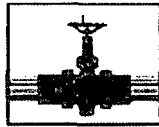


AP - 96

# STAGE 1 & 2 REPORTS

DATE:

August 2010



**PLAINS**  
PIPELINE, L.P.

RECEIVED OCD  
2010 AUG 27 P 1:24

August 19, 2010

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

RE: Plains Pipeline, L.P. Lovington Gathering WTI  
NMOCD Reference # 1R-838 / AP-96  
Unit Letter H of Section 6, Township 17 South, Range 37 East  
Lea County, New Mexico

Dear Mr. Hansen:

Plains Pipeline, L.P. is pleased to submit the attached *Remediation Summary and Soil Closure Request*, dated August 2010, for the Lovington Gathering WTI site. This site is located in Section 6 of Township 17 South, and Range 37 East of Lea County, New Mexico. This document details the soil remediation activities performed at the site.

Should you have any questions or comments, please contact me at (575) 441-1099.

Sincerely,

Jason Henry  
Remediation Coordinator  
Plains Pipeline, L.P.

CC: Larry Johnson, NMOCD, Hobbs Office

Enclosure

# *Basin Environmental Consulting, LLC*

2800 Plains Highway  
P. O. Box 381  
Lovington, New Mexico 88260  
cjbryant@basin-consulting.com  
Office: (575) 396-2378 Fax: (575) 396-1429



## **REMEDIATION SUMMARY AND SOIL CLOSURE REQUEST**

**PLAINS PIPELINE, L.P. (231735)  
Lovington Gathering WTI  
Lea County, New Mexico  
Plains SRS # 2006-142**

**UNIT LTR "H" (SE/NE), Section 6, Township 17 South, Range 37 East  
Latitude 32° 51' 56.0" North, Longitude 103° 17' 07.2" West  
NMOCD Reference # 1RP-838 / AP-96**

Prepared For:

Plains Pipeline, L.P.  
333 Clay Street  
Suite 1600  
Houston, Texas 77002

Prepared By:  
Basin Environmental Consulting, LLC  
2800 Plains Highway  
Lovington, New Mexico 88260

**August 2010**

Joel W. Lowry  
Project Manager

Camille J. Bryant  
Project Manager

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Figure 2 – Site and Sample Location Map

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## APPENDICES

Appendix A – Soil Boring and Monitor Well Logs

Appendix B – Analytical Reports

Appendix C – Photographs

Appendix D – Release Notification and Corrective Action (Form C-141)



## **1.0 INTRODUCTION**

Basin Environmental Consulting, LLC (Basin), on behalf of Plains Pipeline, L.P. (Plains), has prepared this Remediation Summary and Soil Closure Request for the release site known as Lovington Gathering WTI (SRS # 2006-142). The legal description of the site is SE¼, NE¼ Section 6, Township 17 South, Range 37 East in Lea County, New Mexico. The site latitude is 32° 51' 56.0" North and the site longitude is 103° 17' 07.2" West. Please reference Figure 1 for a Site Location Map and Figure 2 for a Site and Sample Location Map. The Release Notification and Corrective Action (Form C-141) is provided as Appendix D.

On April 21, 2006, Basin responded to the pipeline release on behalf of Plains. During initial response activities the crude oil release was clamped and contained under the direction of Plains personnel. The excavated soil was stockpiled on 6-mil plastic sheeting to mitigate hydrocarbon impact to the underlying soil. The Release Notification and Corrective Action (Form C-141) indicated approximately twelve (12) barrels of crude oil was released from the Plains pipeline and eight (8) barrels were recovered, resulting in a net loss of four (4) barrels of crude oil. The cause of the release was attributed to internal corrosion of the pipeline while purging the line. The excavated area was fenced and is characterized by a Plains pipeline right-of-way adjacent to an idled Plains pump station; the release occurred in a pasture containing various oil and gas production facilities. The release resulted in a surface stain measuring approximately thirty (30) feet in length by twenty-seven (27) feet in width. General photographs of the site are provided as Appendix C.

## **2.0 NMOCD SITE CLASSIFICATION**

The depth to groundwater on-site is approximately seventy-five (75) feet bgs. On-site drilling activities indicate the soil is impacted to groundwater in the vicinity of the release point, the distance between groundwater and the deepest extent of impact results in 20 points being assigned to the Lovington Gathering WTI release site as a result of this criterion.

The water well database, maintained by the New Mexico Office of the State Engineer (NMOSE), was accessed to determine the location and type of nearby registered water wells in the area. The database indicated there is one (1) water well less than 1,000 feet from the release, resulting in 20 points being assigned to this site as a result of this criterion.

There are no surface water bodies located within 1,000 feet of the site. Based on the NMOCD ranking system no points will be assigned to the site as a result of the criterion. The Guidelines indicate the Lovington Gathering WTI release site has a ranking score of 40. Based on this score, the soil remediation levels for a site with a ranking score of >19 points are as follows:

- Benzene – 10 mg/Kg (ppm)
- BTEX – 50 mg/Kg (ppm)
- TPH – 100 mg/Kg (ppm)

### 3.0 SUMMARY OF REMEDIATION ACTIVITIES

Following the initial excavation activities, field screening using a photo ionization detector (PID) indicated elevated concentrations of volatile organic compounds (VOC's) remained in the floor and sidewalls of the excavation. Approximately 200 cubic yards (cy) of impacted soil was excavated and stockpiled on a 6-mil poly-liner adjacent to the excavation, pending final disposition.

On April 24, 2006, eleven (11) soil samples were collected from the floor and sidewalls of the excavation ranging in depth from approximately one (1) to four (4) feet bgs. The soil samples were field screened using a PID, the results of the field screening suggested VOC's exceeded the NMOCD regulatory standard of 100 mg/Kg.

On April 28, 2006, five (5) delineation trenches were excavated at the release point, west cross gradient, east cross gradient and in down gradient positions with regard to the release point, to evaluate the extent of crude oil impact. Soil samples were collected at depths ranging from approximately five (5) to nineteen (19) feet bgs and field screened with a PID. The PID results suggested elevated concentrations of VOC's were present in the vicinity of the release point and east cross gradient delineation trenches.

On July 18-24, 2006, eleven (11) soil borings were advanced at the site utilizing an air rotary drill rig, operated by Straub Corporation, Stanton, Texas, to evaluate the vertical and horizontal extent of crude oil impact. The eleven (11) soil borings were advanced to depths ranging from approximately thirty (30) to seventy-five (75) feet bgs. Soil samples were collected at five (5) foot drilling intervals and field screened with a PID. No visual observations of phase separated hydrocarbons (PSH) were encountered during the advancement of the soil borings. Selected soil samples were analyzed for concentrations of benzene, toluene, ethylbenzene and xylene (BTEX) by Method EPA 8021B, total petroleum hydrocarbons (TPH) by Method SW8015M and SW8015M Extended. A summary of analytical results is provided in Table 1, Concentrations of Benzene, BTEX, TPH and Chlorides in Soil. Laboratory analytical reports are provided on a compact disk in Appendix B.

Soil Boring SB-1 was advanced in an up gradient position approximately six (6) feet north of the north sidewall of the initial excavation. The soil boring was advanced to a total depth of approximately thirty (30) feet bgs. Soil samples collected at five (5), ten (10), twenty (20) and thirty (30) feet bgs were submitted for laboratory analysis. Laboratory analytical results indicated BTEX and TPH concentrations were less than the appropriate laboratory (method detection limit) MDL of 10 mg/Kg and 100 mg/Kg, respectively, for each of the soil samples submitted. Details and descriptions of soil boring logs are provided in Appendix A, Soil Boring and Monitor Well Logs.

Soil Boring SB-2 was advanced in a west cross gradient position approximately six (6) feet from the west ramp of the initial excavation. The soil boring was advanced to a total depth of approximately thirty (30) feet bgs. Soil samples collected at five (5), ten (10), twenty (20) and thirty (30) feet bgs were submitted for laboratory analysis. Laboratory analytical results indicated BTEX concentrations were less than NMOCD regulatory standard for each of the soil samples

submitted. TPH concentrations were less than NMOCD regulatory standard for each of the submitted soil samples with the exception of soil sample SB-2 @ 5', which exhibited a concentration of 442 mg/Kg.

Soil Boring SB-3 was advanced at the release point approximately six (6) feet south of the initial excavation. The soil boring was advanced to a total depth of approximately seventy-five (75) feet bgs. Soil samples collected at five (5), ten (10), fifteen (15), twenty (20), twenty-five (25), thirty-five (35), forty-five (45), fifty-five (55), sixty-five (65) and seventy-five (75) feet bgs were submitted for laboratory analysis. Laboratory analytical results indicated BTEX concentrations were less than the NMOCD regulatory standard for each of the soil samples submitted. TPH concentrations ranged from 40.7 mg/Kg for soil sample SB-3 @ 75' to 2,429 mg/Kg for soil sample SB-3 @ 10'.

Soil Boring SB-4 was advanced in an east cross gradient position approximately six (6) feet from the initial excavation. The soil boring was advanced to a total depth of approximately seventy-five (75) feet bgs. Soil samples collected at five (5), ten (10), fifteen (15), twenty (20), twenty-five (25), thirty-five (35), forty-five (45), fifty-five (55), sixty-five (65) and seventy-five (75) feet bgs were submitted for laboratory analysis. Laboratory analytical results indicated BTEX concentrations were less than the NMOCD regulatory standard for each of the submitted soil samples. TPH concentrations ranged from 270.5 mg/Kg for soil sample SB-4 @ 5' to 1,721.5 mg/Kg for soil sample SB-4 @ 55'.

Soil Boring SB-5 was advanced in the east cross gradient position approximately thirty (30) feet from the initial excavation. The soil boring was advanced to a total depth of approximately seventy-five (75) feet bgs. Soil samples collected at five (5), ten (10), fifteen (15), twenty (20), twenty-five (25), thirty-five (35), forty-five (45), fifty-five (55), sixty-five (65) and seventy-five (75) feet bgs were submitted for laboratory analysis. Laboratory analytical results indicated BTEX concentrations were less than the NMOCD regulatory standard for each of the submitted soil samples. TPH concentrations ranged from 98.9 mg/Kg for soil sample SB-5 @ 75' to 3,027 mg/Kg for soil sample SB-5 @ 15'.

Soil Boring SB-6 was advanced in an east cross gradient position approximately sixty (60) feet from the initial excavation. The soil boring was advanced to a total depth of approximately seventy-five (75) feet bgs. Soil samples collected at five (5), ten (10), fifteen (15), twenty (20), twenty-five (25), thirty-five (35), forty-five (45), fifty-five (55), sixty-five (65) and seventy-five (75) feet bgs were submitted for laboratory analysis. Laboratory analytical results indicated BTEX concentrations were less than NMOCD regulatory standard for each of the submitted soil samples. TPH concentrations ranged from 15.5 mg/Kg for soil sample SB-6 @ 75' to 2,507 mg/Kg for soil sample SB-6 @ 10'.

Soil Boring SB-7 was advanced in an east cross gradient position approximately eighty-five (85) feet from the initial excavation. The soil boring was advanced to a total depth of approximately thirty (30) feet bgs. Soil samples collected at five (5), ten (10), twenty (20) and thirty (30) feet bgs were submitted for laboratory analysis. Laboratory analytical results indicated BTEX and TPH concentrations were less than the appropriate laboratory MDL for each of the submitted soil samples.

Soil Boring SB-8 was advanced in a south down gradient position approximately twenty-five (25) feet from the initial excavation. The soil boring was advanced to a total depth of approximately thirty (30) feet bgs. Soil samples collected at five (5), ten (10), twenty (20) and thirty (30) feet bgs were submitted for laboratory analysis. Laboratory analytical results indicated BTEX and TPH concentrations were less than the appropriate laboratory MDL for each of the submitted soil samples.

Soil Boring SB-9 was advanced in a northeast up gradient position approximately seventy-five (75) feet from the initial excavation. The soil boring was advanced to a total depth of approximately thirty (30) feet bgs. Soil samples collected at five (5), ten (10), twenty (20) and thirty (30) feet bgs were submitted for laboratory analysis. Laboratory results indicated BTEX and TPH concentrations were less than the appropriate laboratory MDL for each of the submitted soil samples.

Soil Boring SB-10 was advanced in a southeast down gradient position approximately seventy (70) feet from the initial excavation. The soil boring was advanced to a total depth of approximately seventy-five (75) feet bgs. Soil samples collected at five (5), ten (10), fifteen (15), twenty (20), twenty-five (25), thirty-five (35), forty-five (45), fifty-five (55), sixty-five (65) and seventy-five (75) feet bgs were submitted for laboratory analysis. Laboratory analytical results indicated BTEX concentrations were less than NMOC regulatory standard for each of the submitted soil samples. TPH concentrations ranged from 170.4 mg/Kg for the soil sample SB-10 @ 75' to 4,267 mg/Kg for soil sample SB-10 @ 20'. Soil sample SB-10 @ 20' was submitted for analysis of chloride concentrations utilizing method E 300, the analytical results indicated a chloride concentration of 73.9 mg/Kg.

Soil Boring SB-11 was advanced in a southeast down gradient position approximately one hundred fifteen (115) feet from the initial excavation. The soil boring was advanced to a total depth of approximately thirty (30) feet bgs. Soil samples collected at five (5), ten (10), twenty (20) and thirty (30) feet bgs were submitted for laboratory analysis. Laboratory analytical results indicated BTEX and TPH concentrations were less than the appropriate laboratory MDL for each of the submitted soil samples.

