70 - 130

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	0.928	mg/L	1	1.00	0.0857	84	70 - 130	3	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)	0.0832	0.0856	mg/L	1	0.100	83	86	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0853	0.0851	mg/L	1	0.100	85	85	70 - 130

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 15 of 22
Hobbs, NM

Laboratory Control Spike (LCS-1)

QC Batch: 52877
Prep Batch: 45308

Date Analyzed: 2008-09-30
QC Preparation: 2008-09-30

Analyzed By: DC
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0860	mg/L	1	0.100	<0.000500	86	71.7 - 120.5
Toluene	0.0875	mg/L	1	0.100	<0.000700	88	75.4 - 118.8
Ethylbenzene	0.0867	mg/L	1	0.100	<0.000700	87	73.5 - 118
Xylene	0.262	mg/L	1	0.300	<0.00180	87	72.9 - 118.2

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	0.0844	mg/L	1	0.100	<0.000500	84	71.7 - 120.5	2	20
Toluene	0.0855	mg/L	1	0.100	<0.000700	86	75.4 - 118.8	2	20
Ethylbenzene	0.0854	mg/L	1	0.100	<0.000700	85	73.5 - 118	2	20
Xylene	0.257	mg/L	1	0.300	<0.00180	86	72.9 - 118.2	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)	0.0805	0.0786	mg/L	1	0.100	80	79	38.2 - 131.6
4-Bromofluorobenzene (4-BFB)	0.0828	0.0821	mg/L	1	0.100	83	82	43.9 - 132.4

Laboratory Control Spike (LCS-1)

QC Batch: 52902
Prep Batch: 45325

Date Analyzed: 2008-10-01
QC Preparation: 2008-10-01

Analyzed By: LD
Prepared By: LD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	23.6	mg/L	1	25.0	<2.44	94	70 - 130

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	25.1	mg/L	1	25.0	<2.44	100	70 - 130	6	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	11.3	11.4	mg/L	1	10.0	113	114	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 53057
Prep Batch: 45459

Date Analyzed: 2008-10-03
QC Preparation: 2008-10-02

Analyzed By: DS
Prepared By: DS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Naphthalene	0.0489	mg/L	1	0.0800	<0.0000730	61	10 - 141
2-Methylnaphthalene	0.0546	mg/L	1	0.0800	<0.0000509	68	50 - 150
1-Methylnaphthalene	0.0546	mg/L	1	0.0800	<0.0000748	68	50 - 150
Acenaphthylene	0.0703	mg/L	1	0.0800	<0.0000767	88	10 - 152
Acenaphthene	0.0667	mg/L	1	0.0800	<0.000142	83	10 - 151
Dibenzofuran	0.0673	mg/L	1	0.0800	<0.0000470	84	10 - 148
Fluorene	0.0747	mg/L	1	0.0800	<0.0000569	93	10 - 172
Anthracene	0.0715	mg/L	1	0.0800	<0.0000876	89	22.5 - 172
Phenanthrene	0.0701	mg/L	1	0.0800	<0.0000552	88	19.6 - 172
Fluoranthene	0.0782	mg/L	1	0.0800	<0.0000954	98	17.3 - 187
Pyrene	0.0756	mg/L	1	0.0800	<0.0000497	94	14.9 - 199
Benzo(a)anthracene	0.0718	mg/L	1	0.0800	<0.0000328	90	19.4 - 185
Chrysene	0.0758	mg/L	1	0.0800	<0.0000990	95	18.4 - 188
Benzo(b)fluoranthene	0.0742	mg/L	1	0.0800	<0.0000684	93	10 - 193
Benzo(k)fluoranthene	0.0781	mg/L	1	0.0800	<0.0000830	98	27.8 - 196
Benzo(a)pyrene	0.0845	mg/L	1	0.0800	<0.0000549	106	12.4 - 205
Indeno(1,2,3-cd)pyrene	0.0891	mg/L	1	0.0800	<0.0000869	111	10 - 198
Dibenzo(a,h)anthracene	0.0884	mg/L	1	0.0800	<0.0000605	110	10 - 172
Benzo(g,h,i)perylene	0.0886	mg/L	1	0.0800	<0.0000681	111	10 - 186

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
Naphthalene	0.0475	mg/L	1	0.0800	<0.0000730	59	10 - 141	3	20
2-Methylnaphthalene	0.0540	mg/L	1	0.0800	<0.0000509	68	50 - 150	1	20
1-Methylnaphthalene	0.0540	mg/L	1	0.0800	<0.0000748	68	50 - 150	1	20
Acenaphthylene	0.0680	mg/L	1	0.0800	<0.0000767	85	10 - 152	3	20
Acenaphthene	0.0641	mg/L	1	0.0800	<0.000142	80	10 - 151	4	20
Dibenzofuran	0.0645	mg/L	1	0.0800	<0.0000470	81	10 - 148	4	20
Fluorene	0.0711	mg/L	1	0.0800	<0.0000569	89	10 - 172	5	20
Anthracene	0.0699	mg/L	1	0.0800	<0.0000876	87	22.5 - 172	2	20
Phenanthrene	0.0688	mg/L	1	0.0800	<0.0000552	86	19.6 - 172	2	20
Fluoranthene	0.0771	mg/L	1	0.0800	<0.0000954	96	17.3 - 187	1	20
Pyrene	0.0730	mg/L	1	0.0800	<0.0000497	91	14.9 - 199	4	20
Benzo(a)anthracene	0.0698	mg/L	1	0.0800	<0.0000328	87	19.4 - 185	3	20
Chrysene	0.0737	mg/L	1	0.0800	<0.0000990	92	18.4 - 188	3	20
Benzo(b)fluoranthene	0.0718	mg/L	1	0.0800	<0.0000684	90	10 - 193	3	20
Benzo(k)fluoranthene	0.0754	mg/L	1	0.0800	<0.0000830	94	27.8 - 196	4	20
Benzo(a)pyrene	0.0806	mg/L	1	0.0800	<0.0000549	101	12.4 - 205	5	20

continued ...

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 17 of 22
Hobbs, NM

control spikes continued ...

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Indeno(1,2,3-cd)pyrene	0.0857	mg/L	1	0.0800	<0.0000869	107	10 - 198	4	20
Dibenzo(a,h)anthracene	0.0851	mg/L	1	0.0800	<0.0000605	106	10 - 172	4	20
Benzo(g,h,i)perylene	0.0849	mg/L	1	0.0800	<0.0000681	106	10 - 186	4	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
Nitrobenzene-d5	0.0659	0.0640	mg/L	1	0.0800	82	80	10 - 165
2-Fluorobiphenyl	0.0626	0.0601	mg/L	1	0.0800	78	75	10 - 157
Terphenyl-d14	0.0835	0.0813	mg/L	1	0.0800	104	102	10 - 220

Matrix Spike (MS-1) Spiked Sample: 174884

QC Batch: 52857
Prep Batch: 45269

Date Analyzed: 2008-09-29
QC Preparation: 2008-09-29

Analyzed By: DC
Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.06	mg/L	5	0.500	0.6922	74	10 - 160.8
Toluene	0.405	mg/L	5	0.500	<0.00350	81	10 - 160.7
Ethylbenzene	0.403	mg/L	5	0.500	<0.00350	81	10 - 158.3
Xylene	1.21	mg/L	5	1.50	<0.00900	81	10 - 158

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	1.08	mg/L	5	0.500	0.6922	78	10 - 160.8	2	20
Toluene	0.418	mg/L	5	0.500	<0.00350	84	10 - 160.7	3	20
Ethylbenzene	0.421	mg/L	5	0.500	<0.00350	84	10 - 158.3	4	20
Xylene	1.27	mg/L	5	1.50	<0.00900	85	10 - 158	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)	0.405	0.406	mg/L	5	0.5	81	81	33.1 - 132.5
4-Bromofluorobenzene (4-BFB)	0.421	0.425	mg/L	5	0.5	84	85	37.5 - 136

Matrix Spike (MS-1) Spiked Sample: 174868

QC Batch: 52858
Prep Batch: 45269

Date Analyzed: 2008-09-29
QC Preparation: 2008-09-29

Analyzed By: DC
Prepared By: DC

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 18 of 22
Hobbs, NM

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	11 163	mg/L	100	100	101.921	61	70 - 130

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	177	mg/L	100	100	101.921	75	70 - 130	8	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)	8.57	9.05	mg/L	100	10	86	90	70 - 130
4-Bromofluorobenzene (4-BFB)	8.97	9.46	mg/L	100	10	90	95	70 - 130

Matrix Spike (MS-1) Spiked Sample: 174994

QC Batch: 52877
Prep Batch: 45308

Date Analyzed: 2008-09-30
QC Preparation: 2008-09-30

Analyzed By: DC
Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	43.8	mg/L	200	20.0	26.7384	85	10 - 160.8
Toluene	40.0	mg/L	200	20.0	23.2604	84	10 - 160.7
Ethylbenzene	21.2	mg/L	200	20.0	5.8361	77	10 - 158.3
Xylene	61.5	mg/L	200	60.0	15.0328	77	10 - 158

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	48.6	mg/L	200	20.0	26.7384	109	10 - 160.8	10	20
Toluene	12 50.4	mg/L	200	20.0	23.2604	136	10 - 160.7	23	20
Ethylbenzene	13 26.4	mg/L	200	20.0	5.8361	103	10 - 158.3	22	20
Xylene	74.4	mg/L	200	60.0	15.0328	99	10 - 158	19	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)	15.3	15.5	mg/L	200	20	76	78	33.1 - 132.5
4-Bromofluorobenzene (4-BFB)	16.6	17.2	mg/L	200	20	83	86	37.5 - 136

¹¹Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

¹²MSD analyte out of range. MS/MSD has a RPD within limits. Therefore, MS shows extraction occurred properly.

¹³MSD analyte out of range. MS/MSD has a RPD within limits. Therefore, MS shows extraction occurred properly.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 19 of 22
Hobbs, NM

Matrix Spike (MS-1) Spiked Sample: 174868

QC Batch: 52902
Prep Batch: 45325

Date Analyzed: 2008-10-01
QC Preparation: 2008-10-01

Analyzed By: LD
Prepared By: LD

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	¹⁴	270	mg/L	1	25.0	270	0	70 - 130

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	¹⁵	267	mg/L	1	25.0	270	0	70 - 130	1	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	^{16 17}	22.8	22.5	mg/L	1	10	228	225	70 - 130

Standard (ICV-1)

QC Batch: 52857

Date Analyzed: 2008-09-29

Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.104	104	85 - 115	2008-09-29
Toluene		mg/L	0.100	0.107	107	85 - 115	2008-09-29
Ethylbenzene		mg/L	0.100	0.107	107	85 - 115	2008-09-29
Xylene		mg/L	0.300	0.326	108	85 - 115	2008-09-29

Standard (CCV-1)

QC Batch: 52857

Date Analyzed: 2008-09-29

Analyzed By: DC

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0942	94	85 - 115	2008-09-29
Toluene		mg/L	0.100	0.0965	96	85 - 115	2008-09-29
Ethylbenzene		mg/L	0.100	0.0976	98	85 - 115	2008-09-29
Xylene		mg/L	0.300	0.296	99	85 - 115	2008-09-29

¹⁴Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

¹⁵Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

¹⁶High surrogate recovery due to peak interference.

¹⁷High surrogate recovery due to peak interference.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 20 of 22
Hobbs, NM

Standard (ICV-1)

QC Batch: 52858

Date Analyzed: 2008-09-29

Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.928	93	85 - 115	2008-09-29

Standard (CCV-1)

QC Batch: 52858

Date Analyzed: 2008-09-29

Analyzed By: DC

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.988	99	85 - 115	2008-09-29

Standard (ICV-1)

QC Batch: 52877

Date Analyzed: 2008-09-30

Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0931	93	85 - 115	2008-09-30
Toluene		mg/L	0.100	0.0938	94	85 - 115	2008-09-30
Ethylbenzene		mg/L	0.100	0.0942	94	85 - 115	2008-09-30
Xylene		mg/L	0.300	0.287	96	85 - 115	2008-09-30

Standard (CCV-1)

QC Batch: 52877

Date Analyzed: 2008-09-30

Analyzed By: DC

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0891	89	85 - 115	2008-09-30
Toluene		mg/L	0.100	0.0897	90	85 - 115	2008-09-30
Ethylbenzene		mg/L	0.100	0.0889	89	85 - 115	2008-09-30
Xylene		mg/L	0.300	0.269	90	85 - 115	2008-09-30

Standard (ICV-1)

QC Batch: 52902

Date Analyzed: 2008-10-01

Analyzed By: LD

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 21 of 22
Hobbs, NM

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	237	95	85 - 115	2008-10-01

Standard (CCV-1)

QC Batch: 52902

Date Analyzed: 2008-10-01

Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	222	89	85 - 115	2008-10-01

Standard (CCV-1)

QC Batch: 53057

Date Analyzed: 2008-10-03

Analyzed By: DS

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/L	60.0	56.6	94	80 - 120	2008-10-03
2-Methylnaphthalene		mg/L	60.0	52.2	87	80 - 120	2008-10-03
1-Methylnaphthalene		mg/L	60.0	52.3	87	80 - 120	2008-10-03
Acenaphthylene		mg/L	60.0	59.4	99	80 - 120	2008-10-03
Acenaphthene		mg/L	60.0	58.3	97	80 - 120	2008-10-03
Dibenzofuran		mg/L	60.0	60.6	101	80 - 120	2008-10-03
Fluorene		mg/L	60.0	66.6	111	80 - 120	2008-10-03
Anthracene		mg/L	60.0	59.8	100	80 - 120	2008-10-03
Phenanthrene		mg/L	60.0	57.5	96	80 - 120	2008-10-03
Fluoranthene		mg/L	60.0	59.2	99	80 - 120	2008-10-03
Pyrene		mg/L	60.0	61.0	102	80 - 120	2008-10-03
Benzo(a)anthracene		mg/L	60.0	56.0	93	80 - 120	2008-10-03
Chrysene		mg/L	60.0	58.1	97	80 - 120	2008-10-03
Benzo(b)fluoranthene		mg/L	60.0	60.7	101	80 - 120	2008-10-03
Benzo(k)fluoranthene		mg/L	60.0	61.5	102	80 - 120	2008-10-03
Benzo(a)pyrene		mg/L	60.0	63.6	106	80 - 120	2008-10-03
Indeno(1,2,3-cd)pyrene		mg/L	60.0	69.7	116	80 - 120	2008-10-03
Dibenzo(a,h)anthracene		mg/L	60.0	69.8	116	80 - 120	2008-10-03
Benzo(g,h,i)perylene		mg/L	60.0	69.0	115	80 - 120	2008-10-03

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5		61.5	mg/L	1	60.0	102	80 - 120
2-Fluorobiphenyl		57.6	mg/L	1	60.0	96	80 - 120
Terphenyl-d14		60.3	mg/L	1	60.0	100	80 - 120

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 22 of 22
Hobbs, NM

Standard (CCV-2)

QC Batch: 53057

Date Analyzed: 2008-10-03

Analyzed By: DS

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/L	60.0	57.0	95	80 - 120	2008-10-03
2-Methylnaphthalene		mg/L	60.0	53.8	90	80 - 120	2008-10-03
1-Methylnaphthalene		mg/L	60.0	54.7	91	80 - 120	2008-10-03
Acenaphthylene		mg/L	60.0	58.8	98	80 - 120	2008-10-03
Acenaphthene		mg/L	60.0	58.7	98	80 - 120	2008-10-03
Dibenzofuran		mg/L	60.0	62.1	104	80 - 120	2008-10-03
Fluorene		mg/L	60.0	69.8	116	80 - 120	2008-10-03
Anthracene		mg/L	60.0	59.0	98	80 - 120	2008-10-03
Phenanthrene		mg/L	60.0	56.6	94	80 - 120	2008-10-03
Fluoranthene		mg/L	60.0	54.4	91	80 - 120	2008-10-03
Pyrene		mg/L	60.0	61.1	102	80 - 120	2008-10-03
Benzo(a)anthracene		mg/L	60.0	56.7	94	80 - 120	2008-10-03
Chrysene		mg/L	60.0	58.4	97	80 - 120	2008-10-03
Benzo(b)fluoranthene		mg/L	60.0	56.8	95	80 - 120	2008-10-03
Benzo(k)fluoranthene		mg/L	60.0	61.6	103	80 - 120	2008-10-03
Benzo(a)pyrene		mg/L	60.0	63.1	105	80 - 120	2008-10-03
Indeno(1,2,3-cd)pyrene	18	mg/L	60.0	73.8	123	80 - 120	2008-10-03
Dibenzo(a,h)anthracene	19	mg/L	60.0	73.5	122	80 - 120	2008-10-03
Benzo(g,h,i)perylene	20	mg/L	60.0	72.8	121	80 - 120	2008-10-03

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5		58.3	mg/L	1	60.0	97	80 - 120
2-Fluorobiphenyl		52.4	mg/L	1	60.0	87	80 - 120
Terphenyl-d14		59.6	mg/L	1	60.0	99	80 - 120

¹⁸Indeno(1,2,3-cd)pyrene outside of control limits on CCV(ICV). CCV(ICV) component average is 101% which is within acceptable range. This is acceptable by Method 8000.

¹⁹Dibenzo(a,h)anthracene outside of control limits on CCV(ICV). CCV(ICV) component average is 101% which is within acceptable range. This is acceptable by Method 8000.

²⁰Benzo(g,h,i)perylene outside of control limits on CCV(ICV). CCV(ICV) component average is 101% which is within acceptable range. This is acceptable by Method 8000.

114866-869 110811

LAB Order ID 84 DG 8092650

Page 1 of

TraceAnalysis, Inc.

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Contact Person: Sharon Smith / Annelle Bryant
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Project Name: Kimbrough Sweet
Sampler Signature: Carl Vessels
Project Location (including state): Levellington, N.M.
different from above) SR# 2000-10757

Field CODE
MW-3
MW-4
MW-10
MW-7
MW-8

FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX					PRESERVATIVE METHOD					SAMPLING	
			WATER	SOIL	AIR	SLUDGE	HCI	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	DATE	TIME
MW-3	4	100%	X				X				X	X	9/24/08	1045
MW-4	4	1	X				X				X	X	9/24/08	1100
MW-10	4	1	X				X				X	X	9/24/08	1110
MW-7	6	100%	X				X				X	X	9/24/08	1245
MW-8	6	1	X				X				X	X	9/24/08	1326

Uninquired by: <u>Talen/PE</u>	Company: <u>Talen/PE</u>	Date: <u>9/20/08</u>	Time: <u>1640</u>	Received by: <u>Talen/PE</u>	Company: <u>Talen/PE</u>	Date: <u>9/20/08</u>	Time: <u>1040</u>	Temp °C: <u>32°</u>
Uninquired by: <u>Talen/PE</u>	Company: <u>Talen/PE</u>	Date: <u>9/20/08</u>	Time: <u>1700</u>	Received by: <u>Talen/PE</u>	Company: <u>Talen/PE</u>	Date: <u>9/20/08</u>	Time: <u>1040</u>	Temp °C: <u>32°</u>
Uninquired by: <u>Talen/PE</u>	Company: <u>Talen/PE</u>	Date: <u>9/20/08</u>	Time: <u>1700</u>	Received by: <u>Talen/PE</u>	Company: <u>Talen/PE</u>	Date: <u>9/20/08</u>	Time: <u>1040</u>	Temp °C: <u>32°</u>

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8021B / 602 / 8260B / 624	TPH 418.1 / TX1005 / TX1005 Ex(C35)	TPH 8015 GPO / DRO / TVHC	PAH 8270C / 625	TCLP Metals Ag As Ba Cd Cr Pb Se Hg 8010B/200.7	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
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

REMARKS:
DTEX, BOS - Midland
PAH - Lubbock

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check if Special Reporting Limits Are Needed

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Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Shanna Smith
Talon LPE-Amarillo
921 North Bivins
Amarillo, TX, 79107

Report Date: October 7, 2008

Work Order: 8093003



Project Location: Hobbs, NM
Project Name: Kimbrough Sweet 8 inch
Project Number: Plains045SPL
SRS#: 2000-10757

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
174994	MW-2	water	2008-09-29	14:42	2008-09-30
174995	MW-5	water	2008-09-29	13:38	2008-09-30
174996	MW-6	water	2008-09-29	15:39	2008-09-30
174997	MW-9	water	2008-09-29	12:20	2008-09-30

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 21 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 Kimbrough Sweet 8 inch were received by TraceAnalysis, Inc. on 2008-09-30 and assigned to work order 8093003. Samples for work order 8093003 were received intact without headspace and at a temperature of 4.0 deg. C.

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

Test	Method
BTEX	S 8021B
PAH	S 8270C
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 8093003 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: 174994 - MW-2

Laboratory: Midland
Analysis: BTEX
QC Batch: 52877
Prep Batch: 45308

Analytical Method: S 8021B
Date Analyzed: 2008-09-30
Sample Preparation: 2008-09-30

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		26.7	mg/L	200	0.00100
Toluene		23.3	mg/L	200	0.00100
Ethylbenzene		5.84	mg/L	200	0.00100
Xylene		15.0	mg/L	200	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		15.8	mg/L	200	20.0	79	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		16.9	mg/L	200	20.0	84	52 - 124.1

Sample: 174994 - MW-2

Laboratory: Lubbock
Analysis: PAH
QC Batch: 53057
Prep Batch: 45459

Analytical Method: S 8270C
Date Analyzed: 2008-10-03
Sample Preparation: 2008-10-02

Prep Method: S 3510C
Analyzed By: DS
Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene	¹	3.22	mg/L	5	0.000200
2-Methylnaphthalene	²	6.94	mg/L	5	0.000200
1-Methylnaphthalene	³	5.87	mg/L	5	0.000200
Acenaphthylene		<0.00100	mg/L	5	0.000200
Acenaphthene		<0.00100	mg/L	5	0.000200
Dibenzofuran		0.216	mg/L	5	0.000200
Fluorene		0.319	mg/L	5	0.000200
Anthracene		<0.00100	mg/L	5	0.000200
Phenanthrene		0.432	mg/L	5	0.000200
Fluoranthene		0.0146	mg/L	5	0.000200
Pyrene		0.0285	mg/L	5	0.000200
Benzo(a)anthracene		<0.00100	mg/L	5	0.000200
Chrysene		0.0628	mg/L	5	0.000200

continued ...

¹Estimated concentration value greater than standard range.

²Estimated concentration value greater than standard range.

³Estimated concentration value greater than standard range.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 5 of 21
Hobbs, NM

sample 174994 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Benzo(b)fluoranthene		<0.00100	mg/L	5	0.000200
Benzo(k)fluoranthene		0.00585	mg/L	5	0.000200
Benzo(a)pyrene		<0.00100	mg/L	5	0.000200
Indeno(1,2,3-cd)pyrene		<0.00100	mg/L	5	0.000200
Dibenzo(a,h)anthracene		<0.00100	mg/L	5	0.000200
Benzo(g,h,i)perylene		<0.00100	mg/L	5	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5	⁴	0.229	mg/L	5	0.0800	286	37.4 - 123
2-Fluorobiphenyl		0.0539	mg/L	5	0.0800	67	34.3 - 130
Terphenyl-d14		0.0588	mg/L	5	0.0800	74	10 - 252

Sample: 174994 - MW-2

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 52902
Prep Batch: 45325

Analytical Method: Mod. 8015B
Date Analyzed: 2008-10-01
Sample Preparation: 2008-10-01

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		2200	mg/L	10	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	⁵	204	mg/L	10	10.0	2040	70 - 130

Sample: 174994 - MW-2

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 52878
Prep Batch: 45308

Analytical Method: S 8015B
Date Analyzed: 2008-09-30
Sample Preparation: 2008-09-30

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		279	mg/L	200	0.100

⁴8270 Only - One basic surrogate is out of control limits. The other two basic surrogates show extraction was performed properly.

⁵High surrogate recovery due to peak interference.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 6 of 21
Hobbs, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		16.5	mg/L	200	20.0	82	70 - 130
4-Bromofluorobenzene (4-BFB)		18.7	mg/L	200	20.0	94	70 - 130

Sample: 174995 - MW-5

Laboratory: Midland

Analysis: BTEX

QC Batch: 52877

Prep Batch: 45308

Analytical Method: S 8021B

Date Analyzed: 2008-09-30

Sample Preparation: 2008-09-30

Prep Method: S 5030B

Analyzed By: DC

Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		27.8	mg/L	200	0.00100
Toluene		21.6	mg/L	200	0.00100
Ethylbenzene		4.94	mg/L	200	0.00100
Xylene		11.7	mg/L	200	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		15.5	mg/L	200	20.0	78	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		16.6	mg/L	200	20.0	83	52 - 124.1

Sample: 174995 - MW-5

Laboratory: Lubbock

Analysis: PAH

QC Batch: 53057

Prep Batch: 45459

Analytical Method: S 8270C

Date Analyzed: 2008-10-03

Sample Preparation: 2008-10-02

Prep Method: S 3510C

Analyzed By: DS

Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene	⁶	2.99	mg/L	5	0.000200
2-Methylnaphthalene	⁷	6.47	mg/L	5	0.000200
1-Methylnaphthalene	⁸	5.64	mg/L	5	0.000200
Acenaphthylene		<0.00100	mg/L	5	0.000200
Acenaphthene		<0.00100	mg/L	5	0.000200
Dibenzofuran		0.204	mg/L	5	0.000200
Fluorene		0.311	mg/L	5	0.000200
Anthracene		0.418	mg/L	5	0.000200
Phenanthrene		0.414	mg/L	5	0.000200

continued ...

⁶Estimated concentration value greater than standard range.

⁷Estimated concentration value greater than standard range.

⁸Estimated concentration value greater than standard range.

sample 174995 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Fluoranthene		<0.00100	mg/L	5	0.000200
Pyrene		<0.00100	mg/L	5	0.000200
Benzo(a)anthracene		<0.00100	mg/L	5	0.000200
Chrysene		0.0670	mg/L	5	0.000200
Benzo(b)fluoranthene		<0.00100	mg/L	5	0.000200
Benzo(k)fluoranthene		0.00607	mg/L	5	0.000200
Benzo(a)pyrene		<0.00100	mg/L	5	0.000200
Indeno(1,2,3-cd)pyrene		<0.00100	mg/L	5	0.000200
Dibenzo(a,h)anthracene		<0.00100	mg/L	5	0.000200
Benzo(g,h,i)perylene		<0.00100	mg/L	5	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5	9	0.165	mg/L	5	0.0800	206	37.4 - 123
2-Fluorobiphenyl		0.0282	mg/L	5	0.0800	35	34.3 - 130
Terphenyl-d14		0.0401	mg/L	5	0.0800	50	10 - 252

Sample: 174995 - MW-5

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 52902
Prep Batch: 45325

Analytical Method: Mod. 8015B
Date Analyzed: 2008-10-01
Sample Preparation: 2008-10-01

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		357	mg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	10	36.1	mg/L	1	10.0	361	70 - 130

Sample: 174995 - MW-5

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 52878
Prep Batch: 45308

Analytical Method: S 8015B
Date Analyzed: 2008-09-30
Sample Preparation: 2008-09-30

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

continued ...

⁹8270 Only - One basic surrogate is out of control limits. The other two basic surrogates show extraction was performed properly.

¹⁰High surrogate recovery due to peak interference.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 8 of 21
Hobbs, NM

sample 174995 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
GRO		246	mg/L	200	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		16.2	mg/L	200	20.0	81	70 - 130
4-Bromofluorobenzene (4-BFB)		17.5	mg/L	200	20.0	88	70 - 130

Sample: 174996 - MW-6

Laboratory: Midland
Analysis: BTEX
QC Batch: 52877
Prep Batch: 45308

Analytical Method: S 8021B
Date Analyzed: 2008-09-30
Sample Preparation: 2008-09-30

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		16.9	mg/L	50	0.00100
Toluene		7.88	mg/L	50	0.00100
Ethylbenzene		1.39	mg/L	50	0.00100
Xylene		3.36	mg/L	50	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3.88	mg/L	50	5.00	78	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		4.14	mg/L	50	5.00	83	52 - 124.1

Sample: 174996 - MW-6

Laboratory: Lubbock
Analysis: PAH
QC Batch: 53057
Prep Batch: 45459

Analytical Method: S 8270C
Date Analyzed: 2008-10-03
Sample Preparation: 2008-10-02

Prep Method: S 3510C
Analyzed By: DS
Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene	11	0.156	mg/L	1	0.000200

continued ...

¹¹ Estimated concentration value greater than standard range.

sample 174996 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
2-Methylnaphthalene	¹²	0.282	mg/L	1	0.000200
1-Methylnaphthalene	¹³	0.238	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		0.0195	mg/L	1	0.000200
Fluorene		0.0288	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Phenanthrene		0.0350	mg/L	1	0.000200
Fluoranthene		0.00117	mg/L	1	0.000200
Pyrene		0.00204	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		0.00571	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		0.000532	mg/L	1	0.000200
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0478	mg/L	1	0.0800	60	37.4 - 123
2-Fluorobiphenyl		0.0460	mg/L	1	0.0800	58	34.3 - 130
Terphenyl-d14		0.0595	mg/L	1	0.0800	74	10 - 252

Sample: 174996 - MW-6

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 52902
Prep Batch: 45325

Analytical Method: Mod. 8015B
Date Analyzed: 2008-10-01
Sample Preparation: 2008-10-01

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		38.1	mg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	¹⁴	17.6	mg/L	1	10.0	176	70 - 130

¹²Estimated concentration value greater than standard range.

¹³Estimated concentration value greater than standard range.

¹⁴High surrogate recovery due to peak interference.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 10 of 21
Hobbs, NM

Sample: 174996 - MW-6

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 52878
Prep Batch: 45308

Analytical Method: S 8015B
Date Analyzed: 2008-09-30
Sample Preparation: 2008-09-30

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		81.8	mg/L	50	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.05	mg/L	50	5.00	81	70 - 130
4-Bromofluorobenzene (4-BFB)		4.25	mg/L	50	5.00	85	70 - 130

Sample: 174997 - MW-9

Laboratory: Midland
Analysis: BTEX
QC Batch: 52877
Prep Batch: 45308

Analytical Method: S 8021B
Date Analyzed: 2008-09-30
Sample Preparation: 2008-09-30

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		11.1	mg/L	100	0.00100
Toluene		5.56	mg/L	100	0.00100
Ethylbenzene		0.928	mg/L	100	0.00100
Xylene		2.29	mg/L	100	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		7.76	mg/L	100	10.0	78	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		8.01	mg/L	100	10.0	80	52 - 124.1

Sample: 174997 - MW-9

Laboratory: Lubbock
Analysis: PAH
QC Batch: 53057
Prep Batch: 45459

Analytical Method: S 8270C
Date Analyzed: 2008-10-03
Sample Preparation: 2008-10-02

Prep Method: S 3510C
Analyzed By: DS
Prepared By: DS

continued ...

sample 174997 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene	¹⁵	0.104	mg/L	1	0.000200
2-Methylnaphthalene	¹⁶	0.206	mg/L	1	0.000200
1-Methylnaphthalene	¹⁷	0.173	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		0.0149	mg/L	1	0.000200
Fluorene		0.0216	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Phenanthrene		0.0267	mg/L	1	0.000200
Fluoranthene		0.000513	mg/L	1	0.000200
Pyrene		0.00274	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		0.00683	mg/L	1	0.000200
Benzo(b)fluoranthene		0.000275	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0495	mg/L	1	0.0800	62	37.4 - 123
2-Fluorobiphenyl		0.0463	mg/L	1	0.0800	58	34.3 - 130
Terphenyl-d14		0.0959	mg/L	1	0.0800	120	10 - 252

Sample: 174997 - MW-9

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 52902
Prep Batch: 45325

Analytical Method: Mod. 8015B
Date Analyzed: 2008-10-01
Sample Preparation: 2008-10-01

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		119	mg/L	1	5.00

¹⁵Estimated concentration value greater than standard range.

¹⁶Estimated concentration value greater than standard range.

¹⁷Estimated concentration value greater than standard range.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 12 of 21
Hobbs, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	¹⁸	27.8	mg/L	1	10.0	278	70 - 130

Sample: 174997 - MW-9

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 52878
Prep Batch: 45308

Analytical Method: S 8015B
Date Analyzed: 2008-09-30
Sample Preparation: 2008-09-30

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		60.0	mg/L	100	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8.06	mg/L	100	10.0	81	70 - 130
4-Bromofluorobenzene (4-BFB)		8.17	mg/L	100	10.0	82	70 - 130

Method Blank (1) QC Batch: 52877

QC Batch: 52877
Prep Batch: 45308

Date Analyzed: 2008-09-30
QC Preparation: 2008-09-30

Analyzed By: DC
Prepared By: DC

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000500	mg/L	0.001
Toluene		<0.000700	mg/L	0.001
Ethylbenzene		<0.000700	mg/L	0.001
Xylene		<0.00180	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0814	mg/L	1	0.100	81	44.6 - 137.4
4-Bromofluorobenzene (4-BFB)		0.0818	mg/L	1	0.100	82	37.1 - 130.9

Method Blank (1) QC Batch: 52878

QC Batch: 52878
Prep Batch: 45308

Date Analyzed: 2008-09-30
QC Preparation: 2008-09-30

Analyzed By: DC
Prepared By: DC

¹⁸High surrogate recovery due to peak interference.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 13 of 21
Hobbs, NM

Parameter	Flag	MDL Result	Units	RL
GRO		0.0796	mg/L	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0839	mg/L	1	0.100	84	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0810	mg/L	1	0.100	81	50 - 130

Method Blank (1) QC Batch: 52902

QC Batch: 52902
Prep Batch: 45325

Date Analyzed: 2008-10-01
QC Preparation: 2008-10-01

Analyzed By: LD
Prepared By: LD

Parameter	Flag	MDL Result	Units	RL
DRO		<2.44	mg/L	5

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		7.14	mg/L	1	10.0	71	70 - 130

Method Blank (1) QC Batch: 53057

QC Batch: 53057
Prep Batch: 45459

Date Analyzed: 2008-10-03
QC Preparation: 2008-10-02

Analyzed By: DS
Prepared By: DS

Parameter	Flag	MDL Result	Units	RL
Naphthalene		<0.0000730	mg/L	0.0002
2-Methylnaphthalene		<0.0000509	mg/L	0.0002
1-Methylnaphthalene		<0.0000748	mg/L	0.0002
Acenaphthylene		<0.0000767	mg/L	0.0002
Acenaphthene		<0.000142	mg/L	0.0002
Dibenzofuran		<0.0000470	mg/L	0.0002
Fluorene		<0.0000569	mg/L	0.0002
Anthracene		<0.0000876	mg/L	0.0002
Phenanthrene		<0.0000552	mg/L	0.0002
Fluoranthene		<0.0000954	mg/L	0.0002
Pyrene		<0.0000497	mg/L	0.0002
Benzo(a)anthracene		<0.0000328	mg/L	0.0002
Chrysene		<0.0000990	mg/L	0.0002
Benzo(b)fluoranthene		<0.0000684	mg/L	0.0002
Benzo(k)fluoranthene		<0.0000830	mg/L	0.0002

continued ...

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 14 of 21
Hobbs, NM

method blank continued ...

Parameter	Flag	MDL Result	Units	RL
Benzo(a)pyrene		<0.0000549	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		<0.0000869	mg/L	0.0002
Dibenzo(a,h)anthracene		<0.0000605	mg/L	0.0002
Benzo(g,h,i)perylene		<0.0000681	mg/L	0.0002

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0669	mg/L	1	0.0800	84	10 - 146
2-Fluorobiphenyl		0.0623	mg/L	1	0.0800	78	10 - 141
Terphenyl-d14		0.0773	mg/L	1	0.0800	97	10 - 266

Laboratory Control Spike (LCS-1)

QC Batch: 52877
Prep Batch: 45308

Date Analyzed: 2008-09-30
QC Preparation: 2008-09-30

Analyzed By: DC
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0860	mg/L	1	0.100	<0.000500	86	71.7 - 120.5
Toluene	0.0875	mg/L	1	0.100	<0.000700	88	75.4 - 118.8
Ethylbenzene	0.0867	mg/L	1	0.100	<0.000700	87	73.5 - 118
Xylene	0.262	mg/L	1	0.300	<0.00180	87	72.9 - 118.2

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	0.0844	mg/L	1	0.100	<0.000500	84	71.7 - 120.5	2	20
Toluene	0.0855	mg/L	1	0.100	<0.000700	86	75.4 - 118.8	2	20
Ethylbenzene	0.0854	mg/L	1	0.100	<0.000700	85	73.5 - 118	2	20
Xylene	0.257	mg/L	1	0.300	<0.00180	86	72.9 - 118.2	2	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
Trifluorotoluene (TFT)	0.0805	0.0786	mg/L	1	0.100	80	79	38.2 - 131.6
4-Bromofluorobenzene (4-BFB)	0.0828	0.0821	mg/L	1	0.100	83	82	43.9 - 132.4

Laboratory Control Spike (LCS-1)

QC Batch: 52878
Prep Batch: 45308

Date Analyzed: 2008-09-30
QC Preparation: 2008-09-30

Analyzed By: DC
Prepared By: DC

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 15 of 21
Hobbs, NM

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	0.854	mg/L	1	1.00	0.0796	77	70 - 130

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	0.855	mg/L	1	1.00	0.0796	78	70 - 130	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)	0.0849	0.0815	mg/L	1	0.100	85	82	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0870	0.0839	mg/L	1	0.100	87	84	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 52902
Prep Batch: 45325

Date Analyzed: 2008-10-01
QC Preparation: 2008-10-01

Analyzed By: LD
Prepared By: LD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	23.6	mg/L	1	25.0	<2.44	94	70 - 130

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	25.1	mg/L	1	25.0	<2.44	100	70 - 130	6	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	11.3	11.4	mg/L	1	10.0	113	114	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 53057
Prep Batch: 45459

Date Analyzed: 2008-10-03
QC Preparation: 2008-10-02

Analyzed By: DS
Prepared By: DS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Naphthalene	0.0489	mg/L	1	0.0800	<0.0000730	61	10 - 141
2-Methylnaphthalene	0.0546	mg/L	1	0.0800	<0.0000509	68	50 - 150
1-Methylnaphthalene	0.0546	mg/L	1	0.0800	<0.0000748	68	50 - 150

continued ...

control spikes continued ...

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Acenaphthylene	0.0703	mg/L	1	0.0800	<0.0000767	88	10 - 152
Acenaphthene	0.0667	mg/L	1	0.0800	<0.000142	83	10 - 151
Dibenzofuran	0.0673	mg/L	1	0.0800	<0.0000470	84	10 - 148
Fluorene	0.0747	mg/L	1	0.0800	<0.0000569	93	10 - 172
Anthracene	0.0715	mg/L	1	0.0800	<0.0000876	89	22.5 - 172
Phenanthrene	0.0701	mg/L	1	0.0800	<0.0000552	88	19.6 - 172
Fluoranthene	0.0782	mg/L	1	0.0800	<0.0000954	98	17.3 - 187
Pyrene	0.0756	mg/L	1	0.0800	<0.0000497	94	14.9 - 199
Benzo(a)anthracene	0.0718	mg/L	1	0.0800	<0.0000328	90	19.4 - 185
Chrysene	0.0758	mg/L	1	0.0800	<0.0000990	95	18.4 - 188
Benzo(b)fluoranthene	0.0742	mg/L	1	0.0800	<0.0000684	93	10 - 193
Benzo(k)fluoranthene	0.0781	mg/L	1	0.0800	<0.0000830	98	27.8 - 196
Benzo(a)pyrene	0.0845	mg/L	1	0.0800	<0.0000549	106	12.4 - 205
Indeno(1,2,3-cd)pyrene	0.0891	mg/L	1	0.0800	<0.0000869	111	10 - 198
Dibenzo(a,h)anthracene	0.0884	mg/L	1	0.0800	<0.0000605	110	10 - 172
Benzo(g,h,i)perylene	0.0886	mg/L	1	0.0800	<0.0000681	111	10 - 186

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
Naphthalene	0.0475	mg/L	1	0.0800	<0.0000730	59	10 - 141	3	20
2-Methylnaphthalene	0.0540	mg/L	1	0.0800	<0.0000509	68	50 - 150	1	20
1-Methylnaphthalene	0.0540	mg/L	1	0.0800	<0.0000748	68	50 - 150	1	20
Acenaphthylene	0.0680	mg/L	1	0.0800	<0.0000767	85	10 - 152	3	20
Acenaphthene	0.0641	mg/L	1	0.0800	<0.000142	80	10 - 151	4	20
Dibenzofuran	0.0645	mg/L	1	0.0800	<0.0000470	81	10 - 148	4	20
Fluorene	0.0711	mg/L	1	0.0800	<0.0000569	89	10 - 172	5	20
Anthracene	0.0699	mg/L	1	0.0800	<0.0000876	87	22.5 - 172	2	20
Phenanthrene	0.0688	mg/L	1	0.0800	<0.0000552	86	19.6 - 172	2	20
Fluoranthene	0.0771	mg/L	1	0.0800	<0.0000954	96	17.3 - 187	1	20
Pyrene	0.0730	mg/L	1	0.0800	<0.0000497	91	14.9 - 199	4	20
Benzo(a)anthracene	0.0698	mg/L	1	0.0800	<0.0000328	87	19.4 - 185	3	20
Chrysene	0.0737	mg/L	1	0.0800	<0.0000990	92	18.4 - 188	3	20
Benzo(b)fluoranthene	0.0718	mg/L	1	0.0800	<0.0000684	90	10 - 193	3	20
Benzo(k)fluoranthene	0.0754	mg/L	1	0.0800	<0.0000830	94	27.8 - 196	4	20
Benzo(a)pyrene	0.0806	mg/L	1	0.0800	<0.0000549	101	12.4 - 205	5	20
Indeno(1,2,3-cd)pyrene	0.0857	mg/L	1	0.0800	<0.0000869	107	10 - 198	4	20
Dibenzo(a,h)anthracene	0.0851	mg/L	1	0.0800	<0.0000605	106	10 - 172	4	20
Benzo(g,h,i)perylene	0.0849	mg/L	1	0.0800	<0.0000681	106	10 - 186	4	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
Nitrobenzene-d5	0.0659	0.0640	mg/L	1	0.0800	82	80	10 - 165

continued ...

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 17 of 21
Hobbs, NM

control spikes continued ...

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
2-Fluorobiphenyl	0.0626	0.0601	mg/L	1	0.0800	78	75	10 - 157
Terphenyl-d14	0.0835	0.0813	mg/L	1	0.0800	104	102	10 - 220

Matrix Spike (MS-1) Spiked Sample: 174994

QC Batch: 52877
Prep Batch: 45308

Date Analyzed: 2008-09-30
QC Preparation: 2008-09-30

Analyzed By: DC
Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	43.8	mg/L	200	20.0	26.7384	85	10 - 160.8
Toluene	40.0	mg/L	200	20.0	23.2604	84	10 - 160.7
Ethylbenzene	21.2	mg/L	200	20.0	5.8361	77	10 - 158.3
Xylene	61.5	mg/L	200	60.0	15.0328	77	10 - 158

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	48.6	mg/L	200	20.0	26.7384	109	10 - 160.8	10	20
Toluene	¹⁹ 50.4	mg/L	200	20.0	23.2604	136	10 - 160.7	23	20
Ethylbenzene	²⁰ 26.4	mg/L	200	20.0	5.8361	103	10 - 158.3	22	20
Xylene	74.4	mg/L	200	60.0	15.0328	99	10 - 158	19	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)	15.3	15.5	mg/L	200	20	76	78	33.1 - 132.5
4-Bromofluorobenzene (4-BFB)	16.6	17.2	mg/L	200	20	83	86	37.5 - 136

Matrix Spike (MS-1) Spiked Sample: 174995

QC Batch: 52878
Prep Batch: 45308

Date Analyzed: 2008-09-30
QC Preparation: 2008-09-30

Analyzed By: DC
Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	²¹ 279	mg/L	200	200	246.564	16	70 - 130

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

¹⁹MSD analyte out of range. MS/MSD has a RPD within limits. Therefore, MS shows extraction occurred properly.

²⁰MSD analyte out of range. MS/MSD has a RPD within limits. Therefore, MS shows extraction occurred properly.

²¹Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 18 of 21
Hobbs, NM

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	²² 462	mg/L	200	200	246.564	108	70 - 130	49	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)	15.6	16.1	mg/L	200	20	78	80	70 - 130
4-Bromofluorobenzene (4-BFB)	16.6	18.2	mg/L	200	20	83	91	70 - 130

Matrix Spike (MS-1) Spiked Sample: 174868

QC Batch: 52902
Prep Batch: 45325

Date Analyzed: 2008-10-01
QC Preparation: 2008-10-01

Analyzed By: LD
Prepared By: LD

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	²³ 270	mg/L	1	25.0	270	0	70 - 130

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	²⁴ 267	mg/L	1	25.0	270	0	70 - 130	1	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	²⁵ ²⁶ 22.8	22.5	mg/L	1	10	228	225	70 - 130

Standard (ICV-1)

QC Batch: 52877

Date Analyzed: 2008-09-30

Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0931	93	85 - 115	2008-09-30
Toluene		mg/L	0.100	0.0938	94	85 - 115	2008-09-30
Ethylbenzene		mg/L	0.100	0.0942	94	85 - 115	2008-09-30
Xylene		mg/L	0.300	0.287	96	85 - 115	2008-09-30

²²MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

²³Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

²⁴Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

²⁵High surrogate recovery due to peak interference.