On October 11, 2006, monitor well MW-1 was installed in an up gradient position approximately sixty (60) feet from the initial excavation to evaluate the potential impact to the groundwater. The monitor well was advanced to a total depth of approximately eighty-eight (88) feet bgs. Soil samples were collected at five (5) foot drilling intervals and field screened with a PID. The selected soil samples were analyzed for concentrations of BTEX and TPH. Soil samples collected at five (5), ten (10), fifteen (15), twenty (20), twenty-five (25), thirty-five (35), forty-five (45), fifty-five (55), sixty-five (65) and seventy-five (75) feet bgs were submitted for laboratory analysis. Laboratory analytical results indicated BTEX and TPH concentrations were less than the appropriate laboratory MDL for each of the submitted soil samples.

On October 11, 2006, monitor well MW-2 was installed in a down gradient position approximately sixty (60) feet from the initial excavation. The monitor well was advanced to a total depth of approximately eighty-eight (88) feet bgs. Soil samples collected at five (5), ten (10), fifteen (15), twenty (20), twenty-five (25), thirty-five (35), forty-five (45), fifty-five (55), sixty-five (65) and seventy-five (75) feet bgs were submitted for laboratory analysis. Laboratory

analytical results indicated BTEX and TPH concentrations were less than the appropriate laboratory MDL in each of the submitted soil samples.

On October 12, 2006, monitor well MW-3 was installed in a down gradient position approximately one hundred fifteen (115) feet from the initial excavation. The monitor well was advanced to a total depth of approximately eighty-eight (88) feet bgs. Soil samples collected at five (5), ten (10), fifteen (15), twenty (20), twenty-five (25), thirty-five (35), forty-five (45), fifty-five (55), sixty-five (65) and seventy-five (75) feet bgs were submitted for laboratory analysis. Laboratory analytical results indicated BTEX concentrations were less than NMOCD regulatory standards for each of the soil samples submitted. TPH concentrations were less than NMOCD regulatory standard for each of the submitted soil samples with the exception soil sample MW-3 @ 55' and MW-3 @ 75', which exhibited concentrations of 2,076 mg/Kg and 121 mg/Kg, respectively.

On November 22, 2006, monitor well MW-4 was installed in an up and cross gradient position approximately one hundred twenty (120) feet west of the release point. The monitor well was advanced to a total depth of approximately ninety (90) feet bgs. Soil samples collected at five (5), ten (10), fifteen (15), twenty (20), twenty-five (25), thirty-five (35), forty-five (45), fifty-five (55), sixty-five (65) and seventy-five (75) feet bgs were submitted for laboratory analysis. Laboratory analytical results indicated BTEX and TPH concentrations were less than the appropriate laboratory MDL for each of the submitted soil samples.

On November 27, 2006, monitor well MW-5 was installed in an up and cross gradient position approximately one hundred ninety (190) feet east of the release point. The monitor well was advanced to a total depth of approximately ninety (90) feet bgs. Soil samples collected at five (5), ten (10), fifteen (15), twenty (20), twenty-five (25), thirty-five (35), forty-five (45), fifty-five (55), sixty-five (65) and seventy-five (75) feet bgs were submitted for laboratory analysis. Laboratory analytical results indicated BTEX and TPH concentrations were less than the appropriate laboratory MDL for each of the submitted soil samples.

On November 27, 2006, monitor well MW-6 was installed in a down gradient position approximately one hundred ninety (190) feet southeast of the release point. The monitor well was advanced to a total depth of approximately ninety (90) feet bgs. Soil samples collected at five (5), ten (10), fifteen (15), twenty (20), twenty-five (25), thirty-five (35), forty-five (45), fifty-five (55), sixty-five (65) and seventy-five (75) feet bgs were submitted for laboratory analysis. Laboratory analytical results indicated BTEX and TPH concentrations were less than the appropriate laboratory MDL for each of the submitted soil samples.

On November 28, 2006, monitor well MW-7 was installed in a down gradient position approximately two hundred sixty (260) feet southeast of the release point. The monitor well was advanced to a total depth of approximately ninety (90) feet bgs. Soil samples collected at five (5), ten (10), fifteen (15), twenty (20), twenty-five (25), thirty-five (35), forty-five (45), fifty-five (55), sixty-five (65) and seventy-five (75) feet bgs were submitted for laboratory analysis. Laboratory analytical results indicated BTEX and TPH concentrations were less than the appropriate laboratory MDL for each of the submitted soil samples.

On February 7, 2006, monitor well MW-8 was installed in a down gradient position

approximately three hundred eighty (380) feet east-southeast of the release point. The monitor well was advanced to a total depth of approximately ninety-one (91) feet bgs. Soil samples collected at ten (10), twenty-five (25), fifty (50), and seventy-five (75) feet bgs were submitted for laboratory analysis. Laboratory analytical results indicated BTEX concentrations were less than the appropriate laboratory MDL in each of the soil samples submitted. Laboratory analytical results indicated TPH concentrations were less than NMOCD regulatory standard for each of the submitted soil samples with the exception of soil sample MW-8 @ 75', which exhibited a concentration of 101 mg/Kg.

On August 13, 2007, monitor well MW-9 was installed in a down gradient position approximately three hundred ninety (390) feet southeast of the release point. The monitor well was advanced to a total depth of approximately ninety (90) feet bgs. Soil samples collected at five (5), fifteen (15), twenty-five (25), forty-five (45), sixty-five (65), seventy (70), and seventy-five (75) feet bgs were submitted for laboratory analysis. Laboratory analytical results indicated BTEX and TPH concentrations were less than the appropriate laboratory MDL for each of the submitted soil samples.

On October 27, 2009, monitor well MW-10 was installed in a down gradient position approximately four hundred seventy (470) feet southeast of the release point. The monitor well was advanced to a total depth of approximately ninety-two (92) feet bgs. Soil samples collected at five (5), fifteen (15), twenty-five (25), forty-five (45), sixty-five (65), seventy (70), and seventy-five (75) feet bgs were submitted for laboratory analysis. Laboratory analytical indicated BTEX and TPH concentrations were less NMOCD regulatory standards for each of the submitted soil samples.

On February 9, 2010, Plains received NMOCD approval of the Stage 1 and Stage 2 Abatement Plan for the Lovington Gathering WTI release site submitted in August of 2008.

On March 9, 2010, remedial activities commenced at the location. The six (6) inch pipeline was hand spotted and an excavator was utilized to advance the initial excavation to a depth of fifteen (15) feet bgs. The excavation sidewalls were advanced to the north, south, east and west until field test suggested TPH concentrations were less than NMOCD regulatory standards. The final dimensions of the excavation were approximately one hundred twenty (120) feet in width by one hundred twenty (120) feet length and fifteen (15) feet in depth. Excavated material was screened and stockpiled on location in 500 cy cells.

On April 1, 2010, two (2) confirmation soil samples (East S/W 1 @ 14' and East S/W 2 @ 14') were collected from the excavation and submitted to the laboratory for analysis. TPH concentrations ranged from 19.6 mg/Kg for soil sample East S/W 1 @ 14' to 2,559 mg/Kg for soil sample East S/W 2 @ 14'. The excavation was advanced in the area represented by soil sample East S/W 2 @ 14'.

On April 7, 2010, four (4) confirmation soil samples (N. S/W @ 14.5', W. S/W @ 14', S. S/W @ 6.5' and S. SW @ 14') were collected from the excavation and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene, BTEX and TPH concentrations were less than the appropriate laboratory MDL for each of the submitted soil samples.

On April 16, 2010, one (1) soil sample (East Trench Sample 1 @ 5') was collected from the excavation and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene and BTEX concentrations were less than the appropriate laboratory MDL. Laboratory analytical results indicated the TPH concentration was 20 mg/Kg.

On April 20, 2010, three (3) confirmation soil samples (S. SW-1 @ 14.5', N. S/W-1 @ 14.5' and W S/W-1 @ 14') were collected from the excavation and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene, BTEX and TPH concentrations were less than the appropriate laboratory MDL for each of the submitted soil samples.

On April 20, 2010, one (1) five-point composite stockpile soil sample (Stockpile) was collected and submitted to the laboratory for analysis of benzene, BTEX and TPH. Laboratory analytical results indicated benzene concentrations were less than the appropriate laboratory MDL for soil sample Stockpile. The BTEX concentration was 0.261 mg/Kg. The TPH concentration was 872.6 mg/Kg. Soil represented by soil sample Stockpile was deemed suitable for use as backfill material.

On April 28 and 29, 2010, four (4) confirmation soil samples (East S/W-3 @ 14.5', S.W. S/W @ 14.5', West S/W-2 @ 14.5' and E. S/W-2A @ 14') were collected from the excavation and submitted to the laboratory for analysis. Benzene and BTEX concentrations were less than the appropriate laboratory MDL for each of the submitted soil samples. Laboratory analytical results indicated TPH concentrations were less than NMOC regulatory standard for each of the submitted soil samples with exception of soil sample West S/W-2 @ 14.5', which exhibited a concentration of 218.3 mg/Kg. The excavation was advanced in the area represented by soil sample West S/W-2 @ 14.5'.

On May 5, 2010, one (1) confirmation soil sample (West S/W-2A @ 14.5') was collected from the excavation and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene, BTEX and TPH concentrations were less than the appropriate laboratory MDL.

On May 5, 2010, five (5) five-point composite stockpile soil samples (SP-1, SP-2, SP-3, SP-4 and SP-5) were collected and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene concentrations ranged from less than the appropriate laboratory MDL for soil samples SP-1, SP-2 and SP-5 to 0.0541 mg/Kg for soil sample SP-4. BTEX concentrations ranged from 0.9718 mg/Kg for soil sample SP-2 to 4.819 for soil sample SP-1. TPH concentrations were 1,626.0 mg/Kg for soil sample SP-1, 883.3 mg/Kg for soil sample SP-2, 1,332.4 mg/Kg for soil sample SP-3, 1,348.0 mg/Kg for soil sample SP-4 and 1,257.4 mg/Kg for soil sample SP-5. Stockpiled soil represented by soil samples SP-1, SP-3, SP-4 and SP-5 was blended on-site. Soil represented by soil sample SP-2 was deemed suitable for use as backfill material.

On May 10, 2010, three (3) five-point composite stockpile soil samples (SP-6, SP-7 and SP-8) were collected and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene concentrations were less than the appropriate laboratory MDL for each soil sample submitted. BTEX concentrations ranged from 0.1092 mg/Kg for soil sample SP-7 to 1.5989 mg/Kg for soil sample SP-6. TPH concentrations were 2,300 mg/Kg for soil sample SP-

7, 1,156.4 mg/Kg for soil sample SP-8, and 1,474 mg/Kg for soil sample SP-8. Stockpiled soil represented by soil samples SP-6, SP-7 and SP-8 was blended on-site.

On May 19, 2010, one (1) five-point composite stockpile soil sample (SP-1A) was collected and submitted to the laboratory for analysis of TPH concentrations. Laboratory analytical results indicated the concentration of TPH was 899 mg/Kg. Soil represented by soil sample SP-1A was deemed suitable for use as backfill material.

On May 24, 2010, six (6) five-point composite stockpile soil samples (SP-3, SP-4, SP-5, SP-6, SP-7 and SP-8) were collected and submitted to the laboratory for analysis of TPH concentrations. TPH concentrations were 1,077 mg/Kg for soil sample SP-3, 746 mg/Kg for soil sample SP-4, 1,052 mg/Kg for soil sample SP-5, 7,397 mg/Kg for soil sample SP-6, 1,388 mg/Kg for soil sample SP-7, and 1,265 mg/Kg for soil sample SP-8. Stockpiled soil represented by soil samples SP-3, SP-5, SP-6, SP-7 and SP-8 was screened and treated with water soluble fertilizer. Soil represented by soil sample SP-4 was deemed suitable for use as backfill material.

On May 27, 2010, a twenty (20) mil polyurethane liner was installed in the excavation. Prior to the liner installation, a six (6) inch layer of sand was placed in the excavation to protect the integrity of the liner during installation and backfilling activities. Following installation of the liner, the excavation was backfilled with screened material deemed suitable for use as backfill. Backfill was compacted in 12-inch lifts using water and heavy equipment.

On May 27, 2010, one (1) five-point composite stockpile soil sample (SP-8A) was collected and submitted to the laboratory for analysis of TPH concentrations. Laboratory analytical results indicated the concentration of TPH was 541 mg/Kg. Soil represented by soil sample SP-8A was deemed suitable for use as backfill material.

On May 28, 2010, two (2) five-point composite stockpile soil samples (SP-3A and SP-6A) were collected and submitted to the laboratory for analysis of TPH concentrations. TPH concentrations were 551 mg/Kg for soil sample SP-3A and 1,308 mg/Kg for soil sample SP-6A. Stockpiled soil represented by soil sample SP-6A was blended on-site. Soil represented by soil sample SP-3A was deemed suitable for use as backfill material.

On June 3, 2010, one (1) five-point composite stockpile soil sample (SP-5A) was collected and submitted to the laboratory for analysis of TPH concentrations. Laboratory analytical results indicated the concentration of TPH was 1,171 mg/Kg. Soil represented by soil sample SP-5A was reblended.

On June 7, 2010, two (2) five-point composite stockpile soil samples (SP-6B and SP-7A) were collected and submitted to the laboratory for analysis of TPH concentrations. TPH concentrations were 799 mg/Kg for soil sample SP-6B and 1,423 mg/Kg for soil sample SP-7A. Stockpiled soil represented by soil sample SP-7A was blended on-site. Soil represented by soil sample SP-6B was deemed suitable for use as backfill material.

On June 11, 2010, two (2) five-point composite stockpile soil samples (SP-5B and SP-7B) were collected and submitted to the laboratory for analysis of TPH concentrations. TPH concentrations were 717 mg/Kg for soil sample SP-5B and 1,154 mg/Kg for soil sample SP-7B.



Stockpiled soil represented by soil sample SP-7B was reblended. Soil represented by soil sample SP-5B was deemed suitable for use as backfill material.

On June 17, 2010, one (1) five-point composite stockpile soil sample (SP-7C) was collected and submitted to the laboratory for analysis of TPH concentrations. Laboratory analytical results indicated the concentration of TPH was 1,550 mg/Kg. Soil represented by soil sample SP-7C was reblended and treated with water soluble fertilizer.

On June 24, 2010, one (1) five-point composite stockpile soil sample (SP-7D) was collected and submitted to the laboratory for analysis of TPH concentrations. Laboratory analytical results indicated the concentration of TPH was 1,519 mg/Kg. Soil represented by soil sample SP-7D was reblended and treated with water soluble fertilizer.

On July 16, 2010, one (1) five-point composite stockpile soil sample (SP-7E) was collected and submitted to the laboratory for analysis of TPH concentrations. Laboratory analytical results indicated the concentration of TPH was 177 mg/Kg. Soil represented by soil sample SP-7E was deemed suitable for use as backfill material.

On July 26, 2010, Basin completed backfilling the excavation. Backfill was compacted in 12-Inch lifts and contoured to fit the surrounding topography. Upon completing backfilling activities the site was reseeded with seed mixture approved by the land owner.

#### **4.0 QA/QC PROCEDURES**

##### **4.1 Soil Sampling**

Soil Samples were delivered to Xenco Laboratories, Inc., of Odessa, Texas for BTEX and/or TPH analyses using the methods described below. Soil samples were analyzed for BTEX and/or TPH concentrations within fourteen (14) days following the collection date.

The soil samples were analyzed as follows:

- BTEX concentrations in accordance with EPA Method 8021B, 5030
- TPH concentrations in accordance with modified EPA Method 8015M GRO/DRO

##### **4.2 Decontamination of Equipment**

Cleaning of the sampling equipment was the responsibility of the environmental technician. Prior to use and between each sample, the sampling equipment was cleaned with Liqui-Nox® detergent and rinsed with distilled water.

##### **4.3 Laboratory Protocol**

The laboratory was responsible for proper QA/QC procedures after signing the chain-of-custody (COC) form. These procedures were either transmitted with the laboratory reports or are on file at the laboratory.

## **5.0 SITE CLOSURE REQUEST**

Based on the analytical results of confirmation soil samples, Basin recommends Plains provide the NMOCD a copy of this Remediation Summary and Soil Closure Request and request the NMOCD grant soil closure to the Lovington Gathering WTI release site. Groundwater monitoring and remediation activities will continue to be conducted in accordance with the *Amendment to Stage II Abatement Plan* submitted August 8, 2010.

## **6.0 LIMITATIONS**

Basin Environmental Consulting, LLC has prepared this Remediation Summary and Soil Closure Request to the best of its ability. No other warranty, expressed or implied, is made or intended.

Basin Environmental Consulting, LLC has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. Basin Environmental Consulting, LLC has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. Basin Environmental Consulting, LLC has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin Environmental Consulting, LLC also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

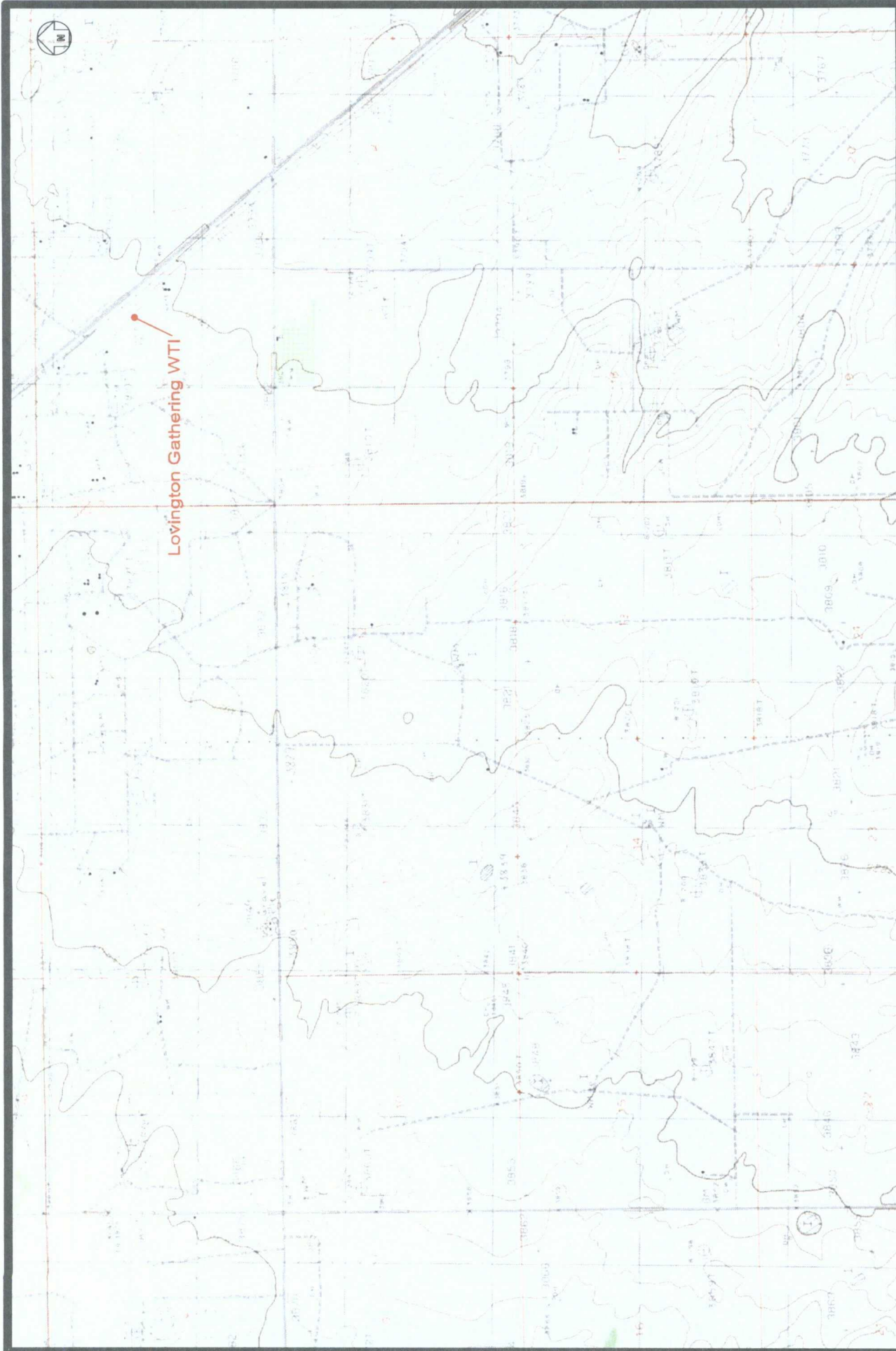
This report has been prepared for the benefit of Plains Pipeline, L.P. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of Basin Environmental Consulting, LLC and/or Plains Pipeline, L.P.

## 7.0 DISTRIBUTION:

- Copy 1: Ed Hansen  
New Mexico Energy, Minerals and Natural Resources Department  
Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505
- Copy 2: Larry Johnson  
New Mexico Energy, Minerals and Natural Resources Department  
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## Figures



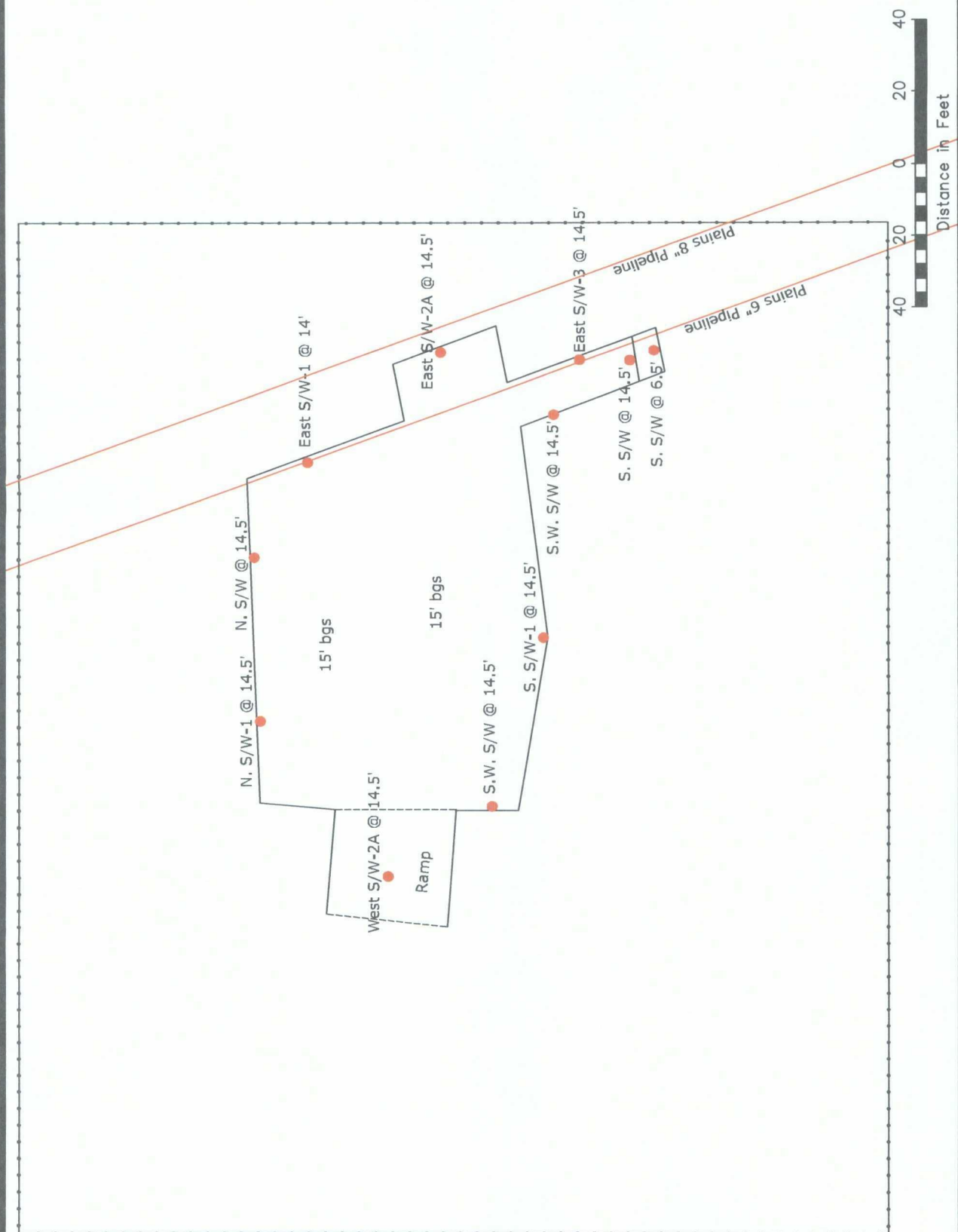
**Figure 1**  
**Site Location Map**  
 Lovington Gathering WTI  
 Plains Pipeline, L.P.  
 Lea County, New Mexico  
 AP-96



Unit Letter "H", Section 6, Township 17 South, Range 37 East

## Basin Environmental Consulting

Prep By: CBS  
 December 22, 2009  
 Checked By: CBS  
 Scale 1"=3000'



Legend:


- Excavation Extents
- Pipeline
- Fence
- Sample Location

Figure 2

Site and Sample Location Map  
Plains Pipeline, L.P.  
Lovington Gathering WTI  
Lea County, NM  
1AP-96

# Basin Environmental Consulting

Prep By: JWL	Checked By: CJB
August 6, 2010	Scale 1"=40'