²⁶High surrogate recovery due to peak interference.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 19 of 21
Hobbs, NM

Standard (CCV-1)

QC Batch: 52877

Date Analyzed: 2008-09-30

Analyzed By: DC

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0891	89	85 - 115	2008-09-30
Toluene		mg/L	0.100	0.0897	90	85 - 115	2008-09-30
Ethylbenzene		mg/L	0.100	0.0889	89	85 - 115	2008-09-30
Xylene		mg/L	0.300	0.269	90	85 - 115	2008-09-30

Standard (ICV-1)

QC Batch: 52878

Date Analyzed: 2008-09-30

Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.09	109	85 - 115	2008-09-30

Standard (CCV-1)

QC Batch: 52878

Date Analyzed: 2008-09-30

Analyzed By: DC

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.946	95	85 - 115	2008-09-30

Standard (ICV-1)

QC Batch: 52902

Date Analyzed: 2008-10-01

Analyzed By: LD

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	237	95	85 - 115	2008-10-01

Standard (CCV-1)

QC Batch: 52902

Date Analyzed: 2008-10-01

Analyzed By: LD

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 20 of 21
Hobbs, NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	222	89	85 - 115	2008-10-01

Standard (CCV-1)

QC Batch: 53057

Date Analyzed: 2008-10-03

Analyzed By: DS

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/L	60.0	56.6	94	80 - 120	2008-10-03
2-Methylnaphthalene		mg/L	60.0	52.2	87	80 - 120	2008-10-03
1-Methylnaphthalene		mg/L	60.0	52.3	87	80 - 120	2008-10-03
Acenaphthylene		mg/L	60.0	59.4	99	80 - 120	2008-10-03
Acenaphthene		mg/L	60.0	58.3	97	80 - 120	2008-10-03
Dibenzofuran		mg/L	60.0	60.6	101	80 - 120	2008-10-03
Fluorene		mg/L	60.0	66.6	111	80 - 120	2008-10-03
Anthracene		mg/L	60.0	59.8	100	80 - 120	2008-10-03
Phenanthrene		mg/L	60.0	57.5	96	80 - 120	2008-10-03
Fluoranthene		mg/L	60.0	59.2	99	80 - 120	2008-10-03
Pyrene		mg/L	60.0	61.0	102	80 - 120	2008-10-03
Benzo(a)anthracene		mg/L	60.0	56.0	93	80 - 120	2008-10-03
Chrysene		mg/L	60.0	58.1	97	80 - 120	2008-10-03
Benzo(b)fluoranthene		mg/L	60.0	60.7	101	80 - 120	2008-10-03
Benzo(k)fluoranthene		mg/L	60.0	61.5	102	80 - 120	2008-10-03
Benzo(a)pyrene		mg/L	60.0	63.6	106	80 - 120	2008-10-03
Indeno(1,2,3-cd)pyrene		mg/L	60.0	69.7	116	80 - 120	2008-10-03
Dibenzo(a,h)anthracene		mg/L	60.0	69.8	116	80 - 120	2008-10-03
Benzo(g,h,i)perylene		mg/L	60.0	69.0	115	80 - 120	2008-10-03

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5		61.5	mg/L	1	60.0	102	80 - 120
2-Fluorobiphenyl		57.6	mg/L	1	60.0	96	80 - 120
Terphenyl-d14		60.3	mg/L	1	60.0	100	80 - 120

Standard (CCV-2)

QC Batch: 53057

Date Analyzed: 2008-10-03

Analyzed By: DS

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/L	60.0	57.0	95	80 - 120	2008-10-03

continued ...

standard continued ...

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
2-Methylnaphthalene		mg/L	60.0	53.8	90	80 - 120	2008-10-03
1-Methylnaphthalene		mg/L	60.0	54.7	91	80 - 120	2008-10-03
Acenaphthylene		mg/L	60.0	58.8	98	80 - 120	2008-10-03
Acenaphthene		mg/L	60.0	58.7	98	80 - 120	2008-10-03
Dibenzofuran		mg/L	60.0	62.1	104	80 - 120	2008-10-03
Fluorene		mg/L	60.0	69.8	116	80 - 120	2008-10-03
Anthracene		mg/L	60.0	59.0	98	80 - 120	2008-10-03
Phenanthrene		mg/L	60.0	56.6	94	80 - 120	2008-10-03
Fluoranthene		mg/L	60.0	54.4	91	80 - 120	2008-10-03
Pyrene		mg/L	60.0	61.1	102	80 - 120	2008-10-03
Benzo(a)anthracene		mg/L	60.0	56.7	94	80 - 120	2008-10-03
Chrysene		mg/L	60.0	58.4	97	80 - 120	2008-10-03
Benzo(b)fluoranthene		mg/L	60.0	56.8	95	80 - 120	2008-10-03
Benzo(k)fluoranthene		mg/L	60.0	61.6	103	80 - 120	2008-10-03
Benzo(a)pyrene		mg/L	60.0	63.1	105	80 - 120	2008-10-03
Indeno(1,2,3-cd)pyrene	²⁷	mg/L	60.0	73.8	123	80 - 120	2008-10-03
Dibenzo(a,h)anthracene	²⁸	mg/L	60.0	73.5	122	80 - 120	2008-10-03
Benzo(g,h,i)perylene	²⁹	mg/L	60.0	72.8	121	80 - 120	2008-10-03

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5		58.3	mg/L	1	60.0	97	80 - 120
2-Fluorobiphenyl		52.4	mg/L	1	60.0	87	80 - 120
Terphenyl-d14		59.6	mg/L	1	60.0	99	80 - 120

²⁷Indeno(1,2,3-cd)pyrene outside of control limits on CCV(ICV). CCV(ICV) component average is 101% which is within acceptable range. This is acceptable by Method 8000.

²⁸Dibenzo(a,h)anthracene outside of control limits on CCV(ICV). CCV(ICV) component average is 101% which is within acceptable range. This is acceptable by Method 8000.

²⁹Benzo(g,h,i)perylene outside of control limits on CCV(ICV). CCV(ICV) component average is 101% which is within acceptable range. This is acceptable by Method 8000.



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Certifications

WBENC: 237019

HUB: 1752439743100-86536

DBE: VN 20657

NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX

El Paso: T104704221-08-TX

Midland: T104704392-08-TX

LELAP-02003

LELAP-02002

Kansas E-10317

Analytical and Quality Control Report

Shanna Smith
Talon LPE-Amarillo
921 North Bivins
Amarillo, TX, 79107

Report Date: December 8, 2008

Work Order: 8120305



Project Location: Hobbs, NM
Project Name: Kimbrough Sweet 8 inch
Project Number: Plains045SPL
SRS#: 2000-10757

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
180967	MW-1	water	2008-12-02	13:15	2008-12-02
180968	MW-3	water	2008-12-02	13:23	2008-12-02
180969	MW-4	water	2008-12-02	13:30	2008-12-02
180970	MW-10	water	2008-12-02	13:57	2008-12-02

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 7 pages and shall not be reproduced except in its entirety, without written approval of

TraceAnalysis, Inc.

Michael Abel

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 Kimbrough Sweet 8 inch were received by TraceAnalysis, Inc. on 2008-12-02 and assigned to work order 8120305. Samples for work order 8120305 were received intact without headspace and at a temperature of 3.1 deg. C.

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

Test	Method
BTEX	S 8021B

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 8120305 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.

Report Date: December 8, 2008
Plains045SPL

Work Order: 8120305
Kimbrough Sweet 8 inch

Page Number: 4 of 7
Hobbs, NM

Analytical Report

Sample: 180967 - MW-1

Laboratory: Midland
Analysis: BTEX
QC Batch: 54889
Prep Batch: 46920

Analytical Method: S 8021B
Date Analyzed: 2008-12-05
Sample Preparation: 2008-12-05

Prep Method: S 5030B
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0985	mg/L	1	0.100	98	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		0.0941	mg/L	1	0.100	94	52 - 124.1

Sample: 180968 - MW-3

Laboratory: Midland
Analysis: BTEX
QC Batch: 54889
Prep Batch: 46920

Analytical Method: S 8021B
Date Analyzed: 2008-12-05
Sample Preparation: 2008-12-05

Prep Method: S 5030B
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		12.1	mg/L	100	0.00100
Toluene		0.189	mg/L	100	0.00100
Ethylbenzene		0.207	mg/L	100	0.00100
Xylene		0.456	mg/L	100	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		9.72	mg/L	100	10.0	97	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		9.47	mg/L	100	10.0	95	52 - 124.1

Sample: 180969 - MW-4

Laboratory: Midland
Analysis: BTEX
QC Batch: 54889
Prep Batch: 46920

Analytical Method: S 8021B
Date Analyzed: 2008-12-05
Sample Preparation: 2008-12-05

Prep Method: S 5030B
Analyzed By: AG
Prepared By: AG

Report Date: December 8, 2008
Plains045SPL

Work Order: 8120305
Kimbrough Sweet 8 inch

Page Number: 5 of 7
Hobbs, NM

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0950	mg/L	1	0.100	95	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		0.0922	mg/L	1	0.100	92	52 - 124.1

Sample: 180970 - MW-10

Laboratory: Midland
Analysis: BTEX
QC Batch: 54889
Prep Batch: 46920

Analytical Method: S 8021B
Date Analyzed: 2008-12-05
Sample Preparation: 2008-12-05

Prep Method: S 5030B
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0980	mg/L	1	0.100	98	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		0.0939	mg/L	1	0.100	94	52 - 124.1

Method Blank (1) QC Batch: 54889

QC Batch: 54889
Prep Batch: 46920

Date Analyzed: 2008-12-05
QC Preparation: 2008-12-05

Analyzed By: AG
Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000800	mg/L	0.001
Toluene		<0.000800	mg/L	0.001
Ethylbenzene		<0.000500	mg/L	0.001
Xylene		<0.000900	mg/L	0.001

Report Date: December 8, 2008
Plains045SPL

Work Order: 8120305
Kimbrough Sweet 8 inch

Page Number: 6 of 7
Hobbs, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.102	mg/L	1	0.100	102	44.6 - 137.4
4-Bromofluorobenzene (4-BFB)		0.0976	mg/L	1	0.100	98	37.1 - 130.9

Laboratory Control Spike (LCS-1)

QC Batch: 54889
Prep Batch: 46920

Date Analyzed: 2008-12-05
QC Preparation: 2008-12-05

Analyzed By: AG
Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0893	mg/L	1	0.100	<0.000800	89	71.7 - 120.5
Toluene	0.0885	mg/L	1	0.100	<0.000800	88	75.4 - 118.8
Ethylbenzene	0.0864	mg/L	1	0.100	<0.000500	86	73.5 - 118
Xylene	0.260	mg/L	1	0.300	<0.000900	87	72.9 - 118.2

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	0.0904	mg/L	1	0.100	<0.000800	90	71.7 - 120.5	1	20
Toluene	0.0894	mg/L	1	0.100	<0.000800	89	75.4 - 118.8	1	20
Ethylbenzene	0.0887	mg/L	1	0.100	<0.000500	89	73.5 - 118	3	20
Xylene	0.267	mg/L	1	0.300	<0.000900	89	72.9 - 118.2	3	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)	0.0952	0.0988	mg/L	1	0.100	95	99	38.2 - 131.6
4-Bromofluorobenzene (4-BFB)	0.0973	0.0984	mg/L	1	0.100	97	98	43.9 - 132.4

Matrix Spike (MS-1) Spiked Sample: 180968

QC Batch: 54889
Prep Batch: 46920

Date Analyzed: 2008-12-05
QC Preparation: 2008-12-05

Analyzed By: AG
Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	22.5	mg/L	100	10.0	12.0982	104	10 - 160.8
Toluene	9.04	mg/L	100	10.0	0.1886	88	10 - 160.7
Ethylbenzene	8.84	mg/L	100	10.0	0.2069	86	10 - 158.3
Xylene	26.5	mg/L	100	30.0	0.456	87	10 - 158

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

Report Date: December 8, 2008
Plains045SPL

Work Order: 8120305
Kimbrough Sweet 8 inch

Page Number: 7 of 7
Hobbs, NM

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	22.4	mg/L	100	10.0	12.0982	103	10 - 160.8	0	20
Toluene	9.08	mg/L	100	10.0	0.1886	89	10 - 160.7	0	20
Ethylbenzene	9.08	mg/L	100	10.0	0.2069	89	10 - 158.3	3	20
Xylene	27.3	mg/L	100	30.0	0.456	89	10 - 158	3	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)	9.56	9.67	mg/L	100	10	96	97	33.1 - 132.5
4-Bromofluorobenzene (4-BFB)	9.70	9.73	mg/L	100	10	97	97	37.5 - 136

Standard (ICV-1)

QC Batch: 54889

Date Analyzed: 2008-12-05

Analyzed By: AG

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.102	102	85 - 115	2008-12-05
Toluene		mg/L	0.100	0.101	101	85 - 115	2008-12-05
Ethylbenzene		mg/L	0.100	0.100	100	85 - 115	2008-12-05
Xylene		mg/L	0.300	0.302	101	85 - 115	2008-12-05

Standard (CCV-1)

QC Batch: 54889

Date Analyzed: 2008-12-05

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0915	92	85 - 115	2008-12-05
Toluene		mg/L	0.100	0.0888	89	85 - 115	2008-12-05
Ethylbenzene		mg/L	0.100	0.0886	89	85 - 115	2008-12-05
Xylene		mg/L	0.300	0.266	89	85 - 115	2008-12-05

TraceAnalysis, Inc.

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Fax (817) 560-4336Company Name: Talco/UPC Phone #: (432) 522-2133Address: 1 (Street, City, Zip)2901 Rockin HwyContact Person: Shanna SmithE-mail: ssmith@talco.com

Invoice to:

(If different from above) PLAINS 3RS #2002-1057

Project #:

PLAINS 0455PL

Project Location (including state):

Hobbs, N.M.

Project Name:

Kimberly

Sampler Signature:

KimberlyANALYSIS REQUEST
(Circle or Specify Method No.)

LAB #	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD					SAMPLING		TIME	DATE	TIME	Temp °C	
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	DATE					TIME
80167	MW-1	3	Var	X				X					X			12/15	13:15		
80168	MW-3	3	Var	X				X					X			13:23			
80169	MW-4	3	Var	X				X					X			13:30			
80170	MW-10	3	Var	X				X					X			13:37			

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	Temp °C:
<u>Shanna Smith</u>	<u>Talco/UPC</u>	<u>12/15/02</u>	<u>17:00</u>	<u>Trace</u>	<u>Trace</u>	<u>12/15/02</u>	<u>17:00</u>	<u>3.1C</u>
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	Temp °C:
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	Temp °C:

REMARKS:

LAB USE ONLY

Analysis Method: As it is - 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.

Carrier #

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APPENDIX D

NMOCD C-141



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Analytical and Quality Control Report

Shanna Smith
Talon LPE-Amarillo
921 North Bivins
Amarillo, TX, 79107

Report Date: June 24, 2008

Work Order: 8061834



Project Location: Hobbs, NM
Project Name: Kimbrough Sweet 8 inch
Project Number: Plains045SPL
SRS#: SRS# 2000-10757

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
163942	MW-3	water	2008-06-18	13:31	2008-06-18
163943	MW-4	water	2008-06-18	13:59	2008-06-18
163944	MW-10	water	2008-06-18	13:47	2008-06-18

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 7 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Certifications

Lubbock - NELAP T104704219-08-TX

El Paso - NELAP T104704221-08-TX

Standard Flags

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

Case Narrative

Samples for project Kimbrough Sweet 8 inch were received by TraceAnalysis, Inc. on 2008-06-18 and assigned to work order 8061834. Samples for work order 8061834 were received intact without headspace and at a temperature of 2.1 deg C.

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

Test	Method
BTEX	S 8021B

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 8061834 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.

Report Date: June 24, 2008
Plains045SPL

Work Order: 8061834
Kimbrough Sweet 8 inch

Page Number: 4 of 7
Hobbs, NM

Analytical Report

Sample: 163942 - MW-3

Laboratory: Midland
Analysis: BTEX
QC Batch: 49662
Prep Batch: 42588

Analytical Method: S 8021B
Date Analyzed: 2008-06-21
Sample Preparation: 2008-06-20

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		11.6	mg/L	50	0.00100
Toluene		<0.0500	mg/L	50	0.00100
Ethylbenzene		0.196	mg/L	50	0.00100
Xylene		0.177	mg/L	50	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3.83	mg/L	50	5.00	77	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		3.62	mg/L	50	5.00	72	52 - 124.1

Sample: 163943 - MW-4

Laboratory: Midland
Analysis: BTEX
QC Batch: 49662
Prep Batch: 42588

Analytical Method: S 8021B
Date Analyzed: 2008-06-21
Sample Preparation: 2008-06-20

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0725	mg/L	1	0.100	72	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		0.0733	mg/L	1	0.100	73	52 - 124.1

Sample: 163944 - MW-10

Laboratory: Midland
Analysis: BTEX
QC Batch: 49662
Prep Batch: 42588

Analytical Method: S 8021B
Date Analyzed: 2008-06-21
Sample Preparation: 2008-06-20

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Report Date: June 24, 2008
Plains045SPL

Work Order: 8061834
Kimbrough Sweet 8 inch

Page Number: 5 of 7
Hobbs, NM

Parameter	Flag	RL	Units	Dilution	RL
		Result			
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0730	mg/L	1	0.100	73	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		0.0744	mg/L	1	0.100	74	52 - 124.1

Method Blank (1) QC Batch: 49662

QC Batch: 49662
Prep Batch: 42588

Date Analyzed: 2008-06-21
QC Preparation: 2008-06-20

Analyzed By: DC
Prepared By: DC

Parameter	Flag	MDL	Units	RL
		Result		
Benzene		<0.000200	mg/L	0.001
Toluene		<0.000200	mg/L	0.001
Ethylbenzene		<0.000200	mg/L	0.001
Xylene		<0.000300	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0776	mg/L	1	0.100	78	44.6 - 137.4
4-Bromofluorobenzene (4-BFB)		0.0781	mg/L	1	0.100	78	37.1 - 130.9

Laboratory Control Spike (LCS-1)

QC Batch: 49662
Prep Batch: 42588

Date Analyzed: 2008-06-21
QC Preparation: 2008-06-20

Analyzed By: DC
Prepared By: DC

Param	LCS	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec.
	Result						Limit
Benzene	0.0830	mg/L	1	0.100	<0.000200	83	71.7 - 120.5
Toluene	0.0819	mg/L	1	0.100	<0.000200	82	75.4 - 118.8
Ethylbenzene	0.0820	mg/L	1	0.100	<0.000200	82	73.5 - 118
Xylene	0.246	mg/L	1	0.300	<0.000300	82	72.9 - 118.2

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

Report Date: June 24, 2008
Plains045SPL

Work Order: 8061834
Kimbrough Sweet 8 inch

Page Number: 6 of 7
Hobbs, NM

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.0829	mg/L	1	0.100	<0.000200	83	71.7 - 120.5	0	20
Toluene	0.0816	mg/L	1	0.100	<0.000200	82	75.4 - 118.8	0	20
Ethylbenzene	0.0816	mg/L	1	0.100	<0.000200	82	73.5 - 118	0	20
Xylene	0.245	mg/L	1	0.300	<0.000300	82	72.9 - 118.2	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)	0.0760	0.0764	mg/L	1	0.100	76	76	38.2 - 131.6
4-Bromofluorobenzene (4-BFB)	0.0777	0.0782	mg/L	1	0.100	78	78	43.9 - 132.4

Matrix Spike (MS-1) Spiked Sample: 163942

QC Batch: 49662
Prep Batch: 42588

Date Analyzed: 2008-06-21
QC Preparation: 2008-06-20

Analyzed By: DC
Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	12.6	mg/L	50	5.00	11.5731	20	10 - 160.8
Toluene	3.16	mg/L	50	5.00	<0.0100	63	10 - 160.7
Ethylbenzene	3.33	mg/L	50	5.00	0.1957	63	10 - 158.3
Xylene	9.43	mg/L	50	15.0	0.1768	62	10 - 158

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	13.1	mg/L	50	5.00	11.5731	30	10 - 160.8	4	20
Toluene	3.29	mg/L	50	5.00	<0.0100	66	10 - 160.7	4	20
Ethylbenzene	3.52	mg/L	50	5.00	0.1957	66	10 - 158.3	6	20
Xylene	9.92	mg/L	50	15.0	0.1768	65	10 - 158	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)	3.61	3.68	mg/L	50	5	72	74	33.1 - 132.5
4-Bromofluorobenzene (4-BFB)	2.77	2.84	mg/L	50	5	55	57	37.5 - 136

Standard (ICV-1)

QC Batch: 49662

Date Analyzed: 2008-06-21

Analyzed By: DC

Report Date: June 24, 2008
Plains045SPL

Work Order: 8061834
Kimbrough Sweet 8 inch

Page Number: 7 of 7
Hobbs, NM

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.101	101	85 - 115	2008-06-21
Toluene		mg/L	0.100	0.0987	99	85 - 115	2008-06-21
Ethylbenzene		mg/L	0.100	0.0983	98	85 - 115	2008-06-21
Xylene		mg/L	0.300	0.295	98	85 - 115	2008-06-21

Standard (CCV-1)

QC Batch: 49662

Date Analyzed: 2008-06-21

Analyzed By: DC

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0899	90	85 - 115	2008-06-21
Toluene		mg/L	0.100	0.0881	88	85 - 115	2008-06-21
Ethylbenzene		mg/L	0.100	0.0876	88	85 - 115	2008-06-21
Xylene		mg/L	0.300	0.261	87	85 - 115	2008-06-21



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E-Mail: lab@traceanalysis.com

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Shanna Smith
Talon LPE-Midland
2901 State Highway 349
Midland, TX, 79706

Report Date: August 7, 2008

Work Order: 8080516



Project Location: Hobbs, NM
Project Name: Kimbrough
Project Number: Plains045SPL
SRS #: 2000-10757

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
169548	BC-1 2'	soil	2008-08-05	09:01	2008-08-05
169549	BC-1 5'	soil	2008-08-05	09:04	2008-08-05
169550	BC-1 10'	soil	2008-08-05	09:08	2008-08-05
169551	BC-1 15'	soil	2008-08-05	09:13	2008-08-05
169552	BC-2 2'	soil	2008-08-05	09:16	2008-08-05
169553	BC-2 5'	soil	2008-08-05	09:19	2008-08-05
169554	BC-2 10'	soil	2008-08-05	09:23	2008-08-05
169555	BC-2 15'	soil	2008-08-05	09:26	2008-08-05
169556	BC-3 2'	soil	2008-08-05	09:30	2008-08-05

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
169557	BC-3 5'	soil	2008-08-05	09:50	2008-08-05
169558	BC-3 10'	soil	2008-08-05	09:57	2008-08-05
169559	BC-3 15'	soil	2008-08-05	10:03	2008-08-05
169560	BC-4 2'	soil	2008-08-05	10:05	2008-08-05
169561	BC-4 5'	soil	2008-08-05	10:08	2008-08-05
169562	BC-4 10'	soil	2008-08-05	10:11	2008-08-05
169563	BC-4 15'	soil	2008-08-05	10:15	2008-08-05

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 28 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Blair Leftwich

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 Kimbrough were received by TraceAnalysis, Inc. on 2008-08-05 and assigned to work order 8080516. Samples for work order 8080516 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 8080516 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.