# Tables

TABLE 1

## CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDES IN SOIL

PLAINS MARKETING, L.P.  
LOVINGTON GATHERING WTI  
LEA COUNTY, NEW MEXICO  
NMOC REFERENCE #AP-96

SAMPLE LOCATION	SAMPLE DEPTH (below ground surface)	SAMPLE DATE	METHOD: EPA 8021B						METHOD: SW8015M, Ext.			TOTAL TPH (mg/Kg)	E 300 CHLORIDES (mg/Kg)
			BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	M.P. XYLENE (mg/Kg)	O-XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	DRO Ext. (mg/Kg)		
SB-1 5'	5' bgs	07/18/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--
SB-1 10'	10' bgs	07/18/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--
SB-1 20'	20' bgs	07/18/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--
SB-1 30'	30' bgs	07/18/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--
SB-2 5'	5' bgs	07/18/06	<0.025	<0.025	<0.025	0.065	<0.025	<0.025	27.3	414.7	--	442	--
SB-2 10'	10' bgs	07/18/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--
SB-2 20'	20' bgs	07/18/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--
SB-2 30'	30' bgs	07/18/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--
SB-3 5'	5' bgs	07/19/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	43.6	1,021.0	--	1,064.6	--
SB-3 10'	10' bgs	07/19/06	<0.025	<0.025	0.174	0.232	0.052	0.458	225	2,204.0	--	2,429	--
SB-3 15'	15' bgs	07/19/06	<0.025	<0.025	0.044	0.093	0.030	0.167	152	1,969.0	--	2,121	--
SB-3 20'	20' bgs	07/19/06	<0.025	<0.025	0.036	0.063	<0.025	0.099	153	2,012.0	--	2,165	--
SB-3 25'	25' bgs	07/19/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	76.9	--	76.9	--
SB-3 35'	35' bgs	07/19/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	170.2	--	170.2	--
SB-3 45'	45' bgs	07/19/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	409.8	--	409.8	--
SB-3 55'	55' bgs	07/19/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	804.9	--	804.9	--
SB-3 65'	65' bgs	07/19/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	15	540.8	--	555.8	--
SB-3 75'	75' bgs	07/19/06	<0.025	<0.025	<0.025	0.036	<0.025	0.036	<10.0	40.7	--	40.7	--
SB-4 5'	5' bgs	07/19/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	270.5	--	270.5	--
SB-4 10'	10' bgs	07/19/06	<0.025	0.029	0.164	0.552	0.132	0.877	98.6	836.2	--	934.8	--
SB-4 15'	15' bgs	07/19/06	<0.025	<0.025	0.066	0.160	0.082	0.308	133	1,356.0	--	1,489	--
SB-4 20'	20' bgs	07/19/06	<0.025	0.068	0.112	0.257	0.069	0.506	101	1,024.0	--	1,125	--
SB-4 25'	25' bgs	07/19/06	<0.025	<0.025	<0.025	0.026	<0.025	0.026	65.9	1,492.0	--	1,557.9	--
SB-4 35'	35' bgs	07/19/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	46.4	1,043.1	--	1,089.5	--
SB-4 45'	45' bgs	07/19/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	29.5	980.9	--	1,010.4	--
SB-4 55'	55' bgs	07/19/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	80.5	1,641.0	--	1,721.5	--
SB-4 65'	65' bgs	07/19/06	<0.025	<0.025	<0.025	0.025	<0.025	0.025	56	1,199.0	--	1,255	--
SB-4 75'	75' bgs	07/19/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	281.3	--	281.3	--
SB-5 5'	5' bgs	07/19/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	18.3	664.0	--	682.3	--
SB-5 10'	10' bgs	07/19/06	<0.025	0.116	0.730	0.884	0.447	2.177	322	2,093.0	--	2,415	--
SB-5 15'	15' bgs	07/19/06	<0.025	0.186	0.744	2.12	1.01	4.06	450	2,577.0	--	3,027	--
SB-5 20'	20' bgs	07/19/06	<0.025	0.135	0.479	1.01	0.633	2.257	343	2,148.0	--	2,491	--
SB-5 25'	25' bgs	07/19/06	<0.025	0.097	0.263	0.519	0.326	1.205	266	1,666.0	--	1,932	--
SB-5 35'	35' bgs	07/19/06	<0.025	<0.025	<0.025	0.044	<0.025	0.044	60.8	1,196.0	--	1,256.8	--
SB-5 45'	45' bgs	07/19/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	71.4	1,470.0	--	1,541.4	--
SB-5 55'	55' bgs	07/19/06	<0.025	<0.025	<0.025	0.026	<0.025	0.026	135	1,951.0	--	2,086	--
SB-5 65'	65' bgs	07/19/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	29.9	697.3	--	727.2	--
SB-5 75'	75' bgs	07/19/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	10.4	88.5	--	98.9	--
SB-6 5'	5' bgs	07/20/06	<0.025	<0.025	<0.025	0.029	<0.025	0.029	78.8	1,461.0	--	1,539.8	--
SB-6 10'	10' bgs	07/20/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	158	2,349.0	--	2,507	--
SB-6 15'	15' bgs	07/20/06	<0.025	<0.025	<0.025	0.030	<0.025	0.03	81.5	1,361.0	--	1,442.5	--
SB-6 20'	20' bgs	07/20/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	23.1	926.0	--	949.1	--
SB-6 25'	25' bgs	07/20/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	713.9	--	713.9	--
SB-6 35'	35' bgs	07/20/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	193.7	--	193.7	--
SB-6 45'	45' bgs	07/20/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	649.2	--	649.2	--
SB-6 55'	55' bgs	07/20/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	24.8	1,291.0	--	1,315.8	--
SB-6 65'	65' bgs	07/20/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	12.4	798.1	--	810.5	--
SB-6 75'	75' bgs	07/20/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	15.5	--	15.5	--
SB-7 5'	5' bgs	07/20/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--
SB-7 10'	10' bgs	07/20/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--
SB-7 20'	20' bgs	07/20/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--
SB-7 30'	30' bgs	07/20/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--
SB-8 5'	5' bgs	07/20/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--
SB-8 10'	10' bgs	07/20/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--
SB-8 20'	20' bgs	07/20/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--
SB-8 30'	30' bgs	07/20/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--
SB-9 5'	5' bgs	07/24/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--
SB-9 10'	10' bgs	07/24/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--
SB-9 20'	20' bgs	07/24/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--
SB-9 30'	30' bgs	07/24/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--
SB-10 5'	5' bgs	07/24/06	<0.025	0.047	0.134	0.190	0.076	0.447	66.1	817.0	--	883.1	--
SB-10 10'	10' bgs	07/24/06	0.251	1.62	10.4	10.2	2.42	24.891	777	2,913.0	--	3,690	--
SB-10 15'	15' bgs	07/24/06	0.142	2.04	5.13	7.77	3.96	19.042	746	3,474.0	--	4,220	--
SB-10 20'	20' bgs	07/24/06	0.152	3.46	6.54	10.4	5.82	26.372	812	3,455.0	--	4,267	73.9
SB-10 25'	25' bgs	07/24/06	0.063	1.47	3.44	6.18	3.16	14.313	740	3,102.0	--	3,842	--
SB-10 35'	35' bgs	07/24/06	<0.025	0.252	0.557	1.05	0.455	2.314	87	760.3	--	847.3	--
SB-10 45'	45' bgs	07/24/06	<0.025	0.029	0.067	0.114	0.059	0.269	44.3	663.6	--	707.9	--
SB-10 55'	55' bgs	07/24/06	<0.025	0.260	0.493	0.789	0.418	1.96	121	1,007.3	--	1,128.3	--
SB-10 65'	65' bgs	07/24/06	0.033	0.822	1.74	3.12	1.53	7.245	453	2,595.0	--	3,048	--
SB-10 75'	75' bgs	07/24/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	12.9	157.5	--	170.4	--



PLAINS MARKETING, L.P.  
LOVINGTON GATHERING WTI  
LEA COUNTY, NEW MEXICO  
NMOCD REFERENCE #AP-96

SAMPLE LOCATION	SAMPLE DEPTH (below ground surface)	SAMPLE DATE	METHOD: EPA 8021B						METHOD: SW8015M, Ext.				TOTAL TPH (mg/Kg)	E 300 CHLORIDES (mg/Kg)
			BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M.P.-XYLENE (mg/Kg)	O-XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	DRO Ext. (mg/Kg)			
SB-11 5'	5' bgs	07/24/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
SB-11 10'	10' bgs	07/24/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
SB-11 20'	20' bgs	07/24/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
SB-11 30'	30' bgs	07/24/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-1 5'	5' bgs	09/11/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-1 10'	10' bgs	09/11/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-1 15'	15' bgs	09/11/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-1 20'	20' bgs	09/11/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-1 25'	25' bgs	09/11/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-1 35'	35' bgs	09/11/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-1 45'	45' bgs	09/11/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-1 55'	55' bgs	09/11/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-1 65'	65' bgs	09/11/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-1 75'	75' bgs	09/11/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-2 5'	5' bgs	09/11/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-2 10'	10' bgs	09/11/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-2 15'	15' bgs	09/11/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-2 20'	20' bgs	09/11/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-2 25'	25' bgs	09/11/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-2 35'	35' bgs	09/11/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-2 45'	45' bgs	09/11/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-2 55'	55' bgs	09/11/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-2 65'	65' bgs	09/11/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-2 75'	75' bgs	09/11/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-3 5'	5' bgs	09/12/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-3 10'	10' bgs	09/12/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-3 15'	15' bgs	09/12/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-3 20'	20' bgs	09/12/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-3 25'	25' bgs	09/12/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-3 35'	35' bgs	09/12/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-3 45'	45' bgs	09/12/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-3 55'	55' bgs	09/12/06	<0.025	0.032	0.039	0.641	0.310	1.022	249	1,827.0	--	2,076	--	
MW-3 65'	65' bgs	09/12/06	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	61.3	--	--	61.0	--	
MW-3 75'	75' bgs	09/12/06	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	121.0	--	--	121	--	
MW-4 5'	5' bgs	11/22/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-4 10'	10' bgs	11/22/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-4 15'	15' bgs	11/22/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-4 20'	20' bgs	11/22/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-4 25'	25' bgs	11/22/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-4 35'	35' bgs	11/22/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-4 45'	45' bgs	11/22/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-4 55'	55' bgs	11/22/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-4 65'	65' bgs	11/22/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-4 75'	75' bgs	11/22/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-5 5'	5' bgs	11/27/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-5 10'	10' bgs	11/27/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-5 15'	15' bgs	11/27/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-5 20'	20' bgs	11/27/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-5 25'	25' bgs	11/27/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-5 35'	35' bgs	11/27/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-5 45'	45' bgs	11/27/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-5 55'	55' bgs	11/27/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-5 65'	65' bgs	11/27/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-5 75'	75' bgs	11/27/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-6 5'	5' bgs	11/27/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-6 10'	10' bgs	11/27/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-6 15'	15' bgs	11/27/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-6 20'	20' bgs	11/27/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-6 25'	25' bgs	11/27/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-6 35'	35' bgs	11/27/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-6 45'	45' bgs	11/27/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-6 55'	55' bgs	11/27/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-6 65'	65' bgs	11/27/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-6 75'	75' bgs	11/28/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-7 5'	5' bgs	11/28/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-7 10'	10' bgs	11/28/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-7 15'	15' bgs	11/28/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-7 20'	20' bgs	11/28/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-7 25'	25' bgs	11/28/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-7 35'	35' bgs	11/28/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-7 45'	45' bgs	11/28/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-7 55'	55' bgs	11/28/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-7 65'	65' bgs	11/28/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	
MW-7 75'	75' bgs	11/28/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--	

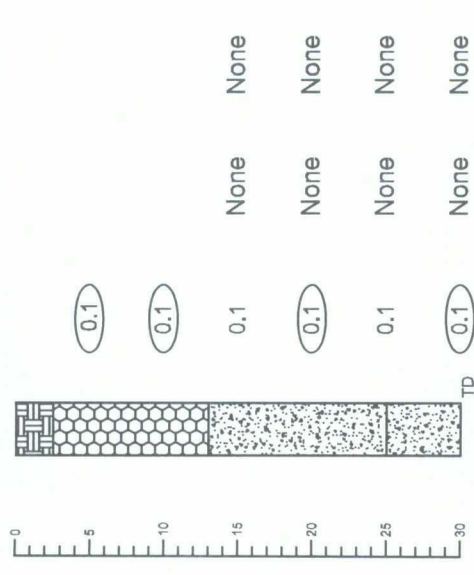
TABLE 1  
CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDES IN SOIL

PLAINS MARKETING, L.P.  
LOVINGTON GATHERING WTI  
LEA COUNTY, NEW MEXICO  
NMOC REFERENCE #AP-96

SAMPLE LOCATION	SAMPLE DEPTH (below ground surface)	SAMPLE DATE	METHOD: EPA 8021B						METHOD: SW8015M, Ext.				E 300
			BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M,P-XYLENE (mg/Kg)	O-XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	DRO Ext. (mg/Kg)	TOTAL TPH (mg/Kg)	
MW-8 10'	10' bgs	02/07/07	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--
MW-8 25'	25' bgs	02/07/07	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	--	<10.0	--
MW-8 50'	50' bgs	02/07/07	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	14.0	--	14.0	--
MW-8 75'	75' bgs	02/07/07	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	101.0	--	101	--
MW-9 5'	5' bgs	08/13/07	<0.002	<0.002	<0.002	<0.004	<0.002	<0.004	<10.0	<10.0	--	<10.0	--
MW-9 15'	15' bgs	08/13/07	<0.002	<0.002	<0.002	<0.004	<0.002	<0.004	<10.0	<10.0	--	<10.0	--
MW-9 25'	25' bgs	08/13/07	<0.002	<0.002	<0.002	<0.004	<0.002	<0.004	<10.0	<10.0	--	<10.0	--
MW-9 45'	45' bgs	08/13/07	<0.002	<0.002	<0.002	<0.004	<0.002	<0.004	<10.0	<10.0	--	<10.0	--
MW-9 65'	65' bgs	08/13/07	<0.002	<0.002	<0.002	<0.004	<0.002	<0.004	<10.0	<10.0	--	<10.0	--
MW-9 70'	70' bgs	08/13/07	<0.002	<0.002	<0.002	<0.004	<0.002	<0.004	<10.0	<10.0	--	<10.0	--
MW-9 75'	75' bgs	08/13/07	<0.002	<0.002	<0.002	<0.004	<0.002	<0.004	<10.0	<10.0	--	<10.0	--
MW-10 @ 5'	5' bgs	10/27/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.2	27.7	--	27.7	--
MW-10 @ 15'	15' bgs	10/27/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.1	23.1	--	23.1	--
MW-10 @ 25'	25' bgs	10/27/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.4	25.3	--	25.3	--
MW-10 @ 45'	45' bgs	10/27/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.3	23.4	--	23.4	--
MW-10 @ 65'	65' bgs	10/27/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.3	24.0	--	24.0	--
MW-10 @ 70'	70' bgs	10/27/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.2	19.7	--	19.7	--
MW-10 @ 75'	75' bgs	10/27/09	<0.0010	<0.0020	<0.0010	<0.0020	<0.0010	<0.0020	<15.1	22.7	--	22.7	--
East S/W 1 @ 14'	14' bgs	04/01/10	--	--	--	--	--	--	<15.7	19.6	<15.7	19.6	--
East S/W 2 @ 14'	14' bgs	04/01/10	--	--	--	--	--	--	392	2,030.0	137.0	2,559	--
N. S/W @ 14.5'	14.5' bgs	04/07/10	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.4	<16.4	<16.4	<16.4	--
W. S/W @ 14'	14' bgs	04/07/10	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.7	<16.7	<16.7	<16.7	--
S. S/W @ 6.5'	6.5' bgs	04/07/10	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0022	<16.0	<16.0	<16.0	<16.0	--
S. S/W @ 14'	14' bgs	04/07/10	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.4	<16.4	<16.4	<16.4	--
East Trech Sample 1 @ 5'	5' bgs	04/16/10	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.3	20.0	<16.3	20.0	--
S. S/W-1 @ 14.5'	14.5' bgs	04/20/10	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.2	<17.2	<17.2	<17.2	--
N. S/W-1 @ 14.5'	14.5' bgs	04/20/10	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.3	<16.3	<16.3	<16.3	--
W. S/W-1 @ 14'	14' bgs	04/20/10	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<17.0	<17.0	<17.0	<17.0	--
Stockpile	--	04/20/10	<0.0011	0.0105	0.0379	0.1371	0.0755	0.261	270	579.0	23.6	872.6	--
East S/W-3 @ 14.5'	14.5' bgs	04/28/10	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.4	18.7	<15.4	18.7	--
W. S/W @ 14.5'	14.5' bgs	04/28/10	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.3	<17.3	<17.3	<17.3	--
West S/W-2 @ 14.5'	14.5' bgs	04/28/10	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	24.8	175.0	18.5	218.3	--
E. S/W-2A @ 14'	14' bgs	04/29/10	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.4	20.0	<16.4	20.0	--
SP-1	--	05/05/10	<0.0108	0.2395	0.955	2.333	1.295	4.819	427	1,090.0	109.0	1,626	--
SP-2	--	05/05/10	<0.0055	0.0429	0.1513	0.4789	0.2987	0.9718	195	622.0	66.3	883.3	--
SP-3	--	05/05/10	0.0145	0.2174	0.9216	2.289	0.9399	4.382	307	933.0	92.4	1,332.4	--
SP-4	--	05/05/10	0.0541	<0.0108	0.1915	0.7956	0.7334	1.7746	288	963.0	97.3	1,348	--
SP-5	--	05/05/10	<0.0108	0.0968	0.3392	1.469	0.7184	2.623	293	873.0	91.4	1,257.4	--
West S/W-2A @ 14.5'	14.5' bgs	05/05/10	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.7	<15.7	<15.7	<15.7	--
SP-6	--	05/10/10	<0.0052	0.0239	0.1867	0.9324	0.4559	1.5989	433	1,710.0	157.0	2,300	--
SP-7	--	05/10/10	<0.0011	0.0053	0.0282	0.0454	0.0303	0.1092	159.0	907.0	90.4	1,156.4	--
SP-8	--	05/10/10	<0.0011	0.0082	0.021	0.0749	0.0444	0.1485	225	1,140.0	109.0	1,474	--
SP-1A	--	05/19/10	--	--	--	--	--	--	137.0	678.0	84.0	899	--
SP-3	--	05/24/10	--	--	--	--	--	--	105.0	892.0	80.2	1,077	--
SP-4	--	05/24/10	--	--	--	--	--	--	122.0	557.0	66.7	746	--
SP-5	--	05/24/10	--	--	--	--	--	--	183.0	781.0	88.3	1,052	--
SP-6	--	05/24/10	--	--	--	--	--	--	1,530.0	5,200.0	667.0	7,397	--
SP-7	--	05/24/10	--	--	--	--	--	--	309	934.0	145.0	1,388	--
SP-8	--	05/24/10	--	--	--	--	--	--	181	981.0	103.0	1,265	--
SP-8A	--	05/27/10	--	--	--	--	--	--	69.0	407.0	65.1	541	--
SP-6A	--	05/28/10	--	--	--	--	--	--	131	1,080.0	96.5	1,308	--
SP-1A	--	05/28/10	--	--	--	--	--	--	32.7	470.0	47.9	551	--
SP-5A	--	06/03/10	--	--	--	--	--	--	247	849.0	75.0	1,171	--
SP-6B	--	06/07/10	--	--	--	--	--	--	70.8	661.0	66.7	799	--
SP-7A	--	06/07/10	--	--	--	--	--	--	154	1,170.0	99.4	1,423	--
SP-5B	--	06/11/10	--	--	--	--	--	--	124	549.0	44.1	717	--
SP-7B	--	06/11/10	--	--	--	--	--	--	179	907.0	67.8	1,154	--
SP-7C	--	06/17/10	--	--	--	--	--	--	43.5	1,410.0	96.2	1,550	--
SP-7D	--	06/24/10	--	--	--	--	--	--	98.2	1,320.0	101.0	1,519	--
SP-7E	--	07/16/10	--	--	--	--	--	--	<17.0	137.0	40.0	177	--

# Soil Boring SB-1

## Soil Description



## Soil Boring Details

Date Drilled: July 18, 2006  
 Thickness of Bentonite Seal: 30 Ft  
 Depth of Exploratory Boring: 30 Ft  
 Depth to Groundwater: \_\_\_\_\_  
 Ground Water Elevation: \_\_\_\_\_

Indicates the PSH level measured on \_\_\_\_\_

Indicates the groundwater level measured on \_\_\_\_\_

Indicates samples selected for Laboratory Analysis.

PID Head-space reading in ppm obtained with a photo-ionization detector.

## Notes:


- 1.) The soil boring was advanced on date using air rotary drilling techniques.
- 2.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- 3.) The depths indicated are referenced from below ground surface. (bgs)

Boring Log Details  
 Soil Boring SB-1  
 Lovington Gathering WTI Lea County, New Mexico  
 Plains Pipeline, L.P.

Basin Environmental Services

Prep By: CDS  
 Date: June 11, 2008  
 Checked By: CDS

## Appendices



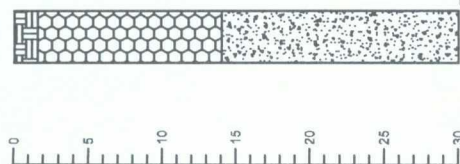
## Appendix A

### Soil Boring Logs

Depth (feet) Soil Columns PID Reading Petroleum Odor Petroleum Stain

## Soil Boring SB-2

### Soil Description



1.5 - 14' - Caliche

14 - 30' - Sand, red to brown, very fine grained, well sorted, dry

### Soil Boring Details

Date Drilled July 18, 2006  
Thickness of Bentonite Seal 30 Ft  
Depth of Exploratory Boring 30 Ft  
Depth to Groundwater  
Ground Water Elevation



Indicates the PSH level measured on



Indicates the groundwater level measured on



Indicates samples selected for Laboratory Analysis.



PID Head-space reading in ppm obtained with a photo-ionization detector.

### Notes:

- 1.) The soil boring was advanced on date using air rotary drilling techniques.
- 2.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- 3.) The depths indicated are referenced from below ground surface, (bgs)

Boring Log Details  
Soil Boring SB-2

Lovington Gathering WTI Lea County, New Mexico  
Plains Pipeline, L.P.

Basin Environmental Services

Prep By: CDS

Checked By: CDS

Date: June 11, 2008



# Soil Boring SB-3

## Soil Description

### Soil Boring Details

Date Drilled: July 19, 2006  
 Thickness of Bentonite Seal: 75 Ft  
 Depth of Exploratory Boring: 75 Ft  
 Depth to Groundwater: 73.5 Ft  
 Ground Water Elevation: \_\_\_\_\_

Indicates the PSH level measured on \_\_\_\_\_

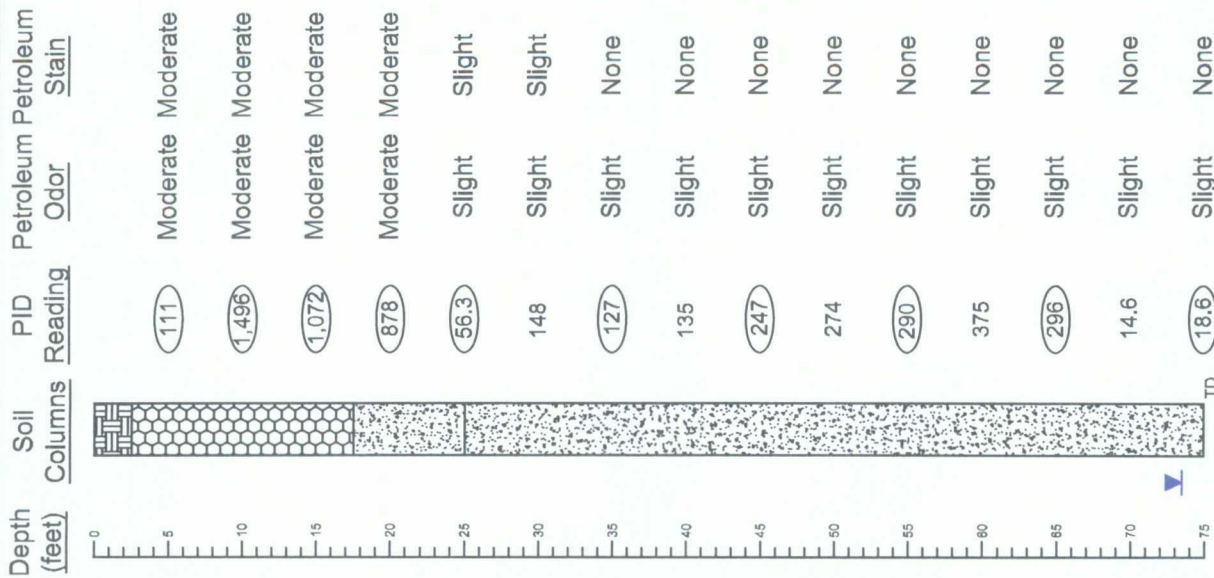
Indicates the groundwater level measured on July 19, 2006

Indicates samples selected for Laboratory Analysis.

PID Head-space reading in ppm obtained with a photo-ionization detector.

### Notes:

- 1.) The soil boring was advanced on date using air rotary drilling techniques.
- 2.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- 3.) The depths indicated are referenced from below ground surface, (bgs)



### Boring Log Details

#### Soil Boring SB-3

Lovington Gathering WTI Lea County, New Mexico  
 Plains Pipeline, L.P.

### Basin Environmental Services

Prep By: CDS

Checked By: CDS




Date: June 11, 2008

# Soil Boring SB-4

## Soil Description




### Soil Boring Details

Date Drilled July 19, 2006  
 Thickness of Bentonite Seal 75 Ft  
 Depth of Exploratory Boring 75 Ft  
 Depth to Groundwater 74 Ft  
 Ground Water Elevation \_\_\_\_\_

-  Indicates the PSH level measured on \_\_\_\_\_
-  Indicates the groundwater level measured on July 19, 2006
-  Indicates samples selected for Laboratory Analysis.
- PID Head-space reading in ppm obtained with a photo-ionization detector.

### Notes:

- 1.) The soil boring was advanced on date using air rotary drilling techniques.
- 2.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- 3.) The depths indicated are referenced from below ground surface (bgs)

Depth (feet)	Soil Columns	PID Reading	Petroleum Petroleum Odor Stain
0		<u>31.1</u>	
5			
10		<u>731</u>	Heavy
15			
20		<u>748</u>	Heavy
25			
30			
35			
40			
45			
50			
55			
60			
65			
70			
75			

2.5 - 19' - Caliche

19 - 25' - Sand, white to brown, very fine grained, well sorted, dry

25 - 75' - Sand, red to brown, very fine grained, well sorted, dry

### Boring Log Details

#### Soil Boring SB-4

Lovington Gathering WTI Lea County, New Mexico  
 Plains Pipeline, L.P.

### Basin Environmental Services

Prep By: CDS

Checked By: CDS

Date: June 11, 2008



## Soil Description

## Soil Boring Details

Date Drilled	July 19, 2006
Thickness of Bentonite Seal	75 Ft
Depth of Exploratory Boring	75 Ft
Depth to Groundwater	74 Ft
Ground Water Elevation	

 Indicates the PSH level measured on

Indicates the groundwater level measured on July 19, 2006

○ Indicates samples selected for Laboratory Analysis.

PID Head-space reading in ppm obtained with a photo-ionization detector.

Notes:

- 1.) The soil boring was advanced on date using air rotary drilling techniques,
- 2.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- 3.) The depths indicated are referenced from below ground surface. (bgs)

### Boring Log Details

Soil Boring SB-5

Lovington Gathering WTI   Lea County, New Mexico  
Plains Pipeline, L.P.