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 4 of 28
Hobbs, NM

Analytical Report

Sample: 169548 - BC-1 2'

Laboratory: Midland
Analysis: BTEX
QC Batch: 51179
Prep Batch: 43891

Analytical Method: S 8021B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

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)		0.811	mg/Kg	1	1.00	81	68 - 136.9
4-Bromofluorobenzene (4-BFB)		0.869	mg/Kg	1	1.00	87	48.2 - 155

Sample: 169548 - BC-1 2'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 51154
Prep Batch: 43873

Analytical Method: Mod. 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		85.2	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		224	mg/Kg	1	100	224	10 - 250.4

Sample: 169548 - BC-1 2'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 51180
Prep Batch: 43891

Analytical Method: S 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

continued ...

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 5 of 28
Hobbs, NM

sample 169548 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
GRO	B	1.01	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.944	mg/Kg	1	1.00	94	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		0.957	mg/Kg	1	1.00	96	63.8 - 141

Sample: 169549 - BC-1 5'

Laboratory: Midland

Analysis: BTEX

QC Batch: 51179

Prep Batch: 43891

Analytical Method: S 8021B

Date Analyzed: 2008-08-06

Sample Preparation: 2008-08-06

Prep Method: S 5035

Analyzed By: DC

Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.0869	mg/Kg	2	0.0100
Toluene		0.0760	mg/Kg	2	0.0100
Ethylbenzene		0.362	mg/Kg	2	0.0100
Xylene		2.97	mg/Kg	2	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.65	mg/Kg	2	2.00	82	68 - 136.9
4-Bromofluorobenzene (4-BFB)		2.86	mg/Kg	2	2.00	143	48.2 - 155

Sample: 169549 - BC-1 5'

Laboratory: Midland

Analysis: TPH DRO

QC Batch: 51154

Prep Batch: 43873

Analytical Method: Mod. 8015B

Date Analyzed: 2008-08-06

Sample Preparation: 2008-08-06

Prep Method: N/A

Analyzed By: LD

Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		970	mg/Kg	1	50.0

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 6 of 28
Hobbs, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	¹	288	mg/Kg	1	100	288	10 - 250.4

Sample: 169549 - BC-1 5'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 51180
Prep Batch: 43891

Analytical Method: S 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		481	mg/Kg	2	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.96	mg/Kg	2	2.00	98	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)	²	2.94	mg/Kg	2	2.00	147	63.8 - 141

Sample: 169550 - BC-1 10'

Laboratory: Midland
Analysis: BTEX
QC Batch: 51179
Prep Batch: 43891

Analytical Method: S 8021B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.197	mg/Kg	2	0.0100
Toluene		<0.0200	mg/Kg	2	0.0100
Ethylbenzene		0.480	mg/Kg	2	0.0100
Xylene		3.78	mg/Kg	2	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.63	mg/Kg	2	2.00	82	68 - 136.9
4-Bromofluorobenzene (4-BFB)		2.52	mg/Kg	2	2.00	126	48.2 - 155

Sample: 169550 - BC-1 10'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 51154
Prep Batch: 43873

Analytical Method: Mod. 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

¹High surrogate recovery due to peak interference.

²High surrogate recovery due to peak interference.

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 7 of 28
Hobbs, NM

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		361	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		225	mg/Kg	1	100	225	10 - 250.4

Sample: 169550 - BC-1 10'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 51180
Prep Batch: 43891

Analytical Method: S 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		450	mg/Kg	2	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.89	mg/Kg	2	2.00	94	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		2.70	mg/Kg	2	2.00	135	63.8 - 141

Sample: 169551 - BC-1 15'

Laboratory: Midland
Analysis: BTEX
QC Batch: 51179
Prep Batch: 43891

Analytical Method: S 8021B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.384	mg/Kg	2	0.0100
Toluene		<0.0200	mg/Kg	2	0.0100
Ethylbenzene		0.477	mg/Kg	2	0.0100
Xylene		2.36	mg/Kg	2	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.69	mg/Kg	2	2.00	84	68 - 136.9
4-Bromofluorobenzene (4-BFB)		2.48	mg/Kg	2	2.00	124	48.2 - 155

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 8 of 28
Hobbs, NM

Sample: 169551 - BC-1 15'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 51154
Prep Batch: 43873

Analytical Method: Mod. 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		352	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		186	mg/Kg	1	100	186	10 - 250.4

Sample: 169551 - BC-1 15'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 51180
Prep Batch: 43891

Analytical Method: S 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		368	mg/Kg	2	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.97	mg/Kg	2	2.00	98	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		2.50	mg/Kg	2	2.00	125	63.8 - 141

Sample: 169552 - BC-2 2'

Laboratory: Midland
Analysis: BTEX
QC Batch: 51179
Prep Batch: 43891

Analytical Method: S 8021B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	2	0.0100
Toluene		<0.0200	mg/Kg	2	0.0100
Ethylbenzene		0.0272	mg/Kg	2	0.0100
Xylene		0.0595	mg/Kg	2	0.0100

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 9 of 28
Hobbs, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.66	mg/Kg	2	2.00	83	68 - 136.9
4-Bromofluorobenzene (4-BFB)		1.71	mg/Kg	2	2.00	86	48.2 - 155

Sample: 169552 - BC-2 2'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 51154
Prep Batch: 43873

Analytical Method: Mod. 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		177	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		195	mg/Kg	1	100	195	10 - 250.4

Sample: 169552 - BC-2 2'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 51180
Prep Batch: 43891

Analytical Method: S 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		59.4	mg/Kg	2	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.93	mg/Kg	2	2.00	96	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.80	mg/Kg	2	2.00	90	63.8 - 141

Sample: 169553 - BC-2 5'

Laboratory: Midland
Analysis: BTEX
QC Batch: 51179
Prep Batch: 43891

Analytical Method: S 8021B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0500	mg/Kg	5	0.0100
Toluene		0.0524	mg/Kg	5	0.0100
Ethylbenzene		0.312	mg/Kg	5	0.0100
Xylene		1.58	mg/Kg	5	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3.94	mg/Kg	5	5.00	79	68 - 136.9
4-Bromofluorobenzene (4-BFB)		5.05	mg/Kg	5	5.00	101	48.2 - 155

Sample: 169553 - BC-2 5'

Laboratory: Midland	Analytical Method: Mod. 8015B	Prep Method: N/A
Analysis: TPH DRO	Date Analyzed: 2008-08-06	Analyzed By: LD
QC Batch: 51154	Sample Preparation: 2008-08-06	Prepared By: LD
Prep Batch: 43873		

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		2250	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	³	550	mg/Kg	1	100	550	10 - 250.4

Sample: 169553 - BC-2 5'

Laboratory: Midland	Analytical Method: S 8015B	Prep Method: S 5035
Analysis: TPH GRO	Date Analyzed: 2008-08-06	Analyzed By: DC
QC Batch: 51180	Sample Preparation: 2008-08-06	Prepared By: DC
Prep Batch: 43891		

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		415	mg/Kg	5	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.57	mg/Kg	5	5.00	91	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		5.06	mg/Kg	5	5.00	101	63.8 - 141

³High surrogate recovery due to peak interference.

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 11 of 28
Hobbs, NM

Sample: 169554 - BC-2 10'

Laboratory: Midland
Analysis: BTEX
QC Batch: 51179
Prep Batch: 43891

Analytical Method: S 8021B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.374	mg/Kg	2	0.0100
Toluene		<0.0200	mg/Kg	2	0.0100
Ethylbenzene		0.821	mg/Kg	2	0.0100
Xylene		3.19	mg/Kg	2	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.65	mg/Kg	2	2.00	82	68 - 136.9
4-Bromofluorobenzene (4-BFB)		2.47	mg/Kg	2	2.00	124	48.2 - 155

Sample: 169554 - BC-2 10'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 51154
Prep Batch: 43873

Analytical Method: Mod. 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		374	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		201	mg/Kg	1	100	201	10 - 250.4

Sample: 169554 - BC-2 10'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 51180
Prep Batch: 43891

Analytical Method: S 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		364	mg/Kg	2	1.00

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 12 of 28
Hobbs, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.90	mg/Kg	2	2.00	95	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		2.57	mg/Kg	2	2.00	128	63.8 - 141

Sample: 169555 - BC-2 15'

Laboratory: Midland
Analysis: BTEX
QC Batch: 51179
Prep Batch: 43891

Analytical Method: S 8021B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.330	mg/Kg	2	0.0100
Toluene		<0.0200	mg/Kg	2	0.0100
Ethylbenzene		0.478	mg/Kg	2	0.0100
Xylene		1.43	mg/Kg	2	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.58	mg/Kg	2	2.00	79	68 - 136.9
4-Bromofluorobenzene (4-BFB)		2.03	mg/Kg	2	2.00	102	48.2 - 155

Sample: 169555 - BC-2 15'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 51154
Prep Batch: 43873

Analytical Method: Mod. 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		182	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		148	mg/Kg	1	100	148	10 - 250.4

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 13 of 28
Hobbs, NM

Sample: 169555 - BC-2 15'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 51180
Prep Batch: 43891

Analytical Method: S 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		256	mg/Kg	2	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.82	mg/Kg	2	2.00	91	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		2.22	mg/Kg	2	2.00	111	63.8 - 141

Sample: 169556 - BC-3 2'

Laboratory: Midland
Analysis: BTEX
QC Batch: 51179
Prep Batch: 43891

Analytical Method: S 8021B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		0.0109	mg/Kg	1	0.0100
Xylene		0.0245	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.806	mg/Kg	1	1.00	81	68 - 136.9
4-Bromofluorobenzene (4-BFB)		0.836	mg/Kg	1	1.00	84	48.2 - 155

Sample: 169556 - BC-3 2'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 51154
Prep Batch: 43873

Analytical Method: Mod. 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

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

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 14 of 28
Hobbs, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		176	mg/Kg	1	100	176	10 - 250.4

Sample: 169556 - BC-3 2'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 51180
Prep Batch: 43891

Analytical Method: S 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		23.4	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.936	mg/Kg	1	1.00	94	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		0.955	mg/Kg	1	1.00	96	63.8 - 141

Sample: 169557 - BC-3 5'

Laboratory: Midland
Analysis: BTEX
QC Batch: 51179
Prep Batch: 43891

Analytical Method: S 8021B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	2	0.0100
Toluene		<0.0200	mg/Kg	2	0.0100
Ethylbenzene		0.0778	mg/Kg	2	0.0100
Xylene		0.195	mg/Kg	2	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.62	mg/Kg	2	2.00	81	68 - 136.9
4-Bromofluorobenzene (4-BFB)		2.03	mg/Kg	2	2.00	102	48.2 - 155

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 15 of 28
Hobbs, NM

Sample: 169557 - BC-3 5'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 51154
Prep Batch: 43873

Analytical Method: Mod. 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		652	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	⁴	255	mg/Kg	1	100	255	10 - 250.4

Sample: 169557 - BC-3 5'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 51180
Prep Batch: 43891

Analytical Method: S 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		181	mg/Kg	2	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.87	mg/Kg	2	2.00	94	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		2.06	mg/Kg	2	2.00	103	63.8 - 141

Sample: 169558 - BC-3 10'

Laboratory: Midland
Analysis: BTEX
QC Batch: 51179
Prep Batch: 43891

Analytical Method: S 8021B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0500	mg/Kg	5	0.0100
Toluene		<0.0500	mg/Kg	5	0.0100
Ethylbenzene		0.193	mg/Kg	5	0.0100
Xylene		0.667	mg/Kg	5	0.0100

⁴High surrogate recovery due to peak interference.

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 16 of 28
Hobbs, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.08	mg/Kg	5	5.00	82	68 - 136.9
4-Bromofluorobenzene (4-BFB)		4.54	mg/Kg	5	5.00	91	48.2 - 155

Sample: 169558 - BC-3 10'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 51154
Prep Batch: 43873

Analytical Method: Mod. 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		401	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		212	mg/Kg	1	100	212	10 - 250.4

Sample: 169558 - BC-3 10'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 51180
Prep Batch: 43891

Analytical Method: S 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		322	mg/Kg	5	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.74	mg/Kg	5	5.00	95	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		4.87	mg/Kg	5	5.00	97	63.8 - 141

Sample: 169559 - BC-3 15'

Laboratory: Midland
Analysis: BTEX
QC Batch: 51179
Prep Batch: 43891

Analytical Method: S 8021B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 17 of 28
Hobbs, NM

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.0729	mg/Kg	5	0.0100
Toluene		<0.0500	mg/Kg	5	0.0100
Ethylbenzene		0.168	mg/Kg	5	0.0100
Xylene		0.323	mg/Kg	5	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.07	mg/Kg	5	5.00	81	68 - 136.9
4-Bromofluorobenzene (4-BFB)		4.38	mg/Kg	5	5.00	88	48.2 - 155

Sample: 169559 - BC-3 15'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 51154
Prep Batch: 43873

Analytical Method: Mod. 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		266	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		152	mg/Kg	1	100	152	10 - 250.4

Sample: 169559 - BC-3 15'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 51180
Prep Batch: 43891

Analytical Method: S 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		208	mg/Kg	5	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.70	mg/Kg	5	5.00	94	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		4.52	mg/Kg	5	5.00	90	63.8 - 141

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 18 of 28
Hobbs, NM

Sample: 169560 - BC-4 2'

Laboratory: Midland
Analysis: BTEX
QC Batch: 51179
Prep Batch: 43891

Analytical Method: S 8021B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL		Units	Dilution	RL	
		Result					
Benzene		<0.0200		mg/Kg	2		0.0100
Toluene		<0.0200		mg/Kg	2		0.0100
Ethylbenzene		<0.0200		mg/Kg	2		0.0100
Xylene		0.0636		mg/Kg	2		0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.61	mg/Kg	2	2.00	80	68 - 136.9
4-Bromofluorobenzene (4-BFB)		1.79	mg/Kg	2	2.00	90	48.2 - 155

Sample: 169560 - BC-4 2'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 51154
Prep Batch: 43873

Analytical Method: Mod. 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL		Units	Dilution	RL	
		Result					
DRO		182		mg/Kg	1		50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		175	mg/Kg	1	100	175	10 - 250.4

Sample: 169560 - BC-4 2'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 51180
Prep Batch: 43891

Analytical Method: S 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL		Units	Dilution	RL	
		Result					
GRO		119		mg/Kg	2		1.00

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 19 of 28
Hobbs, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.89	mg/Kg	2	2.00	94	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.94	mg/Kg	2	2.00	97	63.8 - 141

Sample: 169561 - BC-4 5'

Laboratory: Midland
Analysis: BTEX
QC Batch: 51179
Prep Batch: 43891

Analytical Method: S 8021B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0500	mg/Kg	5	0.0100
Toluene		0.0582	mg/Kg	5	0.0100
Ethylbenzene		0.228	mg/Kg	5	0.0100
Xylene		1.33	mg/Kg	5	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.02	mg/Kg	5	5.00	80	68 - 136.9
4-Bromofluorobenzene (4-BFB)		5.00	mg/Kg	5	5.00	100	48.2 - 155

Sample: 169561 - BC-4 5'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 51154
Prep Batch: 43873

Analytical Method: Mod. 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		1220	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	⁵	376	mg/Kg	1	100	376	10 - 250.4

Sample: 169561 - BC-4 5'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 51180
Prep Batch: 43891

Analytical Method: S 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

⁵High surrogate recovery due to peak interference.

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 20 of 28
Hobbs, NM

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		419	mg/Kg	5	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.64	mg/Kg	5	5.00	93	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		4.84	mg/Kg	5	5.00	97	63.8 - 141

Sample: 169562 - BC-4 10'

Laboratory: Midland
Analysis: BTEX
QC Batch: 51179
Prep Batch: 43891

Analytical Method: S 8021B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.116	mg/Kg	5	0.0100
Toluene		0.250	mg/Kg	5	0.0100
Ethylbenzene		0.476	mg/Kg	5	0.0100
Xylene		2.97	mg/Kg	5	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.12	mg/Kg	5	5.00	82	68 - 136.9
4-Bromofluorobenzene (4-BFB)		5.16	mg/Kg	5	5.00	103	48.2 - 155

Sample: 169562 - BC-4 10'

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 51154
Prep Batch: 43873

Analytical Method: Mod. 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		497	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	⁶	260	mg/Kg	1	100	260	10 - 250.4

⁶High surrogate recovery due to peak interference.

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 21 of 28
Hobbs, NM

Sample: 169562 - BC-4 10'

Laboratory:	Midland	Analytical Method:	S 8015B	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2008-08-06	Analyzed By:	DC
QC Batch:	51180	Sample Preparation:	2008-08-06	Prepared By:	DC
Prep Batch:	43891				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		532	mg/Kg	5	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.76	mg/Kg	5	5.00	95	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		5.41	mg/Kg	5	5.00	108	63.8 - 141

Sample: 169563 - BC-4 15'

Laboratory:	Midland	Analytical Method:	S 8021B	Prep Method:	S 5035
Analysis:	BTEX	Date Analyzed:	2008-08-06	Analyzed By:	DC
QC Batch:	51179	Sample Preparation:	2008-08-06	Prepared By:	DC
Prep Batch:	43891				

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	2	0.0100
Toluene		<0.0200	mg/Kg	2	0.0100
Ethylbenzene		0.0314	mg/Kg	2	0.0100
Xylene		0.0552	mg/Kg	2	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.63	mg/Kg	2	2.00	82	68 - 136.9
4-Bromofluorobenzene (4-BFB)		1.73	mg/Kg	2	2.00	86	48.2 - 155

Sample: 169563 - BC-4 15'

Laboratory:	Midland	Analytical Method:	Mod. 8015B	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2008-08-06	Analyzed By:	LD
QC Batch:	51154	Sample Preparation:	2008-08-06	Prepared By:	LD
Prep Batch:	43873				

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		94.9	mg/Kg	1	50.0

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 22 of 28
Hobbs, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		170	mg/Kg	1	100	170	10 - 250.4

Sample: 169563 - BC-4 15'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 51180
Prep Batch: 43891

Analytical Method: S 8015B
Date Analyzed: 2008-08-06
Sample Preparation: 2008-08-06

Prep Method: S 5035
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		61.7	mg/Kg	2	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.88	mg/Kg	2	2.00	94	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.90	mg/Kg	2	2.00	95	63.8 - 141

Method Blank (1) QC Batch: 51154

QC Batch: 51154
Prep Batch: 43873

Date Analyzed: 2008-08-06
QC Preparation: 2008-08-06

Analyzed By: LD
Prepared By: LD

Parameter	Flag	MDL Result	Units	RL
DRO		<15.8	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		79.1	mg/Kg	1	100	79	30.9 - 146.4

Method Blank (1) QC Batch: 51179

QC Batch: 51179
Prep Batch: 43891

Date Analyzed: 2008-08-06
QC Preparation: 2008-08-06

Analyzed By: DC
Prepared By: DC

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00580	mg/Kg	0.01
Toluene		<0.00470	mg/Kg	0.01
Ethylbenzene		<0.00530	mg/Kg	0.01

continued ...

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 23 of 28
Hobbs, NM

method blank continued ...

Parameter	Flag	MDL Result	Units	RL
Xylene		<0.0136	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.788	mg/Kg	1	1.00	79	48.3 - 132.5
4-Bromofluorobenzene (4-BFB)		0.765	mg/Kg	1	1.00	76	37.7 - 128.9

Method Blank (1) QC Batch: 51180

QC Batch: 51180
Prep Batch: 43891

Date Analyzed: 2008-08-06
QC Preparation: 2008-08-06

Analyzed By: DC
Prepared By: DC

Parameter	Flag	MDL Result	Units	RL
GRO		0.931	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.937	mg/Kg	1	1.00	94	39.2 - 135.2
4-Bromofluorobenzene (4-BFB)		0.841	mg/Kg	1	1.00	84	16.8 - 138.1

Laboratory Control Spike (LCS-1)

QC Batch: 51154
Prep Batch: 43873

Date Analyzed: 2008-08-06
QC Preparation: 2008-08-06

Analyzed By: LD
Prepared By: LD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	225	mg/Kg	1	250	<15.8	90	27.8 - 152.1

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	224	mg/Kg	1	250	<15.8	90	27.8 - 152.1	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
n-Triacontane	126	127	mg/Kg	1	100	126	127	38 - 130.4

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 24 of 28
Hobbs, NM

Laboratory Control Spike (LCS-1)

QC Batch: 51179
Prep Batch: 43891

Date Analyzed: 2008-08-06
QC Preparation: 2008-08-06

Analyzed By: DC
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.949	mg/Kg	1	1.00	<0.00580	95	73.3 - 116.6
Toluene	0.960	mg/Kg	1	1.00	<0.00470	96	78.6 - 115.1
Ethylbenzene	0.947	mg/Kg	1	1.00	<0.00530	95	77.4 - 114.9
Xylene	2.83	mg/Kg	1	3.00	<0.0136	94	78.2 - 114.7

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	0.931	mg/Kg	1	1.00	<0.00580	93	73.3 - 116.6	2	20
Toluene	0.948	mg/Kg	1	1.00	<0.00470	95	78.6 - 115.1	1	20
Ethylbenzene	0.934	mg/Kg	1	1.00	<0.00530	93	77.4 - 114.9	1	20
Xylene	2.80	mg/Kg	1	3.00	<0.0136	93	78.2 - 114.7	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)	0.833	0.853	mg/Kg	1	1.00	83	85	45 - 124.2
4-Bromofluorobenzene (4-BFB)	0.822	0.835	mg/Kg	1	1.00	82	84	47.2 - 130.4

Laboratory Control Spike (LCS-1)

QC Batch: 51180
Prep Batch: 43891

Date Analyzed: 2008-08-06
QC Preparation: 2008-08-06

Analyzed By: DC
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	9.48	mg/Kg	1	10.0	0.931	85	57.5 - 106.4

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
GRO	9.88	mg/Kg	1	10.0	0.931	89	57.5 - 106.4	4	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)	0.971	0.959	mg/Kg	1	1.00	97	96	63.8 - 134.3
4-Bromofluorobenzene (4-BFB)	0.915	0.878	mg/Kg	1	1.00	92	88	53.3 - 123.6

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 25 of 28
Hobbs, NM

Matrix Spike (MS-1) Spiked Sample: 169548

QC Batch: 51154
Prep Batch: 43873

Date Analyzed: 2008-08-06
QC Preparation: 2008-08-06

Analyzed By: LD
Prepared By: LD

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	220	mg/Kg	1	250	85.18	54	18 - 179.5

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
DRO	222	mg/Kg	1	250	85.18	55	18 - 179.5	1	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	147	170	mg/Kg	1	100	147	170	34.1 - 158

Matrix Spike (MS-1) Spiked Sample: 169549

QC Batch: 51179
Prep Batch: 43891

Date Analyzed: 2008-08-06
QC Preparation: 2008-08-06

Analyzed By: DC
Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.78	mg/Kg	2	2.00	0.0869	85	62.2 - 134.3
Toluene	1.92	mg/Kg	2	2.00	0.076	92	62.6 - 145.4
Ethylbenzene	2.13	mg/Kg	2	2.00	0.362	88	64.6 - 146.4
Xylene	8.20	mg/Kg	2	6.00	2.9718	87	64.3 - 148.8

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	1.64	mg/Kg	2	2.00	0.0869	78	62.2 - 134.3	8	20
Toluene	1.78	mg/Kg	2	2.00	0.076	85	62.6 - 145.4	8	20
Ethylbenzene	2.05	mg/Kg	2	2.00	0.362	84	64.6 - 146.4	4	20
Xylene	7.97	mg/Kg	2	6.00	2.9718	83	64.3 - 148.8	3	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)	1.55	1.54	mg/Kg	2	2	78	77	38.8 - 127.5

continued ...