## Basin Environmental Services

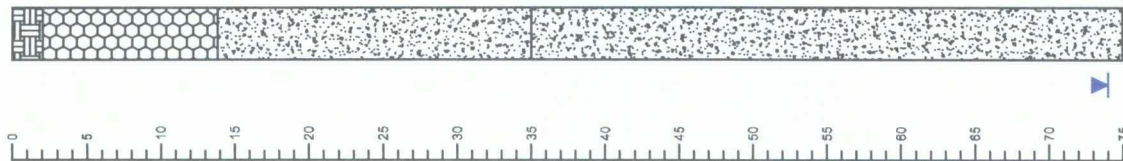
Prep By: CDS	Checked By: CDS
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Date: June 11, 2008

# Soil Boring SB-6

## Soil Description

Depth (feet) Soil Columns PID Petroleum Odor Petroleum Stain



## Soil Boring Details

Date Drilled July 20, 2006  
 Thickness of Bentonite Seal 75 Ft  
 Depth of Exploratory Boring 75 Ft  
 Depth to Groundwater 74 Ft  
 Ground Water Elevation



Indicates the PSH level measured on



Indicates the groundwater level measured on July 20, 2006



Indicates samples selected for Laboratory Analysis.



PID Head-space reading in ppm obtained with a photo-ionization detector.

## Notes:

- 1.) The soil boring was advanced on date using air rotary drilling techniques.
- 2.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- 3.) The depths indicated are referenced from below ground surface. (bgs)

## Boring Log Details

### Soil Boring SB-6

Lovington Gathering WTI Lea County, New Mexico  
 Plains Pipeline, L.P.

## Basin Environmental Services

Prep By: CDS

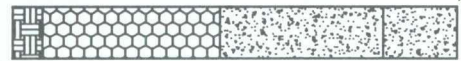
Checked By: CDS

Date: June 11, 2008

Depth (feet)

0 5 10 15 20 25 30 TD

Soil Columns PID Reading Petroleum Odor Stain



## Soil Boring SB-7

### Soil Description

2 - 14' - Caliche

14 - 25' - Sand, white to brown, very fine grained, well sorted, dry

25 - 30' - Sand, red to brown, very fine grained, well sorted, dry

### Soil Boring Details

Date Drilled July 20, 2006  
Thickness of Bentonite Seal 30 Ft  
Depth of Exploratory Boring 30 Ft  
Depth to Groundwater  
Ground Water Elevation



Indicates the PSH level measured on



Indicates the groundwater level measured on



Indicates samples selected for Laboratory Analysis.



PID Head-space reading in ppm obtained with a photo-ionization detector.

### Notes:

- 1.) The soil boring was advanced on date using air rotary drilling techniques.
- 2.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- 3.) The depths indicated are referenced from below ground surface. (bgs)

Boring Log Details  
Soil Boring SB-7  
Lovington Gathering WTI Lea County, New Mexico  
Plains Pipeline, L.P.

Basin Environmental Services

Prep By: CDS Checked By: CDS

Date: June 11, 2008



# Soil Boring SB-8

## Soil Description

Depth (feet)	Soil Columns	PID Reading	Petroleum Odor	Petroleum Stain
0		3.9	None	None
5		7.9	None	None
10		9.1	None	None
15		9.3	None	None
20		9.0	None	None
25		7.1	None	None
30				

2.5 - 14' - Calliche

14 - 25' - Sand, white to brown, very fine grained, well sorted, dry

25 - 30' - Sand, red to brown, very fine grained, well sorted, dry

## Soil Boring Details

Date Drilled July 20, 2006  
 Thickness of Bentonite Seal 30 Ft  
 Depth of Exploratory Boring 30 Ft  
 Depth to Groundwater  
 Ground Water Elevation



Indicates the PSH level measured on



Indicates the groundwater level measured on



Indicates samples selected for Laboratory Analysis.

PID

Head-space reading in ppm obtained with a photo-ionization detector.

## Notes:

- 1.) The soil boring was advanced on data using air rotary drilling techniques.
- 2.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- 3.) The depths indicated are referenced from below ground surface. (bgs)

## Boring Log Details

### Soil Boring SB-8

Lovington Gathering WTI Lea County, New Mexico  
 Plains Pipeline, L.P.

## Basin Environmental Services

Prep By: CDS

Checked By: CDS

Date: June 11, 2008

Depth (feet)

0 5 10 15 20 25 30

Soil Columns



PID Reading

5.4 5.1 7.2 5.8 5.9 5.9

Petroleum Odor

None None None None None None None

Petroleum Stain

None None None None None None None

## Soil Boring SB-9

### Soil Description

2.5 - 9' - Caliche

9 - 30' - Sand, white to brown, very fine grained, well sorted, dry

### Soil Boring Details

Date Drilled July 20, 2006  
Thickness of Bentonite Seal 30 Ft  
Depth of Exploratory Boring 30 Ft  
Depth to Groundwater  
Ground Water Elevation



Indicates the PSH level measured on



Indicates the groundwater level measured on



Indicates samples selected for Laboratory Analysis.



PID Head-space reading in ppm obtained with a photo-ionization detector.

### Notes:

- 1.) The soil boring was advanced on date using air rotary drilling techniques.
- 2.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- 3.) The depths indicated are referenced from below ground surface, (bgs)

Boring Log Details  
Soil Boring SB-9  
Lovington Gathering WTI Lea County, New Mexico  
Plains Pipeline, L.P.

Basin Environmental Services

Prep By: CDS  
Date: June 11, 2008  
Checked By: CDS

# Soil Boring SB-10

## Soil Description

### Soil Boring Details

Date Drilled July 24, 2006  
 Thickness of Bentonite Seal 75 Ft  
 Depth of Exploratory Boring 75 Ft  
 Depth to Groundwater 74 Ft  
 Ground Water Elevation \_\_\_\_\_

↑ Indicates the PSH level measured on \_\_\_\_\_





↓ Indicates the groundwater level measured on July 24, 2006

○ Indicates samples selected for Laboratory Analysis.

PID Head-space reading in ppm obtained with a photo-ionization detector.

### Notes:

- 1.) The soil boring was advanced on date using air rotary drilling techniques.
- 2.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- 3.) The depths indicated are referenced from below ground surface, (bgs)

Depth (feet)	Soil Columns	PID Reading	Petroleum Odor	Petroleum Stain
0		528	Heavy	Moderate
5		1,369	Heavy	None
10		1,396	Heavy	None
15		1,398	Heavy	None
20		1,409	Moderate	None
25		990	Moderate	None
30		699	Moderate	None
35		633	Moderate	None
40		293	Moderate	None
45		495	Moderate	None
50		588	Moderate	None
55		564	Moderate	None
60		723	Moderate	None
65		88.8	Moderate	None
70		54.6	None	None
75		TD	None	None

Boring Log Details  
 Soil Boring SB-10

Lovington Gathering WTI Lea County, New Mexico  
 Plains Pipeline, L.P.

Basin Environmental Services

Prep By: CDS


Checked By: CDS

Date: June 11, 2008



# Soil Boring SB-11

## Soil Description

Depth (feet)	Soil Columns	PID Reading	Petroleum Odor	Petroleum Stain
0		3.4	None	None
5		4.4	None	None
10		4.2	None	None
15		5.5	None	None
20		5.6	None	None
25		5.6	None	None
30		5.6	None	None

2.5 - 9' - Caliche

9 - 30' - Sand, white to brown, very fine grained, well sorted, dry

## Soil Boring Details

Date Drilled July 24, 2006  
 Thickness of Bentonite Seal 30 Ft  
 Depth of Exploratory Boring 30 Ft  
 Depth to Groundwater  
 Ground Water Elevation



Indicates the PSH level measured on



Indicates the groundwater level measured on



Indicates samples selected for Laboratory Analysis.

PID Head-space reading in ppm obtained with a photo-ionization detector.

## Notes:

- 1.) The soil boring was advanced on date using air rotary drilling techniques.
- 2.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- 3.) The depths indicated are referenced from below ground surface. (bgs)

## Boring Log Details

### Soil Boring SB-11

Lovington Gathering WTI Lea County, New Mexico  
 Plains Pipeline, L.P.

## Basin Environmental Services

Prep By: CDS

Checked By: CDS

Date: June 11, 2008

Depth  
(feet)

Soil Columns

PID Reading

Petroleum Odor

Petroleum Stain

Soil Description

## Monitor Well MW-1

## Monitor Well Details

Date Drilled September 11, 2006  
Thickness of Bentonite Seal 58 Ft  
Length of PVC Well Screen 25 Ft  
Depth of PVC Well 88 Ft  
Depth of Exploratory Well 88 Ft  
Depth to Groundwater 76 Ft  
Ground Water Elevation \_\_\_\_\_

Grout Surface Seal

Bentonite Pellet Seal

Sand Pack

Screen

Indicates the PSH level measured on \_\_\_\_\_

Indicates the groundwater level measured on September 11, 2006

Indicates samples selected for Laboratory Analysis.

PID Head-space reading in ppm obtained with a photo-ionization detector.

## Completion Notes

1. The monitor well was installed on date using air rotary drilling techniques.
2. The well was constructed with 2" ID, 0.020 inch factory slotted, threaded joint, schedule 40 PVC pipe.
3. The well is protected with a locked slick up steel cover and a compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from below ground surface. (bgs)

Monitor Well Details  
Monitor Well MW-1

Lovington Gathering WTI Lea County, New Mexico  
Plains Pipeline, L.P.

Basin Environmental Services

Prep By: CDS

Checked By: CDS

Date: June 11, 2008



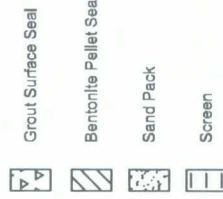
Depth  
(feet)Soil  
ColumnsPID  
ReadingPetroleum  
OdorPetroleum  
Stain

Soil Description

## Monitor Well MW-2

## Monitor Well Details

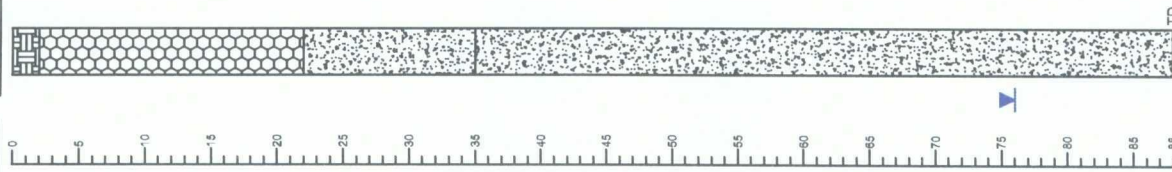
Date Drilled September 11, 2008  
Thickness of Bentonite Seal 58 Ft  
Length of PVC Well Screen 25 Ft  
Depth of PVC Well 88 Ft  
Depth of Exploratory Well 88 Ft  
Depth to Groundwater 76 Ft  
Ground Water Elevation           



Indicates the PSH level measured on             
 Indicates the groundwater level measured on September 11, 2008  
 Indicates samples selected for Laboratory Analysis.  
PID Head-space reading in ppm obtained with a photo-ionization detector.

## Completion Notes

1. The monitor well was installed on date using air rotary drilling techniques.
2. The well was constructed with 2" ID, 0.020 inch factory slotted, threaded joint, schedule 40 PVC pipe.
3. The well is protected with a locked stick up steel cover and a compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from below ground surface (bgs)



Monitor Well Details

Monitor Well MW-2

Lovington Gathering WTI Lea County, New Mexico  
Plains Pipeline, L.P.

Basin Environmental Services

Prep By: CDS

Checked By: CDS

Date: June 11, 2008

Depth  
(feet)Soil  
ColumnsPID  
ReadingPetroleum  
OdorPetroleum  
Stain

Soil Description

## Monitor Well MW-3

## Monitor Well Details

Date Drilled September 12, 2006  
Thickness of Bentonite Seal 58 Ft  
Length of PVC Well Screen 25 Ft  
Depth of PVC Well 88 Ft  
Depth of Exploratory Well 88 Ft  
Depth to Groundwater 76 Ft  
Ground Water Elevation



Indicates the PSH level measured on

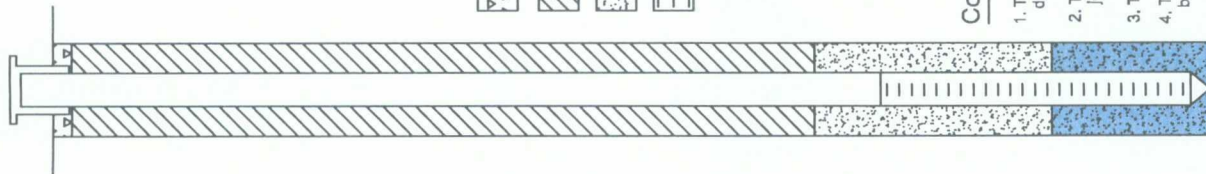
Indicates the groundwater level measured on September 12, 2006

Indicates samples selected for Laboratory Analysis.

PID Head-space reading in ppm obtained with a photo-ionization detector.

## Completion Notes

1. The monitor well was installed on date using air rotary drilling techniques.
2. The well was constructed with 2" ID, 0.020 Inch factory slotted, threaded joint, schedule 40 PVC pipe.
3. The well is protected with a locked stick up steel cover and a compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from below ground surface. (bgs)



1.5 - 16' - Caliche

16 - 25' - Sand, white to brown, very fine  
grained, well sorted, dry25 - 88' - Sand, red to brown, very fine grained,  
well sorted, dry

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

4.6

0.1

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

4.6

0.1

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

4.6

0.1

0.0

0.0

0.0



Depth  
(feet)

Soil Columns

PID  
Reading

Petroleum Odor

Petroleum Stain

## Soil Description

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 TD

None

None

0.0

0.5 - 17' - Caliche

None

None

0.0

None

None

0.0

17 - 25' - Sand, white to brown, very fine  
grained, well sorted, dry

None

None

0.0

None

None

0.0

None

None

0.0

None

None

0.0

None

None

0.0

None

None

0.0

None

None

0.0

25 - 88' - Sand, red to brown, very fine grained,  
well sorted, dry

None

None

0.0

None

None

0.0

None

None

0.0

None

None

0.0

None

None

0.0

B

## Monitor Well MW-4

## Monitor Well Details

Date Drilled November 22, 2006  
Thickness of Bentonite Seal 80 Ft  
Length of PVC Well Screen 25 Ft  
Depth of PVC Well 90 Ft  
Depth of Exploratory Well 90 Ft  
Depth to Groundwater 74 Ft  
Ground Water Elevation

Grout Surface Seal



Bentonite Pellet Seal



Sand Pack



Screen



Indicates the PSH level measured on



Indicates the groundwater level measured on November 22, 2006



Indicates samples selected for Laboratory Analysis.



PID Head-space reading in ppm obtained with a photo-ionization detector.

## Completion Notes

1. The monitor well was installed on date using air rotary drilling techniques.
2. The well was constructed with 2" ID, 0.020 inch factory slotted, threaded joint, schedule 40 PVC pipe.
3. The well is protected with a locked stick up steel cover and a compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from below ground surface. (bgs)

Monitor Well Details

Monitor Well MW-4

Lovington Gathering WTI Lea County, New Mexico  
Plains Pipeline, L.P.

Basin Environmental Services

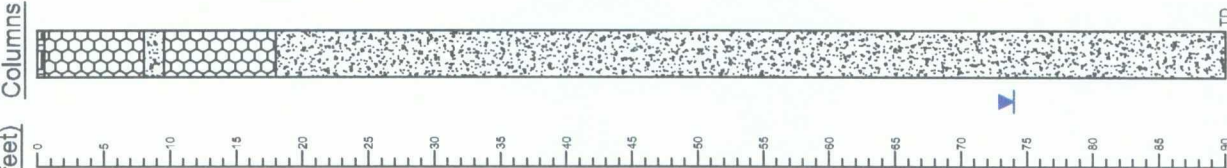
Prep By: CDS

Checked By: CDS

Date: June 11, 2008

Depth  
(feet)Soil  
ColumnsPID  
ReadingPetroleum  
OdorPetroleum  
Stain

Soil Description



0.5 - 8' - Caliche

8 - 9.5' - Sand, red to brown, very fine grained,  
well sorted, dry

9.5 - 18' - Caliche

None

None

None

None

None

None

None

None

None

8 - 90' - Sand, red to brown, very fine grained,  
well sorted, dry

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

0.0

0.0

0.0

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0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

## Monitor Well MW-5

## Monitor Well Details

Date Drilled November 27, 2006  
Thickness of Bentonite Seal 60 Ft  
Length of PVC Well Screen 25 Ft  
Depth of PVC Well 90 Ft  
Depth of Exploratory Well 90 Ft  
Depth to Groundwater 74 Ft  
Ground Water Elevation

Grout Surface Seal

Bentonite Pellet Seal

Sand Pack

Screen

Indicates the PSH level measured on

Indicates the groundwater level measured on November 27, 2006

Indicates samples selected for Laboratory Analysis.

PID Head-space reading in ppm obtained with a photo-ionization detector.

## Completion Notes

1. The monitor well was installed on date using air rotary drilling techniques.
2. The well was constructed with 2" ID, 0.020 inch factory slotted, threaded joint, schedule 40 PVC pipe.
3. The well is protected with a locked stick up steel cover and a compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from below ground surface (bgs)

Monitor Well Details

Monitor Well MW-5

Lovington Gathering WTI Lea County, New Mexico  
Plains Pipeline, L.P.

Basin Environmental Services

Prep By: CDS

Checked By: CDS

Date: June 11, 2008



## Monitor Well Details

Date Drilled	November 27, 2006
Thickness of Bentonite Seal	60 Ft
Length of PVC Well Screen	25 Ft
Depth of PVC Well	90 Ft
Depth of Exploratory Well	90 Ft
Depth to Groundwater	74 Ft
Ground Water Elevation	

### Grout Surface Seal

## Bentonite Pellet Seal

Sand Pack

Screen

indicates the PSH level measured on

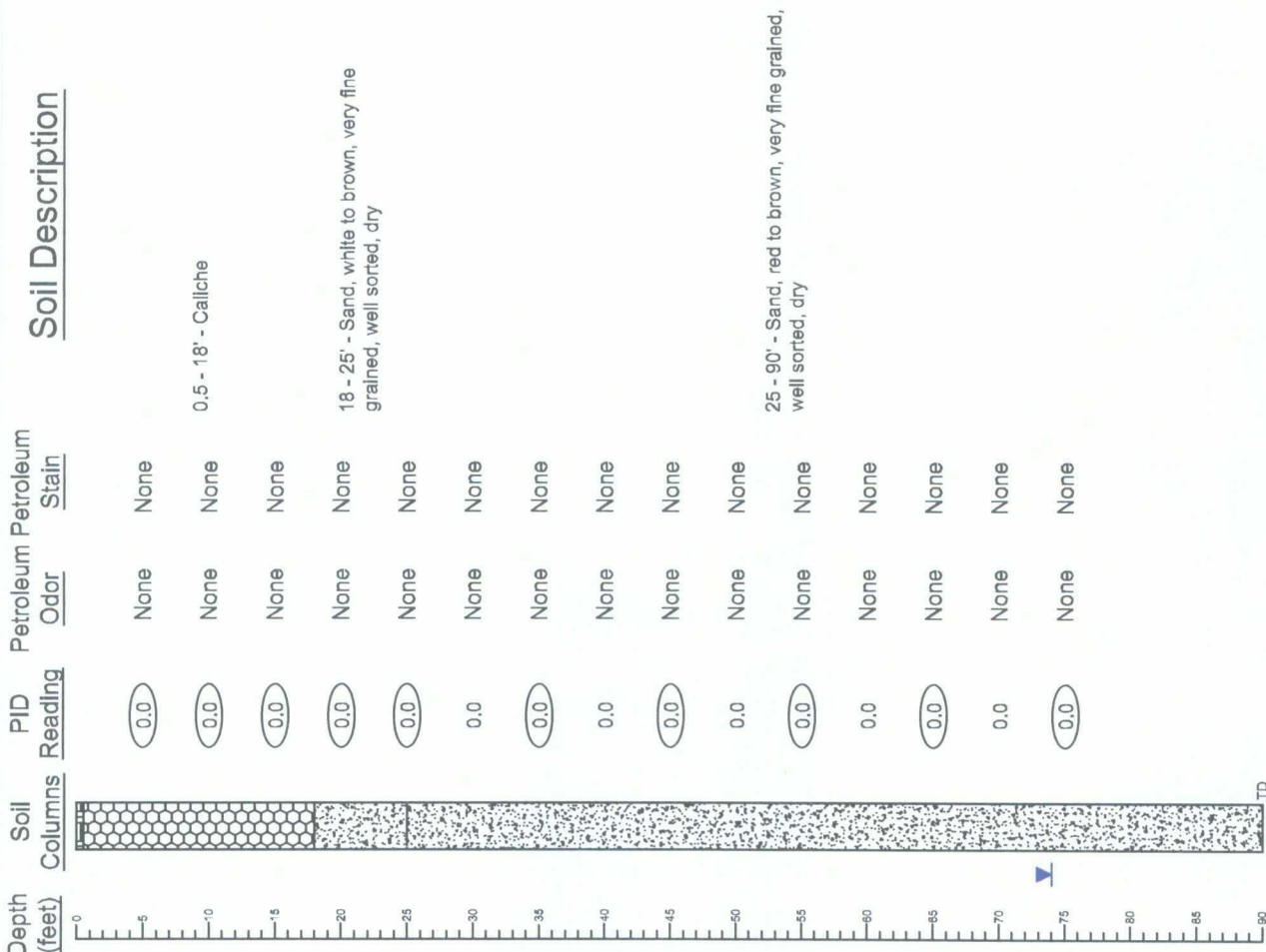
Indicates the groundwater level measured on November 27, 2006

Indicates samples selected for Laboratory Analysis.

PID Head-space reading in ppm obtained with a photo-ionization detector.

## Completion Notes

1. The monitor well was installed on date using air rotary drilling techniques.
2. The well was constructed with 2" ID, 0.020 Inch factory slotted, threaded joint, schedule 40 PVC pipe.
3. The well is protected with a locked stick up steel cover and a compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from below ground surface. (bgs)



Monitor Well Details  
Monitor Well MW-6  
Lovington Gathering WTI Lea County, New Mexico  
Plains Pipeline, L.P.

Basin Environmental Services

Prep By: CDS	Checked By: CDS
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Date: June 11, 2008

Depth (feet) 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 TD

Soil Columns Reading

PID

Petroleum Odor

Petroleum Stain

Soil Description

None

0.5 - 18' - Caliche

None

None

None

None

None

None

None

None

18 - 90' - Sand, red to brown, very fine grained, well sorted, dry

None

None

None

None

None

None

None

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

None

# Monitor Well MW-7

## Monitor Well Details

Date Drilled November 28, 2006  
 Thickness of Bentonite Seal 60 Ft  
 Length of PVC Well Screen 25 Ft  
 Depth of PVC Well 90 Ft  
 Depth of Exploratory Well 90 Ft  
 Depth to Groundwater 73 Ft  
 Ground Water Elevation

Grout Surface Seal

Bentonite Pellet Seal

Sand Pack

Screen

Indicates the PSH level measured on November 28, 2006

Indicates the groundwater level measured on November 28, 2006

Indicates samples selected for Laboratory Analysis.

PID Head-space reading in ppm obtained with a photo-ionization detector.

## Completion Notes

1. The monitor well was installed on date using air rotary drilling techniques.
2. The well was constructed with 2" ID, 0.020 inch factory slotted, threaded joint, schedule 40 PVC pipe.
3. The well is protected with a locked stick up steel cover and a compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from below ground surface (bgs)

Monitor Well Details  
 Monitor Well MW-7  
 Lovington Gathering WTI Lea County, New Mexico  
 Plains Pipeline, L.P.

Basin Environmental Services

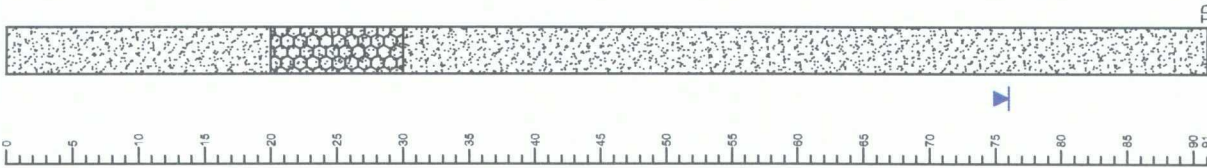
Prep By: CDS  
 Date: June 11, 2008  
 Checked By: CDS



Depth  
(feet)Soil  
ColumnsPID  
ReadingPetroleum  
OdorPetroleum  
Stain

Soil Description

## Monitor Well MW-8



0.1	None	None	None	0 - 20' - Sand, white to brown, very fine grained, well sorted, dry
0.4	None	None	None	
0.2	None	None	None	
0.2	None	None	None	20 - 30' - Sand, white to brown, very fine grained, well sorted, dry with imbedded caliche nodules
0.9	None	None	None	
0.1	None	None	None	
1.5	None	None	None	
1.6	None	None	None	
1.3	None	None	None	
1.0	None	None	None	30 - 91' - Sand, red to brown, very fine grained, well sorted, dry
1.1	None	None	None	
1.9	None	None	None	
1.9	None	None	None	
2.0	None	None	None	
2.3	None	None	None	

## Monitor Well Details

Date Drilled February 7, 2007  
Thickness of Bentonite Seal 56 Ft  
Length of PVC Well Screen 30 Ft  
Depth of PVC Well 91 Ft  
Depth of Exploratory Well 91 Ft  
Depth to Groundwater 76 Ft  
Ground Water Elevation



- Indicates the PSH level measured on February 7, 2007  
Indicates the groundwater level measured on February 7, 2007  
Indicates samples selected for Laboratory Analysis.  
PID Head-space reading in ppm obtained with a photo-ionization detector.

## Completion Notes

- The monitor well was installed on date using air rotary drilling techniques.
- The well was constructed with 2" ID, 0.020 inch factory slotted, threaded joint, schedule 40 PVC pipe.
- The well is protected with a locked stick up steel cover and a compression cap.
- The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
- The depths indicated are referenced from below ground surface. (bgs)

Monitor Well Details  
Monitor Well MW-8  
Lovington Gathering WTI Lea County, New Mexico  
Plains Pipeline, L.P.