⁷High surrogate recovery due to peak interference.

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 26 of 28
Hobbs, NM

matrix spikes continued ...

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
4-Bromofluorobenzene (4-BFB)	2.66	2.75	mg/Kg	2	2	133	138	49.3 - 142.4

Matrix Spike (MS-1) Spiked Sample: 169548

QC Batch: 51180
Prep Batch: 43891

Date Analyzed: 2008-08-06
QC Preparation: 2008-08-06

Analyzed By: DC
Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	8.96	mg/Kg	1	10.0	1.01	80	10 - 139.3

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
GRO	10.6	mg/Kg	1	10.0	1.01	96	10 - 139.3	17	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)	0.909	0.983	mg/Kg	1	1	91	98	21.3 - 119
4-Bromofluorobenzene (4-BFB)	0.944	0.987	mg/Kg	1	1	94	99	52.5 - 154

Standard (ICV-1)

QC Batch: 51154

Date Analyzed: 2008-08-06

Analyzed By: LD

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	228	91	85 - 115	2008-08-06

Standard (CCV-1)

QC Batch: 51154

Date Analyzed: 2008-08-06

Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	228	91	85 - 115	2008-08-06

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 27 of 28
Hobbs, NM

Standard (CCV-2)

QC Batch: 51154

Date Analyzed: 2008-08-06

Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	216	86	85 - 115	2008-08-06

Standard (ICV-1)

QC Batch: 51179

Date Analyzed: 2008-08-06

Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0956	96	85 - 115	2008-08-06
Toluene		mg/Kg	0.100	0.0973	97	85 - 115	2008-08-06
Ethylbenzene		mg/Kg	0.100	0.0924	92	85 - 115	2008-08-06
Xylene		mg/Kg	0.300	0.279	93	85 - 115	2008-08-06

Standard (CCV-1)

QC Batch: 51179

Date Analyzed: 2008-08-06

Analyzed By: DC

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0902	90	85 - 115	2008-08-06
Toluene		mg/Kg	0.100	0.0918	92	85 - 115	2008-08-06
Ethylbenzene		mg/Kg	0.100	0.0895	90	85 - 115	2008-08-06
Xylene		mg/Kg	0.300	0.270	90	85 - 115	2008-08-06

Standard (ICV-1)

QC Batch: 51180

Date Analyzed: 2008-08-06

Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.07	107	85 - 115	2008-08-06

Standard (CCV-1)

QC Batch: 51180

Date Analyzed: 2008-08-06

Analyzed By: DC

Report Date: August 7, 2008
Plains045SPL

Work Order: 8080516
Kimbrough

Page Number: 28 of 28
Hobbs, NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.12	112	85 - 115	2008-08-06

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1298

5002 Basin Street, Suite A1
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200 East Sunset Rd., Suite E
8808 Camp Bowie Blvd. West, Suite 180
Ft. Worth, Texas 76116
Tel (817) 201-5260
Fax (817) 560-4336

LAB ORDER # 8080516

Page 1

Company Name: TALON

Address: (Street, City, Zip)
Phone #: 522-2133
Fax #:

Contact Person: Shawne Smith

E-mail: SSmith@telon-lps.com

Invoice to:

(If different from above) Plains - Camille Boyant

Project #:

2000-10757 Plains 045 SPZ

Project Location (including state):

Hobbes, NM

Project Name:

Kimberly

Sampler Signature:

Shawne Smith

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX			PRESERVATIVE METHOD					SAMPLING	
				WATER	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	DATE	TIME
109518	BC-1 2'	1	172	X						X	X	8/5/08	901
549	BC-1 5'												904
550	BC-1 10'												908
551	BC-1 15'												913
552	BC-2 2'												916
553	BC-2 5'												919
554	BC-2 10'												923
555	BC-2 15'												926
556	BC-3 2'												930
557	BC-3 10'												935
558	BC-3 10'												957

Relinquished by: _____ Date: 8/5/08 Time: 1545 Company: Talon
Relinquished by: _____ Date: 8/5/08 Time: 1545 Company: Talon
Relinquished by: _____ Date: 8/5/08 Time: 1545 Company: Talon

LAB USE ONLY
Initials: _____
Head State: _____
Log: _____

REMARKS:
email Camille + Shawne
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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Carrier #

Carry

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
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1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

LAB C ID # 8080516

Page 2

Company Name:

Address: (Street, City, Zip)

Contact Person:

SHARNA SMITH

E-mail:

SSmith@keloville.com

Invoice to:

(If different from above) Plains - Camille Bryand

Project #:

2000-10787 Plains 045504

Project Location (including state):

Hubbs NM

Project Name:

Kimberly

Sampler Signature:

[Signature]

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB USE ONLY	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX	PRESERVATIVE METHOD	SAMPLING	TIME	DATE	TIME	Temp °C
LAB USE ONLY	BC-3 15'	1	4oz	WATER				8/5/08	1003	
LAB USE ONLY	BC-4 2'								1005	
LAB USE ONLY	BC-4 5'								1002	
LAB USE ONLY	BC-4 10'								1011	
LAB USE ONLY	BC-4 15'								1015	

LAB USE ONLY	REMARKS:
LAB USE ONLY	TPH 8015 GRO / DRO / TVHC TPH 418.1 / TX1005 / TX1005 EX(C35) BTEX 8021B 602 / 8260B / 624 MTBE 8021B / 602 / 8260B / 624 PAH 8270C / 625 Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7 TCLP Volatiles TCLP Semi Volatiles TCLP Pesticides RCI GC/MS Vol. 8260B / 624 GC/MS Semi. Vol. 8270C / 625 PCB's 8082 / 608 Pesticides 8081A / 608 BOD, TSS, pH Moisture Content Turn Around Time if different from standard

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	Temp °C
Sharna Smith	TraceAnalysis, Inc.	8/5/08	1545	Sharna Smith	TraceAnalysis, Inc.	8/5/08	1545	35
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	Temp °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	Temp °C

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

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Carrier # *Camille*



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Shanna Smith
Talon LPE-Amarillo
921 North Bivins
Amarillo, TX, 79107

Report Date: October 7, 2008

Work Order: 8092650



Project Location: Hobbs, NM
Project Name: Kimbrough Sweet 8 inch
Project Number: Plains045SPL
SRS#: SRS# 2000-10757

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
174865	MW-3	water	2008-09-26	10:44	2008-09-26
174866	MW-4	water	2008-09-26	11:00	2008-09-26
174867	MW-10	water	2008-09-26	11:10	2008-09-26
174868	MW-7	water	2008-09-26	12:45	2008-09-26
174869	MW-8	water	2008-09-26	13:26	2008-09-26

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 22 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 Kimbrough Sweet 8 inch were received by TraceAnalysis, Inc. on 2008-09-26 and assigned to work order 8092650. Samples for work order 8092650 were received intact without headspace and at a temperature of 3.2 deg. C.

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

Test	Method
BTEX	S 8021B
PAH	S 8270C
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 8092650 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.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 4 of 22
Hobbs, NM

Analytical Report

Sample: 174865 - MW-3

Laboratory: Midland
Analysis: BTEX
QC Batch: 52877
Prep Batch: 45308

Analytical Method: S 8021B
Date Analyzed: 2008-09-30
Sample Preparation: 2008-09-30

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		9.13	mg/L	100	0.00100
Toluene		0.152	mg/L	100	0.00100
Ethylbenzene		<0.100	mg/L	100	0.00100
Xylene		0.234	mg/L	100	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		7.79	mg/L	100	10.0	78	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		8.00	mg/L	100	10.0	80	52 - 124.1

Sample: 174865 - MW-3

Laboratory: Lubbock
Analysis: PAH
QC Batch: 53057
Prep Batch: 45459

Analytical Method: S 8270C
Date Analyzed: 2008-10-03
Sample Preparation: 2008-10-02

Prep Method: S 3510C
Analyzed By: DS
Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		0.0498	mg/L	1	0.000200
2-Methylnaphthalene		0.0127	mg/L	1	0.000200
1-Methylnaphthalene		0.0283	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		0.00151	mg/L	1	0.000200
Fluorene		0.00119	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Phenanthrene		0.000940	mg/L	1	0.000200
Fluoranthene		<0.000200	mg/L	1	0.000200
Pyrene		<0.000200	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		<0.000200	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200

continued ...

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 5 of 22
Hobbs, NM

sample 174865 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0557	mg/L	1	0.0800	70	37.4 - 123
2-Fluorobiphenyl		0.0574	mg/L	1	0.0800	72	34.3 - 130
Terphenyl-d14		0.0605	mg/L	1	0.0800	76	10 - 252

Sample: 174866 - MW-4

Laboratory: Midland
Analysis: BTEX
QC Batch: 52877
Prep Batch: 45308

Analytical Method: S 8021B
Date Analyzed: 2008-09-30
Sample Preparation: 2008-09-30

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0813	mg/L	1	0.100	81	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		0.0829	mg/L	1	0.100	83	52 - 124.1

Sample: 174866 - MW-4

Laboratory: Lubbock
Analysis: PAH
QC Batch: 53057
Prep Batch: 45459

Analytical Method: S 8270C
Date Analyzed: 2008-10-03
Sample Preparation: 2008-10-02

Prep Method: S 3510C
Analyzed By: DS
Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		0.000247	mg/L	1	0.000200
2-Methylnaphthalene		0.000236	mg/L	1	0.000200
1-Methylnaphthalene		<0.000200	mg/L	1	0.000200

continued ...

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 6 of 22
Hobbs, NM

sample 174866 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		<0.000200	mg/L	1	0.000200
Fluorene		<0.000200	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Phenanthrene		<0.000200	mg/L	1	0.000200
Fluoranthene		<0.000200	mg/L	1	0.000200
Pyrene		<0.000200	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		<0.000200	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0603	mg/L	1	0.0800	75	37.4 - 123
2-Fluorobiphenyl		0.0576	mg/L	1	0.0800	72	34.3 - 130
Terphenyl-d14		0.0677	mg/L	1	0.0800	85	10 - 252

Sample: 174867 - MW-10

Laboratory: Midland

Analysis: BTEX

QC Batch: 52857

Prep Batch: 45269

Analytical Method: S 8021B

Date Analyzed: 2008-09-29

Sample Preparation: 2008-09-29

Prep Method: S 5030B

Analyzed By: DC

Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.00390	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0778	mg/L	1	0.100	78	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		0.0799	mg/L	1	0.100	80	52 - 124.1

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 7 of 22
Hobbs, NM

Sample: 174867 - MW-10

Laboratory: Lubbock

Analysis: PAH

QC Batch: 53057

Prep Batch: 45459

Analytical Method: S 8270C

Date Analyzed: 2008-10-03

Sample Preparation: 2008-10-02

Prep Method: S 3510C

Analyzed By: DS

Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000200	mg/L	1	0.000200
2-Methylnaphthalene		<0.000200	mg/L	1	0.000200
1-Methylnaphthalene		<0.000200	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		<0.000200	mg/L	1	0.000200
Fluorene		<0.000200	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Phenanthrene		<0.000200	mg/L	1	0.000200
Fluoranthene		<0.000200	mg/L	1	0.000200
Pyrene		<0.000200	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		<0.000200	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0609	mg/L	1	0.0800	76	37.4 - 123
2-Fluorobiphenyl		0.0625	mg/L	1	0.0800	78	34.3 - 130
Terphenyl-d14		0.0676	mg/L	1	0.0800	84	10 - 252

Sample: 174868 - MW-7

Laboratory: Midland

Analysis: BTEX

QC Batch: 52857

Prep Batch: 45269

Analytical Method: S 8021B

Date Analyzed: 2008-09-29

Sample Preparation: 2008-09-29

Prep Method: S 5030B

Analyzed By: DC

Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		15.9	mg/L	100	0.00100
Toluene		10.3	mg/L	100	0.00100

continued ...

sample 174868 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Ethylbenzene		1.56	mg/L	100	0.00100
Xylene		3.65	mg/L	100	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8.04	mg/L	100	10.0	80	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		8.39	mg/L	100	10.0	84	52 - 124.1

Sample: 174868 - MW-7

Laboratory: Lubbock
Analysis: PAH
QC Batch: 53057
Prep Batch: 45459

Analytical Method: S 8270C
Date Analyzed: 2008-10-03
Sample Preparation: 2008-10-02

Prep Method: S 3510C
Analyzed By: DS
Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene	1	1.57	mg/L	5	0.000200
2-Methylnaphthalene	2	3.67	mg/L	5	0.000200
1-Methylnaphthalene	3	3.04	mg/L	5	0.000200
Acenaphthylene		<0.00100	mg/L	5	0.000200
Acenaphthene		<0.00100	mg/L	5	0.000200
Dibenzofuran		0.151	mg/L	5	0.000200
Fluorene		0.235	mg/L	5	0.000200
Anthracene		<0.00100	mg/L	5	0.000200
Phenanthrene		0.284	mg/L	5	0.000200
Fluoranthene		0.00907	mg/L	5	0.000200
Pyrene		0.0273	mg/L	5	0.000200
Benzo(a)anthracene		<0.00100	mg/L	5	0.000200
Chrysene		0.0500	mg/L	5	0.000200
Benzo(b)fluoranthene		0.00441	mg/L	5	0.000200
Benzo(k)fluoranthene		<0.00100	mg/L	5	0.000200
Benzo(a)pyrene		<0.00100	mg/L	5	0.000200
Indeno(1,2,3-cd)pyrene		<0.00100	mg/L	5	0.000200
Dibenzo(a,h)anthracene		<0.00100	mg/L	5	0.000200
Benzo(g,h,i)perylene		<0.00100	mg/L	5	0.000200

¹ Estimated concentration value greater than standard range.

² Estimated concentration value greater than standard range.

³ Estimated concentration value greater than standard range.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 9 of 22
Hobbs, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5	⁴	0.152	mg/L	5	0.0800	190	37.4 - 123
2-Fluorobiphenyl		0.0609	mg/L	5	0.0800	76	34.3 - 130
Terphenyl-d14		0.0857	mg/L	5	0.0800	107	10 - 252

Sample: 174868 - MW-7

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 52902
Prep Batch: 45325

Analytical Method: Mod. 8015B
Date Analyzed: 2008-10-01
Sample Preparation: 2008-10-01

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		373	mg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	⁵	38.3	mg/L	1	10.0	383	70 - 130

Sample: 174868 - MW-7

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 52858
Prep Batch: 45269

Analytical Method: S 8015B
Date Analyzed: 2008-09-29
Sample Preparation: 2008-09-29

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		102	mg/L	100	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8.77	mg/L	100	10.0	88	70 - 130
4-Bromofluorobenzene (4-BFB)		8.69	mg/L	100	10.0	87	70 - 130

Sample: 174869 - MW-8

Laboratory: Midland
Analysis: BTEX
QC Batch: 52857
Prep Batch: 45269

Analytical Method: S 8021B
Date Analyzed: 2008-09-29
Sample Preparation: 2008-09-29

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

⁴8270 Only - One basic surrogate is out of control limits. The other two basic surrogates show extraction was performed properly.

⁵High surrogate recovery due to peak interference.

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		17.8	mg/L	100	0.00100
Toluene		13.6	mg/L	100	0.00100
Ethylbenzene		2.54	mg/L	100	0.00100
Xylene		6.00	mg/L	100	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8.04	mg/L	100	10.0	80	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		8.64	mg/L	100	10.0	86	52 - 124.1

Sample: 174869 - MW-8

Laboratory: Lubbock
Analysis: PAH
QC Batch: 53057
Prep Batch: 45459

Analytical Method: S 8270C
Date Analyzed: 2008-10-03
Sample Preparation: 2008-10-02

Prep Method: S 3510C
Analyzed By: DS
Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene	⁶	3.28	mg/L	10	0.000200
2-Methylnaphthalene	⁷	7.62	mg/L	10	0.000200
1-Methylnaphthalene	⁸	6.52	mg/L	10	0.000200
Acenaphthylene		<0.00200	mg/L	10	0.000200
Acenaphthene		<0.00200	mg/L	10	0.000200
Dibenzofuran		0.318	mg/L	10	0.000200
Fluorene		0.434	mg/L	10	0.000200
Anthracene		<0.00200	mg/L	10	0.000200
Phenanthrene		0.582	mg/L	10	0.000200
Fluoranthene		0.0208	mg/L	10	0.000200
Pyrene		0.0412	mg/L	10	0.000200
Benzo(a)anthracene		<0.00200	mg/L	10	0.000200
Chrysene		0.102	mg/L	10	0.000200
Benzo(b)fluoranthene		0.00816	mg/L	10	0.000200
Benzo(k)fluoranthene		<0.00200	mg/L	10	0.000200
Benzo(a)pyrene		<0.00200	mg/L	10	0.000200
Indeno(1,2,3-cd)pyrene		<0.00200	mg/L	10	0.000200
Dibenzo(a,h)anthracene		<0.00200	mg/L	10	0.000200
Benzo(g,h,i)perylene		<0.00200	mg/L	10	0.000200

⁶Estimated concentration value greater than standard range.

⁷Estimated concentration value greater than standard range.

⁸Estimated concentration value greater than standard range.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 11 of 22
Hobbs, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5	⁹	0.175	mg/L	10	0.0800	219	37.4 - 123
2-Fluorobiphenyl		0.0654	mg/L	10	0.0800	82	34.3 - 130
Terphenyl-d14		0.0925	mg/L	10	0.0800	116	10 - 252

Sample: 174869 - MW-8

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 52902
Prep Batch: 45325

Analytical Method: Mod. 8015B
Date Analyzed: 2008-10-01
Sample Preparation: 2008-10-01

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		893	mg/L	5	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	¹⁰	73.9	mg/L	5	10.0	739	70 - 130

Sample: 174869 - MW-8

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 52858
Prep Batch: 45269

Analytical Method: S 8015B
Date Analyzed: 2008-09-29
Sample Preparation: 2008-09-29

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		137	mg/L	100	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8.73	mg/L	100	10.0	87	70 - 130
4-Bromofluorobenzene (4-BFB)		9.44	mg/L	100	10.0	94	70 - 130

Method Blank (1) QC Batch: 52857

QC Batch: 52857
Prep Batch: 45269

Date Analyzed: 2008-09-29
QC Preparation: 2008-09-29

Analyzed By: DC
Prepared By: DC

⁹8270 Only - One basic surrogate is out of control limits. The other two basic surrogates show extraction was performed properly.

¹⁰High surrogate recovery due to peak interference.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 12 of 22
Hobbs, NM

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000500	mg/L	0.001
Toluene		<0.000700	mg/L	0.001
Ethylbenzene		<0.000700	mg/L	0.001
Xylene		<0.00180	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0857	mg/L	1	0.100	86	44.6 - 137.4
4-Bromofluorobenzene (4-BFB)		0.0872	mg/L	1	0.100	87	37.1 - 130.9

Method Blank (1) QC Batch: 52858

QC Batch: 52858
Prep Batch: 45269

Date Analyzed: 2008-09-29
QC Preparation: 2008-09-29

Analyzed By: DC
Prepared By: DC

Parameter	Flag	MDL Result	Units	RL
GRO		0.0857	mg/L	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0898	mg/L	1	0.100	90	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0875	mg/L	1	0.100	88	50 - 130

Method Blank (1) QC Batch: 52877

QC Batch: 52877
Prep Batch: 45308

Date Analyzed: 2008-09-30
QC Preparation: 2008-09-30

Analyzed By: DC
Prepared By: DC

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000500	mg/L	0.001
Toluene		<0.000700	mg/L	0.001
Ethylbenzene		<0.000700	mg/L	0.001
Xylene		<0.00180	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0814	mg/L	1	0.100	81	44.6 - 137.4
4-Bromofluorobenzene (4-BFB)		0.0818	mg/L	1	0.100	82	37.1 - 130.9

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 13 of 22
Hobbs, NM

Method Blank (1) QC Batch: 52902

QC Batch: 52902
Prep Batch: 45325

Date Analyzed: 2008-10-01
QC Preparation: 2008-10-01

Analyzed By: LD
Prepared By: LD

Parameter	Flag	MDL Result	Units	RL
DRO		<2.44	mg/L	5

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		7.14	mg/L	1	10.0	71	70 - 130

Method Blank (1) QC Batch: 53057

QC Batch: 53057
Prep Batch: 45459

Date Analyzed: 2008-10-03
QC Preparation: 2008-10-02

Analyzed By: DS
Prepared By: DS

Parameter	Flag	MDL Result	Units	RL
Naphthalene		<0.0000730	mg/L	0.0002
2-Methylnaphthalene		<0.0000509	mg/L	0.0002
1-Methylnaphthalene		<0.0000748	mg/L	0.0002
Acenaphthylene		<0.0000767	mg/L	0.0002
Acenaphthene		<0.000142	mg/L	0.0002
Dibenzofuran		<0.0000470	mg/L	0.0002
Fluorene		<0.0000569	mg/L	0.0002
Anthracene		<0.0000876	mg/L	0.0002
Phenanthrene		<0.0000552	mg/L	0.0002
Fluoranthene		<0.0000954	mg/L	0.0002
Pyrene		<0.0000497	mg/L	0.0002
Benzo(a)anthracene		<0.0000328	mg/L	0.0002
Chrysene		<0.0000990	mg/L	0.0002
Benzo(b)fluoranthene		<0.0000684	mg/L	0.0002
Benzo(k)fluoranthene		<0.0000830	mg/L	0.0002
Benzo(a)pyrene		<0.0000549	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		<0.0000869	mg/L	0.0002
Dibenzo(a,h)anthracene		<0.0000605	mg/L	0.0002
Benzo(g,h,i)perylene		<0.0000681	mg/L	0.0002

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0669	mg/L	1	0.0800	84	10 - 146
2-Fluorobiphenyl		0.0623	mg/L	1	0.0800	78	10 - 141
Terphenyl-d14		0.0773	mg/L	1	0.0800	97	10 - 266

Laboratory Control Spike (LCS-1)

QC Batch: 52857
Prep Batch: 45269

Date Analyzed: 2008-09-29
QC Preparation: 2008-09-29

Analyzed By: DC
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0843	mg/L	1	0.100	<0.000500	84	71.7 - 120.5
Toluene	0.0855	mg/L	1	0.100	<0.000700	86	75.4 - 118.8
Ethylbenzene	0.0858	mg/L	1	0.100	<0.000700	86	73.5 - 118
Xylene	0.258	mg/L	1	0.300	<0.00180	86	72.9 - 118.2

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	0.0842	mg/L	1	0.100	<0.000500	84	71.7 - 120.5	0	20
Toluene	0.0862	mg/L	1	0.100	<0.000700	86	75.4 - 118.8	1	20
Ethylbenzene	0.0863	mg/L	1	0.100	<0.000700	86	73.5 - 118	1	20
Xylene	0.261	mg/L	1	0.300	<0.00180	87	72.9 - 118.2	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)	0.0806	0.0796	mg/L	1	0.100	81	80	38.2 - 131.6
4-Bromofluorobenzene (4-BFB)	0.0843	0.0835	mg/L	1	0.100	84	84	43.9 - 132.4

Laboratory Control Spike (LCS-1)

QC Batch: 52858
Prep Batch: 45269

Date Analyzed: 2008-09-29
QC Preparation: 2008-09-29

Analyzed By: DC
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	0.897	mg/L	1	1.00	0.0857	81	70 - 130

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	0.928	mg/L	1	1.00	0.0857	84	70 - 130	3	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)	0.0832	0.0856	mg/L	1	0.100	83	86	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0853	0.0851	mg/L	1	0.100	85	85	70 - 130

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 15 of 22
Hobbs, NM

Laboratory Control Spike (LCS-1)

QC Batch: 52877
Prep Batch: 45308

Date Analyzed: 2008-09-30
QC Preparation: 2008-09-30

Analyzed By: DC
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0860	mg/L	1	0.100	<0.000500	86	71.7 - 120.5
Toluene	0.0875	mg/L	1	0.100	<0.000700	88	75.4 - 118.8
Ethylbenzene	0.0867	mg/L	1	0.100	<0.000700	87	73.5 - 118
Xylene	0.262	mg/L	1	0.300	<0.00180	87	72.9 - 118.2

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	0.0844	mg/L	1	0.100	<0.000500	84	71.7 - 120.5	2	20
Toluene	0.0855	mg/L	1	0.100	<0.000700	86	75.4 - 118.8	2	20
Ethylbenzene	0.0854	mg/L	1	0.100	<0.000700	85	73.5 - 118	2	20
Xylene	0.257	mg/L	1	0.300	<0.00180	86	72.9 - 118.2	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)	0.0805	0.0786	mg/L	1	0.100	80	79	38.2 - 131.6
4-Bromofluorobenzene (4-BFB)	0.0828	0.0821	mg/L	1	0.100	83	82	43.9 - 132.4

Laboratory Control Spike (LCS-1)

QC Batch: 52902
Prep Batch: 45325

Date Analyzed: 2008-10-01
QC Preparation: 2008-10-01

Analyzed By: LD
Prepared By: LD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	23.6	mg/L	1	25.0	<2.44	94	70 - 130

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	25.1	mg/L	1	25.0	<2.44	100	70 - 130	6	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	11.3	11.4	mg/L	1	10.0	113	114	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 53057
Prep Batch: 45459

Date Analyzed: 2008-10-03
QC Preparation: 2008-10-02

Analyzed By: DS
Prepared By: DS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Naphthalene	0.0489	mg/L	1	0.0800	<0.0000730	61	10 - 141
2-Methylnaphthalene	0.0546	mg/L	1	0.0800	<0.0000509	68	50 - 150
1-Methylnaphthalene	0.0546	mg/L	1	0.0800	<0.0000748	68	50 - 150
Acenaphthylene	0.0703	mg/L	1	0.0800	<0.0000767	88	10 - 152
Acenaphthene	0.0667	mg/L	1	0.0800	<0.000142	83	10 - 151
Dibenzofuran	0.0673	mg/L	1	0.0800	<0.0000470	84	10 - 148
Fluorene	0.0747	mg/L	1	0.0800	<0.0000569	93	10 - 172
Anthracene	0.0715	mg/L	1	0.0800	<0.0000876	89	22.5 - 172
Phenanthrene	0.0701	mg/L	1	0.0800	<0.0000552	88	19.6 - 172
Fluoranthene	0.0782	mg/L	1	0.0800	<0.0000954	98	17.3 - 187
Pyrene	0.0756	mg/L	1	0.0800	<0.0000497	94	14.9 - 199
Benzo(a)anthracene	0.0718	mg/L	1	0.0800	<0.0000328	90	19.4 - 185
Chrysene	0.0758	mg/L	1	0.0800	<0.0000990	95	18.4 - 188
Benzo(b)fluoranthene	0.0742	mg/L	1	0.0800	<0.0000684	93	10 - 193
Benzo(k)fluoranthene	0.0781	mg/L	1	0.0800	<0.0000830	98	27.8 - 196
Benzo(a)pyrene	0.0845	mg/L	1	0.0800	<0.0000549	106	12.4 - 205
Indeno(1,2,3-cd)pyrene	0.0891	mg/L	1	0.0800	<0.0000869	111	10 - 198
Dibenzo(a,h)anthracene	0.0884	mg/L	1	0.0800	<0.0000605	110	10 - 172
Benzo(g,h,i)perylene	0.0886	mg/L	1	0.0800	<0.0000681	111	10 - 186

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
Naphthalene	0.0475	mg/L	1	0.0800	<0.0000730	59	10 - 141	3	20
2-Methylnaphthalene	0.0540	mg/L	1	0.0800	<0.0000509	68	50 - 150	1	20
1-Methylnaphthalene	0.0540	mg/L	1	0.0800	<0.0000748	68	50 - 150	1	20
Acenaphthylene	0.0680	mg/L	1	0.0800	<0.0000767	85	10 - 152	3	20
Acenaphthene	0.0641	mg/L	1	0.0800	<0.000142	80	10 - 151	4	20
Dibenzofuran	0.0645	mg/L	1	0.0800	<0.0000470	81	10 - 148	4	20
Fluorene	0.0711	mg/L	1	0.0800	<0.0000569	89	10 - 172	5	20
Anthracene	0.0699	mg/L	1	0.0800	<0.0000876	87	22.5 - 172	2	20
Phenanthrene	0.0688	mg/L	1	0.0800	<0.0000552	86	19.6 - 172	2	20
Fluoranthene	0.0771	mg/L	1	0.0800	<0.0000954	96	17.3 - 187	1	20
Pyrene	0.0730	mg/L	1	0.0800	<0.0000497	91	14.9 - 199	4	20
Benzo(a)anthracene	0.0698	mg/L	1	0.0800	<0.0000328	87	19.4 - 185	3	20
Chrysene	0.0737	mg/L	1	0.0800	<0.0000990	92	18.4 - 188	3	20
Benzo(b)fluoranthene	0.0718	mg/L	1	0.0800	<0.0000684	90	10 - 193	3	20
Benzo(k)fluoranthene	0.0754	mg/L	1	0.0800	<0.0000830	94	27.8 - 196	4	20
Benzo(a)pyrene	0.0806	mg/L	1	0.0800	<0.0000549	101	12.4 - 205	5	20

continued ...

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 17 of 22
Hobbs, NM

control spikes continued ...

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Indeno(1,2,3-cd)pyrene	0.0857	mg/L	1	0.0800	<0.0000869	107	10 - 198	4	20
Dibenzo(a,h)anthracene	0.0851	mg/L	1	0.0800	<0.0000605	106	10 - 172	4	20
Benzo(g,h,i)perylene	0.0849	mg/L	1	0.0800	<0.0000681	106	10 - 186	4	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
Nitrobenzene-d5	0.0659	0.0640	mg/L	1	0.0800	82	80	10 - 165
2-Fluorobiphenyl	0.0626	0.0601	mg/L	1	0.0800	78	75	10 - 157
Terphenyl-d14	0.0835	0.0813	mg/L	1	0.0800	104	102	10 - 220

Matrix Spike (MS-1) Spiked Sample: 174884

QC Batch: 52857
Prep Batch: 45269

Date Analyzed: 2008-09-29
QC Preparation: 2008-09-29

Analyzed By: DC
Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.06	mg/L	5	0.500	0.6922	74	10 - 160.8
Toluene	0.405	mg/L	5	0.500	<0.00350	81	10 - 160.7
Ethylbenzene	0.403	mg/L	5	0.500	<0.00350	81	10 - 158.3
Xylene	1.21	mg/L	5	1.50	<0.00900	81	10 - 158

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	1.08	mg/L	5	0.500	0.6922	78	10 - 160.8	2	20
Toluene	0.418	mg/L	5	0.500	<0.00350	84	10 - 160.7	3	20
Ethylbenzene	0.421	mg/L	5	0.500	<0.00350	84	10 - 158.3	4	20
Xylene	1.27	mg/L	5	1.50	<0.00900	85	10 - 158	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)	0.405	0.406	mg/L	5	0.5	81	81	33.1 - 132.5
4-Bromofluorobenzene (4-BFB)	0.421	0.425	mg/L	5	0.5	84	85	37.5 - 136

Matrix Spike (MS-1) Spiked Sample: 174868

QC Batch: 52858
Prep Batch: 45269

Date Analyzed: 2008-09-29
QC Preparation: 2008-09-29

Analyzed By: DC
Prepared By: DC

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 18 of 22
Hobbs, NM

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	¹¹	163	mg/L	100	100	101.921	61	70 - 130

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		177	mg/L	100	100	101.921	75	70 - 130	8	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)	8.57	9.05	mg/L	100	10	86	90	70 - 130
4-Bromofluorobenzene (4-BFB)	8.97	9.46	mg/L	100	10	90	95	70 - 130

Matrix Spike (MS-1) Spiked Sample: 174994

QC Batch: 52877
Prep Batch: 45308

Date Analyzed: 2008-09-30
QC Preparation: 2008-09-30

Analyzed By: DC
Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	43.8	mg/L	200	20.0	26.7384	85	10 - 160.8
Toluene	40.0	mg/L	200	20.0	23.2604	84	10 - 160.7
Ethylbenzene	21.2	mg/L	200	20.0	5.8361	77	10 - 158.3
Xylene	61.5	mg/L	200	60.0	15.0328	77	10 - 158

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		48.6	mg/L	200	20.0	26.7384	109	10 - 160.8	10	20
Toluene	¹²	50.4	mg/L	200	20.0	23.2604	136	10 - 160.7	23	20
Ethylbenzene	¹³	26.4	mg/L	200	20.0	5.8361	103	10 - 158.3	22	20
Xylene		74.4	mg/L	200	60.0	15.0328	99	10 - 158	19	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)	15.3	15.5	mg/L	200	20	76	78	33.1 - 132.5
4-Bromofluorobenzene (4-BFB)	16.6	17.2	mg/L	200	20	83	86	37.5 - 136

¹¹Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

¹²MSD analyte out of range. MS/MSD has a RPD within limits. Therefore, MS shows extraction occurred properly.

¹³MSD analyte out of range. MS/MSD has a RPD within limits. Therefore, MS shows extraction occurred properly.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 19 of 22
Hobbs, NM

Matrix Spike (MS-1) Spiked Sample: 174868

QC Batch: 52902
Prep Batch: 45325

Date Analyzed: 2008-10-01
QC Preparation: 2008-10-01

Analyzed By: LD
Prepared By: LD

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	¹⁴	270	mg/L	1	25.0	270	0	70 - 130

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	¹⁵	267	mg/L	1	25.0	270	0	70 - 130	1	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	^{16 17}	22.8	22.5	mg/L	1	10	228	225	70 - 130

Standard (ICV-1)

QC Batch: 52857

Date Analyzed: 2008-09-29

Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.104	104	85 - 115	2008-09-29
Toluene		mg/L	0.100	0.107	107	85 - 115	2008-09-29
Ethylbenzene		mg/L	0.100	0.107	107	85 - 115	2008-09-29
Xylene		mg/L	0.300	0.326	108	85 - 115	2008-09-29

Standard (CCV-1)

QC Batch: 52857

Date Analyzed: 2008-09-29

Analyzed By: DC

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0942	94	85 - 115	2008-09-29
Toluene		mg/L	0.100	0.0965	96	85 - 115	2008-09-29
Ethylbenzene		mg/L	0.100	0.0976	98	85 - 115	2008-09-29
Xylene		mg/L	0.300	0.296	99	85 - 115	2008-09-29

¹⁴Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

¹⁵Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

¹⁶High surrogate recovery due to peak interference.

¹⁷High surrogate recovery due to peak interference.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 20 of 22
Hobbs, NM

Standard (ICV-1)

QC Batch: 52858

Date Analyzed: 2008-09-29

Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.928	93	85 - 115	2008-09-29

Standard (CCV-1)

QC Batch: 52858

Date Analyzed: 2008-09-29

Analyzed By: DC

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.988	99	85 - 115	2008-09-29

Standard (ICV-1)

QC Batch: 52877

Date Analyzed: 2008-09-30

Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0931	93	85 - 115	2008-09-30
Toluene		mg/L	0.100	0.0938	94	85 - 115	2008-09-30
Ethylbenzene		mg/L	0.100	0.0942	94	85 - 115	2008-09-30
Xylene		mg/L	0.300	0.287	96	85 - 115	2008-09-30

Standard (CCV-1)

QC Batch: 52877

Date Analyzed: 2008-09-30

Analyzed By: DC

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0891	89	85 - 115	2008-09-30
Toluene		mg/L	0.100	0.0897	90	85 - 115	2008-09-30
Ethylbenzene		mg/L	0.100	0.0889	89	85 - 115	2008-09-30
Xylene		mg/L	0.300	0.269	90	85 - 115	2008-09-30

Standard (ICV-1)

QC Batch: 52902

Date Analyzed: 2008-10-01

Analyzed By: LD

Report Date: October 7, 2008
Plains045SPL

Work Order: 8092650
Kimbrough Sweet 8 inch

Page Number: 21 of 22
Hobbs, NM

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	237	95	85 - 115	2008-10-01

Standard (CCV-1)

QC Batch: 52902

Date Analyzed: 2008-10-01

Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	222	89	85 - 115	2008-10-01

Standard (CCV-1)

QC Batch: 53057

Date Analyzed: 2008-10-03

Analyzed By: DS

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/L	60.0	56.6	94	80 - 120	2008-10-03
2-Methylnaphthalene		mg/L	60.0	52.2	87	80 - 120	2008-10-03
1-Methylnaphthalene		mg/L	60.0	52.3	87	80 - 120	2008-10-03
Acenaphthylene		mg/L	60.0	59.4	99	80 - 120	2008-10-03
Acenaphthene		mg/L	60.0	58.3	97	80 - 120	2008-10-03
Dibenzofuran		mg/L	60.0	60.6	101	80 - 120	2008-10-03
Fluorene		mg/L	60.0	66.6	111	80 - 120	2008-10-03
Anthracene		mg/L	60.0	59.8	100	80 - 120	2008-10-03
Phenanthrene		mg/L	60.0	57.5	96	80 - 120	2008-10-03
Fluoranthene		mg/L	60.0	59.2	99	80 - 120	2008-10-03
Pyrene		mg/L	60.0	61.0	102	80 - 120	2008-10-03
Benzo(a)anthracene		mg/L	60.0	56.0	93	80 - 120	2008-10-03
Chrysene		mg/L	60.0	58.1	97	80 - 120	2008-10-03
Benzo(b)fluoranthene		mg/L	60.0	60.7	101	80 - 120	2008-10-03
Benzo(k)fluoranthene		mg/L	60.0	61.5	102	80 - 120	2008-10-03
Benzo(a)pyrene		mg/L	60.0	63.6	106	80 - 120	2008-10-03
Indeno(1,2,3-cd)pyrene		mg/L	60.0	69.7	116	80 - 120	2008-10-03
Dibenzo(a,h)anthracene		mg/L	60.0	69.8	116	80 - 120	2008-10-03
Benzo(g,h,i)perylene		mg/L	60.0	69.0	115	80 - 120	2008-10-03

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5		61.5	mg/L	1	60.0	102	80 - 120
2-Fluorobiphenyl		57.6	mg/L	1	60.0	96	80 - 120
Terphenyl-d14		60.3	mg/L	1	60.0	100	80 - 120

Standard (CCV-2)

QC Batch: 53057

Date Analyzed: 2008-10-03

Analyzed By: DS

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/L	60.0	57.0	95	80 - 120	2008-10-03
2-Methylnaphthalene		mg/L	60.0	53.8	90	80 - 120	2008-10-03
1-Methylnaphthalene		mg/L	60.0	54.7	91	80 - 120	2008-10-03
Acenaphthylene		mg/L	60.0	58.8	98	80 - 120	2008-10-03
Acenaphthene		mg/L	60.0	58.7	98	80 - 120	2008-10-03
Dibenzofuran		mg/L	60.0	62.1	104	80 - 120	2008-10-03
Fluorene		mg/L	60.0	69.8	116	80 - 120	2008-10-03
Anthracene		mg/L	60.0	59.0	98	80 - 120	2008-10-03
Phenanthrene		mg/L	60.0	56.6	94	80 - 120	2008-10-03
Fluoranthene		mg/L	60.0	54.4	91	80 - 120	2008-10-03
Pyrene		mg/L	60.0	61.1	102	80 - 120	2008-10-03
Benzo(a)anthracene		mg/L	60.0	56.7	94	80 - 120	2008-10-03
Chrysene		mg/L	60.0	58.4	97	80 - 120	2008-10-03
Benzo(b)fluoranthene		mg/L	60.0	56.8	95	80 - 120	2008-10-03
Benzo(k)fluoranthene		mg/L	60.0	61.6	103	80 - 120	2008-10-03
Benzo(a)pyrene		mg/L	60.0	63.1	105	80 - 120	2008-10-03
Indeno(1,2,3-cd)pyrene	¹⁸	mg/L	60.0	73.8	123	80 - 120	2008-10-03
Dibenzo(a,h)anthracene	¹⁹	mg/L	60.0	73.5	122	80 - 120	2008-10-03
Benzo(g,h,i)perylene	²⁰	mg/L	60.0	72.8	121	80 - 120	2008-10-03

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5		58.3	mg/L	1	60.0	97	80 - 120
2-Fluorobiphenyl		52.4	mg/L	1	60.0	87	80 - 120
Terphenyl-d14		59.6	mg/L	1	60.0	99	80 - 120

¹⁸Indeno(1,2,3-cd)pyrene outside of control limits on CCV(ICV). CCV(ICV) component average is 101% which is within acceptable range. This is acceptable by Method 8000.

¹⁹Dibenzo(a,h)anthracene outside of control limits on CCV(ICV). CCV(ICV) component average is 101% which is within acceptable range. This is acceptable by Method 8000.

²⁰Benzo(g,h,i)perylene outside of control limits on CCV(ICV). CCV(ICV) component average is 101% which is within acceptable range. This is acceptable by Method 8000.

114865-869 (10811)

LAB Order ID: 8092050

Page 1 of

TraceAnalysis, Inc.

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Company Name: Talen/PE
Address: 2901 Rankin
Contact Person: Shanice Smith / Camille Bryant
Phone #: (432) 522-2133
Fax #: 522-2133
Email: Shm.th@talenpe.com
Project #: SRST 2000-10752
Project Name: Kimberly Sweet
Project Location (including state): Lexington, N.M.
Sampler Signature: Carl Vessels

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX			PRESERVATIVE METHOD						SAMPLING		Turn Around Time if different from standard	Hold
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	DATE		
186	MW-3	4	Vol 1123	X				X				X	X	9/24/08	1045	
800	MW-4	4	1	X				X				X	X	9/24/08	1100	
807	MW-10	4	↓	X				X				X	X	9/24/08	1110	
808	MW-7	6	Vol 1123	X				X				X	X	9/24/08	1245	
809	MW-8	6	↓	X				X				X	X	9/24/08	1526	

MTBE	B021B / 602 / B260B / 624																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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Received by: Shanice Smith Date: 9-20-08 Time: 1640 Temp: 3.2°
Received by: Shanice Smith Date: 9-20-08 Time: 1640 Temp: 3.2°
Received by: Shanice Smith Date: 9-20-08 Time: 1700 Temp: 3.2°

REMARKS: ISTEX, 805 - Midland
PAH - Lubbock

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check if Special Reporting Limits Are Needed

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

Carrier # Cherry m / Jone star

ORIGINAL COPY



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

Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFVB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Shanna Smith
Talon LPE-Amarillo
921 North Bivins
Amarillo, TX, 79107

Report Date: October 7, 2008

Work Order: 8093003



Project Location: Hobbs, NM
Project Name: Kimbrough Sweet 8 inch
Project Number: Plains045SPL
SRS#: 2000-10757

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
174994	MW-2	water	2008-09-29	14:42	2008-09-30
174995	MW-5	water	2008-09-29	13:38	2008-09-30
174996	MW-6	water	2008-09-29	15:39	2008-09-30
174997	MW-9	water	2008-09-29	12:20	2008-09-30

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 21 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 Kimbrough Sweet 8 inch were received by TraceAnalysis, Inc. on 2008-09-30 and assigned to work order 8093003. Samples for work order 8093003 were received intact without headspace and at a temperature of 4.0 deg. C.

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

Test	Method
BTEX	S 8021B
PAH	S 8270C
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 8093003 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: 174994 - MW-2

Laboratory: Midland
Analysis: BTEX
QC Batch: 52877
Prep Batch: 45308

Analytical Method: S 8021B
Date Analyzed: 2008-09-30
Sample Preparation: 2008-09-30

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		26.7	mg/L	200	0.00100
Toluene		23.3	mg/L	200	0.00100
Ethylbenzene		5.84	mg/L	200	0.00100
Xylene		15.0	mg/L	200	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		15.8	mg/L	200	20.0	79	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		16.9	mg/L	200	20.0	84	52 - 124.1

Sample: 174994 - MW-2

Laboratory: Lubbock
Analysis: PAH
QC Batch: 53057
Prep Batch: 45459

Analytical Method: S 8270C
Date Analyzed: 2008-10-03
Sample Preparation: 2008-10-02

Prep Method: S 3510C
Analyzed By: DS
Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene	1	3.22	mg/L	5	0.000200
2-Methylnaphthalene	2	6.94	mg/L	5	0.000200
1-Methylnaphthalene	3	5.87	mg/L	5	0.000200
Acenaphthylene		<0.00100	mg/L	5	0.000200
Acenaphthene		<0.00100	mg/L	5	0.000200
Dibenzofuran		0.216	mg/L	5	0.000200
Fluorene		0.319	mg/L	5	0.000200
Anthracene		<0.00100	mg/L	5	0.000200
Phenanthrene		0.432	mg/L	5	0.000200
Fluoranthene		0.0146	mg/L	5	0.000200
Pyrene		0.0285	mg/L	5	0.000200
Benzo(a)anthracene		<0.00100	mg/L	5	0.000200
Chrysene		0.0628	mg/L	5	0.000200

continued ...