Basin Environmental Services

Prep By: CDS  
Date: June 11, 2008  
Checked By: CDS

Depth  
(feet)Soil  
ColumnsPID  
ReadingPetroleum  
OdorPetroleum  
Stain

Soil Description

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 TD



1 - 7' - Caliche

7 - 20' - Sand, white to brown, very fine grained,  
well sorted, dry20 - 90' - Sand, red to brown, very fine grained,  
well sorted, dry

## Monitor Well Details

Date Drilled August 13, 2007  
Thickness of Bentonite Seal 55 Ft  
Length of PVC Well Screen 30 Ft  
Depth of PVC Well 90 Ft  
Depth of Exploratory Well 90 Ft  
Depth to Groundwater 74.5 Ft  
Ground Water Elevation

Grout Surface Seal

Bentonite Pellet Seal

Sand Pack

Screen

Indicates the PSH level measured on August 13, 2007

Indicates the groundwater level measured on August 13, 2007

Indicates samples selected for Laboratory Analysis.

PID Head-space reading in ppm obtained with a photo-ionization detector.

## Completion Notes

1. The monitor well was installed on date using air rotary drilling techniques.
2. The well was constructed with 2" ID, 0.020 inch factory slotted, threaded joint, schedule 40 PVC pipe.
3. The well is protected with a locked stick up steel cover and a compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from below ground surface, (bgs)

Monitor Well Details

Monitor Well MW-9

Lovington Gathering WTI Lea County, New Mexico  
Plains Pipeline, L.P.

Basin Environmental Services

Prep By: CDS

Checked By: CDS





Date: June 11, 2008







# Monitor Well MW-10

## Monitor Well Details

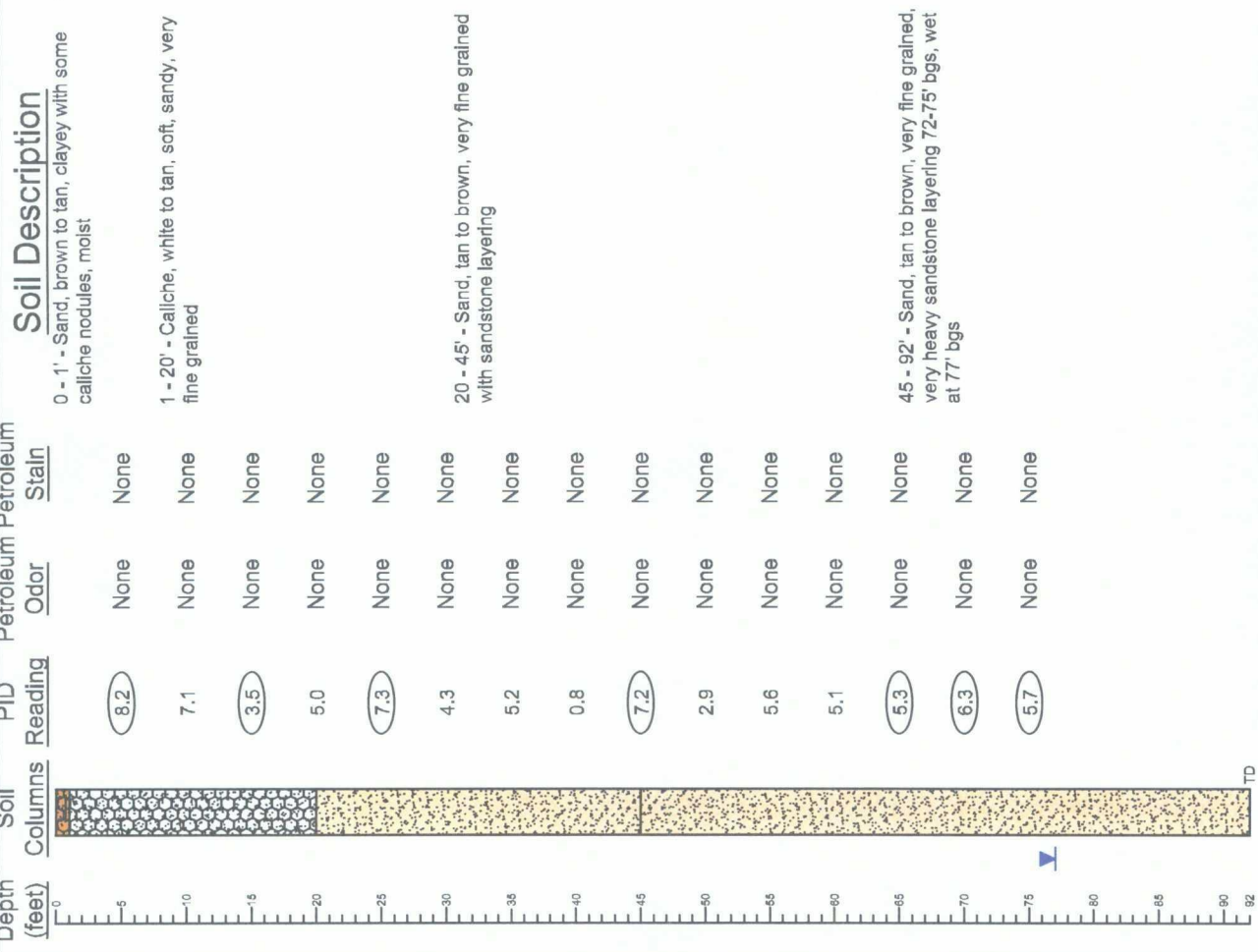
Date Drilled October 27, 2009  
 Thickness of Bentonite Seal 57 Ft  
 Length of PVC Well Screen 30 Ft  
 Depth of PVC Well 92 Ft  
 Depth of Exploratory Well 92 Ft  
 Depth to Groundwater 77 Ft  
 Ground Water Elevation \_\_\_\_\_

-  Grout Surface Seal
-  Bentonite Pellet Seal
-  Sand Pack
-  Screen

-  Indicates the PSH level measured on \_\_\_\_\_
-  Indicates the groundwater level measured on \_\_\_\_\_
-  Indicates samples selected for Laboratory Analysis.
-  PID Head-space reading in ppm obtained with a photo-ionization detector.

## Completion Notes

1. The monitor well was installed on date using air rotary drilling techniques.
2. The well was constructed with 2" ID, 0.020 Inch factory slotted, threaded joint, schedule 40 PVC pipe.
3. The well is protected with a locked stick up steel cover and a compression cap.
4. The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.
5. The depths indicated are referenced from below ground surface (bgs).



Monitor Well Details  
 Monitor Well MW-10  
 Lovington Gathering WTI Lea County, New Mexico  
 Plains Marketing, L.P.

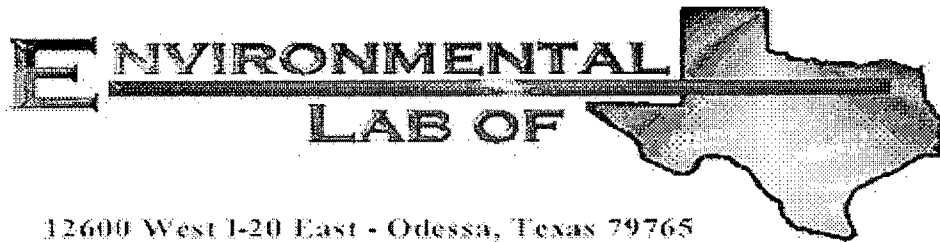
Basin Environmental Consulting

Prep By: CDS  
 November 2, 2009  
 Checked By: CDS



## Appendix B

### Analytical Reports



See  
this thumbnail  
for results

## Analytical Report

**Prepared for:**

Camille Reynolds

Plains All American EH & S

1301 S. County Road 1150

Midland, TX 79706-4476

Project: Lovington Gathering WTI

Project Number: SRS: 2006-142

Location: Lea County, NM

Lab Order Number: 6G20010

Report Date: 07/28/06



## Appendix C

### Photographs





Photograph of excavation activities at the Lovington Gathering WTI release site.



Photograph of excavation and sample locations at the Lovington Gathering WTI release site.





Photograph of the installation of pad sand beneath the liner at the Lovington Gathering WTI release site.

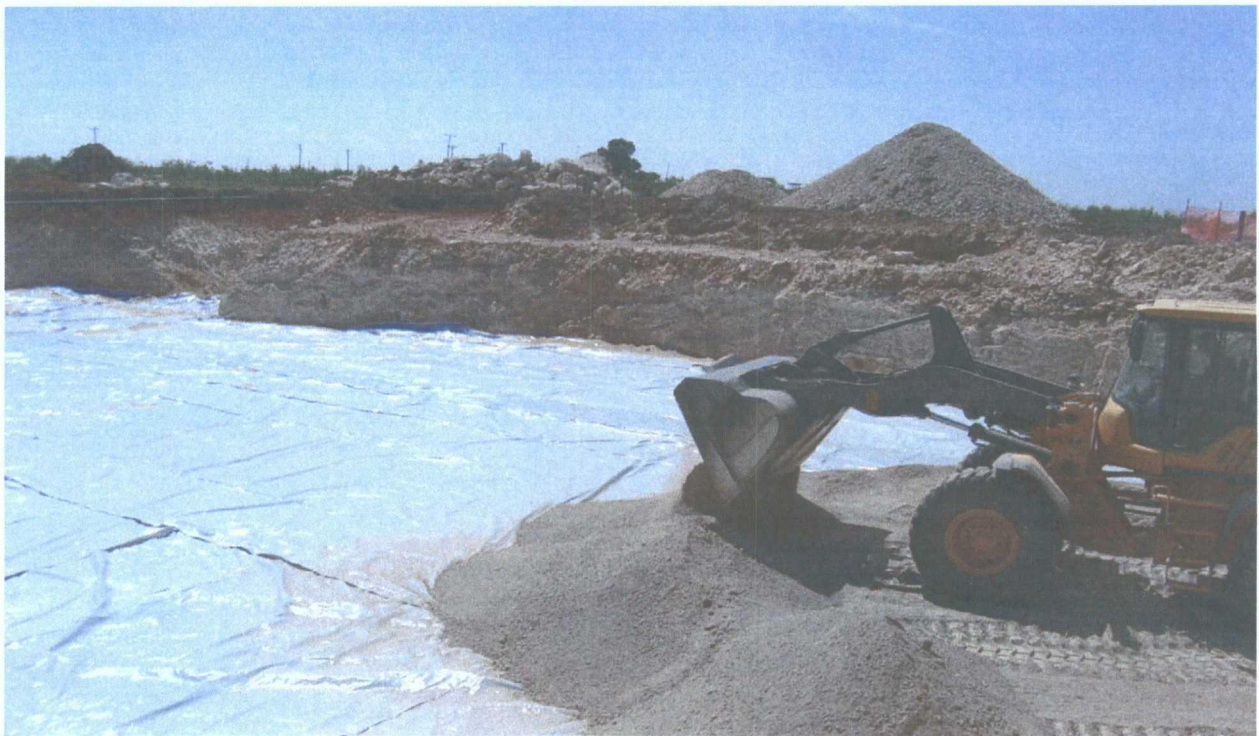


Photograph of the installation of the poly liner at the Lovington Gathering Release site.





Photograph of the installation of the poly liner at the Lovington Gathering Release site.



Photograph of backfilling activities at the Lovington Gathering WTI site.





Photograph of backfilling activities at the Lovington Gathering WTI site.



Photograph of the reseeding of the Lovington Gathering WTI remedial site.





Photograph of completed remedial activities at the Lovington Gathering WTI release site.

Appendix D  
Release Notification and Corrective Action  
(Form C-141)

1325 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

STATE OF NEW MEXICO  
Energy Minerals and Natural Resources

Form C-141  
Revised October 10, 2003  
Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

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

Release Notification and Corrective Action

OPERATOR

x Initial Report ☐ Final Report

Name of Company Plains Pipeline	Contact Camille Reynolds	
Address 3112 W. US Hwy 82, Lovington, NM 88260	Telephone No. 505-441-0965	
Facility Name Lovington Gathering WTI	Facility Type 6" Steel Pipeline	
Surface Owner Robert Rice	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter H	Section 6	Township 17S	Range 37E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
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Latitude 32° 51' 56.0" Longitude 103° 17' 07.2"

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 12 barrels	Volume Recovered 8 barrels
Source of Release 6" Steel Pipeline	Date and Hour of Occurrence 4-21-2006 @ 13:00	Date and Hour of Discovery 4-21-2006 @ 13:15
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Pat Caperton	
By Whom? Camille Reynolds	Date and Hour 4-21-2006 @ 15:35	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

a Watercourse was Impacted, Describe Fully.\*  
  
Describe Cause of Problem and Remedial Action Taken Internal corrosion while purging the line resulted in release of sweet crude oil. The line has been purged. The line is an idle 6-inch steel gathering line. The pressure on the line was approximately 50 psi and the gravity of the sweet crude oil was 34. The sweet crude has an H<sub>2</sub>S content of <10 ppm. The line was approximately 1.5 feet bgs at the release point.

Describe Area Affected and Cleanup Action Taken.\* The impacted soil was excavated and stockpiled on plastic. Aerial extent of surface impact was approximately 1,500 ft<sup>2</sup>.

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: <u>Camille Reynolds</u>	OIL CONSERVATION DIVISION	
Printed Name: Camille Reynolds	Approved by District Supervisor:	
Title: Remediation Coordinator	Approval Date:	Expiration Date:
E-mail Address: cjreynolds@paalp.com	Conditions of Approval:	
Date: 4/26/2006 Phone: 505-441-	Attached <input type="checkbox"/>	