¹ Estimated concentration value greater than standard range.

² Estimated concentration value greater than standard range.

³ Estimated concentration value greater than standard range.

sample 174994 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Benzo(b)fluoranthene		<0.00100	mg/L	5	0.000200
Benzo(k)fluoranthene		0.00585	mg/L	5	0.000200
Benzo(a)pyrene		<0.00100	mg/L	5	0.000200
Indeno(1,2,3-cd)pyrene		<0.00100	mg/L	5	0.000200
Dibenzo(a,h)anthracene		<0.00100	mg/L	5	0.000200
Benzo(g,h,i)perylene		<0.00100	mg/L	5	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5	4	0.229	mg/L	5	0.0800	286	37.4 - 123
2-Fluorobiphenyl		0.0539	mg/L	5	0.0800	67	34.3 - 130
Terphenyl-d14		0.0588	mg/L	5	0.0800	74	10 - 252

Sample: 174994 - MW-2

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 52902
Prep Batch: 45325

Analytical Method: Mod. 8015B
Date Analyzed: 2008-10-01
Sample Preparation: 2008-10-01

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		2200	mg/L	10	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	5	204	mg/L	10	10.0	2040	70 - 130

Sample: 174994 - MW-2

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 52878
Prep Batch: 45308

Analytical Method: S 8015B
Date Analyzed: 2008-09-30
Sample Preparation: 2008-09-30

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		279	mg/L	200	0.100

⁴8270 Only - One basic surrogate is out of control limits. The other two basic surrogates show extraction was performed properly.

⁵High surrogate recovery due to peak interference.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 6 of 21
Hobbs, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		16.5	mg/L	200	20.0	82	70 - 130
4-Bromofluorobenzene (4-BFB)		18.7	mg/L	200	20.0	94	70 - 130

Sample: 174995 - MW-5

Laboratory: Midland

Analysis: BTEX

QC Batch: 52877

Prep Batch: 45308

Analytical Method: S 8021B

Date Analyzed: 2008-09-30

Sample Preparation: 2008-09-30

Prep Method: S 5030B

Analyzed By: DC

Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		27.8	mg/L	200	0.00100
Toluene		21.6	mg/L	200	0.00100
Ethylbenzene		4.94	mg/L	200	0.00100
Xylene		11.7	mg/L	200	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		15.5	mg/L	200	20.0	78	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		16.6	mg/L	200	20.0	83	52 - 124.1

Sample: 174995 - MW-5

Laboratory: Lubbock

Analysis: PAH

QC Batch: 53057

Prep Batch: 45459

Analytical Method: S 8270C

Date Analyzed: 2008-10-03

Sample Preparation: 2008-10-02

Prep Method: S 3510C

Analyzed By: DS

Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene	⁶	2.99	mg/L	5	0.000200
2-Methylnaphthalene	⁷	6.47	mg/L	5	0.000200
1-Methylnaphthalene	⁸	5.64	mg/L	5	0.000200
Acenaphthylene		<0.00100	mg/L	5	0.000200
Acenaphthene		<0.00100	mg/L	5	0.000200
Dibenzofuran		0.204	mg/L	5	0.000200
Fluorene		0.311	mg/L	5	0.000200
Anthracene		0.418	mg/L	5	0.000200
Phenanthrene		0.414	mg/L	5	0.000200

continued ...

⁶Estimated concentration value greater than standard range.

⁷Estimated concentration value greater than standard range.

⁸Estimated concentration value greater than standard range.

sample 174995 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Fluoranthene		<0.00100	mg/L	5	0.000200
Pyrene		<0.00100	mg/L	5	0.000200
Benzo(a)anthracene		<0.00100	mg/L	5	0.000200
Chrysene		0.0670	mg/L	5	0.000200
Benzo(b)fluoranthene		<0.00100	mg/L	5	0.000200
Benzo(k)fluoranthene		0.00607	mg/L	5	0.000200
Benzo(a)pyrene		<0.00100	mg/L	5	0.000200
Indeno(1,2,3-cd)pyrene		<0.00100	mg/L	5	0.000200
Dibenzo(a,h)anthracene		<0.00100	mg/L	5	0.000200
Benzo(g,h,i)perylene		<0.00100	mg/L	5	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5	⁹	0.165	mg/L	5	0.0800	206	37.4 - 123
2-Fluorobiphenyl		0.0282	mg/L	5	0.0800	35	34.3 - 130
Terphenyl-d14		0.0401	mg/L	5	0.0800	50	10 - 252

Sample: 174995 - MW-5

Laboratory: Midland	Analytical Method: Mod. 8015B	Prep Method: N/A
Analysis: TPH DRO	Date Analyzed: 2008-10-01	Analyzed By: LD
QC Batch: 52902	Sample Preparation: 2008-10-01	Prepared By: LD
Prep Batch: 45325		

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		357	mg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	¹⁰	36.1	mg/L	1	10.0	361	70 - 130

Sample: 174995 - MW-5

Laboratory: Midland	Analytical Method: S 8015B	Prep Method: S 5030B
Analysis: TPH GRO	Date Analyzed: 2008-09-30	Analyzed By: DC
QC Batch: 52878	Sample Preparation: 2008-09-30	Prepared By: DC
Prep Batch: 45308		

continued ...

⁹8270 Only - One basic surrogate is out of control limits. The other two basic surrogates show extraction was performed properly.

¹⁰High surrogate recovery due to peak interference.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 8 of 21
Hobbs, NM

sample 174995 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
GRO		246	mg/L	200	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		16.2	mg/L	200	20.0	81	70 - 130
4-Bromofluorobenzene (4-BFB)		17.5	mg/L	200	20.0	88	70 - 130

Sample: 174996 - MW-6

Laboratory: Midland
Analysis: BTEX
QC Batch: 52877
Prep Batch: 45308

Analytical Method: S 8021B
Date Analyzed: 2008-09-30
Sample Preparation: 2008-09-30

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		16.9	mg/L	50	0.00100
Toluene		7.88	mg/L	50	0.00100
Ethylbenzene		1.39	mg/L	50	0.00100
Xylene		3.36	mg/L	50	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3.88	mg/L	50	5.00	78	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		4.14	mg/L	50	5.00	83	52 - 124.1

Sample: 174996 - MW-6

Laboratory: Lubbock
Analysis: PAH
QC Batch: 53057
Prep Batch: 45459

Analytical Method: S 8270C
Date Analyzed: 2008-10-03
Sample Preparation: 2008-10-02

Prep Method: S 3510C
Analyzed By: DS
Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene	¹¹	0.156	mg/L	1	0.000200

continued ...

¹¹ Estimated concentration value greater than standard range.

sample 174996 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
2-Methylnaphthalene	¹²	0.282	mg/L	1	0.000200
1-Methylnaphthalene	¹³	0.238	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		0.0195	mg/L	1	0.000200
Fluorene		0.0288	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Phenanthrene		0.0350	mg/L	1	0.000200
Fluoranthene		0.00117	mg/L	1	0.000200
Pyrene		0.00204	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		0.00571	mg/L	1	0.000200
Benzo(b)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(k)fluoranthene		0.000532	mg/L	1	0.000200
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0478	mg/L	1	0.0800	60	37.4 - 123
2-Fluorobiphenyl		0.0460	mg/L	1	0.0800	58	34.3 - 130
Terphenyl-d14		0.0595	mg/L	1	0.0800	74	10 - 252

Sample: 174996 - MW-6

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 52902
Prep Batch: 45325

Analytical Method: Mod. 8015B
Date Analyzed: 2008-10-01
Sample Preparation: 2008-10-01

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		38.1	mg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	¹⁴	17.6	mg/L	1	10.0	176	70 - 130

¹²Estimated concentration value greater than standard range.

¹³Estimated concentration value greater than standard range.

¹⁴High surrogate recovery due to peak interference.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 10 of 21
Hobbs, NM

Sample: 174996 - MW-6

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 52878
Prep Batch: 45308

Analytical Method: S 8015B
Date Analyzed: 2008-09-30
Sample Preparation: 2008-09-30

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		81.8	mg/L	50	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.05	mg/L	50	5.00	81	70 - 130
4-Bromofluorobenzene (4-BFB)		4.25	mg/L	50	5.00	85	70 - 130

Sample: 174997 - MW-9

Laboratory: Midland
Analysis: BTEX
QC Batch: 52877
Prep Batch: 45308

Analytical Method: S 8021B
Date Analyzed: 2008-09-30
Sample Preparation: 2008-09-30

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		11.1	mg/L	100	0.00100
Toluene		5.56	mg/L	100	0.00100
Ethylbenzene		0.928	mg/L	100	0.00100
Xylene		2.29	mg/L	100	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		7.76	mg/L	100	10.0	78	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		8.01	mg/L	100	10.0	80	52 - 124.1

Sample: 174997 - MW-9

Laboratory: Lubbock
Analysis: PAH
QC Batch: 53057
Prep Batch: 45459

Analytical Method: S 8270C
Date Analyzed: 2008-10-03
Sample Preparation: 2008-10-02

Prep Method: S 3510C
Analyzed By: DS
Prepared By: DS

continued ...

sample 174997 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene	¹⁵	0.104	mg/L	1	0.000200
2-Methylnaphthalene	¹⁶	0.206	mg/L	1	0.000200
1-Methylnaphthalene	¹⁷	0.173	mg/L	1	0.000200
Acenaphthylene		<0.000200	mg/L	1	0.000200
Acenaphthene		<0.000200	mg/L	1	0.000200
Dibenzofuran		0.0149	mg/L	1	0.000200
Fluorene		0.0216	mg/L	1	0.000200
Anthracene		<0.000200	mg/L	1	0.000200
Phenanthrene		0.0267	mg/L	1	0.000200
Fluoranthene		0.000513	mg/L	1	0.000200
Pyrene		0.00274	mg/L	1	0.000200
Benzo(a)anthracene		<0.000200	mg/L	1	0.000200
Chrysene		0.00683	mg/L	1	0.000200
Benzo(b)fluoranthene		0.000275	mg/L	1	0.000200
Benzo(k)fluoranthene		<0.000200	mg/L	1	0.000200
Benzo(a)pyrene		<0.000200	mg/L	1	0.000200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	1	0.000200
Dibenzo(a,h)anthracene		<0.000200	mg/L	1	0.000200
Benzo(g,h,i)perylene		<0.000200	mg/L	1	0.000200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0495	mg/L	1	0.0800	62	37.4 - 123
2-Fluorobiphenyl		0.0463	mg/L	1	0.0800	58	34.3 - 130
Terphenyl-d14		0.0959	mg/L	1	0.0800	120	10 - 252

Sample: 174997 - MW-9

Laboratory: Midland
Analysis: TPH DRO
QC Batch: 52902
Prep Batch: 45325

Analytical Method: Mod. 8015B
Date Analyzed: 2008-10-01
Sample Preparation: 2008-10-01

Prep Method: N/A
Analyzed By: LD
Prepared By: LD

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		119	mg/L	1	5.00

¹⁵ Estimated concentration value greater than standard range.

¹⁶ Estimated concentration value greater than standard range.

¹⁷ Estimated concentration value greater than standard range.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 12 of 21
Hobbs, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	¹⁸	27.8	mg/L	1	10.0	278	70 - 130

Sample: 174997 - MW-9

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 52878
Prep Batch: 45308

Analytical Method: S 8015B
Date Analyzed: 2008-09-30
Sample Preparation: 2008-09-30

Prep Method: S 5030B
Analyzed By: DC
Prepared By: DC

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		60.0	mg/L	100	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8.06	mg/L	100	10.0	81	70 - 130
4-Bromofluorobenzene (4-BFB)		8.17	mg/L	100	10.0	82	70 - 130

Method Blank (1) QC Batch: 52877

QC Batch: 52877
Prep Batch: 45308

Date Analyzed: 2008-09-30
QC Preparation: 2008-09-30

Analyzed By: DC
Prepared By: DC

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000500	mg/L	0.001
Toluene		<0.000700	mg/L	0.001
Ethylbenzene		<0.000700	mg/L	0.001
Xylene		<0.00180	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0814	mg/L	1	0.100	81	44.6 - 137.4
4-Bromofluorobenzene (4-BFB)		0.0818	mg/L	1	0.100	82	37.1 - 130.9

Method Blank (1) QC Batch: 52878

QC Batch: 52878
Prep Batch: 45308

Date Analyzed: 2008-09-30
QC Preparation: 2008-09-30

Analyzed By: DC
Prepared By: DC

¹⁸High surrogate recovery due to peak interference.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 13 of 21
Hobbs, NM

Parameter	Flag	MDL Result	Units	RL
GRO		0.0796	mg/L	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0839	mg/L	1	0.100	84	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0810	mg/L	1	0.100	81	50 - 130

Method Blank (1) QC Batch: 52902

QC Batch: 52902
Prep Batch: 45325

Date Analyzed: 2008-10-01
QC Preparation: 2008-10-01

Analyzed By: LD
Prepared By: LD

Parameter	Flag	MDL Result	Units	RL
DRO		<2.44	mg/L	5

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		7.14	mg/L	1	10.0	71	70 - 130

Method Blank (1) QC Batch: 53057

QC Batch: 53057
Prep Batch: 45459

Date Analyzed: 2008-10-03
QC Preparation: 2008-10-02

Analyzed By: DS
Prepared By: DS

Parameter	Flag	MDL Result	Units	RL
Naphthalene		<0.0000730	mg/L	0.0002
2-Methylnaphthalene		<0.0000509	mg/L	0.0002
1-Methylnaphthalene		<0.0000748	mg/L	0.0002
Acenaphthylene		<0.0000767	mg/L	0.0002
Acenaphthene		<0.000142	mg/L	0.0002
Dibenzofuran		<0.0000470	mg/L	0.0002
Fluorene		<0.0000569	mg/L	0.0002
Anthracene		<0.0000876	mg/L	0.0002
Phenanthrene		<0.0000552	mg/L	0.0002
Fluoranthene		<0.0000954	mg/L	0.0002
Pyrene		<0.0000497	mg/L	0.0002
Benzo(a)anthracene		<0.0000328	mg/L	0.0002
Chrysene		<0.0000990	mg/L	0.0002
Benzo(b)fluoranthene		<0.0000684	mg/L	0.0002
Benzo(k)fluoranthene		<0.0000830	mg/L	0.0002

continued ...

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 14 of 21
Hobbs, NM

method blank continued ...

Parameter	Flag	MDL Result	Units	RL
Benzo(a)pyrene		<0.0000549	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		<0.0000869	mg/L	0.0002
Dibenzo(a,h)anthracene		<0.0000605	mg/L	0.0002
Benzo(g,h,i)perylene		<0.0000681	mg/L	0.0002

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0669	mg/L	1	0.0800	84	10 - 146
2-Fluorobiphenyl		0.0623	mg/L	1	0.0800	78	10 - 141
Terphenyl-d14		0.0773	mg/L	1	0.0800	97	10 - 266

Laboratory Control Spike (LCS-1)

QC Batch: 52877
Prep Batch: 45308

Date Analyzed: 2008-09-30
QC Preparation: 2008-09-30

Analyzed By: DC
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0860	mg/L	1	0.100	<0.000500	86	71.7 - 120.5
Toluene	0.0875	mg/L	1	0.100	<0.000700	88	75.4 - 118.8
Ethylbenzene	0.0867	mg/L	1	0.100	<0.000700	87	73.5 - 118
Xylene	0.262	mg/L	1	0.300	<0.00180	87	72.9 - 118.2

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	0.0844	mg/L	1	0.100	<0.000500	84	71.7 - 120.5	2	20
Toluene	0.0855	mg/L	1	0.100	<0.000700	86	75.4 - 118.8	2	20
Ethylbenzene	0.0854	mg/L	1	0.100	<0.000700	85	73.5 - 118	2	20
Xylene	0.257	mg/L	1	0.300	<0.00180	86	72.9 - 118.2	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)	0.0805	0.0786	mg/L	1	0.100	80	79	38.2 - 131.6
4-Bromofluorobenzene (4-BFB)	0.0828	0.0821	mg/L	1	0.100	83	82	43.9 - 132.4

Laboratory Control Spike (LCS-1)

QC Batch: 52878
Prep Batch: 45308

Date Analyzed: 2008-09-30
QC Preparation: 2008-09-30

Analyzed By: DC
Prepared By: DC

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 15 of 21
Hobbs, NM

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	0.854	mg/L	1	1.00	0.0796	77	70 - 130

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	0.855	mg/L	1	1.00	0.0796	78	70 - 130	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)	0.0849	0.0815	mg/L	1	0.100	85	82	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0870	0.0839	mg/L	1	0.100	87	84	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 52902
Prep Batch: 45325

Date Analyzed: 2008-10-01
QC Preparation: 2008-10-01

Analyzed By: LD
Prepared By: LD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	23.6	mg/L	1	25.0	<2.44	94	70 - 130

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	25.1	mg/L	1	25.0	<2.44	100	70 - 130	6	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	11.3	11.4	mg/L	1	10.0	113	114	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 53057
Prep Batch: 45459

Date Analyzed: 2008-10-03
QC Preparation: 2008-10-02

Analyzed By: DS
Prepared By: DS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Naphthalene	0.0489	mg/L	1	0.0800	<0.0000730	61	10 - 141
2-Methylnaphthalene	0.0546	mg/L	1	0.0800	<0.0000509	68	50 - 150
1-Methylnaphthalene	0.0546	mg/L	1	0.0800	<0.0000748	68	50 - 150

continued ...

control spikes continued ...

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Acenaphthylene	0.0703	mg/L	1	0.0800	<0.0000767	88	10 - 152
Acenaphthene	0.0667	mg/L	1	0.0800	<0.000142	83	10 - 151
Dibenzofuran	0.0673	mg/L	1	0.0800	<0.0000470	84	10 - 148
Fluorene	0.0747	mg/L	1	0.0800	<0.0000569	93	10 - 172
Anthracene	0.0715	mg/L	1	0.0800	<0.0000876	89	22.5 - 172
Phenanthrene	0.0701	mg/L	1	0.0800	<0.0000552	88	19.6 - 172
Fluoranthene	0.0782	mg/L	1	0.0800	<0.0000954	98	17.3 - 187
Pyrene	0.0756	mg/L	1	0.0800	<0.0000497	94	14.9 - 199
Benzo(a)anthracene	0.0718	mg/L	1	0.0800	<0.0000328	90	19.4 - 185
Chrysene	0.0758	mg/L	1	0.0800	<0.0000990	95	18.4 - 188
Benzo(b)fluoranthene	0.0742	mg/L	1	0.0800	<0.0000684	93	10 - 193
Benzo(k)fluoranthene	0.0781	mg/L	1	0.0800	<0.0000830	98	27.8 - 196
Benzo(a)pyrene	0.0845	mg/L	1	0.0800	<0.0000549	106	12.4 - 205
Indeno(1,2,3-cd)pyrene	0.0891	mg/L	1	0.0800	<0.0000869	111	10 - 198
Dibenzo(a,h)anthracene	0.0884	mg/L	1	0.0800	<0.0000605	110	10 - 172
Benzo(g,h,i)perylene	0.0886	mg/L	1	0.0800	<0.0000681	111	10 - 186

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
Naphthalene	0.0475	mg/L	1	0.0800	<0.0000730	59	10 - 141	3	20
2-Methylnaphthalene	0.0540	mg/L	1	0.0800	<0.0000509	68	50 - 150	1	20
1-Methylnaphthalene	0.0540	mg/L	1	0.0800	<0.0000748	68	50 - 150	1	20
Acenaphthylene	0.0680	mg/L	1	0.0800	<0.0000767	85	10 - 152	3	20
Acenaphthene	0.0641	mg/L	1	0.0800	<0.000142	80	10 - 151	4	20
Dibenzofuran	0.0645	mg/L	1	0.0800	<0.0000470	81	10 - 148	4	20
Fluorene	0.0711	mg/L	1	0.0800	<0.0000569	89	10 - 172	5	20
Anthracene	0.0699	mg/L	1	0.0800	<0.0000876	87	22.5 - 172	2	20
Phenanthrene	0.0688	mg/L	1	0.0800	<0.0000552	86	19.6 - 172	2	20
Fluoranthene	0.0771	mg/L	1	0.0800	<0.0000954	96	17.3 - 187	1	20
Pyrene	0.0730	mg/L	1	0.0800	<0.0000497	91	14.9 - 199	4	20
Benzo(a)anthracene	0.0698	mg/L	1	0.0800	<0.0000328	87	19.4 - 185	3	20
Chrysene	0.0737	mg/L	1	0.0800	<0.0000990	92	18.4 - 188	3	20
Benzo(b)fluoranthene	0.0718	mg/L	1	0.0800	<0.0000684	90	10 - 193	3	20
Benzo(k)fluoranthene	0.0754	mg/L	1	0.0800	<0.0000830	94	27.8 - 196	4	20
Benzo(a)pyrene	0.0806	mg/L	1	0.0800	<0.0000549	101	12.4 - 205	5	20
Indeno(1,2,3-cd)pyrene	0.0857	mg/L	1	0.0800	<0.0000869	107	10 - 198	4	20
Dibenzo(a,h)anthracene	0.0851	mg/L	1	0.0800	<0.0000605	106	10 - 172	4	20
Benzo(g,h,i)perylene	0.0849	mg/L	1	0.0800	<0.0000681	106	10 - 186	4	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
Nitrobenzene-d5	0.0659	0.0640	mg/L	1	0.0800	82	80	10 - 165

continued ...

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 17 of 21
Hobbs, NM

control spikes continued ...

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
2-Fluorobiphenyl	0.0626	0.0601	mg/L	1	0.0800	78	75	10 - 157
Terphenyl-d14	0.0835	0.0813	mg/L	1	0.0800	104	102	10 - 220

Matrix Spike (MS-1) Spiked Sample: 174994

QC Batch: 52877
Prep Batch: 45308

Date Analyzed: 2008-09-30
QC Preparation: 2008-09-30

Analyzed By: DC
Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	43.8	mg/L	200	20.0	26.7384	85	10 - 160.8
Toluene	40.0	mg/L	200	20.0	23.2604	84	10 - 160.7
Ethylbenzene	21.2	mg/L	200	20.0	5.8361	77	10 - 158.3
Xylene	61.5	mg/L	200	60.0	15.0328	77	10 - 158

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	48.6	mg/L	200	20.0	26.7384	109	10 - 160.8	10	20
Toluene	¹⁹ 50.4	mg/L	200	20.0	23.2604	136	10 - 160.7	23	20
Ethylbenzene	²⁰ 26.4	mg/L	200	20.0	5.8361	103	10 - 158.3	22	20
Xylene	74.4	mg/L	200	60.0	15.0328	99	10 - 158	19	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)	15.3	15.5	mg/L	200	20	76	78	33.1 - 132.5
4-Bromofluorobenzene (4-BFB)	16.6	17.2	mg/L	200	20	83	86	37.5 - 136

Matrix Spike (MS-1) Spiked Sample: 174995

QC Batch: 52878
Prep Batch: 45308

Date Analyzed: 2008-09-30
QC Preparation: 2008-09-30

Analyzed By: DC
Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	²¹ 279	mg/L	200	200	246.564	16	70 - 130

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

¹⁹MSD analyte out of range. MS/MSD has a RPD within limits. Therefore, MS shows extraction occurred properly.

²⁰MSD analyte out of range. MS/MSD has a RPD within limits. Therefore, MS shows extraction occurred properly.

²¹Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 18 of 21
Hobbs, NM

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	²² 462	mg/L	200	200	246.564	108	70 - 130	49	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)	15.6	16.1	mg/L	200	20	78	80	70 - 130
4-Bromofluorobenzene (4-BFB)	16.6	18.2	mg/L	200	20	83	91	70 - 130

Matrix Spike (MS-1) Spiked Sample: 174868

QC Batch: 52902
Prep Batch: 45325

Date Analyzed: 2008-10-01
QC Preparation: 2008-10-01

Analyzed By: LD
Prepared By: LD

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	²³ 270	mg/L	1	25.0	270	0	70 - 130

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	²⁴ 267	mg/L	1	25.0	270	0	70 - 130	1	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	²⁵ ²⁶ 22.8	22.5	mg/L	1	10	228	225	70 - 130

Standard (ICV-1)

QC Batch: 52877

Date Analyzed: 2008-09-30

Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0931	93	85 - 115	2008-09-30
Toluene		mg/L	0.100	0.0938	94	85 - 115	2008-09-30
Ethylbenzene		mg/L	0.100	0.0942	94	85 - 115	2008-09-30
Xylene		mg/L	0.300	0.287	96	85 - 115	2008-09-30

²²MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

²³Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

²⁴Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

²⁵High surrogate recovery due to peak interference.

²⁶High surrogate recovery due to peak interference.

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 19 of 21
Hobbs, NM

Standard (CCV-1)

QC Batch: 52877

Date Analyzed: 2008-09-30

Analyzed By: DC

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0891	89	85 - 115	2008-09-30
Toluene		mg/L	0.100	0.0897	90	85 - 115	2008-09-30
Ethylbenzene		mg/L	0.100	0.0889	89	85 - 115	2008-09-30
Xylene		mg/L	0.300	0.269	90	85 - 115	2008-09-30

Standard (ICV-1)

QC Batch: 52878

Date Analyzed: 2008-09-30

Analyzed By: DC

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.09	109	85 - 115	2008-09-30

Standard (CCV-1)

QC Batch: 52878

Date Analyzed: 2008-09-30

Analyzed By: DC

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.946	95	85 - 115	2008-09-30

Standard (ICV-1)

QC Batch: 52902

Date Analyzed: 2008-10-01

Analyzed By: LD

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	237	95	85 - 115	2008-10-01

Standard (CCV-1)

QC Batch: 52902

Date Analyzed: 2008-10-01

Analyzed By: LD

Report Date: October 7, 2008
Plains045SPL

Work Order: 8093003
Kimbrough Sweet 8 inch

Page Number: 20 of 21
Hobbs, NM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	222	89	85 - 115	2008-10-01

Standard (CCV-1)

QC Batch: 53057

Date Analyzed: 2008-10-03

Analyzed By: DS

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/L	60.0	56.6	94	80 - 120	2008-10-03
2-Methylnaphthalene		mg/L	60.0	52.2	87	80 - 120	2008-10-03
1-Methylnaphthalene		mg/L	60.0	52.3	87	80 - 120	2008-10-03
Acenaphthylene		mg/L	60.0	59.4	99	80 - 120	2008-10-03
Acenaphthene		mg/L	60.0	58.3	97	80 - 120	2008-10-03
Dibenzofuran		mg/L	60.0	60.6	101	80 - 120	2008-10-03
Fluorene		mg/L	60.0	66.6	111	80 - 120	2008-10-03
Anthracene		mg/L	60.0	59.8	100	80 - 120	2008-10-03
Phenanthrene		mg/L	60.0	57.5	96	80 - 120	2008-10-03
Fluoranthene		mg/L	60.0	59.2	99	80 - 120	2008-10-03
Pyrene		mg/L	60.0	61.0	102	80 - 120	2008-10-03
Benzo(a)anthracene		mg/L	60.0	56.0	93	80 - 120	2008-10-03
Chrysene		mg/L	60.0	58.1	97	80 - 120	2008-10-03
Benzo(b)fluoranthene		mg/L	60.0	60.7	101	80 - 120	2008-10-03
Benzo(k)fluoranthene		mg/L	60.0	61.5	102	80 - 120	2008-10-03
Benzo(a)pyrene		mg/L	60.0	63.6	106	80 - 120	2008-10-03
Indeno(1,2,3-cd)pyrene		mg/L	60.0	69.7	116	80 - 120	2008-10-03
Dibenzo(a,h)anthracene		mg/L	60.0	69.8	116	80 - 120	2008-10-03
Benzo(g,h,i)perylene		mg/L	60.0	69.0	115	80 - 120	2008-10-03

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5		61.5	mg/L	1	60.0	102	80 - 120
2-Fluorobiphenyl		57.6	mg/L	1	60.0	96	80 - 120
Terphenyl-d14		60.3	mg/L	1	60.0	100	80 - 120

Standard (CCV-2)

QC Batch: 53057

Date Analyzed: 2008-10-03

Analyzed By: DS

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/L	60.0	57.0	95	80 - 120	2008-10-03

continued ...

standard continued ...

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
2-Methylnaphthalene		mg/L	60.0	53.8	90	80 - 120	2008-10-03
1-Methylnaphthalene		mg/L	60.0	54.7	91	80 - 120	2008-10-03
Acenaphthylene		mg/L	60.0	58.8	98	80 - 120	2008-10-03
Acenaphthene		mg/L	60.0	58.7	98	80 - 120	2008-10-03
Dibenzofuran		mg/L	60.0	62.1	104	80 - 120	2008-10-03
Fluorene		mg/L	60.0	69.8	116	80 - 120	2008-10-03
Anthracene		mg/L	60.0	59.0	98	80 - 120	2008-10-03
Phenanthrene		mg/L	60.0	56.6	94	80 - 120	2008-10-03
Fluoranthene		mg/L	60.0	54.4	91	80 - 120	2008-10-03
Pyrene		mg/L	60.0	61.1	102	80 - 120	2008-10-03
Benzo(a)anthracene		mg/L	60.0	56.7	94	80 - 120	2008-10-03
Chrysene		mg/L	60.0	58.4	97	80 - 120	2008-10-03
Benzo(b)fluoranthene		mg/L	60.0	56.8	95	80 - 120	2008-10-03
Benzo(k)fluoranthene		mg/L	60.0	61.6	103	80 - 120	2008-10-03
Benzo(a)pyrene		mg/L	60.0	63.1	105	80 - 120	2008-10-03
Indeno(1,2,3-cd)pyrene	²⁷	mg/L	60.0	73.8	123	80 - 120	2008-10-03
Dibenzo(a,h)anthracene	²⁸	mg/L	60.0	73.5	122	80 - 120	2008-10-03
Benzo(g,h,i)perylene	²⁹	mg/L	60.0	72.8	121	80 - 120	2008-10-03

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5		58.3	mg/L	1	60.0	97	80 - 120
2-Fluorobiphenyl		52.4	mg/L	1	60.0	87	80 - 120
Terphenyl-d14		59.6	mg/L	1	60.0	99	80 - 120

²⁷Indeno(1,2,3-cd)pyrene outside of control limits on CCV(ICV). CCV(ICV) component average is 101% which is within acceptable range. This is acceptable by Method 8000.

²⁸Dibenzo(a,h)anthracene outside of control limits on CCV(ICV). CCV(ICV) component average is 101% which is within acceptable range. This is acceptable by Method 8000.

²⁹Benzo(g,h,i)perylene outside of control limits on CCV(ICV). CCV(ICV) component average is 101% which is within acceptable range. This is acceptable by Method 8000.

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Address: (Street, City, Zip)

Contact Person: Shanna Smith

Phone to: PLAINS Camilo Bryant

If different from above: PLAINS Camilo Bryant

Project #: 5132 2000-10757

Project Location (including state): New Mexico

Sampler Signature: Carl Vessels

Project Name: Kimbraugh Street 8"

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ANALYSIS REQUEST (Circle or Specify Method No.)

TPH 418.1 / TX1005 / TX1005 Ek(C35)	TPH 8015 GGO / DRO / TVHC	PAH 8270C / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	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
MTBE 8021B / 602 / 8260B / 624	BTX 8021B / 602 / 8260B / 624	PH 8270C / 625	TPH 8015 GGO / DRO / TVHC	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

LAB #	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD						SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	DATE	TIME
24994	MW-2	6	100 TWR	R				R				R	R	9/19/08	144
24995	MW-5	6	↓	R				R				R	R	9/19/08	133
24996	MW-6	6	↓	R				R				R	R	9/19/08	153
24997	MW-9	6	↓	R				R				R	R	9/19/08	122
														</	

Relinquished by: <u>Labon/PE</u>	Company: <u>Trace</u>	Date: <u>9/30/08</u>	Time: <u>0800</u>	Received by: <u>Labon/PE</u>	Company: <u>Trace</u>	Date: <u>9/30/08</u>	Time: <u>0805</u>
Relinquished by: <u>Labon/PE</u>	Company: <u>Trace</u>	Date: <u>9/30/08</u>	Time: <u>0800</u>	Received by: <u>Labon/PE</u>	Company: <u>Trace</u>	Date: <u>9/30/08</u>	Time: <u>0805</u>
Relinquished by: <u>Labon/PE</u>	Company: <u>Trace</u>	Date: <u>9/30/08</u>	Time: <u>0800</u>	Received by: <u>Labon/PE</u>	Company: <u>Trace</u>	Date: <u>9/30/08</u>	Time: <u>0805</u>

REMARKS:
BTX, 8015 - Midland
PAH - Lubbock

- ☐ 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.

ORIGINAL COPY

Carrier # Carry on / Jonatan



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBENC: 237019

HUB: 1752439743100-86536
NCTRCA WFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Shanna Smith
Talon LPE-Amarillo
921 North Bivins
Amarillo, TX, 79107

Report Date: December 8, 2008

Work Order: 8120305



Project Location: Hobbs, NM
Project Name: Kimbrough Sweet 8 inch
Project Number: Plains045SPL
SRS#: 2000-10757

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
180967	MW-1	water	2008-12-02	13:15	2008-12-02
180968	MW-3	water	2008-12-02	13:23	2008-12-02
180969	MW-4	water	2008-12-02	13:30	2008-12-02
180970	MW-10	water	2008-12-02	13:57	2008-12-02

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 7 pages and shall not be reproduced except in its entirety, without written approval of

TraceAnalysis, Inc.

Michael Abel

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 Kimbrough Sweet 8 inch were received by TraceAnalysis, Inc. on 2008-12-02 and assigned to work order 8120305. Samples for work order 8120305 were received intact without headspace and at a temperature of 3.1 deg. C.

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

Test	Method
BTEX	S 8021B

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 8120305 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.

Report Date: December 8, 2008
Plains045SPL

Work Order: 8120305
Kimbrough Sweet 8 inch

Page Number: 4 of 7
Hobbs, NM

Analytical Report

Sample: 180967 - MW-1

Laboratory: Midland
Analysis: BTEX
QC Batch: 54889
Prep Batch: 46920

Analytical Method: S 8021B
Date Analyzed: 2008-12-05
Sample Preparation: 2008-12-05

Prep Method: S 5030B
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0985	mg/L	1	0.100	98	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		0.0941	mg/L	1	0.100	94	52 - 124.1

Sample: 180968 - MW-3

Laboratory: Midland
Analysis: BTEX
QC Batch: 54889
Prep Batch: 46920

Analytical Method: S 8021B
Date Analyzed: 2008-12-05
Sample Preparation: 2008-12-05

Prep Method: S 5030B
Analyzed By: AG
Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		12.1	mg/L	100	0.00100
Toluene		0.189	mg/L	100	0.00100
Ethylbenzene		0.207	mg/L	100	0.00100
Xylene		0.456	mg/L	100	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		9.72	mg/L	100	10.0	97	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		9.47	mg/L	100	10.0	95	52 - 124.1

Sample: 180969 - MW-4

Laboratory: Midland
Analysis: BTEX
QC Batch: 54889
Prep Batch: 46920

Analytical Method: S 8021B
Date Analyzed: 2008-12-05
Sample Preparation: 2008-12-05

Prep Method: S 5030B
Analyzed By: AG
Prepared By: AG

Report Date: December 8, 2008
Plains045SPL

Work Order: 8120305
Kimbrough Sweet 8 inch

Page Number: 5 of 7
Hobbs, NM

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0950	mg/L	1	0.100	95	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		0.0922	mg/L	1	0.100	92	52 - 124.1

Sample: 180970 - MW-10

Laboratory: Midland

Analysis: BTEX

QC Batch: 54889

Prep Batch: 46920

Analytical Method: S 8021B

Date Analyzed: 2008-12-05

Sample Preparation: 2008-12-05

Prep Method: S 5030B

Analyzed By: AG

Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0980	mg/L	1	0.100	98	65.1 - 116.8
4-Bromofluorobenzene (4-BFB)		0.0939	mg/L	1	0.100	94	52 - 124.1

Method Blank (1) QC Batch: 54889

QC Batch: 54889

Prep Batch: 46920

Date Analyzed: 2008-12-05

QC Preparation: 2008-12-05

Analyzed By: AG

Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000800	mg/L	0.001
Toluene		<0.000800	mg/L	0.001
Ethylbenzene		<0.000500	mg/L	0.001
Xylene		<0.000900	mg/L	0.001

Report Date: December 8, 2008
Plains045SPL

Work Order: 8120305
Kimbrough Sweet 8 inch

Page Number: 6 of 7
Hobbs, NM

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.102	mg/L	1	0.100	102	44.6 - 137.4
4-Bromofluorobenzene (4-BFB)		0.0976	mg/L	1	0.100	98	37.1 - 130.9

Laboratory Control Spike (LCS-1)

QC Batch: 54889
Prep Batch: 46920

Date Analyzed: 2008-12-05
QC Preparation: 2008-12-05

Analyzed By: AG
Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0893	mg/L	1	0.100	<0.000800	89	71.7 - 120.5
Toluene	0.0885	mg/L	1	0.100	<0.000800	88	75.4 - 118.8
Ethylbenzene	0.0864	mg/L	1	0.100	<0.000500	86	73.5 - 118
Xylene	0.260	mg/L	1	0.300	<0.000900	87	72.9 - 118.2

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	0.0904	mg/L	1	0.100	<0.000800	90	71.7 - 120.5	1	20
Toluene	0.0894	mg/L	1	0.100	<0.000800	89	75.4 - 118.8	1	20
Ethylbenzene	0.0887	mg/L	1	0.100	<0.000500	89	73.5 - 118	3	20
Xylene	0.267	mg/L	1	0.300	<0.000900	89	72.9 - 118.2	3	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)	0.0952	0.0988	mg/L	1	0.100	95	99	38.2 - 131.6
4-Bromofluorobenzene (4-BFB)	0.0973	0.0984	mg/L	1	0.100	97	98	43.9 - 132.4

Matrix Spike (MS-1) Spiked Sample: 180968

QC Batch: 54889
Prep Batch: 46920

Date Analyzed: 2008-12-05
QC Preparation: 2008-12-05

Analyzed By: AG
Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	22.5	mg/L	100	10.0	12.0982	104	10 - 160.8
Toluene	9.04	mg/L	100	10.0	0.1886	88	10 - 160.7
Ethylbenzene	8.84	mg/L	100	10.0	0.2069	86	10 - 158.3
Xylene	26.5	mg/L	100	30.0	0.456	87	10 - 158

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

Report Date: December 8, 2008
Plains045SPL

Work Order: 8120305
Kimbrough Sweet 8 inch

Page Number: 7 of 7
Hobbs, NM

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	22.4	mg/L	100	10.0	12.0982	103	10 - 160.8	0	20
Toluene	9.08	mg/L	100	10.0	0.1886	89	10 - 160.7	0	20
Ethylbenzene	9.08	mg/L	100	10.0	0.2069	89	10 - 158.3	3	20
Xylene	27.3	mg/L	100	30.0	0.456	89	10 - 158	3	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)	9.56	9.67	mg/L	100	10	96	97	33.1 - 132.5
4-Bromofluorobenzene (4-BFB)	9.70	9.73	mg/L	100	10	97	97	37.5 - 136

Standard (ICV-1)

QC Batch: 54889

Date Analyzed: 2008-12-05

Analyzed By: AG

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.102	102	85 - 115	2008-12-05
Toluene		mg/L	0.100	0.101	101	85 - 115	2008-12-05
Ethylbenzene		mg/L	0.100	0.100	100	85 - 115	2008-12-05
Xylene		mg/L	0.300	0.302	101	85 - 115	2008-12-05

Standard (CCV-1)

QC Batch: 54889

Date Analyzed: 2008-12-05

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0915	92	85 - 115	2008-12-05
Toluene		mg/L	0.100	0.0888	89	85 - 115	2008-12-05
Ethylbenzene		mg/L	0.100	0.0886	89	85 - 115	2008-12-05
Xylene		mg/L	0.300	0.266	89	85 - 115	2008-12-05

APPENDIX D

NMOCD C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised March 17, 1999

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☐ Final Report

Name of Company: Plains Pipeline, L.P.	Contact: Camille Reynolds	
Address P.O. Box 3119 Midland, Texas 79702	Telephone No. 505.396.3341 (CJReynolds@paalp.com)	
Facility Name Kimbrough Sweet #2000-10757	Facility Type 8" Steel Pipeline	
Surface Owner: State of New Mexico	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter G	Section 3	Township T18S	Range R37E	Feet from the	North/South Line	Feet from the	East/West Line	County: Lea
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Latitude: 32°46'48"N Longitude: 103°14'18"W

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 60 bbls barrels	Volume Recovered 22 bbls barrels
Source of Release 8" Steel Pipeline	Date and Hour of Occurrence 10/25/2000	Date and Hour of Discovery 10/25/2000
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Donna Williams	
By Whom? Wayne Brunette	Date and Hour 10-25-00@5:15PM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. NA	

If a Watercourse was Impacted, Describe Fully.*
NA

Describe Cause of Problem and Remedial Action Taken.*

8" Steel Pipeline: The release was caused by internal corrosion. Approximately 60 barrels of crude oil was released and approximately 22 barrels recovered and reintroduced to the system. The leak was excavated and repaired and the line placed back in service.

Describe Area Affected and Cleanup Action Taken.*

15,613 sqft 200' x 200': In 2001, the NMOCD approved a Soil and Groundwater Abatement Plan. Impacted soil down to 15'bgs was excavated, shredded, and treated. A 2-foot thick compacted clay barrier was installed in the bottom of the excavation and the treated soil used to bring to grade. Remedial Goals: TPH 8015m = 100 mg/Kg, Benzene = 10 mg/Kg, and BTEX, i.e., the mass sum of Benzene, Ethyl Benzene, Toluene, and Xylenes = 50 mg/Kg.

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

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Camille Reynolds		
E-mail Address: CJReynolds@paalp.com	Approved by District Supervisor:	
Title: District Environmental Supervisor	Approval Date:	Expiration Date:
Date: Phone: 505.396.3341	Conditions of Approval:	Attached ☐

* Attach Additional Sheets If Necessary

 Site Information and Metrics		Incident Date: 10/25/2000	NMOCD Notified: 10-25-00@5:15PM
SITE: Kimbrough Sweet		Assigned Site Reference #: 2000-10757	
Company: Plains Pipeline, L.P.			
Street Address: P.O. Box 3119			
Mailing Address:			
City, State, Zip: Midland, Texas 79702			
Representative: Camille Reynolds			
Representative Telephone: 505.396.3341 (C)Reynolds@paalp.com			
Telephone:			
Fluid volume released (bbls): 60 bbls		Recovered (bbls): 22 bbls	
>25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas)			
5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas)			
Leak, Spill, or Pit (LSP) Name: Kimbrough Sweet			
Source of contamination: 8" Steel Pipeline			
Land Owner, i.e., BLM, ST, Fee, Other: State of New Mexico			
LSP Dimensions 200' x 200'			
LSP Area: 15,613 ft ²			
Location of Reference Point (RP)			
Location distance and direction from RP			
Latitude: 32°46'48"N			
Longitude: 103°14'18"W			
Elevation above mean sea level: 3,720'amsl			
Feet from South Section Line			
Feet from West Section Line			
Location- Unit or ¼: SW¼ of the NE¼		Unit Letter: G	
Location- Section: 3			
Location- Township: T18S			
Location- Range: R37E			
Surface water body within 1000' radius of site: none			
Domestic water wells within 1000' radius of site: none			
Agricultural water wells within 1000' radius of site: none			
Public water supply wells within 1000' radius of site: none			
Depth from land surface to ground water (DG) 50'bgs			
Depth of contamination (DC) - 50'bgs			
Depth to ground water (DG - DC = DtGW) - zero feet			
1. Ground Water		2. Wellhead Protection Area	
If Depth to GW <50 feet: 20 points		If <1000' from water source, or; <200' from private domestic water source: 20 points	
If Depth to GW 50 to 99 feet: 10 points		If >1000' from water source, or; >200' from private domestic water source: 0 points	
If Depth to GW >100 feet: 0 points		If >1000' from water source, or; >200' from private domestic water source: 0 points	
Ground water Score = 20		Wellhead Protection Area Score = 0	
Site Rank (1+2+3) = 20		Surface Water Score = 0	
Total Site Ranking Score and Acceptable Concentrations			
Parameter	>19	10-19	0-9
Benzene ¹	10 ppm	10 ppm	10 ppm
BTEX ¹	50 ppm	50 ppm	50 ppm
TPH	100 ppm	1000 ppm	5000 ppm
¹ 100 ppm field VOC headspace measurement may be substituted for lab analysis			